Press Release

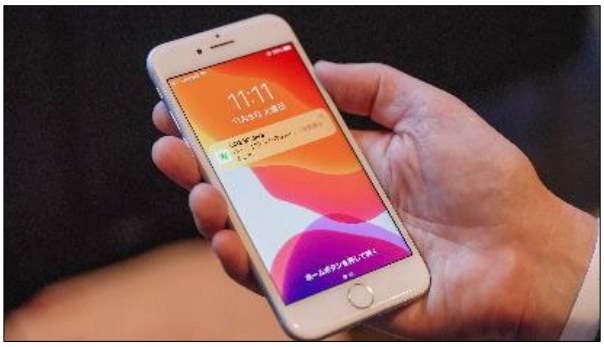
Long-established 'Ryokan' Operator Ichinoyu Introduces Gravio to Digitalize Operations with No-code IoT System

Tokyo -- Dec. 26 2022 -- Asteria Corporation (Japan listed, Security Code: 3853) today announced Kanagawa Prefecture-based Ichinoyu Co., which operates nine *ryokan* (traditional Japanese inn) and hotels in the hot spring resort town of Hakone, including Ichinoyu Honkan, has adopted Asteria's AI-equipped IoT integration edgeware Gravio to drive the digital transformation (DX) of hotel management.

■Background

Founded in 1630, Ichinoyu is a long-established hot spring inn that has been in business for about 400 years and currently runs nine inns and hotels in Hakone. Under the management philosophy of "changing the conventional wisdom of lodging and proposing a life-enriching experience through lodging," Ichinoyu has played a role in promoting tourism in Hakone as a long-established representative of the region. In recent years, as the ryokan operator strives to further improve operational efficiency and service quality as well as push forward with the work style reform, it has embarked on DX initiatives and digitalization of operations using AI and IoT. Ichinoyu was considering the introduction of a system that would enable visualization of the usage status of facilities in hotels and digitalization of day-to-day operations.

After comparing several IT tools and solutions, Ichinoyu turned its focus to Gravio, which allows users to build an IoT system without coding. The decision was made to implement Gravio because of its ability to integrate a wide variety of IoT sensors without the need for large-scale system construction.

A motion sensor set up on the entrance detects visits by guests	A notification instantly sent to users through integration of Gravio and LINE WORKS
	

■Overview of solution using Gravio

Before the solution was introduced, guests were asked to ring the doorbell around check-in time when the front desk was unmanned. Using Gravio, a motion sensor installed outside the entrance detects visitors. The system then automatically sends a push notification to the smartphone of a front desk staff member, making it possible to smoothly welcome guests at the front door without the need for having someone at the front desk at all times.

The opening and closing of the valves that control the hot spring facilities -- essential to such facilities -- must be performed according to a defined procedure and cycle. There was an urgent need to take measures to prevent equipment failure caused by procedural errors or omissions. To address this issue, Ichinoyu has deployed Gravio's double button to record the execution and termination of valve opening and closing operations using the left and right buttons. Data are automatically entered into a Google spreadsheet. Even if an operation is not recorded when it should be, an alert is automatically sent to the smartphone of a staff member.

The constant monitoring by Gravio helps prevent omissions in the operation. Ichinoyu also uses door sensors to check the frequency of use of the restroom in the building, which has contributed to optimize the allocation of cleaning personnel and improve the operational efficiency. Through these efforts, Ichinoyu is developing a more pleasant work environment.

In addition, Ichinoyu began studying the possibility of implementing an automated air conditioning temperature control system in restaurants. Temperature and humidity sensors visualize temperature changes caused by tabletop stoves used at dining tables and control the air conditioning units. The goal is to ensure that guests can always enjoy their meals in a comfortable space.

The tourism industry, which faces staffing shortages, sees the return of international tourists and growth in demand for domestic tourism as the economic activity resumes.
Gravio will help customers address these issues through DX and digitalization of business operations with AI and IoT.

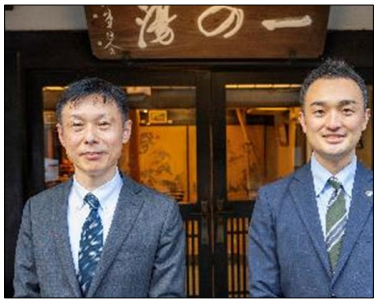
■Device Usage Status

Device	Use	Installation site	Overview
Motion sensor	Detect visitors	Entrance	Detect visits by guests and send a notification to the smartphone of a front staff member
Door sensor	Check usage frequency	Restroom	Record usage frequency and encourage cleaning at optimal intervals
Double button	Record operations	The control panel of hot spring facilities	Record operations at bathing facilities. If an operation is not recorded when it should be, an alert is automatically sent to the staff member's smartphone
Temperature and humidity sensor	Measure temperature and humidity (experiment)	Restaurant	Visualize temperature and humidity and optimize the environment in restaurant

■Message from Ichinoyu Users

Our company policy is to "take on challenges without fear of failure". The fact that Gravio can be implemented from a small start fits our corporate culture and we were able to introduce it and produce a result in a short period of time.

OHNO Masaki, store operations manager(right)

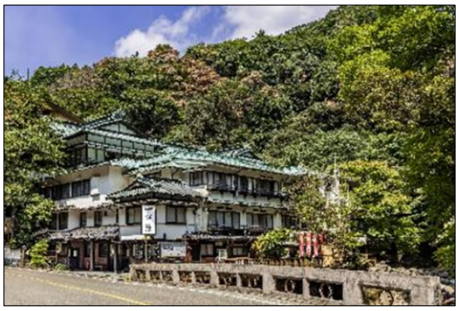


Basically I built the IoT system with Gravio on my own. The process was smooth thanks to its no-code capabilities and sensors that are available free of charge.

IMAIZUMI Masayuki, organization development officer(left)

■About Ichinoyu Co.

Centered on Ichinoyu Honkan hot spring inn established in 1630, Ichinoyu operates nine ryokan and hotels in the areas of Hakone-Yumoto, Tonosawa and Sengokuhara. Its management philosophy is to "change the conventional wisdom of lodging and propose a life-enriching experience through lodging" by pursuing "value that's one step ahead" and "innovation and evolution." Ichinoyu intends to move forward together with customers for the benefit of the people and contribution to society.



For more information, visit https://www.ichinoyu.co.jp/eng/

＜Awards and Accolades＞

-2008: Received an award at the 4th "High Service Japan 300 Selection" (hosted by Service PRoductivity & Innovation for Growth)
-2015: Won the grand prize at 6th "Kanagawa Tourism Award" (hosted by Kanagawa Prefecture)
-2018: Won a prize at the 4th "Japan Tourism Awards" (Japan Travel and Tourism Association)

■About Asteria Corporation

Established in 1998 as Infoteria Corporation, Asteria developed its first no-code product in 2002. It sells software and services which connect a variety of in-house computers and devices. Its key product, ASTERIA Warp, is middleware which integrates data in different computer systems without coding. As of end-September 2022, 9,809 companies, mainly large and medium ones, had introduced the product. Another product, Handbook, allows users to carry around materials used for sales activities and meetings as well as product catalogues in electronic files on smartphones and tablets. A total of 1,670 companies and public institutions had adopted the product through end-September 2022.

For more information, visit https://en.asteria.com

■About AI-equipped IoT integrated edgeware Gravio

Gravio is an AI/IoT integrated edge computing platform that can easily link data from general-purpose cameras and various sensors with various systems without coding. With simple operations based on intuitive screen design, various data can be collected and managed at the edge, and actions based on the data can be automatically executed. We also offer a free loan program for various certified sensors, eliminating the complexity around installation. The entire service enables simple and quick utilization of AI/IoT. In the new version, the AI image inference function has been further enhanced, and in addition to the pre-installed inference models, original image inference models created by customers can be used seamlessly without coding. Gravio will help users achieve digital transformation utilizing AI and IoT in a wide variety of applications.

For more information, visit https://www.gravio.com/en

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