White Paper: Bikera, Bikeswap, Bukbike, Bikechain, Bikalot, Pedalin.

Abstract

A blockchain application project for real world purpose. ~~Hence~~ everything will have a digital identity, including ~~so will~~ certain goods or real world physical assets. Using this,~~From this~~ everyone will be able to participate in adding to a network of available physical assets with a digital key locked to this asset.
Our project would only apply~~apply only~~ to two or more wheeled transportation, which uses an input of physical labor by the driver. Having incentives like Bikera will promote the use of these transportations in cities, the combination of electric and muscle power has the advantage of not polluting the air and giving the users a healthy alternative transportation. The Project is dual from having the need to be able to collide the real asset with its digital immutable identity. Being immutable on the blockchain does not mean immutable in the real world.

The blockchain

The system would be comprised ~~comprise~~ of classes/groups, each having a purpose to adding value to the ecosystem. Anyone can be in any or all of these groups, any given moment of time. The ecosystem safeguarding will be done by the numbers of the masses and the randomness of travel-trajectory of these individuals, this contributes to the Proof of Transit consensus protocol that will be used to mine the blocks.
All users/accounts will receive the right to vote on changes made to the blockchain infrastructure and the set of rules of conduct and standards. This applies to accounts that have a minimum of 100 reputation score . This reputation score increases with the miles, time spent and amount of different bikes the biker has used since the creation of the account, upgrading to another class or group will result in gaining points to add to the reputation score, the amounts generated is further in detail described under Reputation score. The implementation of this will allow users who use the service more frequently, to have more voting power, as well as the users who have invested time and material to add to the ecosystem. The ordinance of other groups will happen by the users who have enough reputation built up to question an account, of the other groups and flag these accounts. When certain accounts have a certain amount of flags, their account will be downgraded from a certain group. From this point; an investigation will be run by random chosen trusted accounts that are in the vicinity of the incident, the results will be publicly available on the network and the progress logged in the blockchain. In some cases the foundation may step in to aid in solving unforeseen issues, these cases can then lead to improvements of the code and the blockchain. If 70% of the network reputation score agrees with the changes to the core or other mechanisms of the blockchain, these changes will be implemented.

Physical Assets

Having real world assets used in a decentralised system needs a connection between the virtual and the real world. There needs to be a gate, connecting the transportation with the blockchain. This will be done by the development of a multi-functional lock, which has certain radio receiving and transmitting capabilities and storage to store data on, before sending it out on the network. A GPS module and/or Cellular network connectivity can be used to verify the location of the transportation, WIFI might also be added during the start and transition phase to support the network.
A network of radio receiving nodes need to be used or placed to receive data of these locks. Multiple nodes throughout a “two” dimensional space can then also be used to triangulate these locks, and verify its location. Eventually this network can achieve complete decentralisation and autonomy from existing networks. The use-case of pre-existing networks can then be limited to verification of the own network by comparing data, this can set flags on users trying to spoof the network, or the producer’s of the onboard chips, ...
Depending on the course the decentralised autonomous organisation (DAO) will go, the further development of this gateway can be subjected as an open-hardware initiative.

Legal

We, the founders, will form a foundation to follow up on jurisdictions and law related topics. As the network grows, this foundation will be governed as a DAO. For assuring legality in the different cities and regions the service will be available and unlocking certain areas is a responsibility of the foundation. A certain amount of tokens will be set for the build-up and maintenance of this foundation and a part of the fee system within the blockchain will be delivering monetary funds to this foundation. The Blockchain is permissionless and open for anybody to use as a payment channel, the use and deployment of the hardware is bound to laws of a region and the use of radio frequencies

What is Bikera

Bikera is a blockchain ecosystem that will function as a means to lend transportation and have it seamlessly maintained without having to worry about having a flat tyre or any other mechanical difficulty that might cause inability to travel to your destination.
The Bikera blockchain will always keep all the necessary parties informed on the latest and these will then swiftly present solutions. The means of transportation isn't a solo challenge but a group effort. Depending on the class/group, roles will be assigned to accounts/persons. Acting on this role and delivering the requested solutions will result in a merit for these accounts/persons.

Bikera's currency the (M)ERA

This is the local coin used to pay for the fees of the network, to lock in smart contracts during the time a vehicle is used, to do final payments, to receive as bounty for certain actions, as blockreward, ...

The different classes/groups in Bikera

Within this ecosystem there are 5 groups/classes, each contributing to the other groups/classes and the ecosystem, respectively these are; the bikers, the supporters, the validators, the producers, representatives of Bikera DAO. Here we go more into detail on what these Classes/groups have as a function in the ecosystem. Also how they relate to on-another and how they work together, earn together, make the ecosystem and themselves thrive.

Bikers

The Bikers are the users of the transportation, they should be the biggest class/group. They lend the vehicles from the supporters, if they agree price and duration these parameters are put in a smart digital lock/contract, maintenance intervals and replacement vehicles can also be described in this contract, rules of conduct that apply by the network will also apply on these contracts, additional sets of rules about damage inflicted by bikers can be added by the supporters but this needs to be clearly stated in the agreement.

Riding a vehicle with a verified lock, will add direction and traveled distance during certain time intervals, these time intervals will occur every block, this will add reputation points to the bikers account. The more mileage the biker has, on different bikes offered by the network, the higher his reputation score will be. This reputation will have an impact on voting capabilities and the ability to flag validators or supporters. More on this in the reputation points section

Supporters

These are the backbone of the ecosystem, they will supply vehicles to the network. Anyone buying or creating a lock will be able to upgrade his account to Supporter. Having these vehicles noted on the network in the form of an address will create a vehicle log, this

because the mileage on these vehicles will be logged by referring to the Bikers mileage done on the vehicle and logging all movement in the blockchain through the LoRa network and or GPS network. This gives an accurate detail on when the vehicle needs to be maintained, notices will be sent out to the biker if the vehicle is still in his possession but to the supporter as well. It's the supporter's task to maintain the vehicle-park he offers to the ecosystem. This does not necessarily apply to him as a person he can also have this done at a shop or by the biker himself. But both supporter and biker have to validate the maintenance this is done by connecting to the bluetooth or any other near field technology white-listed by the foundation that is connecting the lock's account to the other parties. GPS and LoRa location services can verify the location of the different accounts are in the vicinity during this validation. To prove a first admittance of a new vehicle to the ecosystem a validator needs to verify the state and the condition of the lock, and during certain time intervals these validators will need to revalidate this.

Validators

These will be the data keepers, they are accounts who have a high reputation or have a certain amount of coins burned to receive this reputation. A validator is possible to set-up different nodes to aid the LoRa network, these nodes can be simple LoRa transceiver nodes that link the locks to the ecosystem, more on this in the lock section and the network section. Validators are limited in space, there can only be a certain amount of validators per 10km². preferably multiple will have different nodes, on different locations. Cross-referencing each-other on the truthfulness of their data, they log on the blockchain. The validators will have to stake Mera in order to deploy a functional LoRa node and connect to the network. This to prevent the network of being spammed. Only the locks they have verified will be used to multiply the chance on mining the block. The blockchain and consensus section has a more in depth view on these mechanics.

Producers

This is the group the consists of production facilities, tech individuals, companies, … they are providing the locks to the supporters, certain requirements of these locks will be set by the foundation, also Mechanical-designs, PCB-electrical-designs, software and programs, validated microcontrollers, …. This information will be put available by the foundation through the Open hardware initiative. The more producers the better change, in a competitive free market, the quality and the price will be stabilizing. The previous 3 groups will give these Producers a 0-10 rating on the lock, to safe-gaurd the network from hostile producers, only the amount of locks e.a. the amount of created; verified and rided accounts will give the producer a reputation score, a producer's account can never have more than 10 as a reputation score aka rating. Once an account is upgraded to producer other mechanics will apply to this account and the previous reputation will be converted to a rating. Producers will also have no vote, only a rating. The amount of locks supplied, which are then verified and the reputation scores of those giving a rating will result in a constant rating, an improvement of rating or downgrade in rating.

Coding angels, Elected officials, Esteemed members of the foundation

These are a very select few accounts that during their election time or their time as an employee of the foundation, will be given in lease the total reputation score of all members who elect them or the foundation's Base reputation score. They will govern the ecosystem, if the task of governing the ecosystem is not the concern of the persons using the system, or if they prefer to leave it to another person to make the decisions they can lease their reputation score to another account, with the exception of producers. They will only intervene for matters that compromise the network, when abuse is reported and the local community can not find agreements on matter's, … they will function as the peacekeepers and the guardians of the ecosystem. For example: If malicious hardware is found on any of the locks they can downgrade a producer and therefore downgrade the created accounts for locks, to malicious lock. This will result in no more datalog for the validators and create a self-destruct sequence on the account of this lock, rendering the lock useless. How this will be arranged is still up for debate and the DAO is responsible on the matter. The locks still in warranty will be brought back to stores, giving the Supporters back their money. If eventually court-cases are to be fought against these intrusions; for locks that are out of warranty. The foundation and the elected officials within the DAO will be tasked to do this.

Reputation score

The reputation score will be a separate token or value that will be distributed throughout the network that results in voting power or flagging power. these tokens will not be usable by the user of an account, the network itself will independently add reputation points to an account. An account will not be able to transfer these tokens they are fixed given as bonus to accounts that incentivise or use the network. An account will be able to lease their tokens, with immediate revoking capability of this lease every created block. The economics on distribution of reputation points can be altered by votes within the network. These numbers are only a baseline of distribution in the beginning of the network. alteration will be limited in amount every voting period, to keep the ecosystem from suffering from major sudden changes in reputation score distribution. This is to keep a liquid state of harmony in the ecosystem.

Reputation points given to group/class

Bikers

Every 10km a biker has ridden a vehicle he gains 1 reputation point, if this account uses different vehicles from different suppliers a multiplier will be in effect to the amassing of these points. the network can verify within its own blockchain database how many different bikes; this is done cross-referencing on the smart contracts made between biker, supporter and lock of the vehicle. having used a difference of these three will add 0.02 per vehicle and 0.2 per supporter of reputation points extra every 10km, if this is done within the last months 3 months. depending on the blockchain block creation it will be a certain amount of blocks that is approximately set to these 6 months = # blocks created. These multipliers are given to these Bikers account because using multiple vehicles from multiple Supporters will result into having a more unbiased, more informed review on these other accounts, henceforth having a higher or faster growing reputation score.

Supporters

The reputation points are also logged every 10 km but a supporter will only gain 0.1 points for the bikers riding their vehicles. Reputation points gained as biker are still in effect and can also add to the total amount of reputation points of the account; this account can still receive reputation points as biker as well.
an extra bonus of adding a vehicle to the network of 100 reputation points is given the first time a lock is initialised with a new supporter account. This will be limited in time, every 3 months this bonus can be acquired or a transition of a supporter's account can be implemented and be halved every time period passes. This gives supporters also the ability to resell their locks, so second hand use is possible or when interest in supporting the ecosystem withers.
Having the lock verified by a validator will also result in 50 additional reputation points.
Maintaining a vehicle and updating the maintenance list of vehicle with scheduled curative actions will be given a 2 point bonus. An exception on this is If the biker chooses to maintain the vehicle themselves, these points will be on balance as unverified until either a biker or supporter validates the claims.

Validators

They will receive reputation points every 10km a biker rides a bike validated by the validator, this is 0.01 per vehicle / lock every 10km this vehicle is used. Validating a lock will result in 20 reputation points added to his account, revalidating will be also halved every 2 periods of time.
Setting up a LoRa network gateway node will result in 200 reputation points. having an uptime of this Lora Gateway of 99.4% will result in an additional 5 reputation points every day or the amount of blocks generated in a day.
Resolving a conflict between Biker and Supporter will also result in an additional 50 reputation points.

Producers

As described above a producer’s account will not get reputation points only a 0 out of 10 rating. the rating will be the original reputation points from upgrading the account given an unverified rating. The calculation is every reputation point equals a rating. if somebody gives a rating of 7/10 with 500 reputation points and the original account was 1000 reputation points with 10/10 then the rating is the multiplier (7*500 + 10*1000) / 1500 = 9 rating score;

the formula is the average of all the rating weight of all reputation points given by the different accounts/adresses that have actually used the lock of the producer for a minimum of 20 km.

$$(n_{\text{rating acount n}} * n_{\text{Rep account n}}) + (n_{\text{rating acount n+1}} * n_{\text{Rep account n+1}}) + ... / (n_{\text{Rep account n}} + n_{\text{Rep account n+1}} + \ldots)$$

= Rating score for a Lock

The average of all ratings of locks produced by a certain producer will give an overall rating of this producer.

members of the foundation coding angels

The foundation accounts will receive an initial amount of reputation points surpassing the vast majority of the network, to govern the network into maturity. The amount will remain as is from the genesis block, so eventually the complete amount of reputation points of the network will be able to surpass the initial amount of the foundation. This transition will be calculated so that the network will be self-sufficient and self-govern in time. An extra amount of reputation points can then be given to the foundation with an 70% vote of the network. There will be a limit on amount and a limit in times these reputation points can be generated for the foundation, eventually the foundation will exist out of elected representatives.

Reputation points decreased from an account

There are actions that can be penalised with a diminishing amount of reputation points. Examples of these are not abiding the contract between supporter and biker, falsifying information about maintenance or not following up on the maintenance schedule. These decreasing reputation points will be discussed with the founders and eventually the whole network the same rules set in the blockchain for adding reputation points mechanism will apply to the decreasement. The amounts cannot be drastically changed but are left for dynamic input depending on the course of the voters within the ecosystem.
A negative Reputation will also affect the ability to use certain features of the network and fees will be risen for persons who have a negative reputation score. Supporters will also be able to block functionality to accounts that have a negative reputation score

Bikers

Not abiding the contract of dropping of a vehicle at a certain point or verhicle spots will result in when the vehicle is not used an arbitrary amount of -10 repuation points. Remainingly using the vehicle will be penalised with a -5 reputation points every 1km.

Supporters

Having not charged the bike or not available for the network when validated and not unvalidated by a request to withdraw the vehicle from the network, wil result in an decrease of -1 reputation point per day.
Not following up on maintenance will cost also -5 reputation point per day.

Validators

the nodes need to be up and running so a 99,99% of up time is required, unless scheduled maintenance is being applied. When a node doesn’t reach 99.4% uptime every 0.2% during within the duration of a day unscheduled downtime, will result in a penalty of -5 reputation points per 0.2%

Blockchain and network

The blockchain is the beating heart of the ecosystem, it is used as a clock that registers every progress during a certain amount of time. The initial block time or 10 minutes, similar to the block time of Bitcoin. Eventually when the network grows the amount of data needing to be logged increases. The blockchain will be used to log segregated data from seperate smaller side chains, through the use of trusted validators.This will be necessary to combat blockchain-bloat having these side chains register within the larger blockchain doesn't mean the initial blockchain blocks need to carry all the data logged. Komodo is one of the blockchains implementing this technique, the network can also be segregated side chains for certain areas and the main chain can then be Komodo for example. logging all of the data in the smaller side chains and just referencing data in the main chain, this referencing data will not be able to deliver the complete dataset of a sidechain, but it will be essential so anybody can verify the correctness of the side chain.

Mainchain

The Mainchain will be used to log the transactions of MERA over the network the accounts will be set as one in both sidechain and mainchain. But only the currency and relevant smart contracts between Supporters and Bikers on the lease of vehicles will be logged in this mainchain

Sidechains

These will logg the distance traveled and the Reputation points. This is to much information to be used globally so there will be clusters of multiple side-chains with peggs in the mainchain logging a snapshot of that certain side-chain in the mainchain. this to keep track of the reputation points given to the different classes. The Side-chains will be divided over a certain area and a certain amount of accounts/users.

Bikera consensus

a hybrid proof of work and proof of stake will be used, the proof of work will rely on the transportation and its location. The proof of location consensus will be set-up with a proof of location network as for example FOAM network, for more information on the implementation visit https://www.foam.space/
The staking amount will be necessary to trust the validators, a minimum of reputation score will also be needed to participate in the block creation.
having the nodes validate the transactions, a true random function would be using real world randomness with original computational random functions. the amount of km's ridden in a certain direction could help randomize the node winner selection for the proof of stake validazing the transactions and also logging the amount of km's ridden by the bikers as reputation points.

Proof of transit

The validating nodes are selected by the network to mine a block through a mechanism of random input of direction and distance traveled by the bikers. The vehicles are logging this data, separately by each lock sending out to the network's different nodes its coordinates every 10 minutes. The direction en the amount of km's traveled will increase the change of a certain node to mine the block. Because of a vast amount of bikers, it will be very hard to do a 51% attack. The price of the locks will discourage attackers. The actual displacement of the locks attributing to node selection by the network, with a randomizing function that adds or subtracts this displacement. Every 10° of a goniometric circle with North being 0° has a + or - randomly put in front of the distance traveled. This will result in a positive or negative amount of distance adding to the total sum of all the distances the validating nod receives from the validated locks. This protocol will be used dynamically, depending on the amount of bikers using the service of transportation, for a maximum 75% in the node selection that mines the following block. The nodes need to reach consensus on these amounts. This will make it practically impossible to coördinate an attack. Having different oracles and networks verifying these changes in distance and direction, will be used to verify if nodes are sending out false information or data, when trying to mine the next block.
Eventually all nodes will keep all the reputation scores and transactions listed going into the next block, this will then also be cross-referenced with all other nodes, to reach consensus. On amounts and accounts to or from transactions, there cannot be any deviation. If the node does not have the same Ledger as 51% of the rest of the network. It will be discarded as faulty input node and the block mining will follow up to the next in line winner of the proof of transit-protocol.
On reputation score, distance, direction travelled, there will be a larger fault tolerance applied. The accuracy of the network will result in a dynamic fault tolerance, depending on a list of variables that can affect radio waves or transmission of location. Examples are; range of measuring distance, amount of nodes set-up, amount of oracles, weather, ...

Proof of stake

The Proof of stake part will be used with a VRF 5 as many other POS-chains use, it will attribute for a minimum of 25% in node selection, to incentive the staking element the more is staked on a node the more chance the function will select this node.
There will be a maximum amount being able to stake on 1 LoRa gateway Node, it will be possible to link nodes and multi-mine a block meaning that the different LoRa Nodes will be able to co-operate into mining a block. the network will then set different nodes as one validation miner. The proof of stake amount divided over the different nodes will be aggregated to help win the block reward, Similar to a mining pool. Also the truthfulness of the nodes registering Proof of Transit will be aggregated. the network will see these values as if it was sent out by 1 node and use this to calculate the difference with other nodes, this will discourage the validator in trying to spoof the network with false data. The block reward that correlates to the total amount staked must be higher than the amount of block reward received through proof of transit; the cost of the locks adding to this calculation.
This means that sending out false data to spoof Proof of Transit will not result in higher income than normal staking on the network.
It will be foremostly used when there is no data that provides to have "Proof of Transit" or the data is not within the 90% range throughout the network. In the starting days of the network there will be gaps of no users using the service and node selection cannot be done on the

base of Proof of Transit. If each city or wide area will be allocated it's own side-chain, then there will be also gaps that during the night nobody is utilizing the vehicles. the network will set dynamically a margin to how much is attributed to Proof of stake and Proof of Transit

Dynamic Block Reward

Inflation of the network will be set dynamically between 2% and 10%, of this is the total amount of (M)ERA tokens that will be generated during a year. The distribution of these tokens will happen through block rewards. the amount of tokens received as block reward will depend on the inflation rate set in that year; this will be adjusted every 52000 blocks to be divided over the next 52000 blocks.
The validator earns for the proof of transit part; 35% of the block reward, 30% will go to the bikers having used a validated lock by this validator, 30% to the supporters and 5% to the producer of the lock. This means that the block reward will encourage validators to have multiple accounts but also multiple LoRa Gateway nodes. These dynamic block rewards per group/class can be adjusted in the rate of maximum +-2.5% difference in distribution, every 52000 blocks, through the voting mechanism.

The Multifunctional Lock

Mechanical Design

The lock will be designed by our mechanical engineering and design department. The casing of the lock and the mechanical parts inside, will first be prototyped by the foundation. There will be extensive field-testing with different designs, to ensure quality standards can be set. This will be a continuous effort by the mechanical engineering and design team of the foundation. Keeping the Bikera standards up to date with new innovations in production technology. The design itself will be available for download on the website.

Lean manufacturing

For the part of lean manufacturing, the design needs to be optimized for 3D printing the lock or a certain amount of parts, at home or a distant location. The supply chain can be cut out because the model will be able to be printed directly from an advanced 3D printer which only uses crude rudimentary resources like powdered plastic and metal that can also be used for other projects producing a minimal amount of waste.
The housing will need to be big enough to accomodate updates of PCB boards, if in the future an expansion of size in pcb or batteries is desired.

During the first stages of development a lot of time and resources will go into defining how to set quality standards. This process of trial and error will be posted on the website and a community subthread so the community can follow up on the efforts of the team and they themselves can add to the research and development. Having multiple lock designs being tested by users who print mostly the mechanical parts themselves will give a lot of raw data to be used in the continuous improvement. This is according to the standards of OPEN hardware.

Standards

Certain standards and milestones will be logged in the bikera chain. So that the standards and design specs on which Bikera expects to have a lock build, as the design of the lock will be freely available to anyone using the network utilizing an internet connection. This to ensure transparency and open source of the project, immutable and always accessible everywhere in the world, as the network grows.

PCB design

The wiring diagram will be maintained by the foundation and it's members. Official wiring diagrams of the PCB will have its own hash protected verification delivered as an on-chain notice and available for download from GitHub.

First iteration will be concluded and trial tested with the necessary lock. This will take place during the test and prototyping phase as described in our roadmap.

There can be multiple versions of PCB design, some having extra functions beyond the basic functionality the foundation describes on the website; bikera.org. Every version will need to be backwards compatible, with new versions of the Blockchain. After a certain amount of time some of the old locks will be phased out of the blockchain, if security can not be guaranteed. Using the app or the wallet bikers and supporters will be notified of the exclusion of a lock depending on the version of the lock or the outdated hardware that is installed on it. This will also be notified in our blog and on the website.

Low power MCU's will be used to reduce the power usage of the lock. Onboard a powerpack of 18650 batteries will be implemented, extension packs can be designed and by third parties.

Connection with the lock will be over BLE or a NFC-docking pad. During testing phase the usage of either will be determined by longevity, battery consumption and user friendliness.

A solenoid or a small motor will lock the lock mechanically, which will be prefered will again be looked at during testing phase of the design and prototype.

Programming

The onboard MCU will be programmed with a program written in the language of that MCU. This might be a port from a language like python or C++. The ongoing development of the program is made public on the Bikera GitHub page. The development will be a community driven effort, and the foundation will set funds available for the bounties put out during hack-a-thons, or other bug hunting moments. Contributors of the code will be rewarded with MERA tokens.

The GitHub page will be the go-to for all the written code. These will be version based added over time to a functional product. Most of the testing will concur before the official release of

a working design. The Bikera foundation will maintain the programming of the locks as well as the GitHub page.

Lock quality verification and commissioning

The lock is real and verified if it has our project's own blockchain proven account/address on it. The addresses generated are given to certified production facilities. The lock needs to be validated in the blockchain by a validator who will do a checkup of the lock by connecting with it and have a diagnostic scan run on the device, this to prove it meets the specifications and requirements and hasn't been tampered with or damaged during all transports in the supply chain. Installed according to guidelines of the foundation. From the moment a validator links with the lock and the inspection leaves a positive feedback, the lock a visible Proof of Quality Installation emblem when looking it's address up in the blockchain.

There will need to be regular and surprise inspections of the locks to guarantee the lock is still untampered with and still meets the Bikera quality standards. These will be concluded by the validators.

Voting and the decentralised autonomous organisation (DAO)

The Bikera network will be a a community effort that will. The reputation points given to te bikers and all other involved parties will adress the voting weight of these parties. These votes will in turn be used to guide the network in the direction the users and involved parties want the network to go.
For example: Amount of points needed for a ban, a downgrade as validator, or supporter. will be reviewed by public votes by the biker's themselves, and only the ones that have proven to have ridden within the last 3 months will be liable for voting that week. This will be able to be detected by the blockchain, hence only a certain amount will actually be added to the system of Proof of Transit. Having to use muscle power on these vehicles and having those who are actually using this muscle power to validate transactions means; that only the "real" bikers adding muscle power to this system, can vote so if any big company would want to maliciously try to win votes; they will need the bikers support. 10% will be input by the foundation 30% by the stakers (this might involve governments or corporations). But the blockchain will imply a certain by the people, for the people rule-set. validator can the supporters chosen public address to this lock. The lock will be developed during the start-up of this project. The lock will be firstly made by in-house development but eventually anyone with production capabilities should be able to reproduce this lock. This will help the ecosystem by delivering sharp priced locks with decent quality, the reputation mechanism will keep these quality standards high. Any vendor will be able to participate, these vendors will get scores from the supporters. Having a certain bad reputation, directly submitted by the users of the locks, will give a ban of adding locks to the blockchain from a certain production facility. This will also mean a certain return of funds that will be cut, the address will stop receiving the block rewards that are distributed by the network to certain locks for mining a new block.

Bikera tokenomics

The MERA is the main token on which the Bikera economy will be revolving. These tokens will be used to form the contracts with the m

Bikera implementation and roadmap