Building Society and Industry through Digital Transformation (DX)

Redefining Industry with DX

SoftBank Corp. is using cutting-edge technologies to help corporations and governments innovate the way they operate and organize themselves while promoting social change to enhance people's lives through digital transformation (DX).

SoftBank Corp. promotes the digitization of the business environment using cutting-edge technologies, such as 5G, AI, IoT[1] and RPA.[2] By doing so, we will prompt revisions to business processes. We aim for overall, rather than partial, optimization to increase the efficiency of entire corporations and even industries, thereby accelerating the speed of social change. In addition to redefining industries and society, SoftBank Corp. will thus create new businesses and industries and support the cultivation of human resources with advanced digital skills.

In the medical field, for example, SoftBank Corp. provides healthcare apps through corporations and municipalities. These apps enable the provision of individually optimized services to employees and residents who can consult via chat with physicians, nurses and pharmacists on health and medical issues. Users can also search for clinics, purchase over-the-counter medications, receive online medical consultations and guidance on the use of medicines, and have prescriptions sent to them.

In the fields of retail and food service, we provide a cloud-based, AI-powered demand forecasting service that helps reduce food loss and solve problems caused by population decline. To predict customer traffic to individual stores, the service analyzes data on the flow of people, the weather and retail stores so that businesses can optimize their order volumes and personnel costs while improving sales.

SoftBank Corp. is also aiming to achieve smart cities that contribute significantly to urban revitalization and industrial development by utilizing technology throughout the entire cityscape. Through industry-government-academia collaboration, we will centrally manage public data, such as traffic information; privately held data, such as the flow of people; and sensor data, such as river water levels. By conducting simulations and forecasting in virtual space, we will be able to find optimal solutions to problems facing cities, which can then be applied in real space.

In addition, SoftBank Corp. is implementing such initiatives as entering into partnerships with local governments in order to address a wide range of issues faced by regional areas using technology. These include labor shortages due to Japan's severe demographic graying, disaster countermeasures and tourism promotion.

1. Internet of things. Refers to technologies or services that are achieved by attaching sensors to various objects, equipping those objects with communication functions and connecting the objects to the Internet.
2. Robotic process automation. Refers to the use of software robots to automate and streamline operations.

Social Issues

- Advance the foundation of industry and renew aging infrastructure
- Resolve labor shortages caused by population decline
- Close economic disparities between regions

Value Creation

(1) Expand and enhance the efficiency of the industrial base through cutting-edge technologies
(2) Create new industries through DX
(3) Revitalize local communities (regional revitalization)

Risks and Opportunities

Risks

- Loss of promising markets due to lack of digital strategy or vision, decline in corporate appetite for innovation, or stagnation in digitization due to delay in loosening regulations
- Decline in profitability due to intensified competition from numerous new entrants into the enterprise solutions market
- Loss of business opportunities due to shortage of digital talent

Opportunities

- Realization of SoftBank's corporate philosophy, "Information Revolution — Happiness for everyone," support for our corporate activities from customers and investors
- Expansion of solutions business for implementing digital technologies in society
- Growing opportunities to provide solutions for demographic graying issues and regional revitalization
- Business expansion through the development and implementation of solutions leveraging generative AI

KPIs

(1) • Revenue from business solutions and others: 10% CAGR[1]
(2) • Create at least one example of social implementation in each of the seven priority business areas[2]
(3) • Initiatives to address the material issues in partnership with local governments: More than 25[3]

1. CAGR: Compound annual growth rate, calculated by the group
2. Priority business areas: retail/distribution, logistics, insurance/finance, social infrastructure, healthcare, super cities/smart cities, and other industries
3. Number of group-wide cases of commencing provision of solutions

Main Businesses and Initiatives

- Leverage 5G, big data, AI, IoT and other technologies to contribute to the vitality of customer businesses
- Streamline industry through AI, RPA,* big data and IoT
- Create start-ups and new businesses in various industries using DX (main fields: logistics, infrastructure, distribution, real estate/construction, healthcare, insurance/finance)
- Promote co-creation through DX (ONE SHIP, etc.)
- Realize smart cities
- Solve social issues by providing DX solutions to local communities and governments (cooperative agreements, pilot tests, dispatch of digital talent, etc.)

* Robotic process automation. Refers to the use of software robots to automate and streamline operations.

Building Society and Industry through Digital Transformation (DX)

Key Person Interview

Yasuyuki Imai

Representative Director & COO

New Waves in Technology

Generative AI, most notably ChatGPT, is making big waves in the business world. We are receiving frequent inquiries about generative AI from our enterprise customers, and I feel its true value is about to be put to the test in a new way.

More than ever, it is crucial to effectively use these constantly evolving technologies and build businesses around them. Over the past several years, in addition to providing communications infrastructure, we have been working to solve issues in a variety of industries, aiming to become our enterprise customers' digital transformation (DX) partner. As a result of our efforts to go beyond internal DX by offering our expertise in this area to customers, we were selected as a Digital Transformation Stock 2023, marking the third consecutive year we have received this honor.

Leveraging our accumulated expertise, we will be there as partner for our customers in generative AI, as well, working to solve issues they face.

Corporate DX

SoftBank Corp.'s Enterprise Segment proposes solutions tailored to the challenges faced by individual companies in the practical application of digital technologies—corporate DX. We have recently been advancing analyses of such industries as manufacturing, retail, construction, real estate and finance, as well as local government operations, thereby laying the groundwork to make proposals that address industry-specific issues and company-specific management challenges. We are also stepping up efforts to approach small and medium-sized enterprises to promote digitalization at companies that are further behind in this area.

To meet the needs of our enterprise customers, we offer a wealth of solutions, including the cloud, networks, security, digital marketing, IoT and AI, with one-stop service from consulting to system building and operational support. Furthermore, our customers greatly appreciate that we can make proposals leveraging our base of customer touchpoints, one of the largest in Japan, through synergies with Yahoo Japan, LINE and other group companies. In addition, we make extensive use, internally, of the products and services that we offer in order to accumulate know-how that we can then use as a major strength in making proposals to customers.

To further reinforce this strength, this year, as a new initiative, we are making thorough use of generative AI internally. Employees are incorporating generative AI into their work in an effort to improve productivity and operational efficiency. We are also holding a contest in the corporate division with the aim of using successes achieved through this initiative to formulate proposals for solutions to issues faced by enterprise customers. We are confident that these efforts will further accelerate the DX of various industries and the social implementation of digital technologies, helping our customers achieve business growth while contributing to the further revitalization of the Japanese economy.

Social DX

SoftBank Corp. is proactively advancing initiatives in social DX to provide digital solutions to such issues as labor shortages, disasters and energy issues. For example, we have begun offering a healthcare app, which can be used for health and medical consultations and to search for clinics, not only to companies and municipalities, but also individual customers in an effort to help solve such issues as growing medical costs and doctor shortages. We also provide municipalities with portable water reuse systems for recycling wastewater when municipal plumbing is out of operation due to natural disasters or other emergencies, contributing to measures to handle disasters. In addition, we have launched new initiatives to improve the overall energy efficiency of office buildings and other facilities in the Takeshiba area of Minato-ku using cutting-edge technologies.

We are also advancing the public-private co-creation of super-distributed computing infrastructure for coordinating and utilizing all kinds of data in order to realize digitalization across a wide range of fields via a common platform that will link data scattered across individual companies and organizations. By linking data that was previously disparate on a single platform, we aim to realize a more convenient society through services that make information easily available where it is needed and seamless information linkage between different services.

Through such initiatives, we will create new digital industries and produce digital professionals to drive the DX of society overall as a provider of the next-generation infrastructure necessary for a super-digitalized society. All of us at SoftBank Corp. will continue to work together to contribute to the creation of a sustainable society and achieve business growth.

Building Society and Industry through Digital Transformation (DX)

Value Creation 1

Expand and Enhance the Efficiency of the Industrial Base through Cutting-edge Technologies

By utilizing such technologies as 5G, AI and IoT, we will widely deploy cutting-edge solutions to society and contribute to the development of social infrastructure through DX by streamlining and revitalizing business.

Promote Corporate and Social DX through Digitization Support

Under SoftBank Corp.'s "Beyond Carrier" growth strategy, we are supporting the digitization of all industries.

SoftBank Corp. provides more than a hundred solutions to promote corporate DX in four areas: the digital communication area to accelerate corporate information sharing and communication, the digital automation area to promote automation of operations and onsite work, the digital marketing area to make forecasts based on vast amounts of information and apply them to marketing, and the security area to support them all.

Cloud services are indispensable to corporate DX. However, many companies are still facing problems that prevent them from adopting cloud systems, such as insufficient cloud knowledge, lack of personnel and information security risks. Under its "Multicloud Strategy," SoftBank Corp. provides centralized network, security and data center services so that companies can freely utilize a variety of public clouds, including SoftBank Corp.'s White Cloud ASPIRE, Microsoft Azure and Google Cloud. OnePort multi-cloud access also enables us to build more flexible networks by connecting from our closed network to multiple cloud services via a single physical port. In addition, SoftBank Corp. provides consulting, implementation support and managed service provider (MSP) services fully supported by experienced cloud specialist engineers, offering comprehensive support from implementation to operation. SoftBank Corp. employees are continuously updating their skills, with some having earned Microsoft Azure and Google Cloud partner certification and others having earned all 11 Amazon Web Service certifications.

DX Support for Companies

To support enterprises facing digitization challenges, SoftBank Corp. proposes solutions such as smartphones and cloud computing to help them go paperless, streamline operations and reduce costs.

In particular, SoftBank Corp. is strengthening support for these companies to comply with laws and regulations in light of legal changes coming into effect from 2022 to 2024. For example, we provide a set that includes LINE WORKS, smartphones and mobile device management (MDM) as a countermeasure against shadow IT risk in accordance with the revision of the Personal Information Protection Law. We also offer video alcohol detection solutions together with smartphones in preparation for the mandatory alcohol checks due to the revision of the Road Traffic Act. In addition, we support a full range of initiatives to comply with laws and regulations that are burdensome for small and medium-sized enterprises, such as providing cloud time and attendance management systems and smartphones in accordance with the workstyle reform laws.*

Furthermore, we are reinforcing services to support companies struggling with digitization. Support services include digitization diagnostics, which, as a first step, help companies understand the current state of their digitization, identify issues they face and develop next steps, as well as a subsidy concierge service that provides consultation about the IT adoption subsidies offered by the Ministry of Economy, Trade and Industry and handles the application process on behalf of customers.

The SoftBank Corp. group will further contribute to the expansion of customers' businesses through corporate digitization while utilizing a B-to-B-to-C business model that leverages some of Japan's largest customer touchpoints, such as Yahoo! JAPAN, PayPay and LINE.

* Acts on the development of related laws to promote workstyle reforms

Multiple Certifications from Partners

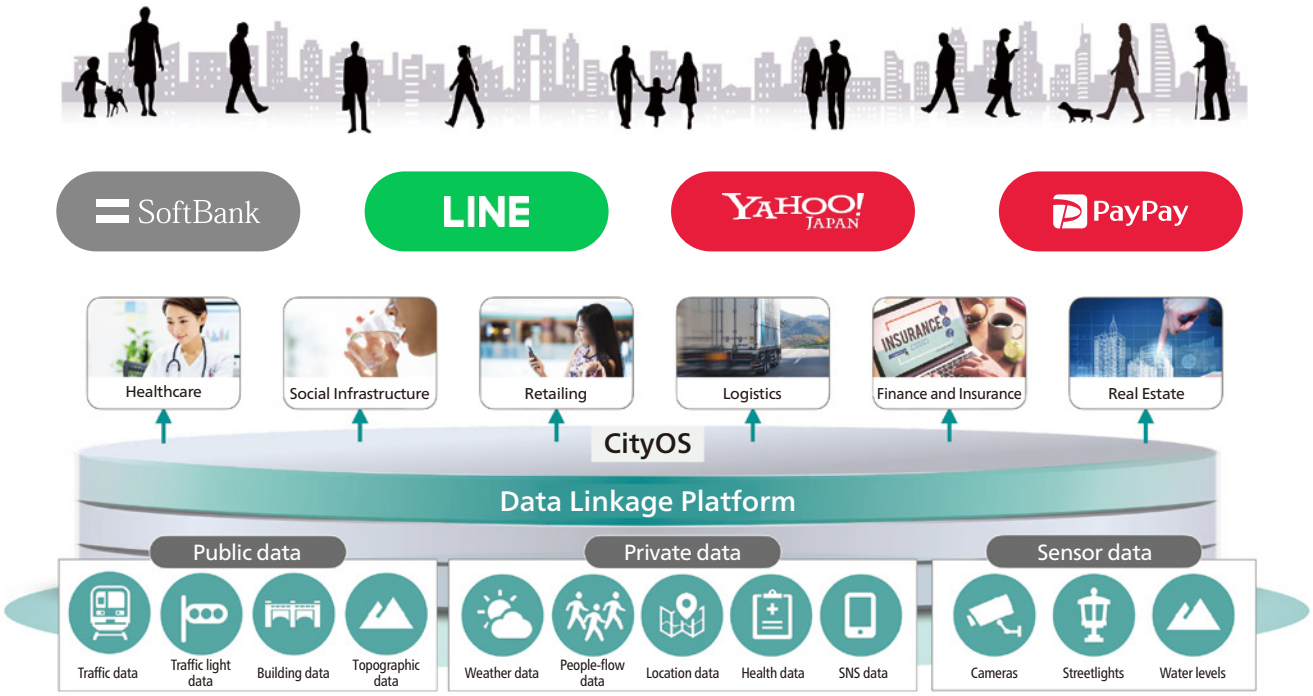
1. MSP: Managed service provider, a business that operates, maintains and monitors systems used by customers
2. Google Cloud is a trademark of Google LLC.

Building Society and Industry through Digital Transformation (DX)

Value Creation 1

Expand and Enhance the Efficiency of the Industrial Base through Cutting-edge Technologies

Promote Corporate and Social DX through Digitization Support



Promoting DX in Society

One initiative for DX in society is smart cities, and SoftBank Corp. is promoting the construction of a next-generation data linkage platform. This next-generation data linkage platform is an infrastructure for centrally linking public data such as traffic information, private data such as weather information and human flow, and sensor data such as cameras and river water levels. By linking healthcare, retail, logistics, finance and other services to the aggregate next-generation data linkage platform, all industries will be further optimized. By delivering these services to residents through SoftBank Corp.'s touchpoints with the largest number of end users in Japan, we aim to provide more convenient and prosperous lifestyles, and at the same time, to create cities that fit the future of Japan, where the working population is decreasing.

One of the features of SoftBank Corp.'s DX business is the aim to create a society in which data is used for all kinds of digital services, such as healthcare and disaster prevention, by connecting information across public and private sectors and all industries to a next-generation data linkage platform. These digital services are created through new businesses co-created with SoftBank Corp.'s partners. By working side-by-side with our partners on the frontlines of the field, we understand the issues and continuously create new businesses with the ability to execute and promote. By leveraging the strength of our many customer touchpoints, including users of both SoftBank Corp. and its group companies, we will build the next-generation infrastructure for these digital services, thereby transforming the social structure. In this way, we will contribute to the promotion of DX in Japan and the creation of a sustainable society.

Building Society and Industry through Digital Transformation (DX)

Value Creation 1

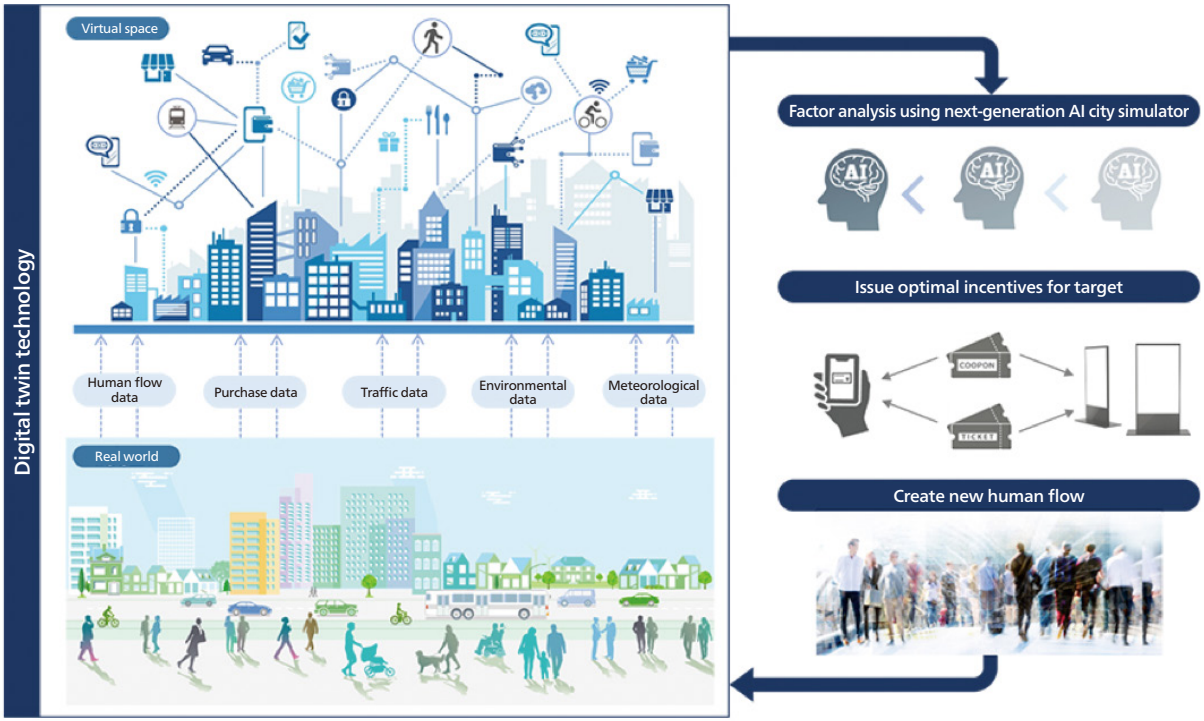
Expand and Enhance the Efficiency of the Industrial Base through Cutting-edge Technologies

Promote Corporate and Social DX through Digitization Support

Next-generation AI Urban Simulator

The Beyond AI Joint Project initiative being implemented by the University of Tokyo and SoftBank Corp. is conducting research on a next-generation AI urban simulator for Ebina Station on the Odakyu Line and surrounding facilities that applies a population flow guidance algorithm to promote behavioral change in visitors. Utilizing digital twin technology, which reproduces the real world in a virtual space, Ebina Station and the surrounding area are simulated in digital space to visualize and predict population flow and behavior using data on human movement, traffic, purchases and visitor attributes. Based on this, the project will develop and implement technologies to ease congestion, promote purchasing, optimize traffic and guide evacuation in the event of a disaster by providing visitors with information via smartphone app notifications, issuing coupons and displaying information on digital signage in facilities to encourage behavioral changes.

SoftBank Corp. will continue to contribute to the realization of a safe and secure society through the promotion of DX, including the use of digital data for disaster preparedness, while striving to make Japan a leading DX country.



Chosen as a DX Stock for the 3rd Consecutive Year

DX銘柄2023 Digital Transformation

SoftBank Corp. was selected as a Digital Transformation (DX) Stock 2023 by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange in recognition of its efforts to support the DX of companies, as well as that of society, to create new industries. SoftBank Corp. was the only company in the information and telecommunications industry to be selected. We also received high marks for our culture of taking on business models that realize DX and continually striving to innovate corporate management, including our in-house entrepreneurship program; the free agent system, which allows employees to apply for a position in another division of their choosing to further their careers; and our proactive stance toward DX, including the establishment of numerous joint ventures.

SoftBank Corp. Becomes the First Japanese Company to Receive the CompTIA Certified Team Award for Two Consecutive Years

CompTIA CERTIFIED TEAM AWARD Recipient

The CompTIA headquarters in the United States provides the annual CompTIA Certified Team Award, recognizing organizations in which at least 80% of staff is CompTIA certified and that demonstrate the skills and dedication to provide superior service internally and externally. SoftBank Corp. became the first Japanese company to receive the CompTIA Certified Team Award for two consecutive years.

Building Society and Industry through Digital Transformation (DX)

Value Creation 1

Expand and Enhance the Efficiency of the Industrial Base through Cutting-edge Technologies

DX Support Initiatives

STAION, an AI Video Analysis Platform Utilizing Camera Footage for a Variety of Applications

SoftBank Corp.'s STAION is an AI video analysis platform that utilizes video data captured by camera for a wide variety of purposes. STAION provides one-stop video analysis solutions applicable to a wide range of industries and businesses through linkage with edge devices to analyze camera footage, communications networks, and services that can use AI-powered analysis to, for example, identify out-of-stock items, empty seats, dangerous behavior and defective products as well as count people and estimate their age and gender.

AI Analysis Service for Retail Powered by STAION

SoftBank Corp. has developed AI Analysis Service for Retail Powered by STAION as the first service using STAION. The service offers three functions: counting the number of store visitors and analyzing their characteristics; measuring the time that visitors spend on the sales floor, and measuring how long visitors look at digital signage. With these functions, customers can use camera footage to formulate and evaluate the effectiveness of marketing measures based on data.

The service is composed of a device that performs AI analysis of video footage, a video analysis platform and a web app (visualization tools). By connecting the AI analysis device to an IP camera,* video data can be analyzed securely on-site, without the need to upload it to the cloud.

Going forward, we plan to roll out functions that meet significant needs in retail, such as analyzing repeat purchases and display arrangement, to contribute to the DX of the retail sector.

* Only cameras that meet the Open Network Video Interface Forum (ONVIF) standard can connect to AI Analysis Service for Retail Powered by STAION.

Next-generation Supermarkets That Enhance Customer Satisfaction with AI

In August 2021, SoftBank Corp. and Kobe Bussan Co., Ltd. opened a directly managed pilot store, Gyomu Super Tenkajaya Ekimae Store (Nishinari-ku, Osaka City) as an experimental next-generation supermarket that utilizes AI and other technologies.

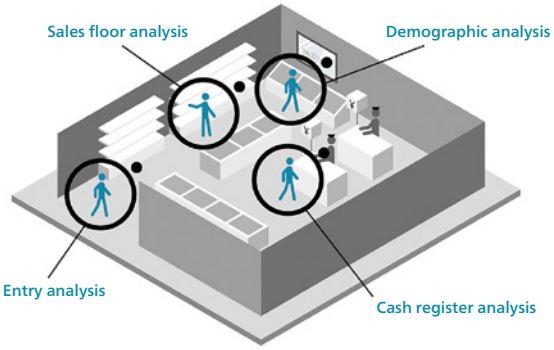
Aiming to further reinforce low-cost operations and enhance customer satisfaction, we are implementing the following initiatives to promote DX in the sector.

1) Automatic detection of out-of-stock items

Video of product displays from cameras on the sales floor is analyzed by AI to provide clear, real-time data on display status and detect out-of-stock items, thereby enabling restocking at the optimal timing.

2) Analysis of customer flow within the store

Using video from cameras in the store, the service can provide AI analysis of the behavior of customers in front of a particular product, or the time that customers spend in line for the register. These results can be used to help boost sales and to optimize the number of registers in operation by predicting the number of waiting customers.



Next-generation supermarket

Building Society and Industry through Digital Transformation (DX)

Value Creation 1

Expand and Enhance the Efficiency of the Industrial Base through Cutting-edge Technologies

DX Support Initiatives

Biz-Raku: Total Support for the DX of SMEs

Biz-Raku is a new solution business of SoftBank Corp. group company ASKUL that uses the power of digital technology to solve business-related problems faced mainly by small to medium-sized enterprises (SMEs) through the provision of software as a service (SaaS) as well as telecommunications products and services necessary for customer DX. SoftBank Corp. and its group companies are providing wide-ranging support for Biz-Raku in the areas of offering telecommunication services and solutions for enterprises.

Biz-Raku logo

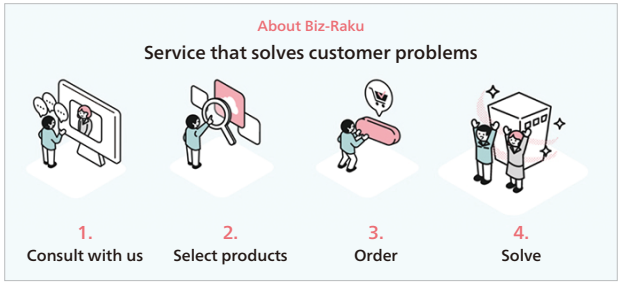
Many SMEs today face the problem of not having in-house IT staff, and their top priorities when selecting a vendor to purchase IT tools are the availability of implementation support and after-sales services, as well as the ease of seeking support and asking questions. To meet these needs, Biz-Raku provides one-stop service through a customer-focused framework encompassing consultation, proposing products that solve issues according to customer needs, a process that allows the customer to actually try SaaS and telecommunication products, and operational support after implementation.

Based on a track record of handling more than 400,000 types of products for enterprise customers, SoftBank Corp. and its group companies are helping develop the Biz-Raku product lineup by carefully selecting easy-to-use products and services that meet customer needs, including groupware, information security and other SaaS, as well as smartphones, Wi-Fi and other communication products. Moreover, SoftBank Corp.'s marketing and system development staff are assisting with the Biz-Raku business and providing knowledge and expertise in areas such as customer support. SoftBank Corp. group company SB Engineering Corp., meanwhile, provides and operates Minnano IT Support, an IT systems outsourcing service that is one of the services offered through Biz-Raku.

Aiming to "create tomorrow's digitalization of small and medium-sized enterprises," ASKUL and SoftBank Corp. will strive to further expand their offerings of products and services to accommodate the changing work styles and new needs of customers in order to contribute to SME DX and workstyle reforms.

Service Content and Features of New Business Biz-Raku

Biz-Raku is a solution business that uses the power of digital technology to solve the business-related problems faced mainly by SMEs against a backdrop of workstyle changes, labor shortages and legal reforms. Based around a website that sells SaaS and telecommunication products and services, Biz-Raku combines consultation services provided by professional staff with sales services to help customers solve their problems. Combining the insight into customer issues provided by ASKUL's contact with customers at all kind of workplaces across Japan with SoftBank Corp.'s track record in supporting companies' DX using cutting-edge solutions, Biz-Raku provides services that make work easy.



Biz-Raku Consultation Room is a free service that allows customers to seek consultation by phone or online about their digitization and IT issues.

Minnano IT Support is an IT operations outsourcing service provided using tablets.

Note: This service is provided and operated by SB Engineering.

Building Society and Industry through Digital Transformation (DX)

Value Creation 1

Expand and Enhance the Efficiency of the Industrial Base through Cutting-edge Technologies

DX Support Initiatives

DX of Construction Sites Using 5G

Aiming to realize remote supervision of construction sites, we are conducting trials using 5G and digital twin technology at East Japan Railway Company's (JR-East) large-scale replacement of the Senju Power Plant (Tokamachi City, Niigata Prefecture).

During the construction phase, JR-East performs quality checks at construction sites in multiple aspects, for example to ensure that the dimensions of the structure and the type and location of the rebar are in accordance with the design drawings, among other items. Currently, this requires time-consuming travel from the office to the construction site and in-person confirmation. In the demonstration experiment, digital twin technology, which acquires images and point cloud data at construction sites and reproduces on-site conditions in a virtual space, will be used to perform quality checks and other tasks remotely, such as from the office. Drone and other tools will be utilized to acquire images and point cloud data, and methods of data acquisition and confirmation that do not rely on human labor are being considered. In addition, 5G with its high-speed and large-capacity communications will be utilized for transmission of acquired data to enable real-time, remote monitoring of construction status. With the aim of promoting workstyle reforms in construction work, the results of the trials will be horizontally deployed in various projects to realize DX in construction projects.

At the construction site (acquire images and point cloud data in real space)/At the office (check the construction site in virtual space)

VR Remote Support Enables Remote Group Training and Operational Support

Human capital development is a challenge shared by all corporations. As the COVID-19 pandemic complicated group training and on-site education, SoftBank Corp. received inquiries from many enterprises about remote training. To address these needs, we partnered with Pocket Queries, Inc., which has strengths in the development of systems using XR[1] technology, to jointly develop a new service called VR Remote Support.

VR Remote Support offers Training Mode, for creating and sharing VR[1] training materials to enable remote group training, and Real Time Mode, in which a 360° camera is set up in a factory or other workplace, and someone in a remote location uses VR to provide instructions and support to the people on-site. Leveraging high-speed, high-volume 5G communications and the latest VR technology, VR Remote Support enables the acquisition of skills and know-how through practical experience in VR space that cannot be achieved through e-learning.

Using an iPad to provide VR remote support

The easy-to-use service provides the application, cloud environment and communication network[2] setup in a seamless package, so that customers only need to use the 360° camera and VR devices or tablets. When used within our 5G area, the service can stably stream high-definition VR video to multiple devices simultaneously.[3]

SoftBank Corp. and Pocket Queries, Inc. are combining their technological strengths to understand the needs of diverse customers and add new functions and improvements to make VR Remote Support easily accessible to a wide variety of customers, regardless of scale or industry.

1. Extended reality, a term encompassing a number of advanced technologies, including virtual reality (VR), augmented reality (AR) and mixed reality (MR).
2. The service can be used on closed networks, without passing through the external Internet.
3. Depending on the application specifications, up to 10 VR devices and tablets can be connected at once.

Remote group training using VR goggles

Building Society and Industry through Digital Transformation (DX)

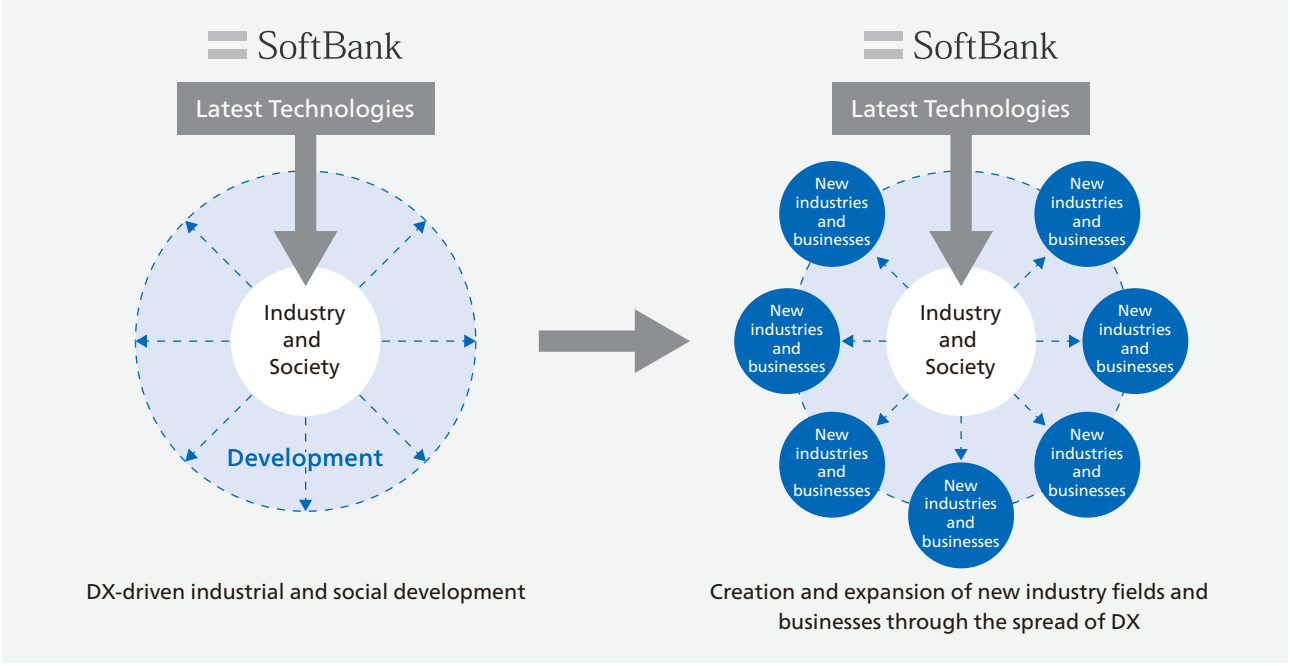
Value Creation 2

Create New Industries through DX

Aiming to solve a wide range of social issues, we will work to create and develop new industries, fields and businesses through the spread and penetration of cutting-edge digital solutions and services, such as AI, RPA and IoT.

Approach

We will create diverse use cases by promoting the use of DX solutions and services in various industries, companies and organizations. By doing so, we will not only maximize our customers' enterprises and businesses, but dramatically increase new business opportunities. Furthermore, we will broker business matching and otherwise provide opportunities for companies and organizations to come together in ways not achievable under traditional business practices and values.



DX-driven industrial and social development

Creation and expansion of new industry fields and businesses through the spread of DX

Mainly through 25 projects, we are working to develop new business models through DX and implement them in society.

The business models generated through DX will solve a variety of social issues in such areas as corporate work-style reforms, logistics, healthcare and infrastructure. By enhancing efficiency in all kinds of processes and jobs throughout society, they will make people's lives richer and safer.

25 Projects for Advancing DX	
Retail/distribution	4
Logistics	2
Health insurance/finance	5
Infrastructure	7
Healthcare	3
Super cities/smart cities	2
Other industries	2

As of March 31, 2023

Building Society and Industry through Digital Transformation (DX)

Value Creation 2

Create New Industries through DX

Medical Care/Healthcare

HELPO—Promoting Healthcare DX

Japan today faces numerous problems that threaten the sustainability of conventional medical care, such as ballooning medical costs due to severe demographic graying and overworked physicians. A multifaceted approach is needed to resolve these issues, including a review of existing systems. One important measure is to prevent risks at the presymptomatic stage, thereby halting the progression of a health condition into a full-blown disease. This approach is expected to help reduce medical costs.

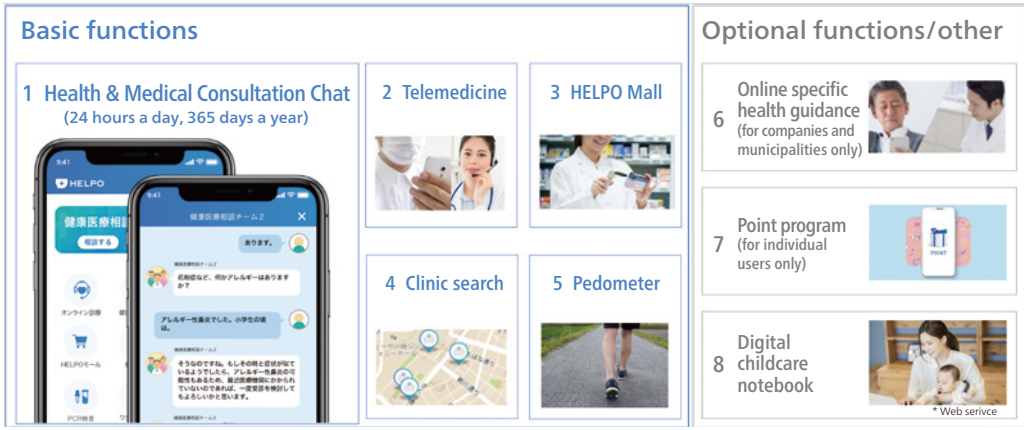
Doctors	Hospitals with doctors who work more than 155 hours overtime per month	71%[1]	Overworked
Government	Medical expense in 2020	¥16 trillion (National health expenditure: ¥42.9 trillion)[2]	Rising medical costs
Citizens	Takes more than 30 minutes to see a doctor at a hospital	43.2%[3]	Obstacles to healthcare

1. Source: Ministry of Health, Labour and Welfare study report on workstyle reforms for physicians (figure for hospitals with 400 or more beds)
2. Source: Ministry of Health, Labour and Welfare 2020 summary of national medical care expenditure
3. Ministry of Health, Labour and Welfare 2017 patient's behavior survey

Healthcare Technologies Corp., a SoftBank Corp. subsidiary, provides the HELPO healthcare app to improve the health of each individual by promoting new business in the healthcare sector, thereby helping to ensure that Japan's unique universal healthcare system will be maintained for future generations. The main service of HELPO is a Health & Medical Consultation Chat which allows users to freely consult with a medical team of physicians, nurses and pharmacists 24 hours a day, 365 days a year when they start to feel unwell (during the presymptomatic disease phase) or when they feel uneasy about their physical condition. Based on the consultation chat, users will be advised on the appropriate action to take. If the user needs to see a physician at a medical institution, the app will provide guidance on the appropriate medical department. If treatment with over-the-counter drugs is appropriate, the app will provide information on the suitable medicine available on HELPO Mall, an e-commerce website for over-the-counter drugs.

In addition to over-the-counter drugs, HELPO Mall offers a wide variety of products such as health foods, cosmetics, daily necessities and test kits. Within central Tokyo, products arrive in as little as three hours, making it easy for users to purchase over-the-counter drugs or daily necessities when they have a spare moment, even during a busy day. HELPO also offers telemedicine service during the day on weekdays and, since July 2022, on weekday evenings and weekends. This allows HELPO to offer a full range of healthcare services, from health and medical consultations to telemedicine. Beginning in December 2022, in addition to existing services for companies and municipalities, HELPO launched services for individuals. SoftBank Corp. will continue to expand HELPO's functions through co-creation with partner companies to promote healthcare DX in Japan.

Providing a full range of online healthcare services



HELPO service functions

Building Society and Industry through Digital Transformation (DX)

Value Creation 2

Create New Industries through DX

Medical Care/Healthcare

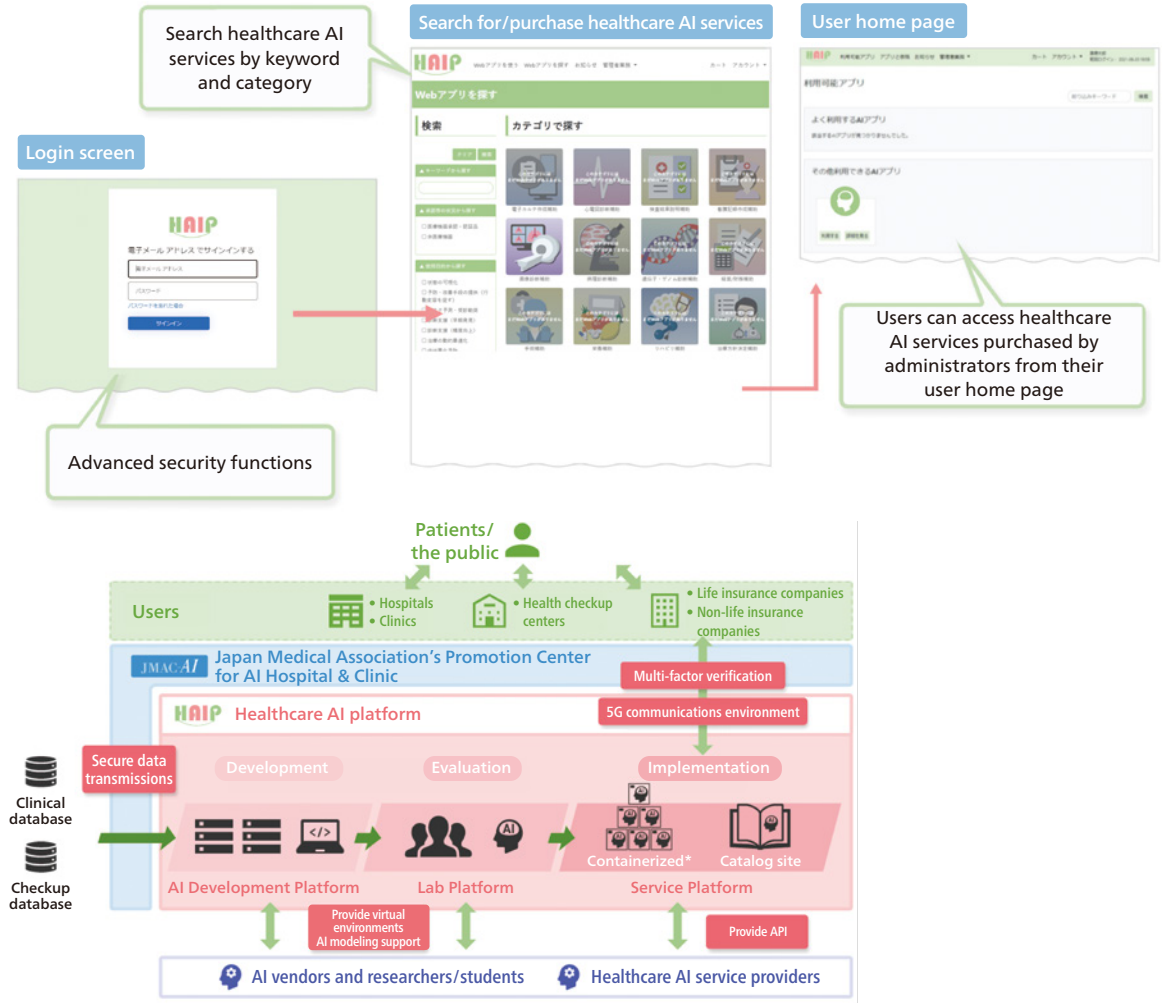
Healthcare AI Platform Collaborative Innovation Partnership (HAIP)

SoftBank Corp., BIPROGY Inc., Hitachi, Ltd., IBM Japan, Ltd. and other partners established the Healthcare AI Platform Collaborative Innovation Partnership (HAIP) on April 1, 2021 to promote the spread and development of healthcare AI services. As of May 1, 2023, HAIP comprises 16 domestic enterprises, including private companies, universities and national research institutions. Working with the Japan Medical Association's Promotion Center for AI Hospital & Clinic, HAIP aims to spread and develop healthcare AI services by providing an integrated healthcare AI platform encompassing the development, evaluation and implementation of healthcare AI.

This healthcare AI platform comprises the AI Development Platform, which enables the development of healthcare AI using medical data; the Lab Platform, which supports AI evaluation; and the Service Platform, which provides healthcare AI services. Moreover, HAIP is engaged in R&D on platform technology issues that are common to the entire industry and cannot be addressed by individual companies, such as the utilization of various healthcare data, the establishment of common connection procedures based on next-generation standards, providing a high-security environment to guard against threats such as ransomware, and complying with international standards such as HL7 FHIR.

The development of medical AI services will provide a variety of assistance to tasks previously only performed by medical professionals, such as diagnostic imaging, genomic diagnosis, differential diagnosis and deciding treatment courses. By aiming to develop the service in a form that can be easily introduced at rural clinics and other facilities, we hope to encourage the widespread use of healthcare AI services and help eliminate disparities in medical care.

▼ Healthcare AI Platform Portal Mockup



* Containers: A technology for efficiently running multiple applications. Containerized systems increase the portability of healthcare AI services from on-premise environments to cloud environments.

Building Society and Industry through Digital Transformation (DX)

Value Creation 2

Create New Industries through DX

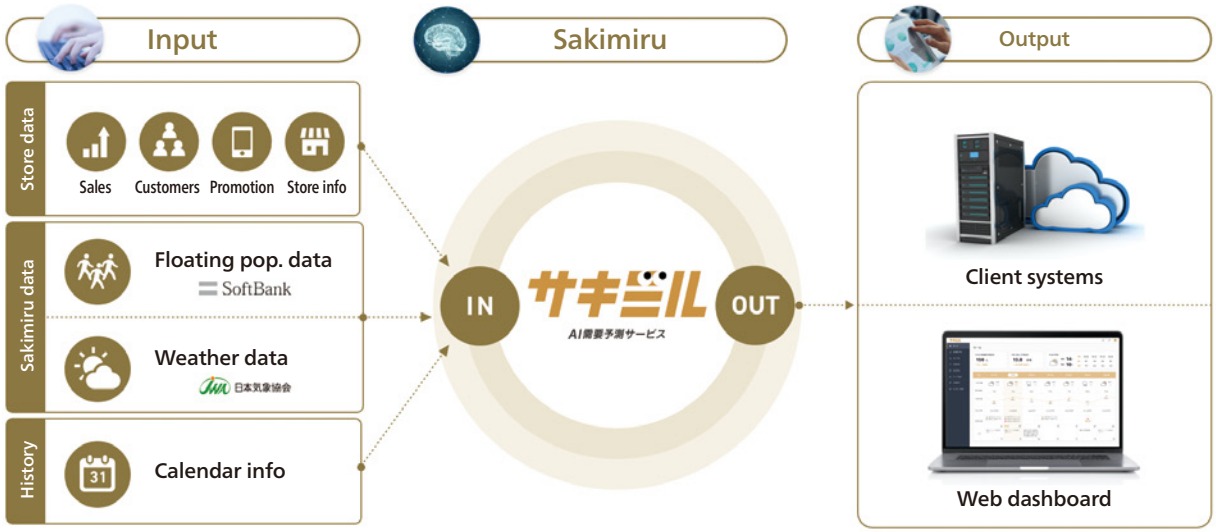
Retail/Food & Beverage

Sakimiru Demand Forecasting Service

Reducing Dependence on Individuals, Food Waste, Opportunity Loss and Costs

Japan's retail and food service industries face numerous issues, including 5.7 million tons of food waste per year,[1] high employee turnover and difficulty hiring. The food industry, in particular, has lagged in terms of IT investment compared with other industries, and relies heavily on human resources and analog operations, leading to operational inefficiencies and food loss when customer counts and demand forecasts based on experience and intuition are off. To address this serious social issue, SoftBank Corp. collaborated with the Japan Weather Association to create Sakimiru, which means "see the future," an AI-powered demand forecasting service using population flow data[2] and weather data.

Utilizing Sakimiru helps resolve such issues as dependence on specific individuals to perform certain tasks, food waste, opportunity loss and wasteful expenses. AI demand forecasting makes it possible to optimize product orders and work shifts based on the number of expected customers with the aim of eliminating dependence on individual's skills and reducing expenses. In addition, sales promotions can be conducted at optimum times based on the number of visitors, contributing to improved sales and operational efficiency.



What makes Sakimiru unique is its ability to predict the number of customers visiting a store with a high degree of accuracy by using demand forecasting algorithms based on inputs such as client company data, population flow data and weather data. The latter includes temperature, solar radiation, wind speed, precipitation, snowfall, humidity and other weather data from the Japan Weather Association, while population flow data is derived from SoftBank Corp.'s base stations, which have access to tens of millions of mobile phone locations, which are then extrapolated to Japan's population of approximately 120 million. The data obtained is analyzed using an AI algorithm jointly developed by data scientists from SoftBank Corp. and the Japan Weather Association to predict the number of customer visits up to two weeks in advance. In addition, by understanding the flow of people in a store's area, it is now possible to predict the number of customers who will visit the store without relying solely on past store data results.

SoftBank Corp. will effectively utilize data through Sakimiru to help solve issues in the retail and food service industries from multiple perspectives.

1. FY2019 estimate from the Ministry of Agriculture, Forestry and Fisheries of Japan
2. Uses data from the National Movement Statistics. Service is provided by utilizing statistically processed data that is anonymized so that individuals cannot be identified.

Building Society and Industry through Digital Transformation (DX)

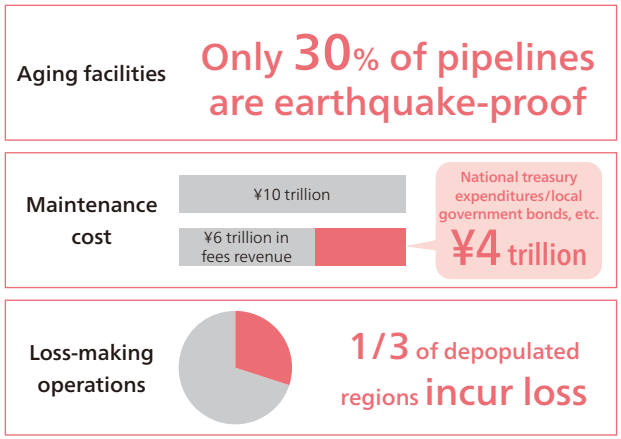
Value Creation 2

Create New Industries through DX

Infrastructure

WOTA—Constructing a Decentralized Water Supply System Independent of Water Infrastructure

As Japan faces societal problems related to aging infrastructure, maintaining water supply infrastructure and the rising costs of doing so are becoming more of an issue every year. At the same time, many regions of the globe are experiencing increasingly severe water shortages due to climate change.



In order to use the power of technology to find solutions to these problems, SoftBank Corp. has formed a partnership with WOTA Corp., a water treatment autonomous control technology company. By combining WOTA's small-scale decentralized water reuse system and SoftBank's knowledge in communications technology and infrastructure construction, we aim to introduce a decentralized water supply system that is independent of water service in Japan.

WOTA aims to solve water supply infrastructure issues with its core technology, namely IoT and AI-based water treatment technology that can be autonomously controlled. WOTA's proprietary IoT sensors measure water quality, and AI derives the optimal recycling treatment process based on the sensor data, achieving a water recycling rate of over 98%. In addition, as sensor measurement data is accumulated to train the AI, the optimal water treatment algorithm is constantly evolving, leading to more efficient water treatment.

Working toward practical social implementation, in fiscal 2023 we began a pilot test in the village of Toshima, Tokyo, using a small-scale decentralized water reuse system developed by WOTA to recycle all domestic wastewater. The project is aimed at solving a variety of water-related challenges faced by Toshima and the other Tokyo Islands, such as the operating losses of public water services, drought risk and insufficient management personnel.

WOTA is developing a number of products and technologies, aiming for practical social implementation. One example is the portable water reuse system WOTA BOX, which utilizes water recycling technology to enable many people to use water for bathing and other purposes even when water supply is limited due to municipal water services being disrupted by a disaster. Another example is the water reuse hand-wash stand WOSH, which can be installed in locations without water supply and is designed to be an effective part of community-wide public health measures.

Through decentralized water reuse systems using cutting-edge technology, SoftBank Corp. and WOTA will continue to develop sustainable next-generation water infrastructure, working to solve water-related problems in Japan and around the world.

Constant Monitoring Using AI and IoT Sensors

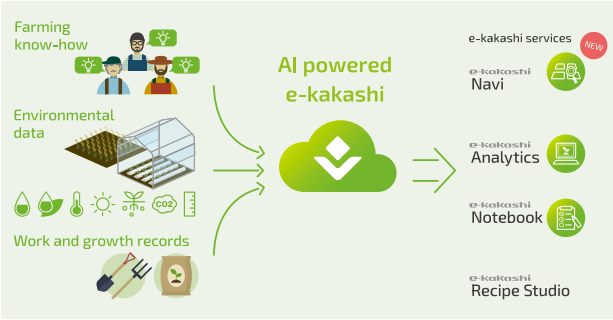
Monitor and control WOSH conditions and water quality with sensors and water treatment AI allowing immediate notification on the dashboard

e-kakashi IoT Sensors Support Smart Agriculture

The e-kakashi system uses IoT sensors to analyze environmental data collected from indoor and outdoor farm fields, weather data, data on crop growth and work performed with AI that incorporates knowledge from plant science to suggest optimal cultivation methods. This IoT solution is being used in Japan and overseas.

e-kakashi is also used for environmental conservation. As one aspect of this, we are providing the Natural Capital Credit Consortium (in which SoftBank Corp. has participated since December 2022) with e-kakashi's AI-powered "brain" for agriculture (its CO_2 absorption estimation system) to help with verification testing of estimating the CO_2 absorption of trees and other plants.

SoftBank Corp. will continue aiming to provide a variety of data on cultivation technology and the results of its analysis as solutions as it advances R&D to make e-kakashi an agricultural information platform that helps solve a variety of issues in agriculture, such as improving cultivation efficiency, production volume and quality, and passing on skills, while providing new value through synergy.



Building Society and Industry through Digital Transformation (DX)

Value Creation 2

Create New Industries through DX

Smart Cities

The rapid population inflow to cities around the world is leading to a variety of problems, such as traffic congestion and air pollution, rising crime rates and environmental degradation. To address these, the smart city is attracting growing interest as a new concept for urban environments. Today, Japan is facing severely graying demographics and a serious decline in its working population. Efforts to realize smart cities are aimed at solving these problems, upgrading social infrastructure and creating a sustainable society. To realize smart cities, it is essential to enhance collaboration on various DX solutions across industries.

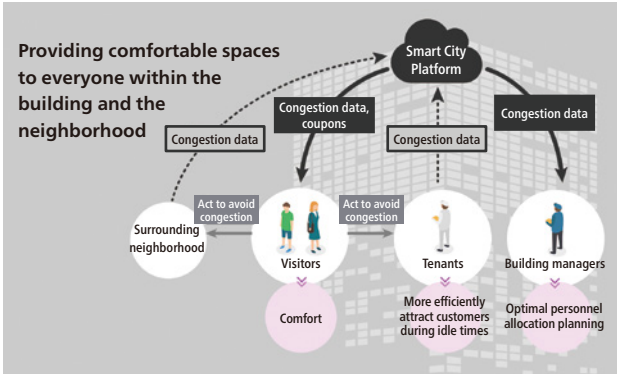
Enhancing collaboration will require the cooperation of all parties involved in the community, including local governments, landowners, developers, building tenants, tenant companies, building management and neighbors. In our view, it is crucial to make cities and towns not just places to attract people and businesses, but places that offer a forum for activities that provide added value to society. So far, we have advanced initiatives for smart cities that are suited to the specific characteristics of two types of areas: depopulated areas and urban areas.

By using the cutting-edge technologies of our service segment group companies, we aim to solve various challenges facing people, businesses, society and communities. We believe that providing various IoT platforms to the people involved will open up new service possibilities.

We will advance smart cities through co-creation powered by IoT, ICT and DX solutions to realize sustainable cities and regions that aim for overall optimization to promote the well-being of their inhabitants.

Smart City Takeshiba

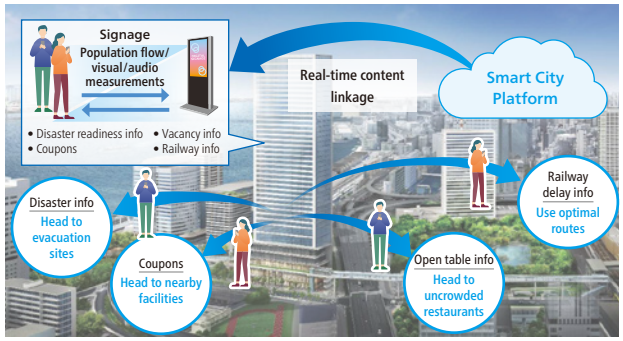
SoftBank Corp. is working with Tokyu Land Corporation to build a model urban smart city in the Takeshiba area of Tokyo, which is a national strategic special zone. At Tokyo Port City Takeshiba Office Tower, SoftBank Corp.'s headquarters, approximately 1,400 sensors are in operation to acquire a variety of data within the building. By collecting and utilizing the data on the platform, the system provides a mechanism to disseminate useful information to building users in real time, such as distributing coupons to workers and visitors at appropriate times by comparing the congestion rate of restaurants in the building to the weather and time of day. This system received a 2022 Good Design Award as smart city model case.



"Congestion visualization solution for Smart City Takeshiba" received a 2022 Good Design Award

Beginning in FY2023, we are working to expand these initiatives by utilizing the Smart City Platform data exchange platform—which enables the real-time use of wide-ranging data collected in the Takeshiba area—to solve urban issues, such as reinforcing disaster prevention measures and enhancing visitor circulation. Specifically, we are implementing a disaster-readiness service that obtains and transmits information about the state of the neighborhood in real time and using digital twin technology to enhance area management after a disaster. We are also installing cameras in digital signage to track visitor traits and behavior patterns in order to provide data on specific facilities and promote cross-visitation and circulation.

We will continue working to solve issues across a wide range of fields in order to promote economic development and the creation of added value in the Takeshiba area.



Building Society and Industry through Digital Transformation (DX)

Value Creation 2

Create New Industries through DX

Smart Cities

Promoting Smart City Initiatives in Aizuwakamatsu City

AiCT Consortium was established to further regional revitalization in Aizuwakamatsu City. As a member of the Consortium, SoftBank Corp. is involved in efforts to enhance resident services in such areas as disaster prevention and healthcare.

Since March 2023, we have provided city residents with the Digital Bosai app, which provides personalized evacuation support based on user attributes and location data and helps users confirm the safety of their families in the event of a disaster. In addition, by linking the HELPO healthcare app with the Aizuwakamatsu Plus community information portal for residents, we are supporting health management that is closely aligned with the living habits of individual residents.

Going forward, we will promote Aizuwakamatsu nationwide as a model smart city for Japan, aiming for regional DX.

Digital Bosai service that uses location data

National Movement Statistics—Data on the Movement of 120 Million People Throughout Japan

Japan is already confronting certain challenges that are still down the road for many other nations, and Japanese cities face a wide variety of problems, such as traffic congestion, aging infrastructure and frequent natural disasters. SoftBank Corp. is working to solve these problems through the concept of smart infrastructure. As one such initiative, we have released a human flow statistics service, National Movement Statistics, in collaboration with Pacific Consultants Co., Ltd.

National Movement Statistics is a human flow statistics service that combines the fully anonymized location for tens of millions of devices from SoftBank Corp.'s mobile phone base stations with Pacific Consultants' knowledge and know-how in urban planning, transportation planning and other aspects of social infrastructure. We are able to extrapolate from data on the movement of people to make predictions about the entire population of Japan (approximately 120 million people). We achieve highly accurate estimations by combining location data, current usage data for railways and other transportation modes, and statistical data such as the population in each area.

We support urban development measures by making data related to the movement of people easily accessible. This extends to urban planning and development, disaster countermeasures, plans for the opening of commercial facilities, invigoration of tourist spots and even the introduction of new mobility services.

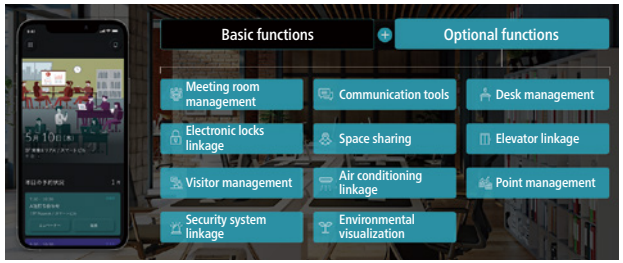
Smart Work Solution

Workstyle reforms in recent years, coupled with the rapid expansion of online meeting and other remote work tools in the wake of the COVID-19 pandemic, have enabled more flexible ways of working unbound by time or location. As a result, the role of the physical office is changing.

However, conventional offices were not designed with flexible workstyles in mind. As such, existing offices are facing a range of issues related to time and location restraints, such as insufficient meeting rooms to accommodate the increase in online meetings, insufficient supply of booths for making calls, difficulty locating employees when using free-address systems, and the absence of necessary staff during hours when customer inquiries are received.

SoftBank Corp. offers the smartphone app WorkOffice+. Through the app, users can maintain optimal control of building facilities (such as air conditioners, security systems and other building facilities), and IoT devices. Optimization is based on user needs and activity, including reservations and usage of meeting rooms and desks, along with data on people entering and exiting the premises. We provide end-to-end support covering all the installation, consulting, and communications network set-up necessary to adopt the app, enabling more flexible workstyles.

Since its release in 2021, the app has been used by a wide range of companies, including both office building owners and tenants. It has been adopted at +SHIFT NOGIZAKA, an office building developed by Sun Frontier Fudousan Co., Ltd. in Minato-ku, Tokyo, at the new headquarters of AEON DELIGHT CO., LTD. in Chiyoda-ku, Tokyo, and at Takenaka Central Building South, a property jointly owned by Takenaka Corporation and ASAHI FACILITIES INC.



Functions of WorkOffice+

Building Society and Industry through Digital Transformation (DX)

Value Creation 2

Create New Industries through DX

Smart Cities

Linking WorkOffice+ with Takenaka Corporation's BCS Plus

Takenaka Corporation provides Building Communication System Plus (BCS Plus), a smart building solution package built around a cloud-based building OS that accumulates data from building equipment monitoring and IoT sensors. By linking BCS Plus with SoftBank's WorkOffice+, tenants can use the environment visualization functions of WorkOffice+ to check office temperature and humidity as well as the availability of restrooms within the building via the WorkOffice+ smartphone app. Furthermore, using the request function (an optional environment visualization function), tenants can communicate their perceptions, such as whether a space is hot or cold, to building managers, who can adjust the air conditioning accordingly, helping to balance electricity use optimization with tenant comfort.

In March 2023, BCS Plus was installed at Takenaka Central Building South, a property jointly owned by Takenaka Corporation and its group company ASAHI FACILITIES INC. Going forward, by expanding the use of Takenaka's BCS Plus, we will support efforts to improve office comfort while advancing efforts toward carbon neutrality.

Collaboration on the Nagasaki Stadium Project

SoftBank Corp. and Japanet Holdings Co., Ltd. are collaborating on ICT for the Nagasaki Stadium City Project, a complex centered on a stadium that the Japanet group aims to open in 2024. The stadium at the heart of Nagasaki Stadium City has been named "PEACE STADIUM Connected by SoftBank," reflecting our commitment to promoting peace from the stadium and creating a next-generation Stadium City that produces new value by leveraging cutting-edge technologies built on communications to connect people, goods and information. Through this project, we aim to realize a new regional development model that will lead the way toward the future of Japan.

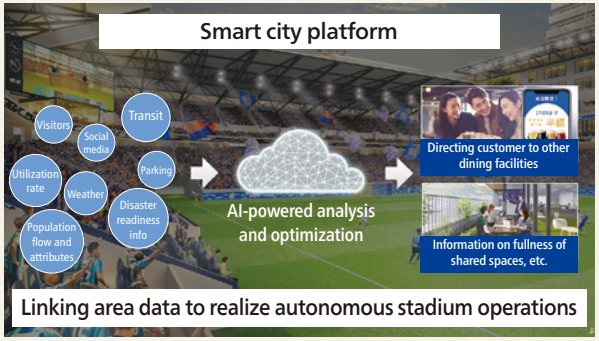
We are currently considering the following initiatives.

1. Building a Communications Network as the Foundation for a Smart City

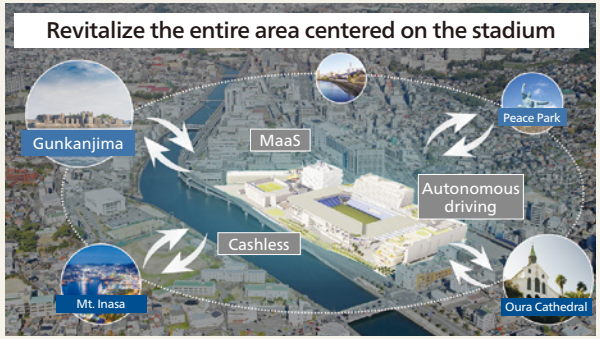
Working with its group companies and other partners, SoftBank Corp. is building a communications network that will support a smartphone app being planned by the Japanet Group specifically for Stadium City. By connecting the people, goods and information in Stadium City, this initiative aims to provide unprecedented and inspiring customer experiences, leverage data to facilitate efficient facility operations, and stimulate consumption within the facility and the surrounding community.

2. Creating a Stadium City Where Visitors Will Stay Longer by Facilitating Comfort

By analyzing population flow data, we will inform visitors about crowded areas, helping them avoid congestion and stay in comfort, for longer, in Stadium City.



Smart city platform



The future smart city

Building Society and Industry through Digital Transformation (DX)

Value Creation 2

Create New Industries through DX

Fintech

Expanding Insurance Possibilities InsurTech Solutions

While the Japanese insurance market is one of the largest in the world, it faces the threat of shrinkage due to population decline, automated driving technology, related technological innovations, and other factors. Needs are evolving with changes in consumer lifestyles and preferences, as well as the progress of digitization, requiring the digital transformation (DX) of the entire insurance industry. LeadInX Corp., a SoftBank Corp. subsidiary, advances DX in the insurance industry by providing insurance companies and agencies with InsurTech services, new insurance planning and business matching, and marketing support for insurance sales.

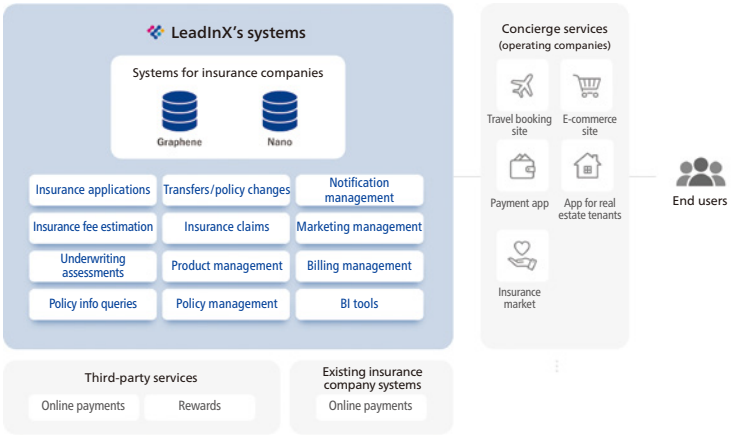
By providing digital insurance systems—Graphene and Nano for insurance companies, and Fusion for insurance agencies—LeadInX helps seamlessly link insurance companies and insurance agencies while offering excellent scalability and flexibility to enable speedy product deployment and insurance operation automation through AI. In addition, we statistically analyze policyholder trends and efficiently use this information to improve service through, for example, improved UI and UX, as well as to plan new products, thereby providing products that meet diversifying end-user needs.

The use of LeadInX's systems enables the development of insurance programs that users can easily enroll in through their smartphone. The scenario-specific insurance offered through Yahoo! JAPAN Shopping, YAHUOKU! And Yahoo! Japan Travel places insurance sales within the flow of other purchasing processes, providing an excellent user experience in which customers can apply and pay for insurance right when they buy a product or make a travel reservation. A cumulative total of more than 1.9 million such policies have been purchased to date (as of July 2023).

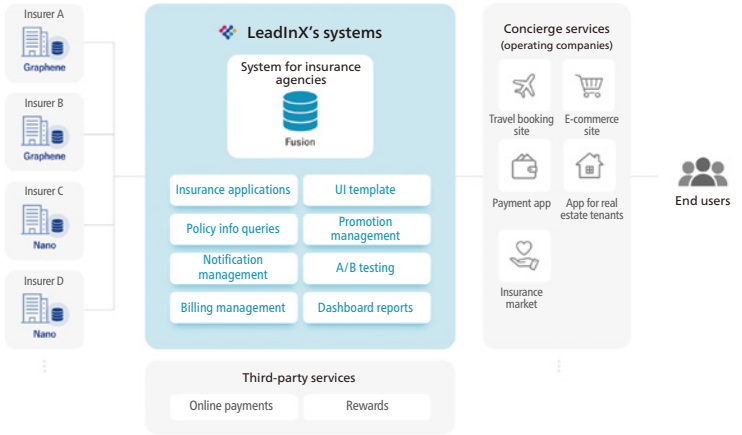
PayPay Hoken (insurance), a mini app offered through the PayPay cashless payment service, provides an easy and smooth insurance enrollment process. PayPay Hoken provides a marketplace offering a wide range of insurance products. A cumulative total of more than 2.0 million such policies have been purchased through the marketplace to date (as of July 2023).

In January 2023, the PayPay Hoken mini app launched sales of "Influenza Allowance" and "Anshin Medical" insurance, the result of working with insurers and agencies to plan and develop new forms of insurance and providing a digital insurance system and UI/UX support to enhance service value. In addition, we sold "Heat Stroke Allowance" insurance for a limited time between April and October 2022, garnering significant media attention. Sales of this insurance were reopened in April 2023 with a discount for repeat customers, pushing forward with new efforts to improve insurance based on past data.

LeadInX is committed to improving convenience for insurers, insurance agencies (partners), and end users by utilizing technology to realize a society in which every individual can easily access insurance and live life to the fullest.



Graphene and Nano Systems for Insurance Companies



Fusion System for Insurance Agencies

Building Society and Industry through Digital Transformation (DX)

Value Creation 3

Revitalize Local Communities (Regional Revitalization)

Through the utilization of cutting-edge technologies and DX promotion, we will address various regional social issues and contribute to the realization of regional revitalization, aiming to provide goods and services that meet diverse needs while eliminating disparities, as envisioned with Society 5.0.

Collaboration with Local Governments and Organizations

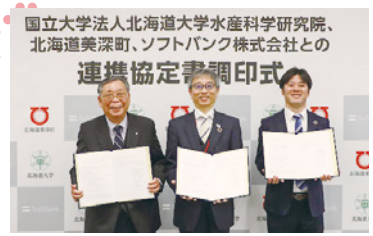
SoftBank Corp. is working to deepen ties with local governments and communities and help solve issues in local communities through ICT in order to contribute to regional revitalization.

Regional revitalization is one of the most important strategies of the Japanese government to address its rapidly shrinking population and severe demographic graying. Various initiatives are being undertaken with the goals of creating autonomous and sustainable communities that make the most of their unique regional characteristics and maintaining a vibrant society for the future. In addition, the government's Vision for a Digital Garden City Nation is promoting the implementation of digital technology starting in regional areas to create a new wave of change and narrow the gap between rural and urban areas. Against this backdrop, technology is becoming increasingly important in regional revitalization.

State-of-the-art technologies such as 5G, IoT and AI play a role in the shift to more comfortable and convenient lifestyles. At the same time, though, they have the potential to help solve various issues facing communities, such as advancing ages and the declining birthrate. For example, the development of 5G networks will make it easier to create and grow businesses and industries in various regions, not just metropolitan areas, leading to regional revitalization and national resilience, which are indispensable for improving international competitiveness. In addition to 5G, we believe the power of the cutting-edge technologies of SoftBank Corp. and its group companies, such as cashless and other fintec, MaaS, AI, IoT and smart cities, will greatly support regional revitalization.

We are pioneering efforts to study various issues faced by local governments, implement advanced initiatives and solve problems using cutting-edge technology, leveraging ICT to help solve issues in regional communities. We are also deepening our ties with local governments and communities by dispatching our DX personnel there and holding seminars and other events to raise awareness of DX among local officials. SoftBank Corp. also provides advisory services to local governments while conducting a wide variety of initiatives and demonstrations, including services provided by group companies. To ensure the stability of these efforts, we have concluded various partnership agreements. To date, we have concluded various partnership agreements with 113* local governments nationwide.

* As of July 31, 2023



Building Society and Industry through Digital Transformation (DX)

Value Creation 3

Revitalize Local Communities (Regional Revitalization)

Collaboration with Local Governments and Organizations

Partnership Agreements with Local Governments

Note: Agreements concluded after April 1, 2022 (as of March 31, 2023); some agreements are omitted.

Partner local government	Agreement date	Partnership description
Shima City, Mie Prefecture	April 22, 2022	Cooperation agreement on DX promotion for local government
Oita City Board of Education	May 10, 2022	Cooperation agreement on support for improvement of citizens' ability to utilize information
Uozu City, Toyama Prefecture	May 10, 2022	Cooperation agreement on the promotion of ICT and digital technology
Kagoshima City Board of Education	May 16, 2022	Cooperation agreement on ICT-enabled AI human resource development
Funabashi City, Chiba Prefecture	June 1, 2022	Business cooperation agreement on digital education
Komatsu City, Ishikawa Prefecture	June 3, 2022	Comprehensive cooperation agreement on regional revitalization through ICT and promotion of municipal DX
Usa City, Oita Prefecture	July 22, 2022	Business cooperation agreement for training digital utilization support staff and improving citizens' ability to utilize information
Moriguchi City, Osaka Prefecture	July 22, 2022	Cooperation agreement on solving regional issues
Morioka City, Iwate Prefecture	August 30, 2022	Cooperation agreement on promoting municipal DX
Ozu Town, Kumamoto Prefecture	September 22, 2022	Cooperation agreement on enhancing resident services using ICT
Kokonoe, Kusu District, Oita Prefecture	October 26, 2022	Business cooperation agreement for training digital utilization support staff and improving citizens' ability to utilize information
Saitama City, Saitama Prefecture	November 1, 2022	Cooperation agreement on digital divide countermeasures
Usuki City, Oita Prefecture	November 2, 2022	Business cooperation agreement on promoting digital transformation
Hyuga City, Miyazaki Prefecture	November 10, 2022	Business cooperation agreement on supporting the improvement of residents' digital literacy
Kamiita Town, Tokushima Prefecture	January 18, 2023	Business cooperation agreement on supporting the improvement of digital literacy of the elderly
Shizuoka Prefecture	January 26, 2023	Cooperation agreement on DX promotion
Yonago City, Tottori Prefecture	February 1, 2023	Comprehensive cooperation agreement on DX promotion
Sera Town, Hiroshima Prefecture	February 15, 2023	Cooperation agreement on developing human resources with digital skills and promoting digitalization
Nanto City, Toyama Prefecture	March 1, 2023	Comprehensive cooperation agreement aimed at regional revitalization through DX
Higashimurayama City, Tokyo	March 3, 2023	Cooperation agreement on providing the Ugokuma walking app
Kawaminami Town, Miyazaki Prefecture	March 24, 2023	Business cooperation agreement on supporting residents' ability to use digital technologies
Yamagata City, Yamagata Prefecture	March 29, 2023	Cooperation agreement on regional revitalization through DX and ICT and enhancing resident services

Collaborative DX Training for the Toyama Prefectural Government

SoftBank Corp., Toyama Prefectural University and the Toyama prefectural government are collaboratively implementing a training program aimed at promoting digital transformation (DX) in the Toyama Prefectural Government.

Like many other prefectures of Japan, Toyama faces a low birth rate and aging population, and the decline in its population continues unabated. At the same time, the numerous initiatives being promoted by Japan's central government, such as the roll out of Individual Number Cards and increased security measures, are creating a heavy burden on prefectural public employees. Through DX, the prefectural government is working to advance work reforms and increase the convenience of services for residents in order to contribute to regional revitalization.

DX training program for the Toyama prefectural government

Building Society and Industry through Digital Transformation (DX)

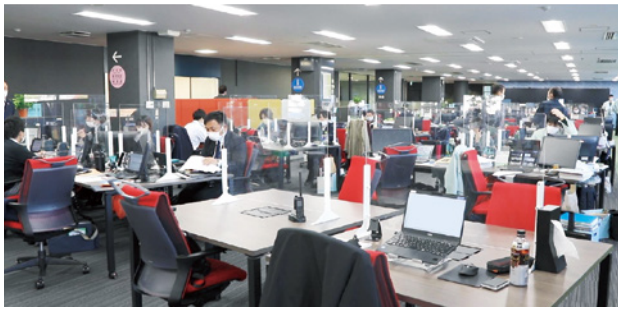
Value Creation 3

Revitalize Local Communities (Regional Revitalization)

Collaboration with Local Governments and Organizations

Increasing Employee and Resident Satisfaction with Cloud PBX and Smartphones

In 2020, the city government of Mitoyo, Kagawa Prefecture, became one of the first municipalities in Japan to adopt a free address system in its offices, aiming to alleviate the issue of insufficient communication. Although the city advanced a range of other operational reforms, as well, it continued to use land lines in the office, making it impossible for employees to choose their seats freely and necessitating additional steps in relaying calls. To address these issues, the city adopted ConnecTalk, a cloud PBX provided by SoftBank Corp. The office eliminated almost all land lines and provided employees with smartphones, enabling employees to fully utilize the free address system and fostering greater communication. Enabling calls directly to the phones of specific staff members has made it possible to more quickly handle inquiries from residents, and the use of video calls and language interpreting apps has greatly improved operational effectiveness. Furthermore, ConnecTalk settings can be controlled via an online interface, significantly reducing administrator burden. The use of ConnecTalk has thus contributed to the city's DX, simultaneously improving services for residents and work efficiency for city employees.



Mitoyo City Office

Automated BRT, One Solution to Rural Transportation Issues

SoftBank Corp. is working with relevant local organizations to achieve sustainable transportation services in conjunction with planned community development. One such initiative concerns next-generation mobility services that can operate safely, stably and flexibly while maintaining transportation capacity and speed. More specifically, we are working on the development of automated bus rapid transit (BRT) technology in which different types of self-driving buses run in convoys.

Under its "Beyond Carrier" growth strategy, SoftBank Corp. is working to transform various industries through the use of cutting-edge technology. Through this project, we aim to help solve issues in the field of mobility in various regions.

Commenced BRT Self-driving Convoy Trials with West Japan Railway Company

SoftBank Corp. and West Japan Railway Company (JR-West) started BRT trials using automated driving and convoy driving technology on a dedicated test course (Yasu City, Shiga Prefecture) in October 2021.

In March 2020, SoftBank Corp. and JR-West launched a project to develop a self-driving convoy BRT system with the aim of realizing next-generation mobility services as sustainable regional transportation linked to community development. Under this project, we have been preparing for trials, including creating a dedicated test course, with the aim of becoming the first company in Japan to automate the operation of articulated buses and the practical application of self-driving buses in a convoy. With the completion of the driving path on the dedicated test course, we have begun trials using three types of self-driving vehicles (articulated buses, large buses and small buses), in which self-driving vehicles of different vehicle types merge and drive in formation.

Through demonstration experiments on the test course, we aim to establish self-driving convoy BRT technology and create a standardized system package, working toward social implementation as a next-generation mobility service by the mid-2020s.

Self-driving convoy BRT

Building Society and Industry through Digital Transformation (DX)

Value Creation 3

Revitalize Local Communities (Regional Revitalization)

Collaboration with Local Governments and Organizations

Promoting Digital Transformation in Regional Areas: Setouchi Tech LAB

SoftBank Corp. opened Setouchi Tech LAB in Fukuyama City, Hiroshima Prefecture. The facility was established as a base to promote digital transformation (DX) in the city and surrounding region. Based on the concept of delivering solutions from the Fukuyama/Bingo area to the Setouchi region and from there to all of Japan, the facility is cultivating and developing digital technologies and business models closely aligned with the local area.

In addition, Setouchi Tech LAB includes exhibit spaces highlighting cutting-edge technologies and use cases of technologies that can be easily applied—even by companies and organizations without a great deal of familiarity with digital technologies—to solve real issues facing not just Fukuyama City, but the Bingo area and the overall Setouchi region. Exhibits are updated constantly to reflect current trends, so that each visit offers new discoveries and experiences. Setouchi Tech LAB also regularly hosts events, workshops, cross-industry networking sessions and other opportunities for communication. By thus fostering a greater understanding of technology, the facility is being used to help solve local issues and promote DX in the region.

Exhibit related to local issues: 3D models of buildings, such as public facilities and private corporate facilities

Future Disaster Preparation to Protect the Community in a Large-scale Earthquake

In anticipation of communities being cut off from outside access in a disaster, the Susami Smart Cities Promotion Consortium in the town of Susami, Wakayama Prefecture, is preparing to utilize drone logistics and smart phone ordering to deliver relief supplies between Roadside Station Susami and evacuation centers or isolated communities in the event of a disaster. These efforts are aimed at meeting needs for greater efficiency in evacuation center operation and include using disaster supply volume data and headcount data to predict the number of days until supply shortages occur after a disaster.

Amid aging demographics and population decline in Japan, there are concerns that it will become difficult to maintain urban functionality. In addition to the healthcare, education and daily living functions of cities that enable people to live with peace of mind, disaster prevention is an important focus. Solutions leveraging advanced ICT technology have great potential in aging communities like Susami.

In July 2022, the consortium conducted simulations of drone flight routes and LTE signal conditions during a disaster using 3D maps. Based on this simulation, it then implemented demonstration experiments to investigate the use of drones to check damage to bridges after a disaster. These efforts are helping to improve the efficiency of advance drone flight route planning and will enable rapid checks for damage by using drone photography to replace the dangerous work of public employees visually confirming the situation onsite.

SoftBank Corp. will continue to address local issues in Susami and use the insights and data obtained in this project for the good of disaster-prone Japan.

Drones are used to check for damage to bridges

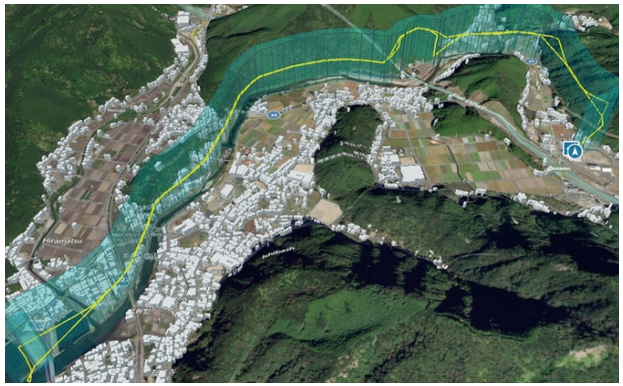


Illustration of simulated flight route