

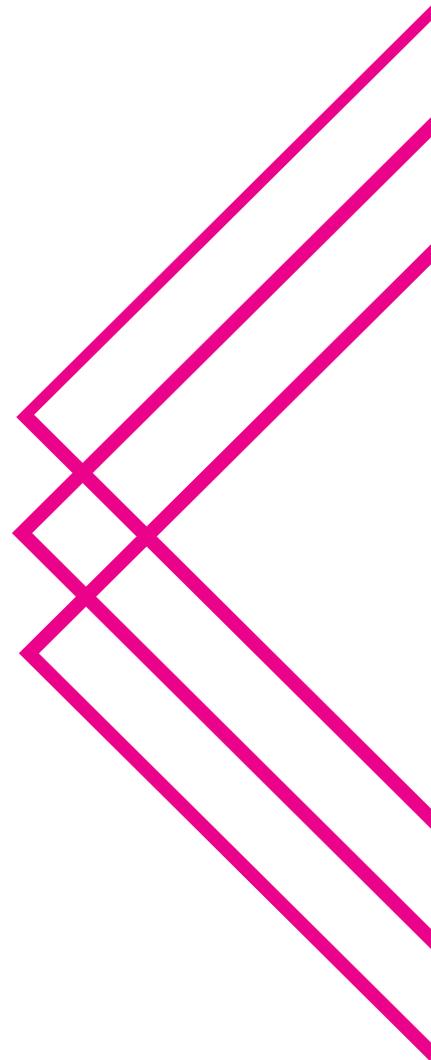
Pulse Network Project

Whitepaper v. 1.1



Disclaimer

The content of this whitepaper is given for information purposes only and can be edited, modified or changed at any time with or without explicit reasons and at the sole discretion of the Pulse Network and its team. The information shared in this whitepaper is not all-encompassing or comprehensive and does not in any way intend to create or put into implicit effect any elements of a contractual relationship. The primary purpose of this whitepaper is to provide potential token holders with pertinent information in order for them to thoroughly analyse the project and make an informed decision. Prior to your participation in the purchase of PULSE tokens, we strongly advocate a careful study of this whitepaper and all the documents associated with the same, including the contract in relation to the purchase of the same. You may even engage the services of appropriate experts to help you with investment analysis. Certain statements, estimates and financial information featured in this whitepaper are forward-looking statements that are based on and take into consideration certain known and unknown contingencies and risks which in eventuality may cause the estimated results or may differ factually and substantially from the featured estimates or results extrapolated or expressed in such forward-looking statements herewith.



Executive Summary

Contents

Who are we?	4
Delivery of Advanced Medical Care	6
Case Studies	7
Integration and application of advanced medical know-how	11
AI to support diagnosis	12
Creating Pulse-Lab	13
Pulse Network	14
• Information accumulation with Pulse Records (EMR)	15
• Healthcare app Pulse Pocket (Personal) to accumulate information	17
• Health promotion support through globally available Mail Medical Check	20
Why Blockchain?	22
• Additional Project Details	23
• Use Cases	23
• Opportunity Size	25
• Future Growth	25
Tokenomics	26
• Total Supply of PULSE	26
• Distribution of PULSE	27
• Burning of tokens	28
Polkadot	28
• Why Polkadot?	28
• How Pulse will help Polkadot eco-system	29
• Launch and rollout roadmap	29
• Parachain Loan Offering	30
• Consensus Mechanism	31
Conclusion	32
Team	33
Advisory Board	34
Advisors	35
Partner	36
Acquired Patents	36
Track record of the project operating company in the public sector	37

Pulse Network

Who are we?

Pulse is a reliable medical data repository and sharing platform, building the infrastructure for state-of-the-art, AI enabled diagnostic and treatment capabilities for people everywhere, unconstrained by the limitations of the medical facilities of their locality.

Pulse Network will facilitate the collection of data (Electronic Medical Records, Biometric data, sensor data, etc) and dissemination of the best treatment options.

JPMedSn, the business behind Pulse was launched in 2012 and has built innovative technical capabilities in bringing reliable data to medical care through their 2 main products:

Pulse Records (EMR) - JPMedSn has collated a well-researched database of diagnostics, treatment guidelines, recommended prescriptions, and latest drug information which it makes available to medical practitioners on their Pulse Records (EMR) platform. Also, their patented data input technology significantly reduces the time taken by doctors to create patient record entries.

Pulse Pocket (Personal) - It collates individual health data, lifestyle data and clinical records and gives complete control over this data to the patient itself. For instance, if a person visits a new medical practitioner, then their medical history can be seamlessly transferred to their new doctor with their permission using Pulse Pocket (Personal).

ETHICAL COLLECTION AND PROCESSING OF MEDICAL DATA

Data is collected from Hospitals, Clinics, Mail Health checks. Pulse's patented data collection software installed with health providers allowing for sharing of medical data while anonymizing identity data, patented data processing software to convert data received in different formats to a common readable format, patented technology allowing sharing of personal data with the permission of patients helps accumulate a treasure trove of useful medical information.

Delivering the most advanced medical care to people around the world

Advanced medical care to be made available to everyone in the world

Our mission is to democratize medical care by collating a database of medical expertise and knowledge from all over the world and making state-of-the-art medical care available equally everywhere and to everyone. We aim to expand our reach to all the corners of the world, starting from Japan and Sweden and then to Asia, adapting our model to local realities in every step of the way.

Research and Development in Medical care continues to advance globally. Innovations in diagnostics, therapies and medication, built on findings of the latest studies in top-notch research facilities in collaboration with industry and academia are revolutionizing healthcare and wellbeing. Discoveries in microbiology are leading to development of effective therapies in the field of infectious diseases

Unfortunately, not everyone has access to such advanced medical care. In fact, only a small fraction of people benefit from the advancement of medicine, even among the population living in developed countries.

We are exploring ways to make the most advanced medical care available to everyone.

We see the knowledge and expertise as the tallest hurdle before this goal. Specialists working in major hospitals can focus on their specialties and are often updated on the latest developments in their field, but Family Doctors and General Practitioners who serve as gatekeepers of medical care struggle to provide even standard treatment. They require enormously broad knowledge in a wide range of ailments and treatments. In developing countries, many doctors begin practicing medicine immediately after finishing school and are thrown at the deep end to deal with patients suffering from a wide variety of medical conditions. Obviously, no one can reasonably expect these doctors to provide their patients with the most advanced medical care.

In addition to expertise, doctors also do not immediately have access to the patient's distinct medical history.

Even pharmacists preparing medications, giving pharmacological information and monitoring drug therapies, struggle to maintain their knowledge in the ingredients and mechanisms of all medicines. Specifying the disease based solely on a prescription is extremely difficult as the information pharmacists need to familiarize themselves with varies widely, including precautions, adverse reaction, side effects and drug interaction. Even seasoned pharmacists find it difficult to provide counsel on all the details of the prescription to every single patient.

Being fully aware of the current environment, we have been exploring ways to deliver the most updated medical and drug information to doctors everywhere. By providing such support, we will be able to make the most advanced medical care available equally to everyone in the world. In addition, we will support anyone who strives to improve their health with a carefully selected collection of health information. As part of our support, we will offer a mail-delivery, at-home health check-up service. The users of this service will receive not only their check-up reports but also beneficial advanced healthcare information.

Through these efforts and our contribution to better the quality of medical care, we are committed to delivering advanced medical care to every single person and improving the health of the entire human race.

Case Studies

Pharyngeal cancer/PET scan

60-year-old male, Company CEO

A 60-year-old male patient had a PET scan at a regular medical check-up. He also complained of a throat irritation. The PET scan did not detect cancer. The patient had a PET scan routinely for the following seven years. In the eighth year, a PET scan detected abnormalities for the first time. Subsequently, the patient visited a university hospital for a follow-up examination and received a definitive diagnosis of nasopharyngeal cancer. Had the cancer been detected earlier, the patient could have undergone surgery for total removal. But lymph node metastases led the doctors to judge the patient unfit for surgery. He thus received a combination of radiotherapy and chemotherapy.

A PET scan has been widely viewed as a modality to detect cancers at any levels, but this view is inaccurate. It is wrong to assume you are cancer-free when a PET scan shows no abnormality. The advantage of PET scan lies in detecting widespread cancerous lesions and recurrent cancer, not in screening for the primary cancer.

The false sense of security offered by a routine PET scan led to this case. The important thing to understand is that despite its beneficial advantages, a PET scan has its own limitations. At medical institutions that offer a medical check-up, physicians often have limited knowledge of PET scan. Everyone needs to be aware that a PET scan alone cannot detect cancers

Note: The advantages of PET scan include the following: Screening the entire body in one test; less burden on the patient; screening for cancer at a millimeter level; distinguishing a malignant tumor from a benign one. A PET scan, on the other hand, has the following disadvantages: The limited capability of pinpointing the precise site of a lesion; insufficient detectability of lesions in certain body parts; inadequate detectability of certain types of cancers

FDG-PET Cancer Screening Guideline 2004 warned against campaigns overly emphasizing the efficacy of PET scan, with the recommendation that any campaign should note a PET scan might fail to detect a cancer several centimeters in size if the campaign advertised a PET scan as capable of detecting cancers a few millimeters in size. Three years later, the revised 2007 guideline a ISO stressed that PET screening lacked enough evidence for its efficacy in cancer check-up. Sources: Japanese Society of Nuclear Medicine JCPET (<http://www.jsnm.org/archives/695/>)

Breast cancer

49-year-old female/housewife

The patient had a mammogram at a cancer check-up administered by the municipality. "No abnormality" was the diagnosis she received then. Five months later, she noticed a lump. She immediately visited a mammary gland specialist and learned she had stage-1 breast cancer. She then underwent a mastectomy and breast reconstruction of the left breast.

Roughly one in twelve Japanese women suffers from breast cancer. Women in their 40s and 50s are especially prone to the disease. While mammography has been widely recommended for early-stage detection of breast cancer, researchers are currently debating whether they should advise additional use of ultrasonography, since they have learned that a large number of Asian women have a type of breast that makes it difficult for a mammogram to detect cancer. In fact, one in twenty breast cancer patients is presumed to have had a mammogram without detecting her cancer.

This type of breast is called a "dense breast". Roughly 40% of American women and 70-80% of Asian women are estimated to have dense breasts. Because of the concentration of glands and ducts, dense breast tissue appears as a solid white area on a mammogram, so that a lump, even if present, hides behind the white area. Many of the municipality-administered breast cancer check-ups only offer a mammogram. A growing number of voices are pointing out these check-ups may be ineffective in detecting early-stage breast cancer.

Note: The detection rate of breast cancer stands at around 30% in Japan, lowest among the developed countries*1, and both morbidity and mortality are on the rise*2. About 50% of Asians below 50 years old are estimated to have dense breasts, but only 1% of the Japanese public recognize dense breast (GE Healthcare Study*3). The renowned medical journal Lancet published an article of the randomized controlled trial with more than 70,000 Japanese women at ages of 40 or above of adjunctive ultrasonography for breast cancer screening*4. With support of the Ministry of Health, Labour and Welfare (MHLW), designated as a national project, the trial began to verify the efficacy of adjunctive ultrasonography and concluded that the additional use of ultrasonography improved early-stage breast cancer screening by 50%.

w

*1: OECD Health Data 2013

*2: Cancer mortality from Vital Statistics in Japan (1958-2016) by Center for Cancer Control and Information Services, National Cancer Center Japan based on Vital Statistics by Vital, Health and Social Statistics Office, MHLW

*3: GE Healthcare Study, conducted July 2015. 4,500 subjects (18 years old or above) in US, Brazil, UK, Indonesia, Japan, India, China, Australia, South Korea.

*4: Sensitivity and specificity of mammography and adjunctive ultrasonography to screen for breast cancer in the Japan Strategic Anti-Cancer Randomized Trial (J-START); a randomized controlled trial from July 2007 to March 2011, with an enrollment of 72,998. <http://www.j-start.org/topics/2015-11-09.html>

Insulin-resistant diabetes mellitus

40-year-old male, office worker

High blood glucose levels found at a routine check-up prompted the patient to visit a clinic for a second test. Provided with the results of the routine checkup, the doctor at the clinic prescribed him a medication to increase insulin production. The patient continued to take the medication as prescribed believing that early-stage diagnosis would help prevent his condition from deteriorating. In a few years, however, the patient found himself on dialysis. He also started to suffer from paralysis, thanks to diabetic neuropathy.

The doctor at this clinic prescribed the medication based on the prejudice that higher blood glucose levels meant deficiency in insulin production. But in this case, the patient's body still produced insulin, but resisted the effects of the hormone to lower blood glucose levels. The doctor's failure to take into account the possibility of insulin resistance led to the deterioration in the patient's conditions. The medication eventually damaged the pancreases by excessively stimulating it for insulin production through all these years.

As of 2017, diabetic patients totaled 425 million. The number is predicted to reach 693 million by the year 2045 if no effective measures are put in place. The prevalence of diabetes among adults at ages of 20 to 79 stood at 8.8% by estimate, accounting for one in eleven of those in the age group. The prevalence is estimated to rise to 9.9% by the year 2045, accounting for one in 10 of the group. Sources: IDF Diabetes Atlas, 8th edition: International Diabetes Federation, 2017.

Insulin resistance means how poorly the body responds to insulin. In other words, while the pancreas secretes enough insulin, cells that normally absorb glucose from blood in response fail to respond to the hormone insulin. This failure causes glucose to remain in blood, thus resulting in high glucose levels. The case here illustrates how inaccurate the diagnosis could be if it is reached solely on the numbers of blood glucose levels

Gonorrhea

33-year-old female, office worker

The patient presented with itchy urethra and the area surrounding the opening of the urethra being sticky. She immediately suspected a possible sexually transmitted infection. She visited a gynecologist. After the tests and examinations, she was diagnosed with gonorrhea and prescribed a new quinolone antimicrobial, which she took orally. Soon after, she was rushed to the emergency room of a university hospital in excruciating pain in the lower abdomen.

The physicians found that the gonorrhea had spread throughout her lower abdomen. They had to remove all the organs inside the pelvis including the uterus in order to save her. She survived the episode, but she now had to live with disabilities.

N. gonorrhoea, which causes gonorrhea, tends to quickly grow resistant to antibiotics. Physicians need to update their knowledge; otherwise, they may prescribe less effective medication and fail to improve their patients' conditions. The FDA currently recommends that an antimicrobial be discontinued for the treatment when the proportion of bacterial infections resistant to it reaches 5% of isolates in the community. As of today, none of oral medications prescribed in Japan meet this standard. The medications that can satisfy this standard are limited, including rocephin shots.

An estimated 78 million people contract gonorrhea each year. The decline in condom use and inadequate or failed treatment because of antimicrobial resistance all contribute to this uptrend in the number of gonorrhea patients. Last year's report by the WHO based on the data from 77 countries indicates rapidly growing resistance of *N. gonorrhoea* to existing antibiotics.

Sources: WHO (<http://www.who.int/news-room/detail/07-07-2017-antibiotic-resistant-gonorrhoea-on-the-rise-new-drugs-needed>).

An estimated 30% of patients contract gonorrhea through sexual contact with carriers, making it the most contagious sexually transmitted infection of all. Generally speaking, the symptoms of gonorrhea tend to be mild for women, including vaginal discharge, pain or burning sensation while urinating, and spotting. None of the symptoms are gonorrhea-specific. Against the backdrop of widespread antimicrobial resistance, doctors are finding cases of the infection that are untreatable. In cases of women with gonorrhea, they may eventually suffer from pelvic inflammatory disease (PID), which could develop collections of infected fluid (abscesses) and cause long-term pelvic pain (abdominal pain/ lower back pain). Patients have to have their organs inside the pelvis removed in such cases.

Chasing the most advanced medical care

People may suspect the doctors of negligence or incompetence in the aforementioned cases, but it is unrealistic to expect doctors to be updated on every medical development or breakthrough and not make a single mistake. Especially accounting for the limited time allowed for each patient encounter which gives doctors only a few moments to understand the patients' conditions. Furthermore, doctors struggle to keep in touch with rapidly changing pharmaceutical information. The challenge we face is to find a way to collect, understand, and apply all the pharmaceutical information. We also need to take into consideration the diverse medical environments of regions and countries as we seek the way to make available the best medical care.

Integration and application of expertise and knowledge in the most advanced medical care

For that purpose, we are committed to accumulating and integrating the most advanced medical information from around the world as our shared property.

We see the need to establish a system where patients everywhere can draw on this shared property for their medical and health care. We believe such a system will lead us to create a world where everyone has equal access to the most advanced medical care. Capitalizing on the track record of our IT support in Japan as a model case, we aim to establish a system that will deliver medical care to Asia and the rest of the world.

Each medical professional seeks medical information of value from different viewpoints in the clinical setting. By matching their individual expertise with the most updated diagnostic and pharmaceutical information, it will become possible to deliver the most relevant information to each professional. When we start to manage the database linking all the information accumulated through these practices, we will be able to integrate the expertise and knowledge of the most advanced medical care; we will, then, move closer to completing the global infrastructure of medical information.

We have named this vision of ours "Pulse Network" project.

AI to support diagnosis

One aspect of the system to be established with the use of the accumulated data is a diagnostic aid AI. Many expect the field of medical AI to advance rapidly in the coming years. By combining each patient's genetic information and medical history with the most updated medical information, the steps to approach medical conditions will be logically organized. Doctors can apply these logics to their patient encounter and improve the accuracy of their diagnoses, which in turn will be integrated into the information base.

In the construction industry, for example, a system called computer-aided design—or CAD—is used to design buildings. The use of computers for designing and computational tools for structural analysis assist the architectural process, which used to be done manually. As a matter of fact, with the help of computers and computer-aided tools, the Sagrada Familia—designed by renowned architect Gaudi—is now expected to be completed in less than 10 years as against the previous estimate of 200 years.

We envision a medical system that would serve as the equivalent of these architectural aids in the medical field: Computer-Aided Diagnostic System. This system shall provide AI aid not only for routine medical care and health promotion, but also for the global medical information infrastructure of integrated medical expertise and knowledge. Furthermore, this computer-aided diagnostic system shall enable doctors to practice more accurate medical care by aiding their diagnosis and contribute to the advancement of medical care through statistical analysis of accumulated big data.

We, however, recognize the huge amount of time necessary to develop a medical AI until it can begin to provide support and assist diagnosis. Such AI capabilities will require processing accurate information on the genetics and health background of each patient as well as their diagnostic records.

Against this backdrop, we have decided on AI-aided diagnostic imaging as where we could start. The AI tools will apply deep learning techniques to the accumulated data of images and diagnosis. As of today, studies have shown remarkable results of diagnostic performance by the AI of CT and MRI images, ultrasonography, and endoscopy, virtually comparable to that by skilled doctors. By having learned a large volume of, for example, images of gastric cancers, the AI no longer overlooks even a tiny white spot on an image as it makes a diagnosis.

As we strive to perfect AI-aided diagnostic imaging based on the integration of the most advanced medical expertise and knowledge, we have sought the advice of doctors. Dr. Haruhiko Ogata, Director of the Center for Diagnostic and Therapeutic Endoscopy, Keio University Hospital, has provided us with his expertise and insight in AI-aided diagnostic imaging.

Creating Pulse-Lab

We will create a virtual lab Pulse-Lab on our global medical information infrastructure Pulse Network.

Pulse-Lab will offer a virtual research environment integrated online on Pulse Network for the world's leading medical researchers, letting them benefit from the integrated knowledge base of the most advanced medical care and a vast accumulation of medical records from all over the world stored on the network.

The research results at the virtual lab will contribute to various health-related projects that promote health improvement on a global scale. Also those results will help realize AI-aided diagnosis by feeding into AI's deep learning process, while feeding back to Pulse Records (EMR) and Pulse Pocket (Personal).

Furthermore, Pulse-Lab will not only offer health information, but also supply merchandise carefully selected based on experts' opinion. Such merchandise requires clinical per se studies to confirm their effects. We will certify their effects to be genuine based on highly reliable information. We will help promote health lives based on evidence, delivering Pulse-Lab-certified health merchandise information globally to people.



Toward the integration of the most advanced medical knowledge in the world

Where we start toward the most advanced medical care

No matter how excellent our vision for "Pulse Network" project is, and no matter how abundant the information on our medical blockchain system is, we will end up turning the whole information into a large chunk of waste unless we can integrate, manage, and utilize it. We will not only build a medical blockchain system, but also develop the software to integrate and utilize the medical and healthcare information.

This step is the very first of our "Pulse Network" project.

To alleviate the burden on doctors by simplifying their practice with AI- aided diagnosis based on the globally integrated expertise and knowledge in the most advanced medical and pharmaceutical information.

To display pharmaceutical caution on a medical record through the integrated knowledge and expertise.

To access one's own medical history anywhere with the use of electronic medical records. Many may wonder if any tools can aid doctors and other users in situations like the above. The key to overcome these challenges shall lie in the services we now start to introduce.

Many may also wonder whether any tools can deliver medical care to everyone on the earth. The answer to this challenge shall once again be found in these services. These services will serve as the entrance to the integration of the most advanced expertise and knowledge, which is the core of the medical blockchain system, and they will eventually mean the exit from it.

Here is our electronic medical record system for all doctors and health promotion app for everyone. The following electronic medical record system is already in use in Japan, and we have been already contacted from Singapore, China and Korea with offers for AI- assisted medical care and the integration of medical big data. As for the aforementioned app, we are planning to collaborate with the operator of mail health check-up business with over 40 million clients, which would boost the user base of the app.

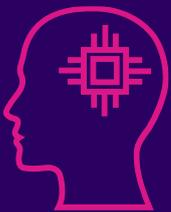


Information accumulation with Pulse Records (EMR)

Our electronic medical record system Pulse Records (EMR) comes with next-generation operability, and we plan to embed the diagnosis assisting information in the system.

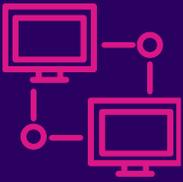
In Japan, a so-called five minute-diagnosis rule has been put in place, so that each patient encounter shall take five minutes as set by the nation's medical fee system. The objective of this rule is to promote more thorough examination of the patient, which could otherwise be shorter. But the current medical record system is too cumbersome to simply make an entry in time; the rule hasn't, thus, helped doctors to spend more time examining their patients. With Pulse Records (EMR) efficient operability, it will take only thirty seconds to make an entry of a patient's record. This patented technology of ours will significantly shorten the time necessary to make an entry of a medical record, which will, in turn, allow doctors to spend more time facing their patients.

AI-AIDED DIAGNOSTIC INFORMATION



Associating with the Asclepius Network project, the shared property of the information from medical specialists around the world, Pulse Records (EMR) will allow every doctor who uses it to share clinical information. With regard to AI-aided diagnostic information, we will start with collecting case-study information globally in order to integrate a wide range of diagnostic/therapeutic protocols. Also, we will install the treatment guidelines issued by medical societies of all specialties. In the future, when we integrate the expertise and knowledge of various specialists, each doctor will be able to access the knowledge base from their terminal as they record the patient's conditions and to study the relevant information marked with their sources.

TELEMEDICINE TO BE MADE POSSIBLE



With the AI-aided diagnostic imaging, medical records on the network, and the integrated medical knowledge base, we will be able to readily offer telemedicine remote clinical medical care which is expected to become widely accepted in the rural regions in Japan as well as in Europe and North America. The use of this service will enable the most advanced medical care to reach people in every corner of the world.

USABILITY IMPROVEMENT



We will continue to develop the system further for better usability and browsability, with the priority always on the usability of the system; we will continue to pursue patents for the technologies developed along the way.

REAL-TIME RESEARCH OF THE LATEST PHARMACEUTICAL INFORMATION



We will continue to develop the system further for better usability and browsability, with the priority always on the usability of the system; we will continue to pursue patents for the technologies developed along the way.

RESERVATION SYSTEM AND INSURANCE CLAIM FUNCTION



At medical institutions, their operations rely on a number of systems ranging from reservations, medical records, placing orders, insurance claims, etc. Pulse Records (EMR) will come with the medication order and insurance claim functionality, on top of the reservation system linked to Pulse Pocket (Personal). Once the doctor makes an entry into Pulse Records (EMR) as they perform an examination, they will be able to refer to the relevant aided diagnostic information and promptly place an order according to the prescription suggested by the system, which then seamlessly enters into the invoice system.

EMBEDDED WALLET FUNCTIONALITY



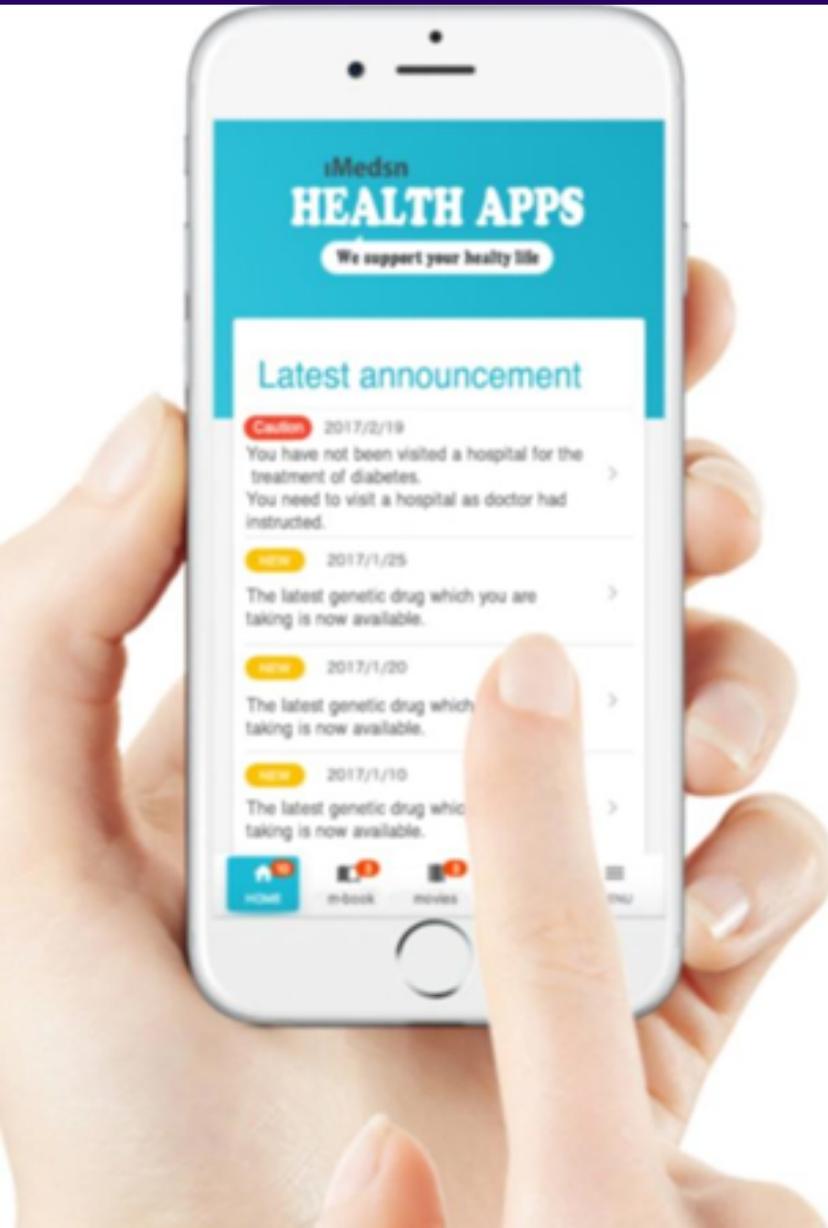
Pulse Records (EMR) will also have a wallet functionality to receive payments made in unique cryptocurrency for uninsured medical care.

MULTILINGUAL PULSE RECORDS (EMR)



Pulse Records (EMR) will be multilingual, so that wherever the user practices medicine, they will be able to take advantage of Pulse Records (EMR) to access the most advanced medical information while conversely contributing their country's own medical advancement to the information base. Such contribution will further enhance the knowledge base. Doctors in developing countries will, therefore, be able to access the knowledge base and provide their patients with the most advanced medical care. We are aiming to develop the global standard of medical recording

HEALTHCARE APP PULSE POCKET (PERSONAL) TO ACCUMULATE INFORMATION



Our revolutionary healthcare app Pulse Pocket (Personal) will be developed to support the users' health in many aspects. Pulse Pocket (Personal) will seamlessly link individual health information and clinical records and offer the health guidance that best matches their health conditions, while serving for the accumulation and integration of medical expertise and knowledge and medical records.

HEALTH SUPPORT INFORMATIVE VIDEOS



Pulse Pocket (Personal) will offer health informative videos. On top of the descriptions of diseases, the topics of these videos will include medicine administration and health-related familiar, everyday matters familiar to many ears, but actually not known in detail. We will make extra efforts when we create videos to entertain the users. We will also offer support for health information linked to the contents of the videos.

DIGITAL MEDICINE NOTEBOOK



Pulse Pocket (Personal) will automatically record the data of the medication prescribed at hospital. The users will be able to view the detailed descriptions of the corresponding generic medicines and to make their own decision whether to choose the generic product.

PROVISION OF HEALTH CHECK-UP RESULTS AND ASSOCIATED HEALTH INFORMATION



Pulse Pocket (Personal) will deliver the results of a routine health check-up and relevant health information. This function will also serve as an alert notifying their upcoming routine check-up. Furthermore, Pulse Pocket (Personal) will manage the past data in a chronological order, while functioning as severe-disease prevention and prompting health informative videos of relevance.

ALERT FOR SEVERE DISEASE PREVENTION



Pulse Pocket (Personal) will monitor the past check-up and medical records and alert the users when any important risk emerges in them. If the detected risks are considered to threaten their health, Pulse Pocket (Personal) will display their descriptions on screen.

HEALTH CHECK-UP SUPPORT



The users of Pulse Pocket (Personal) will be able to readily book a health checkup and make an appointment at the medical institutions that use our Pulse Records (EMR). This function will facilitate hospital visits by eliminating the time for cumbersome telephone appointments and long waiting hours

BOOKING FOR MAIL MEDICAL CHECK



The users will be able to book for a Mail Medical Check and receive the results on Pulse Pocket (Personal). As they use the service for years, the users can view the results in graphs and relevant information based on them.

TELESHOPPING



Pulse Pocket (Personal) will introduce the users merchandise that is relevant to maintaining their health. Corresponding to their individual healthy activities and health checkup records, the users will receive the merchandise information carefully selected by experts. The users can purchase merchandise by engaging in healthy activity mining.

ACCESS TO MEDICAL INFORMATION INFRASTRUCTURE AND SEARCH FUNCTION.



The Pulse Network will store a vast volume of medical information including the most advanced medical information and medical expertise and knowledge. The users of Pulse Pocket (Personal) will be able to access and browse such reliable information whenever they wish.

WALLET FUNCTION AND AMULET



Pulse Pocket (Personal) will come with a wallet function of the rewards the user receive for their healthy activities. With the use of ERC20, not only will they be able to save their mining rewards, but also to pay their medical bill at the participating clinics of the Pulse Network project as well as for the bills for Mail Medical Check. The users will be awarded the cryptocurrency as an amulet, and they will be able to familiarize themselves with it.

MULTILINGUAL PULSE POCKET (PERSONAL)



Pulse Pocket (Personal) will be multilingual, so that the users can use it in their home country. Furthermore, the users will be able to access the information relevant to their home country and receive support of their healthy activities that suit the environment there.

Pulse Pocket (Personal) will come with the functions far more than introduced here. We are committed to continuously expanding the functionality of Pulse Pocket (Personal) in order to promote the users' health. As of today, we have started cooperating with a company that handles information of more than six million users to promote Pulse Pocket (Personal).

Health promotion support through globally available Mail Medical Check

Pulse Pocket (Personal) offers a mail health checkup system as part of the services of Pulse Pocket (Personal). The user will receive a blood sample kit at home, take a sample on their own, and then send it in. Our highly advanced medical technology will examine this small amount of blood sample in as much detail as the regular blood test does. Our advanced medical technology will analyze the blood sample for pathological risks and send the report to the user via the Pulse Pocket (Personal) app. This mail blood test will measure twelve different items of the blood and help early detection of any abnormalities in liver and kidney functions, uric acid, body fats, and any signs of arteriosclerosis, diabetes, and other diseases.

The national health insurance system provides universal health coverage in Japan, and all the routine health checkups conducted under the system include a blood system. But health care systems vary nation to nation in the world, and so do medical care environments.

China, for instance, does not have a universal health care system in place. Every visit to a medical institution is discretionary. Also, the country is so large that the access to the cutting-edge health checkup or to advanced medical care is rather limited. Many patients flock to university hospitals in Beijing and Shanghai for advanced medical care; as a result, the hospitals always have long queues of patients. The busy hours of these hospitals for patients needing medical attention leaves little room for offering health checkups for early disease detection. In developing countries, the situations are clearly far grimmer. medical institutions in that part of the world struggle to provide medical care, let alone health checkups.

We will start Mail Medical Check with the small-volume blood test kit and eventually expand the services to include such tests as a cancer marker check kit as we continue to promote our mail-order at-home health check-up services. Furthermore, we will integrate the medical records form the service into the most advanced knowledge base which in turn serves as an infrastructure of medical information.

As we continue to integrate medical information through the activities at Pulse Lab, we will be able to not only accumulate health checkup results, but also incorporate the information on diverse regional and ethnic characteristics of the world into the knowledge base. We believe that we will be able to contribute to further development of medical care in the world by offering global medical research institutions this integrated information base of medical records as useful data.

While serving to promote the health promotion of the entire human race, Mail Medical Check will certainly broaden the knowledge base of the most advanced medical care. We are committed to our mission of materializing the world where every single person on the earth has equal access to the most advanced medical care as doctors take advantage of the knowledge base for their practice.

We will donate 2% of gross profits of Mail Medical Check to medical care in developing countries. Our donation will be spent to support global medical organizations and to develop medical infrastructure in this part of the globe.

We believe our activity will eventually contribute to a vast number of people. Just like the ultimate goal of medicine is to realize the world where no one has any disease, Pulse Network will strive to materialize the world where no one has any health concern.

Why Blockchain for the most advanced medical care?

The Pulse blockchain project is the next step in the development of this “medical information platform”. It ensures data integrity and data security, and facilitates data sharing in the specialized field of medicine, combining the services of other blockchain projects. AI and Deep Learning enabled analysis of data.

Immutability – In the past, any medical data collected has been vulnerable to alteration with several negative consequences. For instance, data can be altered at hospitals to conduct insurance fraud, or corrupted data when aggregated can lead to dangerous conclusions in drug trials and other research projects. Data stored in a blockchain is timestamped, cryptographically sealed and immutable, and any retrospective changes are immediately apparent. Use of blockchain technology will therefore make data falsification a thing of the past.

Security – The decentralized nature of blockchain ensures that there is no single point of failure which can bring down the data creation, processing and access mechanism. Information is available 24/7.

Smart contracts and efficiency – Use of smart contracts to automate administrative processes like billing, issuing and filling prescriptions, filing and receiving insurance claims, etc. will provide efficiency gains to all medical practitioners on the platform by removing several of the rent seeking middlemen.

Transparency and Authenticity - Blockchain technology makes it possible to verify data. Note that given the sensitivity of medical data, the actual patient information is currently stored using secure, encrypted and natural disaster resistant infrastructure. Only data hashes will be stored in the blockchain. These however are sufficient to verify authenticity.

Additional Project Details

Similar to the money legos of DeFi, we strive to build a data legos ecosystem

- **Verified Information on chain** - Since all the information being stored in the Pulse blockchain is created off-chain, inputting correct hashes on-chain is of paramount importance. In order to ensure that the data hashes that makes it to the blockchain are correct, we will use the services of oracle network, Chainlink which will verify the information collected by reputable oracles.
- **Confidentiality** - The data collected will be secured through alliances with encryption developers to ensure confidentiality of data.
- **Decentralized storage** - At a later stage of the project, the data collected will be stored using decentralised technology like Filecoin. This is 90% cheaper than using services like AWS.

Use Cases

PULSE is a utility token with the following use cases:

1. **Pulse Records (EMR)** - Medical Practitioners will need to stake PULSE for access to the Pulse Records (EMR) infrastructure. Installation of Pulse Records (EMR) will require a deposit of 40,000 PULSE. There will be an additional charge for services which can be paid in fiat or PULSE. Why would they want access to this?
 - Hospitals and clinics (in rural areas which currently have rudimentary healthcare facilities) get access to medical data storage and information sharing infrastructure that provides cutting edge intel on treatment options.
 - Smart medicine purchase at drug stores. Appropriate medication and medical services can be recommended to customers based on their medical history (without sharing any patient identification information with merchants) for a fee paid in fiat or PULSE.

2. **Research Data** - Access to large-scale, anonymized data for research purposes will require a deposit in PULSE.

- Health research projects get access to verified, high-quality, uncorrupted patient data. There will be different clearance levels for data access. With a higher deposit, higher level of data access can be availed. There will be a variable charge for drawing data which can be paid in fiat or PULSE.

3. **Insurance** – Insurance providers must deposit PULSE for access to patient data.

- Insurance firms with access to this data can be assured that data once entered has not been tampered with and is trusted and verifiable. This reduces the possibility of insurance fraud.
- In addition, things like lifestyle data in the future from wearables like FitBit or IoT devices can help determine customized and transparent insurance premiums. Users would be incentivized to share this data with insurance firms as it potentially will lead to lower premiums.

4. **Pulse Pocket (Personal)** – Accumulating PULSE tokens in their wallet entitles customers to discounts

- Patients can claim discounts when availing health services at Pulse Records (EMR) practitioners. For instance, if their wallet has a balance of 10 PULSE then they can claim 3% discount, 100 PULSE gives 5% discount, 10,000 PULSE gives 15% discount and 100,000 PULSE gives 25% discount.
- Portable patient data- Patients can choose to share their medical data with particular physicians and make telemedicine possible. This access can only be granted to medical practitioners on the Pulse Records (EMR) platform and those customers on the Pulse Pocket (Personal) platform which would be an incentive to install the same. In case of emergencies, user data can be shared with a different medical provider.

5. **Consensus Mechanism**

- Token holders (through validators and delegators) must stake coins while confirming transactions in the Proof-of-Stake consensus protocol.
- PULSE is the governance token of Pulse network and PULSE must be deposited when suggesting PULSE Improvement Protocols (PIPs) that the community will vote on. If the PIP is approved then the projects are approved and deposit returned. If the PIP is not approved then the deposit is confiscated by Treasury.

Most of the use cases above help reduce token velocity which as the quantity theory of money indicates will increase the price per token. Deposits for Pulse Records (EMR), Research Projects and Insurance entitle depositors to staking rewards. They will need to pay a variable fee for data drawn to JPMedsn in fiat or PULSE.

Opportunity Size

1. Subscribers to Pulse Records (EMR) (every health provider in a small town or village in every part of the world is a potential customer)
2. Health Research projects (Drug companies, World Health Org studies, National Health studies)
3. All Medical Insurance providers

Future Growth

Additional data sources - We will be developing more sources of information, both organic and inorganic. Tie ups with firms involved in health tracking like 23 & Me, FitBit, IoT devices, etc will improve further on the quality and depth of data. Combining disparate sources of information (anatomic, biological, environmental, lifestyle, genomic, physiological) helps give unprecedented understanding of patient lives and ultimately lead to better diagnosis, research and health of patients.

Smart contract capabilities - Insurance claims may no longer need to be filed at all. Smart contracts built with if/then logics with access to verified information will automatically release insurance payments when certain conditions are met. For instance, if a patient has dental insurance to the extent of \$100, then if the patient avails insured dental services at an Pulse Records (EMR) enabled practitioner who enters the dental treatment details, then the insured amount will automatically be credited to the patient or practitioner without any paperwork involved. Insurance firms can save millions in administrative and legal fees.

Tokenomics

TOTAL SUPPLY OF PULSE

The ideal staking ratio in Polkadot is 50%. They have a mechanism to bring the staking ratio close to 50% (If the staking ratio is less or more than 50% then the inflation reward must be shared by validators with the treasury). We use that as a benchmark and apply the same 50% staking ratio to PULSE.

If we believe that the staking ratio for PULSE should also be 50%

Let's treat (a) deposits by hospitals/clinics to get access to Pulse Records (EMR), (b) deposits by research projects for Pulse's medical data and © deposits by consumers in their wallets which give them discounts all as a form of staking as they lock in funds into the ecosystem

Next we need assumptions of how many PULSE will be deposited in the previous 3 situations:

A. Average deposit by hospitals/clinics/practitioners * average number of hospitals/clinics/practitioners=> $40,000 * 100,000$

B. Average deposit by a research labs/drug manufacturer/ government health agencies * number of research labs/drug manufacturer/ government health agencies => $200,000 * 5,000$

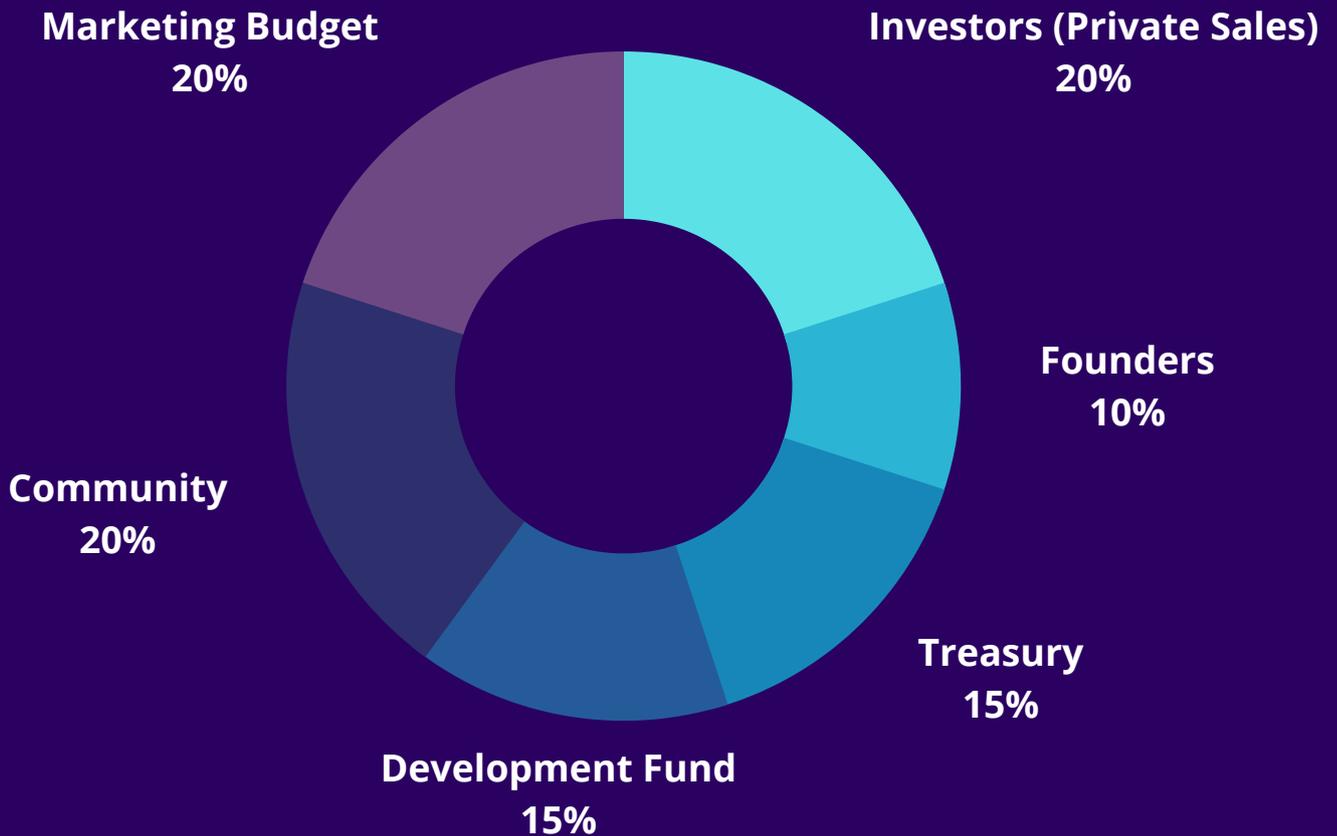
C. Average deposit in the wallet of average retail user * Number of retail users => $10 * 100,000,000$ (Assumption of 100mn users worldwide)

With the above assumptions, you get 6bn PIUS locked. If staked coins are 50% of the total supply, then the total supply should be 12bn coins.

TOTAL TOKEN SUPPLY - 12,000,000,000
PRICE PER TOKEN - US\$0.004

DISTRIBUTION OF PULSE:

The 12bn coins of maximum total circulation will be distributed as follows:



- Investors (Private Sales) - 20% - 20% of this will get vested at the time of listing. The balance 80% will vest linearly over the next 12 months.
- Founders - 10% - The full amount will get vested after 12 months
- Treasury - 15% - This will be used for staking in the initial stages to secure the network
- Development Fund - 15% - This will be earmarked for Pulse Improvement Proposals (PIPs)
- Community - 20% - PULSE will be airdropped to users for completing certain tasks. (walking 10,000 steps a day, climbing 20 flights of stairs etc). This will incentivize users to link their health tracker data to PULSE wallet.
- Marketing Budget - 20%

BURNING TOKENS

An equivalent value of PULSE as revenues received by JPMedsn in fiat for data drawdown of Pulse Records (EMR), Research and Insurance will be burnt. Higher usage of the platform will therefore lead to reduction in token supply.

WHY POLKADOT?

- **Quick blockchain development** - Polkadot tools to build a custom parachain and create our dapps using substrate framework ,will reduce the time to market. Building a blockchain from scratch can otherwise take years. Using Polkadot, our developers will focus on business logic and features instead of blockchain infrastructure development.
- **Interoperability** - Interoperability with other blockchains made possible by bridges (a special form of parachain), make Polkadot an ideal blockchain for a project like Pulse which will need to interact with other blockchains like Filecoin and Ethereum (that supports Chainlink). Cross-chain messaging between parachains will be useful in case Pulse integrates with Kylin, the Polkadot Oracle project
- **Speed and efficiency** – An increase in transactions in some protocols running on Ethereum causes congestion and increases gas costs for all protocols on Ethereum including Pulse. Prominent examples of this include when CryptoKitties jammed the network in 2017 and sudden drop in cryptocurrency prices led to mass liquidations in several DeFi platforms in 2020. Having a dedicated Parachain or Parathread means that Pulse will be immune to such market movement. Since only Pulse transactions have to be processed by collators, higher speeds are ensured.
- **PULSE use case** - POS consensus mechanism on a parachain is an additional stable use-case for PULSE when compared to Ethereum which will reduce token supply.

HOW PULSE WILL HELP THE POLKADOT ECOSYSTEM?

When one looks at the promising Polkadot projects under development, one notices that they're mostly in the DeFi space. Notable exceptions are Kylin and Kilt. There is room for a project in the non-DeFi space whose technology could serve as a template for other data-based projects in the future.

LAUNCH AND ROLLOUT ROADMAP FOR POLKADOT

Polkadot currently has the capacity to support only 100 Parachains. These 100 Parachain slots are likely to be auctioned over 2 years. With several 100 projects vying for these limited slots, there are no guarantees of winning slots immediately even if we were willing to allocate excess number of PULSE tokens in the Parachain Loan Offering.

Therefore, we plan to launch on Polkadot as a Parathread and then move to a full scale Parachain when we (a) Add complex functionality including integration with other blockchains that require greater customization of our blockchain, and (b) Win a Parachain slot in a Polkadot candle auction.

Start as a Parathread - A Parathread is a pay-as-you-go blockchain on the Polkadot ecosystem. It offers most of the benefits of a Parachain at a fraction of the cost. The fixed registration fee to secure a parathread is cheaper than securing a whole parachain. Also, running costs are lower since parathread will produce blocks only when they need to and not at every Relay Chain block.

=> We will initially launch on Polkadot as a parathread till more complex and time-sensitive functionality must move on-chain. In the initial stages the most important requirement is reliability rather than speed or complex functionality and a parathread is ideal for the same. Also, building a track record of stable performance on a parathread will add to our credibility among investors when we market our project for a parachain slot.

Migration to a Parachain- A parachain is an independent chain with its own run-time logic, monetary system and interaction with other blockchains. It benefits from the shared security provided by Polkadot's Relay Chain. It is connected to a validator and hosted by its own set of collators. Parachains offer greater flexibility and customization but are more expensive, require you to win a slot in the candle auction and require more effort to create and maintain.

=> We will participate in the Parachain Loan Offering to win a Parachain slot when we move more sophisticated functionality on-chain and therefore require greater control over design decisions.

Explore smart contract functionality - Polkadot itself does not support smart contracts but there will be Parachains that do.

=> These parachains therefore provide a good testing ground for experimenting with smart contract functionality like automating insurance claims, before it is rolled out to the Pulse Parachain.

BUILDING A PARACHAIN/PARATHREAD

The parachain/parathread will be built using the modular plug ins of Substrate framework (networking layer, consensus mechanism, Wasm interpreter, etc), and a Cumulus extension will make the Substrate compatible with Polkadot by providing the glue code.

PARACHAIN LOAN OFFERING (PLO)

Polkadot can support 100 parachains. Parachain slots will be auctioned for 6 months to 2 years. Auctions begin in February'2021 and will occur continuously.

We will offer 5% of total token supply at the PLO. This will be allocated from the Marketing budget. Before participating in the candle auction of the PLO, we will launch a marketing campaign to educate DOT holders on the superiority of our product and value of PULSE token which would justify them locking their DOT for the duration of the lease.

A track record of price appreciation of the ERC20 token will therefore be of paramount importance.

CONSENSUS MECHANISM

Hashes of all data collected, cryptographically secured and stored are added to the blockchain using a delegated Proof-of-Stake consensus mechanism which offers the benefits of security, scaling and reduced token velocity and aligns participants to the long-term success of the protocol.

The target participation rate is 60% and the ideal inflation rate at this participation rate is 5%. If participation rate falls below 60%, then we will increase inflation rate to incentivize participation and if participation rate rises above 60% then we will decrease inflation rate to disincentivize participation.

This means that in year 1, with total supply at 12bn, annual staking rewards will be 60mn (5% of 12bn). With Polkadot and Kusama operating at a block time of 6 seconds, we will be following the same and release 11 tokens with every block in the 1st year. The consensus mechanism will have the following players:

- **Validators** – Validators secure the network by validating proofs of stored data. They randomly get selected to create the next block, in proportion to tokens in their Validating Pool, up to a maximum of 10%. A Validating Pool holding more than 10% of total supply will not be selected to create any blocks and hence must ensure they do not cross that limit. This is introduced as a feature to minimize the possibility of malicious parties gaining control of the consensus mechanism.
- **Delegators** – PULSE holders can delegate their tokens to Validating Pools. They would have to do their due diligence to ensure they trust the right Validators with their tokens. Once staked with the Validator, they cannot be applied to other use cases till the tokens are unbonded from the Validating Pool.
- **Watchdogs** – Watchdogs monitor the Validators for appropriate behavior. Actions like being off-line for too long, validating 2 blocks at the same height, not following security protocols, etc. will lead to stakes getting slashed. 10% of slashed tokens will get awarded to the Watchdog who spots the misbehavior and the balance 90% will get burnt.

Customers of Pulse Records (EMR), Pulse Pocket (Personal) and Pulse-Corporate who have to deposit PULSE to avail the functionality and well as general PULSE holders will have the option to operate as Validators or Delegators.

Conclusion

Pulse is an ambitious project striving to bring top tier healthcare to every corner of the globe. We are building a better world by making the combined medical knowledge of humanity available to all, using data, technology and the power of blockchain.

Building on the base of already functioning products- Pulse Records (EMR) and Pulse Pocket (Personal), we will use blockchain technology to create a trove of high quality, verified and immutable data that will be utilized for correct diagnosis and treatment as well as research and development. The PULSE token helps us institute incentives to align the purpose of protocol with the interests of the protocol users and stakeholders, be it hospitals and medical professional providing medical services, consumers of those medical services, manufacturers of drugs and medical equipment or academics.

The migration to Polkadot, in addition to increasing speed and efficiency, will give us greater control over design, and therefore help bring more sophisticated functionality on-chain. Given the imminent migration, we have prepared for similar staking ratios and block time as the Polkadot blockchain.

Pulse aims to embrace decentralization and support other blockchain protocols by utilizing the services of public blockchain projects- Chainlink for data oracles and Filecoin for data storage.

Our mission is to improve healthcare by placing patients at the centre of the digital transformation of the healthcare sector and giving them the tools to avail the best medical care for themselves. We do this by giving patients full ownership of their data and choice of sharing it with the services and applications they deem fit.

Team

Hiroyuki Yamaguchi, CEO, JpMedsn Co., Ltd.; CEO

CEO, Macrocom Corporation (current)

CEO, Well Life Communications Corporation

CEO, Universal Solution Systems Inc.(listed on JASDAQ)CIO, Saint Marc Corporation(now Saint Marc Holdings, TSE 1st Section 3395)

CEO, Dewey CorporationOkayama System Service Co., Ltd

Alma mater: Seto High School

Minoru Mogi; CFO

COO, Total Health Consulting Inc. - Tokyo

Executive Officer, Finance, Japan Xpress Ltd. – Tokyo

Director of Finance and Administration, Mondial Assistance Japan (A.S. 24 K.K.) – Tokyo

Translator (Self Employed) – Chiba

General Manager – Reporting & Analysis, Financial Control, AXA Life Insurance Co., Ltd. – Tokyo

CFO, Prudential Financial Advisors Securities Co., Ltd. – Tokyo

VP, Financial Control, Credit Suisse First Boston Securities (Japan) Ltd. – Tokyo

Associated Director, Head of Management Accounting, UBS Securities Japan Ltd. – Tokyo

Accountant, Credit Suisse First Boston Securities (Japan) Ltd. – Tokyo

Accountant, Morgan Stanley Japan Ltd. – Tokyo

Dr. Souichiro Asanami, DDS, PhD; COO

Education:

DDS, Tokyo Dental College - 1966

PhD, Tokyo Dental College - 1979

Postdoctoral Studies, Johannes Gutenberg University Mainz - 1988

Affiliations:

Associate Professor, Keio University - 1984

Professor, International University of Health and Welfare – 2007

Director, Nishi-Azabu Oral Surgery Implant Center - 2014

Honorary Member, Japanese Society of Oral and Maxillofacial Surgeons

Auditor, Japanese Academy of MaxilloFacial Implants

Honorary Member, Japanese Society of Dentistry for Medically Compromised Patient

Auditor, Japanese Society of Pediatric Oral and Maxillofacial Surgery

Director, Educational Foundation Japan Sweden Dental Academic Society

Toshifumi Oda; CBO

Born July 25, 1950

Graduated from Keio University, Engineering Department Joined Matsushita Electric Industrial Corporation

Japan Systems Corporation CEO (Currently Japan Medical Systems)

Konosu City Council member

Tobu College of Medical Technology Director

Japan Medical Systems Executive Chairman (currently)

Japan Healthcare Business CEO (currently)

Medicare Support Standing Auditor

Genkimura Group Director

Meisei Gakuen Urawa Gakuin Director

Advisory Board

Hiroyuki Yasuoka, MD., Director, Minami Akasaka Clinic

The authority on preventative medicine with advanced medical technology.

Dr. Yasuoka supports the Pulse Network project with his extensive medical insight.

Dr. Yasuoka's solid network of medical authorities throughout the Japanese medical community is an asset to the project.

Class of 1983, Keio University School of Medicine, Opened Minami Akasaka Clinic in 1990.

Trained in Radiology and preventative stress management at Johns Hopkins University Hospital and Emory University Hospital, USA

Internship at the Keio University Hospital Department of Radiology (Medical Corporation) with a focus on preventative medicine

Books:

- Seafood Vegetarian (Vovis)
- Tsuma ha Naze Otto ni Manzoku Shinai no ka (Kadokawa Shoten)
- Karo Shi – Totsuzen Shi ha Kou Fusegu (Japan Business Publications)
- Isogashii Hito Hodo Kenko Kanri ga Umai (Narumido Publications)
- Oishasan no Hanashi ga 10-Bai Wakaru Hon (Japan Medical Publications)

Peter Lingström, Professor/Senior Dental Officer, Department of Cariology, Institute of Odontology, Sahlgrenska Academy, University of Gothenburg, Sweden

Dr. Peter Lingström is a globally renowned authority in the field of. Dr. Lingström has been fostering promising degree candidates as a main supervisor at the department while actively engaging in financial support for dental care. He holds several posts including the vice president of Sweden's society of Cariology, a cariological clinical specialist for the Västra Götalands län public dental health department. Having been helping the efforts to eradicate dental caries and periodontal diseases from Sweden for many years, Dr. Lingström is also responsible for the Swedish health department's dental guidelines. Dr. Lingström has published more than 100 academic papers on cariology and periodontal disease prevention. Dentistry, Lund University

Doctor in Dentistry, University of Gothenburg Associate Professor, Kristianstad University

Visiting Professor, University of Sassari

Professor/Senior Dental Officer, University of Gothenburg Vice Chairman, Swedish Society of Cariology

Cariological Specialist, Kingdom of Sweden Department of Public Dental Health Head of Dental Guideline Committee, Kingdom of Sweden Department of Public Dental Health

Masakuni Tamura, Professor, School of Science and Technology, Meiji University

Supervisory Officer, Mori Hills REIT Investment Corporation (current) CEO, Arc Brain, Co., Ltd. (current) Director on Board, Sigma Planning Institute, Inc. Sumitomo Construction Co., Ltd. Alma mater: School of Engineering, Kyoto University

Advisors

Ryosuke Tamura, Chief Patent Attorney, Lighthouse International Patent Firm

Ryosuke Tamura, an expert on management of intellectual property, manages intellectual property rights of the Pulse Network project—which is the indispensable part of the project. After graduation, he began work for a chemical manufacturer where he engaged in research and development. He, later, joined a patent firm and subsequently registered as a patent attorney in 2003. In 2004, he moved to join a consulting firm. Since establishing Lighthouse International Patent Firm in 2007, he has provided attentive support for patent applications extensively in the fields of software and chemistry.

Alma mater: School of Engineering, Kyoto University

Partner

Japan Healthcare Business Inc.

RJHCB operates the business of reviewing the medical insurance claims of over six million people per year in place of hospital and clinics.

Acquired Patents

In the run-up to the Pulse Network project, JpMedsn has applied for patents. As of today, the company has acquired the following four patents, with twelve patents still pending.*Macrocom Corporation is a pure holding company of JpMedsn.

Patent no. 6117483 Apparatus for Medical Data Conversion/ Transmission and Method for Medical Data Conversion/Transmission

An apparatus for converting and transmitting various formats of common medical data contained in electronic medical record information to a patient medical information server. As a result, common medical data can be conveniently accumulated as common information even if the formats of the individual electronic medical records are different.

Patent no. 6177527 Medication Administration Information Provision System

A system for providing medication administration information, equipped with the function that allows all doctors and pharmaceutical companies to share information "only" on medicines in coordination with the medical information system, while maintaining anonymity of each entry for personal information protection. This system, thus, enables physicians to access information of the latest pharmaceutical products and pharmaceutical companies to easily accumulate data on medication administration.

Patent no. 6177546 Medical Information Display System

A system for enhancing the convenience of patients and medical institutions by allowing patients' medical information to be viewed by not only patients themselves, but also by medical institutions other than those patients had visited in the past. As a result, patients' family doctors and major hospitals can share information on their medical history and can perform more adequate treatment in a shorter time than that taken at the first visit.

Patent no. 6356466 Medical Record Entry Support System, Server Apparatus, Terminal at Medical Institution, Medical Record Entry

Method, Apparatus at Medical Institution, and Medical Record Entry Support Program

A system provides support for medical record entry with the user interface to facilitate entry of a medical record, as the relevant information appears on the screen when the doctor makes choices there during patient encounter. As a result, the support system significantly reduces the time for medical record entry.

Track record of the project operating company in the public sector

FY2012 Ministry of Economy, Trade, and Industry

For the Subsidy for Service Industry Reinforcement Project Expenses (Subsidy for Regional Healthcare Development Promotion Project Expenses) Healthcare Services Creation Support Project, the MEIT selected the proposal by the “Kanagawa Working KAIGO Consortium” for “next-generation nursing system utilizing new input device” in which JpMedsn served as an operating company, and its implementation was duly completed.