CASE 3

Developing healthy region

Triggers of Smart City initiatives

In Sapporo-city, a low percentage of citizens regularly exercised, and its healthy life expectancy was at low level among ordinance-designated cities. There was also an increasing trend in the share of automobile usage with a higher environmental impact than public transportation.

Due to these facts, the necessity for the initiatives aimed at realizing an environment with focus on walking and public transportation was well recognized.

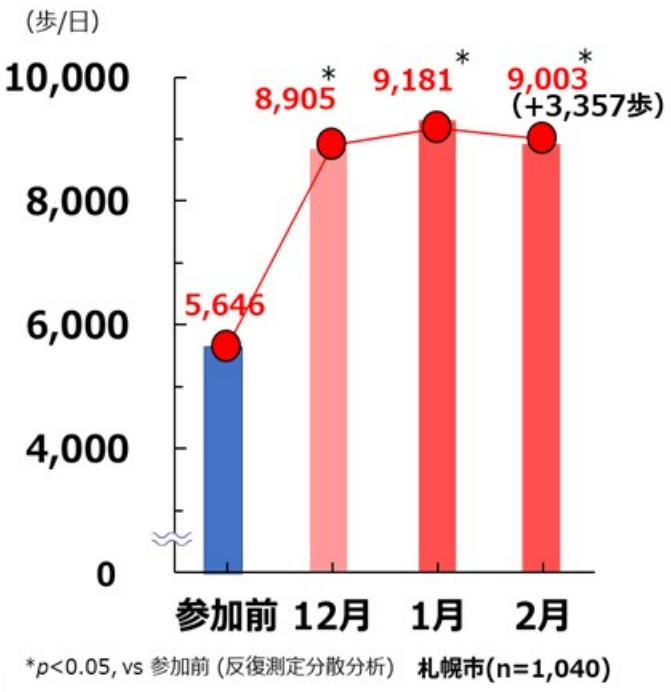
Effectiveness (Cost-effectiveness)

The results from "Kenko (health and well-being) Point" trials with more than 1,000 citizens participating

Anticipated medical expenses[*1] reduction effect of about 74,500 yen/person-year

*1 Calculated assuming medical expenses reduction effect by walking to be "0.061 yen/step/day (*2)

*2 Shinya Kuno: ICT and "Kenko City" to cope with hyper-aging – Aiming at the world best in healthy long-life expectancy by Smart Wellness City , The 2nd WG at ICT and Hyper-Aging Society Design Council, January 24, 2013

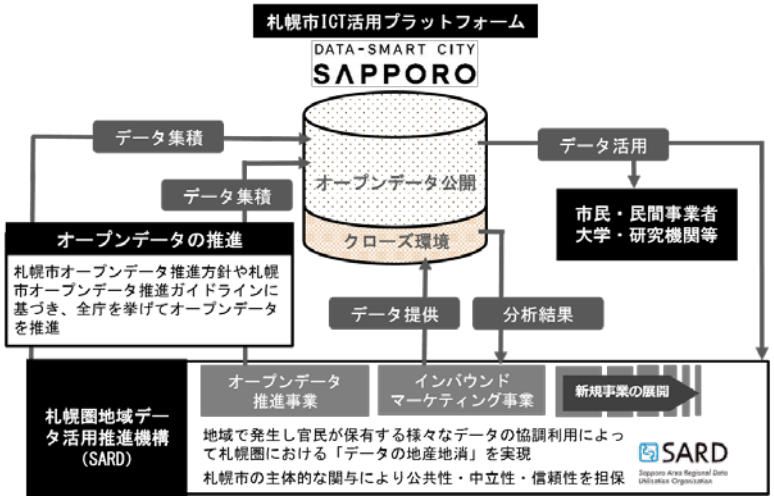


*p<0.05, vs 参加前 (反復測定分散分析)　札幌市(n=1,040)

Objectives and service overview

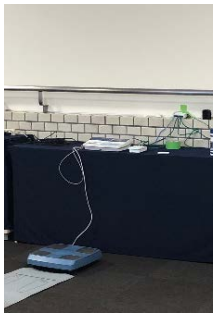
■Construction of data federation infrastructure and establishment of management organization for public-private sector collaboration

- Construction of data platform (PF) to store/process/utilize wide variety of data owned by the public and private sectors
- Establishment of public-private sector collaboration organization to manage and operate PF
- Aiming at the future collaboration with behavioral, health and other data in the Kenko Point trials



■Introduction of the Kenko Point system utilizing ICT

- Implementation of a program which gives incentives to participants according to their actions and achievements (walking, improving health condition, participating in courses, visiting specific areas, etc.)
- Implemented items
  - Events to measure body composition
  - Active use of an application to count steps
  - Point program
  - Nurturing of health influencers

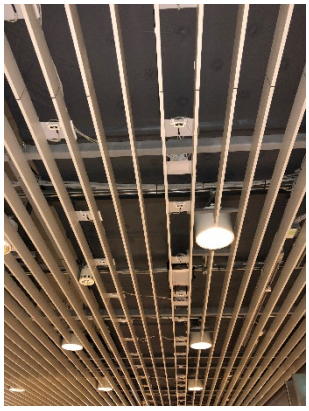


ポイント種類	概要
がんばってますポイント	毎月の平均歩数に応じて、1か月に最大800ポイント
変わりましたポイント	体組成測定結果（BMIまたは筋肉率で判定）の改善度合いに応じて最大1000ポイント
行きましたポイント	指定の箇所を歩行する際に、アプリを起動して来訪すること、または端末にタッチすることで付与

The keys to success

Point1 Enhanced ICT infrastructure

- BLE beacons and ultrasonic people flow sensors are installed in the metropolitan underground spaces which are designated as the “Showcase for ICT utilization”, and it is possible to track the movement of people and count the number of pedestrians.
- As the indoor people flow data can be obtained, it is possible to give out points for visits to particular areas and analyze the activities in detail.

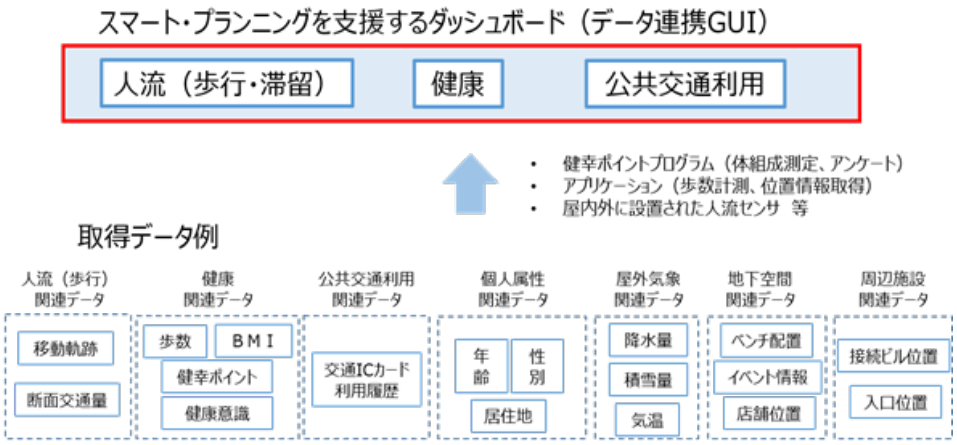

Point2 Existence of pedestrian spaces in the winter time

- In the Kenko Point trials in Sapporo-city, the increase in the number of walking steps in the winter time was observed even in the snow-covered areas.
- One of the factors for that is identified as the cooperative collaboration with the environment (underground spaces) and large-scale shopping malls where people can walk safely and comfortably even in the winter time.


Future development

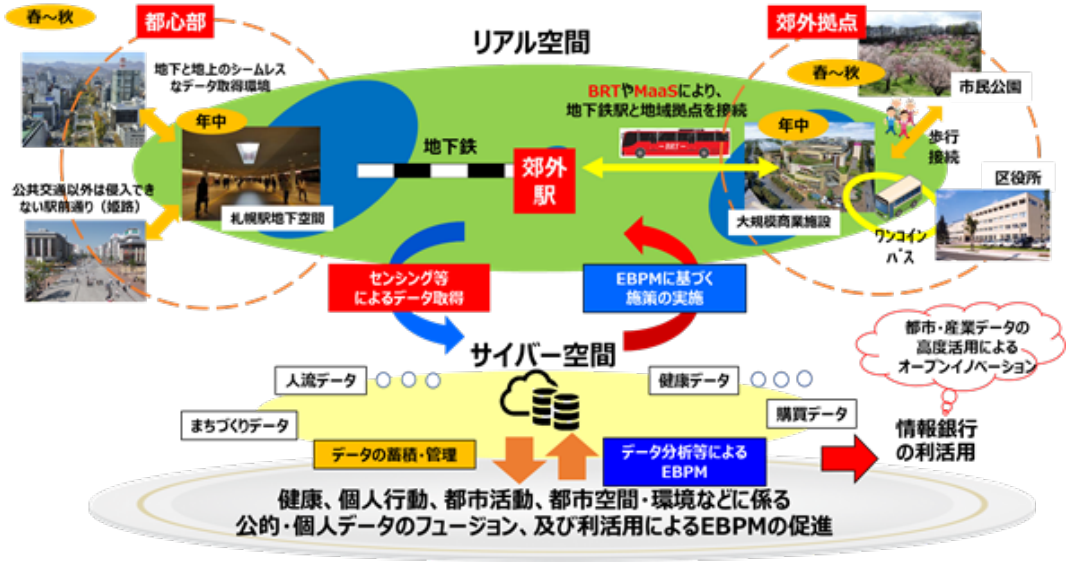
■Dashboard for the Kenko regional development

Implementation of dashboard to enable organic visualization & analysis of health conditions, a number of daily walking steps, movement logs, etc. of citizens, and smart-planning trial



■Improving urban spaces to promote healthy activities

Developing evidence-based regional liveliness, improving walking spaces, collaborating with large-scale shopping malls as walking spaces in the winter time, etc. by smart planning



■Strengthening and expanding industry-government-academia sector collaboration

By way of the **Smart Wellness City Mayors Study Group**, in which Sapporo-city also participates, aiming at the integration of the Kenko development (software) and

the Compact-plus-network (hardware), and the **Smart Wellness Regional Council** which collaborates with the former, we will work to advance our know-how and deploy it horizontally across the country.

Smart Wellness City Mayors Study Group

- Launched in November 2009, with the aim of overcoming various social issues arising from Japan's hyper-aging society with declining population by municipalities themselves
- Chaired by Professor Shinya Kuno, University of Tsukuba Graduate School
- The number of participating municipalities is 105 cities, wards, towns and villages in 43 Prefectures (as of February 2020)
- The objectives are to realize not merely physical health but also the "Kenko Society (Smart Wellness City)" where people can feel a sense of fulfillment in their lives and lead safe, secure, and prosperous lives, with the goal of building a new sustainable city model based on the latest science and technology and scientific evidences
- Regular study sessions (twice a year) are held with the attendance of the heads of participating municipalities themselves

Collaboration

Smart Wellness Regional Council

- Established in 2015 as an organization to resolve issues by bringing together the wide range of wisdom from industry, government, and academia sectors, looking beyond conventional approaches to health and medical care to include a variety of factors such as regional development and sports. It became a general incorporated association in 2018
- The number of members is 137 organizations (as of February 2020)
- The Council is currently conducting research on practical and effective measures and making policy recommendations in five subcommittees; 1) Incentive System and Business Subcommittee, 2) Kenko Ambassadors and Human Resource Development Subcommittee, 3) AI and Information Bank Data Utilization Subcommittee, 4) Sports and Legacy Subcommittee, and 5) Regional Development Subcommittee.

Information source: Nikken Sekkei Research Institute K.K., Tsukuba Wellness Research K.K., Sapporo-city

CASE4

Region with the leading-edge services promoted by City OS & users' viewpoint

Triggers of Smart City initiatives

Aizu-Wakamatsu-city has come to face an unprecedentedly difficult situation due to the impact of a reputational damage on the main industries of agriculture and tourism resulting from the Great East Japan Earthquake of 2011 on top of the mountain of issues such as declining population, and declining birthrate and aging population.

That has led us to set forth a new strategy of "Smart City Aizu-Wakamatsu". With consideration to local resources such as the only public university (University of Aizu) specializing in ICT in Japan, we have been making efforts to realize a dynamic local region and comfortable lives for citizens with an emphasis on ICT since 2013.

Effectiveness (Cost-effectiveness)

Characteristic achievements include the actual site usage rate of 20% of all citizens, more than five-fold increase in the number of foreign visitors staying overnight, and the attraction of ICT-related companies with the scale of 500 employees.

Objectives and service overview

■The core of Smart Services: Aizu-Wakamatsu-Plus (City OS)

"Aizu-Wakamatsu-Plus" has been introduced as City OS, and digital services from various sectors are centrally provided to the users by way of a portal. Based on the primary focus on the ease of use from the user's viewpoint, the characteristics can be summarized into the following four points.

Screen image, characteristics and concept of Aizu-Wakamatsu-Plus

1. Information personalized (optimized for each individual) according to each user's attributes and preferences is displayed on the portal. Necessary information is provided for each individual citizen.
2. 2. Various Smart City services are displayed in the form of gadgets on the portal. By enabling the use of them by registering a single regional ID and password, the user convenience is maximized (detailed descriptions on the next page).
3. 3. It federates to "My Post", an electronic P.O. box service by Japan Post. It functions as an online mailbox to handle the official public documents over Internet.
4. 4. As the regional portal, it also publishes and provides information of private companies as well as public administration information. The users can obtain regional information closely related to their own lives on the single portal.

■Wide variety of services enabled on City OS

On the Aizu-Wakamatsu-Plus, various services are provided in an optimum form (application/gadget/external service federation) for the users of each service. Furthermore, due to API interfaces enabling easy expansion, new services are added as necessary.

外国人観光客誘致サイト	観光客の国籍を基に提示する観光コンテンツを出し分け
母子健康情報配信	市の母子健康情報DBと既存母子健康アプリの連携
AIチャットボット	SNSを通じてAIが行政サービスに関する問い合わせに24時間対応
除雪車位置情報サービス	個人の住所に合わせてパーソナライズして、除雪状況を表示
教育情報配信	子どもの通う学校の情報にパーソナライズして、学校情報を配信
スマートTV	テレビを通じて会津若松プラスを利用可能とする
外部連携	外部サービスとも都市OSを通じてデータ／サービス連携を実現

- It should be noted that these services above were not developed and implemented all at the same time but added on City OS step-by-step
- The cost has been suppressed by the utilization of City OS compared to the separate development and maintenance of each service one at a time

The keys to success

Point1 Strong belief that data belongs to citizens

While it was indispensable to acquire and utilize data, the sense of distrust and opposition from the targeted users were factors that could have been a barrier to promoting Smart City.

In Aizu-Wakamatsu-city, based on the strong belief that data belongs to citizens, in order to gain the understanding of citizens, data is always obtained by opting-in (a method of obtaining explicit consent in advance), and services are always provided with consideration to the benefits to citizens when requesting the provision of data, resulting in good understanding of citizens.

Example：
Prior to providing information on the age of children and the information on the primary schools they attend, it is clarified that it is for initiating the use of a service to deliver school information

Point2 Don't stop & get satisfied with the service development

In order to realize the services which actually get used by the users, we place great importance on not to get satisfied just because various applications and sites are completed. We have adopted an agile-style service development continually improving the service as needed by informing & publicizing and constantly checking the usage status in addition to the development.

デジタルを活用したさまざまなプロモーション活動

Example:
By constantly conducting promotions to attract more views of the "Visit Aizu" site to attract foreign tourists, it has resulted in high growth rate of inbound visitors

Future development

The following three points are expected as the future development of Smart City Aizu-Wakamatsu.

1. Wide-area & nationwide rollout of the Smart City Aizu-Wakamatsu initiatives
   - As a municipality that has been utilizing City OS from an early stage, we aim to rollout the Aizu-Wakamatsu model not only to neighboring municipalities in the Aizu area but also all over Japan
   - To that end, we will actively conduct explanations and field trips outside of the region
2. Addition and expansion of services
   - While continually adding and federating public and regional services useful for the citizens, we will also actively collaborate with and introduce the excellent services found in other regions
   - In doing so, we intend to acquire more user IDs and in turn improve the communication frequency
3. Operations reform at City Hall and others in response to the digital age
   - In addition to the digitalization on the users' side, we will work on the end-to-end digitalization of the operations in City Hall and local companies utilizing RPA, AI, etc.
   - To that end, we will proceed to develop systems and rules for further utilization of public authentication of individuals

Information source: Accenture Japan Ltd, Collaborator: Aizu-Wakamatsu-city