

SEKISUI HOUSE, LTD.

Making the house a platform for happiness Presenting the "Platform House Concept" at CES2019

Our first step: A house that makes health especially for acute diseases Accelerating research with plans to launch the services in Spring 2020

Sekisui House exhibited our new project, the "Platform House Concept," at CES 2019, the world's largest consumer electronics show, held in Las Vegas, Nevada. The Platform House aims to turn the house into a platform for happiness. We at Sekisui House believe we can utilize the home as a base to expand our business by creating new services that assist the resident's lifestyle.

- Presentation on "a house that makes health"
- Aims to improve outcomes for acute diseases
- Following successful testing, launch of Platform House services in Japan planned for spring 2020

The Platform House Concept aims to dramatically change the industry model of housing. The services are planned to start in line with the 60th anniversary of Sekisui House's founding in Spring 2020. At Sekisui House, we believe that the house should be a platform for happiness in the so-called 100-year generation in Japan.

PLATFORM HOUSE

The Platform House will use resident data as a base to develop and recommend services for creating intangible assets such as health,

connections and learning, while also being a sturdy and adaptive residence. In line with our vision to "make home the happiest place in the world" the Platform House will assist the happiness of the 100-year generation.

The first step in our efforts is health. By dividing health into 3 groups; emergency response, health monitoring over time, and preventive care; we can provide a new value to the residents. At CES2019, we presented our efforts towards emergency response. If the house can detect the onset of certain conditions, social cost can be reduced and quality of life can be improved.

To realize the Platform House Concept, we have made wide alliances with specialized high-end companies for open innovation to develop and provide services. Our efforts towards health will be continued together with AIST / Hitachi / Faculty of Science and Technology, Keio University / Keio University Hospital / KONICA MINOLTA / NEC / NTT COMWARE.

Going forward, we will continue to expand our range of partners and complete various verification tests and clinical trials in line with our plan to launch the services of the Platform House by Spring 2020.



ECO 1 FIRST

Step one: A house that makes health

The first step of our Platform House Concept is our effort for health as a theme. We divided health into 3 groups: emergency response, health monitoring over time, and preventive care, to provide services without causing any stress on the resident. For sudden onset diseases and conditions that threaten our lives, particularly those with a high likelihood of occurring at home (stroke, heart attacks, drowning in the bathtub, falling or fainting), early detection will lead to faster treatment that can have a huge impact on health.



The services of emergency response, health monitoring over time and preventive care will utilize biodata and house environment data

The house can even detect conditions that are usually not visible using sensors and send for emergency help. Furthermore, as a health monitoring over time service, the resident's biodata, such as breaths per minute and heartbeat, are acquired and analyzed to detect signs of sickness. Also as preventive care, by combining biodata and house environment data, and by controlling temperature, humidity and lighting etc. in a room, a comfortable and pleasant lifestyle can be achieved. We will provide various services, while considering privacy and accommodating the resident, through the unique data that can be acquired in the house.

Early detection is the key to protecting our lives

Since the adoption of airbags and technologies to protect drivers, deaths from traffic accidents has gone down greatly, but acute diseases and problems that happen at the house are still abundant.

For example, 290,000 people have strokes every year in Japan*1, and of those cases, 79% occur at home*2. Furthermore, there are currently more than 1 million stroke patients, from all ages and genders*3, and as a country where the 100-year generation is coming quickly, this is a significant social problem. Strokes are a condition where quick treatment is vital. There is already a very effective treatment on the market but, since detection at the house is sometimes slow, a significant number of patients are unable to receive the treatment. On top of that, there are roughly 100,000 heart attack patients every year*4 and of them, 66% suffered onset at home*5. Every year more than 5,000 people drown in the bathtub*6 and more than 3,000 people die from fainting or falling in the home *7.

There is great need for a Platform House that provides early detection for diseases or accidents that happen at home, and the potential effectiveness is also significant. This early detection feature is not limited to detached housing but also will be applicable to apartments, hotels, nursing facilities and more. If society as a whole broadly uses this technology, reductions in social cost and improvements to quality of life can be achieved through this effort.

Emergency response example



Detecting abnormalities in the resident without causing any stress. Comparing collected data with pre-set parameters from everyday life to determine irregularities, then contacting a center with medical staff on standby.





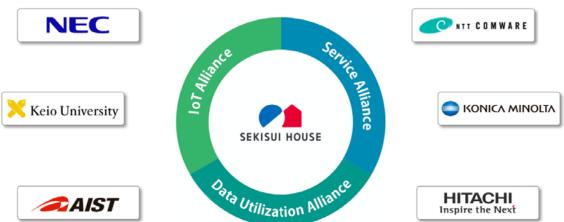
The center has received the notification and checks in with the resident to confirm their safety. If it is determined to be an abnormal situation, the EMT is contacted. The house can be remotely unlocked and the paramedics can enter the house to rescue the resident.

We will continue to research with our partners (as of January 2019)

Technology new to house builders will be needed to realize the Platform House. We have made broad alliances with specialized high-end companies to develop these technologies through open innovation.

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Japan has an aging population, and as a result, a significant number of accidents occur at home. Every year, roughly 15,000 people die because of these accidents. Along with the aging society, the health consciousness of the population is also increasing. In order to realize the idea of a house that will support safety, security and health, it is believed that the most effective tool is wearable types of technology that use radio waves or infrared rays to look after consumers, while also protecting their privacy, without providing discomfort and stress. As a technology to support the health of people, I would be happy to see Sekisui House's Platform House research implemented in society.



Keio University
Faculty of Science and Technology
Professor Tomoaki Ohtsuki

<Road map going forward>

We intend to launch the services of the Platform House in Japan by spring of 2020. First, we plan to begin the services for newly constructed detached housing and, in the future, expand the sales area.

January 2019 Spring 2019 Spring 2020 Planning to begin multiple clinical trials and verification tests at various university hospitals Spring 2020 Spring 2020 Planning to begin multiple clinical trials and verification tests at various university hospitals

- <Footnotes>
- *1 Shiga University of Medical Science: Estimated using the Shiga Stroke Registry of June 6, 2017
- *2 Ministry of Health, Labour and Welfare: Reports on the condition sudden strokes
- *3 Ministry of Health, Labour and Welfare: 2014 Patient Census, mainly life threatening condition patient total
- *4 Japan Heart Foundation: 2nd Media Workshop "Can heart attacks be prevented?" presented by Morimasa Takayama, teacher at Nippon Medical School
- *5 Japanese Circulation Society: [Guidelines for diagnosis and treatment for circulatory diseases (Joint report of 2011) / Primary Guidelines for Ischemic Heart Disease (2015/2/5 revision), @Conditions at onset
- *6 Consumer Affairs Agency: result of analysis of Ministry of Health, Labour and Welfare Abridged Life Tables for Japan 2017
- *7 Ministry of Health, Labour and Welfare: \[\text{Abridged Life Tables/ Deaths and composition by age divided by accident type concerning unforeseen accidents that happen at home (2013)