

## WHITEPAPER

FUTURE OF MIDDLE EASTERN CRYPTOCURRENCY

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# WORLD COIN NETWORK

### 1. Introduction

#### 1.1. The Problem

The Middle East and North Africa is vast and diverse region with a population of over 700 million people of which 85% is unbanked, and over two billion people worldwide who do not have bank accounts or even have access to one. Unable to participate in the global marketplace, the Middle East has a highest percentage of unbanked than any other region, even Sub-Saharan Africa bank account holders are almost double that rate. World Coin Network aims to bring stability to the Middle East with a three pronged approach - Currency Stability, Lending Platform, National Coins and Charity.

Many of the problems in the Middle East all lead back to currency devaluation. None of the issues will be fixed in the region unless currency and banking issues are addressed. World Coin Network (WCN) aim is to fix these problems and also give back in major way.

Currency devaluation is the main destabilizing force in the Middle East. How do you start a business or forecast when prices in many countries can spike weekly or monthly 10-20%. How do you save? How do you plan? Things we take for granted in the west. World Coin Network (WCN) wants to fix this problem with unique a coin and a unique network. The Middle East is still a cash economy, and we want to help facilitate a Network that can boost trade, while also creating jobs and stabilizing the region.

Events like the 2008 financial crisis often lead some individuals to distrust the financial institutions due to their fallible nature and the interconnectedness of the banking sector with non-banking sectors [1]. Electronic payments, which are the backbone of the global economy, depend almost exclusively on banking institutions to act as trusted third parties. While this system is sufficient for most transactions, it still suffers from the fundamental weaknesses of the trust-based model. Before the release of bitcoin in 2009, completely non-reversible transactions were not actually possible because the financial institutions could not avoid mediating disputes. The cost of mediation inflates transaction fees, limiting

the minimum practical transaction size and removing the possibility for small everyday transactions; and there is a broader cost in the loss of the ability to make non-reversible payments for non-reversible services. With the potential for reversal, the need for trust grows. Sellers must be wary of their buyers, requesting that they provide more information than they would otherwise need. Financial institutions accept a certain percentage of fraud as unavoidable. These costs and payment uncertainties can be avoided in person by using physical currency, yet they cannot be avoided on the Internet without the assistance of cryptocurrencies [2].

Due to limited banking infrastructure in the Middle East, internet transactions in the region rely heavily on foreign banks, which means transaction costs negatively affect the region's economy. While the region does have some banks, none of the world's largest banks are located in the Middle East [3]. Growth in the region is hindered by the limitations of their banking infrastructure and the economic outlook looks bleak due to the world's reliance on oil slowly waning. Furthermore, there are many cultural/religious laws in the Middle East that restrict the development of their financial institutions and make it difficult for them to compete with their non-native peers abroad. Most of these restrictive laws stem from Islamic law (sharia), which prohibits profitable banking practices such as paying or charging interest, charging additional amounts for late payments, and securities trading that involves gambling or excessive risk (i.e. margin trading, short selling, day trading, and derivatives like forwards, futures, options, and swaps). Other restrictions include that Islamic banks, according to some sources, must collect zakat (obligatory religious alms) from customers and that banking practices must be risk sharing [4]. Given these rules, common credit and lending practices in the region are scarce, with few banks and financial institutions offering credit cards. Everyday digital transactions have instead come to rely on debit cards; however, debit cards are not risk sharing because all of the risk of fraud is garnered by the banks. Some banking systems in the Middle East attempt to circumvent these cultural laws by lacking candor and transparency, but a trustless transparent system is needed to be adopted by the majority of the Middle-Eastern populace. Due to all of these reasons, local transactions and cross-border trade are most commonly carried out in physical cash/currency, which is extremely risky for the locals and traders. What is needed is a method for replicating these

physical transactions in a digital medium. World Coin Network solves all of these issues because our tokens act as a digital representation of physical cash transactions. World Coin Network uses a sharia-compliant financial system based on a decentralized trustless blockchain network that shares the risk amongst its users. This network is a means for transparent peer-to-peer transactions, whereby all transactions are recorded online in a public distributed-ledger system. Because World Coin Network transactions are secured using cryptography, tampering with them is computationally impossible. Lastly, because many individuals in the Middle East have limited access to the Internet, we will be opening physical branches in every country in the Middle East to provide people with a means to send/receive World Coin Network tokens and to exchange tokens for the local currency of their choice. We believe our cryptocurrency platform will enable increased trade in the Middle East and boost the region's economy, sparking a new age of innovation, growth, and development.

#### 1.2. Background Information

A cryptocurrency is a digital asset developed to function as a medium of exchange using cryptography to secure the transactions [5, 6]. Cryptocurrencies are virtual/digital currencies, existing on the servers hosted around the world. Bitcoin, the world's first successful cryptocurrency, was announced in 2008 by its pseudonymous founder Satoshi Nakamoto in his (or her) whitepaper *Bitcoin: A Peer-to-Peer Electronic Cash System*. Bitcoin was then developed and released the following year. Satoshi describes bitcoin as an electronic payment system based on a cryptographic proof instead of trust. Bitcoin transactions are computationally impractical to reverse, protecting sellers from fraud. Bitcoin uses a peer-to-peer distributed timestamp server to create a computational proof of the chronological order of transactions. This system is secure as long as miner nodes collectively control more CPU power than any cooperating group of attacker nodes [2].

Miners are members of the general public that are given incentive to use their computers processing power to help verify, timestamp, and add transactions to the public ledger. Each computer system operating on this network is known as a

node. The proposed "peer-to-peer distrusted timestamp server" mentioned by Satoshi Nakamoto is referred to today as a blockchain. A blockchain is essentially a continuously growing list of records, called *blocks*, which are linked and secured using cryptography [7].

Electronic money has been the focal point of financial technology research for over the past twenty years due to the complexity of the double-spending problem [8]. There are two types of electronic money: currency and deposits. Electronic currency, which is also referred to as digital currency, is an asset that can be transferred from person-to-person over a virtual medium and is evidenced by a ledger kept by the owner of the currency. Electronic deposits can be defined as money which is evidenced by a ledger at a financial institution and this money is a liability of that institution [9]. Before bitcoin, the entire world depended on banks and bank deposits simply because there were no viable electronic currencies available due to the complexity of the double-spending problem. The essence of the double-spending problem is that digital information can be easily replicated and therefore could be spent again (or double). For instance, handing out a dollar in-person is not translatable to e-mailing a picture of a dollar, because pictures and all other types of digital data are nothing more than a string of binary code. This string of code is called a bit string, which is most often seen as a series of 0's and 1's, and these individual digits are referred to as bits; hence the name bitcoin.

As the popularity of bitcoin grew, developers began taking bitcoin's open-source code and started using it for their own cryptocurrencies. All these subsequent coins are referred to as altcoins (alternate coins). While the use of the bitcoin blockchain is limited to the creating and tracking of bitcoins, the Ethereum blockchain is used to create and track ether<sup>1</sup> as well as over 20,000<sup>2</sup> other tokens (which can be cryptocurrencies, cryptocurrency-based businesses, and other decentralized applications<sup>3</sup>) operating on the Ethereum platform. Despite the enormous size of the Ethereum platform, the average transaction time of ether

<sup>1</sup> Ether is the name of the main cryptocurrency on the Ethereum blockchain and it was developed by the founders of Ethereum. In a sense, Ether acts as fuel for the entire Ethereum platform.

<sup>&</sup>lt;sup>2</sup> This is the current estimate as of December 25, 2017. This number is subject to change as the size of the Ethereum platform is growing at an exponential rate.

<sup>&</sup>lt;sup>3</sup> A decentralized application is simply the name of Ethereum's smart-contract (scripting) protocol.



of about ten minutes to complete, whereas ether and the cryptocurrencies operating on the Ethereum platform have an average transaction time of about 0.23 minutes, which is roughly 14 seconds [10, 11]. Faster transaction times are one of many advantages that Ethereum (and our token) have over bitcoin. Ethereum and World Coin Network transactions are also significantly cheaper than bitcoin transactions. Satoshi Nakamoto created bitcoin in hopes of having cheaper transaction fees than bank transactions, yet the average transaction fee of bitcoin is over 55 USD and these fees are growing exponentially, whereas the average transaction fee of ether (and the World Coin Network token) is only one dollar per transaction [12].

#### 2.1. Our Company

World Coin Network, is a financial services business that will help banks integrate the World Coin Network tokens and infrastructure into current banking systems and that will be opening local branches and automated teller machines (ATMs) where individuals can exchange World Coin Network tokens with local currencies and can send/receive our tokens. Strategic partnerships with these local branches, will generate a profit from exchange fees for the network. Although World Coin Network will be allocating a portion of our profits for *zakat*. We will be donating 20% of our transaction fees to non-profit educational charities in the Middle East. We believe helping underprivileged children, receive a proper education will inevitability help their families break the circle of poverty. The other 80% of our profits will be reinvested back into the coin or kept as cash reserves to be sharia-compliant. Our employees will not be provided a salary, instead they will be paid in tokens, which is why we have a have allotted a large portion of tokens for staff members. This payment structure invests our employees in the project, so their

compensation grows with the success of the World Coin Network. To keep the price of our tokens stable, all of our employees will have staggered lockup periods ranging from 6 months to 2 years. Lockup periods will prevent employees from selling tokens all at once and negatively affecting the token price. All sales of staff member tokens will be announced via our e-mail subscription, and employees will have limitations to the amount that they can sell in one month.

We will also be establishing a sharia advisory council to ensure that our operations remain sharia-compliant. Our platform will also include a digital wallet application for smartphones and computers, Sharia compliant lending platform, a cash reserve system, blockchain banknotes, escrow services, physical exchanges for transferring fiat to digital currencies, and ultimately, we will be opening our own public digital currency exchange websites where we can monitor transactions to prevent fraud. We believe that the World Coin Network will improve the lives of hundreds of millions of Middle-Eastern people, so we are striving to make our business as transparent as possible to aid it its adoption. All of our technology, including the World Coin Network token, will undergo both internal and external security audits. Also, our company will have an open-book policy, whereby investors can request quarterly reports of our accounts, transactions, and operations. As our platform is still in its earliest stages of development, we are actively searching for strategic corporate partnerships and investors, as well as hiring financial consultants/executives, software developers, and other information technology (IT) personnel.

#### 2.1.1. Partner Coins and Exchanges

Local World Coin Network exchanges will be set up in each country creating a partnerships with local businesses, and current money exchanger's, building on current infrastructures, and while forging a valuable network with local populations. Local traders who want to protect their cash assets will finally have an alternative to their potentially-depreciating local currencies.

World Coin Network has a feature that allows us to create new partner coins and integrate them within the World Coin Network. Helping spread digital currency across the Middle East and rapidly expand the reach of WCN.

We have already acquired hundreds of domains for future partners and will be releasing them as we gain new partners. Our regional partners will gain access to our entire platform, apps, lending, and exchanges. WCN token holders will also receive a percentage of each new coin minted, creating value for WCN token holders long term while expanding our network across the Middle East.

Our Partner Coins will allow each coin to conform specifically to the countries financial policies, so that they are able to operate legally. These coins, combined with our physical branches, will provide ample access to cryptocurrency and will drive demand for the World Coin Network. Here is a list of the 14 website domains that we have reserved for our current partners:



#### 2.1.3. Lending Platform – Job Creation

In order to facilitate trade and create jobs World Coin Network will create a lending platform. WCN will be holding 15% of our tokens for the lending platform, we plan to give loans to under privileged people to start in-home businesses, open up store fronts, or web businesses. Our loans will be from 100 to 10,000 WCN tokens and we expect to generate between 50,000 to 100,000 WCN loans in a year.

Small loans have the ability to change people's lives in many countries especially women who don't have access to the banking system. 85% of the Middle East is unbanked and World Coin

Network could become the bridge for them. We want to establish WCN as the banking system of the unbanked and merchants who can't access the traditional banking world. By giving out loans in WCN Tokens we will also be building out our Network. Imagine within a year tens of thousands of stores and websites all accepting WCN, while also getting lending help from us. Our lending platform will be interest free. We will follow Sharia law guidelines, and become partners in these new businesses. By being partners, we will give the business owners the choice, they can select to buy us out at any time or just continue being 20% partners and paying WCN a share of the profits each month. Our lending platform will also give a credit score and ranking to each member, as the membership grows anyone who owns WCN Tokens can loan them to a business or individual to start a business or expand an established one. The credit ratings will provide a score and level of risk each loan takes on.

With 85% of the Middle East being unbanked World Coin Network sees a massive opportunity. Not only could we become the leading digital currency in the Middle East but we can create jobs and stabilize the region where unemployment is 25%-40% in many countries. Our vision is to bring stability and commerce, to an untapped market. This market has the potential to be a huge windfall. To bring stability you need to create jobs, and the best way we can to this is to empower the disenfranchised population. WCN will help create jobs, stabilize, and it will also extend the World Coin Network around the region. Think of the lending platform as a second ICO to hundreds of thousands of small merchants. All of WCN token holders receiving loans, must also accept WCN coins as a form of payment, thus creating a community that depends on the World Coin Network.

In most cases WCN coins will be the merchant's largest asset, thus we will become the best and most fully integrated digital currency in that region. Our lending platform will propel millions of unbacked people into a new digital era. As token holders of WCN also come into the peer2peer lending platform, lending coins will boost community integration and increase the rate at which WCN can grow. The lending platform will accelerate our penetration into an untapped market and create a large network of websites and businesses across the region that will start creating jobs and stabilizing the region.

#### 2.1.4. Philanthropic Goals- WCN Charity

Keeping with our ideals of creating a stable and prosperous Middle East, we will be allocating a portion of our profits for *Zakat* (charitable tradition). We will be donating 20% of our transaction fees to non-profit educational charities in the Middle East. We believe helping underprivileged children, receive a proper education will inevitability help their families break the circle of poverty. The other 80% of our profits will be reinvested back into WCN, or kept as cash reserves to be sharia-compliant.

#### 2.2. Our Token

The World Coin Network token is a sustainable public cryptocurrency coin written in Solidity, which is a high-level programming language influenced by C++, Python, and JavaScript. Our token is a basic open-source ERC20 token, operating on the Ethereum platform's smart contract protocol. World Coin Network transactions are executed by the Ethereum Virtual Machine (EVM), a decentralized Turing-complete virtual machine that executes scripts using Ethereum's global network of public nodes. Our token will be backed by a basket of Middle-Eastern tokens in the World Coin Network fund. Transactions of our token can be performed on exchanges, as well as by using the following wallets: Mist, MyEtherWallet, or Metamask.<sup>4</sup>

#### 2.2.1. Construction Parameters

Token Supply	100,000,000
Token Name	World Coin Network
Token Symbol	WCN
Decimals	18

<sup>&</sup>lt;sup>4</sup> Our own wallet will be added to the list once development has been completed.

#### 2.2.2. Token Code

The code for our token is available for download on <u>GitHub</u>. Once the contracts have been deployed, we will republish this code under our companies GitHub, which is where we will post the source code for all of our projects. For an in-depth explanation of the code, we encourage you to read the section on Ethereum's website titled "UNDERSTAND THE CODE", which can be found at: <a href="https://www.ethereum.org/token">https://www.ethereum.org/token</a>

#### 2.3. Token Sale Details

Our initial coin offering (ICO) is split into three phases: Pre-ICO, Round A and Round B. The difference between the phases is that:

- Pre-ICO, the price is \$0.14 per token.
- Round A, the price is \$0.21 per token.
- Round B, the price is \$0.29 per token.
   For all phases, investments greater than \$10,000 will be given a 20% token
   Bounty bonus. For information on the length/dates of our ICO, please refer
   to our timeline, in section 2.4.

Half of the proceeds from the presale will be dedicated to a cash reserve account, whereby early adopters and presale investors can request up to 50% of their money back in case prices falls below ICO purchases. Approved requests, can receive funds up to two years, but no sooner than six months, after the launch on exchanges. To purchase tokens, please follow the instructions our website. The following lists the allocation of the 100-million World Coin Network tokens:

- 30% of the tokens will be sold during the presale/ICO periods.
- 2.5% of the tokens will be reserved for our Referral Rewards.
- 2.5% of the tokens will be reserved for our Bounty Programs.

15% of the tokens will be Reserved and offered after the platform launches. They will be sold to local financial institutions, digital and physical currency exchanges, as well strategic corporate partnerships. These institutional investors will be given incentive to hold their positions



20% of the tokens are allotted for other expenses (Operations, Legal, Public Relations, Marketing, Consulting, Development, Technical Support, and Security Audits, etc.). If these tokens are given to full-time, then they will have a lockup period associated with them. Tokens distributed to temporary employees or freelancers will not have a lockup period, however, our company will be incentivizing them to hold long-term.

The token distribution provides our company (initially) with the majority of the tokens, so that we may use them as incentive for institutions and employees to join our project. In the next one to two years, we predict that the amount of tokens that our company and staff controls will be less than 20%. And, in the course of the next five to ten years, we predict our company and staff will hold less than 10% of all the 100-million tokens, allowing the price to be dictated by the free market. The World Coin Network plans to keep the supply of tokens fixed, however, we do retain the ability to burn tokens held by the company, enviably **PROGRAMS** 

**REWARDS** 

increasing total value of all coins. This ability will only be used if there is a viable reason to do so, and the World Coin Network investors and community will be consulted before any such action is taken. For transparency sake, the supply of tokens can always be tracked on <a href="Etherscan">Etherscan</a> (once the coin goes live and trading begins).

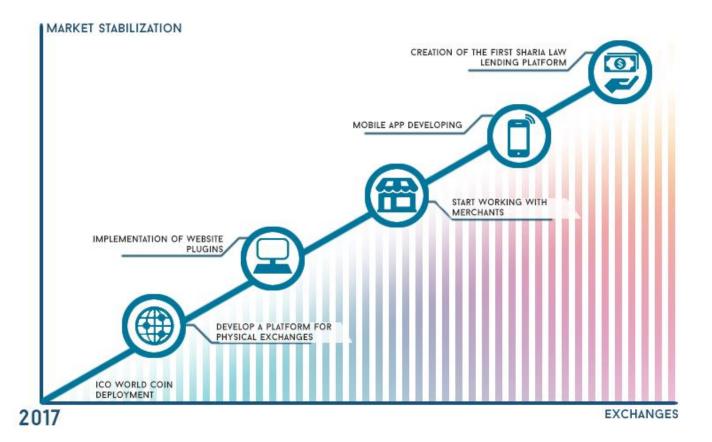
#### 2.4. Timeline

Below is a representation of our timeline for the next 1-2 of years. To be notified of any changes to our schedule, please subscribe to our <u>e-mail updates</u>:

- ICO and World Coin Network deployment we will roll out World Coin Network after our ICO for initial coin usage and open market trading.
- Develop a platform for National Exchanges
  we will also immediately start development on our platform, featuring security minded
  coding and not relying on existing security infrastructures. (This is for exchanging tokens
  (AED <-> AEDT).
- We will then start to deploy our local markets country-by-country. The order of country deployment will be determined by initial demand and further market research etc. We will then create an exchange on top of the platform developed on step 2; this will be our own Middle East mini exchange for our token holders to use. Then we can develop partnerships with local banks to store fiat reserves. All the banks we work with will help us in our quarterly investor screened audits of cash reserves on hand... (If only everyone did this!) We will then link the cash with the documents referenced in blockchain correspondence to the actual real money transactions.
- We will then begin working with Kyber (parallel to 3) to create a unique (non-market exchange reliant) token exchange service for easy conversions between national tokens and World Coin Network.
- During this time we will be developing a mobile app (parallel to 2, 3 and 4)
  which will allow token holders to store national tokens and convert them to/from
  national currencies and to/from World Coin Network. This will allow people to send
  tokens and World Coin Network to friends

6. Working with Merchants
 We then shift our focus on working with merchants to help them accept national tokens
 and World Coin Network for their services and goods. Creating a platform which they can easily integrate into their existing businesses.

All Board members and advisors have 6 months to 2 year lockup period.



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