

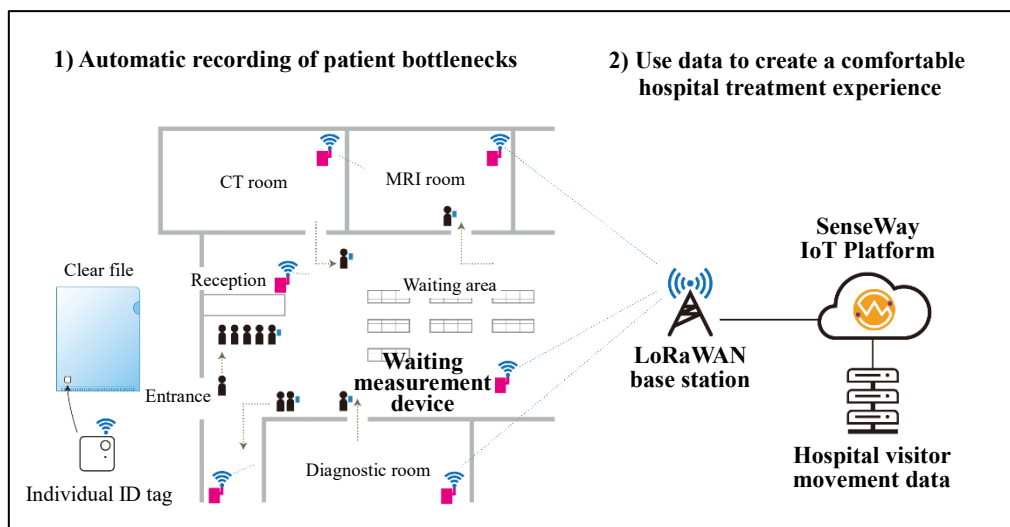
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Mitsui Fudosan Co., Ltd.
SenseWay Inc.

Kashiwanoha IoT Business Co-creation Lab

Kashiwanoha IoT Business Co-creation Lab Starts Trial Tests for Healthcare Project Using IoT Technology to Automatically Visualize Patient Movement Flow and Improve Waiting Times

Tokyo, Japan, June 20, 2019 – Mitsui Fudosan Co., Ltd., a leading global real estate company headquartered in Tokyo, and SenseWay Inc. (Headquarters: Chuo-ku, Tokyo; President Yuzo Jimbo; hereinafter “SenseWay”) started an analysis project for visualizing and quantifying patient movement flow and bottlenecks at the National Cancer Center Hospital East located on Kashiwa-no-ha Campus in Chiba Prefecture. The project started in June 2019 as a healthcare working project (hereinafter “the Project”) of Kashiwanoha IoT Business Co-creation Lab (Managing companies: Mitsui Fudosan Co., Ltd. and others), which seeks to spread and utilized the Internet of Things (IoT) in the local area.



■ Project Overview

In this Project, individual ID tags and waiting measurement devices provided by SenseWay are used to ascertain the flow of patient movement within the hospital. The waiting measurement device will automatically register the approach of individual ID tags in its periphery. By using this function and attaching individual ID tags to the consultation files carried by the patients during their hospital visit, multiple waiting measurement devices installed throughout the hospital can be used to automatically record and compile location data of patients in the hospital. By extracting the locations of patient bottlenecks and times from this data, the Project aims to relieve stress caused by issues such as patient waiting times, and to increase the number of patient consultations.

The number of outpatients in Japan is expected to increase going forward as the population ages, while the aging of

the medical professional workforce is also expected to lead to a shortage in healthcare resources. However, building or rebuilding hospitals to improve patient services is difficult with limited resources, and they are called to extend the functions of hospitals by efficiently operating current assets. This sensing technology that uses IoT can be developed for use not only with patients, but also to enable insight into the working status of medical professionals and transportation of specimens, etc. As such, it is expected to provide high efficacy and future potential as an analysis method that can be used in all manner of ways.

■ Background to Implementation

The Project is being led by the healthcare working group of the Kashiwanoha IoT Business Co-creation Lab, which aims to promote the spread and utilization of IoT, and to create IoT-related business opportunities. At the same time, it is also part of Innovation Field KASHIWA-NO-HA, which undertakes trial projects for new products and services private-sector corporations and so forth at the social implementation stage, set in Kashiwa-no-ha Campus.

Mitsui Fudosan and SenseWay are using the LoRaWAN™*1 low-power wide area (LPWA) network, a wireless communication technology for IoT, to create an IoT field-testing environment in the areas alongside the Tsukuba Express railway line, such as Kashiwa-no-ha Campus Station. LoRaWAN™ is a sensor with low power consumption and long-distance communication capability. In this Project, data will be collected at the National Cancer Center Hospital East using LoRaWAN™ and Bluetooth Low Energy (BLE), which are important IoT communication technologies, to create a system with simple, low-cost implementation.

Moreover, this year, Mitsui Fudosan, Kashiwa City, and others are leading the Kashiwa-no-ha Smart City Consortium at Kashiwa-no-ha Campus. The consortium has been selected as a smart city model project of the Ministry of Land, Infrastructure, Transport and Tourism, which is promoting smart city urban development that incorporates new technologies such as AI and IoT as well as public- and private-sector data. The Kashiwa-no-ha Smart City Consortium has created a data platform that links private-sector and public data, and introduced new technologies such as AI and IoT, aiming to create a data-driven smart, compact city centered on the local train station. This Project falls under the “wellness” category of the smart city model project, and the National Cancer Center Hospital East is also a participating institution in the consortium.

Having ascertained the flow of patients through this project, the companies plan to connect the results to urban development utilizing AI and IoT, for example by proposing ways for patients to spend their waiting time in town, and connecting to services such as transportation guides that provide notification of car parks and bus arrival times. In addition, the Project will serve as a model case for development in other cities, and the companies will use it for tackling social issues.

Relevant press release: https://www.mitsufudosan.co.jp/corporate/news/2019/0605_02/

*1 LoRaWAN™ is a global open wireless standard for IoT created by the LoRaAlliance™, a global alliance of more than 500 telecommunication carriers and companies. It is a wireless communication technology (LPWA) for IoT that achieves long distance communication with lower power consumption than conventional telecommunications technology.

■ Overview of organizations and project

○ SenseWay Inc. (Website: <https://www.senseway.net/en/>)

SenseWay provides sensor networks needed for IoT using the LoRaWAN™ LPWA. The company has worked quickly to develop facilities in Kashiwa City, including Kashiwa-no-ha Campus since launching its service there, and already provides services with a large coverage area. On Kashiwa-no-ha Campus, SenseWay is conducting multiple trials to build and commercialize advanced examples of IoT.

○ Mitsui Fudosan Co., Ltd. (Kashiwa-no-ha Smart City website: <https://www.kashiwanoha-smartcity.com/en/>)

Mitsui Fudosan has been promoting the Kashiwa-no-ha Smart City urban development project in the area around Kashiwa-no-ha Campus Station on the Tsukuba Express line in Kashiwa City, Chiba Prefecture since 2005. Aiming to create an urban development model that resolves worldwide issues, the Company is undertaking various initiatives through partnerships among the public, private and academic sectors, based on the three themes of creating “an Environmental-Symbiotic City,” “a City of Health and Longevity” and “a City of New Industry Creation.” In terms of new industry creation, Mitsui Fudosan aims to realize a city that creates new industries by connecting people of all ages, fields, and nationalities throughout the entire town, as well as companies at various stages, to spark innovation.

○ Kashiwa-no-ha IoT Business Co-creation Lab

(website: <https://innovation-field-kashiwanoha.jp/iot-lab/> (Japanese))

Kashiwa-no-ha IoT Business Co-creation Lab is a local group that aims to be a lab for co-creation of IoT businesses to assist the spread IoT (Secretariat: Microsoft Japan Company Limited; managing company: TOKYO ELECTRON DEVICE LIMITED). In June 2018, the lab established an IoT field testing environment that uses the global LPWA standard (LoRaWAN™) environment essential for AI/IoT use in the area alongside the Tsukuba Express railway line, including Kashiwa-no-ha Campus. The lab was established to promote the spread and use of IoT in neighboring areas and to create IoT-related business opportunities making use of this environment. It is working primarily support community formation, sharing of the latest technologies and information, as well as commercialization and testing, with a focus on solving urban issues.



○ Innovation Field KASHIWA-NO-HA (Website: <https://innovation-field-kashiwanoha.jp> (Japanese))

Innovation Field KASHIWA-NO-HA focuses on two fields: AI/IoT and life science/medical. It undertakes full trial projects in Kashiwa town through partnership between the public, private, and academic sectors and serves as a testing platform for joint creation of new products and services. The organization started formally calling for projects year-round in February 2019. It provides coordination for adopted projects between relevant parties such as testing field providers, governments, and cooperating companies. It also provides technological consultation, mentoring and other comprehensive support. Through these activities, Innovation Field KASHIWA-NO-HA is working to create new industries and solve social issues in the Kashiwa-no-ha area.



○ Kashiwa-no-ha Smart City Consortium

Kashiwa-no-ha Smart City Consortium is managed by three organizations: Urban Design Center Kashiwa-no-ha (UDCK), Mitsui Fudosan, and Kashiwa City. It was formed to build a data platform linking private- and public-sector data and introduce new technologies such as AI and IoT to create a smart compact city centered on Kashiwa-no-ha Campus Station, making use of characteristics in the local area which is especially conducive to bringing together people, things, and information. The Kashiwa-no-ha Smart City Consortium is engaged in four model projects aimed at realizing a smart city. In one of these, the “Wellness” project, the National Cancer Center Hospital East is a participant.

Relevant Press Release: https://www.mitsui-fudosan.co.jp/corporate/news/2019/0605_02/