mHealthCoin

WHITE PAPER

@2019

Mine, your health!

Providing a free health platform to manage your healthiness with incentives under integration of blockchain

What we believe:

We believe that everyone in the world has to be aware of healthiness himself or herself, no matter how old we are, how fat we are, or even how tall we are. However, in reality, most of the people would be likely aware their health situation until they get sick, serious illness, abnormal state or other forms in terms of "illness" instead of trying to prevent in earlier stage.

Our mission is to provide a platform with more diversified data collected for users to understand the health status by themselves in order to gain some incentives by improving health status or awareness of own healthiness. A widespread ideology of proactive awareness of own health status is our goal of this project.

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Abstract

Abstract

The developing of wearable devices leads closer connectivity between human and health. People can wear the devices all the time to monitor own body status in order to maintain healthier body by doing different kinds of exercises. Hence, we are going to launch a coin regarding close connectivity between people and health under attractive incentive scheme. The more healthiness you are, the more incentive you gain.

Own branded smart wearable devices are launched to collect and monitor health data collected, and provide more specific analysis of body status for users. 24 hours wearing of smart wearable devices is strongly recommended in order to gain as many coins as possible since our devices will be used calories instead of moving times or running steps as a calculation method to gain the reward, so even sleeping, user can consume calories while gain the coin.

Based on the smart wearable devices, this project aims to build an ecosystem that users get benefits from maintaining a healthy body, in addition to being healthy. Our mobile application, connected with the smart wearable devices, collect health information to claim token award from our token store. Users can claim rewards from us and our partners using the token. In later phrase, being healthy becomes a mining activity. mHealthCoin, an ERC-20 compatible coin, is awarded when users keep healthy habits, like drinking water, sleeping well, exercising, with our mobile applications. The coin will be well recognized by different parties internationally as the project advances.

Besides economic benefits, our ecosystem also forms a positive feedback loop on being healthy using state of the art technology stack. All health data from users will be securely stored on blockchain for AI analysis. AI agent analyzes the data and provide each user personalized advice on being healthy. It also finds out the suitable products and services from our partner companies for targeted marketing. A chatbot is also built to answer health related questions from users and provide personal advices. The healthier our users are, the more encouragements and custom benefits they receive.

To make this project happens, different supports are necessary. We will release mHealthCoin to reward our supporters and raise the necessary resources. Details of the project and ICO are discussed in this whitepaper.

Augmented reality game is developed to arouse users to gain rewards by achieving certain missions or competitions among friends or other users. Users can complete specific tasks by certain exercises achieved to gain rewards, and at the same time, the merchants can promote and advertise their products or services to users in order to establish well ecosystem for all parties. The winners of the specific competitions can create new route to attract more users to challenge as a consequence of positive influence to stimulate more users to participate the activities with incentives. Combination of game playing and fitness is the key value of development of augmented reality game.

Background

1 Background

Nowadays, people are willing to be aware of their healthiness because of the technology is all around our daily lives. Technological devices or machines connect closer relationship between human and health.

Some existing cryptocurrencies related to sports or healthiness encounter basic problems that it cannot really monitor the health status under effective way. For example, there is a coin with respect to running, when a user runs every 1,000 steps, the user can gain certain amount of coins.
(source: Sweatcoins- https://technews.tw/2018/01/19/uk-sweatcoin-app/) .

The problem is that user will want to take off their wearable devices after the hard day when they got home as they are feeling too tired. Users will not run at home anymore for mining coin and thus there is no any incentive for them to keep wear devices. Hence, the valuable data cannot be comprehensively collected from the users.

Everybody wants to be and feel healthier, and they believe exercise can make them dream comes true, but not many of them walk the talk. The Global Health Index conducted by A.S. Watson in 2017 — 2018 shows us that one of the biggest barriers to exercising is not having enough time, or having time but feeling too tired by the stresses of daily life to feel like doing it.

The % of people who consider themselves as healthy, and the % of people who self-perceive as knowledgeable on health, are averaged to derive the World Health Index. **France has topped the Health Index**, while Hong Kong ranks at the bottom.

	World Health Index		Global: 66
1.	France	86	
2.	Netherlands	82	
3.	United Kingdom	79	
4.	Philippines	74	
5.	Singapore	72	
6.	Malaysia	69	
7.	Ukraine	64	
8.	China	61	
9.	Thailand	56	
10.	Taiwan	46	
11.	Hong Kong	45	

Base: All respondents (weighted: 32,021K; unweighted: 10,569)
The Health Index (HI) is calculated based on the average of the percentage of respondents who chose either 'Absolutely healthy' or 'Relatively healthy' in Q1, and chose either 'Expert', 'Advanced' or 'Conversant' in Q4.
Q1: Do you consider yourself to be healthy in general?
Q4: How would you rate your own knowledge level on health related matters?

WISE **A.S. Watson Group** 1

To help people jump some of these hurdles to healthier living, we're coming up with ways to make exercise an easy, fun part of users' daily routine, and helping people get over the idea that exercise has to be time-consuming and involve special equipment. When it comes to exercise, the little things add up — and our days are full of opportunities to do them.

The survey found strong links between happiness and overall health and wellbeing. Being healthy does not just pertain to physical wellbeing; it's about feeling good too. In fact, health and happiness are two sides of the same coin.
Therefore, we want to help our user see that it is not necessary for them to put on sports gear in daily life. We want to encourage more people to live healthier, more active lives, and create closer bonds with their favourite health care information through our platform.

1.1 Background of Augmented reality

Augmented reality (AR) technology has been around for longer than most people realize. From the first virtual yellow line marker in live NFL games to assisting NASA flight simulations, AR has essentially been around for numerous decades. But the recent advances in augmented reality and the growth in investments in the field give evidence that AR could soon be the next big commercial commodity.

Augmented reality combines the real world we currently live in with virtual elements. The computer-generated augmentations are projected on top reality in a way that is supposed to help us with our different tasks and help us with being more efficient in our day today.

Market Analysis

2 Market Analysis

2.1   Target market

mHealthCoin will focus its marketing activities on Pure investors and End Users separately for reaching its target audiences.

For the Pure investors who act as fundraisers of sorts, it will be defined three types of the interested investors: 1) Institutional Investors, 2) Private Investors and 3) Public Investors. mHealthCoin will use the investor funds as a means of furthering its goals, it's not only for starting its cryptocurrency, but for developing an ecosystem of mHealthCoin platform and creating values for each other.

General trend toward quality healthy lifestyles among modern people plays an important role in the recent growth. Hence, mHealthCoin is committed to creating mobile platform and own branded wearable devices that can integrate healthcare into every part of our lives.

We hope that our target audiences of the real users can be reached to
   1) Individuals
   2) Companies
   3) Families (including child & elderly)
   4) Sports people
   5) Patients

On the other hand, some brandings or famous merchants of related products or services would be targeted in our platform too. We are going to provide quality products and services to all users resulting from offering the best user experiences to all stakeholders through the platform. A well ecosystem is to be accomplished under the healthy growth of users and merchants time by time.

2.2 Market trend of wearable devices

According to the 2017 Global Health Industry Trends Survey conducted by the American College of Sports Medicine (ACSM), among the top 20 trends in 2017, the Wearing device continued to maintain its position in the second year of the champion. It also showed that some trends that have emerged in 2017 remain unchanged in 2018 (for example, high-intensity interval training, Educated, Certified, and Experienced fitness professionals and the wearable technology.

These are all solid evidence to support the strong demand of wearable devices from the global market. We are going to meet or even lead the demands towards higher degree of usage of wearable devices advanced with the blockchain technology.

Top 20 of Wolrdwide Survey of Fitness Trends for 2018

2017	1	Wearable Technology
	2	Body weight training
	3	High-intensity interval training
	4	Educated, certified, and experienced fitness professionals
	5	Strength training
	6	Group training
	7	Exercise is Medicine®
	8	Yoga
	9	Personal training
	10	Exercise and weight loss
	11	Fitness programs for older adults
	12	Functional fitness
	13	Outdoor activities
	14	Group personal training
	15	Wellness coaching
	16	Worksite health promotion
	17	Smartphone exercise apps
	18	Outcome measurements
	19	Circuit training
	20	Flexibility and mobility rollers

2018		
	1	High-intensity interval training
	2	Group training
	3	Wearable technology
	4	Body weight training
	5	Strength training
	6	Educated, certified, and experienced fitness professionals
	7	Yoga
	8	Personal training
	9	Fitness programs for older adults
	10	Functional fitness
	11	Exercise and weight loss
	12	Exercise is Medicine
	13	Group personal training
	14	Outdoor activities
	15	Flexibility and mobility rollers
	16	Licensure for fitness professionals
	17	Circuit training
	18	Wellness coaching
	19	Core training
	20	Sport-specific training

(citation)

Chart of 2017

http://www.don1don.com/archives/84410/2017 年全球健康產業趨勢調查─ACSM 美國

運動醫學學會

Chart of 2018

http://www.sohu.com/a/213654844_678883

Estimation of global export volume of wearable devices from 2016 to 2021 (unit: million)

Wearable devices	2016	2017	2018	2021
Smartwatch	34.80	41.50	48.20	80.96
Head-mounted display	16.09	22.01	28.28	67.17
Body-worn camera	0.17	1.05	1.59	5.62
Bluetooth headset	128.50	150.00	168.00	206.00
Wristband	34.97	44.10	48.84	63.86
Sports watch	21.23	21.43	21.65	22.31
Other fitness monitor	30.12	30.28	30.97	58.73
Total	265.88	310.37	347.53	504.65

Source: Gartner, Wikipedia

Based on the source of Gartner, it indicates that the exported volume of all wearable devices has been growing since 2016. The estimated exported volume of smartwatch in 2018 is 48.2 million, and expect the exported volume to be almost doubled in 2021 to 80.96 million. The smart wristband is estimated 48.84 million exported volume in 2018 to 63.86 million in 2021. Increasing demand of smart watch and smart wristband is obvious in current market. More diversified wearable devices are going to enter the market to scramble for a piece of action.

However, as mentioned before, current devices can't be ascribed as valuable and irreplaceable things in the market as they failed to provide concrete incentives to users to wear the devices.

2.3　Competitive Advantage

2.3.1　Irreplaceable

The world's first 24/7-health-focused platform that rewards you with mHealthCoin or tokens each time you engage in your healthy life and wellness. By syncing your Smart Wearable Devices to our mHealthCoin Apps, users will be rewarded with mHealthToken through calories consumption in early stage.

According to Wiki, Basal Metabolic Rate (BMR) is the rate of energy expenditure per unit time by endothermic animals at rest. For every pound of weight, the body needs to consume 10 kilocalories.

For example, a 120-pound lady needs a minimum of 1,200 kcal (120 x 10=1,200) per day to maintain basic physical needs. That is to say, the 120-pound lady, who sleeps 24 hours a day, still needs 1200 kcal to maintain her heartbeat, breathing and other normal body operations.

There is a big incentive for users to wear our smart devices all the time even when they are sleeping or is static situation. Therefore, based on calories consumption calculation formula as the reward system, it can motivate users to wear the wearable devices at any time in everywhere. It can benefit both accuracy of body status analysis for the platform and for the users. More accurate data collected is valid for the platform to analyse the trend or overall body status under different functions provided by the wearable devices, so the platform can indicate more accurate index for users to be aware of the body status. We believe that it is effective way for motivating users to wear our smart wearable devices to become their habits.

(sources:
https://en.wikipedia.org/wiki/Basal_metabolic_rate
http://www.vt.hk/orticlefife/102.htm)

2.3.2 Convert a simple health awareness to be life-friendly demand and application

To enlarge the global market shares, different types of devices would be designed for reaching different demands. Smart Wristband and smart watch are the core products for the wearable devices which can be fully integrated into the life of the user.

For Kids
- GPS trace function is added for parents to trace the location of their children

For Elderly
- SOS function is added for elderly to use under emergent situation and calling for help
- monitor their body situations

For Sport
- A digital training system designed to keep users fit and motivated for life, features diversified exercises instruction video which will build a series of workouts based on users' individual goal and training preferences

loT for Home Appliance
- To provide user a one-stop solution for a smarter living style, I oT technology will be developed to our smart devices in the later stage. Users can control their connected home anywhere at mHealthcCoin APP or even wearable devices. One simple interface can be used for total home control of multiple equipment of your home via Smart Living system at in-home & out-of-home, so that you can turn on your air-condition and cooling your house before you step in your home

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In current market, there are many other coins and tokens related to health or sports in different mechanism and business models. We made a table below to compare some of the competitors in the market

	mHealthCoin	Universal Healthcoin	HealthCoin Plus	CoinHealth	Sweatcoin
Code	MHEC	UHX	HLTH	CoinHealth	Sweatcoin
Business model	- Gain incentives by exercising to redeem branded goods and services with discount - A platform connecting both users and merchants together closely - A well-established ecosystem for all coin holders, users & merchants - A platform providing both coin & token to balance & stabilize the whole mechanism	- A platform of healthcare delivery and payment via blockchain - Reduce healthcare costing	- Provides 24/7 virtual doctor's visit via nation's largest network of telehealth care - Redeem real goods and services	- A blockchain system to record medical history, recent lab reports, allergies and prescription drugs - Track physical exertions and be rewarded with tokens	- Gain tokens by specific steps outdoor - Redeem goods & services by the tokens gained
Mission & Vision	- Arouse awareness of health and status with devices and app to all	- Increase quality of healthcare while reducing	- Reinvent health & wellness payment	- Preventative care to reduce any kind of loss	- Get paid to exercise - Arouse walking

	people - All-win approach for all stakeholders in ecosystem	cost for UHX members - - Save one million lives while improving the lives of 100 million	systems	- Improve underusing of preventive services - Prevent disease and eliminate cost-sharing	gained
AI technology	- Analysis for personalized advice by AI	- Intelligent personal assistants (IPA)	N/A	N/A	N/A
Remarks	- Completed ecosystem to benefit coin holders, users and merchants - Gain incentives by calories consumption during exercising and even sleeping - Inspire users to wear the smart wearable devices with incentives all the time to collect most accurate personal data for AI to analyze with advices	- Focus on healthcare & healthcare payment instead of sport/exercise oriented	- No whitepaper - Focus on health care and related services instead of sport/exercise oriented	- Focus on prevention of disease and personal medical record instead of sport/exercise oriented	- Simple and precise concept of outdoor steps achieved - Just walking or running oriented without complete health status tracking and inspiration

There are 2 of them concentrate on healthcare and their own payment systems in order to reduce healthcare costings. Another one is a blockchain system for recording personal medical history and track physical exertions. Those three are likely indirect competitors to our project but related to health also. Sweatcoin is with similar concept as us but with single and passive method to gain tokens. It cannot probably arouse users to be aware their health statuses by outdoor step calculation. Hence, mHealthCoin is executed to modify and optimize the ways from all direct and indirect competitors. Thus, we will launch our own branded wearable devices in business consideration. To maximize the benefits to all parties, users are required to wear our devices 24 hours a day to collect the most accurate personal health data for higher accurate analysis. At the same time, the users can gain tokens by wearing our devices even they are sleeping because static activities can consume certain level of calories too. It is fair that more frequent sportsmen can gain more tokens by higher calories consumption. Of cause, own branded wearable devices with 24 hours wearing a day can upsurge the demands of our wearable devices in business consideration in case of sustainability of business development.

In summary, mHealthCoin is going to execute active and preemptive instrument instead of passive ones in existing market with sustainable business development consideration

2.3.3 The Popularity of Augmented reality game

AR technology has been incorporated into many different aspects of our lives, it has even infiltrated the gaming world as well. The Nintendo is notable for releasing the record-breaking game **Pokémon Go**, It provides a new experience for those who've been fans of previous versions of Pokémon.

Pokémon Go is the most commonly known consumer use of AR technology, since its release on July2016, attracted 800 million users and became one of the most successful mobile apps ever—has been praised for promoting exercise, facilitating social interactions, sparking new interest in local landmarks, and more.

On the other hand, AR is already closely intertwining itself within Social media. Over the years, **Snapchat** is playing an essential role spreading the uptake of augmented reality.   In September 2017, Snapchat updated its app to include a camera filter that allowed users to render an animated, cartoon version of themselves called "Bitmoji".

These animated avatars would be projected in the real world through the camera, and can be photographed or video recorded.

Snapchat has even created its own AR games that are built right into the app. The use of facial gestures controls all your movements in each game. It's successful to make AR a natural part of building a lovable product or experience.

How this AR game is related to health status of users

Pokémon Go proved to be the catalyst and a game changer for AR. Although the hype around the virtual animal hunting settled, AR continues to march triumphantly into more and more industries and fields, including healthcare, which we want to focus.

According to recent research, "gamifying" exercise can improve motivation and make fitness more effective at all levels. Hence, we are developing a Fitness game in integrating physical activity into AR Games in order to let our users to find a fresh way to motivate their newfound fitness goals.

In our app, there are different workout missions user can take and complete by doing physical activities in natural environment. Every mission will keep the best result record by the last champion. Users can join the event and try to break the record.

Users can also choose their virtual "training partner" who will workout alongside them, urging them on with encouragements and helping users complete various trials.

Similar to the Pokémon Go gameplay mechanic, to make more fun, during the mission like running, users can using their device's GPS to find objects to aid them in their quest. Users can ever create a new own campaign for aligning with other players, take on additional challenges.

Within the app, users can also receive our coins as rewards based on the calories burnt and type of sport done if he has done the workout and submitted the data to blockchain as part of their health information.

Our goal is to create interactive games that encourage exercise, social interaction, and exploration, giving players the opportunity to play together in the real world and coming up with ways to make exercise an easy, fun part of users' daily routine- and ultimately to make you realize health and wellness benefits.

2.3.4   Advantages of AR game

Augmented Reality helps in creating a combined view for the player which is an amalgamation of the real world and virtual images created by the computer.

Here are some of the advantages that playing AR games on mobile or with AR glasses have over standard non-AR mobile games:

Physical activity —The ability to play a game that requires physical activity, which was invigorating and a healthy physical activity.

Hands-free gameplay — Users can play a game where their hands are free from holding the device.

Real First-person Experience — compared to mobile, with AR glasses, It felt like a real first-person experience. Users were in the game, but not as an avatar, but with their physical body. In fact, many games for AR glasses will be designed so the player is the center of the experience and the experience.

Face-to-face Social Interaction— unlike mobile games where, in most part, users get to actually play and socialize with other real players on-location. Users can watch their reactions and socialize with them naturally, which by itself improves the multiplayer gaming experience time fold. Furthermore, studies have shown that having a person inspired to go outside and socialize helps improve his social skills and can even help with anxiety and depression. It's not for nothing that many companies who develop multiplayer platforms mention the phrases "Bringing people together" or "We want to create a social experience", this actually one of their leading goals. They know that once people get positive feedback from the experience, they will want to experience it again.

2.4   Positive circulation of token flow (positive ecosystem)

We are creating an ecosystem where every contribution has value. mHealthCoin and tokens are issued as a basic currency for transactions within the mHealthCoin ecosystem.

Online shopping market and vendor's products are linked to advertiser campaigns and content within the mHealthCoin platform. Users can treat their mHealthTokens mined in early stage can be spent as a discount to purchase the products or services from the platform. And the vendors or advertisers can put tokens received in the transaction back into the platform to pay for advertising, creating a full cycle of flow of interaction between coins and tokens. A well-established ecosystem is our core value in this project in order to be consistent of intrinsic value of the coin and its price.

2.5   Coverage - Users cover the world

mHealthCoin platform is openly available to the public all over the world and is completely free for registration. In order to ensure the demand and maintain an effective way to manage the large market. Different localized redemption platforms in different countries are necessary to setup for users to enjoy the redemption experiences in their own countries instead of only a few regions or countries can be entered.

Marketing Strategy

3   Marketing Strategy

3.1   International Implementation

As previous so-called sport coin is regional only, there is no concrete coin implemented in real global market. We target on several international market as a pioneer under 80/20 rule.

Refer to the graph below, the countries where with more than55% internet penetration rate like Northern, Central and South America, Eastern and Southeast Asia, Oceania and the whole Europe will also be our target countries.

For example, in Northern America and Europe, where the Digital technology are more mature, the United States has the highest smartphone penetration rate and the penetration rate is as high as 69.3% while Germany and United Kingdom has 68.8% and 68.3%.

As large user base and high internet penetration rate are often indicative of the market's potential, companies and institutional investors from all over the world have been making their moves in those countries. This demonstrates optimism towards the digital health market's long-term performance.

(Source: https://technews.tw/2018/01/31/worlds-intemet-users-pass-the-4-billion-mark/)
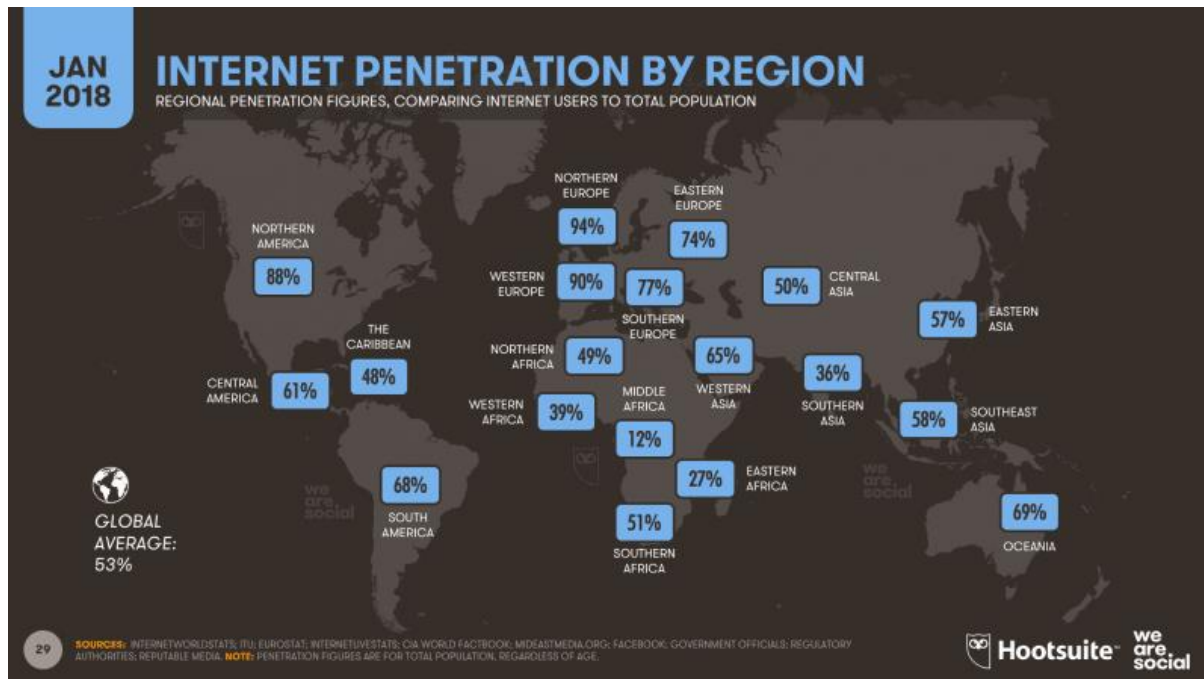
TOP COUNTRIES BY SMARTPHONE USERS 2017|GLOBAL

RANK	COUNTRY	SMARTPHONE USERS	SMARTPHONE PENETRATION
1	CHINA	717M	51.7%
2	INDIA	300M	22.4%
3	UNITED STATES	226M	69.3%
4	BRAZIL	79M	37.7%
5	RUSSIAN FEDERATION	78M	54.7%
6	JAPAN	63M	50.1%
7	GERMANY	55M	68.8%
8	INDONESIA	54M	20.7%
9	MEXICO	52M	40.7%
10	UNITED KINGDOM	44M	68.6%

(Source: Global Smartphone User Analysis Report-   http://www.sohu.com/a/137306487_609238)

GLOBAL SMARTPHONE USERS PER REGION 2015-2020

- EASTERN EUROPE
- WESTERN EUROPE
- NORTH AMERICA
- MIDDLE EAST & AFRICA
- LATIN AMERICA
- INDIA
- CHINA
- ASIA-PACIFIC*

*Excludes India & China

Region	2015	2016	2017	2018	2019	2020
Total	2075M	2317M	2590M	2888M	3216M	3550M
Eastern Europe	152M	165M	179M	193M	207M	220M
Western Europe						
North America	231M	242M	252M	262M	271M	281M
Middle East & Africa	215M	252M	296M	346M	400M	458M
Latin America	174M	201M	232M	266M	302M	337M
India	171M	228M	300M	387M	485M	585M
China	597M	658M	717M	775M	830M	881M
Asia-Pacific*	283M	308M	340M	375M	427M	484M

To achieve higher effectiveness and efficiency of reaching the global market, we target on the countries with both the highest internet penetration and smartphone penetration, such as the United States, United Kingdom, Germany, and some other European countries, Japan, China, etc.

3.1.1 Project Expansion

Stage	Time Period	Countries	Expected User
1	6 months	Asia (especially China & HK)	5,000,000
2	6 months	North American (Including US & Canada)	3,000,000
3	6 months	Europe	2,000,000

3.2 Marketing Promotion

Promotion is one of the key elements of our marketing strategy, and deals with any one or two-way communication that takes place with our target consumer.

3.3　Digital marketing　— new channels are emerging constantly

3.3.1　Key Opinion Leader (KOL)'s post or thread

The idea using KOLs to influence demand and enhance targeted communication is not a new concept. We have seen the rise and successes of columnists, socialites, bloggers, and popular Twitter personalities successfully grow an audience of followers within the digital realm, with Facebook, Instagram, YouTube and personal Blogs (or all platforms) — giving them a level of influence perhaps greater than the mass media, on a wide range of topics.

Let them be our voice. Send them our product to review, have them do unboxing videos, installation videos, product reviews, etc. and reward them for lifting sales with our buyers in the Marketplace.

3.3.2　Social media marketing

Facebook, Instagram, Snapshot or Twitter allows for the greatest creativity in the shortest format with regards to self- promotion. We will create playful account that highlights our products, keep users informed—including interactivity—responds to users' comments.

3.3.3　Paid Commenters

In order to promote the Word of mouth of our platform, we will offer payments to those "Internet fighters" in exchange the posts of positive comment in some famous forums.

3.3.4　Posting on ICO rating website:

ICO rating website is a good platform for people to gather and evaluate the information of different ICO. Most of the ICO Rating website are able to well-constructed rating system and very little bias. Also, they will not endorse or recommend any of the projects that are rated or listed on the website. Hence, this is the most credible and persuasive promotion tool in our promotion plan.

3.3.5 Paid Search

Paid search, or pay-per-click (PPC) advertising, typically refers to the "sponsored result" on the top or side of a search engine results page. When a person is searching for a particular keyword or term, our ads will appear. We only ask for pay when our ad is clicked. We will tailor our PPC ads to appear when specific search terms are entered, creating ads that are targeted to our particular audience.

3.3.6 Advertising - a mass media approach to promotion

Traditional marketing is still important for promote our plan despite the benefits of online marketing. We will select some famous media vehicles or channels, like magazines, newspaper, editorials, etc to reach their audience.

3.3.7 Sales promotion: price/money related communications

Packages of ICO soles
To attract investor's interest to buy in, packages of ICO sales will be offered. For example, if a person buys 10,000 (5,000) coins, then will get a Smart Watch (Smart Wristband) for free.

Special promotion campaign
Special promotion campaign is offered routinely with higher tokens mined by specific missions completed.

Walking activities
With Applications of GPS, participant needs to walk from the designated location to the destination to complete the tasks like the famous and popular mobile game Pokemon Go, ensuring certain distance to walk by.

Gesture Motion Detection activities
Users are required to complete particular gesture motions to accomplish the tasks. For example, routine reminder of drinking water every hour, so the users need to pick up the phone to pretend the gesture of drinking water to meet the requirement of the task and earn tokens. It definitely motivates users to drink water and do some stretching exercises between time intervals.

3.3.8 Association connection —

Reward schemes launched in association

More and more organizations are discovering the importance of employees' physical and mental health, because healthy employees not only have high output and productivities, but also reduce the turnover rate. Gradually, many companies have begun to change from the traditional "preventing employees from getting sick" to" The attitude of promoting employee health.

Hence, we are approaching to cooperate with different associations, institutes, chambers of commerce, schools, universities, communities, small and medium-sized enterprises (SMEs), companies, etc. We hope to lead the awareness of exercising to societies concerning "Mine, your health". The more calories you consume, the better your health status and the greater the rewards.

3.3.9 Bounty Program

An attractive bounty program will be launched to attract more investors to support our project and target users to join the platform. And this bounty program does not affect the pricing model and investors' attitude towards the investment consideration.

Technical Advancements

4 Technical Advancements

4.1 Technical Description

Here at mHealthCoin, we understand the importance of implementing the right innovation and technology to stay ahead of the trend. Using state of the art technology stack, our comprehensive mHealthCoin platform will be a game changing fitness and health advocator and tracker. We are incorporating new ideas and features to encourage and incentivize you to get fitter and healthier, bring you benefits, and lower your healthcare costs.

The platform is designed to archive the following goals:

II. Providing a mobile application which can encourage user to follow healthy habits and do exercises
II. Create a positive feedback loop and ecosystem on staying healthy, by
   A. Collect user health information securely for analysis. Analysis results will be used to make the mobile application more personalized and allow target marketing by our partners.
   B. Provide rewards on staying healthy using cryptocurrency or token, which can be used inside and outside our platform for services.
   C. Health information and cryptocurrency must be managed securely in a decentralized manner, i.e. by blockchain.

The all-round mHealthCoin platform is centered by our mobile application. mHealthCoin mobile app is an all-in-one platform for our users to track and manage their health and fitness data. The mobile app also provides games and competitions using augmented reality to encourage our users to do exercises and compete with others. Rewards and social praises across our marketing channels further attract our users to stay in our platform and do exercises.

All health data, including exercises, healthy habits and optional medical data, collected by the mobile application will be encrypted and submitted to blockchain as part of his account information. The blockchain will be based on Proof of Stake (PoS) blockchain, using mobile applications as peers. Each account has its own chain to keep health information. Health information generates new coins under the blockchain to the users as reward. Members can use the coins to redeem partners' discount coupons,

goods and services via our cloud exchange. Hence our users can "mine, your health".

Cloud health token exchange will be a marketplace for you to use your coins on whatever your heart desires. Enhanced security will be enforced in the exchange to ensure your effort will not be stolen by anyone else. Besides merchants, people can also sell products and provide services for coins in this exchange.

With user approval, health data will also be submitted for big data analytics to unleash the hidden potential of your fitness data for your benefits. Bob the chatbot, a chatbot inside the mobile application, use the analysis result to offer personalized advice to further encourage members to follow the healthy habits and achieve their health and fitness goals. It also selects suitable advertisements and campaigns to show to the users. A positive feedback loop to stay healthy is formed.

Our branded special smart wearable device pairs up with the mobile application to supports 24 hours monitoring on health data like blood pressure, heartbeat, etc and calculates the calories burnt by the owners. The data will be submitted to the mobile application. Under different scenarios, the device also provides different additional features.

Seeing how some people delete freshly downloaded mobile apps within seconds, we understand how the most well-intentioned and all-mighty apps can fail if they aren't built with user friendliness and ease-of-use in mind. And when it comes to your health, there is no margin for the slightest mistake.

To support third party developments based on our platform and meet current and future demands from our community users and commercial partners, an open and scalable API is designed with the blockchain and exchange. We design and build our API with security and access rights in mind so that only partners that are explicitly authorized by users can access a user's health and fitness data.

mHealthCoin distributed in this ICO is not the platform currency, instead it is an ERC20-compliant token on Ethereum blockchain. As you may have already known, Ethereum is a decentralized network of nodes that can record transactions and produce smart contracts. Being part of the popular platform, mHealthCoin can easily be shared, exchanged for other tokens, or transferred to a crypto-wallet.

In the first phase of this project, we will release the whole platform using mHealthCoin

as the platform currency and reward. Therefore, users can enjoy our platform even the blockchain is still under development. When the blockchain part is ready and fully tested, we will migrate the platform to use the blockchain concurrency.

4.2   System architecture

mHealth system will be built with a three-tier architecture.

The data-tier will be implemented by both blockchain and a secured database. All health and fitness record and coins transaction information will be stored securely in the blockchain. It is to make sure all privacy related data is kept securely and no party, including us, can read the health data without user permissions or manipulate the platform currency without consent from the society.

When the blockchain is not ready, the health data will be kept inside the mobile application and rewards are provided by ERC20 mHealthCoin.

The campaign and partner information database keep all partners discount coupons, goods and services information and the products offering by users. This part of the database can be thought as back-end of the exchange, but it also serves Bob the chatbot and mobile application for targeted advertisements. The database also keeps what games and competitions are available for users to join and the campaign results. This can be thought as the back-end of the mobile application, except the health data.

The logic-tier comprises of a cloud health token exchange and the brain of Bob the Chatbot.

Presentation-tier will be represented by a secured API that allows our client facing panels and external devices to access our back-end platform.

The APIs can further be classified into user API and partner API. Through user API, individual users can record and access all our services through our mobile apps. Users can also access the token exchange via a web portal.

Partner API is especially built for the web-based partner content management platform. Through the platform, partners can design and launch their own promotional campaigns, put up advertisements and offer discounts, goods and

services to our users.
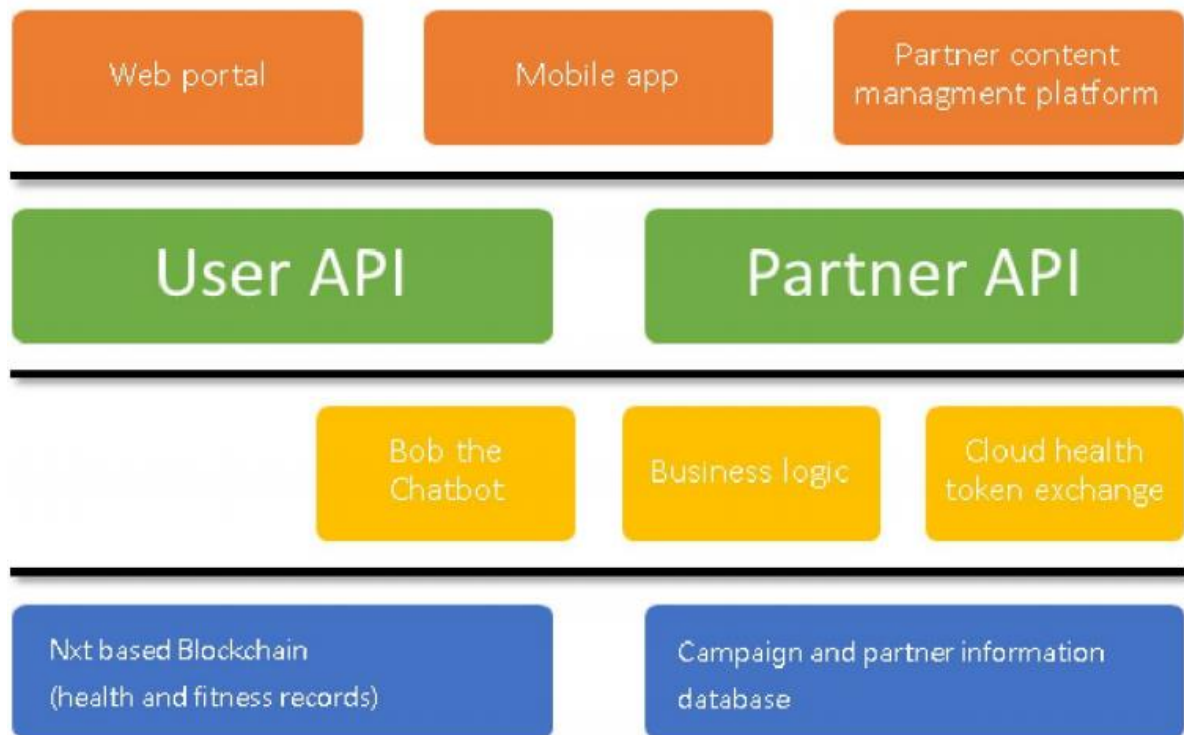
4.2.1　Mobile App

Even with the best marketing effort and state-of-the-art backend technology, mobile apps that are not built with user friendliness in mind will be despised and discarded by community in a flash. As the center of the whole platform and the main user-facing panel, we are going to put extra effort in user interface (UI) design to engage and motivate you to achieve your fitness goals.

The mobile application has the following major parts:

1. Sending alerts to users on healthy habits, like drinking water, do some exercises at least twice a week, etc.

2. Pairing with our wearable device for health tracking.

3. Recording workouts and exercises and sending the related information to blockchain.
4. Checking rewards to the user and transaction history.

5. Providing campaigns for user to join, giving incentive to users to do exercises.

6. Access points to the exchange, chatbot and targeted advertisements.

Even though we are releasing our own wearable device, this app can be easily integrated into other smart sports watches and mobile phones in the market. The app will be available on Google Play Store, and Apple App Store, reaching all major smartphones operating systems.

4.2.1.1 Health habit alerts

The first step to be healthy is integrating healthy habits into your everyday lives. A major obstacle on keeping a new healthy habit is forgetting to do so. Our mobile application has predefined a list of healthy habits, such as drinking water and stretching the body, and alert users in a certain period. To fulfil a healthy habit, users need to hold the phone and perform a certain action. Application uses the built-in sensors to measure the action and judge whether users have done the habit. Every time a user performs an action successfully, a constant reward will be given.
Users can also setup their own alerts. This small feature gives a major push on keeping healthy habits.

4.2.1.2 Pairing with smart devices

A lot of information is needed to prove and analyze the workout of our users. While location and steps data can be measured by the mobile device, major health information like heartbeats, V02 Max levels and calories burnt can only be measured by smart wearable. Therefore, our application needs to pair up with a smart wearable for a through measurement.

Together with your age, height and weight, the app can also help you monitor your weight changes, calories intake and usage, and sleep and workout patterns.

4.2.1.3 Recording workouts

Am I running at the speed I want? Am I running faster than last week? Is it 42km yet?

We exercise, and we know how important it is to just focus and enjoy the workout. This project does not want you to worry about your goals and targets and is going to

take care of all these for you.

Regardless if you are connected to the internet or not during your workout, your training data such as GPS location, heart rate and calories burnt will be automatically recorded and analyzed. All health information will be saved inside the mobile application and submit to the blockchain when online.

Once a workout section is finished and all training data including GPS location, speed, and heart rate are uploaded to blockchain, your workout data will be compared against your historic training data and that of other users for validation and analysis. Validated workouts will generate new coins on blockchain and the coins will be automatically credited into your wallet and shown in the mobile application. More exercises are done, more coins are mined.

4.2.1.4 Coin wallet

Once you finish your workout, it is time to check your wallet inside the app to see how much coins you have earned. The coin is here to incentivize your workout. We know how much sweat you have shed for these coins, and we are doing our very best to protect them from malicious third parties.

The coin wallet, including the cryptographic keys, is generated and stored inside the app. Users can send coins to their friends on a click, or spend them on a wide range of health and fitness related offers provided by our commercial partners and other users.

The wallet is developed based on the standard Android client, with redesigned front-end and page showing the user health data chain and coin transaction history.

In the first phase of this project, ERC-20 token mHealthCoin is distributed as reward from the reserved portion. Health data does not leave the mobile application, only the amount of reward is sent to our server. After the blockchain for keeping health data is developed and fully tested, users with the ERC-20 tokens will receive the blockchain currency, or the coins. From that time onward, the mobile app will have two wallets, one is for mHealthCoin and another one is for the blockchain coins. The ERC-20 token wallet will be disabled by default and all rewards will be created from the blockchain.

4.2.1.5 Campaigns

Every time when users decide to do a workout, they can open our app and see if there is a campaign of a similar type to join. Campaign provides a unique way for users to know whether someone has done a similar workout and their results. Users can then challenge the current champion by doing the same workout more effectively. For example, someone has run along Shing Mun river end-to-end in two hours. When other users go to one end of the Shing Mun river and prepare to run, they will see this campaign and the best last result. They can join the event and try to break the record.

Every week we will announce the champion of each campaign on all our social network channels, and champions can create a new campaign for others to join. The social endorsements and honors are the biggest incentives for our users to install our app and keep doing exercises and following healthy habits. No matter they become the campion or not, they will receive our coins based on the calories burnt and type of sport done if he has done the workout and submitted the data to blockchain as part of their health information.

To make joining the campaign looks fun, there will be augmented reality figures, like Pokemons in Pokemon Go at the starting point of the campaign and users will need to catch the figure before starting the campaign.

Campaign is also a good advertising channel to our partner merchants. By creating campaigns which require scanning special AR tags in our partner merchants' shops, users can gain a fix amount of coins and the shops receive much more physic visits of targeted customers.

4.2.1.6   Access to other modules

This mobile application is the major point of access to use our services. Besides reading the calories burnt, campaign results and coins earnt, users can also access our exchange, chatbot and talent-made advertisements.

Earnt coins can be used to buy products, discounts and services from other users and merchants on the exchange. Users can also sell their second-hand health related products on the exchange for coins.

Bob the chatbot gets personal health information upon user approval and performs analysis. It will be on your side to remind you and cheer you up whenever your reach a

new milestone. It also provides personalized advice to achieve their health goals and select suitable advertisements and campaigns from the database to display. The more committed to the platform and healthy habits, the more positive result is provided. This will create a positive feedback loop so that our users will be more and more committed to a healthy life.

4.2.2 Blockchain

A blockchain will be used as the backbone of our health and fitness data storage and keeping coins transaction records. The blockchain needs to be environmental friendly and low in energy consumption, supports keeping encrypted health data for users and provides a decentralized and fair mechanism to reward users for "mining their health".

Encompassing distributed ledger technology (DLT), independent nodes that are geographically spread across multiple sites with no central administrator will be deployed for storage. A consensus algorithm is shared by the nodes to record, replicate, share and synchronizes data in their respective electronic ledgers.

To lower unnecessary energy consumption, a proof-of-stake(PoS) consensus algorithm will be used instead of a proof-of-work algorithm. Following the example of Nxt, a formula that searches for the lowest hash value in conjunction with the size of the stake will be employed to select the next block. The blockchain can be maintained by the users' mobile applications only. We will provide blockchain monitoring web service for the public and maintain a number of active accounts dedicated for staking.

Besides the main chain of keeping the coin tractions, each member also has its own chain for keeping their own encrypted health data. Supporting multiple chains is another consideration when we select the base our blockchain. This health data chain is appending only, and all data is encrypted using the encryption keys in the member's app.

In later releases, we will also allow health data submission from others, e.g. a doctor putting a medical report to your health data chain. The data will be digitally signed by doctor's private key and encrypted by an encryption key, which is submitted with the report and encrypted by your public key so that only you can read it.

Based on the length of the health data, new coins will be generated to the user. When users follow healthy habits and submit the result to blockchain, a fixed amount of

health data is submitted to the user's health data chain. Hence a fixed amount of coins will be generated and sent to the user. There is a time limit so that users cannot submit the same healthy habit too frequently for rewards.

The reward on workouts is variable. After a workout, the workout data is submitted with the value of burnt calories. Based on the amount of health data, time of exercising, calories burnt and the type of sport, new coins will be generated to the user. The data is calculated and verified to prevent workout spoofing. The workout data is also compared with the workouts of other accounts to spot potential double workout claiming. When there are malicious workouts, we will ask the user to decrypt the workout data to us for verifications. After verifications, we will send coin to user for reward accordingly.

Promotional workouts, e.g. scanning AR tags in a partner's shop, are actually smart contracts on the blockchain. Once a user scans the AR tag, he will gain a fixed amount of coins from the partner shop according to the smart contract.

For security and privacy reasons, all health and fitness records have to be validated and striped of any personal identifier before being uploaded to the blockchain. All published blocks will be permanently embedded in the blockchain and replicated in several locations.

Before the release of blockchain, all health information is kept inside the mobile application and users will submit coins requests to our exchange for rewards. The rewards will be in ERC-20 token mHealthCoin reserved by us. When the blockchain is released, all mHealthCoin owners will receive the same amount of the blockchain coin as the initial distribution.

4.2.3 Campaign and partner information database

A secured relational cloud database is responsible for storing all partners discount coupons, goods and services information, campaign information and advertisements. A basic inventory checkout system will also be created inside this store. Mobile applications read advertisements and campaign information from this database to display to users. For promotional workouts, the related smart contracts are kept inside the blockchain, yet the addresses are kept inside the database. Hence our partners can change their campaigns by changing the smart contract address, given that the

new campaign smart contract is ready on blockchain.

The database will be regularly indexed to ensure frequently accessed data are adequately cached.   This improves query efficiency and ensures users can obtain data needed in a timely manner.

4.2.4   Bob the Chatbot

Chatbot technology is maturing and is proven to save customer support cost and improve customer experience. How can we deny this from our valued and treasured users?

Our mHealthCoin very own Bob the Chatbot knows not only how to text, he also knows how to talk! Charismatic and energetic, Bob is here to socialize and chat with you 24/24, 7/7.

Bob the chatbot is a virtual personal coach supporting our users to complete their personal goals. Built with a use-case driven approach and embedded in all user facing interfaces, bob is on the frontline to guide mHealth users through different work flows, provide health advice, workout reminders and training tips.

The chatbot involves two parts, a local natural language processing   (NLP)   engine inside the app and a health data analysis engine on the cloud side.

With user explicit approval, the health data (with personal identity removed) will be decrypted by user's app and submitted to the analysis engine for activity analysis and unsupervised categorizations. The primary goal is to classify the user into suitable groups so that Bob can predicts the need and selects the most suitable, realistic and actionable training plans, advertisements and campaigns for individual users.

To ensure data analytics can acquire the same intuition and tacit knowledge of human personal trainers, users can provide feedbacks and bob will be refined as we walk down the health and wellness journeys with our users. This ensures our system keeps up with the ever-evolving health and fitness scene.

This will further increase the accuracy of the analysis and users' satisfactions to the app, and make sure all advertising methods in our platform are highly targeted and

never annoying to the users.

Another goal of the analysis is to compare the health status of the user with prepared data from healthy and unhealthy people to suggest any abnormality on the user body for early checkup. Usually big diseases like stroke and heart disease have some early symptoms that may not be noticeable to the users. By 24/7 measurements on the body, especially during workout, bob may be possible to spot out potential problems and suggest users to take a medical checkup before it is too late. It can also help sending out medical alert for users when there is an emergency health issue.

Besides, this analysis results are very valuable when our users seek for medical services or insurances from our partners. With user explicit approval, our partner can read the health data and analysis result of a user to design a personal medical service or insurance plan to the user. It is good to user as it normally means lower premium, better coverage and more effective treatments. It is also good to the partner companies as it allows lower false claims, faster claim process, and more targeted services.

Without user explicit approval, none of the health data will go outside the analysis engine.

Local natural language processing   (NLP) engine does not work on health data, instead it focuses on how to present the data and interact with users in the most personal and effective way. With the NLP engine, users' intent and tone can be identified. "How many coins do I need for a Sunday brunch discount?", "How many more minutes do I have to jog for a brunch offer?", "Swim for brunch, how much?"... No matter how you question Bob, NLP will help him to decrypt and interpret your intent. With such intelligence, Bob can then follow up users' request by either asking relevant questions or provide suggestions and answers.

On the back-end, we will also conduct unsupervised machine learning algorithms to further improve the chatbot. Bob will be able to provide appropriate answers over time and imitate the tonality of human customer service representatives, minimizing human intervention in the long run. Our users will receive a lot of advices and encouragements from Bob, just like having a real professional coach.

Bob the Chatbot is users' best companion on their journey to be healthy.

4.2.5 Cloud health token exchange

The cloud mHealth token exchange is where the tokens and coins can be used or gained by buying or selling discount coupons, goods and services.

In the first phase of the project, the exchange has a polling component that constantly monitors the ERC-20 mHealthCoin transactions on Ethereum blockchain and a major point for tokens exchanges. To avoid malicious parties from stealing tokens, two-factor authentication of the user will be required for debiting tokens. And to prevent double-spending, cryptographic techniques will be deployed. All token transactions will first go to the hot wallet of the exchange and send out to recipient once the products / services are delivered. On top of transactions between users and partners, the token exchange will also support full and partial refunds of tokens.

The token exchange provides information on all token accumulation and spending history and can categorize spending into categories. This functionality helps users to visualize the fruits of their workouts and assists in artificial intelligence analytics.
For users and business partners who have products / services for sale, they can also sell them on our exchanges for tokens. They can also spend the tokens for advertising on this exchange or creating advertising workouts.

After the blockchain for keeping health data is developed and fully tested, users with the ERC-20 tokens will receive the blockchain currency, or the coins, and this platform will be migrated to work on the coins, instead of tokens.

4.2.6 Secured API

The secured API layer is the interface for all incoming and outgoing data requests of the backend. mHealthCoin APIs are built with openness and security in mind, so that any future demands of our community users and commercial partners can be easily satisfied.

The APIs can further be classified into user API and partner API. Through user API, community users can record and access their own health and fitness data through the mobile apps.

Open Authorization (OAuth) standard for token-based authentication and authorization will be used for single sign-on to mHealthCoin platform. Having that said, users can enjoy the convenience of signing in mHealthCoin using their Facebook or Google accounts, without exposing their social network password.

Commercial partners have to be authenticated by both certificate and password. They will be able to access the exchange, consult general analytics results, set up and follow up advertising workouts, handle getting user consent process and obtain personalized user data that have been explicitly given consent by individual users.

The use of standardized Restful API with authentication ensures users can only obtain information that they have access, and no one can read any data without authorizations. Moreover, front-end performance will not be hampered by any future backend implantation updates.

4.2.7 Smart Wearable

Our branded special smart wearable device measures user health data continuously and submits to the app. This watch contains blood pressure and heartbeat measurement hardware and GPS location chip to monitor the user's health information. Unlike smart watch available today, the information collected by our watch is fully available to access by our smart watch API.

4.2.7.1 Hardware configurations

Our device combines the features of a smart watch, GPS device and a blood pressure monitor. It allows 24 hours blood pressure and heartbeat monitoring and uploading to the app. It can also analyze user activity to distinguish whether they are resting, walking, different kinds of exercising and sleeping. If the device owner is sleeping, the quality of sleeping is also measured. If they are doing outdoor exercising, the watch can also perform real time GPS tracking.

Chip	Latest MTK chip
GPS	Micro GPS tracking chip
Blood pressure measurement	Microchip
RAM + ROM	4MB + 4MB
Screen display	1,28" colorful transparent touch screen display
Bluetooth	BT4.2 BLE
Phone notifications	Yes
Battery size	390 mAH
GPS use time	Up to 9 hours
Battery use time	Up to 15 days
Battery standby time	Up to 25 days
Waterproof	IP68
Material	Shell, two color plastic strap, silicon
Product size	L 46 * W 37 * T 12.5 mm band :20 mm wide
Weight	45g

4.2.7.2 Special edition for elderly and children

We will also publish a special edition of the wearable for elderly and children. The special edition contains a telecommunication chip. This allows approved third parties, like parents and care takers, to track the real time location of the owner. The owner can also call for emergency service with their own location in simple clicks. The band of the wearable is specially designed to prevent taking off accidentally.

4.2.8   Security

Your privacy and security are our utmost priority. All your data is end-to-end encrypted and securely stored, ensuring that only authorized parties can have access to them.

Moreover, two-factor authentication will be required for any sensitive actions and transactions.   One-time password or biometrics will be required on top of the usual password when users want to link a new device to his account or remove a connected device.

4.2.9   Anonymity

Even though a decentralized blockchain is used for recording users' health and fitness records, all personal identifiers are removed before the data is stored on blockchain. No one wants their weight and whereabouts be known to strangers. Anonymity of data prevents unauthorized parties from linking any data to individual users.

All health and fitness records are linked to users by the wallet address. The identifier can only be obtained from the app with user consent. This ensures only the user concerned and their authorized third-parties can gain access to sensitive and private health data. No user data can be passed to partners without users' express consent.

4.3   System architecture

4.3.1   mHealthCoin over Sweatcoin

Sweatcoin was conceived with a similar concept and is already out in the market, mHealthCoin has a few advantages over Sweatcoin.

A few reviews have criticized Sweatcoin for only rewarding steps that are taken outdoor. Yet mHealthCoin is going to incentivize you for indoor workout activities and healthy habits too. We understand the importance of having a routine and building a habit to the success of any fitness training plan. Who wants to leave the comfort of indoor gyms when there is a snowstorm outside? mHealthCoin will not let a bad weather day to hamper your training progress. Sweat shed indoor will also be rewarded with mHealthCoin tokens.

Sweatcoin is built as a simple fitness tracker that rewards users with a very limited range of gift choice for their sweat. However, research has shown that using traditional fitness trackers can only motivate users to move more for a short period of time. That is why when we conceive mHealthCoin, we make sure our system is fun and engaging to community users. A wide range of product and service discounts will be available on token exchange. The chatbot is tuned to set fitness plans that are actionable and achievable based on users' profile to make sure our users enjoy and gain a sense of achievement in having a workout. mHealthCoin is also going to use a humorous and charismatic Bob the Chatbot to engage users, motivate them and remind them to stick with their training plans.

4.3.2   Blockchain over traditional storage

Here at mHealthCoin, we understand that your health is your greatest asset. And data is invaluable in assisting you to achieve your health and fitness goals. That is why we have chosen to store your health and fitness record on a blockchain.

A blockchain storage ensures that any data that is ever written on it will be permanently available. As previously mentioned, our blockchain nodes will be distributed in various geographical locations. As a result, multiple copies of your data are available to counter the risk of data loss, theft and degradation. In addition, the geographical distribution of our data nodes would ensure that wherever a user is, he

or she can easily access his / her historic training data from the nearest and most convenient data node.

Moreover, blockchain storage is immune to traditional internet attacks. This protects your precious health data from the risk of being tampered by malicious third party.

We know how much you LOVE to exercise and improve your health. That generates a vast amount of health data. With decentralization, operating cost will be reduced as compared to centralized architecture. The economization can help this platform to channel resources on more essential aspects of your health.

4.3.3 Bob the Chatbot over human customer service representatives

Our charming ambassador Bob the Chatbot will be employed to deal with first-level customer support and lowers demand for human customer support. It has long been proven that well-trained chatbots are very effective in lowering customer support expenditure. This will in turn lowers operating cost.

With Bob the Chatbot's charismatic personality and round-the-clock availability, we hope to engage adults and child alike to this platform. Bob will be our users' personal alarm clock, fitness training coach and closest confident. Bob the Chatbot will give community a personalized experience in their journey.

As chatbot is still relatively new in the market, we hope Bob the Chatbot can arouse users' curiosity to use mHealthCoin, engage and motivate users in pursuing and achieving their health and fitness goals.

Token Sale

5   Token Sale

Token name: **mHealthCoin**
Symbol: **MHEC**
Issuance amount: **6,000,000,000**
Minimum Purchase: **0.1 ETH or 0.003175 BTC**
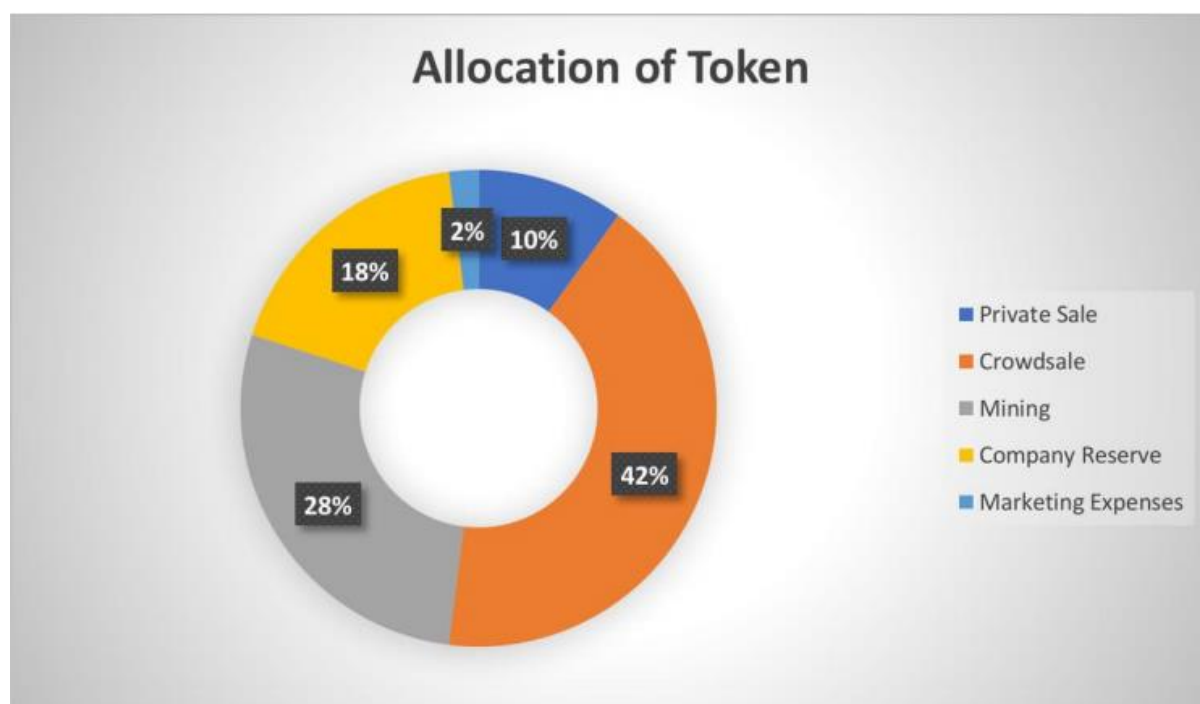Particulars: **ERC-20(Ethereum-Based token)**

Goal: **USD 25,000,000**
Soft cap: **3,000 ETH or 732 BTC or equivalent value**
Private sale: **15th February 2019 to 28th February, 2019**
Crowdsale start date: **15t March, 2019**
ICO end date: **30th June, 2019**

For the allocation of the token, 10% of total issuance amount is for private sale, 20% for company reserve and 70% for public.

As for the private sale, we target on private investors and institutional investors before the stage of crowdsale. 10% of total issuance, which are 600,000,000 tokens, are

offered for those investors with price of USD 0.00125 per token with minimum purchase amount of USD 100,000, which are 50,000,000 tokens. Maximum 10 private investors or institutional investors are prior to the private sale stage. There is lockup period of 180 days from the date investor's purchase during private sale stage.

70% of total issuance, which are 4,200,000,000 tokens, are for public. 60% of 4,200,000,000 tokens (42% of total issuance) are for crowdsale stage during ICO period. Remaining 40% (28% of total issuance) are for mining in further stage of exercising and calories consumption by app users.

20% of total issuance are for company reserve and marketing expenses. 18% out of 20% are for founders, teams and further development of the projects. 2% out of 20% are for marketing expenses including airdrop, advertising, marketing promotion, etc.

	mHealthCoin
Cryptocurrency	Yes
Mining	Yes
	(By Calories consumption)
Limited Supply	Yes
Target Users	1.) Institutional investors
	2.) Private investors
	3.) Public investors
	4.) End Users
	a. Individuals
	b. Companies
	c. Families
	d. Sports people
	e. Patients
Usage	- Redeem discounts of purchasing products/services
	- To trade in exchange
	- For capital gain
	- To be mined by exercising in later stage
	- Advertise by merchants

Intrinsic Value	1.) For investment
	2.) For speculation
	3.) Content economy
	4.) For advertisement expenses by merchants
Channel of gaining	1.) Purchase from ICO
	2.) Buy from exchange (after listing)
	3.) Calories Consumption in later stage
	4.) Revenue of merchants by consumption of users
Channel of selling	1.) Exchange
	2.) Private Deal

5.1 Project Development

If softcap is reached and hardcap is not reached, app development and device development would be implemented in first priority, in order to achieve the core value of the project under the conceptuality of "mine, your health".

Amount of fundraised	Development
3,000 ETH	1.) App Development 2.) AR Development 3.) Marketing
8,000 ETH	4.) IoT 5.) More marketing activities
>12,000 ETH	6.) Big Data Analysis

Before the end of ICO period of March 2019, we focus on crowdsale promotion activities and also some preparations of the business development, including of quotation of app development and wearable device development, business and production estimation, market research of market trend and related products and services too. Hence, we can be confident to execute the planned marketing and business development activities step by step. And pre-registration of app would be launched during ICO period by airdrop with bonus to registered future users. Once the number of pre-registered users is reached 50,000, some branding partners are confirmed to cooperate with us through our platform.

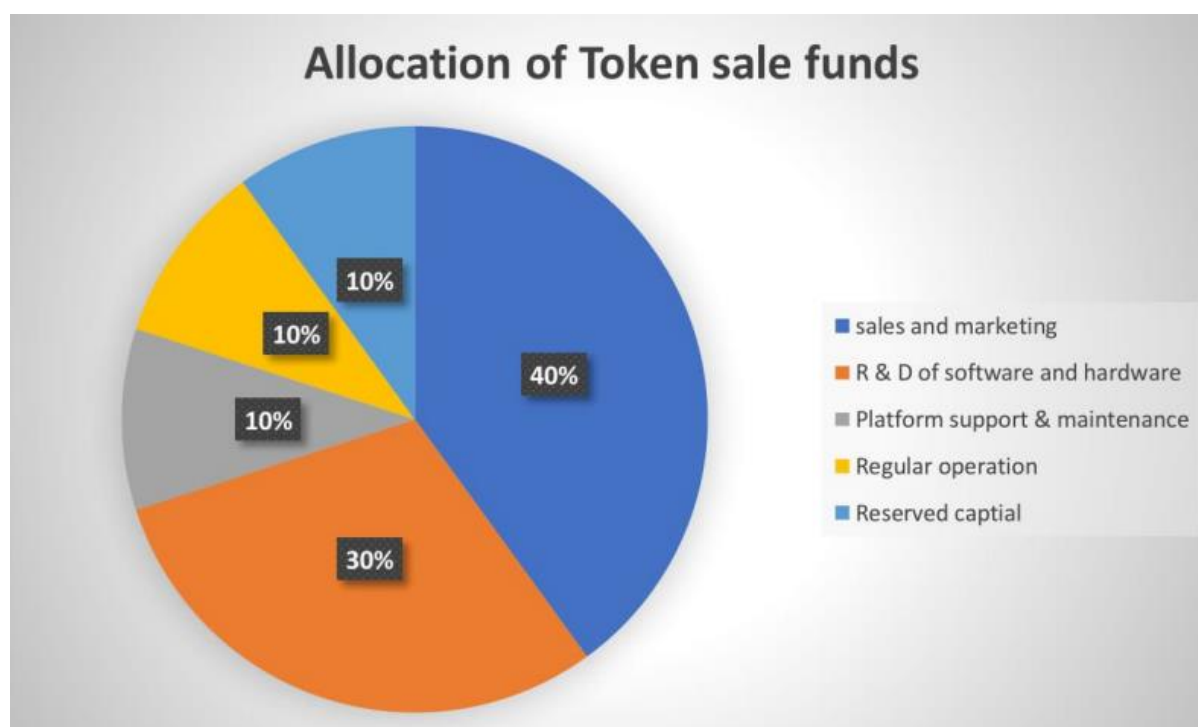| Time Period	Marketing Activities (based on existing roadmap of white paper)
May 2019	- Roadshow of pre-promotion the app - Promotion of AR related stuff & technology usage
July 2019	- Advertorial & editorial of 1st version of mobile app - Promotion scheme for redemptions (online market) - Pop-up promotion through the own platform
Sept 2019	- Join health related exhibitions - Promotion campaign
Nov 2019	- Advertorial & editorial of AI chatbot & phase 2 of mobile app
Jan 2020	- Roadshow to promote the app & devices
Mar 2020	- Join exhibition related to IoT
April	- Advertorial & editorial of AI chatbot for personalized advices

5.2 Pricing Model

During the crowdsale of ICO, there are total 2.52 billion mHealthCoins for public offerings. The price is initialized at USD 0.01, and the price increases by USD 0.005 every week. And the expected listing price in exchange is USD 0.15 after crowdsale period is ended. Therefore, for first week, the purchasing price is USD 0.01 with 93% discount; the purchase price of second week is USD 0.015 with 90% discount and so on. There are 18 weeks which is 4 months in total for crowdsale stage.　The　below table indicates theinterval　and price growth status:

Date	Week	Purchasing Price	Discount
2019/3/1	1	0.010	93%
2019/3/8	2	0.015	90%
2019/3/15	3	0.020	87%
2019/3/22	4	0.025	83%
2019/3/29	5	0.030	80%
2019/4/5	6	0.035	77%
2019/4/12	7	0.040	73%
2019/4/19	8	0.045	70%
2019/4/26	9	0.050	67%
2019/5/3	10	0.055	63%
2019/5/10	11	0.060	60%
2019/5/17	12	0.065	57%
2019/5/24	13	0.070	53%
2019/5/31	14	0.075	50%
2019/6/7	15	0.080	47%
2019/6/14	16	0.085	43%
2019/6/21	17	0.090	40%
2019/6/28	18	0.095	37%

The final purchasing price during crowdsale period is USD0.95 with 37% discount.

The below graph reflects the price change by the increase of coins sold:

Subscription Price advanced with time

Allocation of Token sale funds

- sales and marketing
- R & D of software and hardware
- Platform support & maintenance
- Regular operation
- Reserved captial

Most of the fund raised are used for sales and marketing, it is because this project is particularly user-based development project. Thus, we need to spend much more costing on marketing part to attract more users to use our mobile app and wearable devices. 30% of fund raised would be spent on research and development of both software and hardware in case as a consequence of a complete system for users to

monitor their health status and gain their benefits. Platform support and maintenance, regular operation and reserved capital are accomplished by 10% respectively.

Bonus of coin holders:

For rewarding the purchasers of our coins, there will be bonus distributed in terms of mHealthCoin to all coin holders in certain dates. The bonus would be depending on business development of this project.

The bonus settlement dates would be settled quarterly at the last day of March, June, September and December. But the first settlement date for bonus distribution is five months after the end of ICO period, which is 31st December, 2019. And the second bonus settlement date is 31st March, 2020, the third bonus settlement date is 31st June, 2020 and so on. The bonus will be distributed to wallets of coin holders within 1 week after the settlement dates.

5.3 Lockup Period

There is no any lockup period for mHealthCoin. Coin owners can transfer MH EC to other wallets anytime without any restriction.

5.4   Burn Clause

If the hardcap is not reached after the end of the ICO period, all unsold tokens will be burnt out to avoid redundancy of unused tokens for sales and maintain the stability of the tokens.

Who Benefits

6 Who Benefits

6.1 Investors

The first ICO was started in July 2014 by Ethereal. Even though it was the first time, the ICO collected 18M supporters to launch and then it was established.
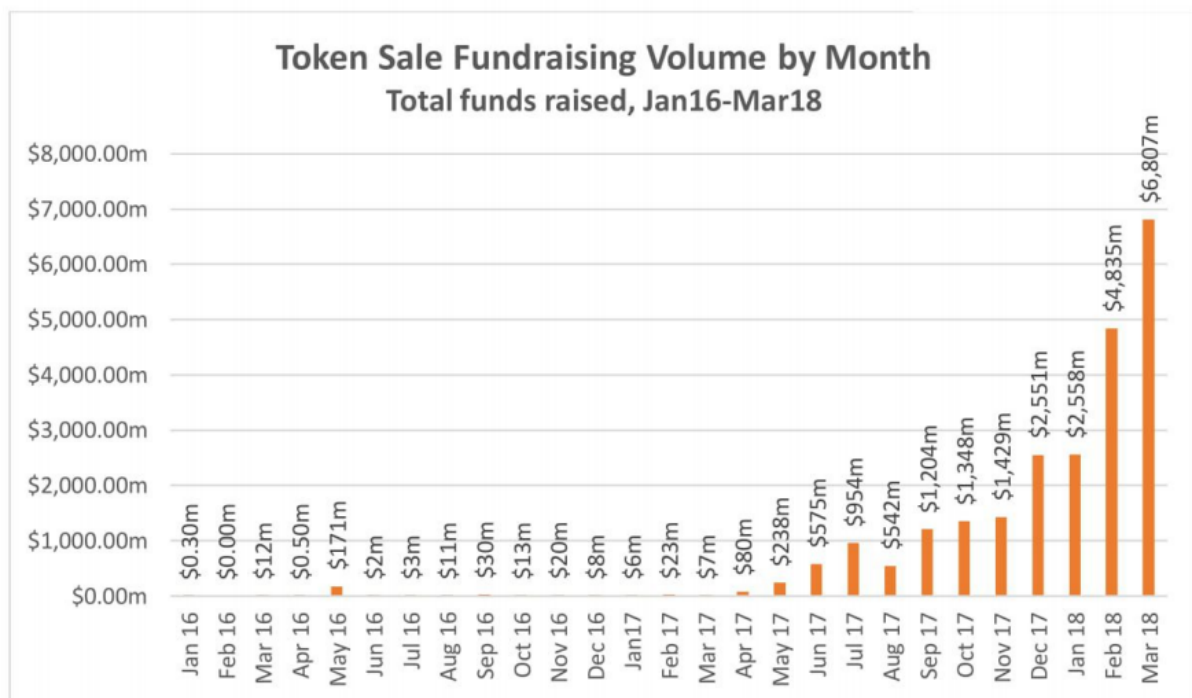

Image source: Google

This confirms that a significant advantage of an ICO for investors is that it is open to everyone. And we will prove how does our ICO work.

Unlike a traditional IPO, we want small investors to have a chance to invest little money, so we price our tokens modestly for allowing public to participate in the sale. Once mHealthCoin platform launches and acquires users, demand for its token will increase dramatically, causing token values to rise to the benefit of our holders. We are full of confidence that mHealthCoin can gains popularity and market trust in the near future, hence our investor can reap tremendous returns in the future.

6.2 End Users

Access to Professional-Grade Services

By syncing our Smart Wearable Devices to mHealthCoin Apps, users will be rewarded and received valuable content with health tokens in 24/7:

Earn tokens or coins by calories consumption — Motivation for improving the awareness of own healthiness.

Al technology for data analysis - able to diagnose preliminary medical condition by comprehensive data like Daily Heart Beat Rate and Daily Body Temperature collected by users in 24/7.

Moving average of comparison of team or individual exercising chart & global standard — as a reference value for the user to achieve a higher goal

Safe and Efficient Access to Medical Records — mHealthCoin gets users health records on a blockchain starting with their first contact when they connect to our mobile applications. By using blockchain technology, doctors and care providers can now work in one decentralized, shared ledger that update patient's medical records, accessible to all authorized parties, anywhere in the world in just minutes. So, every time when user go to the hospital or clinic for medical treatment, HC platform can send and retrieve valuable information from the database in just a few clicks on their phone.

6.3 Merchants

6.3.1 Content economy

The main goal of the Health token is to build the Decentralized Payment Ecosystem for E-Commerce to increase the Blockchain adoption for regular people across the world. The Health token ecosystem offers unified reward system which any service-providing entities can partake in. In HC platform, content value can be recognized efficiently, and all contributors can be incentivized in a more direct and effective manner that helps promote long-term economic growth for individual creators and for content creation generally. Hence, we allow the token earned by the merchants can be used back on the platform, like pay for advertising.

Content economy with related ad to specific respondents by advertisers

As mHealthCoin platform collected a large amount of comprehensive data analysis from the user (e.g. exercise pattern, consumption pattern, health index analysis), we can develop and measure intent among potential buyers by appealing to the players' psychographics thereby we can provide effective marketing strategies like promotion add to merchant accordingly to target their right audience.

6.4 Benefits for both users & merchants by AR game

6.4.1 Users

Our app combines two very popular concepts: AR games and fitness. Studies show that people play interactive games for a number of reasons: to have fun, stay fit, meet other people, or simply to enjoy the challenge of the game itself. No matter what the reason, our users can reap a number of benefits that are intrinsic to each of these activities.

6.4.2 Health and weight management

Experts agree that an hour of moderate to vigorous exercise a day is essential for children's health. In spite of this, children and teenagers today are growing increasingly used to a sedentary lifestyle, which leads to a number of health issues, even at an early age.

While fitness gaming may not be the cure for diseases that come with an inactive lifestyle, obesity being the most frequent one, the engaging nature of the game makes it an extremely fun activity not only for children, but for adults and seniors as well. This makes Fitness Games an excellent choice for anyone who has a hard time staying motivated to exercise.

Our app is designed to get players out of the house, walking around, and interacting with the environment and intended to help motivate people with sedentary lifestyles to become physically active. With traditional forms of exercise, people will usually be thinking about how exhausted they are, but with our fitness gaming, their mind is immersed in the game and they are just having fun. As a result, the level of motivation to stick with the exercise program is also much higher than with traditional exercise.

6.4.3 Physical benefits

The physical benefits of our app include improved speed, balance, agility, sense of rhythm, coordination, spatial awareness, endurance and reaction time. As an added benefit, all the skills acquired while playing can be transferred to real-world situations.

6.4.4   Cognitive benefits

The interactive aspects of our app — competition, attention to details in the virtual environment, the need for participants to anticipate events and make decisions — all have a very positive effect on executive functioning as well as on attention, working memory, planning, multi-tasking and problem-solving skills. This can be particularly beneficial to seniors, as it helps delay dementia and improve cognitive skills.

6.4.5   Social benefits

All the fitness missions offered by our app is a social experience. It provides an opportunity to interact with peers with similar interests, which can in turn foster friendships among players.

The multiplayer experience and ability to have people playing at different difficulty levels side by side has a positive effect on self-esteem, especially with teenager, while the immersive nature of the game gives them a sense of commonality and collaboration. Beyond that, like any other kind of exercise, our app can help decrease stress levels and improve mood.

6.4.6   Merchants

Our partner merchants can reap a number of benefits by serval activities of our app

Attract Customers and Increase the Store Foot Traffic
By creating missions for user to gain a fix amount of coinsas a reward, we require users to move around and scan special AR tags in our partner merchants' shops. The shops will receive much more physical visits of target customers.

Also, when the visitorsscan the AR tags in the front window display of the shops, it will direct the link to the shop websites and let customers learn more about a product or order it directly from you.

Better Meet the Needs of the Target Customers
During the users using our app, a lot of value data will be generated by the blockchain, such as health status, lifestyle, which enables the physician to get a holistic picture of a

patient.

The database can help our partner merchants determine how to improve their business and better meet the needs of the target customers.   They can create a corresponding market strategy or competitive advantage product and service through this health management information and big data analysis.

There is a huge potential business opportunity in the integration of the medical industry. Electronic Health Records (EHR) systems are becoming standard in medical care.

As HC is a Real-time monitoring the health stats of users' health stats of users and reporting facilitates the management of value-driven healthcare platform which enables patient data analytics and provide a Data-oriented Healthcare Solutions to Medical industry, medical institution but also research companies are expected to invest in innovation to take advantage of all this data.

6.4.7   Insurance industry

In addition to measuring outcomes, another opportunity in Big Data is tying in patient data to health insurance providers to encourage patients to take ownership of their healthcare needs.

The big data collected by HC platform measures risk and master's customer needs through accurate data analysis. Through close cooperation, Insurance industry can create an innovative product or service of Insurance + great health, which provide a competitive advantage for health insurance through health management information and big data analysis, reducing underwriting risks and tapping potential niches.

Contribution to countries

HC platform aim at reducing the burden of the growing medical system and the public's medical expenses with harnessing digital technologies in order to reap significant economic benefits to countries in the long run.

Aging problem is a serious problem in some developed countries. It may rise future medical expenses and lower future labour productivities in proportion. Therefore, mHealthCoin also aims at self-awareness of health status to relieve the effect of aging problems in long run including lower medical expenses and more labour productivities.

As early as October 18, 2017, President in the China, Xi Jinping pointed out in the report of the 19th National Congress that the implementation of the healthy China strategy should improve the national health policy and provide all-round full-cycle health services for the people. Development, which will play an important role in improving people's livelihood and building a well-off society in an all-round way.

(source:http://www.thishealthsummit.corn/index/gotoNews.doid=xwebcf484afc7b44[59a89eb17ea26d160)

Besides, regarding to the Analysis of the market scale of health management service industry in China, the health management service industry with personalized health services is still in the early stage of the development. In 2016, the market size was only 152 billion yuan, but its huge growth space and anti-economic cycle characteristics have attracted a lot of capital attention and participation by cross-border companies.

There are two major benefits to promoting the development of the health management service industry with the blockchain technology into the countries. First is to promote national health quality in order to save the medical resources, control medical costs, and alleviate chronic diseases and aging. Second, to achieve industrial economic benefits, promote the development of related health industries, meet diversification and high-quality health service needs. Overall, under the big health strategy, HC platform will able to bring the most important incremental market to the countries.

Chart: Market size of health management service industry in 2010-2017 (unit: 100 million yuan)

Market Size of Health Management Service Industry (RMB 100 million)

(source : haps://bg,qionzhan.com/report/detail/300/180619-1fa879d1html)
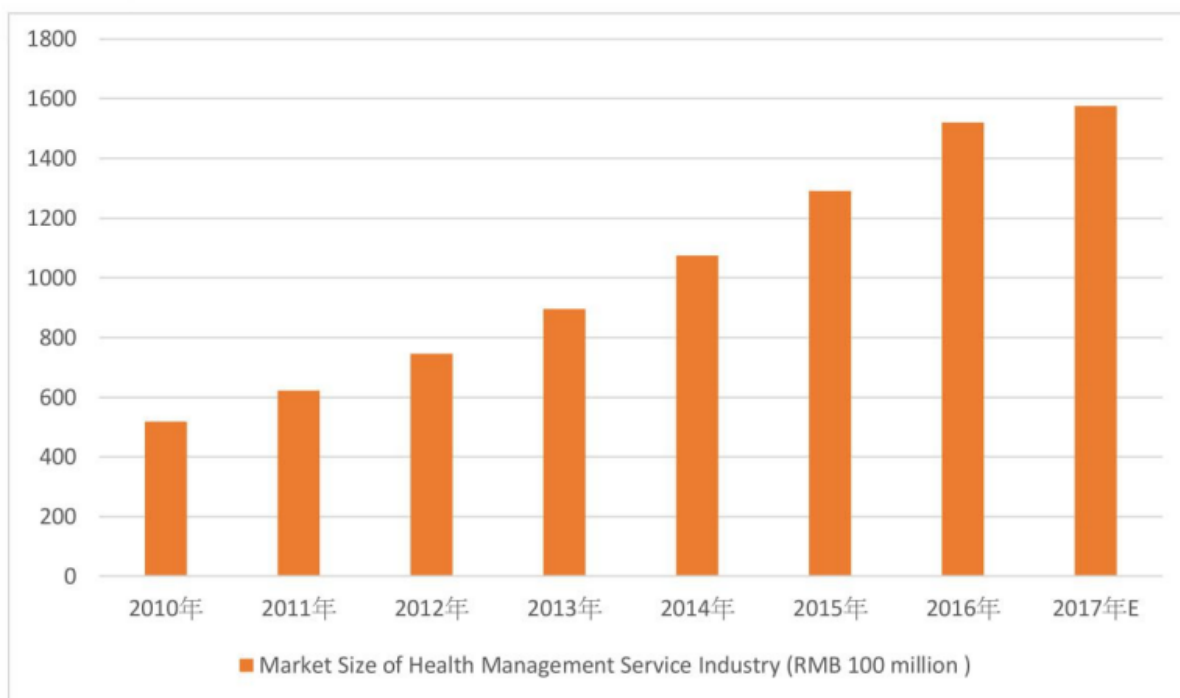
6.5 Profitability

All revenue for the network is logged and managed using blockchain technology to ensure immutability and transparency.

The main revenue we will generate can be divided into few aspects:

1. Device sales — To satisfy the need of our different target segments, we will launch 3 devices with different functionalities, for sport, child, elderly to reach the highest market share.

2. Advertisement profit from content economy — As we can provide effective marketing strategies by following users' behavior to provide target specific advertising for our clients. We can charge the higher service/analyzing fee.

3. Big data analysis related profit — By analyze users' behaviors stored on the blockchain, we can provide corresponding trend reports through the HC platform to governments, medical institution, research institutions, companies etc. These valuable reports could significantly help to our clients for studying purposes.

4. Medical or clinic link up - With user's willingness, HC platform can cooperate with global healthcare companies — which have great opportunities for expanding our business model.

Team and Advisory

7 Team and Advisory
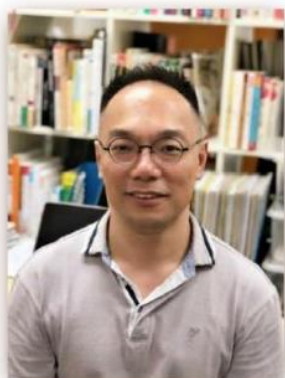
ANDY

CEO and CTO

Andy Yuen is the CEO of mHealthCoin project. He is a blockchain enthusiast. He is the one giving ideas of mHealthCoin development and design business eco-system.

MICHAEL NG
GLOBAL BUSINESS
DEVELOPMENT
DIRECTOR

Michael has 20 yrs experience in retail services industry, served most Fortune500 retail brands globally. He also provides sales training for brands and conducts retail management courses in institutes for public.

SOLON LI

System Architect

Li Chak Man, Solon is the founders of Authpaper Limited, which provides technology advisory and software development services, especially on blockchain and cryptocurrency. He is also an authorized trainer for Oxygen Forensics and examiner (En CE) on forensic services.

Advisor team

Derek Leung is a post-graduate of Master of Science in International Banking and Finance and graduate of Bachelor of Commerce in Marketing and Advertising. He is a strategic planning specialist for more than 8 years in business planning experience. He plans for businesses with innovative conceptuality advanced with technology to enlarge synergy effects. Quantitative analysis is one of the focuses on business planning and development with sufficient evidences to work out.

DEREK LEUNG
ADVISOR

Terence Chim is a representative of Hong Kong at Ice Hockey and a coach of ice hockey and skating over 13 years of experience. He is also a consultant of ice rink and inline rink building and management. His expertise in ice hockey, ice skating and inline skating develops one-stop services of development, coaching and marketing with sophisticated implementation in sport industry.

TERENCE CHIM
ADVISOR

Alex is a Hong Kong entrepreneur who has previously founded successful companies in IT Twenty years of experience designing and implementing software solutions. His primary expertise is in: B2B Ecommerce, Business Workflow system, Blockchainbased systems development, data driven applications and document management applications. Bridging the gap between technical solutions and business. Participated as a technical consultant in many start-ups. Helped design and build scalable, durable and cost optimized solutions covering mobile, front-end and back-end tracks.

ALEX CHIU
ADVISOR

Legal

8　Legal

8.1　Legal

General Information

This whitepaper describes the initial sale in which the mHealthCoin is sold. mMHealthCoin is a crypto token that is designed to be used for all services provided by the platform aforementioned in this project as explained in this whitepaper. mHealthCoin also can be used as a crypto token to pay for any other services provided by other business entities in which accept the token. It is not limited the usage of mHealthCoin or the types of business entities that would like to use mHealthCoin for their businesses.

mHealthCoin is not intended to constitute a security in any jurisdiction. This whitepaper is not a solicitation of investment and does not pertain in any way to an offering of securities in any jurisdiction.

Please note that purchases of mHealthCoin are final and non-refundable.

Individuals, businesses, and other organizations should carefully weigh the risks, costs, and benefits of acquiring mHealthCoin.

Limitation of the Purchasers

You are not eligible to and you shall not purchase mHealthCoin through its token sale if you are a citizen or resident (tax or otherwise) of any country or state where the purchase of mHealthCoin or similar crypto token may be prohibited, or the token sale is deemed to be not compliant with the applicable laws and regulations. If you are a resident of People's Republic of China, you cannot purchase mHealthCoin through the token sale.

Purchases of mHealthCoin should be undertaken only by individuals, entities, or companies that have extensive experience with, and understanding of, the usage and intricacies of crypto tokens and blockchain based software systems.

Purchasers should have functional understanding of storage and transmission mechanisms associated with other loss of any crypto tokens, mHealthCoin or fiat currency resulting from actions taken by, or omission of the purchasers. If you do not have the required experience or expertise, then you should not purchase mHealthCoin or participants in the sale of mHealthCoin.

You should carefully consider the risks, costs, and any other demerits of acquiring mHealthCoin, and, if necessary, obtain your own independent advice in this regard. If you are not in the position to accept not to understand the risks associated with the token sale of mHealthCoin (including the risks related to the non-development of the platform) or any other risks as indicated in this whitepaper, you should not acquire mHealthCoin, until such that you have received the necessary independent advice.

Representation and Warranties by the Purchasers

By participating in the token sale of mHealthCoin the purchasers represent and warrant to mHealthCoin as follows:

(a) you are authorized and have full power to purchase mHealthCoin according to the laws that apply in your jurisdiction of domicile;

(b) you are solely responsible for determining whether the acquisition of mHealthCoin is appropriate for you;

(c) you are not acting as an agent on behalf of any other person or entity who wish to purchase mHealthCoin or participate in its token sale;

(d) you have carefully considered the risks, costs, and any other demerits of acquiring mHealthCoin and understood such the risks, costs, and any other demerits associated with mHealthCoin and its token sale;

(e) you are not acting for speculative investment;

(f) you agree and acknowledge that mHealthCoin does not constitute securities in any form in your jurisdiction;

(g) you agree and acknowledge that this whitepaper does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities in your jurisdiction or a solicitation for investment in securities;

(h) you agree and acknowledge that no regulatory authority has examined or approved of the information set out in this whitepaper, no such action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction and the publication, distribution or dissemination of this whitepaper to you does not imply that the applicable laws, regulatory requirements or rules have been complied with;

(i) you agree and acknowledge that this whitepaper, the undertaking and/or the completion of the mHealthCoin sale, or future trading of mHealthCoin on any cryptocurrency exchange, shall not be construed, interpreted or deemed by you as an indication of the merits of mHealthCoin;

(j) the distribution or dissemination of this whitepaper, any part thereof or any copy thereof, or acceptance of the same by you, is not prohibited or restricted by the applicable laws, regulations or rules in your jurisdiction, and where any restrictions in relation to possession are applicable, you have observed and complied with all such restrictions at your own expense and without liability to mHealthCoin;

(k) you agree and acknowledge that in the case where you wish to purchase any mHealthCoin, it is not to be construed, interpreted, classified or treated as:

(i) any kind of currency other than cryptocurrency;

(ii) debentures, stocks or shares issued by mHealthCoin;

(iii) rights, options or derivatives in respect of such debentures, stocks or shares;

(iv) rights under a contract for differences or under any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss;

(v) units in a collective investment scheme;

(vi) units in a business trust;

(vii) derivatives of units in a business trust; or (viii) any other security or class of securities.

(l) you have a good understanding of the operation, functionality, usage, storage, transmission mechanisms and other material characteristics of cryptocurrencies, blockchain-based software systems, cryptocurrency wallets or other related token storage mechanisms, blockchain technology and smart contract technology;

(m) you are fully aware and understand that in the case where you wish to purchase any mHealthCoin, there are risks associated with mHealthCoin and its business and operations;

(n) you agree and acknowledge that mHealthCoin is not liable for any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or relating to any acceptance of or reliance on this whitepaper or any part thereof by you;

(o) you will not use the token sale for any illegal activity, including but not limited to money laundering and the financing of terrorism; and

(p) all the above representations and warranties are true, complete, accurate and non-misleading from the time of your access to and/or acceptance of possession this whitepaper or such part thereof (as the case may be).

Updates to the Detail of the Token Sale

mHealthCoin reserves the right, at its sole discretion, to change, modify, add, or remove portions of this whitepaper and the terms at any time during the sale by posting the amendment on the mHealthCoin website. Any purchaser will be deemed to have accepted such changes by purchasing mHealthCoin. If at any point you do not agree to any portion of the then-current version of this whitepaper and the terms, you should not purchase mHealthCoin.

Market and Industry Information

This whitepaper includes market and industry information and forecasts that have been obtained from internal surveys, reports and studies, where appropriate, as well as market research, publicly available information and industry publications. Such surveys, reports, studies, market research, publicly available information and publications generally state that the information that they contain has been obtained from sources believed to be reliable, but there can be no assurance as to the accuracy or completeness of such included information. mHealthCoin has not conducted any independent review of the information extracted from third party sources, verified the accuracy or completeness of such information or ascertained the underlying economic assumptions relied upon therein.

Mine, your health!

mHealthCoin

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