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Green And Nature Association

white paper

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TEAM GANA

from Phenomenology of perception

“We know not through our intellect but through our experience.”

by
Maurice Merleau-Ponty

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1.0 Abstract

We no longer advance through the intellect.
By gathering experience, Artificial Intelligence (AI),
the new technology with deep learning, reveals a new world to us.

GANA Technologies studies Big Data and AI.

We project that every industrial development will finalize the grafting of AI.

The medical and IT industries have already proven this by applying Watson from IBM and AlphaGo from Google.

The apprehensions of applying AI are wide and involve drawing manipulated results from particular individuals and groups to applying social responsibility and ethics when AI endangers humankind after its application to the field of health and life.

The resolution of the above mentioned social issues shall be achieved by applying blockchain technology to AI. GANA Technologies would like to achieve a solution to this social disquiet through applying blockchain technology to AI.

GANA Technologies would like to make an innovative transformation of the cannabis industry where its technology advances haltingly compare to its rapid growth in size due to the widespread legalization.

To realize this, we have studied various fields in the cannabis industry and confirmed the scarcity of infrastructure for adopting AI.

A data collection channel for learning is required to employ AI and a personalization data collection channel is also essential to provide users with an optimized solution.

GANA Technologies also appreciates the ethical problem of using AI, and suggests solution by managing it through a blockchain based on transparency, integrity, reliability and security.

2.0 Background

The concept of AI was initially suggested in 1956. However AI only recently attracted public interest. This took effect with the emergence of massive amount of data, advancement in hardware and the appearance of new algorithms. AI has been perceived by the public as humanlike robots because the idea was initially released to the public through sci-fi movies and novels.

AI take shape not only in humanoid form. The original AI came into existence in 1950 through artificial neural network which signify finding an algorithm that connects input and output in certain conditions. The advancement of hardware and algorithm manage to bring out the training of AI through deep learning in various fields and subjects.

Renowned theoretical physicist Steven Hawking said “Every aspect of our lives will be transformed by AI, and it could be the biggest event in the history of our civilization.”[1]
Sundar Pichai, the chief executive officer of Google Inc. also mentioned “AI is more important than fire or electricity.”

> **“Every aspect of our lives will be transformed by AI, and it could be the biggest event in the history of our civilization**
>
> *by* ***Stephen Hawking***

It is obvious that groundbreaking change in relation to the accelerated advancement of AI as the quotations of Steven Hawking and Sundar Pichai. Expectation and apprehension currently prevail with regard to this issue. This technology could bring fortune or disaster depending on its direction and management.

AI introduced a huge innovation in the medical industry. Adopting AI in the medical industry brought great expectations with regard to enhancing the accuracy of diagnoses, prescriptions and surgery. When patients require medical treatment, they desire to find more competent medical practitioners when they suffer from severe illness. This implies that the quality and content of medical practice varies according to the experience of the doctors even with specialists.

It is important to retain objectivity in medical industry since it is directly related to health and life. Thus objectivity shall be implemented in the medical industry which has been influenced by more by subjective decision-making for so long, and solutions based on large scale data as in engineering should be administered to deduce objectivity from medical practice.

1. Vice news: https://news.vice.com/en_us/article/qvwd95/even-stephen-hawking-doesnt-know-if-ai-will-be-good-or-bad

3.0 Introduction

The emergence of AI which could replace the work of humans in intellectual areas caused a high anticipation of the generation of great convenience. However, there are suspicions regarding the outcome of AI which are generally accepted as objective, if the results could be managed without the manipulation of a specific individual or group.

Since a close relationship exists between cannabis consumption and the human body, the determination of AI should be meticulously verified. Verification is required for the trained data of AI, and management and publicity should be transparent for service results, such as the information and recommendations offered to users.

Blockchain technology with the advantage of decentralization, integrity, reliability, security, transparency and anonymity shall be the proper management method to retain the good intentions of AI. A blockchain guarantees the reliability of study data and verifies no errors in AI training results that are transpired by design. It could also provide an institutional strategy for maintaining a sense of ethics in companies which disclose the results of AI training and record details of individual and group participation of those involved in AI development.

4.0 Goals

GANA Technologies provides optimized AI solutions which are required by individuals and research institutes through establishing an ecosystem that collects and shares cannabis industry data with lagged technology.

GANA Technologies would elicit offers from indirect developers of AI by contributing the necessary data for responsible AI training. GANA Technologies would also provide the directions for maintaining the good intentions of AI, and retain objectivity by managing AI transparently and exhaustively according to developmental on the procedures and training results.

Detailed goals for the realization of the above are listed as follows:

Managerial Goals of GANA AI

- Verifying no intentional manipulation of data collected by GANA AI through blockchain technology.
- Transparently managing the results of services offered and deducing insight from GANA AI through blockchain technology.
- Retaining the good intentions of individuals or organizations which participate in developing GANA AI through blockchain technology.

Data collection goals

- Collecting expertise and research data generated in the cannabis industry by establishing an ecosystem.
- Collecting quantitative and qualitative data of individual consumers through the mobile application.
- Studying GANA AI design and training data to analyse results.

Service goals

- GANA AI provides an optimized Personal Assistant(PA) service through the mobile application.
- GANA AI shares the statistical data of cannabis users and new insights through the ecosystem.

5.0 Problem Statement

5.1 Problems captured from the characteristics of cannabis and AI

As AI technology evolves, a constant debate prevails on its ethical responsibilities when decision-making. Fields such as the medical industry must undertake a thorough management of such AI's.

Cannabis is also considered as part of the medical industry nowadays, and thus recommendations and analysis must be based on objective data; moreover, the ethical consciousness of the developers must also be managed.

In particular, the development team must fulfill its social responsibilities as an AI operating agency by giving the best effort. This is to achieve high quality big data for accurate recommendations and optimized solutions.

- The data collected for GANA AI learning should be managed so that it is not intentionally modified for any reason.
- The performance of GANA AI must be transparently monitored in real time and must be prevented from being manipulated by one particular organization.
- Ethical awareness must be maintained for all members involved in GANA AI development and data sharing organizations.

5.2 Problems captured from building industrial big data

The cannabis industry, requires rigorous procedures and records that are generally made by handwriting or spreadsheets. Fields such as distribution, cultivation and sales still necessitate the application of IT technology to enhance efficiency and achieve data collection channels.

This leads to a loss of data and lack of reliability. We believe big data collection channels must be built in these fields to develop the GANA AI, bring innovation and take the industry to the next step.

5.3 Problems captured from personalization data collection

The emergence of AI took the consumer-oriented industries one big step further. Accordingly many AI developing agencies focus on a consumer-oriented PA and collect personal data by mobile applications.

The data demanded in order to provide a customized solution to the user is generally the user activity pattern related data. This is the reason why companies that offer services related to the daily lives of the users such as the SNS can develop AI faster than any other industry.

The cannabis industry, however, is deficient in a representative service as PA, and there is a scarcity of data collection channel for developing algorithms to better understand the user needs, advancements and utilization.

6.0 Solution

6.1 GANA AI Data management by blockchain

High expectations exist on the development of AI for bringing better efficiencies to our lives. However, the concerns arising from ethical responsibilities of operating agencies have remained as an unsolved task. The negative perception as it was recognized as a drug and is consumed by smoking led the team to recognize the sensitiveness of users when it comes to recommendations through AI.

GANA Technologies will exhaustively analyze individuals through its mobile application and will collect reliable data through the ecosystem to gain confidence with users. Moreover, the recommendation, research, and learning results will be managed by the blockchain technology in order to maintain trust with users by transparently disclosing all the procedures related to developments.

The most important feature is the ethical awareness of all researchers, developers, and data providers involved in GANA AI development. Thus, the project team has established the principles of development ethics in order to manage the overall direct / indirect changes through the blockchain technology.

This would prevent accidents caused by intentional or unintentional mistakes and a fully monitorable environment would be secured for developing a sensitive AI that integrates with both the GANA ecosystem and the cannabis industry.

6.2 Big data building solution – Ecosystem development for data collection

The GANA ecosystem is a big data solution that serves as a learning pool for GANA AI that consists of retailers, research institutes, and online communities. GANA Technologies exposes brilliant data collected from users that is expected to lead to a revolutionary development in the cannabis industry.

The concepts of AI which were introduced approximately 60 years ago were not clearly shown to the public due to limitations of hardware performance and lack of algorithms. AI became more recognized to the public along with the rising of big data concepts that serves as one of the most important features in developing it.

In particular, it is mandatory to manage the big data in such a way that prevents the AI from suggesting results based on discriminatory data.

GANA Technologies will provide an ecosystem that acts as a data collection and sharing system for the channels shown below using the benefits given by the blockchain technology.

- **Research Institutes**

  Recently, studies related to cannabis have been actively carried out in various fields as its medicinal value has been recognized in the medical field. However, the industry still lacks high quality and personal data for better understanding of the effects for privacy reasons; this is caused by the fact that it has long been classified as a drug.

  Through the ecosystem, GANA Technologies will provide the researchers with insights deduced from the industry big data and GANA AI. On the other hand, we will collect data from those researchers data for algorithms improvements and performance enhancement for the GANA AI.

- **Online Community**

  User analysis requires a large amount of qualitative and quantitative personalization data. Thus, GANA Technologies will lead the participation of communities to the ecosystem that such data generated during communication can be studied.

  Each community can share expertise and anonymous user activity information and by doing so will be rewarded GANA (the primary means of exchange for the GANA ecosystem). Users will be able to communicate with various experts from different communities by using the GANA mobile application. GANA will be rewarded based on an evaluation rule for the users activity performance.

- **Dispensary**

  One of the most essential data in the industry is users product consumption pattern data. However, investigated result indicate that cannabis sales are generally made by cash that causes more delay and owners cannot collect data competently.

  In addition, there are numerous limitations with online sales and delivery, this makes data collection not highly effective.

  GANA Technologies will improve its sales process by providing IT solutions such as membership management systems, Pre order to Pick up. This will also enable us to collect consumption data. Furthermore, we plan to develop the GANA Payment System based on the cryptocurrency that integrates with an automated consumption data collection channel that collects/generates highly reliable data.

  Entire personal information that is requisite to identify the user will be encrypted and managed through the blockchain. This would enable the transparent display of purchase/sales data for various usages.

  The Dispensary participating in the GANA ecosystem is able to solve the security problem questioned by several retailers; it is caused by large amount of cash reserves and will be able to collect their own customer data.

  "GANA Technologies" is compliant with the federal law, and the GANA Payment System based on the cryptocurrency would be applicable only after legalization.

- **Extensibility to related fields**

  The ecosystem will supply an open platform for various fields including distribution, cultivation, public institutions, etc. GANA Technologies provides a solution to improve the underdeveloped data recording method of the cannabis industry and enables the participants to manage cost and products more efficiently.

  The breeders are the largest group of cannabis-related expertise. The GANA ecosystem will benefit breeders to enhance the production efficiency by providing modernized production facilities, user information and valuable knowledge based on personal expertise.

The insights and data deduced by GANA AI will be shared to all participants through the GANA ecosystem and it will also be used as reliable high-quality data for research purposes. This will serve as a device that connects GANA Technologies and all participants to fulfilling its social responsibilities as an operating organization; this will happen through the overall process of developing GANA AI and the steady public disclosure of the results.

6.3 Solution for personalized data collection limitation – GANA mobile application

The GANA mobile application will connect users to the GANA AI. All the services provided to the users from GANA AI will be processed through the GANA mobile application. We will collect data such as user content consumption, mobile payments, community activities, and inquiries answers to let GANA AI study each user's taste. Each suggestion or bit of information given to the user will be recorded in the blockchain and uses their feedback to verify its learning.

The GANA mobile application recommends random contents based on the popularity of the contents at the early stages of meeting the user. GANA AI analyzes users based on three features: adoption, rejection, and retention that is selected by the user himself. GANA AI optimizes the user data based on the following three categories and are classified based on these three features stated above.

User data optimization based on three categories

- **Lifestyle: Those who consume cannabis as a sort of a therapy and like to spend time alone**

  This type is mainly aimed at recommending and consuming contents. GANA AI will focus on analyzing the user's psychology and biorhythm to improve and stabilize the quality of life by being their PA (Personal Assistant). The users will be studied collecting and analyzing qualitative data generated based on the communication of GANA AI with the user.

- **Socializing: Those who consume cannabis for socializing and information sharing purposes**

  Users who are studied and appear to be highly related to socializing will be provided with active contents such as new articles on cannabis, questions to be solved, meetings and community information. The socializing type generates personalized data related to distribution and online communities; its main goal is to collect a large amount of quantitative data or quantification of unstructured data. GANA AI analyzes the acquired data to identify users and communities key concerns and will be shared through the GANA ecosystem based on the needs of the participants.

- **Medical: Those who consume cannabis for daily health-care due to illness**

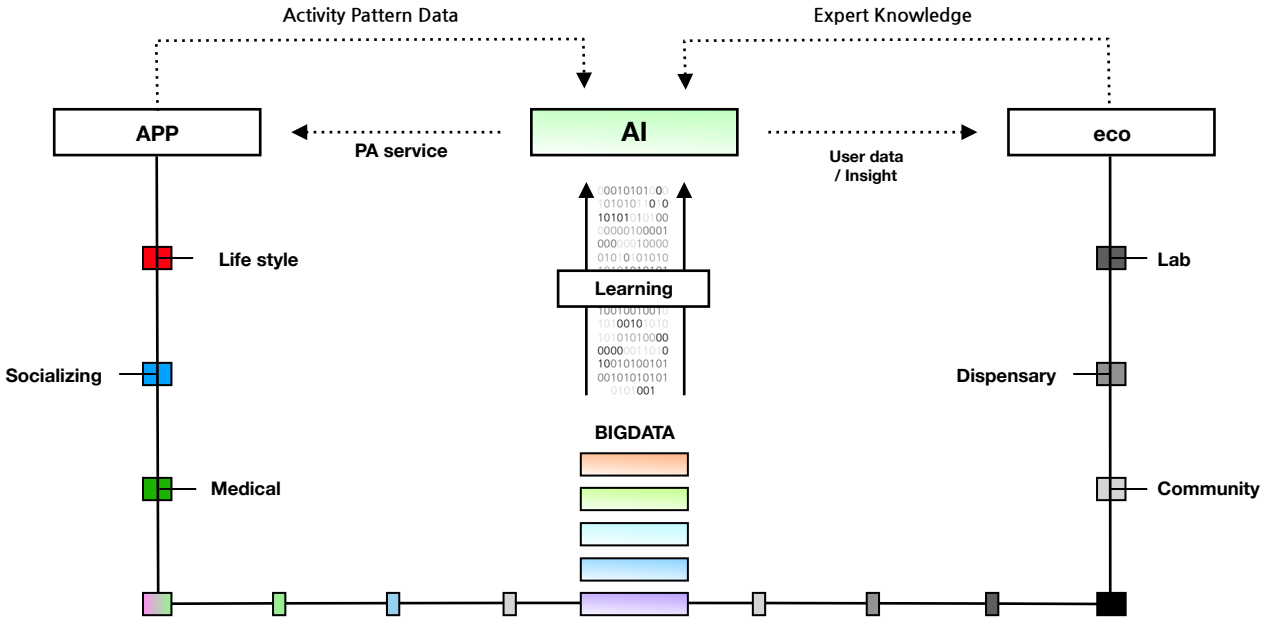
  GANA AI is able to recommend better products to medicinal users based on a continuous learning research institute's expertise, lifestyle and socializing user data. Various physical information such as gender, constitution, ethnicity, psychological influences, changes in biorhythm will be learned along with expert knowledge of research institutes, and recommendations will be provided for relieving symptoms caused by a particular illness.

  This is similar to the behavior of a particular patient visiting a doctor and consulting a doctor. In other words, GANA AI will be able to act as a personal doctor for those users.
  In particular, patients suffering from serious illnesses will also be able to get recommendations for better products and receive a variety of information about users with similar experiences.

In other words, GANA AI will provide the optimal solution through an intensive learning process based on the GANA ecosystem and mobile application. The collected information and insights deduced by GANA AI can be shared with research institutes and clinics, and it will be managed through the blockchain technology. Moreover, additional features such as wearable devices will be developed so that user body information and health data can be collected in real time without the need to request users to directly submit the information.

7.0 Conceptual Design

7.1 GANA AI platform structure



The main features of GANA AI platform structure are big data / ecosystem / mobile application

Each channel shares the big data collected for the learning of GANA AI and all the information and results are shared through the blockchain. The figure below shows the data management process of GANA AI. GANA AI collects data from various organizations and manages it as one big data. GANA AI can reclassify the collected big data according to the requirements of the user and construct a new data set optimized for the user needs.

GANA AI Data Management Structure		
Participants of GANA eco-system	TO : AI	Provides expert knowledge to learn research results, community activities, latest news
	FROM : AI	Provided with insights deduced from personalized data, research results, recreational, market needs
GANA mobile application users	TO : AI	Provides taste, consumption, question, health, race related data
	FROM : AI	Provided with a PA (Personal Assistant) service for more convenient daily life experience

7.2 Blockchain

GANA Technologies uses the blockchain to manage retrieved data and personnel participated in the project. Especially for managing the personnel participated in the project, this will act as a device that will secure the ethical responsibility of all participants to prevent developing discriminatory rules for the GANA AI.

The functions of the blockchain are classified into the following four types.

- Integrity, reliability

  GANA AI transparently manages the data provided to it without any intentional or unintentional errors.
  The big data developed by GANA AI is built by many participants. All the process of retrieving data from ecosystem including personal and organizations will be recorded through the blockchain and managed with transparency.

  We would like to add that we will record even reference personnel or organizations led to algorithm developments both directly and indirectly.

- Transparency

  Decision-making process and results deduced by GANA AI will be displayed so the agency could fulfill its ethical responsibility
  We will manage all performance and procedures handled by the GANA AI through the blockchain and share the results with all participants. This means that all the activities GANA AI has performed will be displayed from the route to the action taken.

  This will prevent intentional errors misconducted during the learning process. Also, this will open another field of research that discusses the questions arose from sharing conflicts and misjudgments. This will serve as a device that helps the agency to fulfill its social responsibility.

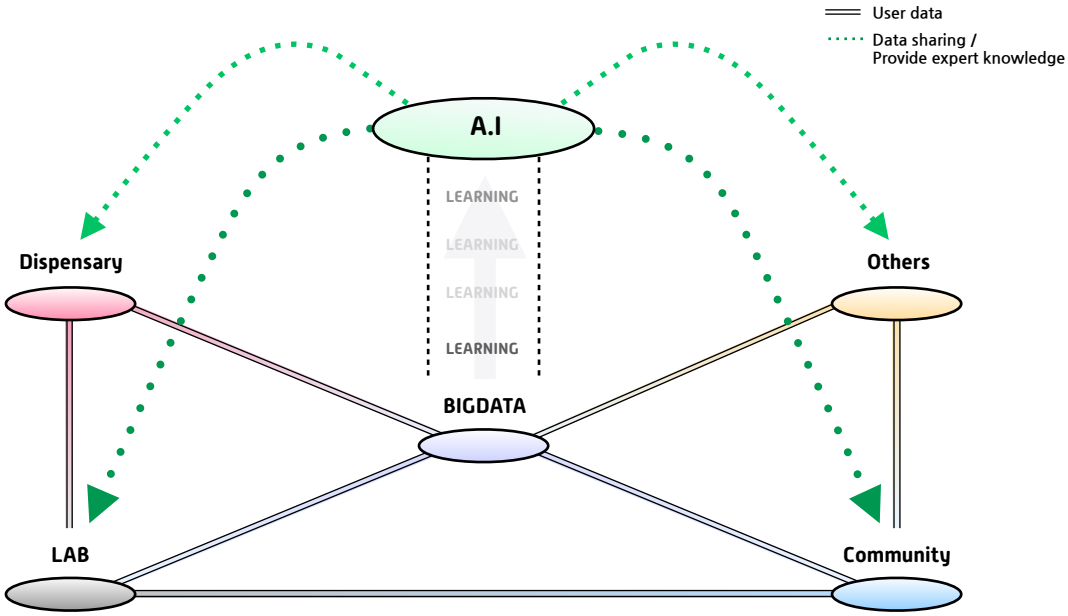
- Security

  GANA AI uses only user permitted data and managed access authorities of participants
  The GANA mobile application user can set the disclosure scope. This means that GANA AI will never collect personal data without permission from users. All the data retrieval procedure will be thoroughly managed by the blockchain to ensure that high security will be achieved.

- Anonymity

  GANA AI will block activities related to identifying the users based on the Big data
  Data collected from users and various institutions might include a variety of personal information or a key clue to it. As described in (7.1) above, GANA AI newly builds a big data set from the collected data. GANA AI will exclude all types of data that cannot be used for statistical analysis or can be converted to one. Names are the most common example for such types of data.

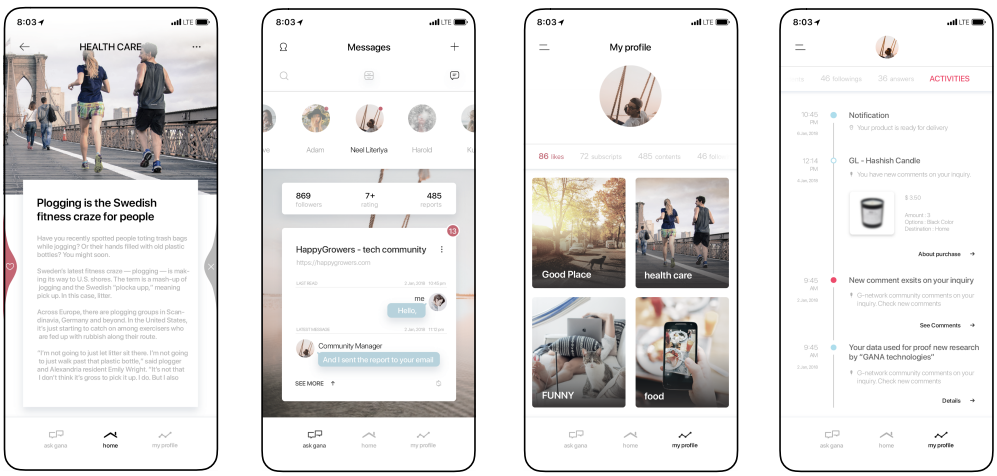
7.3 Eco-system

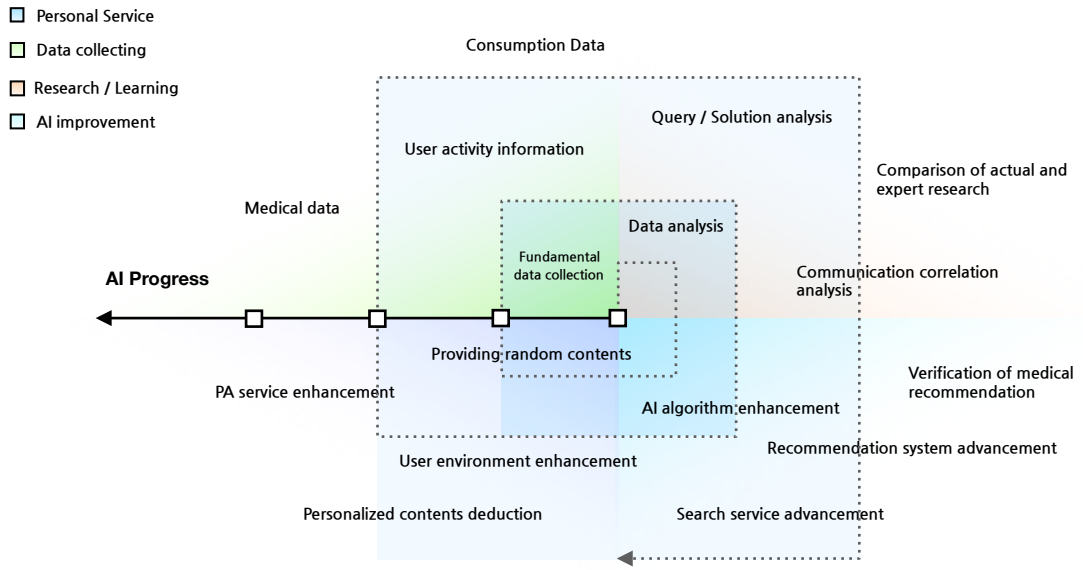


The GANA ecosystem initially focuses on collecting data from retailers / communities / research institutes and personal data, but, will be opened for all new participants who are willing to be part of the system. For example, a producer of digital content to serve mobile applications can participate as a content provider in the GANA ecosystem, where GANA AI provides content to users through mobile applications. In this case, this participant will be provided with insights such as consumer response that could lead to new contents productions.

In addition, the GANA AI will be designed in such a way that could suggest visualized results based on analyzing and understanding questions and needs for research institutions. The powerful feature of GANA AI is that it not only analyzes the question from its original topic but also quantifies its relationship with other fields and suggests various solutions to reduce time and effort and increase efficiency for all participants. The data and insight sharing procedure provides an extraordinary environment where there is no such a concept of supply and demand but participant and public interest realization.

7.4 GANA mobile application





The GANA mobile application will act as an communication interface that connects users and GANA AI. It collects both quantitative and qualitative information and provides optimized solutions. GANA AI develops according to the communication process with the user in a recursive progress of personalized service - data collection - research and learning - GANA AI advancement.

GANA AI categorizes mobile application users by Lifestyle, Socializing, and Medical users, but does not focus on only one-way analysis. GANA AI is based on relationship analysis. This means that a user categorized with a particular category will always have another portion for the other two categories too. This is essential since the mobile application user will not always use the service for one purpose only.

GANA AI is also capable of clustering similar groups of mobile application users to verify statistical hypothesis when an acceptable amount of users are gathered in a particular cluster. The data and insights generated in this process will serve as a highly reliable data that was not able to be collected in the past and will be used for suggesting optimal solutions for each user.

8.0 GANA project direction

GANA Technologies is the direct operator of GANA AI. We will manage the AI in such a way that problems rising from its social concerns will be solved through the blockchain technology. We will be deeply concerned about the controversy raised with the AI's technological growth, and will integrate a decentralized management method based on reliability, transparency and security of the blockchain technology.

GANA Technologies will continuously develop the system in which profit structure will be shifted from supplier centered to consumer centered. This is important in order to manage the system to be transparent from all intentional changes and to maximize profit as the operating agency.

Every industry stakeholder can be a source of data collection and can indirectly develop GANA AI. GANA AI will help solve public concerns and problems by securing interoperability and scalability of the ecosystem.

9.0 USE CASE

9.1 GANA Mobile Application

The GANA mobile application developed by the GANA project categorizes the users into three types.
The use cases are as follows.

Lifestyle

1) Tom is a frequent cannabis consumer
2) Tom had a hard day today
3) Tom wants to have a relaxing time by consuming cannabis
4) Tom wants something special
5) Tom wants to spend some time alone and he wants some new and fun contents
6) GANA AI will communicate with Tom by recommending various contents and activities
7) GANA AI will study Tom based on his decisions and will deduce his needs from his unconsciousness
8) Tom is already exposed to new contents by doing so and he will get more optimized solutions as GANA AI studies more about him
9) The solutions that GANA AI can offer to Tom are endless, and it will develop to be a friend Tom can not get away with as he uses GANA mobile applications more often
10) GANA AI is the most necessary PA for people like Tom
11) GANA AI is the best trained expert and has more knowledge than anyone else

Socializing

1) Danny usually meets with his friends and consumes cannabis for a refreshment
2) Danny is a person who is interested in getting along with others and receiving news
3) That's why he feels thirsty always for news and wants to share his experience with other people
4) The GANA mobile application provides Danny with new information on communities, knowledge management services, news, new issues and ways to connect with groups with similar interests
5) GANA AI recommends activities and contents shared from different users so people could experience new things with their friends
6) GANA AI will communicate with users through the GANA mobile applications and help socializing

Medical

1) Sara is a user who suffers from Rheumatic disease
2) Sara recently heard the news about the effectiveness of medical cannabis to daily health care
3) Sara does not have any knowledge about the components THC, CBD and doesn't know which type she should consume
4) Sara will be recommended with the optimized product for her, share ideas with other users with similar symptoms and get expert advice through the GANA mobile application
5) Sara will leave a feedback to the GANA AI so that it could learn more about her
6) GANA AI will study more about her as much as she uses the GANA mobile application

9.2 Eco-system

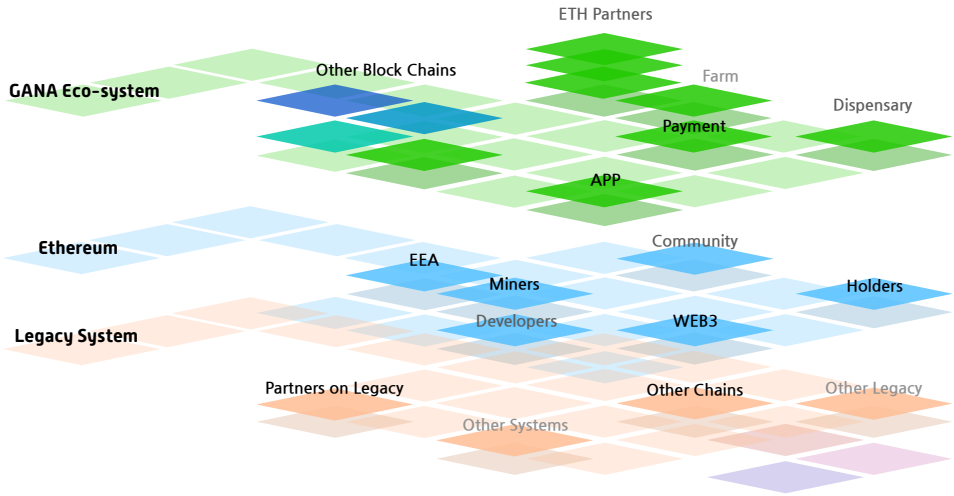
Pharmaceutical company

1) Company A plans to develop a daily anti-epileptic drug for epilepsy care
2) The development of new drugs requires large-scale clinical trials, which are time consuming and costly
3) GANA ecosystem can be used to minimize this process
4) GANA ecosystem will share the data collected from medical users which A could make basic assumptions
5) Company A is able to receive reliable data on usage patterns and product types
6) A can provide its own data and share more valuable user-based data by participating in the GANA ecosystem

Research Institutions

1) Institution T wants to reveal the correlation between various diseases and healthcare methods using cannabis
2) To do so, T used to make interviews with nurses, patients, physicians
3) This process is time consuming and costly, and hard to collect quantitative data
4) GANA ecosystem participants are provided with a new personalized data collected from the GANA mobile application
5) Participants are provided with patients related data from the GANA AI
6) GANA AI also provides insights deduced from the related data
7) Participants can get a full description for the insight deducing progress
8) T can verify those insights using his own methodologies and compare
9) T will share the research results with the GANA ecosystem

10.0 GANA



GANA is the primary means of exchange in the GANA ecosystem.
GANA is implemented as an extension to the ERC-20 standard on a decentralized public blockchain, Ethereum, and can be easily extended to other systems by conforming to standards. Upon the completion of the project, GANA Technologies will set an objective for users to acquire and use GANA as follows:

10.1 Using GANA in Dispensaries through the GANA Payment System

- GANA is evaluated by the market and can be used to buy products in dispensaries.
- Products can be paid through the GANA mobile application and users only need to pick-up at the dispensaries.
- GANA can be used for purchasing contents provided through the GANA mobile application.

(However, GANA Technologies complies with the federal law and it is based on the legalization of purchasing cannabis using cryptocurrencies)

※ The utilization of GANA is highlighted by solving the long waiting time and cash reserve problems for dispensaries

10.2 Using GANA in the GANA Community

- GANA is paid as a reward for contributing to the active rate of the user in the GANA community.
- GANA can be used for purchasing contents provided through the community.

10.3 Using GANA in the GANA ecosystem

- GANA is used as the primary means of exchanging data and insights within the GANA ecosystem.
- All participants of the GANA ecosystem must hold a rate proportional amount of GANA as an authorization authentication process of using the GANA ecosystem.
- All participants will be rewarded GANA by providing data, insights and contents.

※ The utilization of GANA is highlighted by solving the long waiting time and cash reserve problems for dispensaries

10.4 Data sharing rate and partners holding purpose for GANA ecosystem

- Class A : Must hold more than 1,000 GANA to receive statistical data.
- Class B : Must hold more than 10,000 GANA to use the Business Intelligence service through the GANA AI
- Class C : Must hold more than 100,000 GANA to use the partner customized service and data collection extension service through GANA AI

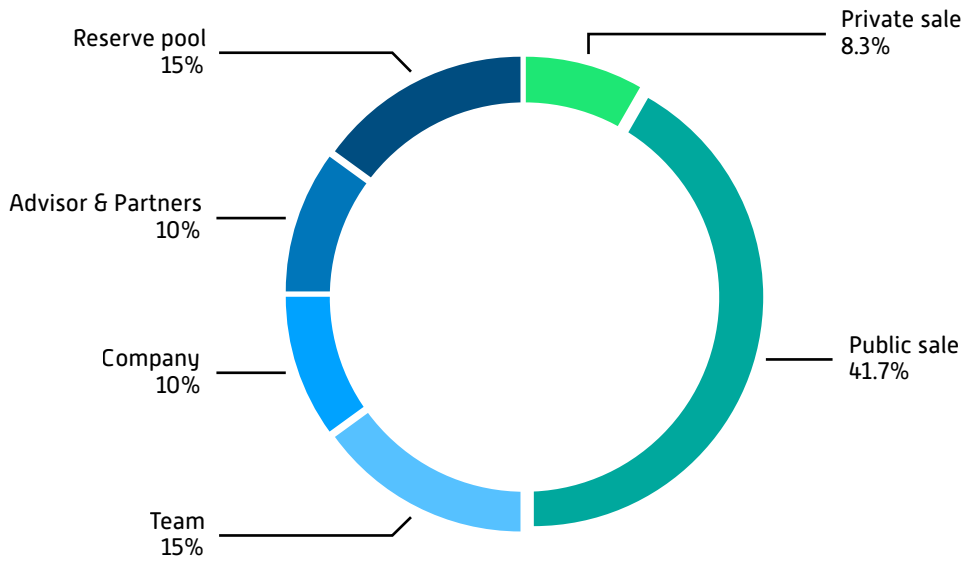
※ The customized service may require extra GANA depending on the quality of requested service.
※ The GANA holding limit may change based on the its value.

Target Amount of Participants			
Year	CLASS A	CLASS B	CLASS C
1st	Team & Advisor Lock		
2nd	10 Partners	5 Partners	1 Partners
3rd	50 Partners	10 Partners	5 Partners
4th	100 Partners	20 Partners	10 Partners

※ The table above is only a draft. The partners of the GANA will not be decided by strength of effort by any individual. The partners take part in the platform voluntarily and profit from doing so.

11.0 GANA sales and distribution conditions

Coin Distribution



Total GANA Amount : 2,400,000,000 GANA

Total Sale Amount : 1,200,000,000 GANA (50%)

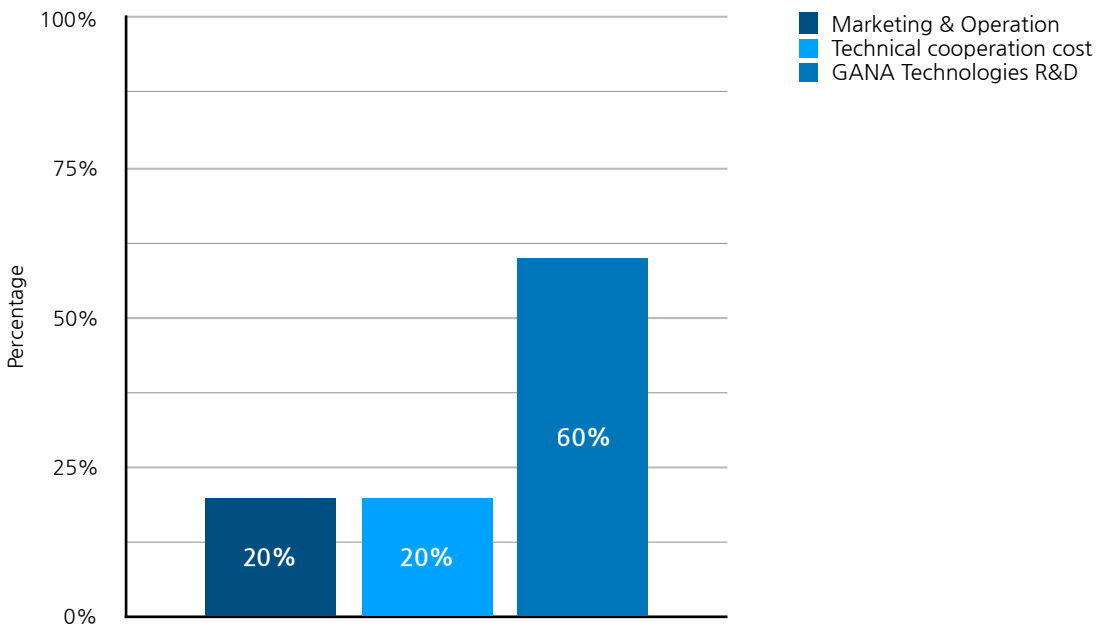
Sale condition

- Private sale ····· 8.3% 1ETH = 20,000 + 6,000 GANA (+ 30% bonus) | Hard cap = 10,000 ETH
- Public sale (Round 1)··· 12.5% 1ETH = 20,000 + 2,000 GANA (+10% bonus) | Hard cap = 15,000 ETH
- Public sale (Round 2)··· 12.5% 1ETH = 20,000 + 1,000 GANA (+5% bonus) | Hard cap = 15,000 ETH
- Public sale (Round 3)··· 12.5% 1ETH = 20,000 + 500 GANA (+2.5% bonus) | Hard cap = 15,000 ETH
- Public sale (Round 4)··· 4.2% 1ETH = 20,000 + 0 GANA (+0% bonus) | Hard cap = 5,000 ETH

- Team ····· 15% 360,000,000 GANA | *1year LOCK
- Advisor & Partners····· 10% 240,000,000 GANA | *1year LOCK
- Company ····· 10% 240,000,000 GANA
- Reserve pool ····· 15% 360,000,000 GANA

* Bonus GANA will be returned from the Reserve Pool.

Use of proceed



- Marketing & Operation ····· 20%
- Technical Cooperation cost ····· 20%
- GANA Technologies R&D ····· 60%

Development scope

Sold less than 20% ····· • Refund

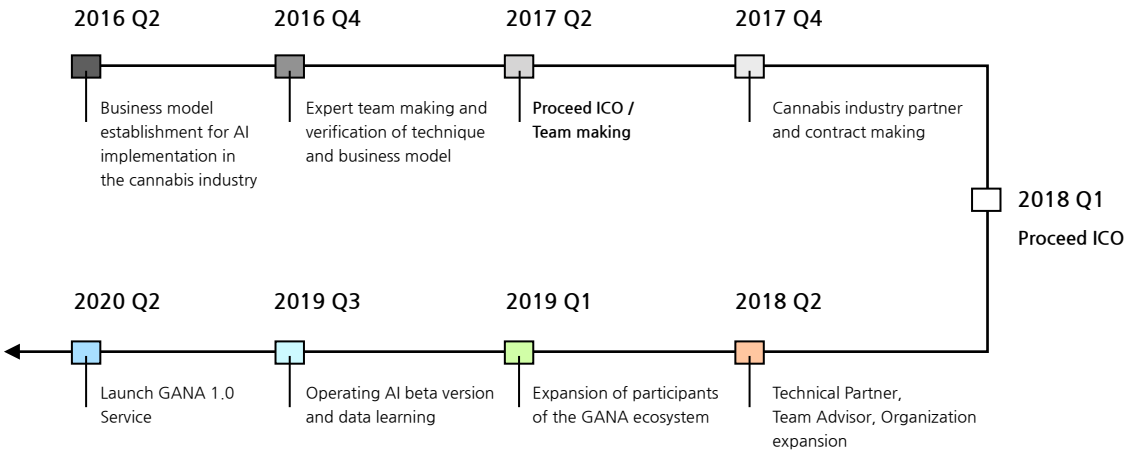
Sold more than 20% ·····
- GANA mobile application development for GANA usage
- GANA AI development
- Personalized data collection and learning
- AI development process management system based on blockchain technology

Sold more than 50% ·····
- GANA ecosystem B2B open platform
- Data collection channel expansion and partnership
- Cannabis industry modernization crew support

Sold more than 80% ····· • Proceed overall project

12.0 Roadmap

The purpose of GANA project is to collect a unique personalized data through the mobile application. The program of the project is shown in the road map below.



GANA Project Tech Team Structure		
R&D	AI	Data analysis, natural language processing, insight deduction, AI learning and research
	Block Chain	Data sharing, blockchain dApp, blockchain research
Operating	Application	Mobile application, online community
	Eco	Data sharing, data provider management, AI performance result, development management program

	2018 Q2	2019 Q1	2019 Q3	2020 Q2
Application	Planning mobile application	Community making and AI R&D model data collection	Implementation of blockchain to the Mobile application	Official launching of GANA AI PA service
Blockchain	Investigation on data sharing Technique using blockchain	Investigation on user certification using blockchain	Investigation on AI performance application	Investigation of Project management Methodology using
AI R&D	Data modeling for AI development	Advancement of recommendation algorithm and beginning AI	AI Beta version Operation and verification	Advancement of GANA Business intelligence 1.0 Service
Eco-system	Investigation on data sharing Technique using blockchain	Planning dApp for data sharing. Participant management program	Operation of ecosystem and expansion of customization	

13.0 Disclaimers

- GANA does not make any representations or warranties related to the token sale, and all responsibility for the token sale is the sole responsibility of the token sale participant.

- GANA is conducting token sales in accordance with laws of the jurisdiction where it is incorporated, and token sale participants participate in the token sale by having complied with all procedures and qualifications required to participate in such token sales in accordance with the law of their nationality. For example (the examples below are not exhaustive): (i) a citizen of a nation that legally prohibits participations in token sales; or (ii) a participant that does not comply with the legal requirements of his or her home country. Any consequences that arise from failure to follow the laws applicable to the procedure and qualifications of the participant's jurisdiction will be borne by the token sale participant.

- GANA may request token sale participants to undergo certain KYC procedures for the purpose of issuing its tokens. Accordingly, GANA reserves the right to refuse to sell its tokens to any potential buyer pursuant to its internal policies.

- GANA does not guarantee token sale participants any profits, including the investment principal, with respect to its tokens and does not grant any other rights. If the GANA project is successful, token holders can use such tokens for the various opportunities made available by the GANA project.

- The token sale participant acknowledges that the participant fully understands the contents of the white papers provided by GANA and is participating in this token sale with the intention of fully accepting the risk of the failure of the project. The participant also acknowledges that the participant fully understands that its tokens do not constitute any form of currency or security.