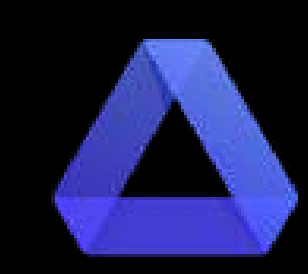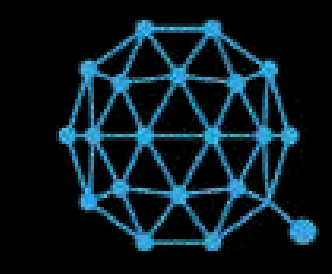**M MTC·MESH**

MTC MESH NETWORK FOR IOT

MTC. THE DECENTRALIZED MESH NETWORK BEEN USED TO
CONNECT BETWEEN MACHINES

Now, this will be REVERSED!

MTC MESH NETWORK

MTC Mesh Network connects one machine with another in the IoT. It is a decentralized network protocol, with its correspondence being conducted by mutual data exchange between communication modules installed in these machines, like BLE and Wifi. In the Mesh Network, every machine, such as mobile phone, refrigerator, automobile, POS and robot, can be a node. And these nodes could communicate with each other without the traditional internet, because MTC is a totally-decentralized Mesh Network protocol.

For blockchain network and IoT of the next generation, MTC Mesh Network performs as the basic internet infrastructure. That is, once MTC Mesh Network is built, all blockchain projects and IoT machines can exchange information and make transactions rapidly and conveniently in condition of no internet.

MTC can support all blockchain projects, such as Bitcoin, Ethereu, EOS, Qtum and Achain, to circulate in a safe and fast way, and even there has no internet. Also, MTC can support IoT equipment in transferring data. In this way, network congestion caused by large qualities of transactions would have been solved, and expensive private network ,such as Lora and NB-IOT, is no longer needed for the IoT equipment, in this way,80% of the cost for the construction of IoT will be saved.In short, it will become the mainstream network for decentralized near field communication and IoT in the future.
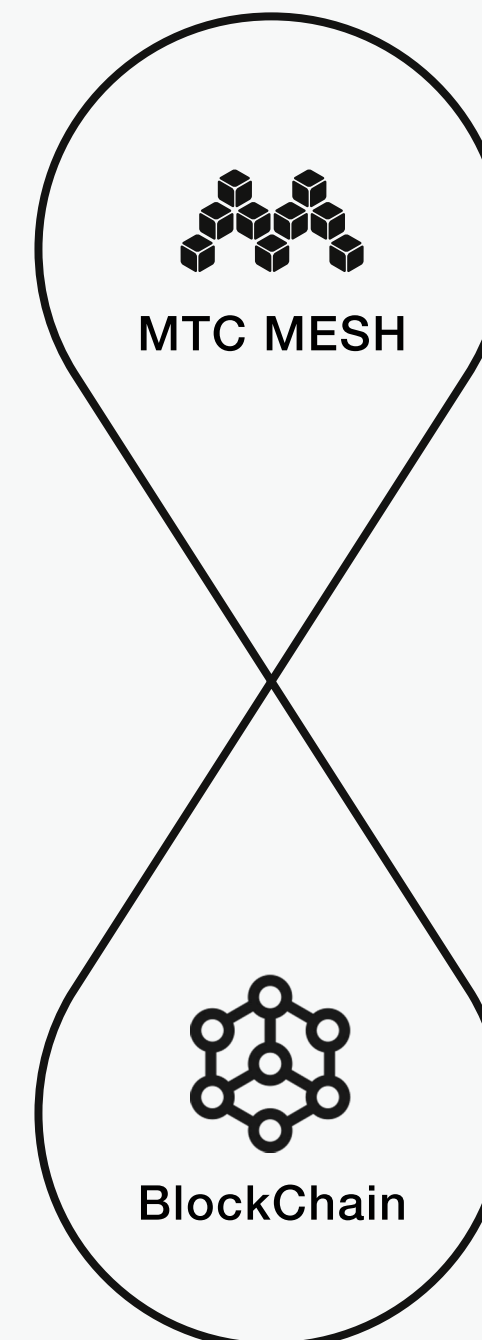
MTC MESH+ BlockChain

Mesh Network, namely wireless mesh network. It is a multi-pop network evolves from ad hoc network. Mesh Network is also one of the vital technologies to address the "last mile" logistics problem. In the process of developing a new network, wireless is indispensable. Wireless mesh network, a dynamic self-organized net-working structure which can be expanded gradually, can achieve cooperative communi-cation with other networks, enabling two or multiple devices to maintain wireless connection.

Mesh network is currently applied in occasions where the network environment is complicated and near field communications are needed, such as underground parking lot, mine field, disaster rescue and relief and the IoT controlling.

Combining the decentralized blockchain network protocol with the decentralized infrastructure of Mesh networking technology will promote the birth of a new underlying communication protocol and the communication protocol of IoT.

MTC MESH

BlockChain

At present, the combination of blockchain and Mesh network are mainly used by four projects globally, namely Smart Mesh, Right Mesh, Nodle Team and our MTC Mesh Network. And in these projects, Mesh network are mainly applied by two forms.

One is the offline communication between different mobile phones, such as chatting, playing game, blockchain payment. Typical projects are Smart Mesh and Right Mesh.

The other is specialized communication network for the IoT, such as data collection of IoT devices and near field offline payment. Typical projects are Nodle and MTC.
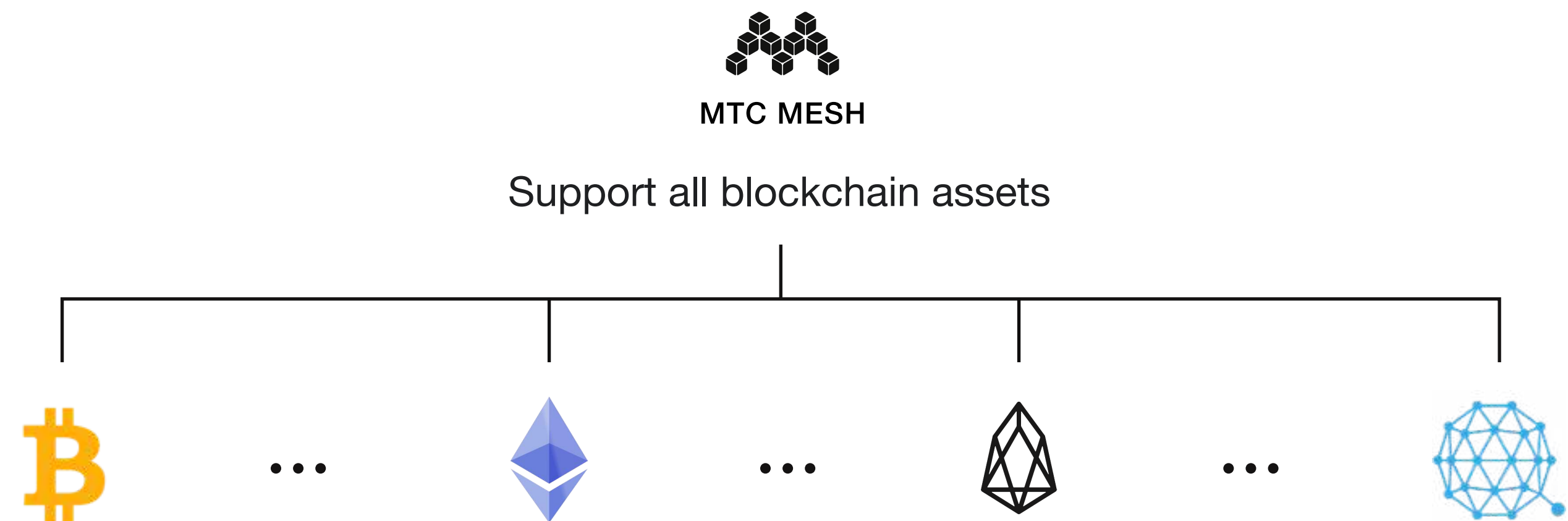
Smart Mesh, an ethereum-based application, can support all offline transactions and offline commu-nication protocol by transacting ERC20 Tokens. And it charges certain amount of SMT tokens as commission while helps clients who possess ERC20 assets with offline transactions.

Afterwards, Smart Mesh introduced Mesh Box as one offline node and issued a new type of token to support the Mesh network, enabling clients to build distributed node system and conduct bitcoin mining through Mesh Box.
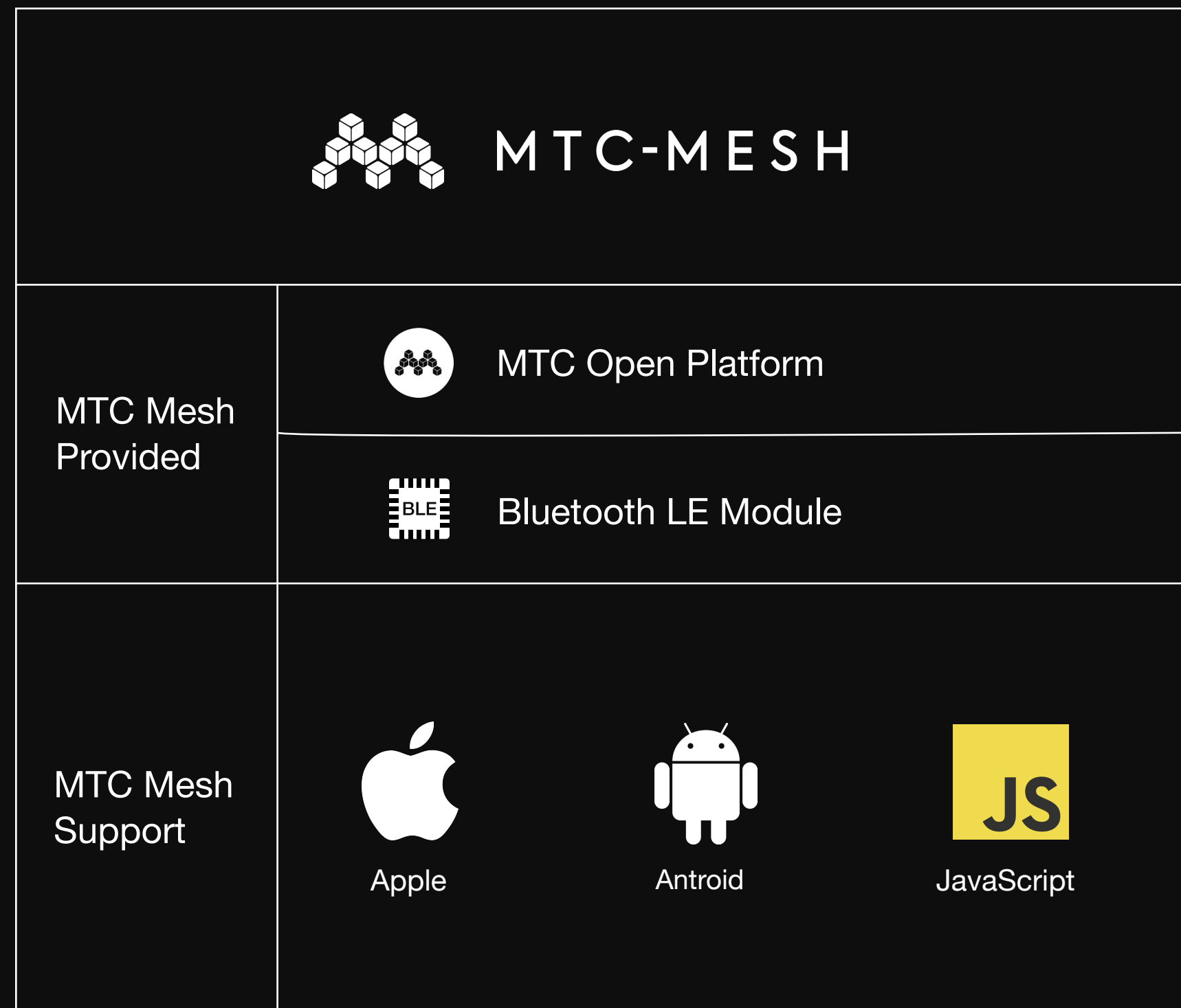
MTC Mesh Network develops our own block-chain Main network to address problems like low transaction speed in ethereum-based network and costly commission.MTC Mesh Network supports nearly all of blockchain assets, such as BTC, ETH, EOS and QTUM to go on the offline transaction.

The tokens in the main internet of MTC make it possible to go on offline transactions with no charge.This function aims to help the IoT devices to build fundamental Mesh network to replace the existing costly Wide-area network stations, like Lora and NB-IOT, etc.In this way, clients can be rewarded with MTC tokens due to sharing their own cell phones to provide network support to IoT devices.

Network communication expenditure will be cut by 80% per year if the MTC Mesh network is used. MTC, apart from providing Mesh communication for IoT devices, also launches services of Mesh Station for IoT enterprises. These services include storing data,building Mesh network nodes as well as enable these nodes to conduct transactions in the MTC system.Clients can build the Mesh Station to maintain the security of MTC network and earn MTC Tokens by sharing data storage space.

MTC MESH

Support all blockchain assets

MTC MESH NETWORK OPEN FLATFORM

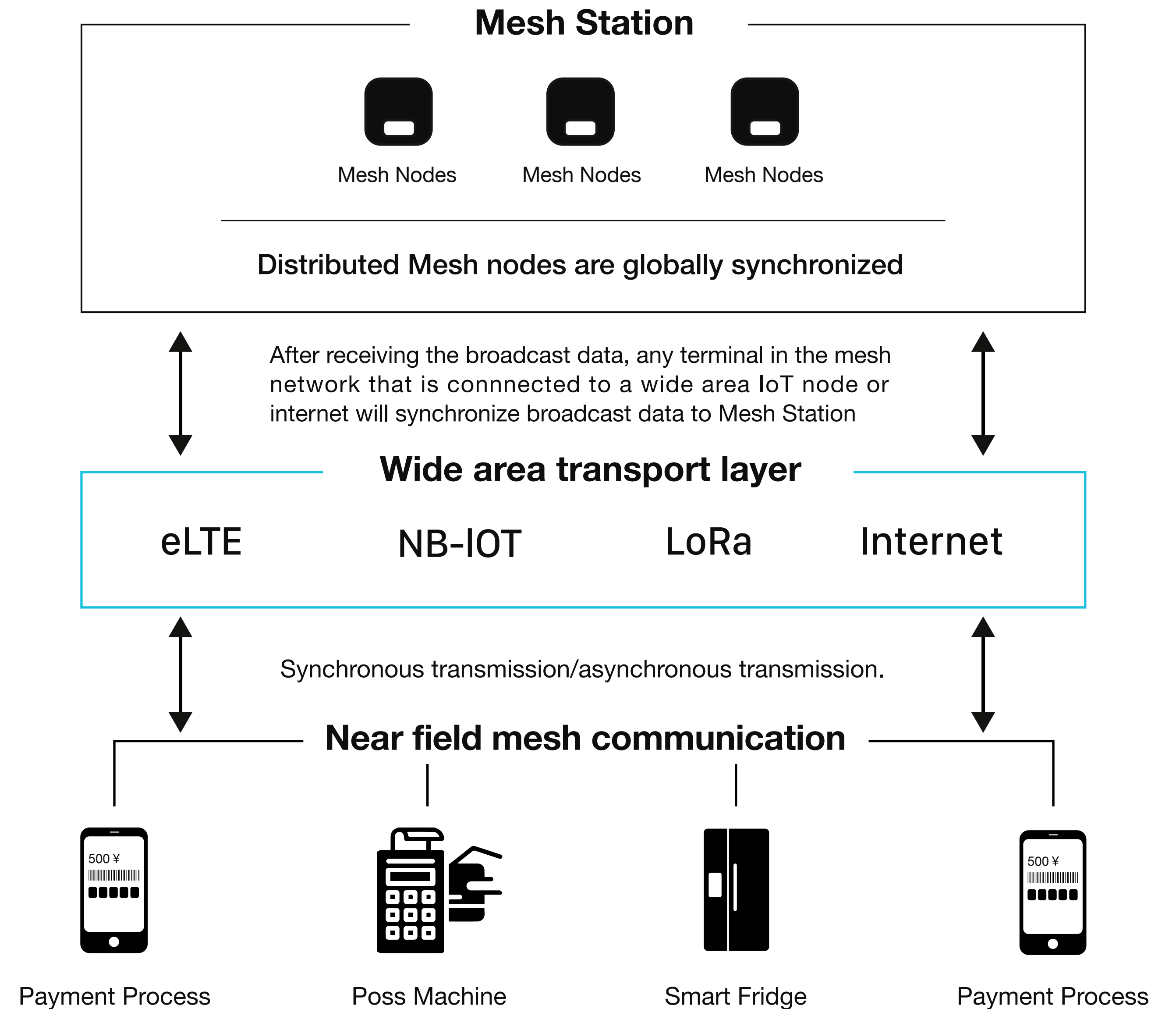|			
MTC·MESH			
MTC Mesh Provided	MTC Open Platform		
	Bluetooth LE Module		
MTC Mesh Support	Apple	Antroid	JavaScript

MTC, a totally open-source project, can support various systems, such as IOS, Android and JS, getting access to MTC network protocol quickly.It can also provide lots of API instances, so that your intelligent devices can enjoy the function of near field comm-unication brought by Mesh network in just 5 minutes. This can be used in the situation of offline internet chat, near-field interaction, blockchain wallet, wisdom city, indoor localization, near-field offline payment as well as IoT control system. All the applications basing on MTC ecosphere have formed a dote-to-dote Mesh network.

Our core operation team participated similar IoT open platform projects before and attracted almost 10, 000 users.In this case, we can take advantages of existing technologies and resources, and MTC funding will constantly develop the MTC network protocol to a deeper level. In the future three years, we aim to cooperate with 50,000 apps and cover more than 1 billion users.
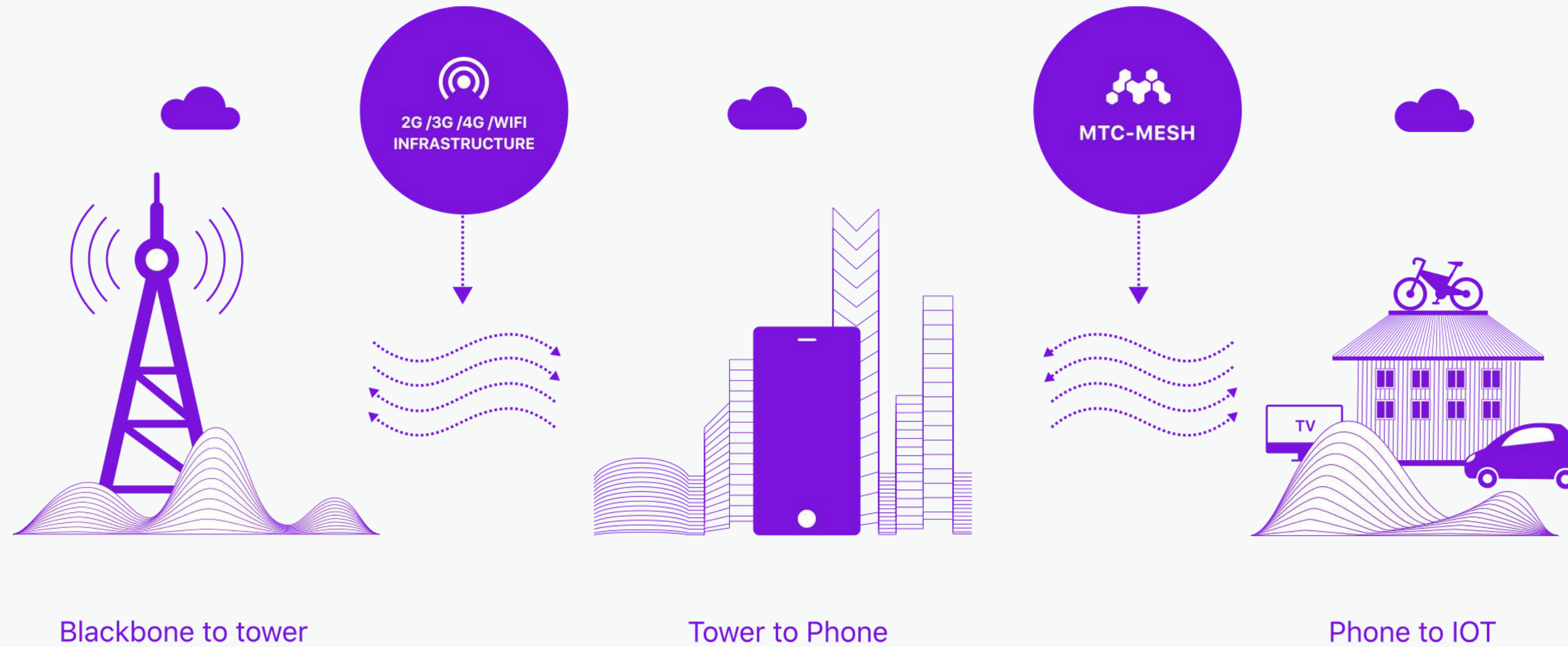
MTC MESH NETWORK ARCHITECTURE

Conveying data from the Mesh Ad-Hoc Network through bluetooth or Wi-Fi of each IoT terminal , MTC network can convey information to all IoT terminals under the environment of BLE, with one single bluetooth covering about 164 feet (Wi-Fi 328 feet), and it can extend the internet cover range unlimitedly through node-to-node information exchange.In this way, one-to-multiple terminal communication can be realized even when there is no public network.

That is to say, if any device in the Mesh network had the opportunity to get access to public network, it will convey all data to Mesh station and synchronize all data to the Mesh network system. In this unlimited-extending network, you can make mobile payment, play on-line games, chat with others with no internet , conduct IoT communication, etc.
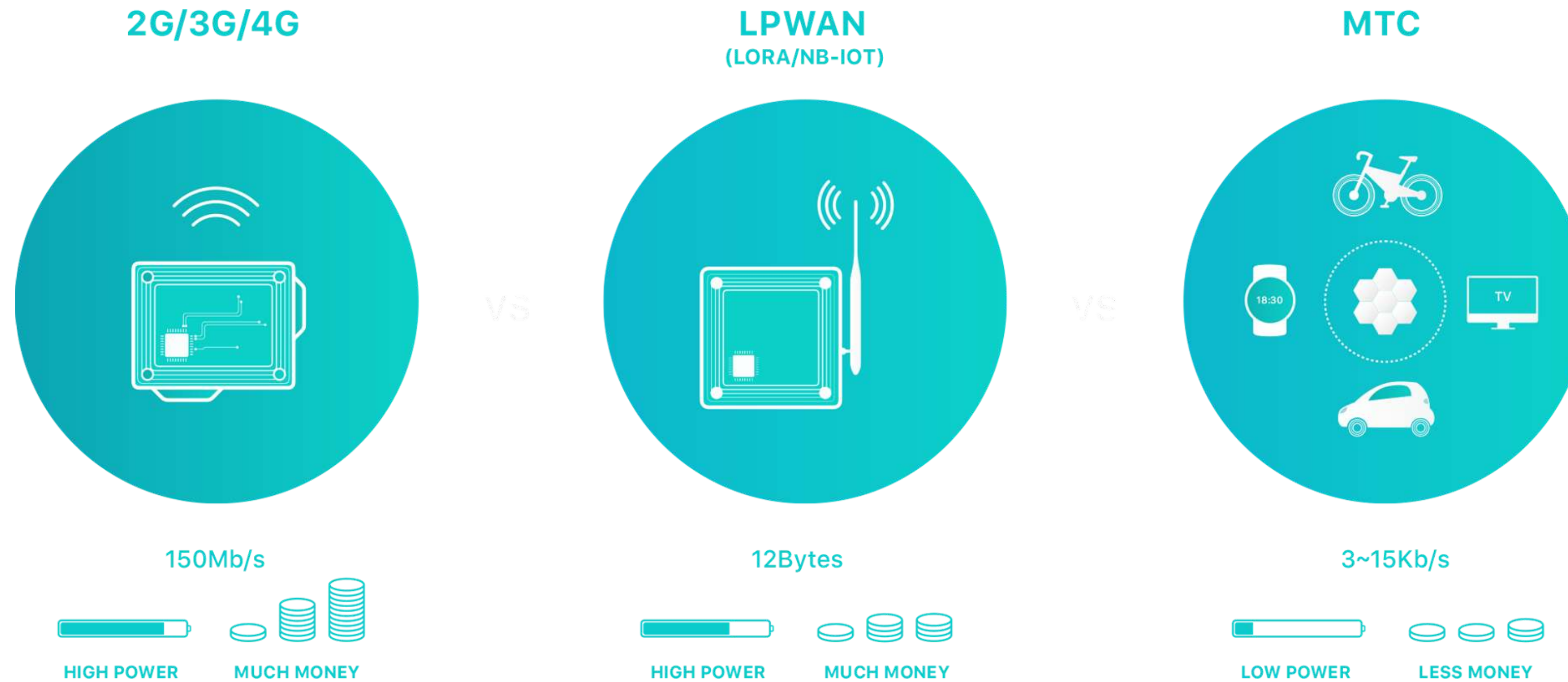
Mesh Station

Mesh Nodes   Mesh Nodes   Mesh Nodes

Distributed Mesh nodes are globally synchronized

After receiving the broadcast data, any terminal in the mesh network that is connnected to a wide area IoT node or internet will synchronize broadcast data to Mesh Station

Wide area transport layer

eLTE   NB-IOT   LoRa   Internet

Synchronous transmission/asynchronous transmission.

Near field mesh communication

Payment Process   Poss Machine   Smart Fridge   Payment Process

500 ¥   500 ¥

HOW DOES MTC MESH WORK

2G /3G /4G /WIFI INFRASTRUCTURE

MTC-MESH

Blackbone to tower

Tower to Phone

Phone to IOT

TV

MTC Mesh Network is a kind of network connects one machine with another in the IoT. Through MTC Mesh network and the BLE module, the equipments in the IoT transmit signal to users' phone, and then users' phone can transfer these data to nearby base station. This network delivers global coverage with low cost and low energy consumption. MTC Mesh network is superior to both Cellular and LPWan connectivity for IoT devices.

COMPARISON OF IOT EQUIPMENT NETWORKING

2G/3G/4G

LPWAN
(LORA/NB-IOT)

MTC

vs

vs

150Mb/s

12Bytes

3~15Kb/s

HIGH POWER MUCH MONEY

HIGH POWER MUCH MONEY

LOW POWER LESS MONEY

Low cost connectivity

MTC uses existing
infrastructure toconnect Bluetooth
devices to cloud

Low energy consumption

Using the BLE Mesh module,
the consumption of MTC is just a
fraction of that of SIM.

Ease of APP developers

SDK lets you monetize
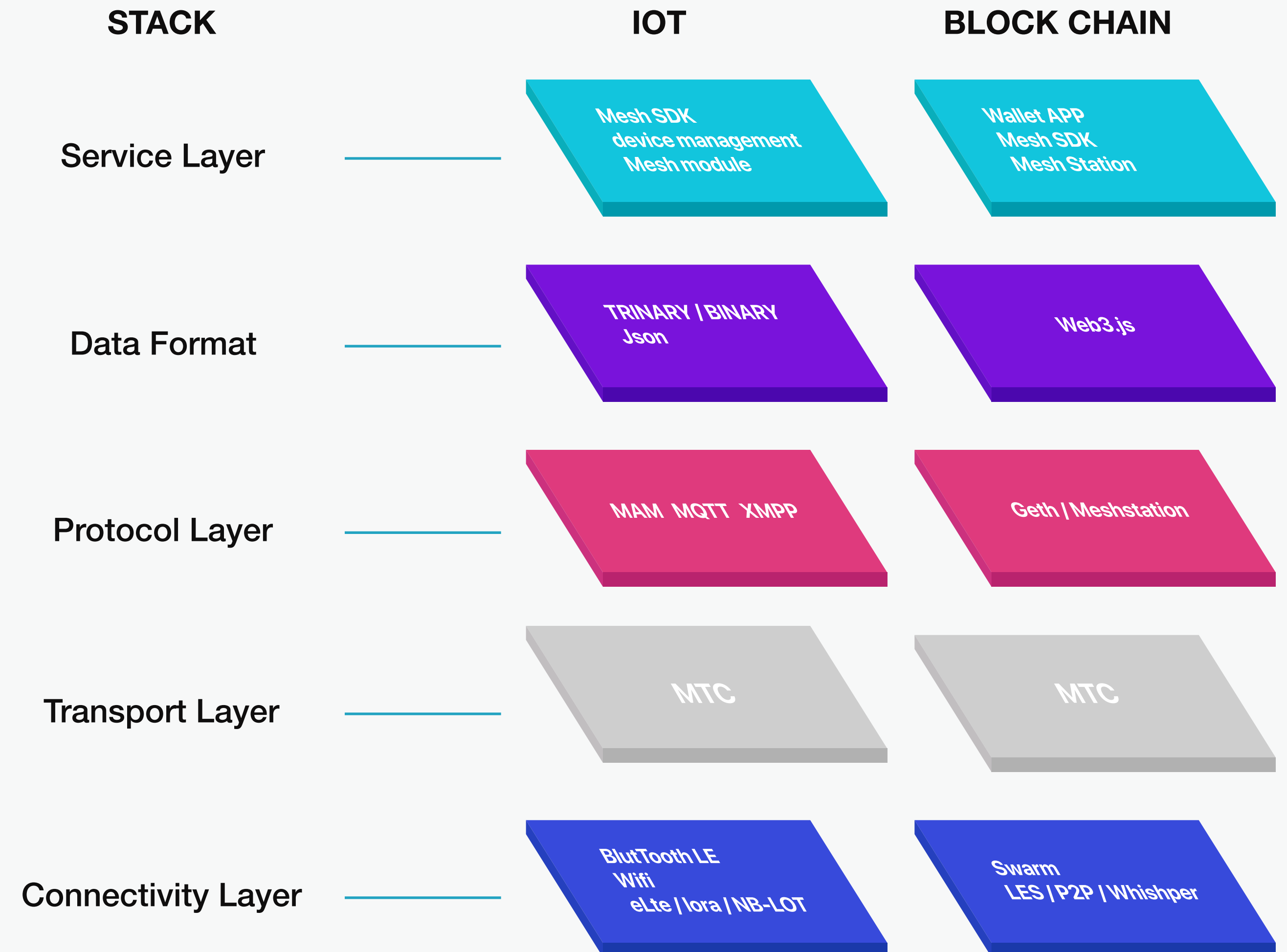your software infrastructure using
standard apppermissions

Ease of Implementation

Uses standard Bluetooth
modules, making it easy for any LoT
device toconnect to our network

MTC MESH NETWORK IOT

MTC is a node-to-node network with unlimited-extending distribute ledger blockchain.Unlike the traditional blockchain network whose communication data is often blocked because of limited size of blocks, Its massive sub-nodes can guarantee rapid communication and off-chain trans-actions. Meanwhile, MTC encourages individual users to share network nodes with other IoT devices by awarding them MTC Tokens, addressing problems like connecting internet and data storage.

One-to multiple Mesh network at the bottom-layer of the near field Mesh communication is based on many protocols like BEL and WiFi. With the increase of Mesh Station which is organized by distributed nodes, MTC Mesh network will become better and better. It is compatible with IoT sensors and other mainstream blockchain network like Bitcoin, Eth, Eos and Ae.Eventually ,it will build a fundamental network protocol for the IoT sector.

STACK	IOT	BLOCK CHAIN
Service Layer	Mesh SDK device management Mesh module	Wallet APP Mesh SDK Mesh Station
Data Format	TRINARY	BINARY Json	Web3.js
Protocol Layer	MAM MQTT XMPP	Geth	Meshstation
Transport Layer	MTC	MTC
Connectivity Layer	BlutTooth LE Wifi eLte	lora	NB-LOT	Swarm LES	P2P	Whishper

MTC MESH NETWORK IOT NODE

Linking every intelligent devices with MTC Mesh network to form a new basic network.Not only the smartphone can be a node, but also all the other intelligent devices around us can be nodes.

MTC MESH TOKEN and MTC MESH NETWORK

First of all, MTC Mesh Token adopts a smart contract based on ERC20 tokens, which can be short for MTC. Ethereum is a open-source blockchain platform with public distributed blockchain.It provides a distributed Turing completeness virtual machine to support the operation of the smart contract. MTC aims to motivate MTC node users or producers to purchase services in the MTC system. For example, the IoT enterprises can use the MTC network to link their IoT devices, so that these devices can communicate with each other. Clients will be rewarded with MTC tokens if they link their smartphones or Mesh Station nodes with the Mesh network. The longer users link with Mesh network, the more MTC tokens they will get.

MTC main network token will take the place of ERC20 Token which is based on Ethereum after MTC main network goes online.MTC main network adopts a distributed way which is guaranteed by POS Proof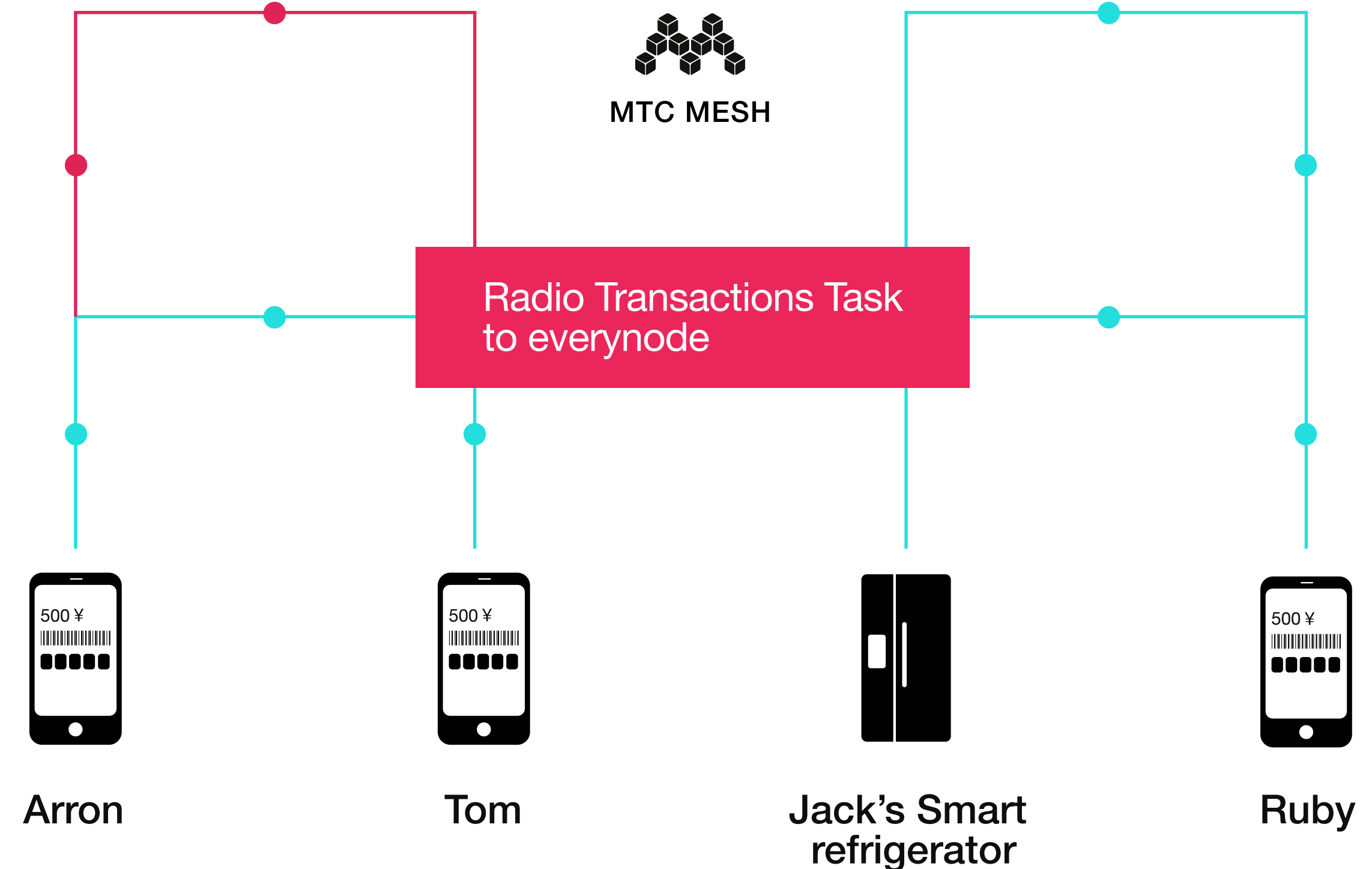 of Stake, so that users are able to set Mesh Station in the MTC network to protect the security of the whole network. What's more, every Mesh Station can share its own network and data storage with other users ,and in this way , users can earn MTC tokens through offering data storage to IoT enterprises.

MTC mesh main network can support transaction of over 10,000 TPS and any payment with MTC tokens is free of Gas charge.For example,Arron pays Bob 5 MTC and Bob will receive 5 MTC.This means the MTC platform charges no penny in the process of transactions.The reason for that is because users have already earned profitable MTC tokens by sharing their network and storage space while they develop the POS Mesh Station.Since the Mesh Station comes with POS Proof of Stake, users do not need to build extra stations for MTC network.In addition, the fact that Mesh Station comes with BEL modules enables users to earn MTC tokens through collecting data of various IoT devices and reporting to IoT enterprises.

MTC OFFLINE ELECTRONIC PAYMENT

Living in an era when mobile payment is prevailing, any third-party payment platforms can not provide payment services normally when the internet is cut off or the signal is weak. However, MTC makes the offline payment become reality for the first time.

At first, MTC offline payment will confirm the transaction quickly through Mesh Nodes. And then, it will use the MTC Mesh network to convey transaction data synchronously to offline nodes. MTC users can transfer their signed encrypted transaction information by the bluetooth in cellphones or Wi-Fi, make offline payment and confirming payment by any node who is access to the Internet to synchronize data in Mesh Node.

MTC MESH

Radio Transactions Task to everynode

500 ¥

500 ¥

500 ¥

Arron

Tom

Jack's Smart refrigerator

Ruby

I.E.

At the beginning, Arron and Tom build a communication channel on the internet by using MTC Apps or blockchain wallets which are linking the MTC network and pledge a certain capital respectively. In the environment of offline, users can make use of MTC, BTC, ETH and other blockchain assets to make payment.

Arron/Tom/Jack's refrigerator/Ruby builds an offline Mesh network by MTC App.

Arron Payed 5 Tokens to Tom.

Arron transmit the transaction information which is encrypted by signature to the whole Mesh network and all the four parties will store the encrypted transaction data.

Once the Internet is available or any node links to the Internet, it will synchronize the cryptographic transaction information to all Mesh Nodes, and then transaction data will be verified and completed.

Mesh Node is a distributed node supporting all blockchain network, and it is similar to the Lightning Network of Bitcion and Rainden Network of Ethereum. It functions as guaranty and it enables clients to conduct timely micropayment. If Arron cheated others, the tokens he has pledged at the Mesh Node will be deducted and given to Tom.

Mesh Node is totally neutral. It supports almost all mainstream like Bitcoin, Eth, Eod and AE, performing as the public node.

When Arron and Tom conduct offline transactions, all the four parties will store the encrypted transaction information. And once the internet is available, any party can make synchronical verification of the data to guarantee security and prevent the data from being tampered.

MTC NEAR FIELD NON SENSE PAYMENT

MTC network helps IoT enterprises, such as vending machine and sharable charger to conduct transactions without internet, in this case, costs on communication and communication module, for example, WIFI and 4G, will be saved. It can verify the validity of the payment through the user's phone and send back the authentication information to the IoT terminal offline.

Near-field Internet of Things (IoT) aware payment without or with network

If you have reserved the goods in advance, and the payment App has used the MTC Mesh network, your cellphone will auto-wake-up and remind you that you have arrived the target location when you are at the target location. Your real-time position will be displayed on the terminal of the corresponding shop, and then they will deliver your goods to you.
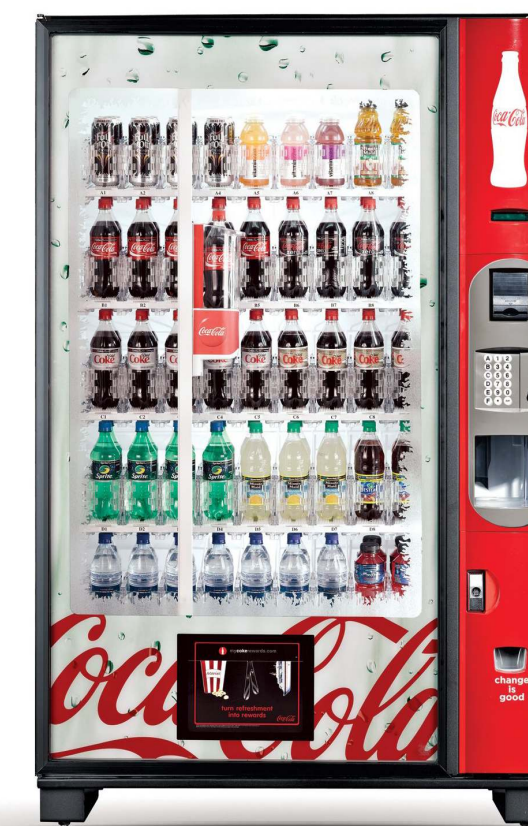
MTC INTERNET OF THINGS

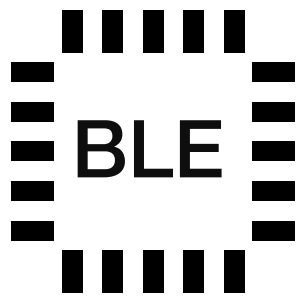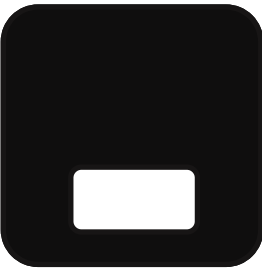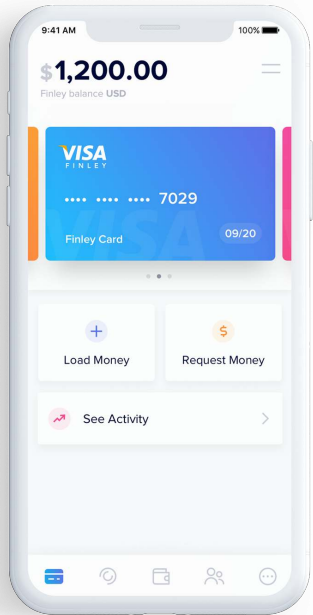**Sharing Mesh Network Resources With Iot To Earn MTC Tokens**

In reality, a large number of IoT devices require network and LBS information to support them, such as electricity, gas, shared bikes, anti-lost alarm, smart trash can and street lamp. They pay tens of millions money per year to get online communication services. In the future, IoT industry will save more than half of the online communication fees once MTC sharing Mesh network is applied.

MTC Mesh network can provide Mesh network for low-power anti-lost devices for children.

Traditional anti-lost devices for children are poor in its localization technology and can only be used outdoors. Due to its high power consumption feature, the data updated in every ten minutes can only be used in less than one week. After companies adopting MTC Mesh network, they will get access to almost real-time outdoor and indoor geographical location information. Besides, it has more than half a year's service life with the MTC Mesh low power consumption chip.
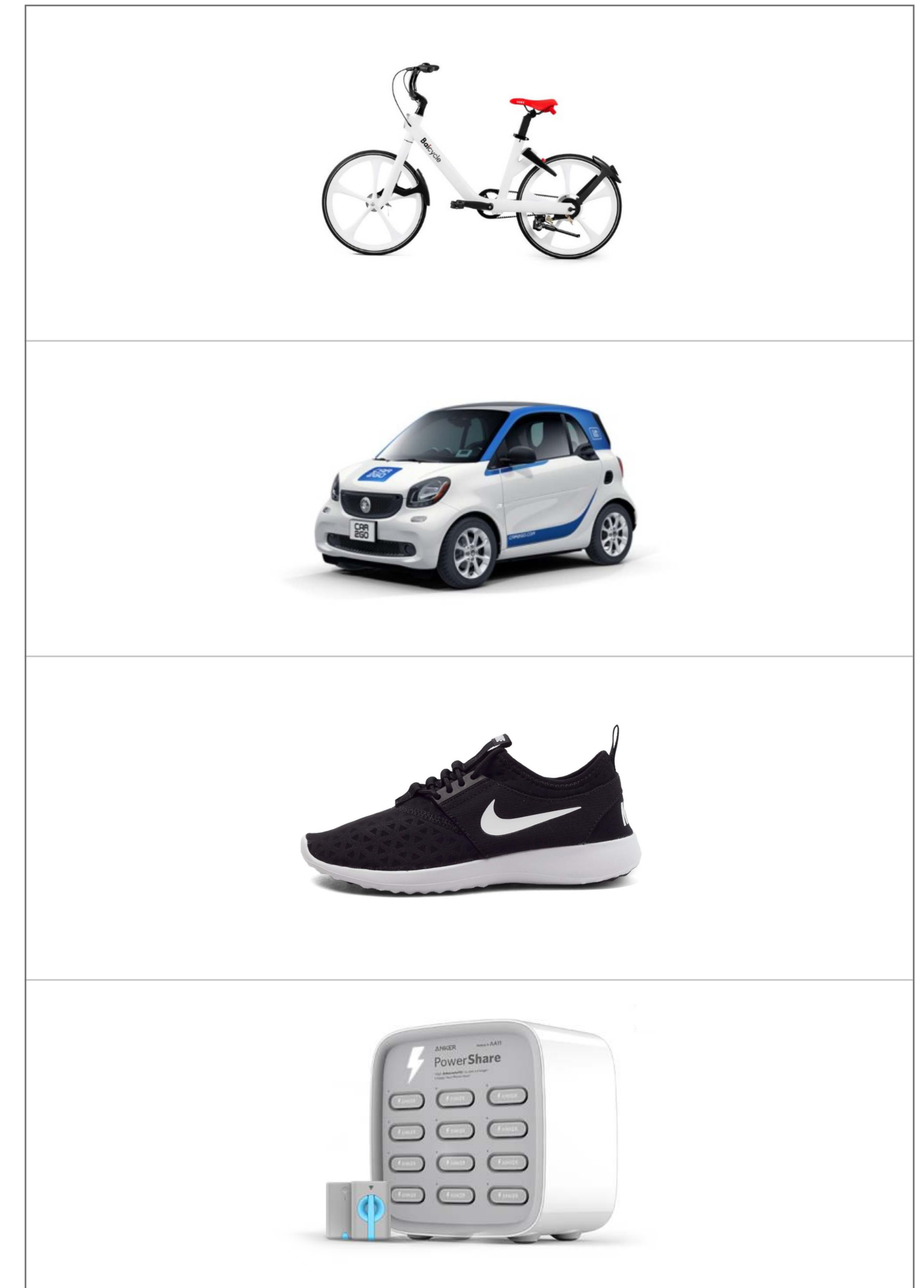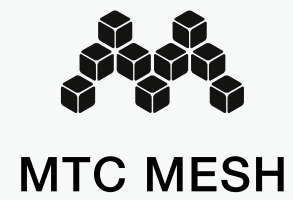
MTC PRODUCT

Bluetooth LE Mesh module

Through sharing Mesh nodes, BLE Mesh module can help IoT enterprises build a low-cost and efficient decentralized IoT netwrok.

Mesh Station

You can use the Mesh Station to deploya Mesh node base Station in the scene, and obtain the MTC token by the baseStation's P2P payment or data

SDK for App developer

Providing Mesh network SDK for all kinds of App.It only takes 5 minutes for developers to connect Mesh network.Contributing network nodes ,so to achieve national Mesh mining Providing fast trade API for Exchanges and wallets outside of the chain.

Bluetooth LE Mesh module for IoT enterprises

By sharing Mesh nodes, it can help IoT enterprises build a state -of -the art IoT network with high efficiency and low cost.

MTC BUSINESS MODEL

MTC Token Allocation

MTC team will release MTC token based on ERC20 token standard at first. The total amount will be 1 billion. MTC token will be the MTC network token after the MTC main network starts running.
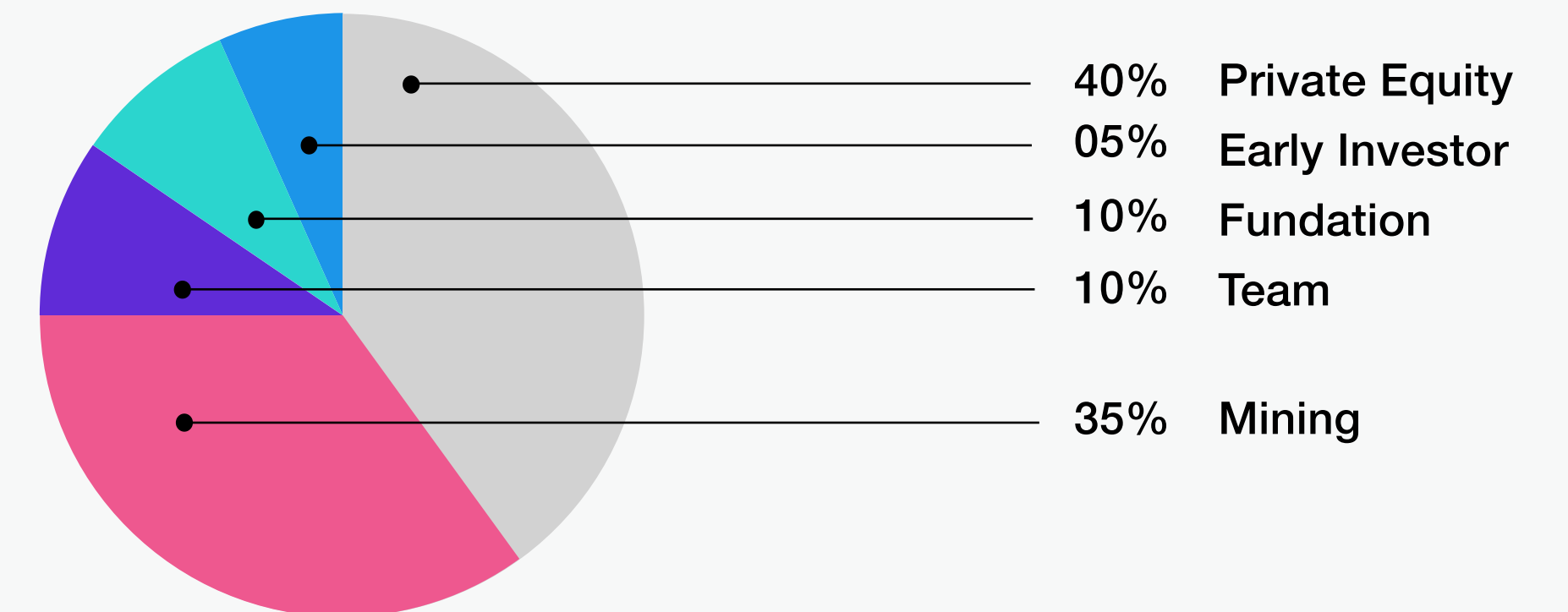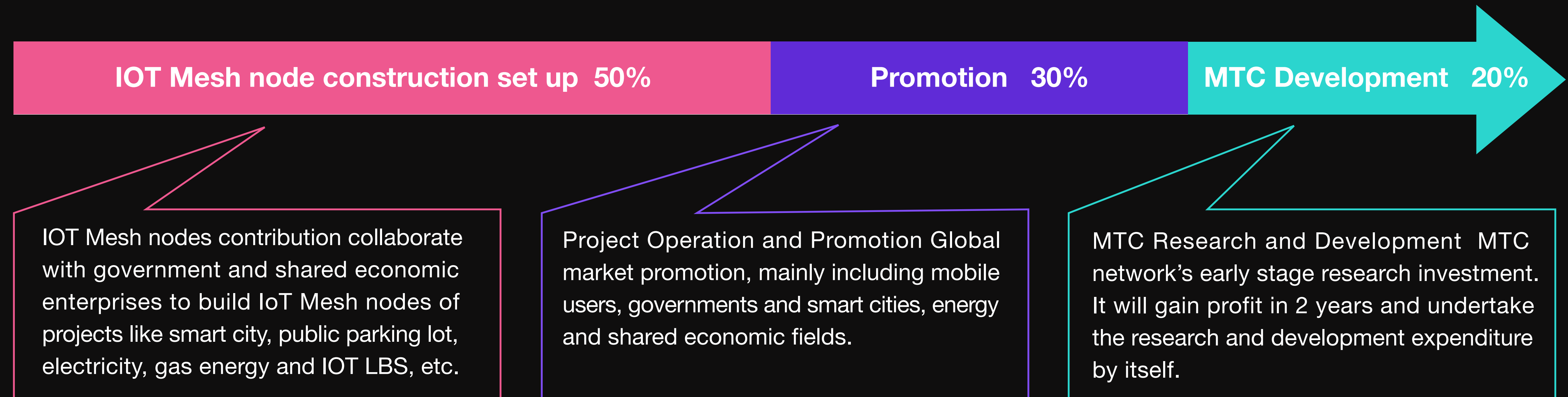
MTC MESH

Users need to have MTC in order to make offline Mesh trade if they planned to pay with virtual coins besides MTC tokens. It will charge a certain amount of MTC as Gas and reward it to miners, but if uses pay with MTC, there would be no charge.

IoT enterprise users must use MTC Token to buy the right of using Mesh network and the distributed data storage service. Big data access and analysis consume MTC Tokens.

40%	Private Equity
05%	Early Investor
10%	Fundation
10%	Team
35%	Mining

Total private placement：40%（400 million MTC tokens）
MTC network sharing node reward：35%（350 million MTC tokens, dunked down every 20 years once every six months）

MTC Team：   10%   （100 million MTC tokens）
foundation：   10%   （100 million MTC tokens）
Early investors： 5%   （50 million MTC tokens ）

In order to keep the project sustainable, MTC has strict restrictions on the lifting the ban of the token possessed by MTC team. The token possessed by the team will be locked for 2 years.

MTC TOKEN USAGE PLAN

IOT Mesh node construction set up 50% | **Promotion   30%** | **MTC Development   20%**

IOT Mesh nodes contribution collaborate with government and shared economic enterprises to build IoT Mesh nodes of projects like smart city, public parking lot, electricity, gas energy and IOT LBS, etc.

Project Operation and Promotion Global market promotion, mainly including mobile users, governments and smart cities, energy and shared economic fields.

MTC Research and Development MTC network's early stage research investment. It will gain profit in 2 years and undertake the research and development expenditure by itself.

MTC TOKEN REWARD RULES


Share Mesh network node

You can share your cellphone network as the Mesh node of the MTC network to win token as reward. The way to calculate reward is: the amount of token possessed by user×the amount of time user possessed the token×the amount of time of cellphone node sharing×the amount of transactions made by your node and the amount of mission reported by IOT data

Mesh Station

You can buy Mesh Station as the ore machine and POS common node in MTC Mesh Network. It adopts the mixed mining mechanism of POS + storage space + networking + Mesh network Sharing, allocating Mesh Station in scenes as a way to get token as reward. Reward calculation method: the amount of token possessed by user×the amount of time user possessed the token×the amount of time online×the storage space occupied×network bandwidth × the amount of payment transactions made in the base station or the amount of mission reported by IOT data.
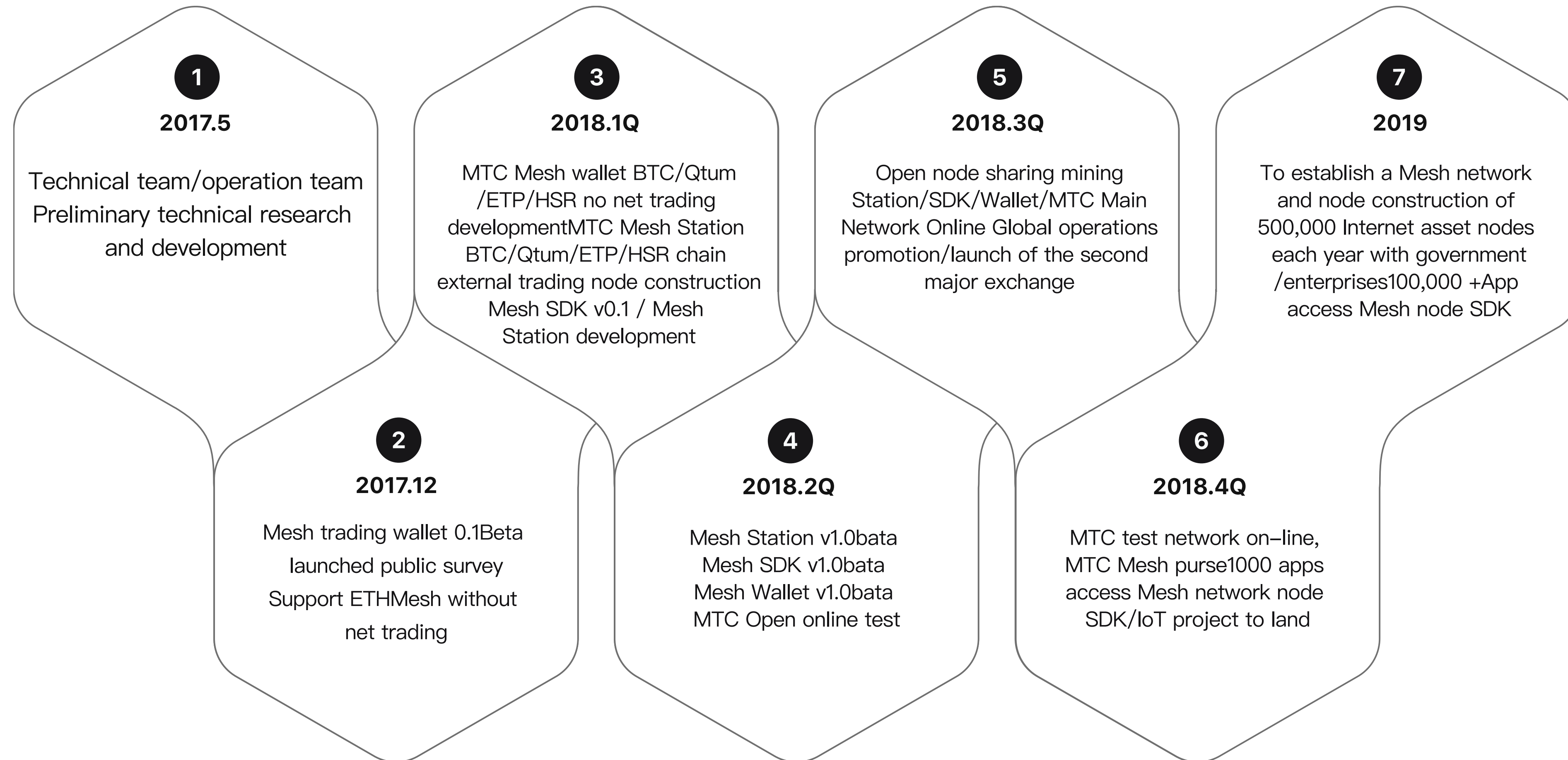
MTC TEAM

Arron Lee

Serial entrepreneur, multiple IOT project financing and successful launch experience ; The founder of the Offdoo technology ; Founder of BrightBeacon technology ;10 years experience in Internet/Internet of things products.

Meng CHili

JCBLE Founder； World leading LPWAN solution team Leader； Worked for China unicom/SICMICRO for 15 years in wireless communication field/IC integrated semiconductor industry.

He Tao

Co-founder of Bright Beacon; Developer of Ethereum Community Forum; Eight-year experience of researching and developing mobile Internet; Participated in over 30 R&D and design projects related to mobile application; Domestic pioneer in developing navidation engine for indoor localization, a technology has been used by over tens thousands of developers; Original technology of BLE Mesh realizes offline communication, with it coverage reaching 200㎡ and control mobile Apps of IOS and Android by remote activation of back-end application through Mesh Network.

Li Shipping

Founder of jcble.com; 15-year experience in research and developing communication protocol, IC and device driver In 2004: Hired by Haier (Beijing) IC Design Co., Ltd. and in charge of the R&D of core chips, IC and devide driver; In 2009: Hired by Thomson (Beijing) Friendly Technology, leader of the R&D team of IC chips; In 2009: Manage of the R&D Department of Chongqing China Silian Instruments and Meters Group; Independently developed Logan ans Lpwan Many patents of LPWAN

Professor.RanPeng

Associate Profess, Master of the University of Manchester; Mainly engage in the research and development of new technologies and devices of intelligent inspection Participated in the 863 Program (National High-tech R&D Program) and major international scientific and technological cooperation projects ; Charged and participated in over 10 research projects all both national and provincial level; Published over 20 pieces of journal articles and obtained over 10 patents ; Completed projects as the pricinpal head, namely the national key industrial projects " Wearable IoT Intelligent Terminal Device" and the crossing research project "On-line Monitoring System of Environmental Information " Products have been accepted and adopted in many industries, like healthcare, education, military and police

Dr.PangYu

Ph.D graduated from the McGill University in 2010;Has been enaged in long-term technical research of photoelectric detecting and Mesh communication of low-power short-range Mainly participated in assembling Chongqing Key Laboratory of "Photoelectric information Detecting and Transmission Technology", orgnizing Chongqing innovation team addressing the development of "Wisdom Healthcare System and Key Technology ", building of Chongqing Postdoctoral Centre and Studios for Chief Experts in Chongqing. Headed 2 research projects of the National Natural Science Foundation, 3 research projects of provincial level and focused on one national specific research project and 3 provincial key projects Published more than 60 SCI/EI academic articles, a monograph, and won more than 10 national invention patents;

INVESTORS

Sun Zheyu

The Co-founder of Coldlar, the academic member of financial science and technology innovation laboratory of Peking University, the vice president of Hongjia Investment, and the well-known angel investor in blockchain who has been interviewed by CCTV and The Guardian.

Ju Xie

Working on full-time research and investment in block chain products from 2013, and is early participants in the bitshares and etheric projects, Bitshares Director, Co-founder of Bit startup, Co-founder of YOYOW project, CEO of WeiQie Information Technology Co., Ltd.

Wang Yajing

Former Global Market Leader of TaiG jailbreak team (the first domestic team of iOS jailbreak), who is now iPIN marketing partner of AI Business cognitive analysis platform.

Liu Changyong

Chairman and co-founder of Taide Caichuang
Co-founder of True-Bit forum；
The popular science author of Digital Currency and Blockchain；Symposiastx and Online forum manager of Babbitt
Doctor of economics, Peking University.
Associate professor, Chongqing Technology and Business University.

Huang Jian

Investor of Blockchain
EMBA, Guanghua School of Management, Peking University
Former Partner of Bitcoin Foundation

THE END

Thank You All

MTC·MESH

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CONNECT BETWEEN MACHINES