NexGen IoT Acceleration Lab

（Advance Project Acceleration WG）

IoT Support Committee（Second Meeting）

Agenda

Date	13：00～14：30 Monday February 15th, 2016
Location	Ministry of Economy, Trade and Industry Main Building B2F Auditorium
Proceedings	Summary of NexGen IoT Acceleration Lab and Action Plan

【Handouts】

Material#１	Member List
Material#２	Summary of NexGen IoT Acceleration Lab and Action Plan
Reference Material#1	Summary of IoT Related Demonstration Budget(Japanese only)
Reference Material#2	Lists of projects to be supported,selected through IoT Lab Selection(Japanese only)

Provisional Edition
Material ＃1

NextGen IoT Acceleration Lab IoT Support Committee Member

<Chairman>

Kazuhiko Toyama	Representative Director and CEO, Industrial Growth Platform, Inc.

<Member>

Fujiyo Ishiguro	President and CEO, Netyear Group Corp., Netyear Group Corporation
Hiroaki Nakanishi	Chairman & CEO, Hitachi, Ltd.
Dr. Jun Murai	Dean/Professor, Faculty of Environment and Information Studies, Keio University
Junichi Tsujii	Director, Artificial Intelligence Research Center
Dr. Kerstin Geiger	Senior Vice President, Industry Value Engineering, SAP Asia Pacific Japan
Makoto Takahashi	Senior Managing Executive Officer, Representative Director, KDDI CORPORATION
Marco Annunziata	Marco Annunziata, General Electric
Masaaki Tanaka	Senior Advisor, The Bank of Tokyo-Mitsubishi UFJ, Ltd.
Paul Daugherty	Chief Technology Officer, Accenture
Peter Fitzgerald	Japan Managing Director, Google Inc.
Shinichi Koide	Executive Vice President, salesforce.com, inc. Chairman and CEO, salesforce.com Co., Ltd.
Soichi Kariyazono	Chairman, Japan Venture Capital Association
Tadao Nagasaki	Representative Director and President, Amazon Web Services Japan K.K.
Taizo Son	President & CEO, Mistletoe, Inc.
Takayuki Hashimoto	Vice Chairman, IBM Japan, Ltd.
Takeshi Natsuno	Guest Professor, Graduate School of Media and Governance, Keio University
Taro Shimada	Senior Executive Operating Officer & Division lead, Digital Factory / Process Ind. & Drives Division, Siemens K.K.

Tatsuya Harada	Professor, School of Information Science and Technology, The University of Tokyo
Tony Blevins	Vice President, Apple Inc.
Tsuyoshi Abe	Director & Senior Executive Officer, Vice president, General Manager of Technology & Manufacturing Group Japan, Intel K.K.
Dr. Udo Wolz	President and Representative Director, Bosch Corporation
Wayoh(Kazuhiro) Suzuki	Managing Director, Strategic Solution and Business, Development, Cisco Systems G.K.
Yasufumi Kanemaru	Chief Exective Officer, Future Architect, Inc.
Yasuyuki Higuchi	Chairperson, Microsoft Japan Co., Ltd.

Provisional Edition
Material #2

NexGen IoT Acceleration Lab

www.iotlab.jp

(Summary of NexGen IoT Acceleration Lab and Action Plan)

February, 2016
Information and Communication Electronics Division
Commerce and Information Policy Bureau

Table of Contents

1．Activity Report of NexGen IoT Acceleration Lab

1－1．IoT Lab Selection（IoT Project Selection Meeting）
1－2．IoT Lab Connection（Matching Event）
1－3．Big Data Analyzing Contest

2．Summary of IoT Related Demonstration Budget

3．Today’s Discussion Topic（Future Action Plan）

3－1．Procedure of Selection/Connection and manner of IoT demonstration
3－2．Global and Regional expansion of NexGen IoT Acceleration Lab
3－3．Others, matters need to be tackled by NexGen IoT Acceleration Lab

1． Activity Report of NexGen IoT Acceleration Lab

- As a first activity of NexGen IoT Acceleration Lab, 3 initiatives listed below were carried out in late January to early Febraly.

1－1． IoT Lab Selection (IoT Project Selection Meeting)

Scout and select advanced IoT projects to provide financial support, mentor support, deregulation support
Sun. Feb. 7, 2016

IoT Lab Selection
IoT LAB
IoT Acceleration LAB
IoT Lab Selection Award
第１回先進的IoTプロジェクト選考会議
第１回Big Data Analysis Contest

1－2． IoT Lab Connection (Matching Event)

Matching of enterprizes, associations and municipality by themes ①Tourism,② Manufacturing（Connected Factory）
Thu. Jan. 28, 2016

1－3． Big Data Analyzing Contest

Competition for developing algorithms online utilizing tourism big data provided by enterprizes.
Sun. Feb. 7, 2016
※award ceremony

1 − 1. IoT Lab Selection（IoT PSM）①

- **Scouting and selecting advanced IoT projects which should be a subject of supports** such as **①Financing, ②Mentor dispatching, ③Deregulation and standardize**, done by Government Agencies, Financial Institutions, and Venture Capitals.

Target Groups and Items Evaluated

Target groups: All advanced projects using technologies such as the IoT
(All kinds of businesses, including large enterprises, small and medium enterprises (SMEs), and individuals)

Items evaluated: We consider the following in evaluation
(1) Growth potential
(2) Openness
(3) Sociality
(4) Feasibility of realization

Support details

The following three types of support are available (multiple types allowed)

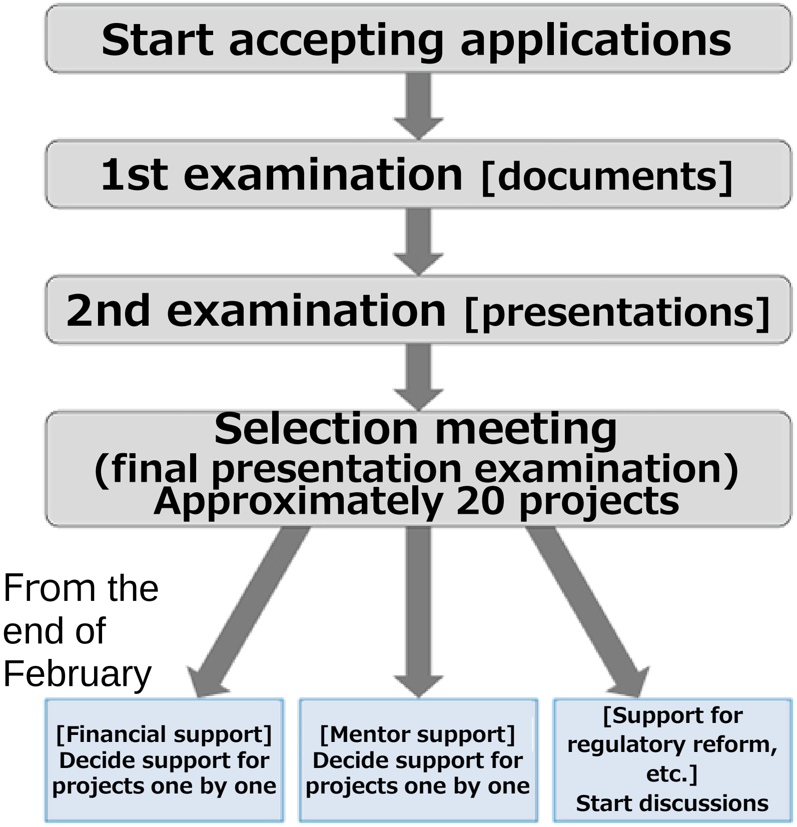
(1) Financial support
(2) Continuous, one-on-one support from mentors
(3) Support related to regulatory reform and standardization
(Support in completing procedures for use of systems such as the System to Remove Gray Zone Areas and the System of Special Arrangements for Corporate Field Tests, research and demonstrations for regulatory reform and standardization, etc.)

Sharing Application Content

If an applicant so desires, it is possible to share the contents of one's application with **(1) participating support institutions** and **(2) Lab members**.

*Entities which are not selected for the final selection can transmit the details of their projects to supporting institutions, Lab member companies, etc.

Schedule for the Advanced IoT Project Selection Meeting



Start accepting applications

1st examination [documents]

2nd examination [presentations]

Selection meeting
(final presentation examination)
Approximately 20 projects

From the end of February

[Financial support]
Decide support for projects one by one

[Mentor support]
Decide support for projects one by one

[Support for regulatory reform, etc.]
Start discussions

1－1. IoT Lab Selection（IoT PSM）②

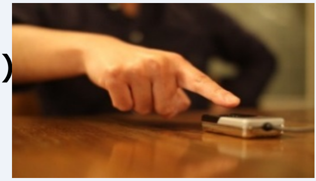
- 16 finalists were selected by **second examination (presentation)** out of 28 projects selected in **first examination (documents)** out of 252 applications. Excellent projects were awarded in the first IoT PSM held on February 7.

★Grand Prize★
Liquid Marketing, Inc.

～Personal authentication of foreign tourists by fingerprints（payment･verification）～

Developed biometric authentication system which **authenticate by fingerprints only.** Authenticate one million fingerprints in 0.05sec. utilizing AI to classify fingerprints by features. Decreased a risk of miss-authenticate to one out of a trillion by using 2 fingers. Demonstrate personal verification and payment by fingerprints at hotels and stores for foreign tourists in cooperation with major hotels.

<seek supports>
- **Deregulation (Inns and Hotels Act)**
- Financing

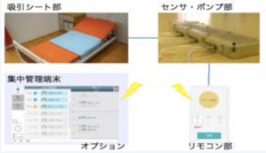


★2nd Prize★
aba Inc.

～Excretion detection sheet “Lifi” to decrease the burden of nursing～

Developed system to **detect by odor components and notify caregivers an excretion of cared**, cooperation with major care equipment manufacturer. Realized the detection based on the facility environment and personal difference by **learning odor components and excretion pattern**. Able to change diapers at appropriate timing based on the excretion pattern. By automating an excretion detection by this system, **the burden of caregivers is decreasing at the same time the cared’s quality of life is increasing**.

<seek supports>
- Financing
- Mentor dispatch



★2nd Prize★
Routrek Networks, Inc.

～Agricultural system to optimize a control of water and fertilizer for Drip irrigation～

Developed the system to **optimally control watering and fertilizing** for worldwide spreading drip irrigation with Meiji university. Increased crop yields by average of 25 to 30% for 12 greenhouse items. Recovered investment in a year. Decreasing watering and fertilizing time by 90%. Try expanding to larger outdoor cultivation market. And also, try expand to global market by cooperating with world’s leading drip irrigation equipment company, Netafim.

<seek supports>
- Financing
- Mentor dispatch

IoT×農業でJapan as Number 1 を!!
Grow with IoT

★Jury Grand Prize★
EverySense, Inc.

～Aiming to be a platformer of data trading with system to mediate trading corporate’s big data and personal data～

1－1．IoT Lab Selection ③ List of finalists

applicant	Name of Project	Seek supports		
		financing	mentor	Deregulation
★Grand Prize★ **Liquid Marketing, Inc.**	Personal authentication of foreign tourists by fingerprints (payment･verification)	○	—	○
★2nd Prize★ **aba Inc.**	Excretion detection sheet "Lifi" to decrease the burden of nursing	○	○	—
★2nd Prize★ **Routrek Networks, Inc.**	Agricultural system to optimize a control of water and fertilizer for Drip irrigation	○	○	—
★Jury Grand Prize★ **EverySense,Inc.**	Commercialization of data exchange market in Japan and the US	○	○	△
OMRON Corporation	Architect the trading system of real time sensor data distribution	—	○	△
ZEROBILLBANK LTD	Convert individual idea and action to visible value(coin) utilizing blockchain	○	○	△
Hottolink,Inc.	To be a global player of SNS big data from Japan	○	—	—
Strobo Inc.	Smart chair to visualize body condition by pressure sensors	○	○	—
Bsize Inc.	Realize new communication business for IoT	○	○	△
AFRO Co., Ltd.	Business optimization of taxi by a smartphone	○	—	○
Social Impact Research Co.,Ltd.	Automated system that can be used by anyone to give an asset management advise which achieve both profits and sociality	○	○	—
Graduate School of Information Science and Technology, Hokkaido University	Realize individual medical services utilizing health data	○	—	○
Cerevo Inc.	Realize inexpensive home security	—	—	○
Sony Corporation	Realize a display device corresponds to the IoT era	—	—	○
Wireless Power Transfer for Consortium Practical Applications(WiPoT)	Practical demonstration of long-distance microwave radio transmission system	—	—	○
Arcadia Systems Corporation	Individual exercise program in accordance with the physical status	○	—	—

△･･･After the business model has been clarified

1 – 2．IoT Lab Connection（Matching Event）①

- **The matching event** was held for **enterprises aim to create new business models** such as member companies with seeds or needs, associations and municipalities to **give an opportunity to meet others who owns related business model, technology, and services.** Theme of the first event was ①**Tourism** and ②**manufacturing（smart factory）**

① Business Matching

(1:1 Matching)

Participants presented needs and seeds in advance for the matching list which was created prier to the event. 15 minutes private sessions are held on the day.

190 participants

550 matching sessions

② Presentation Matching

(1:1 Matching)

Popular Companies presented their seeds and needs in addition to the Business Matching. Meeting with interested enterprises was held in situ.

28 enterprises presented

400 participants

③ Municipalities Booth Matching (Municipalities)

Municipalities set up the booth. Enterprises who has interest in municipality’s seeds and needs **held meeting in situ**.

14 municipalities

320 enterprises

Date: Thursday, January 28, 2016

Venue: Hitotsubashi Hall (Hitotsubashi University)

Co-hosts: IoT Acceleration Lab and METI

Support entity： Japan Tourism Agency

Participants： **814** people

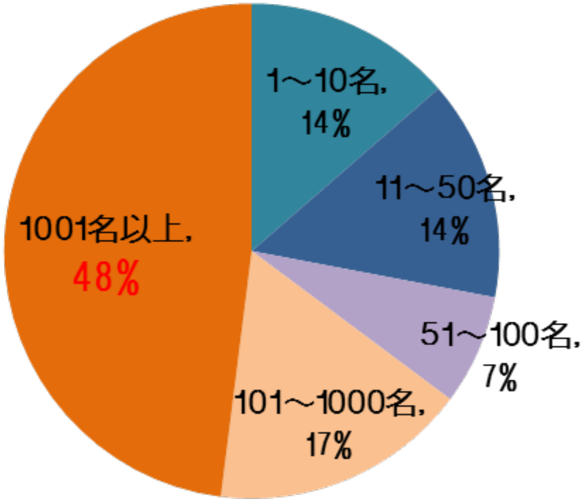
Participated municipalities：

Sapporo, Akita-pref., Aizuwakamatsu, Shibuya, Yokohama, Ueda, Mie-pref., Kyoto, Kobe, Kurashiki, Shimane-pref., Yamaguchi-pref.,Fukuoka, Kitakyushu

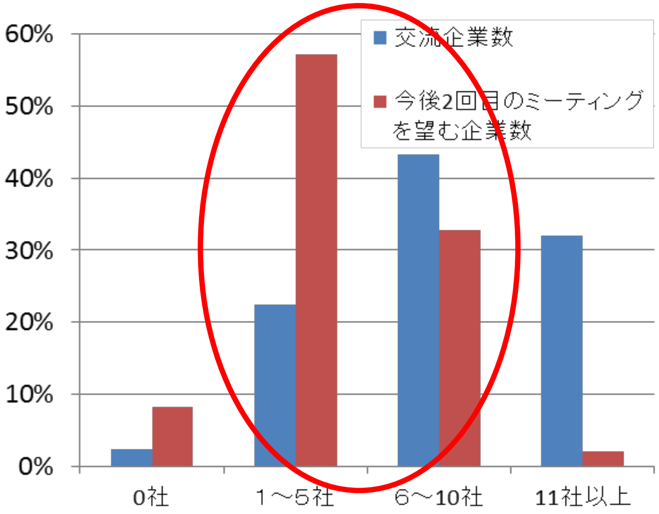
1－2. IoT Lab Connection（Matching Event）②

- **Half of the participants are a large enterprises**, but wide range of entities such as ventures, small enterprises, university and research institute participated.
- **90% of participants** answered that they were able **to meet an enterprise they think they can move on to next step toward business cooperation**.

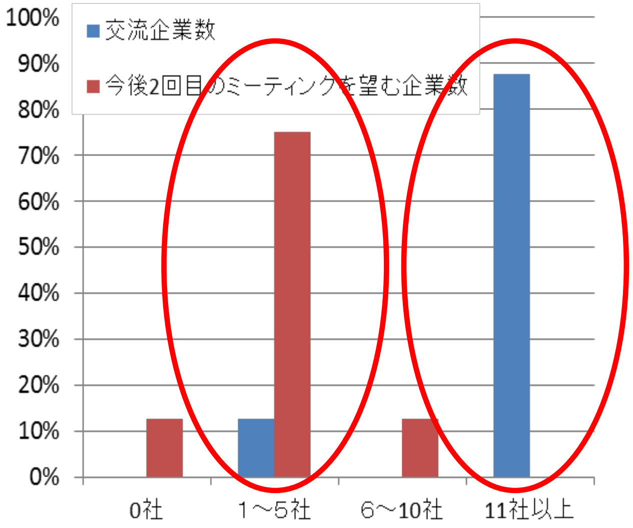
Size of Participating Enterprises



Matching Results for Enterprises



Matching results for Municipalities

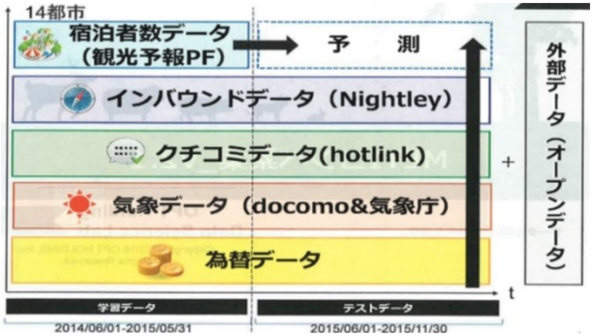


Comments from Participants

- ○ It is necessary to vertically integrated with multiple partners in order to realize IoT. This event was very useful to find potencial partners.
- ○ Wanted to have a matching with municipalities and support organizations.
- ○ It would be even better if I could matched with enterprise with data.
- ○ Wish the event specializing AI, followed by continuous study group organized by enterprises owns AI.
- ○ Would like to exchange with benders from over sea.
- ○ Better to have this kind of matching events frequently, with many fields, at all over Japan.

1－3．Big Data Analyzing Contest

- **A competition for algorithm development** was held **online** focusing on **data analysis using Big Data provided by enterprises**. **Superior algorithm developers** was evaluated based on **predictability** and **modeling ideas** and was awarded at this event.
- The Contest aims to **scout and develop** superior data scientists by **having them conduct analysis** on **actual issues and data from the industrial sector**, on which people rarely have the opportunity to analyze.



Co-hosts : IoT Acceleration Lab and METI
Supporting entities : Ministry of Education, Culture, Sports, Science and Technology in Japan (MEXT), Japan Tourism Agency (JTA), Research Organization of Information and Systems (ROIS), Research Organization of Information and Systems/University of Tsukuba
Planning and operation : OPT Holding, Inc.
Date of announcement of award recipients : Evening of Thursday, January 28, 2016
Number of participants : 130 (439 Downloads)
Number of Applications : 2,819 (* multiple applicants is not prohibited)

1.　Grand Prize

Highly praised for the accurate prediction of the total number of tourists at 14 major tourist spots (Hakodate, Sendai, Kanazawa, Toyama, Chuo ward, Tokyo, Hakone, Yugawara, Atami, Ise, Kyoto, Izumo, Hiroshima, Nagasaki, Ishigaki).

[Winner]　Mr. Ryu Houketsu　The University of Tokyo （Foreign student）

[Extra Prize] JPY 100,000（Courtesy of Softbank Group Corp.）

2．Local Region Category

Praised for the accurate prediction and modeling methods of the number of tourists of major tourist spots (Izu and Hakone Region)

[Winner]　Mr. Hiroshi Shirai　A Major Financial Company

[Extra Prize] Invitation to Yugawara Spa resort, or Hawaii (Courtesy of JTB Corp.)

Winner

3．Transportation Category

Praised for the accurate prediction and modeling methods of the number of tourists of Kanazawa and Toyama from Other regions after extension of the Hokuriku Shinkansen.

[Winner]　Mr. Hiroaki Taniguchi　A Major Financial Company

[Extra Prize] JPY 100,000 and Treasure Data Service for 1 Year　(Courtesy of Treasure Data Inc.)

4．Inbound Category

Praised for the accurate prediction and modeling methods of the number of tourists from overseas.

[Winner]　Mr. Toshiharu Mitsuhashi　Immunology researcher（PhD.）

[Extra Prize] Microsoft Surface Pro4（Courtesy of OBC Co.）

Additional Prizes for all winners:
・JPY 300,000 License of Cloud service by Sakura Internet (Courtesy of Treasure Data Inc.)
・License of Microsoft Bizspark for 3 years (Courtesy of Microsoft Japan Co., Ltd.)
・Right to use AIST's resource for research (Courtesy of AIST)　・JPY 50,000 and Certificate CCP:DS (Courtesy of OPT Holding Inc.)

2．Summary of IoT Related demonstration Budget

- **Demonstrate the new industrial model utilizing data for each fields** in order to **accelerate deregulation and standardization** toward the realization of new society utilizing IoT, Big Data and AI. **Implementation status and results are shared with NexGen IoT Acceleration Lab and leads to regulatory reform proposals.**

（1）Social System Acceleration Project for IoT Acceleration (2016+2015 supplementary :¥3.66bill)

○Demonstration of IoT Business Model for deregulation and formation of cross-industrial rules in many fields.

＜Examples of demonstration＞

① Manufacturing : Smart factory a la Japan
② Infrastructure : Creating new industrial model in regional social infrastructure
③ Industrial Safety : Upgrading self safety
④ Industrial Safety : Upgrading safety inspection methods
⑤ Administration : Developing new benchmark utilizing big data
⑥ Medical, Healthcare : Health promotion using life data analysis
⑦ Medical, Healthcare : Infrastructure development of health information and acceleration of utilization
⑧ Logistics : Drone
⑨ Service : Hospitality using IoT

（2）R&D and Demonstration of smart mobility System（2016 : ¥1.88bill)

○Study technologies and business environment through R&D of revolutionary sensors and demonstration of highly autonomous driving system for social implementation of highly autonomous driving.

3． Today’s Discussion Point（Future Action Plan）

3－1． Procedure of Selection/Connection and manner of IoT demonstration

(１)Selection/Connection

What kind of **selection process and operation method** should be implemented in order to create/scout as many advanced IoT Projects as possible.
For example,
(Selection)

・By making the final selection public and also competitors to some applicants were in the jury, a few applicants withdrew from the Selection. On the other hand, especially in order to promote deregulation or making new rules, it is important to ensure transparency of examinations, and to gain the understanding of the people. To balance of both and encourage those applicants to participate again, what to think about necessity of **non-disclosure agreement**, **the way of examination(closed/open)** **and of selecting members of the jury**.

・In order to expand IoT Projects to society, not only the participation from ventures, but also **from large enterprises are necessary**. How to **encourage the participation** from large enterprises in the future.

(Connection)

・To increase number of business cooperation at the matching event, **how to operate including the theme setting**.

・How to **further encourage enterprises to provide more data** for the Big Data Analyzing Contest. Also, how to **connect the results of analysis to actual business**.

3． Today’s Discussion Point（Future Action Plan）

3－1． Procedure of Selection/Connection and manner of IoT demonstration

(２)Enforcement of IoT demonstration

How about **assign few support member to each projects**, and **share the progress with them and get advices form them**（Project assignment System）

3－2． Global and Regional expansion of NexGen IoT Acceleration Lab

(１)Global Expansion

In order to make Japan to be a hub of IoT Business, it needs to attract IoT business from Asia. What kind of effort is conceivable including **the holding of the Lab in Asian countries**, **cooperation with global alliances such as Industry 4.0 or IIC**.

(２)Regional Expansion

To create/scout advanced IoT projects from all over Japan, also to spread/penetrate realized advanced IoT projects to people’s lives, **What kind of effort** is conceivable to **spread/accelerate activities of the Lab to regions**.（Regional IoT Acceleration Lab）

3－3． Others, Matters need to be tackled in NexGen IoT Acceleration Lab

Is there any other **efforts to be considered** like **cooperation with other event.** For example, exhibit advanced IoT projects in large scale at CEATEC held every October.

Reference Material 1

Budget Outline of IoT Demonstration Projects

- Contents -

1．Social System Promotion projects for promoting IoT (FY2016 Initial Budget + FY2015 Supplementary: 3.66 Billion yen)

① [Manufacturing] Japanese-Style Smart Factory Model Case Demonstration Project ··············· 3
② [Infrastructure] New Industry Model Creation Business in Regional Social Infrastructure Field ···· 3
③ [Industrial safety] Independent Safety Measures Advancement Project (Oil Refinery)············· 4
④ [Industrial safety] Independent Safety Measures Advancement Project （Chemical Plant, etc.） ··· 4
⑤ [Government] New Index Development Business Using Big Data ····························· 5
⑥ [Medical/Health] Health Promotion Model Business Using Life Data Analysis ···················· 5
⑦ [Medical/Health] Health Information Infrastructure Establishment and Usage Promotion Project···· 6
⑧ [Distribution] Drone IoT Demonstration Project ································· 6
⑨ [Service] IoT-Based Service Demonstration Project································ 7

2．Smart Mobility System Research & Development and Demonstration Project (FY2016 Initial Budget: 1.88 Billion yen) 7

① Japanese-Style Smart Factory Model Case Demonstration Project (Commissioned/Granted)

1．Project Objectives and Outline

- With the launch of projects around the world to dramatically change the added value of the manufacturing industry such as "Industrie 4.0" in Germany and the Industrial Internet in the U.S., it is also important to construct new mechanisms to increase the added value of products and services in the manufacturing industry in Japan, in addition to enhancing the productivity of the production sites and reducing costs.
- This project aims to establish and summarize use cases in Japan so that our country does not miss the boat in the discussions conducted on the establishment of international rules such as standardization, etc. based on the analysis of use cases.

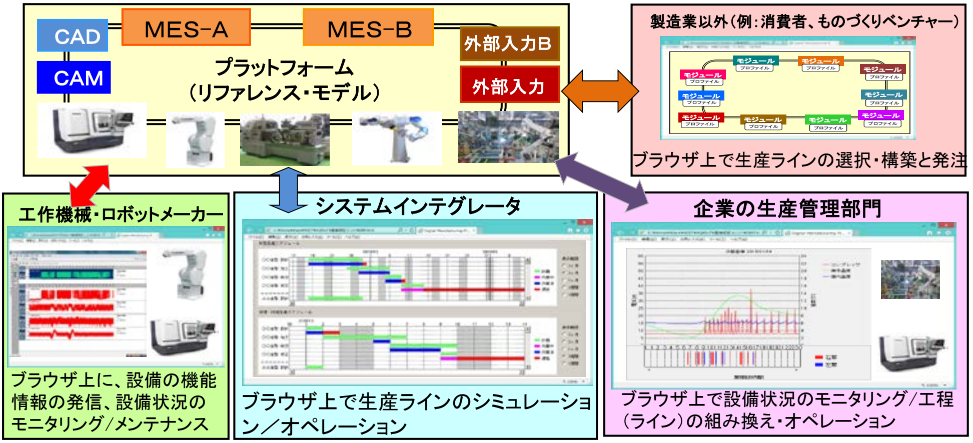
2．Image of Project

[Present Situation]
While the systems for the manufacturing industry are built quite sophisticatedly according to the unique specifications of specific machines, plants, and companies, there are no mechanisms aiming for general optimization by linking the information between machines, between plants, and between companies.

Issues

・Built for each machine, plant, or company, therefore unable to connect to external parts.
・No universal inexpensive products which small and medium companies can also use.
・Use cases are inclined towards enhancing productivity, therefore new business models are not created

Promote smart manufacturing industry through the use of IoT
- Create new use cases by collaboration with outside -


CAD
CAM
MES-A
MES-B
外部入力B
外部入力
プラットフォーム
（リファレンス・モデル）
製造業以外（例：消費者、ものづくりベンチャー）
モジュール
プロファイル
ブラウザ上で生産ラインの選択・構築と発注
工作機械・ロボットメーカー
ブラウザ上に、設備の機能情報の発信、設備状況のモニタリング/メンテナンス
システムインテグレータ
ブラウザ上で生産ラインのシミュレーション／オペレーション
企業の生産管理部門
ブラウザ上で設備状況のモニタリング/工程（ライン）の組み換え・オペレーション

② New Industry Model Creation Business in Regional Social Infrastructure Field (Commissioned)

1．Project Objectives and Outline

- The social infrastructures in Japan face common challenges such as deterioration of facilities, excess facilities, and aging of employees. Thus the means of heightening sustainability are sought.
- This project aims to demonstrate the effects of enhancing the efficiency and optimizing waterworks which are mainly handled by local municipals using information obtained by IoT, and review and establish the rules for enhancing the efficiency of routine operations and enabling the maintenance and management of optimum assets.
- By extending the project to other waterworks inside and outside Japan and other social infrastructure areas, aim to construct a sophisticated social infrastructure project operating system.

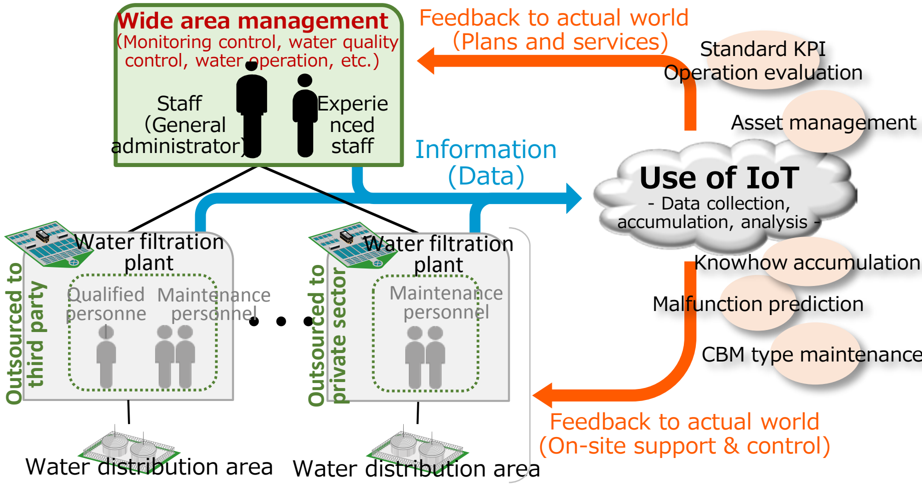
2．Image of Project

[Present Situation]
Waterworks services are maintained by on-site staff, however operations and management are inconsistent and differ according to the service provider and filtration plant, making it difficult to enhance efficiency. Consequently, it is difficult to respond to tasks to deal with aging, deterioration, etc.

Issues

・Decrease in staff and graying of experienced staff with knowhow
・Decrease in income from water supply service due to population decline and excess facilities
・Increase in costs for renovation/maintenance of deteriorated facilities

Promote smart water business through the use of IoT
- Optimize existing assets and information by general mobilization -


Wide area management
(Monitoring control, water quality control, water operation, etc.)
Staff (General administrator)
Experienced staff
Feedback to actual world (Plans and services)
Information (Data)
Use of IoT
- Data collection, accumulation, analysis -
Standard KPI Operation evaluation
Asset management
Knowhow accumulation
Malfunction prediction
CBM type maintenance
Water filtration plant
Outsourced to third party
Qualified personne
Maintenance personnel
Outsourced to private sector
Maintenance personnel
Water distribution area
Water distribution area
Feedback to actual world (On-site support & control)

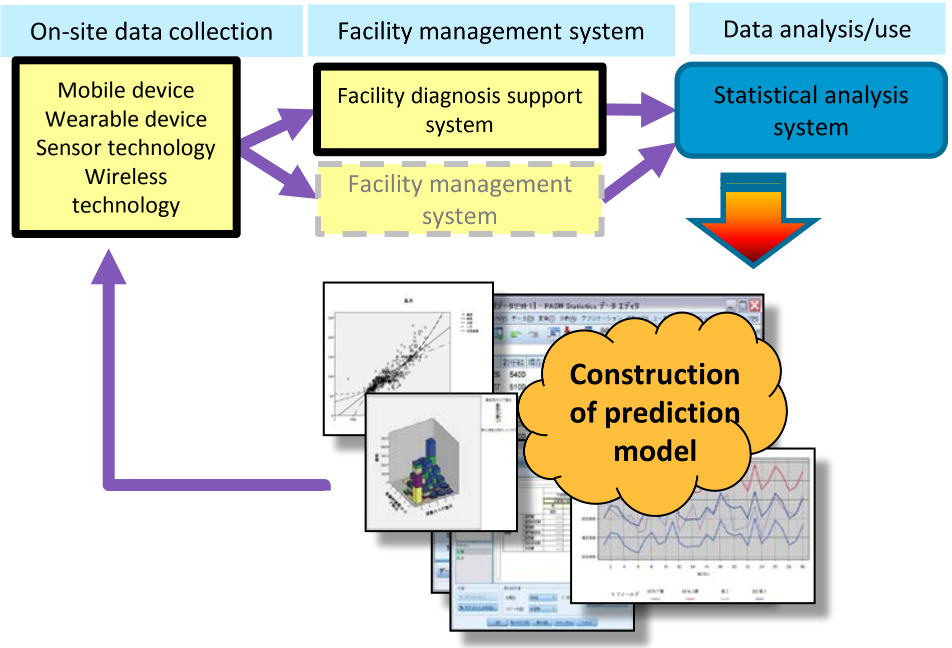
③ Independent Safety Measures Advancement Project (Oil Refinaries)

1．Project Objectives and Outline

- In the oil refinery area, the analysis of various data owned by the refineries is insufficient. In the future, there is a need for the industry to evolve to “sensible” regulations which allow new technologies to be applied flexibly and effectively, so as to maintain and improve the safety standards of the industry.
- It is important to promote advanced from conventional industrial safety measures that center around after-the-fact accident response and periodic conservation to industrial safety measures centering around prevention and conservation approaches which can predict accidents through data analysis, by applying massive data (big data) of the plant, and promote reformation to a regulatory system promoting the advancement of independent safety measures.
- For this, large-scale demonstration tests will be conducted to collect and analyze big data such as the pipes of refinery facilities of the industry.

2．Image of Project

Link information such as temperature, pressure, fluid and gaseous states, regular tests and daily inspection results to the accident and troubleshooting data of each facilities, and analyze the information to determine their correlation and build models for predicting the corrosion state of pipes.



On-site data collection

Facility management system

Data analysis/use

Mobile device
Wearable device
Sensor technology
Wireless
technology

Facility diagnosis support system

Facility management system

Statistical analysis system

Construction of prediction model

④ Independent Safety Measures Advancement Project (Chemical Plants, etc.)

1．Project Objectives and Outline

- In recent years, the number of industrial accidents and the number of casualties due to these accidents are decreasing, but serious accidents still occur occasionally. The situation and cause are also diversifying and becoming complicated.
- In Japan, many plants are aging, and with retirement approaching for many veteran employees capable of carrying out maintenance and safety management work using their advanced knowhow, the risks of serious accidents are expected to increase.
- In order to prepare for such risks, it is important to make use of IoT and big data to aid humans, and enhance the independent safety skills at the site by efficient and effective means.
- Carry out various demonstrations based on this and link this to the review of reassessment of the regulatory system.

2．Image of Project

Carry out the following demonstrations to Maintain/enhance safety standards in the industry.

- ✓ Regarding maintenance and safety methods for the corrosion of plant pipes, etc., demonstrate sophistication using IoT such as robots.
- ✓ Demonstration of signs of accidents by analyzing correlation between near miss information and operator action data etc.
- ✓ Share information such as accidents and abnormal phenomenon, etc. between multiple plants, construct/verify information sharing platform for enhancing accident forecast level, etc.

Advancement of independent safety measures of chemical plants, etc.

⑤ New Index Development Business Using Big Data (Commissioned)

1. Project Objectives and Outline

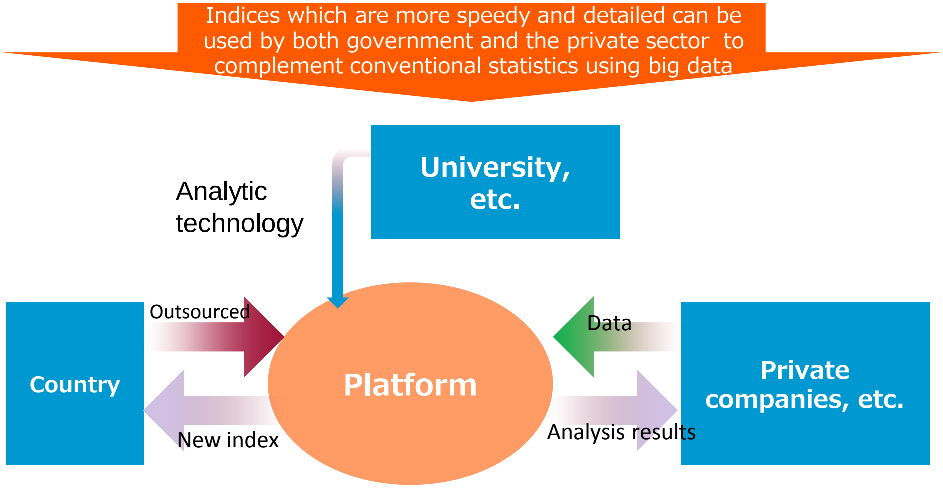
- The economic climate is changing at a rapid speed as a result of the increase in the scope of economic entities due to globalization, IT, etc., and the increasing speed of decision-making and transaction activities.
- In this project, for example, an open platform will be built to use big data such as SNS data provided by private companies to develop new economic indicators which will dramatically improve the speed and detailedness of information and to make future forecasts.
- With the platform, aim to provide information of high added-value to users by giving consideration to protecting corporate and individual information, and ?gathering data and its users.

2. Image of Project

[Present Situation]
In order to determine the macro/micro economical situation, economy, and correlation, etc., summaries using conventional appropriate attributes (by industry, by region, etc.) , statistics requiring a certain period of time to disclosure, and quantitative hearing information from companies, etc. are no longer sufficient.

Issues

・Still not able to provide and use sophisticated information in terms of speed and details compared to previous statistics using big data



Indices which are more speedy and detailed can be used by both government and the private sector to complement conventional statistics using big data

University, etc.

Analytic technology

Country

Outsourced

New index

Platform

Data

Analysis results

Private companies, etc.

⑥ Health Promotion Model Business Using Life Data Analysis (Commissioned)

1. Project Objectives and Outline

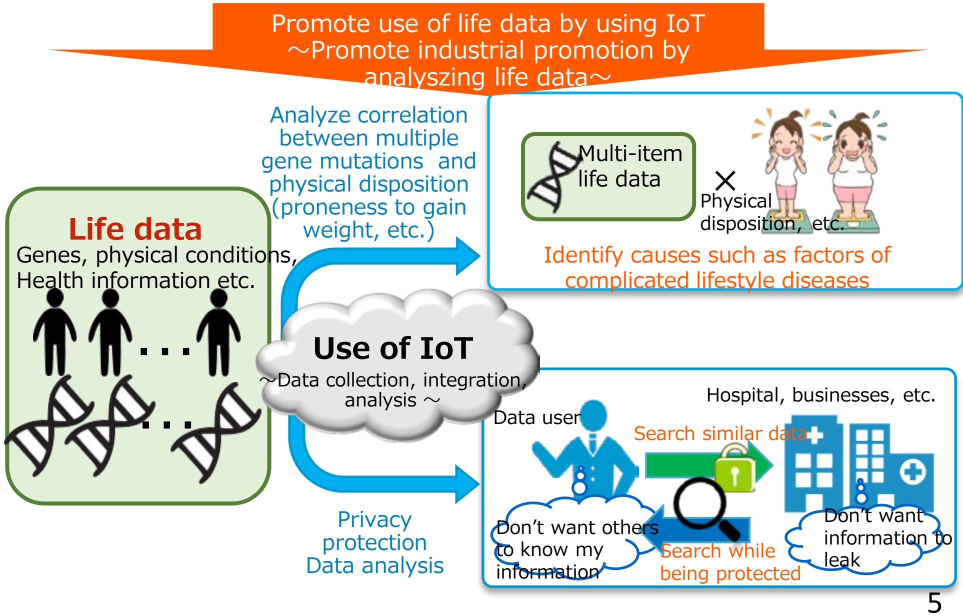
- Presently, the accumulation of complete genome sequence information is being carried out at low costs with the progress of sequencers (DNA decoder). The digitalization of the results of health checkups and detailed medical examinations is also progressing. These life data is expected to increase rapidly in the future.
- Promote the effective use of life data by developing methods of analyzing life data for lifestyle diseases due to complicated causes, and methods for analyzing life data while using them effectively.

2. Image of Project

[Present Situation]
Life data consisting of various information such as genes, physical disposition, health information is gradually accumulating with the progress of equipment and digitalization of diagnosis information. Compared to general big data, analysis is difficult due to the many items involved. There is also a need to use the information effectively in terms of protecting privacy, etc.

Issues

・It is difficult to determine all factors such as lifestyle-related diseases, physical predisposition, etc. from life data by restricting calculation resources such as time and cost performance.
・From the viewpoint of protecting privacy, observing laws, there is a limit to the sharing of life data.



Promote use of life data by using IoT
～Promote industrial promotion by analyszing life data～

Life data
Genes, physical conditions, Health information etc.

Analyze correlation between multiple gene mutations and physical disposition (proneness to gain weight, etc.)

Multi-item life data × Physical disposition, etc.

Identify causes such as factors of complicated lifestyle diseases

Use of IoT
～Data collection, integration, analysis～

Privacy protection Data analysis

Hospital, businesses, etc.

Data user

Search similar data

Don't want others to know my information

Search while being protected

Don't want information to leak

⑦ Health Information Infrastructure Establishment and Usage Promotion Project (Commissioned)

1．Project Objectives and Outline

- It is important to provide health services according to the health risks of individuals in order to realize effective/efficient health investments.
- This project will collect reception information, health information, health information accumulated by individuals in wearable terminals, etc., construct infrastructures for integrated analysis, demonstrate methods of acquiring information on changes in individual behavior, and consent to use individual information.
- Promote the effective use of medical care and health information, promote the people's health, create and foster the healthcare industry.

2．Image of Project

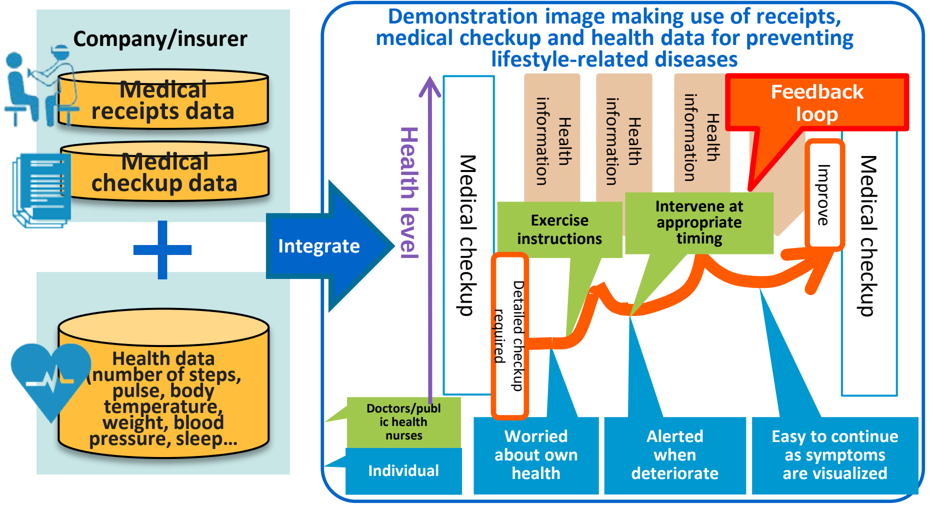
[Present Situation]

While medical receipt information, specific medical checkup information, etc. have been used, daily health information has not been used enough.

Issues

・Effective approach at appropriate timing is not sufficient.
・Even though efforts are made to improve daily life according to the instructions of doctors and public health nurses, daily effects are not visible.
・Standard formats and accuracy, etc. are inconsistent in health information.

By visualizing the improvements made in daily life and effects, intervention at appropriate timings will be possible, leading to the improvement of health more easily


Company/insurer
Medical receipts data
Medical checkup data
+
Health data (number of steps, pulse, body temperature, weight, blood pressure, sleep...
Integrate
Demonstration image making use of receipts, medical checkup and health data for preventing lifestyle-related diseases
Health level
Medical checkup
Health information
Health information
Health information
Feedback loop
Improve
Medical checkup
Exercise instructions
Intervene at appropriate timing
Detailed checkup required
Doctors/public health nurses
Individual
Worried about own health
Alerted when deteriorate
Easy to continue as symptoms are visualized

⑧ Drone IoT Demonstration Project (Commissioned)

1．Project Objectives and Outline

- This project aims to realize efficient and safe automatic piloting and distribution using the quasi zenith satellite system "Michibiki", a high precision measurement satellite system, focusing on distribution using drones, which is an area in which business can be created from an early stage, and transportation over comparatively long distances between the head office and a remote area, and will carry out demonstration tests, surveys, and research.

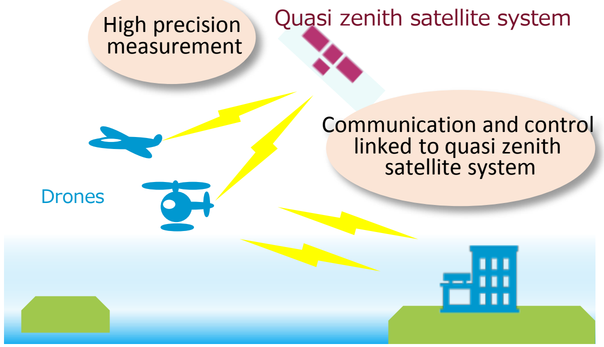
2．Image of Project

[Present Situation]

Trials of distribution using automatically piloted drones have just started including those by private companies. However safety of automatic flights including the cases of emergency is one of the major issues.

Issue Realize safe automatic piloting of drones

Linkage with high precision measurement information from quasi xenith satellite system "Michibiki"


High precision measurement
Quasi zenith satellite system
Communication and control linked to quasi zenith satellite system
Drones

[Project details]
(1) Link to quasi zenith satellite system, and carry out demonstration of safe automatic piloting
(Illustrated in left drawing)

(2) Pick up business needs, required security, safety measures, and summarize tasks and measures to commercialize the system

※Currently accepting applications from the public（Jan. 27-Feb. 25）
http://www.meti.go.jp/information/publicoffer/kobo/k160127003.html

⑨ IoT-Based Service Demonstration Project (Commissioned)

1． Project Objectives and Outline

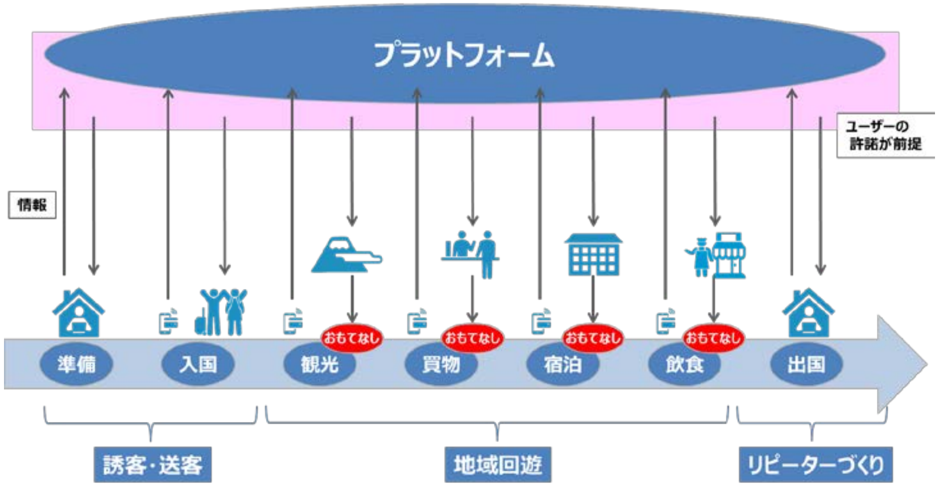
- With the tendency for the worldwide increase in overseas travelers, there is a need not only to dissolve the dissatisfactions faced by travelers to advanced nations but to establish the better accommodations environment for visitors to enhance their satisfaction.
- This project will construct and demonstrate a linking system which allows various businesses to participate and provide high quality services, by sharing and linking their stay information to enhance services and payment environment related to transportation, accommodations, and dining for overseas visitors to Japan, and by providing information on automatic check-in at hotels, individual interests, etc.

2． Image of Project

[Present Situation]
With the rapid increase in overseas visitors to Japan, various businesses are seen to launch services for overseas visitors to Japan. The issue is how to gather sufficient information and provide services based on it.

Issues
・Foreign visitors to Japan are not seeking services for residents.
・Presently, attribute/behavioral information, etc. of foreign visitors is not available.
・There exists no mechanisms for various businesses to collaborate with each other.

[Project]
Build a platform allowing various businesses to collaborate together, and establish an environment where Japan can compete with other tourism nations in acquiring customers.



⑩ Smart Mobility System Research & Development and Demonstration Project (Commissioned)

1． Project Objectives and Outline

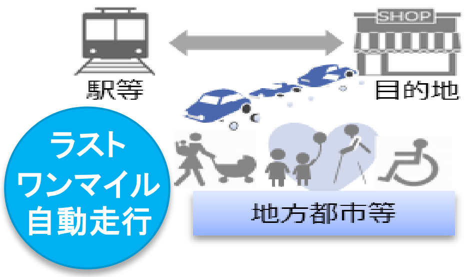
- There are technologies which require collaboration between industry, academia, and government, and tasks related to the business environment in order to socially implement advanced automatic driving functions.
- Based on aspects such as safety, social receptivity and economic viability, and international trends, etc., this project promotes research and development of innovative sensors, etc., and conduct demonstrations of technologies and systems for introducing advanced automatic driving systems in society.

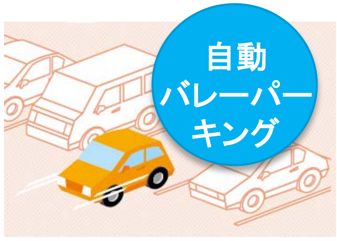
2． Image of Project

[Research & Development (Example)]
(1) Development of innovative on-vehicle sensors
Develop innovative on-vehicle sensors which enables identification of faraway pedestrians and structures even in poor weather conditions, etc.

(2) Development of technology to construct database on driver behavior
Develop a standard mechanism for efficiently accumulating large amount of driver behavior data, and evaluate the suitability of the trial database constructed using this mechanism.

[Demonstration project (Example)]
Last one mile automatic cruising, automatic valet parking, platooning, etc.





Reference Material 2

IoT Acceleration Lab
1st Selection Meeting for Innovative IoT Projects
IoT Lab Selection

List of Supported Projects

- Contents -

①**【Grand Prize】** **Liquid. Inc.** [Personal authentication of tourists to Japan using fingerprint (For settling payments, personal identification)] 2

②**【Second Prize】** **aba** [Excretion detection seat Lifi for reducing nursing burden] 3

③**【Second Prize】** **Routrek Networks, Inc.** [Agriculture system which optimally controls drop culture water and fertilizers] 4

④**【Special Jury Prize】** **EverySense Japan, Inc.** [Creating business out of Japanese-born data exchanges in Japan and U.S.] 5

⑤**OMRON Corporation** [Constructing transaction business in which sensor data circulates at real time] 6

⑥**ZEROBILLBANK LTD** [Using the Blockchain to convert ideas and actions of individuals to visible value (coins)] 7

⑦**Hottolink, Inc.** [Global player of Japan-born SNS big data] 8

⑧**Strobo Inc.** [Smartchair for visualizing physical conditions using pressure sensors] 9

⑨**BSIZE Inc.** [Realizing new communication businesses for IoT] 10

⑩**Aflo** [Enhancement of work efficiency of taxis using smartphones] 11

⑪**Graduate School of Information Science and Technology, Hokkaido University** [Realizing individual medical services making use of health data] 12

⑫**Cerevo Inc.** [Realizing inexpensive home security service] 13

⑬**SONY Corporation** [Development/commercialization of display devices suitable for IoT age] 14

⑭**Social Impact Research Co., Ltd.** [Automatic system providing asset management advice balancing profits and social nature which anyone can use] 15

⑮**Wireless Power Transfer Consortium for Practical Application (WiPoT)** [Demonstration of practicality of long-distance microwave wireless power transmission system] 16

⑯**Acadia Systems Inc.** [Individual exercise program according to physical condition] 17

Liquid, Inc.

Grand Prize

- Personal authentication of tourists to Japan using fingerprint. (For settling payments, personal identification)

Outline of project

Development of biometric authentication system capable of personal identification just from fingerprints.*
By categorizing fingerprints using artificial intelligence according to characteristics, the system is able to realize 1 million authentications in just 0.05 seconds. Currently, this takes about several hundred seconds. Authentication using two fingers reduces the risks of mis-authentication by 1/1 trillion.
Already, a system (Liquid Pay) capable of **settling payments using only fingerprints** (no credit card needed) has been commercialized, and currently **use of ATMS using fingerprints only (no card needed)** is being verified jointly with AEON Bank.
In this project, the company carries out verifications of personal identification and payment settlement, etc. using fingerprints only at hotels and shops (no passport and credit cards needed) for tourists to Japan by working together with leading hotels, etc. This is expected to eliminate queues to check in at hotels, queues at store cashiers and duty free counters, and enhance the stay and comfort of tourists to Japan.

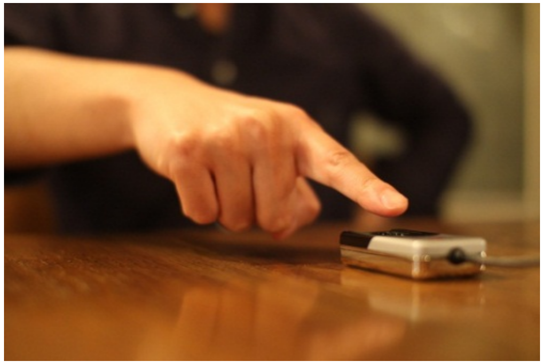
*The existing fingerprint authentication method is combined with credit cards, etc. to check identification by checking if it matches the fingerprint linked to the concerned card (check 1:1). On the other hand, when trying to find matching fingerprints from the database without any credit card, etc., as it will be necessary to perform 1 versus many comparisons in a short time the difficulty becomes very high.

Outline of required support

- Relaxation of Hotel Business Law regulations (need to keep copy of passport) etc.
- Financial support (public support for technical development, etc.)

Future vision

Apply to biometric authentication of various parts such as vein, iris, face, whole body etc. to realize shopping without the need to pay at the cashier or personal identification just by passing through an entrance gate.



aba

Second prize

- Excretion detection seat Lifi for reducing nursing burden

Outline of project

Develop a **system which is able to detect the excretion of nursed persons from odor components and notify caregivers jointly with leading nursing equipment manufacturer**. Realizes detection that is also based on facility environment and individual differences **by learning odor components and excretion patterns**. It may also realize changing diapers at appropriate timings, and helping nursed persons to the toilet beforehand from their excretion patterns.

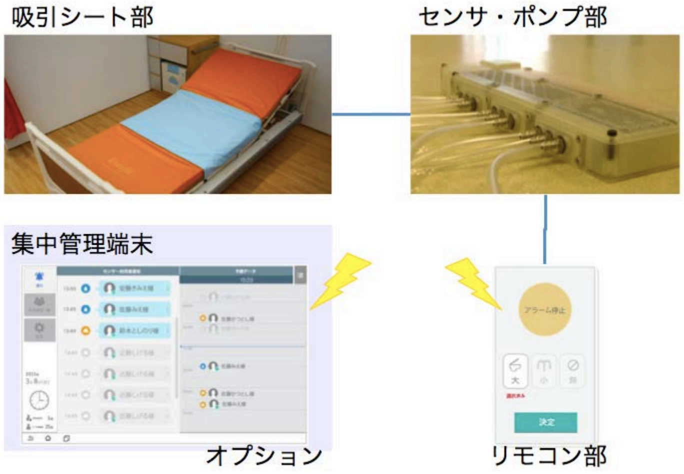
To date, excretion detection has been automated on this system by checking diapers during regular diaper change, and this has realized both **reduced burden of caregivers (about 20% of diaper changes** are usually redundant**, need to change even the bedsheets if too much time has passed since excretion, etc.) as well as improved quality of life of nursed persons (bedsores due to sweating, risks of infections, etc.)**

Outline of required support

- Financial support (funding, etc.)
- Dispatch of advisors (support related to securing IT personnel, etc.)

Future vision

Reduce the burden of toilet nursing which makes up 20% of worktime and which is a “tough work” to more than 80% of staff. It may help reduce on site burden in the aging society.



Routrek Networks, Inc.

Second Prize

- Agriculture system which optimally controls drop culture water and fertilizers

Outline of project

While **drip irrigation*** is spreading around the world, **a system which can optimally control water and fertilizer supply** was jointly developed with Meiji University through industry-academia collaboration. The system is being installed for 12 vegetables such as cucumber and tomato in house cultivation. This has increased harvest by 25 to 30% on average, and realized investments return in one year. It also reduces watering and fertilizer supply working time by 90%.
In this project, the knowhow accumulated for house cultivation which the company has extensive experience in, is applied to expand the use of the system to outdoor cultivation which has a larger market scale. Demonstration tests of house cultivation have already been started in Vietnam, etc. The company has also tied up with Netafim, the largest supplier of agricultural materials for drop cultivation aiming at **global expansion**.

* Cultivation method which minimizes the consumption of water, etc. by supplying water and fertilizers only to around the root of plants. Although this method has not yet spread in Japan, it’s use is expanding around the world, especially in regions with serious water shortage due to desertification.

Outline of required support

- Finding (Public support for technological development, etc.)
- Dispatch advisors (Networking support for increasing sales channels, advise on verification projects with municipals)

Future vision

By building an all-weather type algorithm which can be applied globally, enable acquisition of a global market with market scale that is 200 times larger than Japan.
Intuition and experience will no longer be required, resulting in the increase in new farmers and increased food self-sufficiency rate.

IoTx農業でJapan as Number 1 を!!
Grow with IoT

EverySense Japan, Inc.

Special Jury Prize

- Creating business out of Japanese-born data exchanges in Japan and U.S.-

Outline of project

Regarding the big data and individual data of companies, aim to commercialize mediator systems which help establish transactions by pre-registering the data provision scope and policies, and linking the data automatically to the companies wanting to use the data.

The companies registering their data are able to register various data easily. They can select whether data is to be charged, how individual information is to be handled, etc. If data is to be charged, there is a unique system which provides points. Users only need to provide conditions for the required information, and for example, they will be able to obtain anonymous big data.

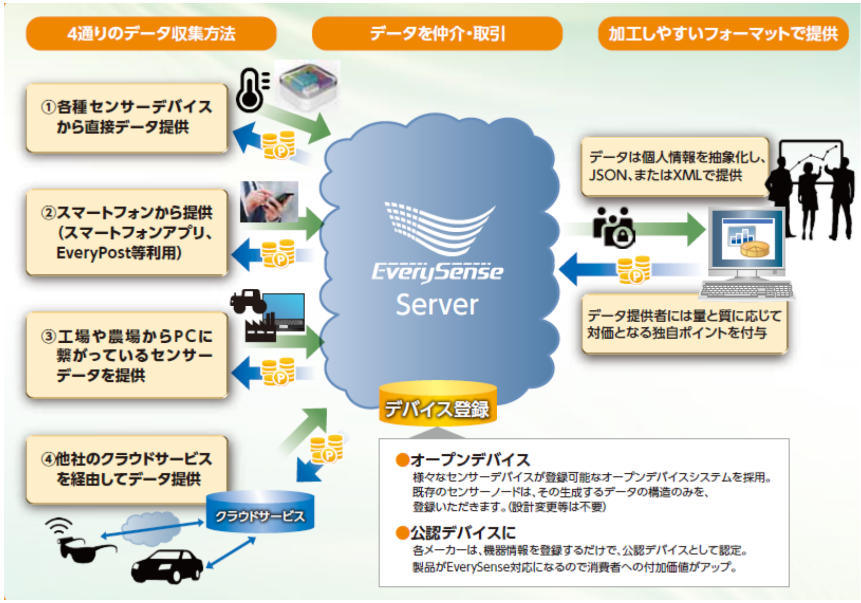
※For example, it will be possible to use existing data such as automobile driving information, route search, weather , etc. as well as which had not been provided as the so-called “big data” such as printer use state of companies, air-conditioning facilities, etc. This is expected to lead to the construction of various new businesses.

Outline of required support

- Dispatch advisors (support for business ties-ups of vendors of home appliances and devices, priority procurement by administration, cooperation in demonstration of usefulness in the community (people, goods, money, place)
- Financial support (Funding, etc.)
- Establish various environment systems required for data transaction

Future vision

Shift from data enclosure models to economic distribution social models in which companies can share big data in an open manner to create new businesses.


4通りのデータ収集方法
データを仲介・取引
加工しやすいフォーマットで提供
①各種センサーデバイスから直接データ提供
②スマートフォンから提供（スマートフォンアプリ、EveryPost等利用）
③工場や農場からPCに繋がっているセンサーデータを提供
④他社のクラウドサービスを経由してデータ提供
クラウドサービス
EverySense Server
デバイス登録
データは個人情報を抽象化し、JSON、またはXMLで提供
データ提供者には量と質に応じて対価となる独自ポイントを付与

●オープンデバイス
様々なセンサーデバイスが登録可能なオープンデバイスシステムを採用。
既存のセンサーノードは、その生成するデータの構造のみを、
登録いただきます。(設計変更等は不要)

●公認デバイスに
各メーカーは、機器情報を登録するだけで、公認デバイスとして認定。
製品がEverySense対応になるので消費者への付加価値がアップ。

OMRON Corporation

- Constructing transaction business in which sensor data circulates at real time

Outline of project

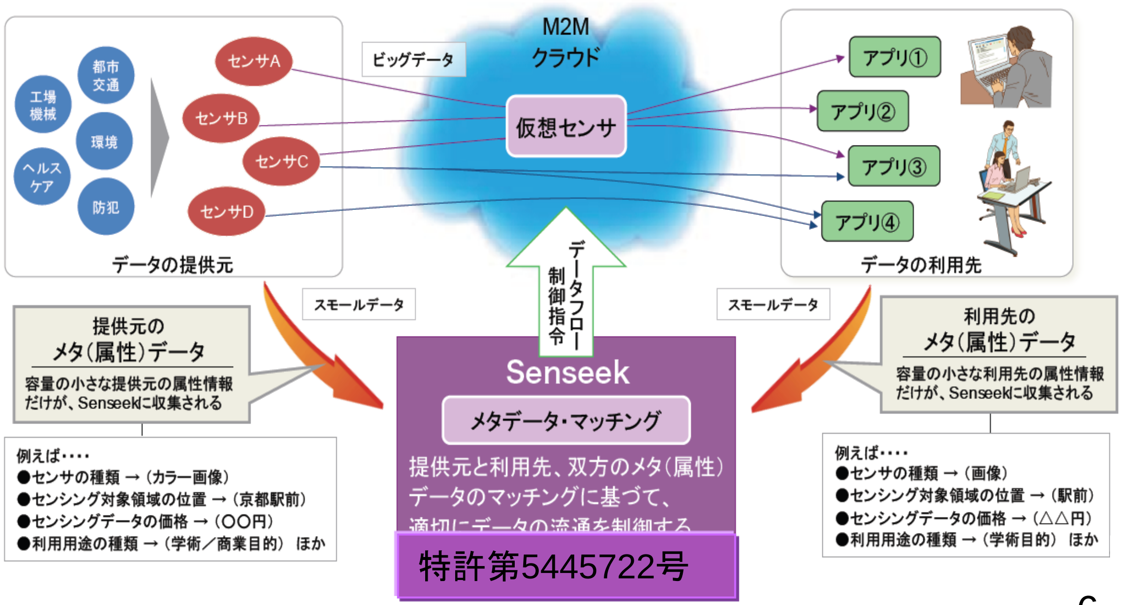
By **registering** attributes and transaction conditions, etc. **systemized by standardized meanings and description formats for** sensing data for which there exists various equipment and which have different nature, **automatically match attributes and transaction conditions, etc.**, to automatically establish transaction contracts between those using sensing data and those providing the data, **aim to construct a system which can distribute sensing data at real time.** In this project, the standardization of attributes and transaction conditions, etc. required for realizing this system and the rules related to the distribution of sensing data will be reviewed.

Outline of required support

・Dispatch advisors and support the establishment of rules (i.e. obtaining international standardizations)

Future vision

Shift from data enclosure models which are currently mainly used to new socioeconomic models which can analyze various big data instantaneously by “combining” data in applications automatically in units of sensors.


M2M
クラウド
ビッグデータ
仮想センサ
都市
交通
工場
機械
環境
ヘルス
ケア
防犯
センサA
センサB
センサC
センサD
データの提供元
アプリ①
アプリ②
アプリ③
アプリ④
データの利用先
スモールデータ
スモールデータ
データフロー
制御指令
Senseek
メタデータ・マッチング
特許第5445722号

提供元の
メタ(属性)データ

容量の小さな提供元の属性情報だけが、Senseekに収集される

例えば・・・・
●センサの種類 → （カラー画像）
●センシング対象領域の位置 → （京都駅前）
●センシングデータの価格 → （〇〇円）
●利用用途の種類 → （学術／商業目的） ほか

提供元と利用先、双方のメタ(属性)データのマッチングに基づて、適切にデータの流通を制御する

利用先の
メタ(属性)データ

容量の小さな利用先の属性情報だけが、Senseekに収集される

例えば・・・・
●センサの種類 → （画像）
●センシング対象領域の位置 → （駅前）
●センシングデータの価格 → （△△円）
●利用用途の種類 → （学術目的） ほか

ZEROBILLBANK LTD

- Using Blockchain to convert ideas and actions of individuals to visible value (coins)

Outline of project

Using the Blockchain technology (Note), **the platform and mobile wallet for issuing points (coins) which are inexpensive, speedy, has low risks of forgery, and can be exchanged with other points**, are provided.

For example, count specific actions at concerts, events, etc. and give away points.
By giving bonuses to frequent users, points will gain value amongst users.

By using the Blockchain to not only manage this at low prices, but also enable conversion with other points, aim at “establishing a market” for the exchange of values among users.

(Note)Technology which supports virtual currencies which as bit coins, etc. Illegal processing can be prevented at low costs without third parties to authenticate transactions.

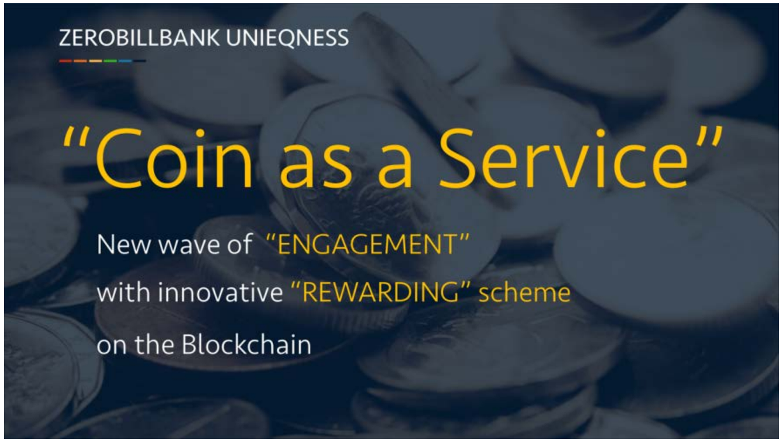
Outline of required support

- Financial support (Funding, etc.)
- Dispatch advisors (Support networking in Japanese market)

Future vision

Blockchain technology is an area where new services are born one after another, and it is drawing interest from around the world. Services related to finance, registration certificates, contract management, voting, etc. can be looked forward to.

This project serves as the first step to “virtualization of wallets” which will enable various values to be exchanged together with paper money (users can settle payment without worrying about what values are being exchanged).



ZEROBILLBANK UNIEQNESS

“Coin as a Service”

New wave of “ENGAGEMENT”
with innovative “REWARDING” scheme
on the Blockchain

Hottolink, Inc.

- Global player of Japan-born SNS big data

Outline of project

Hottolink sells SNS data and bulletin board data such as tweeting information in Japan and China, as well as provides services such as assessment and analysis of products based on this information, measurement of effects of advertisements, etc.

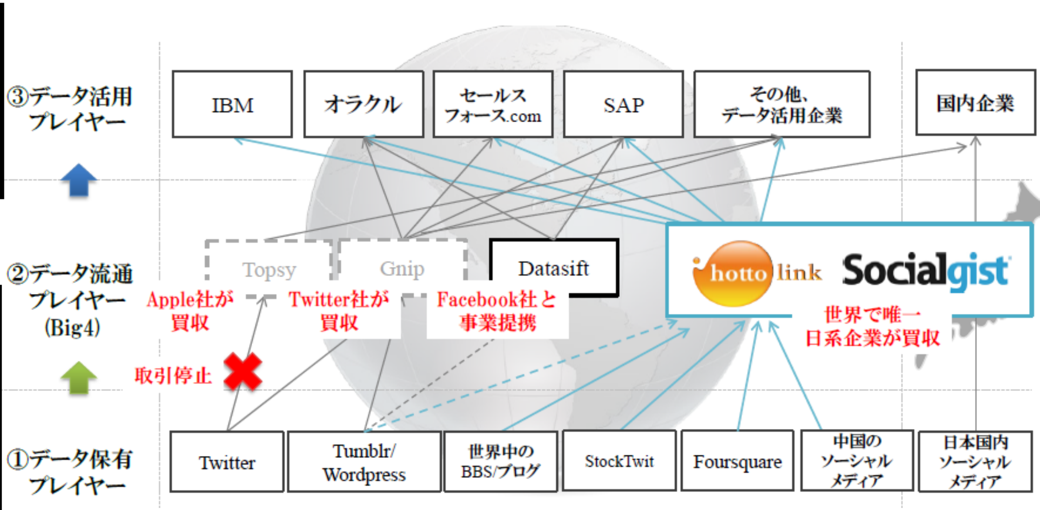
Furthermore, Hottolink also provides inbound information service in which we analyze the actions and behavior of Chinese tourists based on this data to determine what needs to be done for tourists to use and appreciate products and services according to the attributes of tourists and visited region, as well as make precise predictions. In this project, Hottolink aims to buy over other data wholesalers and expand the market **to South-East Asia,** etc., and **establish its position as a global SNS big data wholesaler**.

Outline of required support

・Financial support (Funding, etc.)
（For the M&A, etc. of companies having the SNS data of foreign countries）

Future vision

In the area of SNS big data which continues to lead with the number of business start-ups, Hottolink is the only global player in Japan. Hottolink may also become the leader of inbound information service in the Asian market.


③データ活用
プレイヤー
IBM
オラクル
セールス
フォース.com
SAP
その他、
データ活用企業
国内企業
②データ流通
プレイヤー
(Big4)
Topsy
Gnip
Datasift
hotto link
Socialgist
Apple社が
買収
Twitter社が
買収
Facebook社と
事業提携
世界で唯一
日系企業が買収
取引停止
①データ保有
プレイヤー
Twitter
Tumblr/
Wordpress
世界中の
BBS/ブログ
StockTwit
Foursquare
中国の
ソーシャル
メディア
日本国内
ソーシャル
メディア

Strobo Inc.

- Smartchair for visualizing physical conditions using pressure sensors

Outline of project

Aiming at the IoT of existing industries, develop various sensing equipment jointly with manufacturers to visualize physical conditions. The chair applied to this IoT supported project this time enables to monitor **how a person sits by using the pressure sensors attached to the chair**. Examples of using the chair at the office include attendance management, visualization of congestion in common areas such as toilets and dining rooms, analysis of impact on back pain according to sitting position, etc.

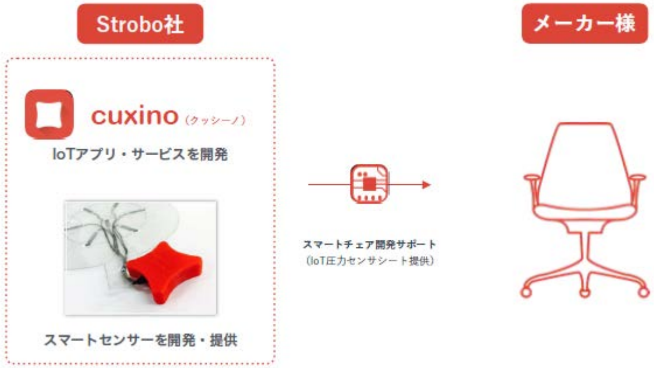
Outline of required support

- Financial support (Funding, etc.)
- Dispatch advisors (Support the planning of technology and market strategies)

Future vision

By attaching sensors to the bed, shoes, etc., individual physical conditions can be monitored. This may lead to businesses providing medical care, health, and insurance services according to individual physical conditions, nursing and sitting services, etc. in the future, as well as use for preventing economy class syndrome on flights.

Realtime Preview
Office


Strobo社
メーカー様
cuxino（クッシーノ）
IoTアプリ・サービスを開発
スマートセンサーを開発・提供
スマートチェア開発サポート
（IoT圧力センサシート提供）

BSIZE Inc.

- Realizing new communication businesses for IoT

Outline of project

Focusing on the fact that only a small amount of data is required for the sensing data used for IoT such as temperature, humidity, consumption amount remainder, location, etc., BSIZE has developed a communication equipment which enables use **of “Sub-GHz band*”, which differs from the communication networks of mobile phones and Wi-Fi, etc. for longer distances.** Using building rooftops as the base station (base), sensing data from terminals are uploaded to cloud via the rooftop base station. By constructing an information network like a bucket relay between the terminals, **low cost, energy-saving, small information volume broad-range information network can be realized.** Already, BSIZE has tied up with some beverage manufacturers and municipals to conduct demonstration tests of inventory management services, monitoring services to locate whereabouts using GPS communication terminals attached to the shoes of children and elderly persons.

*920MHz frequency band which became available in 2012 for use, Characteristics include: (1)No license needed, (2)Long communication distance, (3)Interference does not occur easily, (4)superior conveyance.

Outline of required support

・Financial support (Funding, etc.)
・Dispatch advisors (Support for capital policies, tie-up with related ministries, laws and regulations, etc.)

Future vision

Realize nation-wide network infrastructure used for various IoT businesses such as determining the whereabouts of pets and mobile assets, to garbage collection, river management, agriculture, security, and healthcare.

Aflo

- Enhancement of work efficiency of taxis using smartphones

Outline of project

Develop application mounting taxi meter functions to smartphone.

Application connected to the car for enhancing driving and work efficiency by not only acquiring information on driving distance and calculating taxi fares, but also automating daily reporting work normally done by hand (taxi usage information, and immediate tracking of the service status of taxis (place, whether customer on board, etc.). These sophisticated functions can be realized at much lower costs than building a special device.

Aim to change to a business model which can cost initial costs for implementation and obtain continuous profits with incoming usage costs of the application such as operations management service which can be added to meter functions. Meter networking enables electronic settlement and linkage, electronic changes such as payment plan, consumption tax revision, etc., realizing fast and accurate response at low costs.

Outline of required support

・Financial support (Funding, etc.)
・Verification of compliance with technical standards prescribed in the Measurement Act. (Verification of electronic sealing method with the networking of meters, security measures, etc.

Future vision

This application will not only contribute to enhancing the work efficiency of taxi operations, but it is also expected to create various taxi services such as big data analysis of taxi service data possessed by each taxi companies in a cross-functional manner with the taxi meter as the starting point.
*For example, just by searching the route from Osaka to Tokyo Tower using the application, the application will also show train information, the route by taxi from the nearest train station (Shinagawa Station) to Tokyo Tower, the accurate time of arrival. Pickup service based on the time of arrival at the nearest station will also be possible.

Graduate School of Information Science and Technology, Hokkaido University

- Realizing individual medical services making use of health data

Outline of project

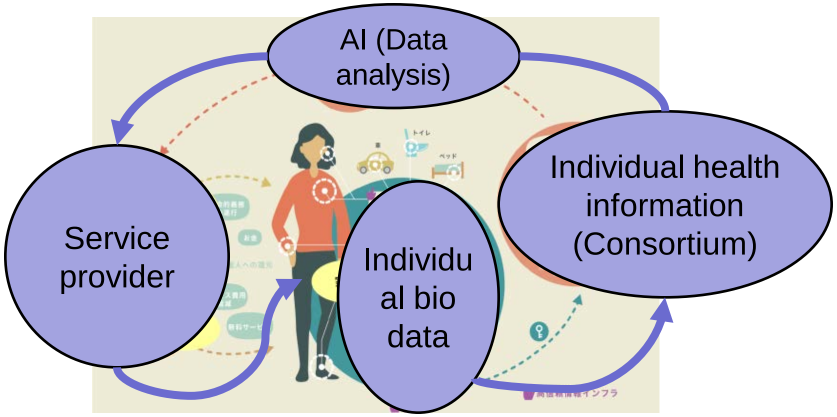
Individual bio data (constant measurement of pulse, blood pressure) acquired using a wearable sensor, **analyze data related to history of illness, treatment method, administered drugs, etc.**, and aim to **discover unknown correlations between these.**

In addition, **realize order-made health support and preventive medicine diagnosis** based on individual data.

Install new business consortium from upstream to downstream centering around Hokkaido University, and construct an individual health information system. Also construct the infrastructure for a framework for allowing many businesses to participate.

Outline of required support

- Financial support (Funding, etc.)
- As it is not clear to what extent advise can be provided for health support and preventive diagnosis in non-medical fields, hope to clear grey zones in this area.



Future vision

- Control provided data by oneself, and create new services in the consortium.
- If businesses can customize analyzed data for services for individuals, the establishment of new markets for calculating appropriate insurance fees, etc. can be anticipated.
- The provision of advice based on data can contribute to the early discovery of pre-symptomatic states and reduction of labor in the medical scene.

Cerevo Inc.

- Realizing inexpensive home security service～

Outline of project

Present home security services mainly costs about 300,000 yen in initial fees and monthly fees of about 5,000 yen using mechanical security. It is difficult to install them in rented houses.

In this project, a simple home security system which can detect the opening/closing of doors and alert users will be constructed. By eliminating the emergency personnel dispatch service, **inexpensive home security can be realized with** fee as low as several thousand yen per year. This system **can also be installed in rented homes**.

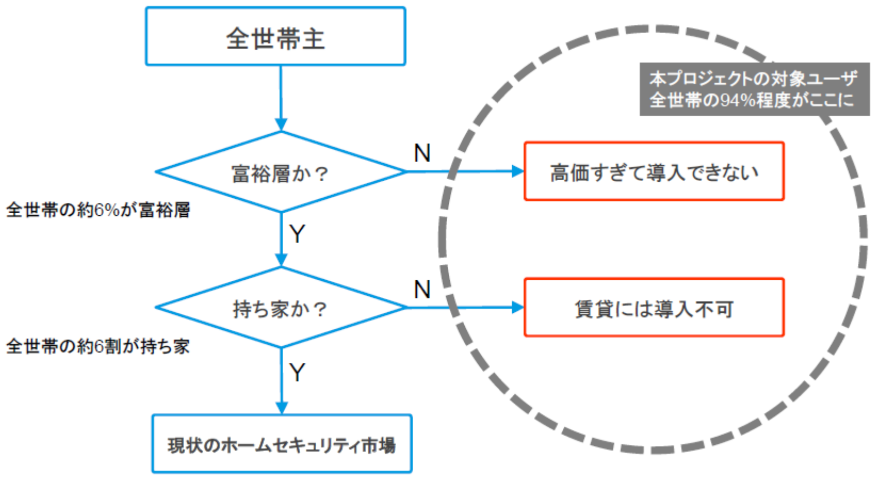
Deregulation in Japan is required to enable **global expansion of the system in Japan, U.S., and Europe** while keeping prices low.

Outline of required support

- Support related to application and approval of Radio Law by enabling use of 433MHz.

Future vision

Also realize partial crime prevention in alliances with home sharing service, etc. (prohibition of entering particular room).


全世帯主
本プロジェクトの対象ユーザ
全世帯の94%程度がここに
富裕層か？
N
高価すぎて導入できない
全世帯の約6%が富裕層
Y
持ち家か？
N
賃貸には導入不可
全世帯の約6割が持ち家
Y
現状のホームセキュリティ市場

SONY Corporation

- Development/commercialization of display devices suitable for IoT age

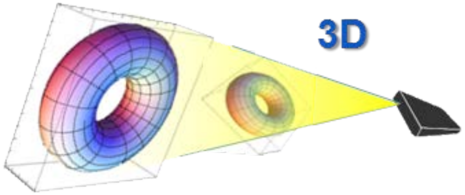
Outline of project

Aim to commercialize **laser type display devices which do not require focusing** (focus free) and considered to be an effective display device for the IoT community, and promote its spread in he IoT ege.

Outline of required support

Partial revision of ordinances related to Consumer Product Safety Act
(Applied JIS standard)

Focus free



Future vision

Images can be displayed clearly on anything from roads, walls, to tables, etc., and its application for various purposes as a display device suitable for the IoT community is anticipated.

Social Impact Research Co., Ltd.

- Automatic system providing asset management advice balancing profits and social nature which anyone can use

Outline of project

Develop algorithms for asset management advice which takes into account not only profits but also social nature such as social contributions and environment considerations by applying artificial intelligence, and **provide these at lost prices.**

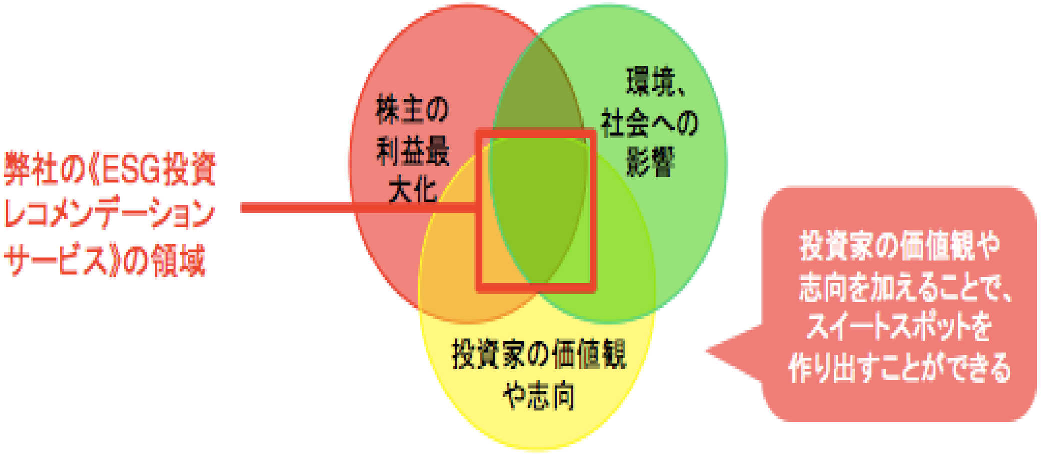
In making investments (purchase of stocks), will reflect preferences of investors (required social nature, existing investments, degree of risk, etc.), draw up balanced asset management proposals, and provide automatic advise.

Outline of required support

- Financial support (Funding, etc.)
- Dispatch of advisors (provide support for marketing (target setting), review of additional functions, evaluation/hearing from trial β version users)

Future vision

Custom-made asset management advice reflecting the preference of various investors will be available, accelerating the flow of investments taking into account social nature.


弊社の《ESG投資レコメンデーションサービス》の領域
株主の利益最大化
環境、社会への影響
投資家の価値観や志向
投資家の価値観や志向を加えることで、スイートスポットを作り出すことができる

Wireless Power Transfer Consortium for Practical Applications (WiPoT)

- Demonstration of practicality of long-distance microwave wireless power transmission system

Outline of project

Member companies and research organizations of WiPoT are currently planning the **demonstration of wireless power transmission system** using the microwave power transmission system currently being developed by the member companies of the consortium. The system can charge wirelessly by just placing on the table. There is no need to connect to smartphones and tablets. It can wirelessly charge running electric vehicles and robots and drones working in places which cannot be approached by people such as disaster sites.

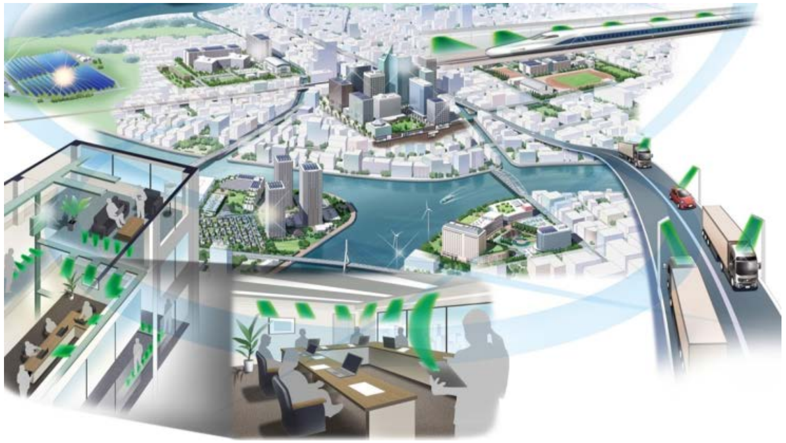
In the long run, demonstrations of the system may be carried out in remote islands and mountainous areas.

Outline of required support

May require deregulation of the Radio Law (Assignment of frequency band, etc.)

Future vision

It may be possible to use everything running on power without the need to charge them using cables.



Acadia Systems Inc.

- Individual exercise program according to physical condition

Outline of project

Develop **a system which analyzes the individual biological data** (ECG, pulse, body temperature, blood pressure, exercise amount, etc.) obtained from wearable terminals so that patients with heart diseases, people at risk of these diseases, elderly persons, etc. can carry out rehabilitation and exercise continuously, and provides **the best exercise program to each individual** which can be enjoyed like a game. By collecting and analyzing numerous cases as big data under the supervision of specialists, more effective services can be realized. Aiming to expand the system to over 36000 medical organizations all over the country, leading companies, facilities for elderly persons, municipals, etc.

Outline of required support

Financial support (Public supports for technology development, etc.)

Future vision

Realize return to society after recovering from illness, prevention of illness, and promotion of health of elderly persons, targeting over 40 million people all over the country.

さあ、始めましょう！
腰の運動
脚を開いてゆっくりと
身体を右に傾けましょう