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# EMI Project White Paper

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 est corporation

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# 1 .INTRODUCTION

## Aggregation of Medical Information for the use of BIG Data

Since the beginning, people have paid a great deal of time and cost to understand the structure of life and solve the economic burden on the disease. It might have been called alchemy or prayer or magic or Oriental medicine based on Yin and Yang thought or may be a gene therapy to doing genome editing.

No matter how different the theories and ideas, in every generation medical science has developed innovative technologies to maintain a healthy life, and people have been living with high expectations to the medical treatment.

In the 21st century, medical science has witnessed one more innovation called Artificial Intelligence just like any other science.

The ultimate goal in medical science is that all people should live healthily.

But that goal is still far away.

There are many diseases that cannot be cured, and there are many people who cannot receive treatment because of financial reasons all across the world. What we aim for is a world where people can receive the best medical treatment at a lowest possible price.

### **The Three objectives of the EMI project**

The EMI (Ecosystem of Medical Informatics) platform is aims at achieving the following three objectives.

That is the system that realizes improvement of medical science by guaranteeing the safety, security & interoperability of medical information and aggregating the data using big data analytics and artificial intelligence on the Blockchain platform

We are convinced that this new medical infrastructure that the EMI platform creates will increase the life span of the people around the world.

1. Secured Sharing of Medical Information with complete traceability
2. Aggregation of Medical Information from multiple sources
3. Utilizing medical information for Big Data Analytics & Artificial Intelligence

## 2. ENVIRONMENT SURROUNDING MEDICAL INFORMATION MARKET

Currently, many medical institutions across the world have introduced electronic medical records. In attempt to consolidate information by integrating electronic medical charts at local, regional or national level for the purpose of improving the quality of medical care, reduction of medical expenses, medical research and so on. The Obama administration under the theme of medical IT as a theme is also a memorable new project. The merit of medical information aggregation is the fact that everyone admits.

However, it is not said that none of the projects that have been conducted in various countries of the world are achieving sufficient results, and especially in Japan, the spread of electronic medical records has not progressed sufficiently.

Since 2006, the emergence of deep learning has improved the importance of medical information aggregation, and the need to improve the environment surrounding medical information is increasing.

### 2-1. Reason why results are not improved

#### 2-1-1. Failure of Standardization

In order to share information, standardization of data is required. HL7 was started in the USA[1], and there is a standard called MML [2] in Japan. However, a number of derived standards have been created for various reasons, such as laws on medicine disbursement, cultural differences, requests from each hospital etc.

In the field of medical care, a special attention is usually paid to the features that innovation or market is working up on to improve. In the medical world there is no severe selection pressure compared to the other industries such as Blu-ray replacing the traditional HD-DVD or VHS moving on to the Beta.

#### 2-1-2. Absence of incentive design

When considering medical institution as an individual organization, there is not much economic merit to aggregate medical information for medical institutions. The fact that sharing patient information may also lead to loss of medical institution opportunities in some cases. For example, if the X-Ray is already taken taken at another hospital recently can be shared across, the patient may need not take an another or even refuse to take a second expensive X-Ray. In the country that supports the medical expenses with social security, the second shoot will be treated as unnecessary inspection.

Of course, not all doctors are selfish based only on economic rationality, however medical institutions are taking the burden of information sharing without having any incentive plan is a challenge. In addition, the policies by the HITECH Act (Health Information Technology for Economic and Clinical Health) [3] that came

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into effect in 2003 has been effective and has rapidly introduced the use of electronic medical records in the United States. Hospitals that have introduced electronic health record (EHR) and met certain requirements will receive a subsidy of 2 million to 6.3 million dollars. However, this is the investment of funds and cannot be called autonomous incentive design.

### 2-1-3. Security concerns and actual damages

Aggregating of medical data also means that there is a risk of information leakage.

In fact, many medical institutions have confirmed ransomware and personal information leaks, and the US civil rights office reported 407 information leak cases and about 17 million people affected within medical institutions and medical organizations within the United States from February 2016 to February 2018

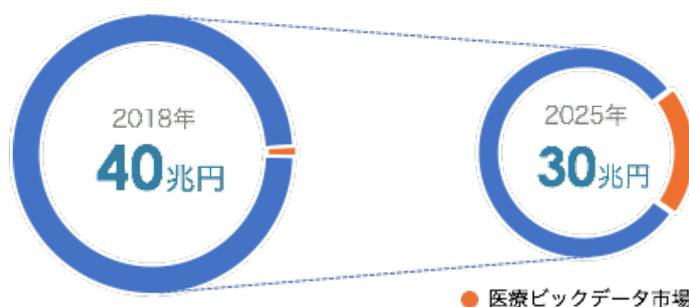
Furthermore, it is difficult to obtain consensus on data usage from information providers due to presence of the risk of information leakage, as a result, electronic medical records with higher security were introduced, but the use of data remains within the hospital. It is a trade-off relationship not to share in order to prevent leaks.

However, we think that this problem also has challenges to incentivize the institutions.

When patient's comparing "disadvantage of leakage of personal information" and "merit of providing personal information", if they feel that "merit of providing medical information" greatly, and we can obtain consent of data usage, the problem should be much smaller.

### 2-2. Size and perspective of medical information market

As mentioned above, it cannot be said that the information is currently being fully consolidated in the medical field. Therefore, the size of the domestic medical big data market is 3.2 billion yen [5], which is a very small amount. This figure does not mean that the value of medical big data is small, meaning that there is little aggregation and utilization of medical big data. We are convinced that the EMI platform will expand the scale of the medical big data market and will also lead to a reduction in domestic medical expenses, estimated at 40 trillion yen.



### 3. Features of EMI Platform

The main purpose of the EMI platform is to aggregate medical data scattered in each medical institution and use it safely. To that end, we need technology to ensure safety and incentive design to encourage participation of all the people involved in medical care such as doctors, patients, researchers, etc.

### **3-1. Support and extensibility for various medical data**

As mentioned in the previous chapter, there are many formats in medical data. In the environment where data sharing among medical institutions is not realistic in the first place, there is no merit in defining the format and making data that complies with it. We believe that, when the environment that can be shared by the EMI platform is created, selection will progress naturally, and a sophisticated format will be decided.

For this reason, we will start with support from existing domestic screening data, which has proven track record in existing business and can be realistically introduced. Sharing opponents are required for “Sharing”.

In order to increase the value of “sharing”, it is important to increase the number of sharable partners.

By sharing medical examination data, we expect to introduce EMI platform to 20 to 30% of clinics in domestic medical institutions (about 160,000 institutions) over the next 3 years.

For details of examination data to be handled, please refer to the chapter "5-1. Medical data".

We will further advance the introduction to medical institutions and enhance the value of sharing by the EMI platform and we will respond to each medical data format again.

Please check "8. Future of EMI Platform" for detailed time schedule.

### **3-2. Incentive design to lead players to participation**

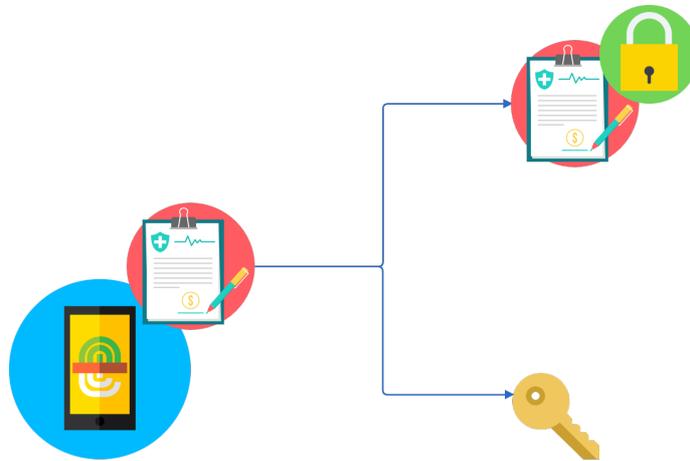
The EMI platform brings the idea of incentive design, which plays a crucial role in spreading cryptocurrency, including bitcoins, to the medical data market. Providing incentives to participants will encourage the dissemination of the EMI platform.

Specifically, on the EMI platform, alternative coins called EMI tokens are issued to patients and medical institutions that provided medical data. Details will be explained in the chapter "4. EMI token".

### 3-3. Safety with blockchain and encryption technology

The EMI platform manages the access rights to medical data and data in a block chain. Moreover, all medical information is encrypted, and it is possible to remarkably reduce the risk of information leakage compared with existing medical information system.

In secret key generation, biometric authentication is used to improve data security. You cannot restore encrypted data unless you have certain permission of the data owner himself. In order to maintain the fluidity of medical data and to maintain confidentiality, we are implementing security measures with a view to the difficulty of data restoration.



#### 3-3-1. Separate management of EMI token and medical data

EMI platform separates and manages EMI token and access authority from public block chain and medical data from private block chain to further enhance safety. Only medical institutions that guarantee reliability and patients who have been approved through medical institutions can participate in private chains of medical data. By using a private chain, it is possible to operate more safely than a normal block chain.

By managing medical data with a private chain that is separated from the EMI token, it is possible to add flexible functions and modify functions to block chains handling medical data. It is possible to avoid the confusion of the community caused by the hard fork, as happened with bit coins, and at the same time to positively incorporate new technological innovations that will occur in the future into the platform.

### **3-3-2. About personal information protection law and hipa**

In Japan, a new personal information protection law (formal name: law concerning the protection of personal information) was enforced from May 2017, and legal obligation to all medical institutions handling medical data occurred. Medical institutions that are not security experts have big costs and future risks.

An effective measure to minimize the risk of information leakage is to have no data. On the EMI platform, ownership of data is owned by the patient himself, and temporary access to data is granted to the medical institution as necessary. It is possible to leave the cost and risk of security to the EMI platform.

We will also implement and operate the EMI platform in compliance with HIPPA [6], which is enforced in the United States and has become a worldwide standard for the handling of medical data.

## 4. EMI TOKEN

The EMI token is used as a medium for all economic activities performed on the EMI platform.

The value of EMI token is equal to the value of medical information.

The EMI token is issued as a token conforming to ERC 223 [7], and it is distributed among patients, medical institutions, etc. through the EMI platform.

ERC 223 is an upward compatible token standard that added processing of incoming transactions to ERC 20. This makes it possible to respond to token transmission mistakes.

### 4-1. Issue volume of EMI token

EMI tokens have issuance limits of 1,342,177,280 pieces, of which 50% of 671,088,640 are issued with platform operation. Among them, the tokens we keep will be less than 5% of the total. The reason why we keep tokens is the mechanism for returning the value of medical information to patients and medical institutions on the EMI platform is heavily involved.

For details, refer to "7. Role and Strength of EST Corporation".

### 4-2. How is the remaining 50% EMI token issued?

Half of the total 1.3 billion pieces are issued early, and the remaining 50% tokens are distributed as incentives to patients and medical institutions each time medical data is provided to the EMI platform.

Distribution amount of EMI token for provided data differs for each item of data to be provided, and the issued EMI token is distributed at a rate of 50% for each patient and medical institution. Setting incentives for medical institutions creates participation in the EMI platform and motivation to produce accurate and valuable data.

Also, the token issued for the provided data continues to decrease along with the remaining issue quantity, and it will complete about 600 million issuances for about 112 years.

## 5. EMI DATA

Next, we will explain the data that the EMI platform holds. Data distributed on the EMI platform is classified as medical data, access rights, and sales information.

### 5-1. Medical data

All medical data provided will be stored on the block chain in encrypted form. We will start supporting from the domestic screening data with business results of 10 years. Specifically, it is all items of the standard inspection item [8] prescribed by the Japan General Medical Seminar Medical Society.

#### CORRESPONDING MEDICAL DATA ITEM (EXCERPT)

Height	Weight	Obesity	BMI
Blood pressure	ECG	Heart rate	Fundus of the eye
Eyesight	Hearing	X rays	Blood data
Blood sugar level	Cholesterol	Red blood cell	Mammography
Urine	Medical history	Medical report	Questionnaire result

### 5-1-2. Medical data to support in the future

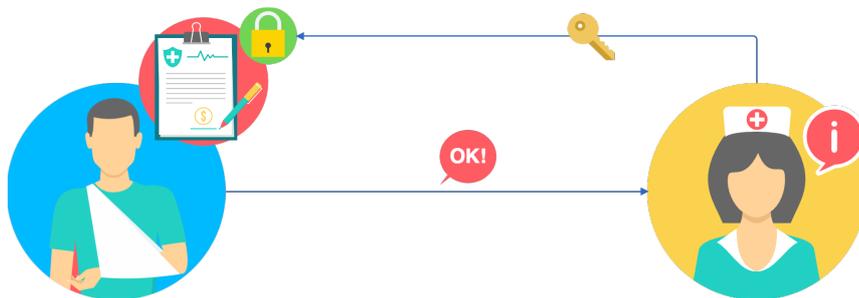
We will support sharing and provision of medical data generated by electronic medical records distributed in Japan around 2021 in three years. However, the current blockchain technology is not suitable for handling large size data such as radiographs. We are going to determine the trend of block chain technology for the next one year and to implement optimal implementation as of 2021

In addition, we plan to support various kinds of vital data collected from smart watch etc. with the goal of 2023.

## 5-2. Access right of medical data

The EMI platform manages ownership and usage rights of data on the block chain together with medical data. Users who provide data can make data viewing and writing at their own discretion by giving usage authority to each medical institution, municipality, insurance association etc.

Also, users can set the data reuse privilege at their own discretion. If you give permission to reuse data, data will be sold to pharmaceutical companies and research institution through Set Corporation and EMI



tokens will be issued to users and medical institutions that provided the data.

## 5-3. Medical data sales information

As mentioned earlier, we do sale of authorized data by EST Corporation. Of course, it is necessary to return the consideration of the data sold to the data provider and the medical institution. We manage the data you buy and sell and the price for it on the block chain and create a situation where users participating in the EMI platform can always monitor.

In addition, we will explain the value reduction method in detail in the chapter "7-3. Reduction of medical data value".

## 6.ADVANCED FEATURES EMI PLATFORM PROVIDE

The EMI platform has all the functions for aggregating and using medical data. We will explain the function of EMI platform assuming concrete use case.

### 6-1. Sharing medical information

The EMI platform manages medical information and its access authority in a blockchain. Users can grant authority to medical institutions, municipalities, insurance associations etc. at their own discretion. A person with authority can restore the encrypted and stored medical data and view and write it.

#### 6-1-1. Data sharing with municipalities / insurance associations

Numerous health checks are conducted in Japan such as specific health checkups conducted by local governments and regular medical checkups conducted by insurance cooperatives. Also, ICT conversion at the screening site has not yet progressed so much, and we do electronic digitization of more than 500,000 paper medical records annually, and we also provide notices for screening and postal examination tickets etc.

As explained in the chapter "5. EMI data", the EMI platform will support sharing of screening data at first. The patient keeps the medical data in the EMI platform through the medical institution that was checked and grants authority to the relevant municipality. The municipality instantly confirms the medical examination result, and it is possible to add the judgment result. Of course, users who are data holders can check the added judgment result.

Also, if you change a municipality and insurance company due to relocation of residence or change of job, past checkup data will not be taken over. But, by using the EMI platform, you manage your medical data by yourself and such problems are solved as well.

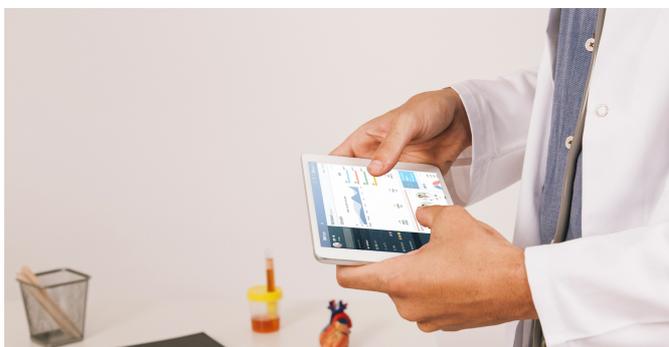
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### 6-1-2. Data sharing among medical institutions

With authorization of local governments, users can share medical data across medical institutions by giving data access authority to the relevant medical institution.

Today, in medical treatment in Japan, we are trying to promote regional medical cooperation and the family doctor system. But here also ICT is not advanced, it is difficult to share medical data etc. This is a fundamental reason that there is no clear criterion of who owns medical data as well as the infrastructure system.

The EMI platform solves this by allowing the user himself to control the access authority. At the same time, we will develop electronic records highly compatible with the EMI platform. We release it open source and promote the spread of EMI platform.



### 6-1-3. Utilizing medical data by users himself

Medical data is valuable to users themselves. But we cannot recognize the value of medical data correctly. Unfortunately, I myself did not know where the result of the medical examination received last year was, and the medical institution which I visited the other day prescribed medicine, but I do not know well what kind of examination result was given.



Of course, it may be so if you are told that this is a question of your own consciousness. However, in the current environment surrounding medical data, it is too difficult to hold medical data on its own. The EMI platform simplifies the possession of medical data by the user himself and activates the use of medical data by himself.

We will develop smartphone applications to utilize medical data stored on the EMI platform, Release SDK and support the development of third-party healthcare applications.

## 6-2. Settlement function with EMI token

The EMI token is issued as a token based on ERC 223. Naturally, settlement between users is possible, but we introduce EMI platform to medical institutions and realize medical settlement with EMI token. We will begin introducing a payment system for medical institutions that do self-medical examinations and medical tourism first, and we plan to actively support insurance treatment as soon as domestic legal development is in place.

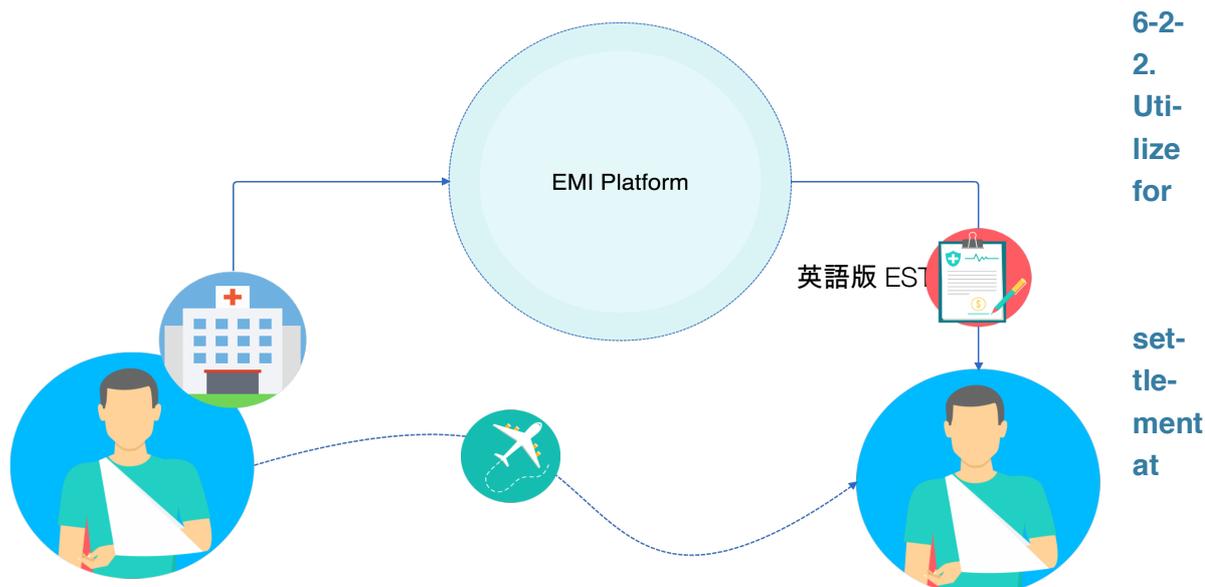
### 6-2-1. Medical tourism and use of medical settlement during visit to Japan

In recent years, the demand from foreign countries for Japanese medical care has grown, and medical institutions also actively accept such as preparing medical interpreters and promoting to overseas.

Among them, there are restrictions on overseas withdrawal of the country's currency depending on the country, and it is difficult to pay for the expensive treatment. We introduce EMI token settlement system to medical institutions and we will revitalize medical tourism market.

In addition, we are currently posting information on medical institutions that can handle English in ESTdoc which we operate. Although visitors to Japan are steadily increasing towards the Tokyo Olympic 2020, there are not many hospitals that can accept patients from the English-speaking countries and further submit the diagnoses to the foreign insurers. Hospitals that can prepare documents are even more limited.

In the EMI platform, we will provide medical certificates to overseas insurance companies in conjunction with medical settlement and will provide the necessary inspection results for treatment after returning home. We believe that it will be an important promotion to convey the usefulness of the EMI platform in the overseas deployment of the EMI platform.



6-2-2. Utilize for

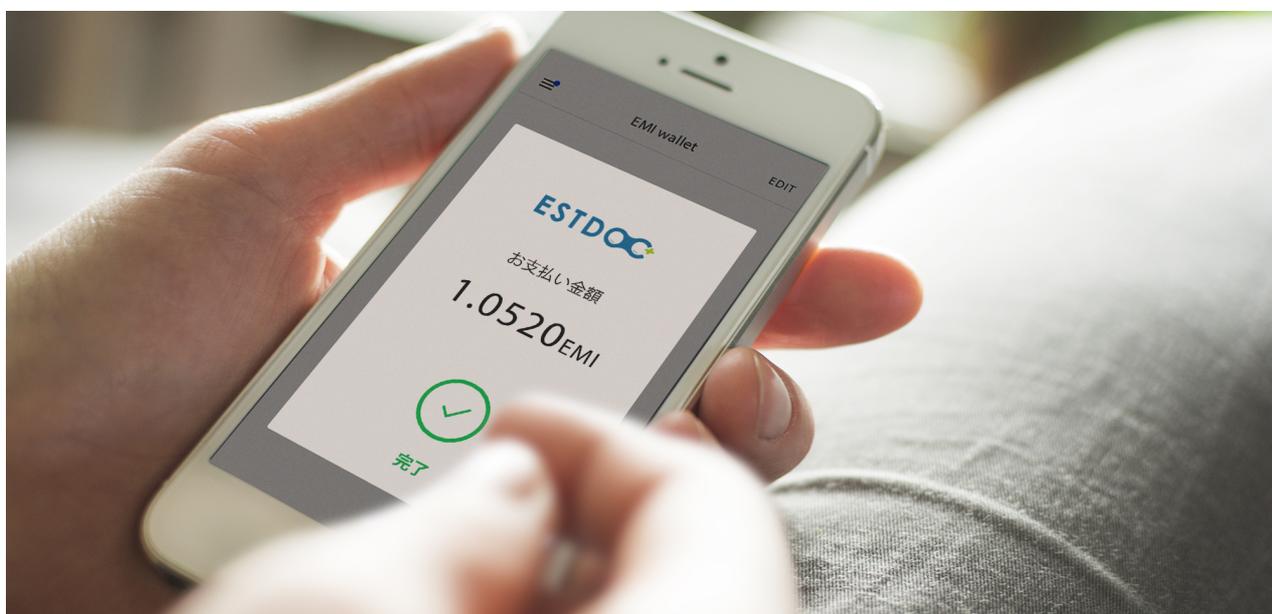
settlement at

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## ESTdoc

At EST Corporation, we are providing the hospital reservation service and search site ESTdoc (<https://ESTdoc.jp>) since 2013. ESTdoc currently gathers 3 million PV access per month, and through this service, about 10,000 medical treatment appointments are held monthly.

We will introduce EMI coin settlement system to ESTdoc. Especially medical institutions conducting self-medication examination such as dentistry performing the whitening and implant, cosmetic dermatology department doing beauty treatment, etc. will be our immediate target.

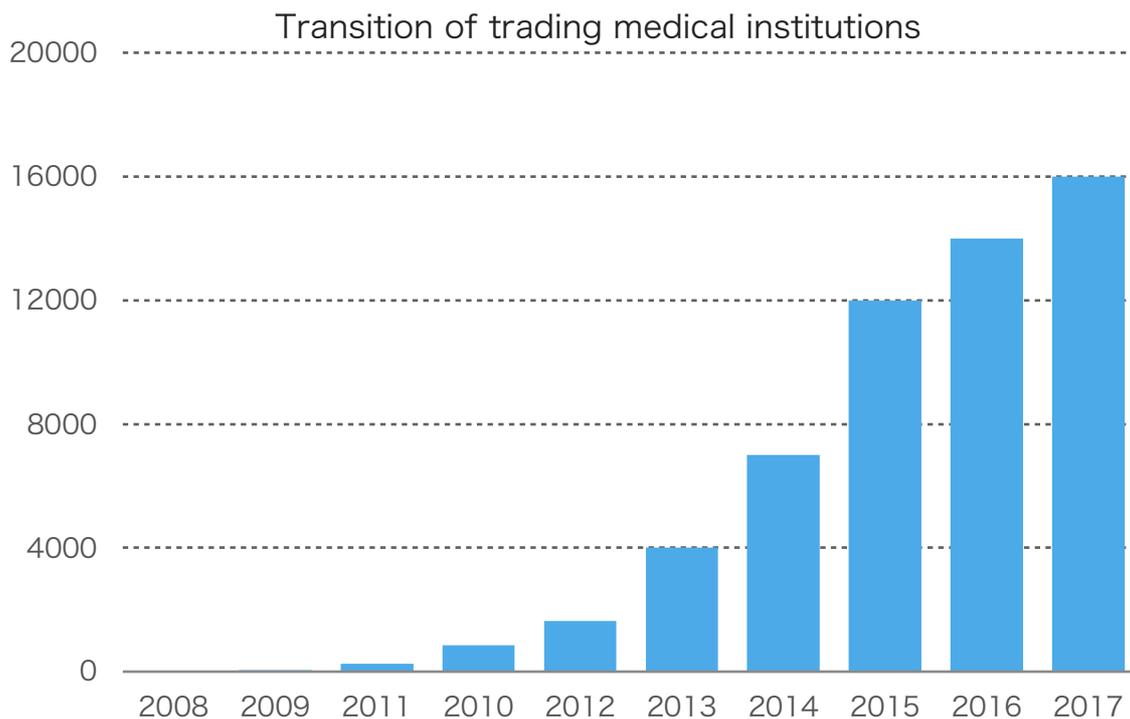


## 7. The role and strength of EST Corporation

We have explained the functions of the EMI platform so far. Although the EMI platform is an autonomous and decentralized system, we have multiple roles in order to make the platform healthy. Here we explain the roles and strengths that EST Corporation plays in the community.

### 7-1. Introduction to medical institutions

Many medical institutions make medical data and provide them directly to the EMI platform. We will promote the introduction of the EMI platform mainly for medical institutions with transactions to date. EST Corporation has been conducting transactions with about 16,000 medical institutions and 72 medical associations over the past 10 years. We already have a powerful and realistic customer network in expanding the EMI platform.



### 7-2. Sales of medical data

In EST Corporation, we have already received over 4 million checkup data as past business results and received many inquiries from pharmaceutical companies and investigational companies that find value in data. However, regarding these data, it is difficult to obtain permission for reuse from all users and so it

cannot be used as big data. There is a fundamental problem that it does not know the number of cases and who has the right of medical examination data. These experiences lead to the idea of the EMI platform.

We will actively sell medical data provided by users to the EMI platform to pharmaceutical companies, research institutions etc. to utilize it as valuable data. As explained in the chapter "5-3. Sales information of medical data", we will manage the released data and the money received against it on the block chain and publish it. Furthermore, we plan to announce the profit obtained by data sales and SG & A expenses such as server expenses through third-party audit corporation.

### **7-3. Reduction of medical data value**

We will sell medical materials and health related products with EMI tokens in order to return the profit that we make by selling the medical data to the data provider. Among them, price vs. EMI token pricing needs to be reasonable compared to the profit we got by selling medical data. If the user feels that the value of medical data will be exploited by us, data provision to the EMI platform will cease. It is not a good idea to gain excessive profits to keep the value of EMI tokens and EMI platforms owned by ourselves.

#### **7-3-1. SALES OF MEDICAL MATERIALS**

As a means of using EMI tokens held by medical institutions, EST Corporation will sell medical materials with EMI tokens. The medical institution can use the EMI token obtained by data production and treatment for purchasing expendable items to be used in the hospital. We will also collaborate with pharmaceutical companies and plan to sell pharmaceuticals.

#### **7-3-2. EC SITE FOR SALE OF HEALTH-RELATED PRODUCTS**

We will operate an EC site that sells health foods and everyday items to users who provided data and received issuance of EMI tokens. In order to securely return the value to the user who participated in the EMI platform and provided the data, the selling price will depend on the EMI token obtained by data provision and differ from other EMI tokens.

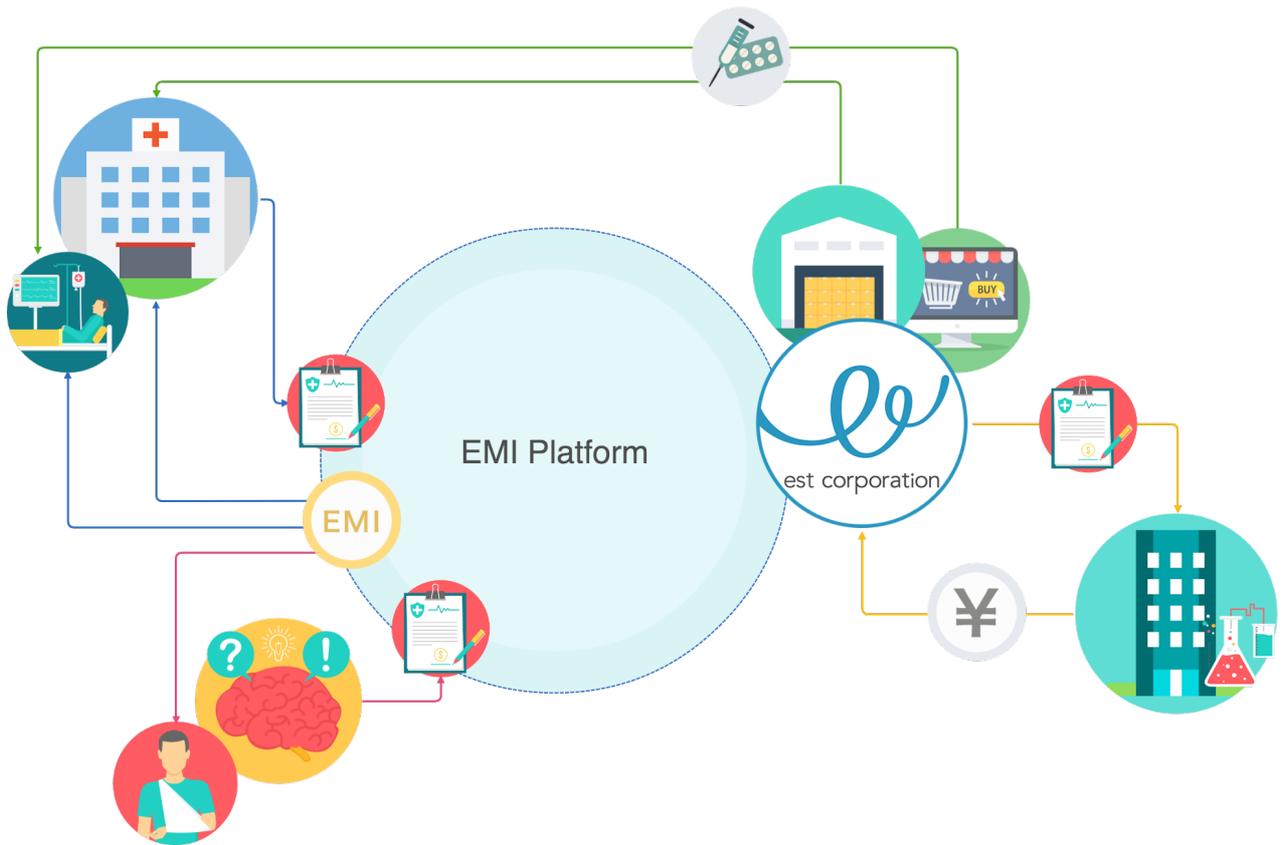
#### **7-3-3. AI MEDICAL DEVELOPMENT**

We will utilize the provided medical data and advance the development of AI medical care. It is undoubtedly true that there are many people who cannot receive appropriate medical care due to financial and geopolitical problems around the world. By utilizing remote medical treatment with AI, we can at least solve some of these problems.

By providing the diagnostic result by AI to the EMI platform, the user can receive the EMI token. It is also possible to purchase medicines and vaccines based on the received EMI token.

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## VALUE CYCLE IN THE EMI PLATFORM



## 8. THE FUTURE OF EMI PLATFORM

When the EMI platform operates soundly, the value of the EMI token is linked with the value of the medical information. The market for big data is in a rapidly growing season and is projected to reach \$ 20 billion in 2020. Medical data is the central one among them. We will implement a three-step (nine-year) plan with three years as a guide.

### 8-1. Introduction and expansion of EMI platform

We have networks in major medical industry in Japan, namely patient, medical institution, medical association, municipality, insurance association respectively. Hospital reservation site, ESTdoc operated by us, is used by more than 1 million patients per month. We have traded with about 16,000 medical institutions, 72 medical associations and 600 municipalities so far. In the first three years, we aim to acquire more than 30% of the medical data generated by medical examinations conducted nationwide, by promoting introduction of EMI platform to past business partners.

#### THREE-YEAR SCHEDULE FROM 2018

2018 / 1Q	Issuance of EMI token
	Start notifying service to business partners
2018 / 4Q	Release of data sharing function of screening data
	Start distribution of tokens to medical information providers
	Establish overseas branch office of EST Corporation
2019 / 1Q	Start selling data
	Application release for users for data management
	Start research and development of medical AI
2019 / 3Q	EC site launch for sales of health-related health-related products
2020 / 1Q	Start selling medical materials for medical institutions

### 8-2. Enhancement of medical information that can be handled

By transmitting the usefulness of the EMI platform to users, healthcare workers, etc., it is expected that demand for sharing, providing, and purchasing will naturally arise for any medical data other than medical examination data. We will use the next three years to expand the range of data that the EMI platform can handle. We will support many medical data formats in and outside of Japan by 2023 and vital data that can be measured from smart watch etc.

#### THREE-YEAR SCHEDULE FROM 2021

2021	Formulation of standard medical data format of EMI platform
	Release of electronic medical record fully compatible with EMI platform
2022	API release for conversion from each medical data format to EMI display data
	Start receiving acceptance of electronic medical chart data
	Start selling electronic medical record data
2023	Start receiving acceptance of vital data
	Start selling vital data

#### 8-3. Global development and AI medical care development

After domestic medical data collection has been achieved, we will release medical treatment by AI from all over Asia to the world. Also following that, we will promote introduction of EMI platform to foreign medical institutions.

#### THREE-YEAR SCHEDULE FROM 2024

2024	AI medical service release
2025	Release of national version electronic medical record
2026	Start introducing EMI platform to foreign medical institutions

## 9. ABOUT EST CORPORATION

EST Corporation was founded in 2007 with the corporate philosophy of “Update to the best and create a new future.” in order to contribute to the medical and welfare society in Japan. In 2007, the specified health checkup program by the Ministry of Health, Labor and Welfare and the specification of the specific medical examination information file according to it was fixed. It can be said as the starting point of aggregation and use of medical data. We built an electronic system before the law amendment in 2018 and we delivered the first specified health guidance information file in Japan to the Ministry of Health, Labor and Welfare while consulting with local governments and medical associations. Since that time, we have been continuing to solve problems using IT technology for medical care and welfare in Japan for 10 years since 2007.

### 9-1. Introduction of each business

Here we will briefly introduce representative businesses that are highly relevant to the EMI project, among the EST projects. It is closely related to the processes that we have started the EMI project.

#### 9-1-1. SCREENING

From 2007 to the present, from the establishment of the company, we provide various support such as data processing, data analysis, system development, etc. in the medical examination done by local government and insurance companies. We have traded with 8800 medical institutions, 73 medical associations and 600 local governments so far and have knowledge related to domestic screening work.

#### 9-1-2. CARE AND WELFARE

As a support for nursing care insurance business, health welfare service operated by government agencies, we are engaged in marketing business for elderly people. We undertake requests from local governments to investigate and analyse the actual situation of community welfare and report it.

#### 9-1-3. EST DOC

Hospital reservation and search site ESTdoc, started from 2013, aims to improve access to medical services. Approximately 8000 medical institutions can make appointments for medical treatment, and over 1 million users per month search for medical institutions.

## 9-2. Member

We will introduce the main members involved in the EMI project.

### FUMIHIRO SHIMIZU

EST Corporation LTD. CEO

Established the EST Corporation after the graduation in 2007. In 2014, he received the "Kitao Prize" from Mr. Yoshitaka Kitao, Representative Director of SBI Holdings.

### JUN ASAMA

EST Corporation Inc. Director CFO

Joined in 2009, since then, supported the growth of EST Corporation and now is in charge of Finance as CFO

### RYO KAMID

ESTdoc, Inc. CBDO

### ISANAO MORII

EST Corporation inc. CTO

EMI Project Lead Developer

### TAKUTO NISHIZAKI

ESTdoc, Inc. Director

EMI Project Chief Architect

### KENICHI SUGIYAMA

Outside Director of EST Corporation Inc.

Joined the Tokai Bank, Ltd. (presently Mitsubishi Tokyo UFJ Bank Ltd.) in 1987, formulated measures to improve company productivity, formulated and implemented restructuring plans, formulated and implemented BS improvement measures, etc. Over the years' experience. In 2013, he was appointed Managing Director of SME Management Support Council.

### ADITYA TALLAPRAGADA

AKT Consulting Group CEO

Worked as a Strategy Consultant in Truven Health acquired by IBM Watson Health in Japan and Currently supporting as a Technical advisor in EMI project. <http://aktcg.com/>

### 9-3. Major Shareholders



### 9-4. Other Outline

Company Name EST corporation inc.

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President Fumihiko Suzuki

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Tel : (+81) 03-4405-8138

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Established July 12, 2007

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Capital 504,980,000yen

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## DISCLAIMER

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Notice to the Secretary of HHS Breach of Unsecured Protected Health Information  
[https://ocrportal.hhs.gov/ocr/breach/breach\\_report.jsf](https://ocrportal.hhs.gov/ocr/breach/breach_report.jsf)
5. Survey the domestic market of services, equipment and systems related to medical big data  
<https://www.fuji-keizai.co.jp/market/16036.html>
6. Health Information Accountability and Portability Act: Public Law 104-191  
<https://www.gpo.gov/fdsys/pkg/PLAW-104publ191/pdf/PLAW-104publ191.pdf>
7. ERC223 token standard reference implementation.  
<https://github.com/Dexaran/ERC223-token-standard>
8. Japan Comprehensive Practice Medical Society Standard Inspection Item (2018)
9. <https://jhep.jp/jhep/sisetu/nst07.jsp>