FOR IMMEDIATE RELEASE

March 26, 2018

Tsunashima SST Council
Panasonic Corporation
Nomura Real Estate Development Co., Ltd.
City of Yokohama

Panasonic and Nomura Real Estate Open Tsunashima Sustainable Smart Town in Yokohama

The town will kick off activities to generate innovations through co-creation between the industry, academia, community and local government concerned

Osaka/Tokyo/Yokohama - Tsunashima Sustainable Smart Town (SST), which has been under construction in the City of Yokohama, opens today, moving into the operation phase, Panasonic Corporation and Nomura Real Estate Development Co., Ltd., the lead organizers of the Tsunashima SST Council, announced. The opening of the next-generation urban-style smart town marks the completion of new buildings, including a smart condominium complex, smart commercial facility and Tsunashima SST SQUARE - where the town's management center and an international student dormitory are located. They join the Town Energy Center, Hydrogen Refueling Station and Smart Technology Development Facility already in operation in the smart town located just south of Tokyo.

Under the concept of "Innovating the Future Together," this new smart town will strive to generate innovations through co-creation between the industry, academia, residents and the local community concerned. Tsunashima SST aims to be a town that makes a contribution to the community's sustainable development and helps achieve the Sustainable Development Goals (SDGs) set by the United Nations, as well as realizing Society 5.0, a "super-smart society" the Japanese government is promoting.

From April, the Tsunashima SST Council will shift its focus from planning to management of the town. A consortium of eight Japanese groups, led by Panasonic Corporation, will work together to manage the town. The other members include UNY Co., Ltd., JXTG Nippon Oil & Energy Corporation, Keio University, Sohgo Security Services Co., Ltd. (ALSOK), Sunautas Corporation, Honda Motor Co., Ltd. and Obayashi Corporation.

ALSOK is opening a hub station for security services in the Town Management Center, aiming to ensure complete safety of the town and swift responses, within 15 minutes, to security incidents. The company will also conduct field tests and verifications on the premises for next-generation security technologies adopting artificial intelligence and other cutting-edge technologies. Sunautas, a car-service company headquartered in Yokohama, will introduce car sharing, car rentals and bicycle sharing services, while Honda Motor will launch a car sharing service using its fuel-cell vehicles.

Tsunashima SST will serve as a testbed on a continuous basis for various field tests of advanced technologies. Such tests include an artificial skylight in the Community Park at the Smart Commercial Facility, which will test new spatial creation by using technologies that incorporate lighting and video images. The Hydrogen Refueling Station will examine the use of energy generated by a 5 kWh pure-hydrogen fuel cell in the facility.

For the town's infrastructure, Japan's leading general contractor Obayashi Corporation will utilize its Smart City Information Modeling (SCIM), a platform that draws on three-dimensional data for smart city planning, to reproduce the entire town in 3D on the computer screen.

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Combined with Panasonic's environmental sensing and outdoor image recognition technologies, SCIM enables visualization of the entire town, the flow of people and their numbers, gender and other attributes. The aim is to accumulate and verify various data during a two-year trial operation in order to improve life quality of the people who gather in this new town, as well as creating new services.

As part of the activities to create innovations through co-creation, Panasonic will build an "innovation studio" in the Town Management Center. The studio will be an advanced office using the Internet of Things and serve as a base for open innovation. An "exchange studio" is also planned as a base for promoting international and knowledge exchange activities and offering information on the smart town. In addition, Panasonic and Keio University will take the lead in setting up the Tsunashima SST Lab, eyeing commercialization of innovation ideas generated through co-creation and utilization of the town by the industry, academia, residents, communities and the local government concerned.

The Tsunashima SST Council will continue to actively promote initiatives that enhance the value of the community. Yokohama City will also be spearheading its eco model zone project centered around the Shin-yokohama downtown areas as well as Tsunashima and bordering Hiyoshi. Working with the Tsunashima SST Council, the city will expand its forward-thinking project and build up value and appeal of the overall community.

Bird-eye view of Tsunashima SST

Tsunashima SST SQUARE

Overview of Tsunashima SST

Name	Tsunashima Sustainable Smart Town
Location	4 Tsunashima-higashi, Kohoku-ku, Yokohama City, Kanagawa Prefecture
Ground Area	Approx. 37,900 m^2
Overview	• Tsunashima SST SQUARE (Sunautas) - Smart Town Management Center (Panasonic) including Innovation Studio, Exchange Studio, etc. - Keio University Tsunashima SST International Student Dormitory (Keio University) • Town Energy Center (Tokyo Gas Group) • Hydrogen station: Yokohama Tsunashima Hydrogen Refueling Station(JXTG Nippon Oil & Energy Corporation) • Smart commercial facility (Apita-Terrace Yokohama Tsunashima by UNY) • Smart technology development facility: YTC (Apple) • Smart condominium: Proud Tsunashima SST (Nomura Real Estate Development, Kanden Realty & Development and PanaHome)
Concept	Innovating the Future Together
Official Town Opening	March 26, 2018

About Tsunashima SST Council

- Community Planning Council* and Members

Lead Organizers	Panasonic Corporation, Nomura Real Estate Development Co., Ltd.
Organizers	Kanden Realty & Development Co., Ltd., PanaHome Corporation*, UNY Co., Ltd., Apple Japan LLC
Council Members	JXTG Nippon Oil & Energy Corporation, Sohgo Security Services Co., Ltd., Sunautas Corporation, Honda Motor Co., Ltd.
Advisors	Keio University, Obayashi Corporation
Observer	City of Yokohama

*Effective April 1, 2018, the Council, established in December 2015, will become Community Management Council, and PanaHome will be renamed Panasonic Homes Co., Ltd.

- Community Management Council and Members (tentative)

Lead Organizer	Panasonic Corporation
Members	UNY Co., Ltd., JXTG Nippon Oil & Energy Corporation, Keio University, Sohgo Security Services Co., Ltd., Sunautas Corporation, Honda Motor Co., Ltd., Obayashi Corporation

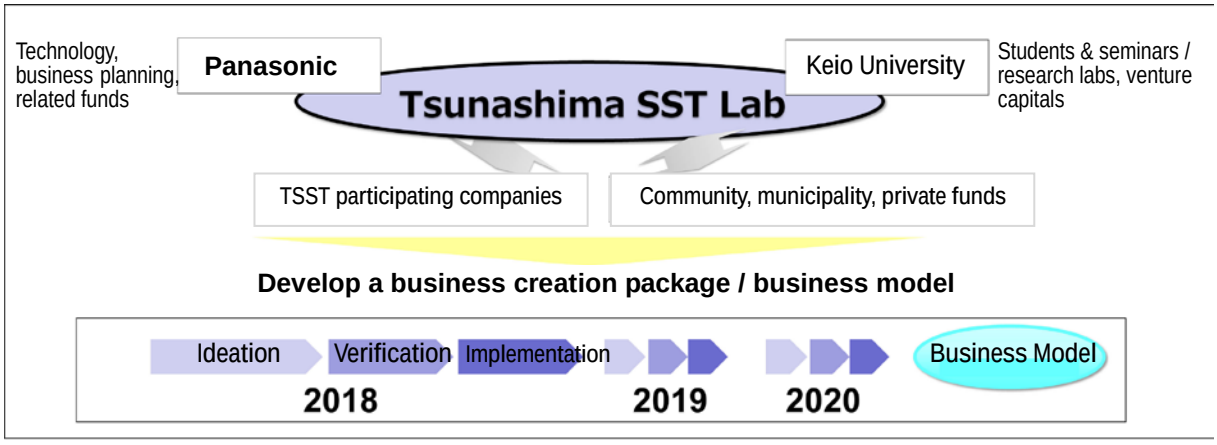
■ Town Management Center

Located on the first floor of the Tsunashima SST SQUARE, the center plays the central role for managing the town's services and various activities, as well as creating innovations. Also included are the Innovation Studio, a base for open innovation, such as experiments of technologies and marketing activities by Panasonic; the Exchange Studio, a place for promoting international, community and knowledge exchanges and offering the town's information; and the Town Service Space that serves as the base for security services.

Artist renderings of Innovation Studio (scheduled to open in July) and Exchange Studio (right)

■ Tsunashima SST Lab

Panasonic and Keio University will take the lead in activities to commercialize innovation ideas generated through co-creation between the industry, academia, residents, communities and the local government concerned. The Lab will aim to commercialize the ideas produced through various exchanges after trials and verifications in the smart town. By considering all the steps from creating ideas and verification to commercialization as one package, the Lab will develop a business model from its activities.



Tsunashima SST operation scheme outline

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■3D Data Town Building Platform “SCIM” and IoT Sensing

The Smart City Information Modeling (SCIM) developed by Obayashi Corporation is a town building platform that supports the development of a smart town in every stage. Reproducing the entire town of the Tsunashima SST in 3D and linking it with the town’s energy data and sensing data, the SCIM can visualize the town from various angles. The SCIM can also be used as a platform for disseminating the town management information, thereby contributing to the enhancement of life quality of the people who gather in the town.

Panasonic’s Sensing Technologies

• Environmental Sensing

Panasonic’s environmental sensing units are capable of real-time measurement of a variety of factors, including temperature, humidity, ultraviolet rays, raindrops, carbon dioxide, particulate matter 2.5 (PM 2.5) and pollen. The smart town will verify the effectiveness of these sensors in supporting residents’ everyday life and managing inventory of relevant products at stores in the town.

• Imaging Recognition Sensing - Vieureka

Vieureka sensor cameras with built-in image analysis will visualize the number, gender and age of visitors to the town while giving due consideration to privacy.

• Thermal Mapping Sensing - Grid-EYE

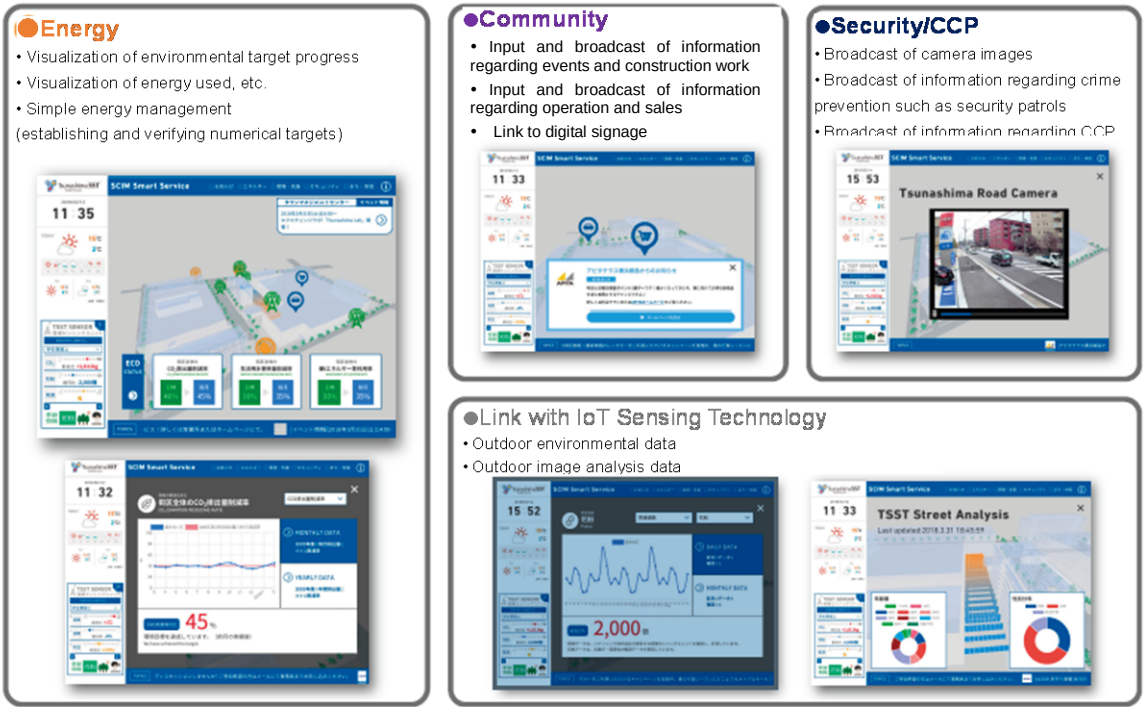
Based on the temperature distribution data detected by the sensor, the Grid-EYE visualizes the positions of persons in a certain area and detailed thermal mapping using a unique algorithm. The visualized data allow for presuming if persons in the room feel warm or cool. By using the data, the town will aim to create a comfortable interior space with climate control.

Environmental Sensing

Vieureka

Grid-EYE

Image of services enabled by SCIM (Screenshots below are under development.)



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