Future Realized by Smart Cities: Tourism / Regional Revitalization

Issues faced by region

- ✓ Failure to communicate the level of attractiveness of the region enough to overcome regional competition and attract customers
- ✓ Need to be innovative in how to showcase tourist facilities in the target area
- ✓ Hope to bring back the drop in consumption caused by COVID-19 and revitalize the economy

Illustration of Future Realized by Smart Cities: Infrastructure Tourism / Regional Revitalization

- ○ **Visualize and guide information about destinations and transportation** to enhance the sightseeing experience.
- ○ The goal is to **make information** about tourism and the region **easier to understand, more accessible and more attractive**.
- ○ Encourage **increased consumption** through the creation of new services using ICT etc., while taking into account tourism styles that respond to the New Normal.

Information visualization and guidance

How to present information

Encourage increased consumption

Future Realized by Smart Cities: Tourism / Regional Revitalization examples

Dissemination of tourism information through digital signage (Kyoto Prefecture)

Provide tourist information at stations etc. and collect and analyze visitor information

People flow analysis camera
Wi-Fi function
Video conference system (virtual concierge function)
Wi-Fi spot
Video calls
Touch screen
2270mm
1100mm
630mm

Data that can be obtained from signage
- Touch data (frequency of use, content preference data)
- Attribute data (gender, age) from people flow analysis camera
- Wi-Fi usage data (dwell data)

Source: Kyoto Smart City Promotion Council website

Implementing district	Within Kyoto Prefecture (*Some locations also in Tokyo and Osaka Prefectures)
Implementing entity	Kyoto Smart City Promotion Council, Kyoto Prefecture
Initiative outline	• 10 units installed at stations etc. Analyze user attributes and preferences based on touch data etc. and provide tourist information tailored to the needs of tourists etc., to improve convenience for tourists and promote sightseeing tours.
Technologies and data used	• Signage touch data, people flow analysis camera acquisition data, Wi-Fi usage data

Hands-free sightseeing with facial recognition (Nanki-Shirahama)

Facial recognition enables hospitality services at airports, hotels, restaurants, theme parks etc. and hand-held payment

1 Welcome service
2 Cashless payment
¥500
3 Unlocking a door without a key

Source: NEC website

Implementing district	Nanki-Shirahama district
Implementing entity	NEC Corporation, Nanki-Shirahama Airport etc.
Initiative outline	• Facial and credit card information is pre-registered and used as a common ID to provide hospitality at Nanki-Shirahama Airport and surrounding facilities. Such services include airport guidance, hotel pickup and entry and cashless shopping.
Technologies and data used	• Face recognition technology etc.

Congestion information dissemination service for facilities such as stores etc. (VACAN)

Real-time delivery of information on 'availability' and 'congestion' of stores and facilities on PC and smartphone maps
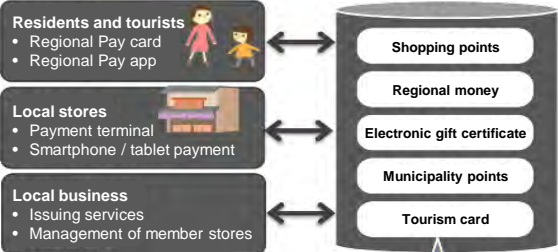

Source: VACAN website

Implementing district	Domestic, Taiwan and China
Implementing entity	VACAN
Initiative outline	• VACAN AIS / Throne automatically detects and analyzes congestion in facilities and restrooms using cameras, sensors and other devices and AI, and displays the information on signage and special web pages. • VACAN Maps delivers real-time information on 'availability and congestion' of stores and facilities on PC and smartphone maps.
Technologies and data used	• Button type IoT device • Cameras / sensors • AI etc.

Future Realized by Smart Cities: Tourism / Regional Revitalization examples

Promotion of cashless shopping in the community (Okaya City)

Digitize all payment services related to the community together, leading to a cashless society and community revitalization.
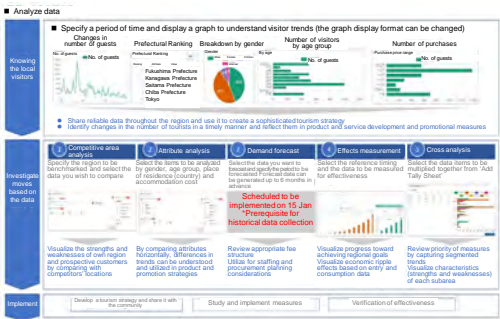

Regional Pay system

- **Residents and tourists**
  - Regional Pay card
  - Regional Pay app
- **Local stores**
  - Payment terminal
  - Smartphone / tablet payment
- **Local business**
  - Issuing services
  - Management of member stores

Shopping points / Regional money / Electronic gift certificate / Municipality points / Tourism card

Source：https://www.toppan.co.jp/news/2020/09/newsrelease_200915_2.html

Implementing district	Okaya City, Nagano Prefecture
Implementing entity	Toppan Printing Co., Okaya Chamber of Commerce and Industry
Initiative outline	• Integrate local e-money, shopping points and municipal points on a single card by adopting the Toppan Printing 'ChiikiPay®' system as the basic system for the local e-money 'OkayaPay'.
Technologies and data used	• Cashless payment services, payment platforms

Advanced data sharing platform (Shizuoka Prefecture)

Aim to create a high value-added and efficiently profitable tourism region through the use and analysis of data collected by cities and towns and cross-sectional data from various fields such as room nights, demand forecasts, V-RESAS etc.

Advanced data sharing platform
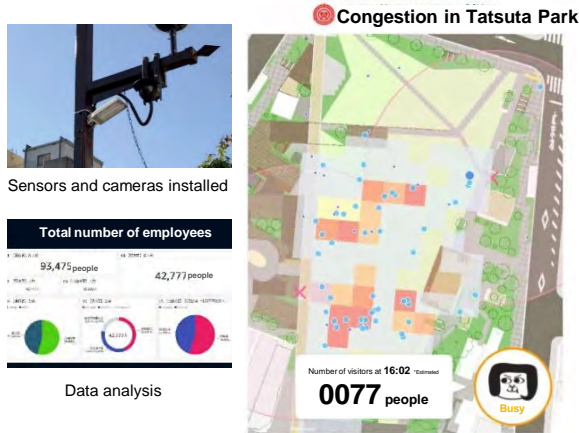Provide diverse data based on a tourism forecasting platform

Source： https://kankouyohou.com/

Implementing district	35 cities and towns in Shizuoka Prefecture
Implementing entity	Shizuoka Prefecture Large-Scale Tourism Campaign Promotion Council, JTB Shizuoka Branch, JTB Research Institute, Inc.
Initiative outline	• Build a data sharing platform by utilizing lodging data, lodging demand forecasts and local people flow data. • Based on cross-analysis by clientele and accommodation demand forecasting, aim to understand the strengths and weaknesses of the region, develop efficient, high value-added products for the region as a whole and create a profitable tourism region
Technologies and data used	• Nationwide accommodation data • Data effective for 'tourism' (e.g., people flow data) • Regional collection data etc.

Dense control during events (Okazaki City)

Disseminate real-time congestion information using people flow data, estimating risk areas for crowd accidents and utilize the information for safe event management.

Congestion in Tatsuta Park

Sensors and cameras installed

Data analysis

Real-time information transmission via signage

Implementing district	Okazaki City, Aichi Prefecture
Implementing entity	Okazaki Smart Community Promotion Council
Initiative outline	• The people flow data obtained by 3D-LiDAR is displayed on signage in the venue in real time, guiding participants' behavior so that they can enjoy the event by avoiding dense traffic. • Visualize the location and time of congestion at fireworks displays, analyze the risk locations and causes of crowd accidents, and use this information for security planning and other purposes.
Technologies and data used	• Cameras / sensors (3D-LiDAR) • People flow data etc.

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Future Realized by Smart Cities: Health / Medical Care

Issues faced by region

- ✓ Increased lifestyle-related illnesses and reduced medical costs
- ✓ Increased burden of medical facility visits among residents of mountainous areas and the elderly
- ✓ Identifying the health status of the increasing number of elderly living alone and children in dual-income households

Illustration of Future Realized by Smart Cities: Health / Medical Care

- ○ **Support citizens in managing their health, by promoting appropriate exercise** using data on personal mobility and health.
- ○ **Ensure access to medical care from remote locations** and reduce the burden on medical personnel.
- ○ Introduce a **system to look after the health of family members who are away from home.**

Support health management through data utilization

Access to medical care from remote areas etc.

Watch over distant family members

Future Realized by Smart Cities: Health / Medical Care examples

Encourage walking with health points (Sapporo City)

Awarding 'health and happiness points' that can be used for public transportation etc., according to the number of steps taken, to promote walking and use of public transportation etc.

Use of smartphone apps
- Measure and transmit the number of steps taken
- Acquire movement track data
- Distribute support information

Award health points
Transportation system IC card
SAPICA (FY 2018)

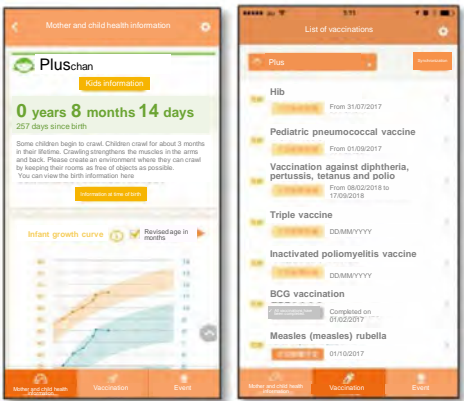**WAON** electronic money (FY2019)

Acquire health related data
- Body composition (Weight and body fat percentage)
- Questionnaire on health awareness
- Results of specific health checkups

Implementing district	Within Sapporo City
Implementing entity	Smart Wellness City Council
Initiative outline	• Encourage behavioral change by awarding 'health points' that can be used for public transportation etc., in proportion to the number of steps taken • In addition, analyze behavioral data (number of steps, location information) and people flow data, and reflect the results in the development of a seamless and walkable space plan for urban planning.
Technologies and data used	• Sensors, GPS data • Health-related data etc.

Digitalization of a maternity passbook (Aizuwakamatsu City)

In addition to checking records of infant health checkups and vaccinations received in the city via smartphone, the system also delivers information on child rearing from the city
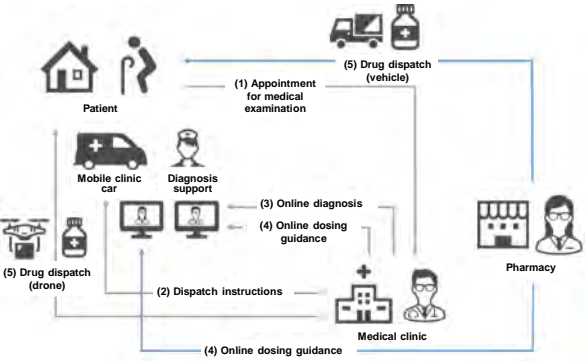

Source: Aizu Wakamatsu City website

Implementing district	Aizuwakamatsu City
Implementing entity	Aizu Wakamatsu City Health Promotion Division
Initiative outline	• Establish a maternal and child health information portal using the public personal authentication function of the My Number Card to efficiently realize a secure and convenient environment for maternal and child health and child raising.
Technologies and data used	• Health checkup data • Secure DB (secure database for storing personal information) • Data linkage platform etc.

Haruno Medical MaaS Project (Hamamatsu City)

Provide online medical services using a mobile clinic vehicle to secure medical services in mountainous areas

Implementing district	Haruno District, Tenryu-ku, Hamamatsu City
Implementing entity	Hamamatsu City, Hamamatsu Mobility Service Promotion Consortium, Ban Shu Medical Association, Ozawa Clinic, MONET Technologies Inc., etc.
Initiative outline	• Online medical care using a mobile clinic vehicle • Online dosing guidance using a mobile clinic vehicle • Drug delivery by drone or vehicle
Technologies and data used	• Online medical care / online medication counseling (over-the-counter tablet terminal) • Self-flying drones etc.

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Future Realized by Smart Cities: Security / Monitoring

Issues faced by region

- ✓ Reduction of crime and accidents
- ✓ Reduce the burden on parents in childcare and nursing care
- ✓ Reduce the burden on childcare and nursing care professionals

Illustration of Future Realized by Smart Cities: Security / Monitoring

- ○ Install security cameras and analyze incident information to **optimize crime prevention and response**.
- ○ Help **prevent and deal with accidents and incidents** by ensuring that parents have timely information about their protected persons.
- ○ **Improve the working environment** by reducing the burden on parents and those involved in childcare and nursing care, and **improve the level of services**.

Optimize crime prevention and handling

Prevention and handling of accidents and incidents

Improve working environment and service level

Future Realized by Smart Cities: Security function / Monitoring examples

Monitoring service using IoT devices (Kakogawa City)

Provide location information of children or elderly people to their families by using cameras and detectors installed in official vehicles etc.

Monitoring tag detector

Monitoring camera (Approx. 1,500 cars)

Application detection function (Approx. 3,900 users)

Official vehicles (Approx. 256 cars)

Monitoring tag

Postal vehicles (approximately 176 vehicles)

Implementing district	Within Kakogawa City
Implementing entity	Kakogawa City
Initiative outline	• When a child with a BLE (beacon) tag or a senior citizen who may lose his or her way due to dementia passes by the detector, family members can check records of their passage via an app or other means.
Technologies and data used	• BLE tags, sensors etc.

CATV-based monitoring service for the elderly (Ina City)

Provide services such as safety confirmation and message display by using a familiar cable TV and remote control as an interface, even for the elderly

How are you?

Implementing district	Ina City
Implementing entity	Ina City, New Industry Technology Promotion Council
Initiative outline	• Notifies family by email when, for example, the service is not used for a certain period of time. • Prevent memory loss and display messages from distant family members on CATV screens.
Technologies and data used	• System construction using cable TV as a platform etc.

Watch-over service using transportation system IC cards (JR East etc.)

When a child passes through an automatic ticket gate at a station using Suica or PASMO, the time of passage, station used etc. are notified to the parent or guardian

Beep

Mail!

Beep

Touch at the ticket gate!

Notify me by email!

In addition to 246 stations in East Japan Railway, **the coverage area will be expanded to all 496 stations including Toei Transportation and Tokyo Metro stations from 1 April, 2020 (Wednesday).**

*Please note that some stations and ticket gates are not included in the program (click here for details).

JR East

Toei Transportation
Tokyo Metropolitan Transportation Bureau

Tokyo Metro

■ Source : https://www.mamorail.jp/

Implementing district	Stations of JR East, Toei Transportation and Tokyo Metro
Implementing entity	JR East, Toei Transportation, Tokyo Metro and Central Security Service System operation and construction: JR East Mechatronics
Initiative outline	• Service that informs parents / guardians of transit times, stations used and remaining charge amount (Mamorail). • 550 yen/month (tax included) / register 1 child and 1 notification address. • Expanded eligibility to include seniors (65 and older) and persons with disabilities (19 and older).
Technologies and data used	• Traffic IC card data etc.

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