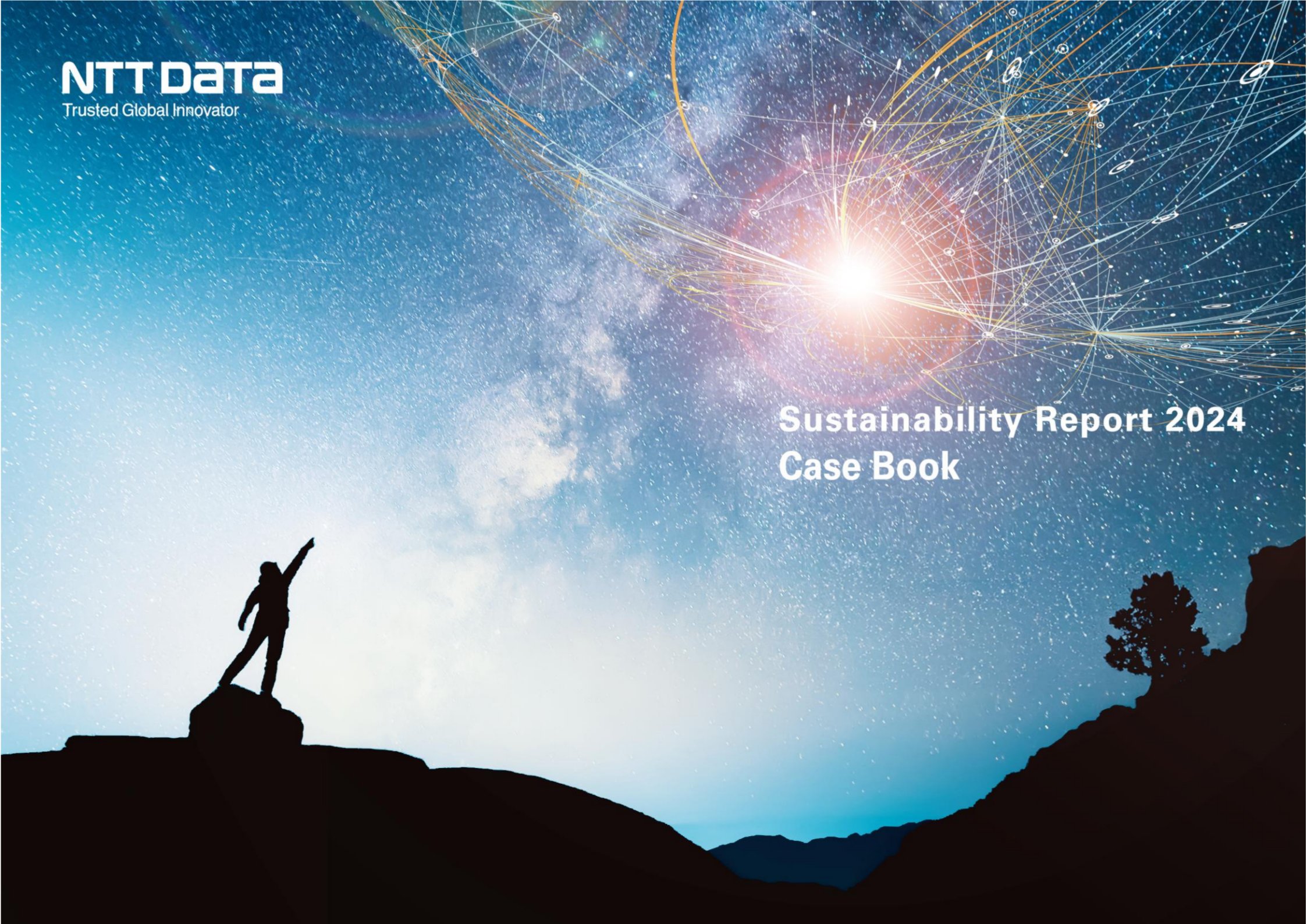
NTT DATA
Trusted Global Innovator

Sustainability Report 2024
Case Book



Introduction

Since our founding, NTT DATA has adhered to the corporate philosophy of "Accelerating client success and positively impacting society through responsible innovation." This guiding principle has been central to our growth as we've expanded our business and provided valuable services to clients and society. Since 2022, we've furthered our commitment through our medium-term management plan, focusing on the vision of "Realizing a Sustainable Future."

We recognize that the business landscape is ever-evolving. Challenges such as Japan's aging population, labor shortages, climate change, and the governance of AI technology require careful attention. In response, NTT DATA leverages our world-class system-building capabilities to offer solutions that address these pressing issues, helping our clients and society achieve meaningful outcomes.

As a proactive force for change, NTT DATA remains dedicated to creating new value through our services, working toward a more sustainable and innovative future.

President and Chief Executive Officer,
Representative Director,
NTT DATA Group Corporation

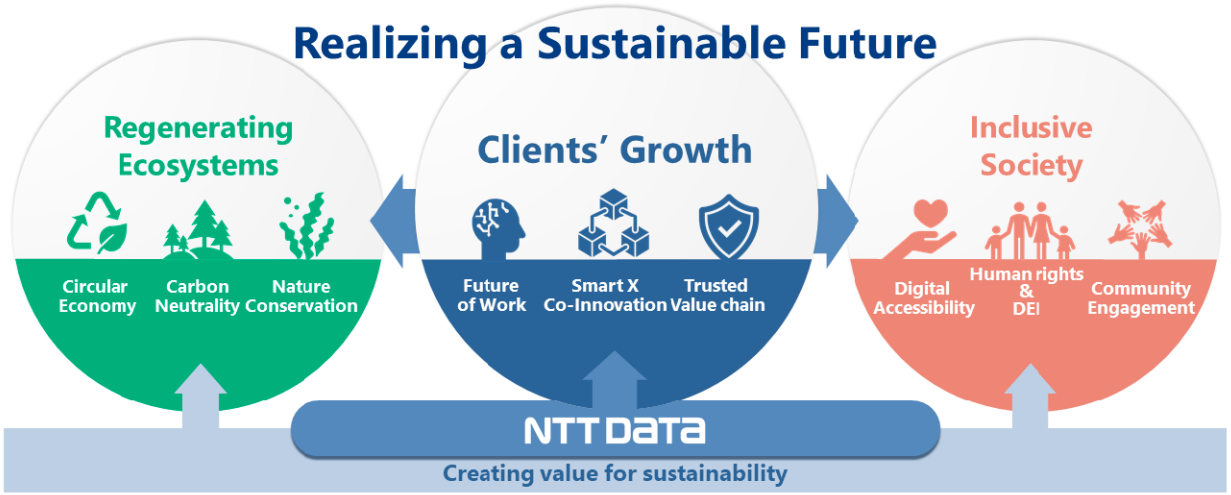
佐々木裕

Yutaka Sasaki

Sustainability Management at NTT DATA

As per the medium-term management plan (FY2022–2025) (hereinafter the current medium-term management plan), NTT DATA aims to create value for the future and work toward achieving a sustainable society alongside customers by connecting various people through technology.

Alongside shifting environmental dynamics such as population concerns, climate change, and rising disaster risks, the widespread adoption of IT and digital technologies has catalyzed transformations in societal trends. These changes impact not just corporate operations but also consumer behavior and lifestyles. Consequently, the challenges and demands that companies must confront have grown more intricate and varied. We view this period of significant change as an opportunity for further growth and have established three axes under the slogan "Realizing a Sustainable Future" to expand our previous efforts in ESG management and promote sustainability management with a long-term perspective.



Nine Material Issues

NTT DATA has identified three material issues under each of the following three axes in an effort to contribute to the SDGs.

· Regenerating Ecosystems
(Preserving the global environment for the future)

· Clients' Growth
(Companies achieving growth in ways that support a sustainable society)

· Inclusive Society
(Achieving a society where everyone can live healthy and happy lives)

NTT DATA seeks to shape a sustainable society together with our clients by creating value for the future and connecting diverse people through technology.

Environment
Regenerating Ecosystems
Preserving the global environment for the future

Carbon Neutrality
Contribute to solving climate change issues by creating innovations to decarbonize society and clients.

Circular Economy
Reduce waste and create a society where the value of products and services continues to circulate.

Nature Conservation
Generate sound global environments and contribute to people's well-being by conserving and recovering nature capital.

Economy
Clients' Growth
Companies achieving growth in ways that support a sustainable society

Smart X Co-innovation
Create new value through co-creation with various companies to achieve a smart and innovative society.

Trusted Value Chain
Uphold data privacy and security to ensure safe, secure and resilient corporate activities.

Future of Work
Provide new ways of working that enhance employee experience and performance. Provide and promote work style reforms for society as a whole.

Society
Inclusive Society
Acheving a society where everyone can live healthy and happy lives

Human Rights & DEI
Work to create an equitable society where a diverse range of people thrive and respect each other's human rights.

Digital Accessibility
Deliver services that provide everyone with equal access to basic needs and improve people's quality of life.

Community Engagement
Understand the challenges and needs for the development of local communities and provide services that enrich people's lives.

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Japan Case Studies

Global Case Studies

Economy

Clients' Growth

Japan Case Studies

Global Case Studies

Society

Inclusive Society

Japan Case Studies

Global Case Studies

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Regenerating Ecosystems

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Environment

Regenerating Ecosystems

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HUCAST AI-Driven HVAC Optimization Services

Saving Energy and Enhancing Comfort through Predictive Control Based on AI Analysis of Footfall and Outside Temperature Data

SDGs

Material Issues

Social issues

- Office buildings and other commercial facilities account for about 40% of Japan's energy-related CO_2 emissions. About half of this figure is connected to air conditioning. Under its Plan for Global Warming Countermeasures, which aims to achieve net zero emissions by 2050, Japan is seeking to reduce CO_2 emissions from commercial buildings by 51% from fiscal 2013 levels by fiscal 2030. To achieve this, building operators need concrete energy reduction strategies.
- Electricity prices are also expected to rise in future, making reducing energy costs an urgent necessity.

Business need

Office building air conditioning is typically operated reactively to achieve a consistent temperature suitable for the time of year (feedback-based control). However, this method takes time to achieve the set temperature and is likely to lead to unnecessary air conditioning operation, resulting in rising energy consumption. Efficient temperature management requires highly sophisticated control to account for time lags and multiple factors that impact temperatures, but operation is still almost exclusively handled by humans on a moment-to-moment basis. Feedback-based control also has limitations that make it difficult to achieve comfortable indoor environments while also reducing energy costs.

Impact

Energy use reduction after introducing HUCAST (based on verification tests at multiple facilities)

Up to 50%

Solution

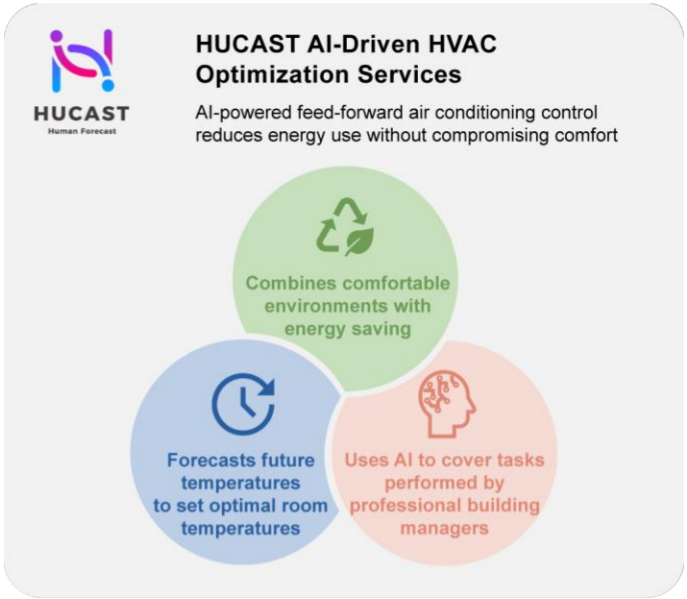
NTT DATA developed the HUCAST AI-Driven HVAC Optimization Services, which launched in September 2023. AI analyzes data points such as the weather, indoor temperature and movement of people, then forecasts future temperatures as a basis for proactive air conditioning control (feed forward control).

This resolves shortcomings of feedback-based control, including short term temperature adjustments and wasteful air conditioning operation. AI forecasting can also be automatically linked with on-site equipment to enable control without manual operation. Based on comfort evaluation metrics (PMV*), the system can also control the temperature to provide a comfortable environment for as many people as possible while also reducing energy use.

In verification tests at multiple office buildings, commercial facilities and mixed-use buildings, including JR Shinjuku Miraina Tower, this system contributed to reductions in energy use of up to 50%.

Through further expansion, HUCAST can advance the optimization of office buildings' energy use and contribute to a carbon neutral society.

*Predicted Mean Vote (PMV) quantifies human perceptions of thermal comfort on a scale from -3 (very cold) to +3 (very hot). PMV is used in the international standard ISO 7730, which recommends heating environments have a PMV within ±0.5 of 0.



HUCAST AI-Driven HVAC Optimization Services: AI-powered Energy Saving Free From Manual Operation (in Japanese only)

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Battery Traceability Platform

An Information Platform that Ensures Data Sovereignty and Enables Safe, Secure Data Distribution

SDGs

Material Issues

Social issues

- To address social issues such as labor shortages, increasingly-severe natural disasters, and the need for decarbonization, and to drive innovation and achieve economic growth, it is essential to establish mechanisms for cross-industry and cross-border data sharing and system integration.
- Batteries used in electric vehicles (EVs) contain critical minerals such as lithium and nickel, and the processes of mining and refining these minerals generate CO_2 emissions. To achieve CO_2 emission reductions and ensure stable supplies, it is necessary to establish a circular economy that utilizes recycled materials.

Business need

Following the EU Battery Regulations that came into effect in August 2023, companies are now required to disclose data on CO_2 emissions and raw material recycling rates throughout the lifecycle of EV batteries. This disclosure will become mandatory in 2025, meaning companies must provide this data when shipping batteries to the European market.

In this context, building robust information platforms is a significant challenge. To thrive in rapidly changing external environments, businesses need an information platform that allows stakeholders to securely exchange only the necessary data without compromising the confidentiality of sensitive information.

Impact

Number of companies expected to use battery traceability platform in next five years

At least 500 companies

Solution

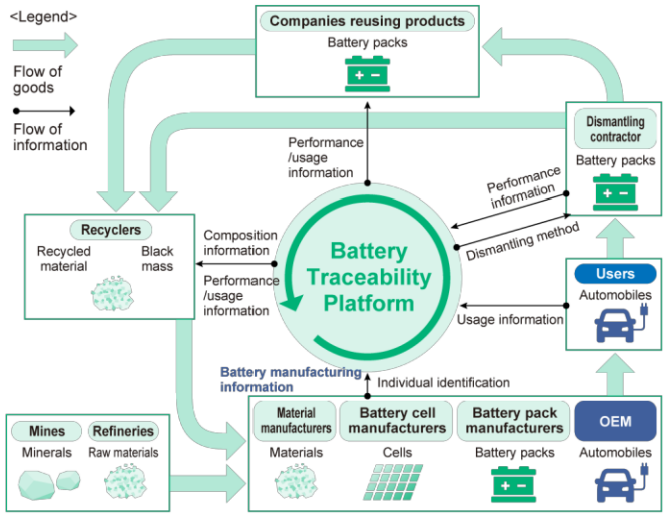
NTT DATA has developed a platform leveraging blockchain-based distributed ledger management, smart contracts, encryption and tampering detection technology to achieve both protection of confidential information and the free exchange of data with the aim of realizing secure inter-company data coordination.

As part of this project, NTT DATA established the Battery Traceability Platform, which visualizes information such as aggregated data regarding supply chains' carbon footprints, recycling and reuse with a view to responding to needs such as compliance with the EU Battery Regulations. In May 2024, NTT DATA started providing a service enabling inter-company aggregation and coordination of carbon footprint data during battery production.

This platform facilitates data coordination across borders throughout battery lifecycles. Additionally, it ensures safe, secure exchanges of data, including confidential information, while maintaining each company's data sovereignty.

Future development is expected to include support for circular economies through interoperability with other data spaces,* support for circular economies through global expansion, and coverage for more products and materials.

This platform was the first use case for the Ouranos Ecosystem, an initiative for cross-industry data exchange coordination led by the Japanese Ministry of Economy, Trade and Industry, and will be applied to various cross-industry data exchange use cases.



*Data spaces:
Initiatives to create spaces for new economic and social activity through systems enabling multiple organizations to freely exchange data while ensuring mutual trust.

Collaboration Platform for Secure Exchange of Industrial Data Enters Operation
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C-Turtle® FE

Helping Investment Recipients by Visualizing their Greenhouse Gas (GHG) Emissions to Achieve Net Zero

SDGs

Material Issues

Social issues

- Increasing GHG emissions from various social activities are accelerating global warming, leading to extreme weather, rising sea levels, ecosystem collapse, and food crises.
- Although various efforts are being made by governments and companies to reduce GHG emissions, further technological innovation and other measures are needed to achieve reduction targets.

Business need

Japan's targets for reducing GHG emissions cannot be attained solely through efforts by high-emission industries, which account for about 30% of total GHG emissions. It is crucial also to reduce emissions from small and medium-sized enterprises, which contribute about 20% to 30% of GHG emissions.

To advance decarbonization in small and medium-sized enterprises, investing in energy-saving and renewable energy equipment is essential. Financial institutions, which are the backbone of local communities, play a major role in supporting these investments through loans and funding. However, financial institutions face challenges in independently calculating the GHG emissions of client companies.

Impact

Reduction in time taken to calculate GHG emissions through optimization with C-Turtle

About 10%

Solution

NTT DATA offers the GHG emissions visualization platform C-Turtle® to promote the reduction of GHG emissions across the entire supply chain. This platform uses actual data (primary data) owned by CDP*1 to achieve calculations through the "total emissions allocation method."

C-Turtle® FE is a new service that complies with the international standards for financial institutions known as the PCAF Standard. This service visualizes the GHG emissions of client companies based on financial data held by financial institutions. By using primary data from investment and financing recipients, it enables high-quality calculation of Scope 3*2 emissions that reflects GHG emissions and reduction efforts related to investments and financing.

The system is currently in use at financial institutions such as Kyoto Financial Group, Tokyo Kiraboshi Financial Group, Fukui Bank, and The 77 Bank. It helps visualize and reduce GHG emissions by enabling understanding of and engagement on the GHG emissions of investment and loan recipients (financed emissions).

NTT DATA will collaborate with more regions and financial institutions to support efforts to reduce GHG emissions locally and will also promote the service with a view to offering it globally.

PCAF Standard-compliant GHG emissions calculation platform for financial institutions

C-Turtle® FE

POINT 1

Calculates FE according to PCAF

Calculations can be made based on the international standard PCAF Standard. Emissions can be visualized by sector and by investment destination.

POINT 2

Stores GHG emissions data from a wide range of companies

The platform holds GHG emissions data (primary data) for a wide range of companies, from large corporations to small businesses, allowing for high-quality calculations.

POINT 3

Enhances engagement with clients

Business partners can disclose their GHG emission information to financial institutions and use it for effective dialogue and partner management.

*1 CDP is a non-profit that operates a global greenhouse gas (GHG) information disclosure system.

*2
Scope 1: Direct emissions from fuel use, etc.
Scope 2: Indirect emissions from the use of purchased electricity and heat
Scope 3: Indirect emissions in the supply chain (excluding Scope 1 and 2)

C-Turtle®
NTT DATA (in Japanese only)

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FEDI®

Cross-industry Support for Enhanced Efficiency in Fashion Industry Supply Chains

SDGs

Material Issues

Circular Economy | Carbon Neutrality | Smart X Co-Innovation | Trusted Value Chain

Social issues

- In Japan, 98% of clothing products are manufactured overseas. Processes from material procurement to manufacturing emit approximately 90,000 tons of CO_2 annually. Additionally, clothing waste contributes to rising CO_2 emissions, amounting to approximately 470,000 tons per year.
- The fashion industry involves numerous stakeholders, such as apparel companies, trading firms, fabric and accessory suppliers, and factories. The use of disparate methods and systems for communication among these parties results in significantly longer lead times from design to delivery.

(Source: Sustainable Fashion (Japanese Ministry of the Environment website): https://www.env.go.jp/policy/sustainable_fashion/index.html (in Japanese only))

Business need

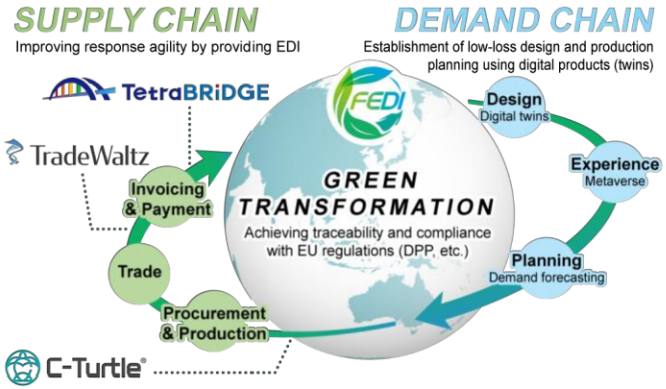
In the fashion industry, communication between stakeholders often relies on company-specific document formats and individual email styles. These variations can lead to errors and the need for work to be redone. Another significant issue in supply chains is the partial optimization of systemization, which often necessitates repeated manual data entry, resulting in inconsistencies. Additionally, to enhance quality, prevent the shipment of defective products, and gain consumer trust, supply chains must be improved to ensure traceability spanning from raw material procurement to production, shipping, sale, and consumption.

Impact

Reduction rate of processes through the introduction of FEDI® **70 %**

Solution

NTT DATA is building cross-industry systems to enhance supply chain efficiency for the fashion industry. It provides a series of these solutions as the FEDI® Ecosystem. FEDI® resolves communication loss caused by analog communication and digitalizes a series of tasks that take place among stakeholders, from order management to customs procedures, invoicing and payment. This is provided in two ways: API and portals. Linking data related to ordering and trade through FEDI® reduces the burden of inputting data into companies' own systems and lowers the risk of human errors.



Moving forward, NTT DATA will work to visualize greenhouse gases in supply chains and perform even more precise demand forecasting on the demand chain*1 side while also using these efforts as a basis to build frameworks that support production of appropriate volumes at appropriate times. This addresses fashion loss*2 as a means to reduce waste and lower CO_2 emissions. It also enables compliance with mandatory EU regulations, including those prohibiting the disposal of unsold clothes and requiring digital product passports (DPPs)*3. NTT DATA will also contribute to the realization of green transformation (GX)*4 in the fashion industry.

*1 Demand chains:
Processes that start from consumers (end users) and move towards suppliers (procurement, production and sales). This contrasts with supply chains, which start from the supplier side and move towards consumers.

*2 Fashion loss:
Clothing that can still be worn but is disposed for one of various reasons.

*3 Digital product passports (DPPs):
Digital certificates containing extensive information to ensure the traceability of products throughout their lifecycles.

*4 Green transformation (GX):
Initiatives to switch from fossil fuels that produce greenhouse gases to industrial structures centered on clean energy.

FEDI® Ecosystem
NTT DATA
(in Japanese only)

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"Local Production, Local Consumption" SAF Supply Chain Platform

Providing a Cross-industry Data Platform to Drive Decarbonization in the Aviation Sector

SDGs

Material Issues

Social issues

- The aviation industry, a major CO_2 emitter, is under pressure to achieve carbon neutrality. The International Civil Aviation Organization (ICAO) aims to achieve carbon neutrality by 2050. Japan's Ministry of Economy, Trade and Industry plans to replace 10% of aviation fuel with Sustainable Aviation Fuel (SAF)* by 2030.
- Japan is making a national push to develop and produce internationally competitive SAF. The Agency for Natural Resources and Energy expects domestic SAF supply to reach nearly 1.92 million kiloliters annually by 2030, several dozen times the current level. In Europe, systems are in place to secure raw materials, cut production costs, and easily obtain and maintain necessary certifications. Japan needs to establish similar systems.

*Sustainable Aviation Fuel (SAF): Sustainable aviation fuel used by the airline industry to reduce environmental impact. It is primarily made from renewable resources and waste, significantly reducing CO_2 emissions compared to traditional fossil fuels.

Business need

SAF is a fuel that emits less CO_2 than traditional jet fuel, and its production is rapidly advancing in Japan.

Producing SAF requires sourcing key materials like used cooking oil, animal fat, municipal waste, waste gas, plants, agricultural residues, and microalgae in an eco-friendly manner. However, this process incurs significant costs, making it crucial to reduce production expenses. As well as strengthening supply chains to secure distribution channels for by-products like biodiesel and naphtha, it is essential to establish systems for information sharing and inspections. This will help streamline the certification process for CORSIA-compliant fuel and adherence to international standards such as ASTM.

Building future supply chains will require a digital platform acting as a single foundation seamlessly connecting various stakeholders involved in diverse processes, such as suppliers, airlines, raw material producers, and collectors.

Impact

Expected CO_2 reduction from building an SAF supply chain

Approx. 415,000 tons

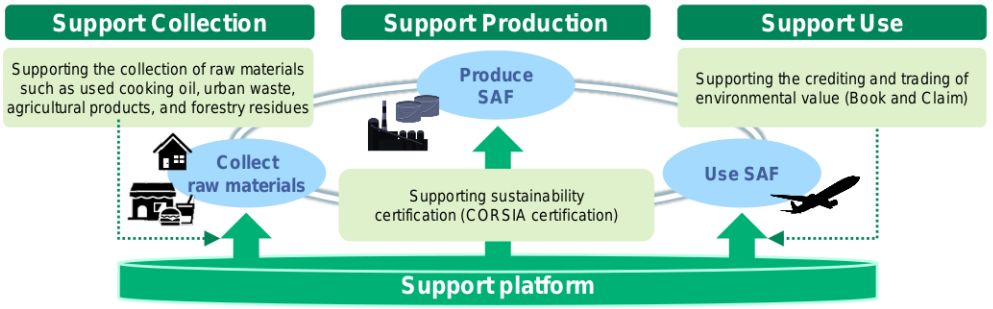
Solution

NTT DATA aims to build a locally integrated supply chain for SAF, ensuring raw material quality through procurement, refining, and sales. The goal is to achieve both environmental conservation and economic sustainability. Specifically, the aim is to use local resources for raw materials and keep the entire process—from procurement to production and consumption—within the region. This approach shortens transport distances, stimulates the local economy, and reduces environmental impact.

NTT DATA will first conduct trials using waste cooking oil in real-world settings, then evaluate and analyze challenges in launching domestic production. Effectiveness will be tested in the Aichi Prefecture decarbonization project, which was approved in January 2025, and in multiple pilot fields as part of work toward full-scale implementation. Efforts to promote local production for local consumption to revitalize the community will also be advanced.

NTT DATA aims to support domestic SAF production and distribution by ensuring transparency, certification, and maintenance across the entire SAF supply chain. The goal is to provide an industry-wide data platform that balances cooperation and competition.

This model will be expanded globally, focusing on Asia, to promote a circular economy and contribute to achieving carbon neutrality across society.



[NTT DATA GROUP's Local SAF Supply Chain Project Selected for Aichi Prefecture's Decarbonization Initiative NTT DATA GROUP (in Japanese only)]

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Sustainable Schools

Scalable Energy Savings in Schools Through IoT, AI and Analytics

SDGs

Material Issues

Social issues

- Data-driven analytics of energy use in buildings have significant potential for reducing energy and operating costs, a particularly pressing need given factors such the EU Energy Efficiency Directive 2023/1791 requiring a 1.9% reduction in annual energy consumption in public buildings, compared to 2021 levels.
- School buildings often lack sufficient indoor climate controls to maximize the health, safety and productivity of both teachers and students.

Business need

According to the World Economic Forum (WEF), buildings are responsible for 40% of global energy consumption and 33% of greenhouse gas emissions.

GovTech Midtjylland, a joint venture between 13 Danish municipalities, was exploring ways to use IoT sensors and AI technology to provide energy use transparency and uncover opportunities for energy cost savings through analytics and AI modelling. To produce actionable insights, they wanted a solution that could capture and consolidate different kinds of usage and consumption data and show specific, tangible optimization opportunities. As building resources and levels of digitalization differ between municipalities, the solution had to be flexible to scale across different maturity levels.

GovTech Midtjylland engaged NTT DATA as a partner with expertise bringing together IoT, AI, data modelling and analytics for similar use cases.

Solution

NTT DATA used the Momenttum platform to build easy-to-use dashboards to consolidate, calculate and report on data such as room bookings, heating use, power consumption, the weather, and IoT sensor readings. Ensuring the platform is open, flexible and intuitive to use facilitated its utilization across municipalities with varying sizes and levels of digitization.

Through workshops and close dialogue, NTT DATA also assisted GovTech Midtjylland in identifying energy consumption hotspots and reduction priorities. For example, schools had a good grasp of how buildings were used during school times, but there was no clarity on energy use at night, on weekends or during holidays. The platform identified significant potential savings outside of school hours.

By tracking attendance using CO_2 sensors, the platform provides an accurate view of how rooms are used at all times, enabling schools to identify and eliminate unnecessary energy consumption and providing tangible cost saving opportunities.

Impact

Student and teacher productivity and well-being were increased due to optimization of heat, light and ventilation.

Estimated average saving per school

DKK 34,966

(USD 5,029)

"The tool clearly illustrates the potential savings, proving the necessity of optimizing" - Henrik Bojsen (Team Leader of Syddjurs Municipality)

If used nationally, it was estimated that the platform can save DKK 37 million (USD 5.32 million) nationwide. This is equivalent to 1 million kg of CO_2 reductions, or up to 10,000 short haul passenger flights.

GovTech
Identifying Potential Energy Savings with IoT and Forecasting

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Software Carbon Footprint Calculator

Comprehensive, Actionable Insight to Drive Decarbonization in IT Systems

SDGs

Material Issues

Social issues

- The environmental impact of digital technology is increasing exponentially and requires urgent attention. A significant portion of companies' Scope 2 emissions is attributable to their IT systems. Accurately calculating such emissions and understanding their composition and underlying drivers is critical for effective emission reduction strategies.
- The complexity of software lifecycles and the wide-ranging factors involved make accurately determining energy consumption at each stage difficult and have prevented the establishment of unified calculation methodologies. Software energy consumption is also often not recorded in detail, and companies therefore lack tools to communicate this information to stakeholders in an easy-to-understand manner.

Business need

IT systems play a significant role in overall emissions levels, and companies are working to enhance their IT operations' energy efficiency, reduce systems' footprints in line with sustainability goals, and comply with sustainability reporting requirements.

Many businesses with complex IT infrastructure use inefficient legacy systems with massive energy consumption. In such large-scale systems, identifying priority areas to upgrade can enable businesses to maximize immediate environmental impact. However, software's carbon footprint constantly changes due to technological advances and changes in usage. Identifying priority measures therefore requires mechanisms that overcome this to accurately calculate systems' environmental footprint. Such mechanisms are also essential for confirming effectiveness and monitoring progress towards environmental goals.

Impact

Percentage of applications with potential carbon reductions identified by NTT DATA's technology within the IT network at Intesa Sanpaolo, Italy's largest bank

About 70%

Solution

NTT DATA is a steering member of the Green Software Foundation and played a key role in developing Software Carbon Intensity (SCI), a standard method of measuring the carbon footprint of software. The SCI Specification was adopted as an ISO standard in 2024.

NTT DATA is enabling companies to leverage SCI and related metrics in their emission reduction efforts through solutions such as its proprietary tool for comprehensive monitoring of CO_2 emissions and SCI. This tool goes beyond CO_2 calculation to offer advanced analytics capabilities such as forecasting, ML-based anomaly detection and automated report generation. Results based on precise, granular calculation of IT-related emissions are made easily accessible in internal dashboards to give decision-makers real time insight. This empowers them to know which IT systems generate the most significant inefficiencies, identify where new technological solutions can have the greatest impact, implement targeted solutions, and keep optimizing performance. In addition to reducing carbon footprints, optimizing software and hardware usage for greater sustainability lowers costs by reducing overall resource consumption. NTT DATA's monitoring tools also support the implementation of efficient, scalable, and sustainable IT solutions to prepare businesses for future advancements and regulatory changes, ensuring they remain competitive in rapidly evolving markets.

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DTE Insight

Successful Energy Optimization Through Real-time Information, Coaching and Gamification

SDGs

Material Issues

Social issues

- Smart meters have the potential to empower households to understand their energy usage and reduce their carbon footprint through access to real-time information and the ability to set and track energy usage targets, however, concerns around areas such as privacy and transparency remain barriers to widespread adoption.
- With conventional energy monitoring services, households receive energy reports at the end of each month, meaning they learn how much energy they used after the fact. Solutions delivering real-time insights can enable homeowners to take action within monthly cycles to proactively prevent overspending and excess emissions.

Business need

DTE Energy is a Detroit-based diversified energy company involved in the development and management of energy-related businesses and services across the United States. The company sought to change the narrative around smart meter adoption by providing customers with a transparent system that delivers real-time energy awareness and insights while addressing privacy concerns as a barrier to adoption. The system was intended to create win-win situations for customers, DTE Energy and wider society by empowering users to proactively reduce their energy costs, increasing loyalty by creating a positive touchpoint for an ongoing relationship, and reducing overall energy use.

Impact

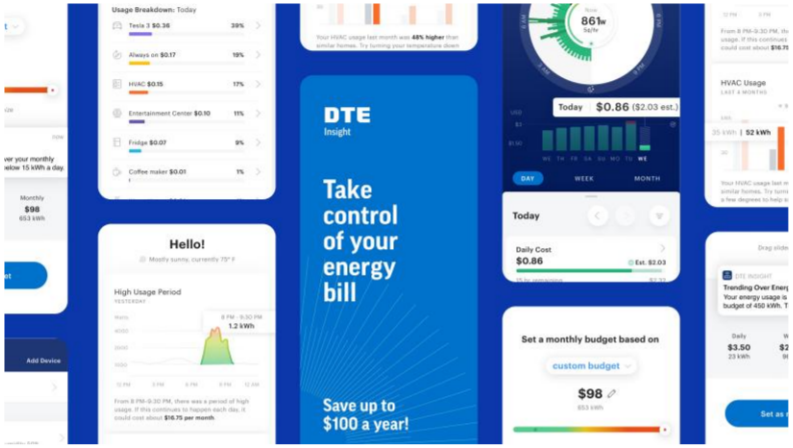
Overall decrease in energy usage among Insight users **10%**

The unique blend of coaching, gamification, and social elements has reinforced a positive touchpoint between users and utility providers while generating the highest aggregate savings for a DTE energy efficiency program. Gamifying the experience also more than doubled the user retention rate to 65%.

Solution

NTT DATA worked with DTE Energy to conceptualize, architect, and design DTE Insight, a system featuring custom hardware that quickly and securely binds to an advanced meter, then presents real-time energy data in a mobile app. The app supports Android and iOS devices, including the Apple Watch, giving users access to real-time information, wherever they are. By enabling users to easily monitor and adjust their appliances, the app empowers people to enjoy time at home in comfort with the peace of mind that comes from being in control of their energy use.

Featuring personalized energy efficiency recommendations and weekly energy-saving challenges, DTE Insight also engages users through coaching and gamification. Users can even set personal energy goals, then monitor their progress and receive positive reinforcement upon reaching their energy reduction and savings targets. To ensure data privacy, the app includes opt-in/opt-out features and the gamification aspects do not share personal identifiers.



[DTE Energy Insight | Our work Putting the Power of Smart Data into the Hands of Energy Consumers]

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Climate Finance Accelerator in Mexico

Facilitating Access to Finance and Accelerating Action on Climate Change

SDGs

Material Issues

Social issues

- Large-scale investments are needed to transit quickly to a low-carbon global economy and to help societies build resilience. Increasing capital resources and innovating on financial solutions to address climate change will be critical in securing impactful outcomes in areas such as water, renewable energy, housing, forestry, and agriculture.

Business need

The Climate Finance Accelerator (CFA) is a UK Government-funded technical assistance program that supports middle-income countries in developing a sustainable pipeline of innovative and bankable climate projects.

The CFA targets three main climate finance challenges to overcome barriers to the effective flow of finance:

1) Identifying a pipeline of bankable low-carbon projects
2) Facilitating access to and mobilization of finance
3) Building a climate finance ecosystem to identify solutions and recommendations for policymakers to address finance barriers in each country

Impact

Total value of investment attained to date

USD 178.5 million

CFA Mexico has accelerated 33 projects, attaining 14 investment deals with a total value of USD 178.5 million. Funded projects aim to deliver outcomes including the provision of drinking water for over 20,000 people and the building of 6,600 homes.

Solution

As a local delivery partner of the CFA in Mexico, NTT DATA has studied the national landscape of climate finance and supported the selection of about 10 climate projects for each support cycle. Through its work, the CFA in Mexico has accelerated investment in climate projects by undertaking capacity building for selected project proponents. This includes developing their understanding of climate finance, including relevant terminology and concepts, and providing insight on how to pitch projects. These efforts are intended to facilitate access to funding. A pitching event was also held to provide a space for investors to dive deeper into the investment opportunities being presented.

NTT DATA has also assisted the CFA in building a climate finance ecosystem through the establishment of a Climate Finance Directory and a community of engaged actors from the finance ecosystem.

Climate Finance Accelerator in Mexico
NTT DATA (in Spanish only)

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MeetZero

Support for the Creation and Operation of Environmental Marketplaces

SDGs

Material Issues

Carbon Neutrality

Social issues

- Environmental assets are emerging as a new class of marketable assets. Beyond providing credits that polluting industries can purchase, this approach offers an alternative means of financing for companies undertaking projects with desirable environmental impacts, encouraging investment in positive actions.
- For environmental markets to be sustainable in the long term, they must align with the SDGs in order to bring direct and indirect benefits in terms of the development of socially and environmentally sustainable societies.

Business need

Environmental credits enable the conversion of actions to improve sustainability metrics into quantifiable assets with market value. Organizations can monetize their sustainability actions in environmental markets—selling them to companies seeking to offset the negative environmental impacts of their business activities. However, while environmental achievements must be validated to build confidence in these systems, validation through manual record keeping may not reach the levels of operational efficiency necessary to release the full potential of environmental credit trading. Automated tools are therefore required to support the development of these vital trading markets while ensuring security and trust.

Impact

Business value expected to be generated by NTT DATA through MeetZero

EUR 35 million over 3 years

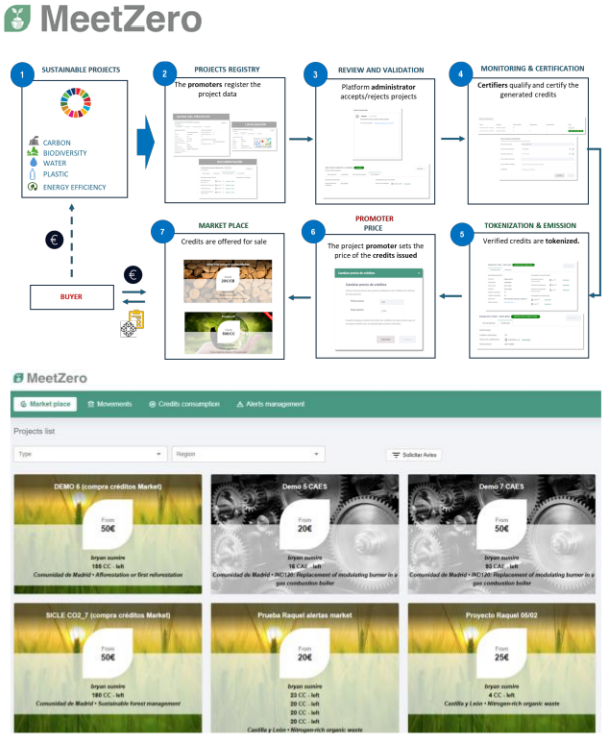
As global markets—particularly environmental asset markets—demand greater traceability and transparency, MeetZero is expected to play an increasingly important role, leading to greater revenue generation.

Solution

NTT DATA has developed MeetZero as a solution based on blockchain technology that supports the creation and operation of voluntary markets for environmental assets. The platform enables the registration of sustainable projects linked to environmental actions in areas such as carbon emissions, water, biodiversity, plastic use and energy efficiency, leading to the creation of verified and tokenized environmental credits. Verified environmental tokens are traded through MeetZero's built-in marketplace. MeetZero tokens are only issued for proven and verified emission reductions, preventing potential fraud and providing security and trust.

Environmental asset markets are gaining momentum among large companies around the world, covering areas including water, carbon emissions and biodiversity. More and more businesses are also including actions such as carbon neutrality and water positivity initiatives in their strategic plans.

Through MeetZero's tradeable token marketplace, NTT DATA provides companies with a powerful, forward-thinking tool to reduce their environmental footprint and contribute to the development of sustainable societies while continuing to align with rising expectations of traceability and transparency in global markets.



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DECARBUILD

Automated Analysis Relating to Real Estate Net Zero Carbon (NZC) Strategies

SDGs

Material Issues

Social issues

- The building sector, including both construction and operation of buildings, represents approximately 38% of global energy-related emissions. More than 70 countries and 700 cities have established net zero carbon emission targets, and this sector will play an important role in achieving these aims.
- Decarbonization is expected to be increasingly relevant to future regulatory environments across the world. Holders of expansive and complex real estate portfolios need to manage vast amounts of data to ensure cost effectiveness and ongoing compliance with these shifting environmental requirements.

Business need

When creating net zero carbon (NZC) strategies for real estate, operators start by establishing a clear picture of energy consumption in each building and for their portfolio as a whole, then formulate and execute energy efficiency measures (EEMs). During implementation, setting annual budgets linked to the carbon reductions achieved and monitoring adherence to decarbonization objectives are key issues. When owners or tenants are responsible for numerous buildings, the vast quantity of information being handled and the huge number of potential EEM combinations make joint strategies significantly more complex, creating challenges in terms of definition, execution and monitoring.

Impact

Energy audit time saved through use of standardized list of EEMs and unique data repository

Up to 20%

Solution

NTT DATA developed DECARBUILD as a tool for automating background analysis relating to real estate NZC strategies. All information relevant to EEMs identified during energy audits—including each building's type, size, location and energy consumption—is integrated into a single, up-to-date, cloud accessible location. Using an approach based on Science Based Target initiative (SBTi) frameworks, decarbonization pathways are mapped out both for individual buildings and for the overall portfolio. Impact forecasts are then automatically calculated by comparing emission reductions to SBTi curves. Users can simulate and monitor the progress of their strategies to identify barriers to smooth implementation, then come up with and execute countermeasures. DECARBUILD also supports automatic selection of EEMs based on preconfigured scenarios and user priorities, such as reducing the time to reach net zero, cost efficiency or their fixed annual budget.

Deployment of this tool is planned to expand beyond the building sector to other fields where NZC strategies are applicable, including data centers, industry and telecommunications.

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Bi-directional EV Charging

New Business Models for Supporting Power Grids with Electric Vehicles

SDGs

Material Issues

Social issues

- With the expansion of renewables and electric vehicles (EVs), bi-directional charging has the potential to deliver environmental and economic benefits through Vehicle-to-Home (V2H), Vehicle-to-Business (V2B) and Vehicle-to-Grid (V2G) approaches, however, solutions addressing impacts on grid stability are required to support widespread deployment.

Business need

EAM is a regional energy and electricity provider based in Hessen, Germany. The company assists cities, municipalities, energy cooperatives, and businesses in planning and executing projects focused on the utilization of renewable energy sources. In this project, EAM aimed to address technical barriers to the integration of bi-directional EV charging technologies in two clusters: residential and business. Expanded use of renewables and EVs impacts grid stability, and goals of the project include managing grid congestion and reducing peak loads, with the eventual aim of establishing practices for the use of electric vehicles to support the grid. This can reduce reliance on grid expansion, create new business models for energy providers to implement sustainable use of renewable energy, and reduce net energy costs for consumers.

Impact

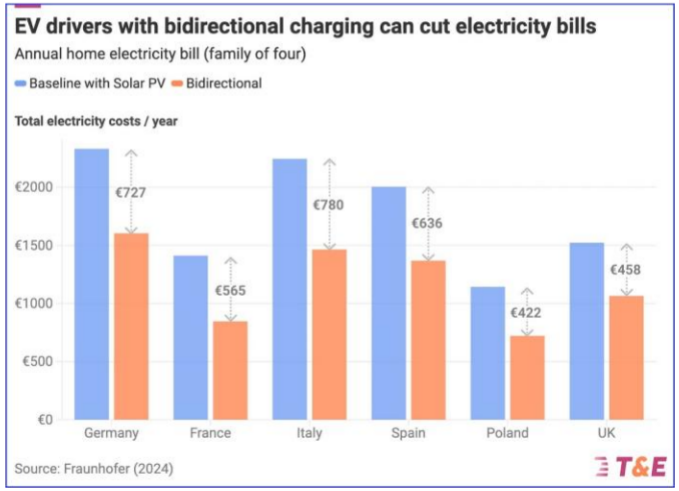
Estimated potential energy cost savings in EU with widespread V2G adoption by 2040

EUR 22.2 billion per year

Solution

NTT DATA provides solutions including V2G/V2B/V2H technology implementations, bi-directional charging platform integrations, renewable energy integration solutions and advanced data analytics. These solutions can address grid stability challenges by stabilizing grid frequencies and voltages, flattening energy peaks and improving overall grid efficiency.

In the project with EAM, testing of separate cars has produced positive results. Next steps include further grid stabilization testing and connected testing of bi-directional charging boxes in different residential clusters and using different car models. Demonstrating the feasibility of supporting energy grids with EVs paves the way for new business models supported by NTT DATA's smart energy solutions. Potential applications include using dynamic tariffs to reduce the burden on energy systems and enabling car owners to generate income by feeding energy into the grid.



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SiGREEN Integration

Automated Integration of Product Carbon Footprint Measurement and Tracking Across Supply Chains

SDGs

Material Issues

Social issues

- Effective sharing of product carbon footprint (PCF) data is essential to management of upstream and downstream (Scope 3) emissions, but presents challenges ranging from a lack of high-quality data to differences in emission calculation standards and concerns regarding information security and data sovereignty.

Business need

Through its PCF management tool, SiGREEN, leading technology company Siemens aims to enable secure information sharing that supports companies and suppliers in managing and reducing emissions across the entire supply chain. However, challenges associated with PCF management include a lack of data availability, limited comparability, discrepancies in emission calculation standards, dependence on low-quality secondary data and the need for high levels of coordination between partners. Siemens sought a solution to overcome these obstacles as a crucial step towards promoting sustainability through effective management of Scope 3 emissions.

Solution

NTT DATA developed a proof of concept project during which it successfully demonstrated seamless data transfer processing between SiGREEN and two enterprise resource planning (ERP) systems. Through the use of APIs, SiGREEN established reliable and efficient aggregation of PCF data while ensuring calculations were compliant with applicable standards.

The seamless data transfer demonstrated in this proof of concept provides continuous up-to-date emission data from across the supply chain, enabling the identification of a “dynamic” carbon footprint. Comprehensive insights of this nature can empower companies to make informed sustainability decisions regarding emissions both upstream and downstream in the supply chain, laying the foundation for more sustainable product lifecycle and supply chain management.

Impact

Compliant with all relevant industry standards, including:

• ISO 14067 • GHG Protocol Product Standard • WBCSD Pathfinder Framework • Catena-X Rulebook

The successful integration of the SiGREEN platform with ERP systems demonstrated the benefits of effective data sharing across organizational data systems.

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Global Data Centers

Decarbonizing Data Centers to Achieve NTT DATA's Net-Zero Commitment

SDGs

Material Issues

Social issues

- Data centers are essential to the digital economy, but their rapid growth can pose environmental challenges through significant energy and water consumption.
- The International Energy Agency (IEA) estimates that data centers accounted for around 1.5% of the world's electricity consumption in 2024, or 415 terawatt-hours (TWh), and data centers electricity consumption is set to more than double to around 945 TWh by 2030.
- As data usage and AI adoption rise, so do greenhouse gas (GHG) footprints, increasing the urgency for operators to adopt sustainable practices.

Business need

As part of NTT DATA, Global Data Centers (GDC) builds and operates data centers around the globe, currently possessing 155 data centers in more than 20 countries, with an IT load of over 1,500 MW.

GDC is driving towards achieving net-zero emissions in its operations by 2030 and across its entire supply chain by 2040.

Operational emissions are generated through electricity usage for cooling, refrigerant leakages from cooling infrastructure and fuel usage for backup power systems.

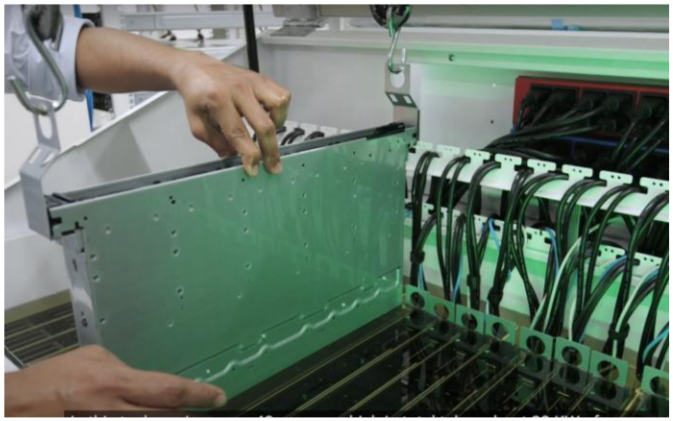
Solution

GDC is dedicated to minimizing its environmental footprint through various sustainability initiatives.

At the Navi Mumbai 1 Data Center, IT equipment is now being cooled using advanced technologies like single-phased Liquid Immersion Cooling (LIC) and Direct Contact Liquid Cooling (DCLC) to meet client needs. These methods are more energy-efficient, offer higher reliability, and reduce the risk of system failures. They also support operation at higher ambient temperatures compared to traditional air-cooled racks, contributing to energy savings.

In the Berlin 2 Data Center, the substantial heat generated by IT servers is reused internally and for providing essential heating and warm water to the local neighborhood. The current setup can supply up to 2 MW of heat continuously per year. Utilizing GDC's emission-free, reliable waste heat reduces the overall GHG emissions in the region by eliminating the need for fossil fuels.

Generators are crucial for providing power to a data center during rare contingencies like grid outages. GDC has explored using HVO100 (Hydrotreated Vegetable Oil), a renewable fuel source, instead of traditional fuels in the generators at the Vienna 1 Data Center.



Impact

Power usage effectiveness (PUE) achieved through use of liquid cooling in Mumbai, India

PUE of 1.27

Carbon-free heating and warm water supplied through reuse of waste heat in Berlin, Germany

Up to 1,000 homes

Reduction of NOx and particulate matter (PM) achieved through use of HVO100 in Vienna, Austria

Nox: 8% reduction
PM: 42% reduction

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Green IT: EcoDev

Supporting Green Coding in Development Pipelines to Enhance Software Quality and Energy Efficiency

SDGs

Material Issues

Social issues

- IT accounts for 3% of global CO_2 equivalent (CO_2e) emissions, a figure expected to rise exponentially. This percentage is as high as 45% for Scope 2 emissions at technology-intensive companies, which includes industries such as banking, insurance and telecommunications.
- Software can play a significant role in determining IT systems' environmental impact. This has led to the establishment of the Software Carbon Intensity (SCI) standard for measuring carbon footprints, formed under the Green Software Foundation (GSF). The SCI Specification has been certified as the new international standard ISO/IEC 21031:2024, and the number of companies and organizations adopting it is expected to continue rising.

Business need

Companies are becoming more aware of the environmental impact associated with software systems. One way to mitigate this impact is through sustainable-by-design software with environmentally-friendly practices built into the software development lifecycle. While potential benefits include code optimization, reduced energy costs, and lowering of associated emissions, organizations have so far encountered difficulties in adequately following this approach, as control over the application of best practices in code sustainability is not automated and is almost entirely dependent on developers' knowledge of the subject.

Impact

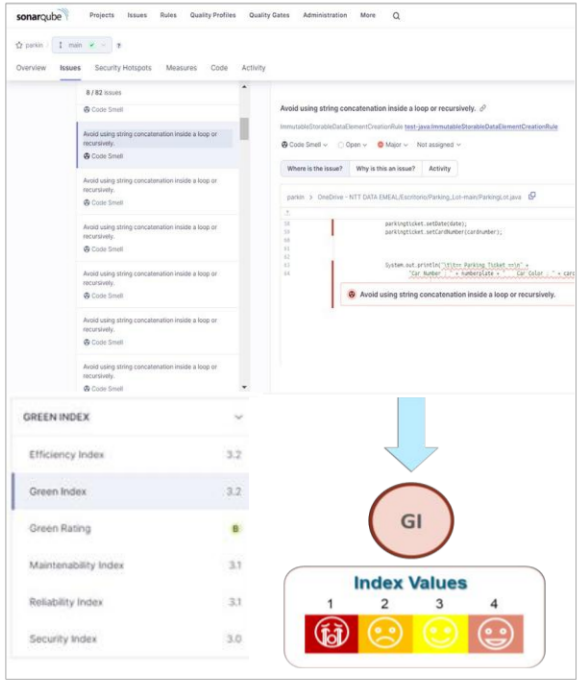
Number of applications with integrated mandatory green coding measurements

Over 40 applications

Solution

NTT DATA has developed a conceptual framework for sustainable IT, with tools and capabilities dedicated to reducing the impact of different phases in IT lifecycles. One key element of this framework is EcoDev, a SonarQube-based tool for code sustainability that is designed to leverage static code analysis to control the implementation of globally-recognized best practices. EcoDev extends SonarQube's capabilities by inspecting code, detecting violations of sustainable coding principles, and providing metrics to quantify code sustainability.

The tool consists of two plugins. The Rules plugin includes a list of custom rules for environmentally-friendly coding based on internationally-recognized best practices from CISQ Green IT and the Green Software Foundation, while the Index plugin introduces the EcoDev Index (Green Index) to assess code quality from a sustainability perspective. EcoDev empowers organizations to ensure that new and existing applications are optimized for energy efficiency, thereby reducing their carbon footprint. Integrated directly into development pipelines, it enables automatic, rapid analysis to support code and architecture optimization, facilitating the creation of sustainable-by-design software.



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SISTEMA INTEGRA

Sustainable, Traceable Crop Protection

SDGs

Material Issues

Social issues

- While crop protection is key for large-scale agriculture that provides stable food supplies, conventional packaging generates large quantities of plastic waste. With potential health and environmental risks if handled inappropriately, ensuring secure, responsible use of these substances is another central issue.

Business need

The crop protection market in Argentina handles over 360,000 L of products annually. These substances are commonly marketed in 20-liter drums and generate 15,000 tons of plastic waste per year in the country. Conventional distribution systems also contain inherent inefficiencies that risk further waste when products reach their expiration date. In the implementation of a new system to address these issues, another key challenge was posed by the requirement for secure traceability certified by government agencies responsible for health and food quality.

Solution

NTT DATA built on its Zoomlo Tracker platform to develop SISTEMA INTEGRA as a solution that enables real-time registration and tracking of shipments, supporting deliveries in bulk tanker trucks that do not require plastic packaging. This eliminates plastic waste from used containers and enhances worker safety by removing direct contact with products.

The system is linked to BFA, a nationwide blockchain platform in Argentina, to ensure compliance with information security and inviolability requirements. Secure end-to-end traceability improves efficiency, limits adulteration, supports expiration management and contributes to the responsible use of chemicals by monitoring each stage of the custody chain. With architecture based on Microsoft Azure technologies, SISTEMA INTEGRA also has the potential to be easily scaled to different product categories and clients worldwide.

Impact

Plastic use reduction per tanker truck delivered **660 kg**

In addition to reducing use of plastic by enabling a bulk sales model, the system has enabled efficiencies that lower logistics and operating costs and also reduce the carbon footprint around the distribution and use of crop protection products.

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CAF

Identifying Solutions to Address Biodiversity Loss in Latin America and the Caribbean

SDGs

Material Issues

Nature Conservation

Social issues

- The climate crisis and loss of biodiversity present urgent challenges across Latin America and the Caribbean, which is home to more than 60% of global biodiversity and considered the world's most biodiverse region.
- Biodiversity loss in key ecosystems like the Amazon Rainforest and Caribbean coral reefs threatens local communities' livelihoods. It can lead to health issues, increased natural disasters, reduced water availability, and decreased farm and fishery productivity, resulting in food insecurity, community displacement, and conflicts over dwindling natural resources.

Business need

Nature conservation is now considered a key environmental issue, as evidenced by the global 2030 targets adopted at the COP15 Biodiversity Conference in December 2022 and the publication of the TNFD disclosure framework in September 2023. With the need for high-quality nature-related data, movements to help companies and financial institutions assess and manage impacts are gaining momentum.

Serving a broad client base of 22 countries, private companies, and financial institutions, CAF is a development bank that aims to improve the lives of Latin American and Caribbean people. Adopting a new ecosystem approach under its mission to invest in sustainability-led projects that protect vulnerable communities and ecosystems, CAF has identified 14 strategic ecosystems of significant global relevance. To achieve the aims of this approach, it sought a partner with data analysis capabilities to find solutions, identify funding gaps and provide costed actions for areas impacted by biodiversity loss.

Solution

NTT DATA helped CAF identify and address issues caused by biodiversity loss across Latin America and the Caribbean through ecosystem research and data analysis, which included interviews and focus groups with more than 60 participants. This research led to the development of a tool that highlights the main specific problems contributing to biodiversity loss and the costs of projects associated with biodiversity preservation. Output included 14 ecosystem reports, each completed with solution plans and related cost estimates. This project was presented at the COP16 Biodiversity Conference in Colombia in October 2024.

Following the project, CAF has reaffirmed its commitment to ensure that at least 40% of its total financing is directed towards green financing by 2026, with 10% (approximately USD 2.5 billion) allocated to the conservation and restoration of biodiversity. NTT DATA continues to develop its analytical tool to enhance public policy-making by providing data accessibility and availability.

Impact

Estimated financing gap in key ecosystems identified through collaboration with NTT DATA

USD 400 billion

Identifying financing gaps in key ecosystems has helped to increase investment, with funding for high-efficiency projects expected to reach USD 1.1 billion. CAF has also announced the first of its investments, with a USD 300 million outlay to support strategic ecosystems.

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Economy

Clients' Growth

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Supply Chain Finance

Supporting the Financial Position of Suppliers and Establishing Strong Supply Chains

SDGs

Material Issues

Smart X Co-Innovation

Trusted Value Chain

Social issues

- The globalization of economic activity, the need to address social issues, and geopolitical risks* are leading to more diverse supply chain risks, making supply chain management increasingly important for businesses.
- In Japan, the time between transaction cutoff dates and receipt of payment through payment websites is increasing, with an average of 60 days across all industries. This places a significant burden on the finances of small and medium-sized enterprises.

*Geopolitical risks:

Risks caused by political or military tensions in a particular region making it difficult to predict future developments in the region or the overall global economy.

Business need

In business, ascertaining the flow of goods, funds and information across the entire supply chain is indispensable to improving efficiency and resilience. Supply chain finance, in which digital technology is used to support financing for suppliers, is receiving particular attention in this regard. Such systems provide stable financing for suppliers, which ultimately leads to the reliable supply of goods and services to consumers, enabling the building of strong supply chains.

Solution

NTT DATA has been providing the iQuattro platform, which advances the use of information in supply chains, since 2017. Linking with the corporate online banking provider AnserBizSOL®, an asset shared by iQuattro and NTT DATA, NTT DATA started to develop a supply chain finance system that uses commercial information from supply chains for financial operations. This enables "purchase order-based finance," in which suppliers receive finance based on order information.

In collaboration with AEON Bank, the supply chain finance system was deployed within the AEON Group's economic area in August 2024. This service can take real time information on transactions between AEON Group and suppliers, then convert it into the information needed for loan applications. As a result, financing can be secured at the order stage. This has optimized capital efficiency for suppliers. In future, the aim is to expand this system to other business and go beyond order-based finance to provide other financial services based on transaction information, including early capitalization and long-term accounts payable.

The creation of a matchmaking platform between businesses' financing needs and financial institutions is also planned, aiming for commercialization in fiscal 2026. NTT DATA will support corporate growth by advancing financing that transcends traditional approaches based on past accounts, focusing on businesses' future potential.

Impact

Number of days until receipt of funds through supply chain finance systems

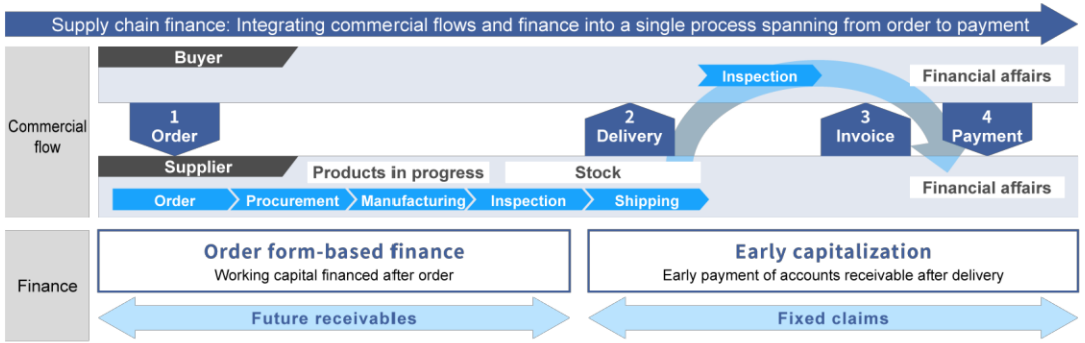
About 60 days

Payment website average

↓

3 business days

When provided by AEON Bank



Overview of Supply Chain Finance

Achieving Supply Chain Finance in Collaboration with AEON Bank (in Japanese only)
NTT DATA GROUP

Octo Knot Supply Chain Finance (in Japanese only)

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Smart Factory

Supporting Digital Transformation in Manufacturing to Boost Productivity

SDGs

Material Issues

Smart X Co-Innovation
Trusted Value Chain

Social issues

- In Japan's manufacturing sector, skilled workers are retiring, while the number of young workers continues to decline. By 2030, it is predicted that there will be a shortfall of 380,000 workers. (Source: Future Labor Market Projections for 2030, Persol Research Institute)
- In manufacturing, digital transformation often targets specific process improvements, but efforts to optimize overall production and expand business opportunities remain limited.
  (Source: White Paper on Manufacturing Industries 2024, Ministry of Economy, Trade and Industry, Ministry of Health, Labour and Welfare, and Ministry of Education, Culture, Sports, Science and Technology)

Business need

Amid the labor shortages facing manufacturing, the concept of smart factories has begun to take hold. These factories use AI and digital technologies to manage operations efficiently and address social challenges like those mentioned above. But manufacturing floors face many challenges. Daily production demands are relentless. Data on people, materials, and equipment is scattered. Each department handles management and improvement separately. Differences in mindset between back-office (IT) and manufacturing operations (OT) teams create barriers to collaboration, making problem-solving harder. In manufacturing, digital transformation often targets specific process improvements, but efforts to optimize overall production and expand business opportunities remain limited.

Impact

Implementation rate of digital transformation aimed at "optimizing overall manufacturing functions" **26.5%***

*Compiled by METI from a survey of 257 manufacturing companies conducted by the New Energy and Industrial Technology Development Organization (NEDO) under its "Research and Development Utilizing Wireless Communication Technologies to Reinforce the Dynamic Capabilities of the Manufacturing Industry/Survey Project on Measures to Strengthen Dynamic Capabilities on Manufacturing Floors and Future Dissemination of the Measures" (Source: White Paper on Manufacturing Industries 2024, Ministry of Economy, Trade and Industry; Ministry of Health, Labour and Welfare; Ministry of Education, Culture, Sports, Science and Technology)

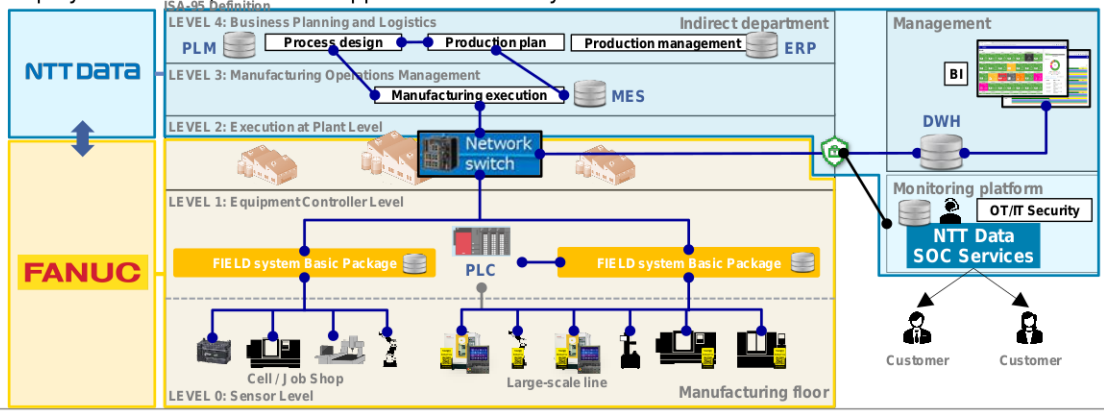
Solution

NTT DATA has partnered with Fanuc to launch a service in April 2024 that improves manufacturing operations by integrating OT and IT through Fanuc's FIELD system Basic Package.

The FIELD system Basic Package offers an API designed for seamless IT solution integration. It enables easy collection, visualization, and analysis of operational technology (OT) data within the factory from equipment and devices from different manufacturers and generations. NTT DATA provides full support to the manufacturing industry, offering: assistance with OT and IT data visualization and analysis, including implementation of the FIELD system Basic Package; consulting for continuous improvement activities; and deployment and operational support for related systems and security services from NTT DATA, tailored to the specific needs of the customer.

This enables the centralization of data that had previously been managed separately, and the sharing of that data across departments, boosting productivity and streamlining operations. The system is designed to adapt to users' proficiency and the problem-solving steps in production sites. It provides ongoing support for improvement ~~kaizen~~ activities, from operational monitoring to integration with external systems.

NTT DATA is actively expanding not only in Japan but also internationally, supporting operational improvements and reforms in the manufacturing sector.



NTT DATA GROUP to Start Offering Manufacturing Site Improvement Services by Integrating OT and IT
NTT DATA GROUP (in Japanese only)

Webinar: How Cross-Functional Teams Transform the Manufacturing Floor
NTT DATA (in Japanese only)

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SOPaymentSpoke

Enabling Streamlined Payment Operations and Secure, Reliable Payment Services Through ServiceNow

SDGs

Material Issues

Smart X Co-Innovation | Future of Work | Community Engagement

Social issues

- The global e-commerce market is on an upward trend in terms of net sales. Growth in Japan is expected to be around 6-8% annually. There is a demand for services that offer high convenience and security for consumers. (Source: 2024 White Paper on Information and Communications in Japan)
- Cashless payments, such as credit cards and QR codes, enhance convenience for users. However, they also present challenges, including rising fraud, data breaches, and the need for regulatory compliance in global transactions.

Business need

The rise of remote work and work style reforms has accelerated the digital transformation of workflow tasks, such as electronic approvals and stamping processes. SaaS* has become essential for implementing this digital shift and reducing associated costs. ServiceNow®, provided by ServiceNow, Inc., is a service that standardizes and automates tasks through digital workflows. It is widely used across many industries.

As the e-commerce market grows, there is increasing demand in operational areas that interact with end users to use ServiceNow for processes including payment handling. However, integration with existing external payment solutions is essential. This brings a range of challenges, including increased costs associated with contract procedures and the development of integration modules, as well as ensuring user-friendliness.

*SaaS (Software as a Service):
Software that can be used online without installation, or the service model for such software. This includes web-based email, conferencing tools, and business chat tools accessed through a web browser.

Impact

Number of non-ServiceNow screen operations visible to users **0**

(Excluding screen operations when additional authentication from the credit card company occurs)

Solution

NTT DATA pioneered the internal use of ServiceNow in Japan in fiscal 2016 and has have partnered with many Japanese firms to help them implement ServiceNow since fiscal 2020. To address challenges in payment operations, NTT DATA Financial Technology spearheaded the development of SOPaymentSpoke. Launched in August 2024, this extension facilitates seamless payments on ServiceNow.

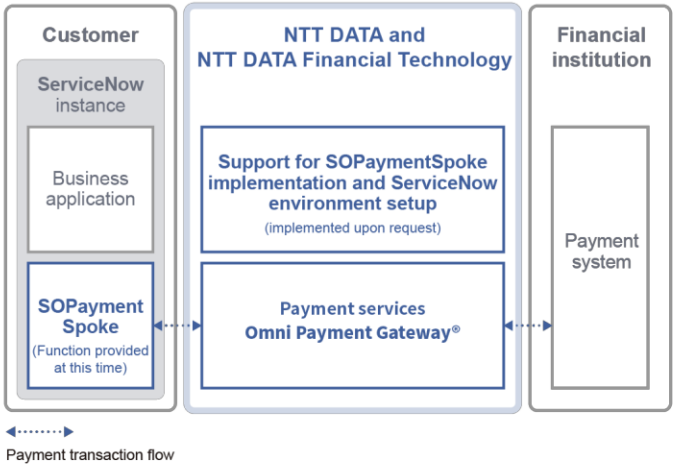
NTT DATA's payment service Omni Payment Gateway® has been integrated with ServiceNow. This integration embeds credit card payment features into portals and catalogs built on the ServiceNow platform. This enables a seamless purchase experience for products and services, covering processes from searching, application submission and contract signing through to payment, greatly enhancing user convenience.

This feature can be widely used for any payment-related operations on ServiceNow, regardless of industry or sector. Examples include retailers planning to build e-commerce sites, businesses or public entities operating websites that accept online applications for paid services, and service providers engaged in crowdfunding.

When implementing the feature, NTT DATA, which has extensive experience in optimizing UI/UX from the user's perspective on ServiceNow, serves as the sole point of contact to facilitate the integration of payment functions and the establishment of contracts with various payment providers, such as credit card companies.

In addition, NTT DATA's payment information processing ensures high reliability and security.

Going forward, NTT DATA will gradually support payment services beyond credit card transactions, offering higher value services to businesses involved in payment operations in order to enhance convenience for companies in the growing e-commerce market.



NTT DATA × ServiceNow (in Japanese only)

ServiceNow Store SOPaymentSpoke (in Japanese only)

NTT DATA Japan Corporation
Digital Success Solutions Division Solutions Sector
Card&Payments Services Division Payment Services Sector

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Smart AI Agent™

Leveraging Generative AI to Enhance Productivity for Office Workers and Address Labor Shortages

SDGs

Material Issues

Smart X Co-Innovation
Future of Work

Social issues

- Population decline is accelerating due to falling birthrates and aging populations, resulting in shrinking workforces.
- Despite the potential for generative AI as an effective means to improve work efficiency and productivity, usage rates among Japanese companies are lagging behind those in the US, China and Germany. (Source: 2024 White Paper on Information and Communications in Japan, Japanese Ministry of Internal Affairs and Communications)

Business need

The generative AI market is predicted to grow about annually 50% from 2023 to 2030, reaching a total scale of JPY 1.7 trillion in Japan and JPY 31.7 trillion* globally by 2030. Various fields are expected to leverage generative AI, with service development centering on generative AI-related applications, which accounts for 90% of the market. As work style reforms become ever more important due to the shrinking of workforces, hopes are high that generative AI can enhance work efficiency.

However, only about 46.8% of Japanese companies are using generative AI—about half the rate in the US and Germany. In terms of use cases, while overseas firms are leveraging generative AI to deal with clients in various fields, adoption in Japan has been cautious and focused on internal use.

Nevertheless, about 75% of respondents in a survey answered that generative AI can lead to better operational efficiency and address labor shortages, suggesting that use of this technology will also advance in Japan.

* Exchange rate of USD 1 = JPY 150

Solution

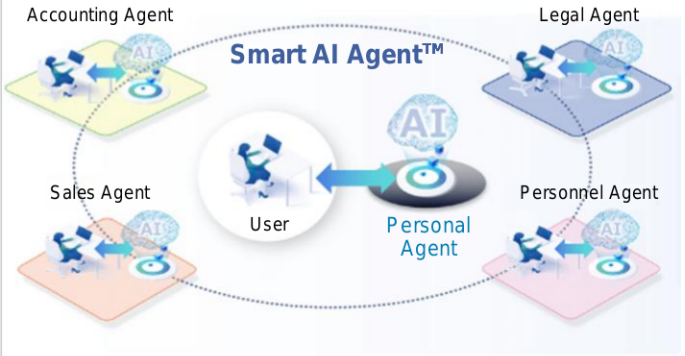
NTT DATA sees generative AI as a technology that can go beyond single tasks and be leveraged across operating processes as a whole. This includes work on Smart AI Agent™, a solution that can dramatically enhance productivity for office workers.

With Smart AI Agent, an AI agent optimized for the office worker's tasks, known as a personal agent, coordinates with multiple specialized AI agents with expertise in their respective fields to identify, organize and execute required tasks. The AI agent optimized to the user's tasks can provide new labor capacity through means such as task automation. This system aims to transform ways of working by reducing repetitive and non-value added tasks for users.

NTT DATA is also developing other technologies based on the Smart AI Agent concept. In the sales field, it has started operating LITRON® Sales, a service that provides autonomous support covering various tasks and carries out tasks instead of humans. Outside Japan, such systems have already been introduced to improve processes in the manufacturing industry, and further progress is expected in terms of adoption in various other industries.

NTT DATA will continue to expand its lineup of services, contributing to enhanced productivity for office workers and addressing social issues such as labor shortages.

Delivering new value with Smart AI Agent™



* "Smart AI Agent™" is a trademark of NTT DATA Group and is not a registered trademark.

Impact

Productivity improvement in operating activities following Smart AI Agent™ introduction (percentage of work time spent on sales activities)

31% Before Smart AI Agent™ introduction → **78%** After Smart AI Agent™ introduction

*Percentage of work time after Smart AI Agent™ implementation calculated by NTT DATA based on Exhibits 10 and 11 in The Economic Potential of Generative AI by McKinsey & Company (McKinsey Global Institute analysis)

*Based on one month of work (160 hours) for one member of sales staff

New Generative AI Service Using AI Agents Begins Operation
NTT DATA GROUP (in Japanese only)

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LITRON® Multi Agent Simulation

Generative AI Holding Meetings and Autonomously Deepening Discussions

SDGs

Material Issues

Smart X Co-Innovation

Future of Work

Social issues

- The shrinking of workforces due to population decline is accelerating, leading to labor shortages and creating a need to significantly reduce labor hours and improve productivity.
- As set out in the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work, it is also necessary to create workplaces where employees can work safely and in good health while improving productivity.

Business need

Labor forces are shrinking at an accelerated rate due to low birthrates and aging populations, and demand to leverage generative AI at work is rising rapidly. In a survey of 1,000 businesspeople, 58% of respondents said they already use or are experimenting with using generative AI in their work. When those considering using the technology are included, the total becomes 76%.

However, use of generative AI is currently limited to tasks such as performing searches and creating summaries using natural language, meaning it has not significantly expanded output of final products. People are seeking projects that use generative AI to transform operating processes as a whole.

Impact

Marketing sophistication verification test with Company A (results after sending direct mail to promotion targets derived using suggestions from LITRON)

Purchase rate compared to typical target customers

3.0% improvement

Solution

NTT DATA has been advancing its customers' use of generative AI through solutions such as the LITRON Generative Assistant. Building on insight from this work, it developed the LITRON® Multi Agent Simulation based on a belief that communication between AI is necessary to creating digital labor that automatically performs tasks instead of humans.

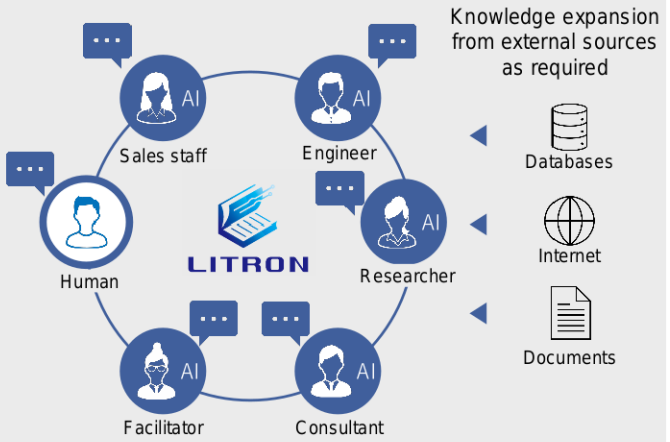
This solution is a communication support service developed by NTT DATA and NTT DATA Mathematical Systems. Generative AI are assigned individual personas covering aspects such as age, gender and work duties. They can then communicate with other generative AI to perform tasks from creating new product ideas to supporting marketing strategy formulation.

For example, generative AI with various expertise can take part in a design meeting for a new product and produce ideas with wide-ranging perspectives, speeding up new product development. In support departments that serve customers, they can simulate complaints and other situations in advance, then create effective customer service manuals incorporating diverse points of view. This can enhance customer satisfaction and reduce support costs.

In future, NTT DATA will continue to develop and put forward services to expand generative AI projects in Japan, contributing to the resolution of social issues and the growth of clients' businesses.

LITRON® Multi Agent Simulation

LLM agents each receive distinct positions and autonomously deepen discussions.



LITRON®
NTT DATA
(in Japanese only)

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Developer Workplace

Providing a Development Environment where IT Engineers can Leverage AI Support and Focus on Creative Work

SDGs

Material Issues

Smart X Co-Innovation

Future of Work

Social issues

- Demand for IT in various fields of society is increasing. The pace of technological advancement is remarkably fast, and the shortage of IT personnel is becoming more serious. It is estimated that by 2030, there will be a shortage of up to approximately 800,000 IT personnel.
  (Source: Survey on the Latest Trends and Future Projections of Human Resources (2016), Ministry of Economy, Trade and Industry)
- Companies today need efficient and adaptable development processes to keep up with rapidly changing markets and technological innovation.

Business need

System engineers are increasingly expected to choose and swiftly implement the best assets and services from a wide range of productivity-enhancing options available within the company.

Inconsistencies in asset and service formats create challenges in user awareness, adoption, and responsiveness to user needs.

Customers expect proposals that not only address visible problems and challenges but also enhance latent value.

Leveraging in-house expertise, there is a need to establish an engineer-friendly environment. This will improve system development productivity and quality, boosting competitiveness.

Impact

Internal adoption rate of Developer Workplace at NTT DATA as of fiscal 2027

50%

Solution

NTT DATA has brought together assets and services that help enhance system development efficiency into the Developer Workplace package, creating an environment that is easy to use from an engineer's perspective. This service is designed for internal use but can also be actively applied to system development projects with external customers.

NTT DATA will implement AI-driven system development using Smart AI Agent™ with multi-LLM, seamlessly integrating areas from proposal to development and operation across a wide range of projects. Before starting a project, the user enters the development project's characteristics. The AI model will then suggest suitable assets and services. In the design and development stages, the AI model leverages NTT DATA's accumulated expertise to generate output, driving a major productivity boost while maintaining established quality levels. This enables customer needs to be met to an even higher level. IT engineers involved in development can maximize their performance and focus more on creative initiatives.

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UnifiedMDR for Cyber Resilience

Security Outsourcing Services with Global Capabilities from Rule Design, Setting Security Policies and Training, to Advanced Operations in SOC/CSIRT

SDGs

Material Issues

Smart X Co-Innovation | Future of Work | Community Engagement

Social issues

- Global economic losses from cyberattacks in 2020 were estimated at around USD 945 billion. In Japan, 70.9% of companies have experienced cyberattacks over the past three years. The average total damage from cyberattacks is approximately JPY 171 million. Organizations hit by ransomware face average losses of around JPY 220 million. (Sources: The Hidden Costs of Cybercrime, McAfee; Security Maturity and Incident Survey 2024, Trend Micro)
- Cyberattacks on partners, not just a company itself, pose a significant supply chain risk that threatens business continuity.

Business need

Cyberattacks are becoming more sophisticated and complex, making it difficult to achieve complete protection. The emphasis is on swiftly detecting, responding to, and recovering from incidents to minimize damage. Faced with the growing threat of ransomware* attacks, businesses must quickly check if their critical data is encrypted and take necessary steps to strengthen their defenses.

In addition, as business operations expand globally and industry regulations evolve worldwide, the need for advanced security measures on a global scale has become urgent. To address this situation, companies need to improve global security governance and hire security experts with advanced skills. However, many find it hard to do this solely with in-house resources.

*Ransomware
A malicious program that infects computers or other devices, encrypts stored data to render the device unusable, and demands a ransom for data recovery.

Impact

NTT DATA security specialists

Approx. 7,500 people

Solution

Seeing cyberattacks as a key business risk, NTT DATA is strengthening its global security governance efforts, leveraging 15 years of experience in incident response and security expertise gained from building and managing a zero-trust environment used by 190,000 people across 59 countries and regions.

UnifiedMDR for Cyber Resilience is a global security service that leverages NTT DATA's extensive security expertise. Highly skilled security specialists provide comprehensive support, from policy development to security operations and improvements.

By using this service, companies with global operations can shift from site-specific security planning to a headquarters-led approach, ensuring consistent measures across all locations.

In fall 2024, NTT DATA launched new services, including insider threat protection and ransomware protection, and will continue to enhance its services and improve cybersecurity to contribute to greater safety and security for its customers and society.

Cybersecurity
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High Performance Computing / Quantum Computing

Boosting Efficiency in Deodorizing Component Compounding Processes to Achieve Results with Optimal Anti-odor Effects

SDGs

Material Issues

Social issues

- From advanced AI (machine learning) and DX functions to simulations in fields such as financial engineering and chemistry, the scale of required computing power is growing year by year. To meet this need, devices that perform calculation based on innovative principles are required.
- Among AI and machine learning fields, mathematical optimization, which includes complex decision making and optimal allocation of limited resources such as personnel, time, and funds, is considered essential for tackling many business issues. However, it is also highly challenging due to the need to calculate optimal solutions for complex business issues from a vast number of possibilities. New calculation methods are expected to make an impactful contribution in this area.

Business need

Quantum computers are computers that use phenomena observed in quantum mechanics to achieve high calculation speeds. With IT technology being widely used in various areas of society, this field is gaining attention due to its potential to lead to even more advanced businesses. Beyond quantum computers, ising machines and various other devices that use advanced computational methods inspired by quantum mechanics are also emerging.

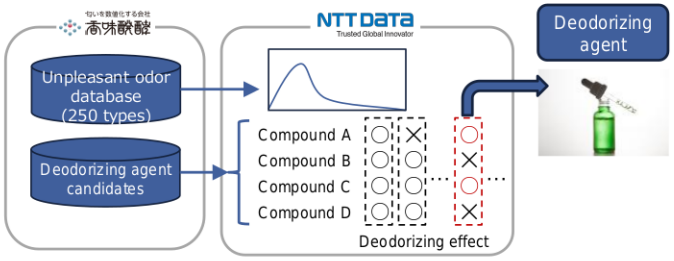
These developments have led many companies to reexamine the feasibility of wide-ranging businesses in which calculation complexity had been considered prohibitive. Use is growing in areas such as business service development, productivity enhancement, data sciences such as AI and machine learning, and even fundamental science fields, with further applications being considered.

Solution

NTT DATA is developing technologies and methods to calculate optimal choices from wide-ranging combinations. Mathematical optimization is one such approach. Using quantum computers and various other advanced devices, NTT DATA provides technical verification and consulting services based on its know-how relating to calculation and other highly-specialized insight.

NTT DATA worked with Komi-Hakko Corporation, which possesses proprietary technology for converting smells into data, to develop a new compounding process for anti-odor components. After measuring 250 types of unpleasant odors and converting them to data, they identified the optimal combinations for deodorizing agents in response to each smell. This enabled the recreation of smells independent of subjective human perception and supported the quantification of how people perceive scents, which is not possible with conventional sensors and devices. Lead times for compounding and developing deodorizing agents were also reduced from one and a half years to as little as one month.

In the future, in addition to more efficient, more advanced development of deodorizing agents, work is planned to develop compounding and transfer technology to share smells remotely. These efforts seek to achieve implementation in various fields, from digital content with added scents for video production and music streaming to flavors that respond to human psychological activity and automation or remote management of odor testing and other tasks that require a human sense of smell. A goal of creating at least 10 new smell-related businesses in 2025 has been set.



Optimization of Odor Molecule Combinations

Impact

Deodorizing agent development time

Approx. 1.5 years → **Minimum of 1 month**

Conventional processes

Processes using odor database and mathematical optimization techniques

*Based on joint experiment carried out by NTT DATA and Komi-Hakko Corporation between April and July 2024

Quantum Computers & Ising Machines
NTT DATA (in Japanese only)

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AI Governance Consulting Service

Comprehensive Support to Strengthen Companies' AI Governance, from AI Risk Assessments to Countermeasure Implementation

SDGs

Material Issues

Trusted Value Chain

Human Rights & DEI

Social issues

- Use of AI is advancing rapidly. While AI offers numerous benefits, such as boosting efficiency in everyday tasks, it also presents unique risks. This makes AI-related risk management a social issue that companies all over the world must address.
- Generative AI has been identified as posing potential social and ethical risks, including unintended use of discriminatory language, information leaks, copyright infringement and dissemination of false information.

Business need

The risks associated with using AI are becoming a prominent social issue, leading to worldwide debate on the ideal form of AI governance. At the G7 summit in December 2023, the Hiroshima AI Process was agreed upon as an international framework for formulating rules relating to AI. The EU also passed the AI Act in May 2024 as a comprehensive legal framework for AI, including generative AI, establishing heavy financial penalties for companies guilty of violations. This reflects an accelerating trend towards tighter regulation and governance. While advancements in companies' use of AI can lead to efficiency enhancements and new business opportunities, failures in risk management can cause reputational damage or a loss of credibility. It is therefore imperative that companies comply with laws and regulations and establish AI governance frameworks.

Implementing AI governance requires appropriate management of AI-related risks while also maximizing the value that AI brings. Companies need appropriate understanding of the risks of AI in order to continuously plan and implement countermeasures. Wide-ranging knowledge and highly-specialized expertise are also required, including regarding technical aspects of AI and regulations in different countries, making it difficult for companies to handle everything in-house.

Solution

NTT DATA established its AI guidelines in 2019 and is a leader in AI risk management initiatives. NTT DATA is also making proactive efforts in relation to AI governance and has established a specialist organization to advance use of generative AI in the Japanese market. Leveraging the vast specialist knowledge and know-how built up through these efforts and the ability to handle the latest technologies and legal requirements, NTT DATA launched its AI Governance Consulting Service in October 2024.

This service supports companies and other organizations by setting out rules to be observed in formulating and revising their AI governance guidelines. It can also implement countermeasures against risks, including assessing potential risks in AI projects, systems and models, then deploying solutions such as monitoring tools to check for the manifestation of issues.

The service also provides wide-ranging support for organization-wide countermeasures, such as AI literacy training for staff with the aim of enhancing and ingraining AI governance.

NTT DATA will expand its collaboration to companies worldwide, delivering global services to enable more businesses to use AI with security and peace of mind.

Overview of AI Governance Consulting Service

Impact

Percentage of financial institutions using generative AI (based on research by the Bank of Japan)

Approx. 80%

*Approximately 30% of financial institutions currently actively use generative AI, rising to approximately 60% including those trialing AI use, and approximately 80% including those considering future trials or use.
(Source: Financial System Report Annex: Use and Risk Management of Generated AI by Japanese Financial Institutions (published October 2024))

AI Governance Consulting Service Launches, Providing Support from AI Risk Assessments to Countermeasure Implementation
NTT DATA GROUP (in Japanese only)

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Digital Workplace

Creating Connections Between People and Information to Support Company Innovation and Talent Development

SDGs

Material Issues

Future of Work | Smart X Co-Innovation | Community Engagement

Social issues

- As society becomes more complex and globalized, companies must enhance teamwork and knowledge sharing among employees to ensure sustainable growth. Boosting employee engagement is essential.
- In 2040, the baby boom junior generation will turn 65, leading to a significant decline in the working-age population and a severe labor shortage, commonly refereed to as the "2040 problem."

Business need

Knowledge management has long been used to enhance business efficiency and corporate value. It works by visualizing and sharing the knowledge, experience, and other intellectual assets of organizations and their employees. In recent years, advances in globalization have given rise to a need for cross-domain collaboration to drive innovation. Weak ties between different fields of expertise and departments are growing in importance. Given this context, the established approach of relying on personal connections for information gathering and sharing has reached its limits. Businesses are concerned that if they fail to recognize or leverage effective internal resources they may fall behind in responding to their clients or miss business opportunities.

In addition, as the workforce continues to shrink due to an aging population and low birthrate, challenges in knowledge sharing have become increasingly apparent. This impacts the transfer of skills and expertise based on individual experience and intuition, as well as the development of talent.

Impact

Impact in optimizing proposals and reducing opportunity loss

J PY 20.1 billion/year

*Based on survey results, the number of proposals involving knowledge sharing and the improvements in business speed and efficiency were analyzed. Revenue opportunities from improved proposal efficiency and the resulting additional proposals were then estimated.

Solution

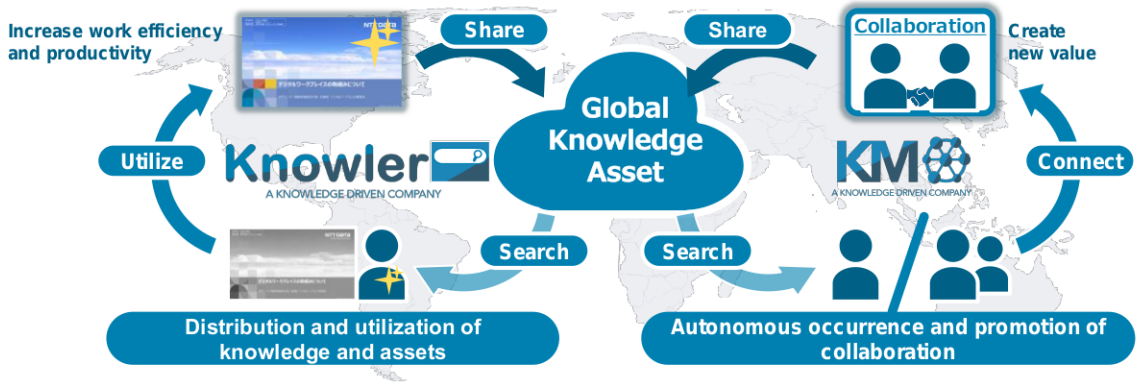
Since 2021, NTT DATA has been partnering with NTT DATA INTELLILINK and Qunie to offer support services for implementing the knowledge management solution "knowler." This includes drawing from expertise accumulated by promoting knowledge management within NTT DATA since 2018.

Knowler enhances internal collaboration by not only sharing documents (Know-How) but also integrating and sharing who holds specific knowledge (Know-Who) and organizational or project information (Know-Where).

Knowler connects with various documents stored in online storage and internal systems to gather information about people, organizations, and projects. The system uses ontology to automatically analyze and organically link and structure various data, enabling complex information searches.

This makes it easier to visualize who holds what information, effectively driving strong interpersonal connections that were previously difficult to establish. As a result, it supports the creation of innovation and the development of human resources, contributing to enhanced competitiveness.

Going forward, NTT DATA aims to expand into both domestic and international markets. This will allow employees to connect freely and organically across the globe. By linking their experiences, skills, and the latest technologies with customer ideas, NTT DATA strives to create new value for customers, society, and employees.



Digital Workplace
Digital Transformation of the Working Environment

Knowledge Search
Making Your Digital Workplace Smarter.

TIME Powered by knowler (YouTube)

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Digital Workplace

Impact (Detail)

Impact refers to long term changes and effects that projects or activities bring to society and the environment, with consideration given to all relevant stakeholders. Specifically, this includes changes relating to individuals and regional communities in fields such as the economy, the environment, health, education and welfare.

Impact on company and clients
(Maximizing the value provided to clients while sustainably enhancing profitability)

Impact on society
(Creating new social value / Increasing digital transformation talent)

Improved proposal efficiency and reduced opportunity loss

J PY 20.1 billion /year

(Including* potential cases, up to 54.3 to 100.7 billion yen)

Based on survey results, the number of projects involving DWP* and their proposals were identified. Improvements in business speed and efficiency were assessed and both the efficiency gains in proposal processes and the potential revenue from additional proposals were estimated.

Impact of increased profits in delivery

J PY 3.2 billion /year

Based on survey results, the number of projects that DWP helped to secure was estimated. It was assumed that DWP's preliminary research helped anticipate and avoid factors impacting project progress and profit margins.

Boost to profits by maximizing skills and performance

JPY 2.7 billion /year

It was assumed that DWP accelerates the integration of new participants, boosting profitability. This estimate is based on actual data such as the number of hires and usage rates, along with typical onboarding effects.

Prevention of economic losses by increasing digital transformation talent

J PY 11.5 billion /year

Given DWP's indirect yet significant role in society as a pool for digital transformation talent, it was assumed that leveraging it will foster individuals with diverse expertise. Potential economic benefits were estimated based on METI's projections of losses stemming from a shortage of digital transformation professionals.

An example of new social value

- Resilient and sustainable supply chain
- Achieving a safe and secure transportation infrastructure
- Improving healthcare access in regional areas
- Access to practical digital insights
- ⋮

Using DWP, it is possible to capture the scale of social issues resolved quickly or through innovative methods, recognizing their ripple effects. (Approaches to major projects and results will be made sequentially in the future.)

Impact will increase with future expansion

Approximately **30,000+** users

Approximately **13,000+** unique users per month

250 proposals / **100** orders

*Results were estimated based on actual survey responses (a subset of the total) and users' DWP registration and browsing status, including potential activity, as seen in the data.

*DWP is an asset and knowledge-sharing service developed by NTT DATA and offered to the domestic group.

Strengthening ESG Data Management to Support CSRD Compliance

Integrated ESG Implementation to Support Timely CSRD Compliance

SDGs

Material Issues

Social issues

- Regulators are making it clear that talking about environmental, social, and governance (ESG) standards is not enough—corporations must also take action. In addition to the adoption of new rules and laws in various countries, this is demonstrated by the passing of the Corporate Sustainability Reporting Directive (CSRD) by the EU in November 2022.
- The CSRD mandates reporting on subjects such as environmental matters, social issues and respect for human rights. It also applies to non-EU companies with a net turnover of EUR 150 million and at least one branch or subsidiary in the EU. Given the wide breadth of companies covered and the depth of reporting standards, companies need to be proactive and adaptable to ensure compliance.

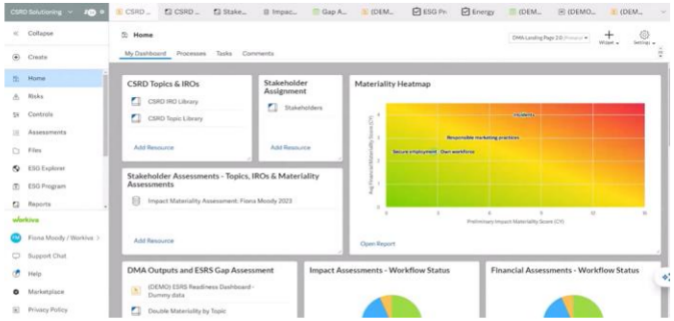
Business need

Under the CSRD, Wave 1 entities, which includes companies with more than 500 employees listed in EU-regulated markets, are under time pressure to disclose information in compliance with new standards in their 2025 sustainability reports. Such companies often have complex structures comprising several legal entities. This creates significant challenges in implementing group-wide collection, management, and reporting of wide-ranging ESG data. Issues include decentralized data collection scattered across different divisions and systems, a lack of standardization making data difficult to compare, and reliance on manual tools such as spreadsheets, which risks errors and inefficiencies. Systems capable of collecting data with speed and accuracy are urgently required to overcome these challenges and implement timely regulatory compliance.

Solution

NTT DATA supported a leading energy company in the successful implementation of Workiva, a connected cloud platform that simplifies financial and ESG reporting through seamless collaboration and deep integration into existing workstreams. NTT DATA consultants worked closely with the client to understand their specific needs, data sources, and workflows, then designed a solution leveraging Workiva's platform capabilities, including customization to fit the client's unique environment. To ensure a smooth transition to the new platform, the client's data owners and report users were also given comprehensive training. NTT DATA provides ongoing post-implementation support to ensure the client can effectively utilize the Workiva platform and immediately address any issues.

Workiva provides a centralized platform for managing of all of the client's ESG data. Automated workflows enhance efficiency by simplifying data collection, validation, and approval. Time taken to produce reports has also been reduced through pre-built ESG reporting frameworks integrated into the platform. In addition, the ability to record all data changes ensures traceability through a comprehensive audit trail.



Impact

20% improvement in data accuracy

15% reduction in audit costs

40% reduction in the time spent on data validation

30% increase in the number of stakeholders actively engaged with ESG data

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Smart Monitoring

Enhancing Water Conservation through Smart Monitoring with IoT and LoRaWAN

SDGs

Material Issues

Smart X Co-Innovation

Nature Conservation

Social issues

- Water leakages affect most of Europe, with over 25% of water being lost in the pipelines between water towers and users. This makes detecting and addressing leaks and backflow crucial to achieving sustainable use of this precious natural resource.

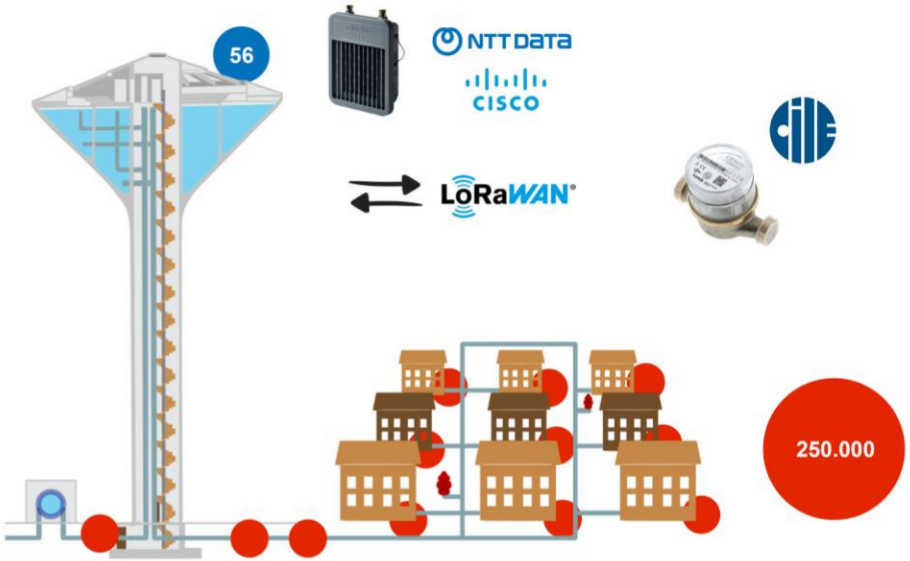
Business need

CILE is a water production and distribution company providing water to 800,000 people across 24 municipalities in the province of Liège, Belgium. To optimize water usage, and ensure a sustainable supply of water, the company needed to enhance the network used to monitor water usage, performing functions such as detecting leaks and backflows.

The aim of the smart network was to conserve water by limiting leaks, ensuring only water that is needed is pumped and identifying priority areas for piping system maintenance and replacement. CILE had already started deploying sensors and a network, with more than 250,000 IoT devices located in the towers and pipe network. The next step was to derive actionable insights using the data from those sensors.

Solution

Working with Cisco and CILE, NTT DATA deployed a series of gateways to securely connect sensors and water meters to a regional long range wide area network (LoRaWAN) covering the entire Liège region. After creating a clear data structure defining what data needed to be gathered, NTT DATA deployed 56 gateways in a secure network, connecting the network's IoT devices. The data delivered allows CILE to improve water management by monitoring water use and detecting problems such as leaks, both in customers homes and in the pipelines. As a low power network, the system supports the use of sensors capable of sending data daily for about 15 years. The comprehensive data from water towers and from citizens also support effective predictions of water consumption in subsequent days, enhancing water conservation by reducing excess pumping of groundwater.



Impact

Water savings contributed to in 2023

1 million m³

Water savings are expected to double to two million m³ in 2024. Building on the success in Liège, this system is being implemented in other regions in preparation for cross-border water exchanges. Efforts are also focused on fostering habits around water consumption among all stakeholders, including end users.

CILE boosts water conservation with IoT and LoRaWAN
NTT

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Society

Inclusive Society

Health Data Bank®

Achieving a Society where People Can Work and Stay Healthy Throughout their Lives

SDGs

Material Issues

Social issues

- In the context of a declining workforce due to a decreasing birthrate and an aging population, it is expected that maintaining employee health and encouraging longer working lives will ultimately lead to increased productivity and improved business performance.
- The rising medical costs associated with an aging society have become a social issue, and there is a push to promote self-medication*1 and self-care, as well as to raise individual awareness of health and health management.

*1 Self-Medication
Taking responsibility for one's own health and managing minor physical ailments independently.

Business need

Health management refers to considering employee health from a managerial perspective and strategically implementing initiatives to maintain and promote health. More companies are becoming interested in health investment for employees as it leads to organizational revitalization and productivity improvement, acquisition of excellent talent and reduction in turnover rates, and enhancement of corporate brand. In Japan, the Ministry of Economy, Trade and Industry has designed the 'Certified Health & Productivity Management Organization Recognition Program' to promote the spread of health management, and currently, about 20,000 organizations are certified. Supporting long-term health management of individual employees requires the use of health management systems and the creation of new services through collaboration with businesses.

Impact

The introduction of Health Data Bank® has significantly reduced the time required for customers to process health checkup data

Approx. 100 hours/month → **0 hours/month**

Implementation of a general health checkup management system

Implementation of Health Data Bank®

*2 Customers with 20,000 employees and 200 medical checkup facilities

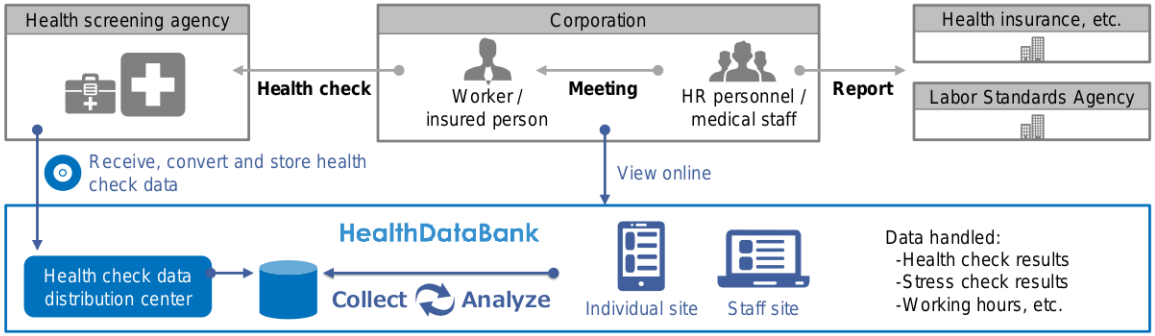
Solution

NTT DATA started operating the cloud-based health management system Health Data Bank® in 2002 and is working on both corporate health management and individual lifelong health management in a manner compliant with Certified Health & Productivity Management Organization Recognition Program standards. The system is currently used for health management by about 3,000 companies or organizations and over 5 million people.

One of the features of Health Data Bank® is that health checkup data is received and registered directly from health checkup institutions. Additionally, staff with medical knowledge check the data and handle inquiries to the health checkup institutions in case of errors. This reduces the workload of industrial health staff and HR personnel, allowing them to focus on follow-up care for employees.

Moreover, industrial health staff and HR personnel can combine health checkup data and stress check data to identify health issues and provide advice to employees with health problems.

Furthermore, employees can review their health data over the years since joining the company, which can be used for self-care. From January 2024, it is now possible to optionally add Arirge, an educational portal site provided by Taiho Pharmaceutical Co., Ltd., which focuses on balancing cancer treatment and work, to Health Data Bank®. This is expected to expand communication with employees not only in the area of health management but also in prevention, treatment, and support for returning to work.



HealthDataBank - Health Management Cloud Service NTT DATA (in Japanese only)

Launch of ARIRGE, an Educational Service on Balancing Work and Cancer Treatment NTT DATA GROUP (in Japanese only)

NTT DATA Japan Corporation
Social Infrastructure Solution Sector Social Innovation Division
Asset Business Group, Asset Business Section
hdb-sales2@kits.nttdata.co.jp

BizMINT®

Promoting Public-private Data Collaboration to Streamline Administrative and Private Procedures

SDGs

Material Issues

Digital Accessibility
Trusted Value Chain

Social issues

- Procedures for life events such as moving require similar applications to be submitted to multiple locations, placing a significant burden on individuals.
- Government and private sector systems are not integrated, leading to complex procedures and time costs.

Business need

To reduce the costs of administrative procedures related to life events and to facilitate the smooth flow of information across society, it is essential to promote public-private data collaboration. Municipalities are enhancing the convenience of procedures and counter services by utilizing digital technologies such as online applications and the use of My Number cards.

For example, in February 2023, the Digital Agency launched the Online Moving Procedures Service on the Mynaportal, which allows users to complete various procedures online, including submitting a moving-out notice to municipalities and handling utilities such as electricity, gas, and water with private companies. Future collaborations with financial institutions and mobile phone companies are also anticipated.

Impact

Number of local governments supporting moving procedures with BizMINT®

1,741 organizations nationwide

As of October 1, 2024

Solution

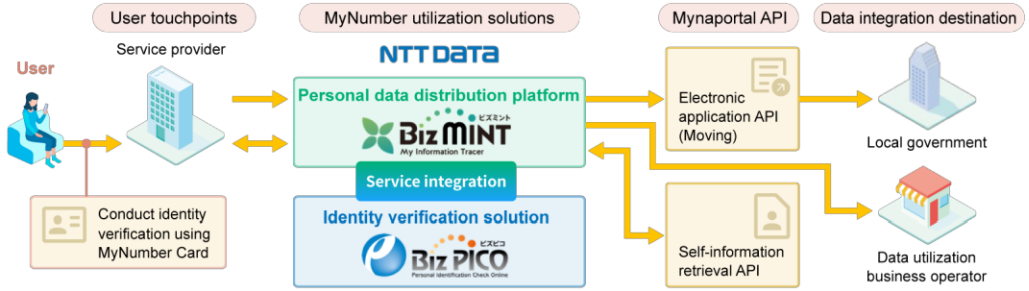
NTT DATA's data distribution platform, BizMINT®, integrates with the Mynaportal API provided by the Digital Agency, offering a system that facilitates applications to government agencies and the provision of information held by these agencies to private businesses. This enables real-time sharing of information across multiple organizations, allowing for the swift delivery of necessary services.

In November 2023, NTT DATA launched a service that integrates with the electronic application API, providing a one-stop solution for administrative and private company procedures related to moving. By combining BizMINT® with BizPICO®, a personal identification solution service using My Number cards and other public personal authentication services, NTT DATA achieves highly reliable data collaboration across public and private sectors.

The platform includes essential features such as managing user consent and controlling data flow to specific businesses if the user does not wish to share their data. This ensures a secure information-sharing environment for both data users (individuals) and data-handling businesses.

This service, which allows for moving applications to 1,741 municipalities nationwide, is the first of its kind offered by a private company in Japan. Currently, it enables simultaneous address change applications for administrative procedures and private businesses such as water, electricity, and gas in Kaga City, Sapporo City, Sendai City, and Kagawa Prefecture. NTT DATA continues to expand the number of businesses nationwide that can handle these procedures.

In the future, NTT DATA aims to link with the Self-Information Acquisition API* to share information such as taxes, income, and family registers held by government agencies with private businesses, with user consent. This will contribute to improving operational efficiency for service providers, creating new business opportunities, and enhancing convenience for service recipients.



* Self-Information Acquisition API : One of the services of Mynaportal. This API allows users to obtain their own information (such as income and household details) held by government agencies.

BizMINT® and BizPICO® NTT DATA (in Japanese only)

NTT DATA Japan Corporation
Social Infrastructure Solution Sector
Social Digital Transformation & Consulting Division
Consulting Group, Business Planning Section
bizmint@hml.nttdata.co.jp

Voista!®

Easy, Voice-activated Communication: Connecting Seniors with Society

SDGs

Material Issues

Social issues

- As the elderly population grows, the medical and welfare personnel shortage worsens and social security costs rise, causing a slowdown in economic activity. Extending healthy life expectancy has become a social issue.
- As society becomes more digital, elderly people often face challenges accessing and using Information and Communication Technology (ICT). This leads to inequality in economic activities, social participation, and information access, known as the digital divide*.

*Digital divide
The gap between those who can use information and communication technologies like the internet and computers and those who cannot.

Business need

Japan's elderly population is expected to peak in around 2040, with the numbers of elderly and working-age individuals approaching a one-to-one ratio. It is estimated that by fiscal 2040, there will be a shortage of about 570,000 caregivers. Such a shortage of caregivers could deprive many individuals of treatment and care opportunities, increasing the burden on families. With some 40% of family care attributed to working caregivers, the economic loss is estimated to be JPY 9 trillion. Social security costs are projected to reach JPY 187 trillion in fiscal 2040. This gives rise to a need for efforts to extend healthy life expectancy through measures such as preventive care.

Meanwhile, many elderly people struggle to use smartphones or tablets due to aging-related cognitive decline and physical decline, such as numbness in the hands, dryness, and decreased vision. A 2023 survey by the Cabinet Office found that less than 30% of people aged 70 and over frequently use smartphones or tablets.

Solution

￥NTT DATA has developed Voista!, a senior-friendly service that combines a smart display with easy to operate with voice commands. The service is offered to senior facilities and local governments.

Since this service is based on voice control, even seniors who are not familiar with using smartphones or tablets can easily manage to use it. As well as creating opportunities for elderly people to speak by engaging with the characters, the service promotes wellness by suggesting content such as health information, brain training, and videos. For communication with families, there are features like video calls and an app to share the status of facility users, allowing facilities and families to work together in monitoring.

In addition, Voista! uses voice prompts to help prevent elderly people from forgetting to take their medication. This supports their independence and also reduces the burden on caregivers and family members.

The current focus is on assisted living facilities and local governments. In the future, NTT DATA plans to offer services to stakeholders such as home care and community-based care providers. NTT DATA aims to continue connecting local communities and older adults across different professions and industries to help solve issues in our aging society.

Impact

Average usage frequency of health content by seniors in Iwanai Town, Hokkaido

3 times a week
Recommended frequency of multi-component exercise (such as radio calisthenics) **

→

7 times a week
When using Voista!

The quizzes and exercises included in Voista! are as effective as speech in preventing frailty. The daily use of health content indicates that actions to prevent frailty are becoming habitual.

**The Ministry of Health, Labour and Welfare (MHLW) recommends that elderly people engage in multi-component exercises such as radio calisthenics at least three times a week. (See Physical Activity and Exercise Guide for Health Promotion 2023 – Elderly Version published by MHLW)

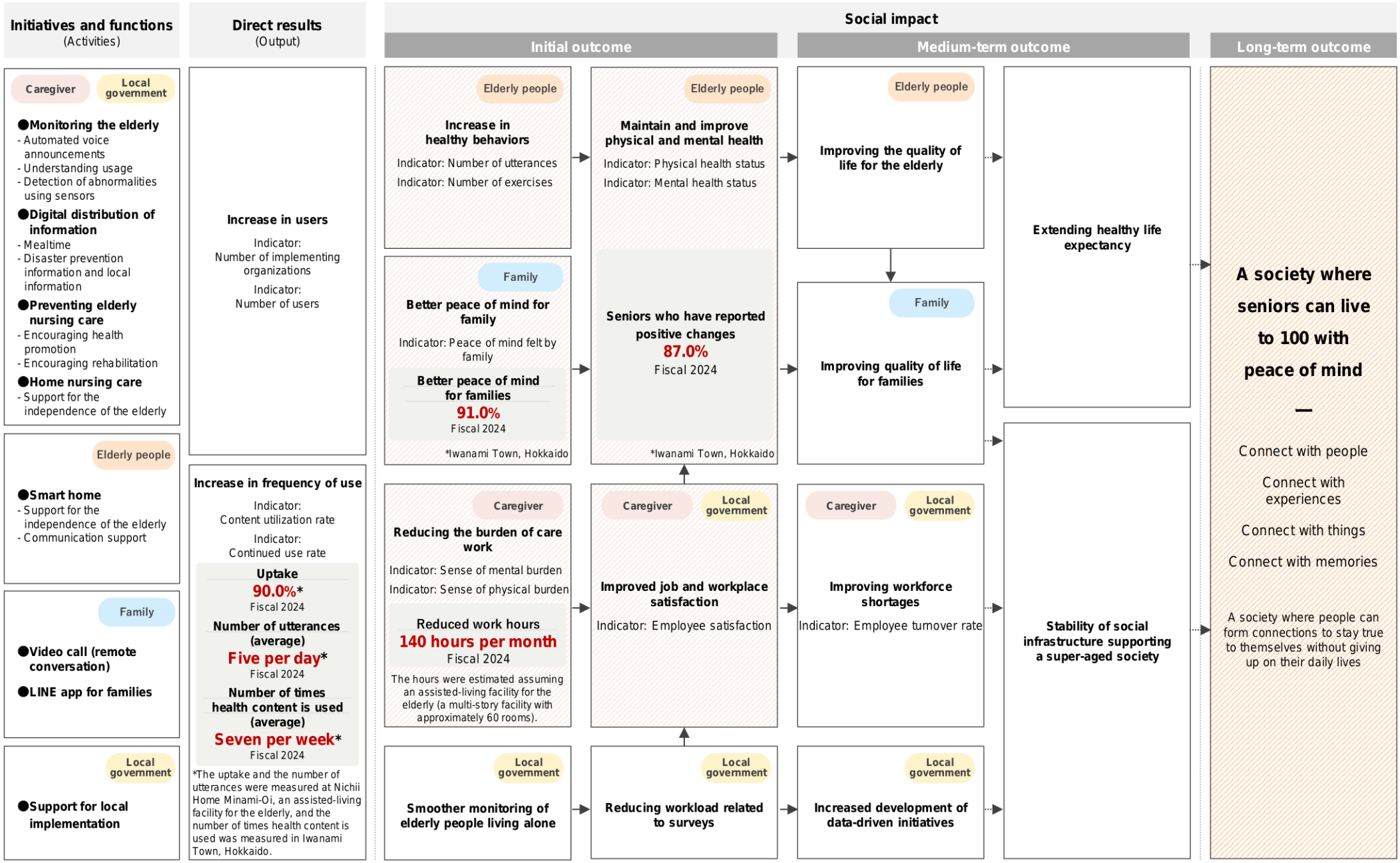
Connecting Seniors with Society: Voista!® (in Japanese only)

NTT DATA Japan Corporation
Business Promotion Group
Shinkin Bank Division
Second Financial Sector
contact-voista@am.nttdata.co.jp

Vista!®

A logic model is a graphical depiction that outlines the causal correlation leading to the desired outcomes of initiatives or projects.

Logic model



A vision map illustrates the desired ideal state of an organization or initiative and visually represents the path toward its realization.

Vision map

Sleep Tech Hotel

Hotel Stays Providing Insight into Sleep Quality

SDGs

Material Issues

Digital Accessibility | Future of Work | Smart X Co-Innovation

Social issues

- To achieve a sustainable society, there is a need to support public physical and mental health and to improve wellbeing as a means to enhance individuals' happiness and quality of life.
- Causes of lifestyle diseases such as diabetes and high blood pressure include dietary habits, stress, and insufficient exercise or sleep. Regular health checks and lifestyle reviews are key ways to achieve the early detection and prevention of such diseases.

Business need

According to OECD research, Japanese people have the world's lowest average number of sleep hours. Lack of sleep is closely correlated with lifestyle diseases such as sleep apnea, high blood pressure, diabetes and arteriosclerosis, and people are paying more attention to their sleep schedules year after year. Companies are responding by developing products and services to improve sleep quality, including functional foods, supplements and mattresses.

This is also leading to rapid expansion of the "sleep tech" market, comprising services and systems driven by technologies such as IT and AI that aim to improve sleep quality.

Impact

Number of people experiencing increased productivity through reduced health-related anxiety and improved health

Approx. 5,000 people

Note 1: Estimate calculated based on behavioral change percentage from survey results from approximately 20,000 hotel customers, based on the sleep reports customers received.

Note 2: Estimate includes improved productivity through productivity-increasing factors, such as a reduction in absences from work or a lowering of periods of reduced concentration, resulting from behavioral changes by hotel customers.

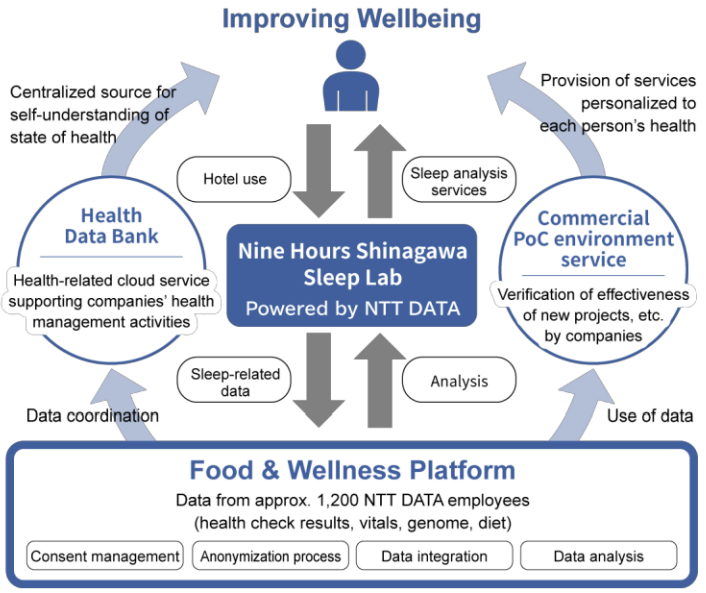
Solution

NTT DATA is leveraging information technology to improve the public's physical and mental health through its Food & Wellness® platform. Aiming to create a world in which people can understand their own health without having to take proactive measures, it sees sleep-related data as a key area of information, alongside health check and genome data.

When the capsule hotel Nine Hours Shinagawa Station Sleep Lab Powered by NTT DATA opened in August 2024, it began collecting and analyzing sleep data from hotel guests who agreed to take part. With the consent of guests, sensors inside the capsule units are used to acquire, aggregate and analyze sleep related data, such as their heart rate during sleep, snoring, and the number and length of apnea occurrences. Guests can get insight into their personal sleeping habits through sleep reports, helping them to learn about their optimal sleeping environment.

NTT DATA also established the Inter-company Co-Creation Program, which engages in co-creation with companies looking to leverage sleep data in areas such as product effectiveness verification, marketing and product development. By providing data that has been collected and analyzed, the hotel enables companies to verify the impact of their products on addressing sleep-related issues and improving health. Data from analysis can also lead to the development of new products.

In the future, NTT DATA will continue to develop facilities and services aimed at improving people's wellbeing while also looking to create a world where wellness checks can be incorporated into daily life.



Food & Wellness (Public Contact Points)
NTT DATA (In Japanese only)

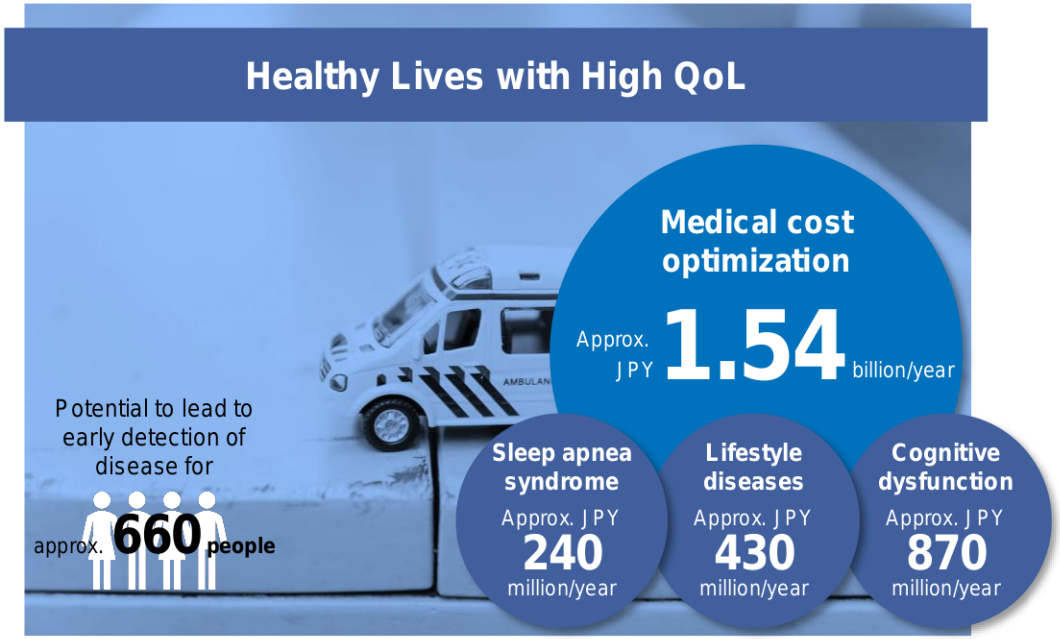
NTT DATA Japan Corporation
First Business Section CPG Division
Second Industry Business Sector
fwsales@kits.nttdata.co.jp

Sleep Tech Hotel

Impact (Detail)

Impact refers to long term changes and effects that projects or activities bring to society and the environment, with consideration given to all relevant stakeholders. Specifically, this includes changes relating to individuals and regional communities in fields such as the economy, the environment, health, education and welfare.

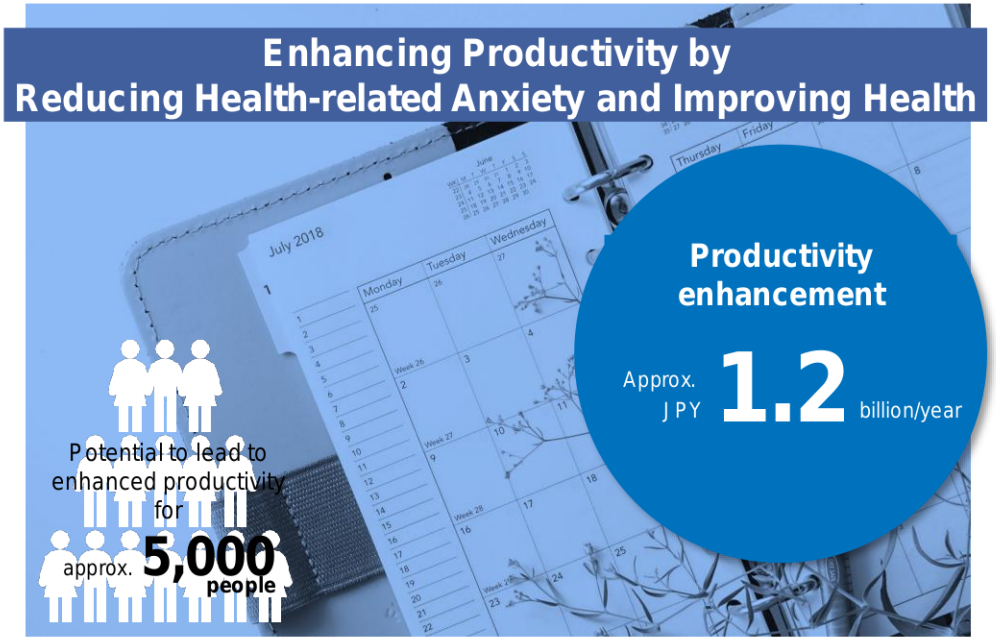
Healthy Lives with High QoL



The rate of behavioral change was calculated based on the expected effects of behavioral change expressed in actual survey results from hotel users in response to the sleep reports provided to them.

The expected effect on medical costs of resulting optimization was calculated based on the prevalence of diseases that have a particularly close relationship with sleep and the treatment costs per person for such diseases (e.g., severe sleep apnea syndrome can result in average annual costs of approximately USD 47,000).

Enhancing Productivity by Reducing Health-related Anxiety and Improving Health



The rate of behavioral change was calculated based on the expected effects of behavioral change on sleep quality expressed in actual survey results from hotel users in response to the sleep reports provided to them.

The extent of productivity improvement as a result of improved sleep quality due to behavioral changes by hotel guests was calculated based on the assumption of losses from both absenteeism (absence from work, etc.) and presentism (drowsiness, lack of concentration, etc.).

Sleep data measurement and provision covering approx. **20,000 people***

*Projected 2025 results based on results after service commencement in 2024

Code Payment Gateway Service

A Total QR Code Payment Solution Connecting People from Diverse Countries with Local Communities

SDGs

Material Issues

Social issues

- The number of inbound tourists visiting Japan from overseas is increasing year after year, accounting for total consumption of JPY 8.1 trillion in 2024. Creating environments that reduce friction to spending for these international tourists can contribute to the revitalization of local communities.
- The rise in tourist numbers is also leading to overtourism, and creating solutions to ensure benefits for both tourists and residents remains a challenge to overcome.

Business need

Businesses are seeking to capitalize on demand from the rising number of tourists travelling to Japan from overseas, particularly in the tourism, hotel and retail industries. Enabling international tourists to use the same payment methods that they regularly use in their own countries is one way to deliver stress-free consumer experiences. However, many merchants still have concerns about processing international payments and the risk of unauthorized use.

Services that make cashless payment convenient and secure for international tourists and merchants can address these needs.

Impact

Effect on increasing inbound consumption (compared to fiscal 2019)

Contributed to an increase in consumption of approx. 2.5 times

*Based on extent of contribution to increase in consumption, with the increase estimated based on the value of NTT DATA's overseas QR code payment transactions between fiscal 2019 and fiscal 2024

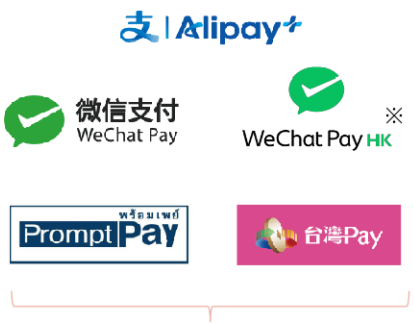
*Overall consumption by visitors to Japan from overseas increased 1.7 times from fiscal 2019 to fiscal 2023

Solution

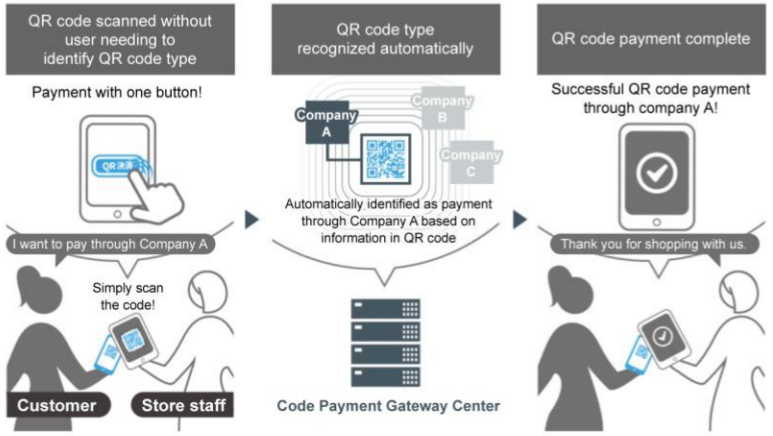
NTT DATA provides a Code Payment Gateway Service that supports 50 types of QR codes from 11 countries, particularly in the APAC region. Bringing together multiple QR code payment types, it is a one-stop solution covering processes from initial application to payment settlement. Merchants can start supporting QR code types that meet their needs through one process, without separate contracts and settlement mechanisms for dealing with individual companies.

The system automatically identifies payment services using the QR code scanned during payment, providing a simple experience for users or staff that remains consistent regardless of the QR code payment type.

NTT DATA continues to expand its connections with QR code payment providers in various countries and make improvements to its services with the aim of enhancing convenience and satisfaction for both international tourists and merchants while also contributing to the revitalization of Japan's economy.



※Support planned in future



Code Payment Gateway
NTT DATA (in Japanese only)

NTT DATA Japan Corporation
Payments Services Sector
Payment Integration Division
PSP & Service Integration Section
bcpayplan@kits.nttdata.co.jp

Healthcare Co-Creation Lab

Companies and People Create Together, and Archive Well-being for Future

SDGs

Material Issues

Social issues

- As life expectancy rises, the gap between overall lifespan and healthy lifespan has become a pressing issue. It is essential to offer personalized healthcare services that address not only illness treatment but also the maintenance of physical and mental health, as well as quality of life in daily activities
- The healthcare sector is grappling with challenges such as rising medical costs and staff shortages, driven by the growing elderly population

Business need

More people are focusing on managing their health, with growing awareness around diet, exercise, and sleep.

In light of this, the creation of new services driven by AI and digital technology is expected. The healthcare market is expanding, with service demands diversifying from personal health management to the development of advanced medical technologies and the improvement of regional healthcare. Against this backdrop, a variety of companies, from large corporations to startups, are developing and providing services in the healthcare area, increasing the need for collaboration between companies. Large companies are looking to streamline their R&D costs and time while startups are seeking support for funding and business expansion. Both are exploring opportunities for collaboration. Despite this, there are few platforms for connecting them. When developing new services or products, verification by actual users is essential. But companies need to start from scratch to find a verification site and users.

Solution

NTT DATA established the Healthcare Co-Creation Lab as a place to create new businesses and services driven by cutting-edge technology, aiming to ensure the health and safety of people in the future. The creation and development of new health-related services are supported through collaboration with various stakeholders, including businesses, people, and national and local government agencies. The lab showcases various interactive solutions, allowing visitors to experience the future of health and living. The Healthcare Co-Creation Lab offers opportunities for discussions and workshops, as well as proof of concept demonstrations. This is in addition to visualizing health through data sensing and experiences related to exercise, food, and sleep. The lab opened in Toyosu, Tokyo in October 2023 and in Seijo, Tokyo in November 2024. A further location is also planned to open in Osaka in 2025.

In the future, NTT DATA will collaborate not only with companies but also with individuals, national and local governments, and various consortiums. By providing value tailored to each of their needs, NTT DATA aims to contribute to improving the health and well-being of every person in society.

Impact

Number of visitors and companies/organizations
(as of December 31, 2024)

Approx. 7,500 individuals and 500 companies

Number of co-creation partners
(as of December 31, 2024)

Approx. 50 companies

Healthcare Co-Creation Lab
NTT DATA (in Japanese only)

Facebook

X

NTT DATA Japan Corporation
Healthcare Co-Creation Lab
Strategy Design Section,
Insurance IT Services Division, Third Financial Sector
lab@hml.nttdata.co.jp

Teaming: The Platform of Choice for Spanish Donors

AI-Powered Document Categorization that Expands Support for Social Causes

SDGs

Material Issues

Smart X Co-Innovation

Community Engagement

Social issues

- Across the world, innumerable small-scale social causes struggle to raise funds. At the same time, the World Giving Index states that the percentage of people who report giving to charity has risen about 10% globally in the last ten years, indicating a willingness to provide support. Technological solutions can help to connect these donors with causes.
- Processing charitable donations can present challenges and concerns for recipients and donors. For recipients, ensuring recurrent income is essential to long-term stability, while donors want to know that payment processing is secure and commissions are minimized to ensure their donations make a difference.

Business need

The Teaming Foundation was co-founded by NTT DATA in Spain 2011 to foster solidarity and drive social transformation through technology and collaboration. The platform operates on a unique model whereby individuals make recurring micro donations of EUR 1 per month, with no commission charged on these contributions. The project has provided funds to support the activities of numerous NGOs.

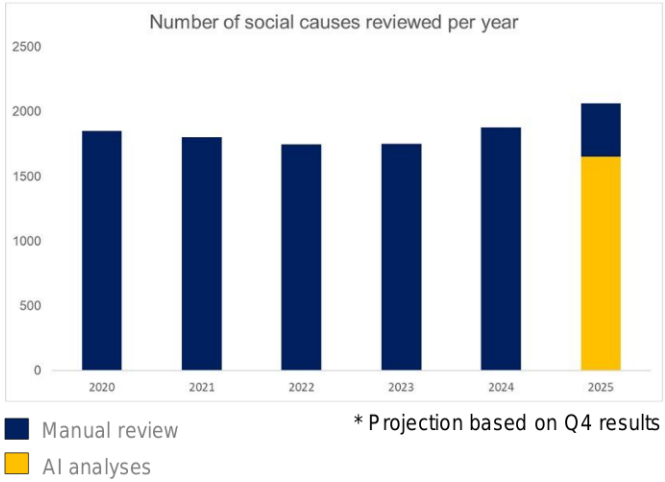
Previously, staff had to manually sort and classify documents every time an NGO entered the program or requested new funds. A more efficient system was required to support the platform's expansion by enhancing scalability.

Solution

In 2024, NTT DATA supported the introduction of automation into the Teaming Foundation's platform for classifying and validating documents from NGOs, including banking documents and IDs. This reduced the number of tasks performed manually by staff, increasing processing capacity while also enhancing security. Today, AI analyzes 80% of documents uploaded to the platform, ensuring greater efficiency and scalability.

The Teaming Foundation can efficiently support more social causes, delivering higher-quality, more targeted assistance. In addition, more small-scale social causes that would otherwise struggle to raise funds due to limited time, resources, contacts, and training are now able to secure donations and receive assistance.

Planned next steps include continuing to train the AI to further enhance efficiency by improving the system's accuracy and reliability and expanding the approach adopted in Spain to other countries.



* Projection based on Q4 results

Impact

Teaming Foundation achievements (as of March 1, 2025)

Total amount raised
Over EUR 62 million

NGOs and social causes supported
Over 11,000

Active monthly donors
Over 400,000

NTT DATA Group Corporation
Corporate Headquarters
Sustainability Innovation Department
Casebook@am.nttdata.co.jp

NTT DATA's Global Healthcare Data Network

Powered by
Rhino Federated Computing

A Trusted Research Network Enabling Shared Use of Healthcare Data While Ensuring Patients' Privacy

SDGs

Material Issues

Social issues

- The healthcare data analytics market is growing rapidly. With a total size of USD 26 billion in 2022, it is projected to reach USD 120 billion in 2030.
- Demand for AI is rising in medical and life sciences fields, including imaging services and imaging biomarkers. AI models require data sets, which is leading to regulatory concerns around data privacy and challenges regarding data structuring, especially in research conducted across multiple sites or using several data providers.

Business need

Clinical data is indispensable to accelerating research and development in medicine. When sharing such highly sensitive data, robust security measures are required to protect against cyberattacks and unauthorized access. Data sharing systems and system coordination based on advanced technologies, such as highly-reliable cloud services and AI, are needed to enable safe, efficient management and sharing of large quantities of medical data.

Different medical institutions use various systems and file formats, which can hinder data sharing when linking systems. To ensure data standardization and compatibility, common standards and platforms are necessary.

Impact

Compound annual growth rate (CAGR) of healthcare data analytics market

23%

Solution

NTT DATA has partnered with Rhino Federated Computing to develop a global federated data network to enhance clinical data accessibility and AI development. Supported by NTT Innovation Laboratory Israel, this advanced network integrates NTT DATA's Advocate AI tools with Rhino's federated* computing architecture. It allows clinical research organizations and healthcare providers to collaborate seamlessly, leveraging a diverse range of global datasets to accelerate AI development and clinical research in healthcare. By utilizing federated computing, the network allows organizations to share hospital data without compromising security. Since the data remains locally stored, it reduces the risks of exposure and ensures regulatory compliance. This approach facilitates the development of robust AI and machine learning models that can predict and improve treatment outcomes across a variety of patient populations and geographies. The global network spans leading academic medical centers in the United States, the Middle East, APAC, and the United Kingdom, fostering greater collaboration and enabling large-scale, data-driven projects in clinical research.

*Federation:

A distributed computing model where resources, including data, computing power and storage, are shared across different entities that remain decentralized.

NTT DATA Group Corporation
Corporate Headquarters
Sustainability Innovation Department
Casebook@am.nttdata.co.jp

Social Contribution (Common Activities)

NTT DATA organizes and implements social contribution activities such as Sustainability Month (sustainability promotion month), World Cleanup Day (cleanup activity) and Global Giving Campaign (donation activity by employees) as a global effort throughout the year.

World Cleanup Day

Regions across 30 countries participated in the World Cleanup Day cleanup activity conducted in September 2024. More than 2,300 employees collected over 8,500 kg of waste.

71 events across 30 countries

At least one in every region where we operate!

>2,300 employees involved

Including over 6,300 hours of volunteer time contributed

>8,500kg of waste collected

That's equivalent to 17 polar bears, 2,656 chickens, or 236 pedal harps.

Global Giving Campaign

Regions across 30 countries participated in the Global Giving Campaign donation activity conducted by employees in the third quarter of fiscal 2024. A total of more than $66,600, along with a large amount of food and many items, were donated by more than 2,800 employees.

>2,800 employees

involved

83 events

across 30 countries

>66,600$ donations

collected

>6,200kg donations

collected

>6,900 items donations

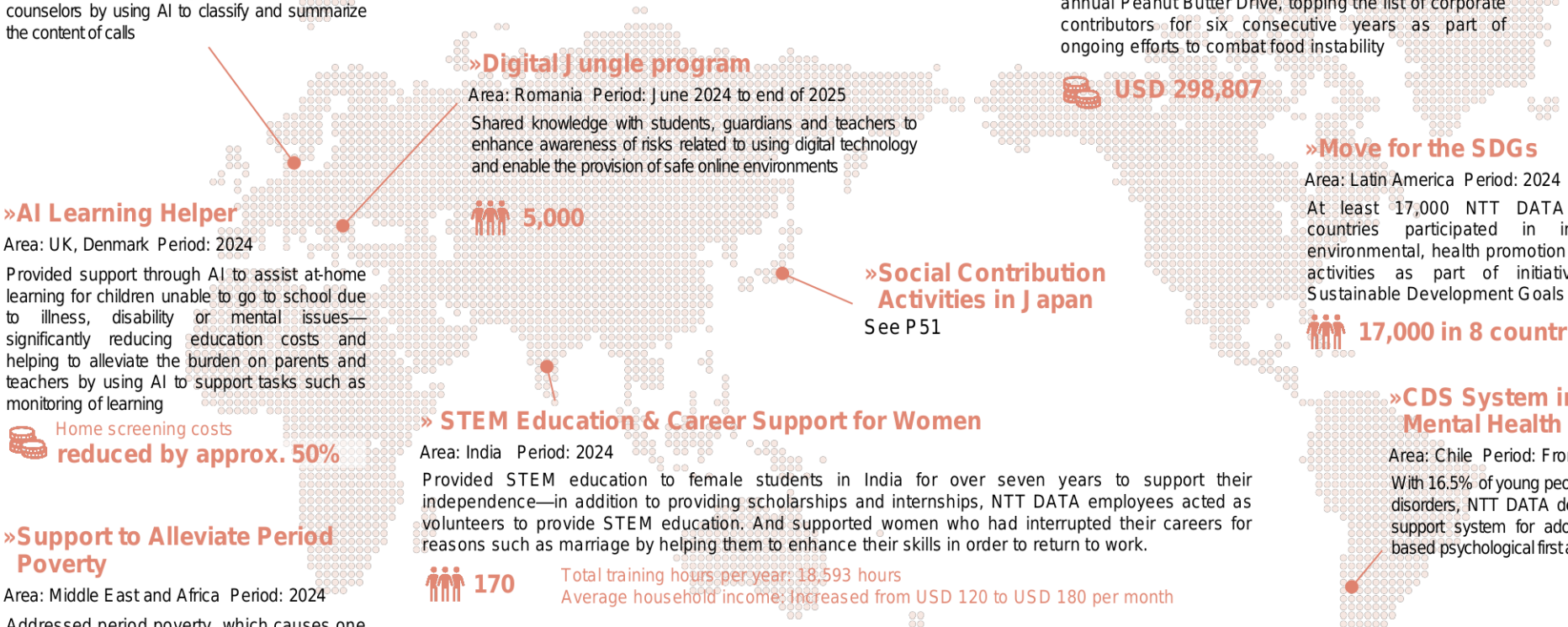
collected

Society | Inclusive Society

Social Contribution (Global Case Studies)

NTT DATA has engaged in various social contribution activities across the globe by leveraging its strength: technology, covering a wide variety of areas, including education support, employment support, biological conservation, improvement of access to medical services and minority support. Some of these activities are shown below.

*Results for fiscal 2024



»AI-based Child Counselling

Area: Denmark Period: 2024

With helplines in Denmark receiving about 200,000 inquiries from children each year, about 130,000 of which cannot be fully handled, supported counselors by using AI to classify and summarize the content of calls

»TEAMING

Area: Europe

See P47

»Peanut Butter Drive

Area: North America Period: 2024

Continued to donate to the North Texas Food Bank's annual Peanut Butter Drive, topping the list of corporate contributors for six consecutive years as part of ongoing efforts to combat food instability

USD 298,807

»Digital Jungle program

Area: Romania Period: June 2024 to end of 2025

Shared knowledge with students, guardians and teachers to enhance awareness of risks related to using digital technology and enable the provision of safe online environments

5,000

»Move for the SDGs

Area: Latin America Period: 2024

At least 17,000 NTT DATA employees in eight countries participated in initiatives related to environmental, health promotion and social contribution activities as part of initiatives to promote the Sustainable Development Goals (SDGs)

17,000 in 8 countries

»AI Learning Helper

Area: UK, Denmark Period: 2024

Provided support through AI to assist at-home learning for children unable to go to school due to illness, disability or mental issues—significantly reducing education costs and helping to alleviate the burden on parents and teachers by using AI to support tasks such as monitoring of learning

Home screening costs
reduced by approx. 50%

»Social Contribution Activities in Japan

See P51

» STEM Education & Career Support for Women

Area: India Period: 2024

Provided STEM education to female students in India for over seven years to support their independence—in addition to providing scholarships and internships, NTT DATA employees acted as volunteers to provide STEM education. And supported women who had interrupted their careers for reasons such as marriage by helping them to enhance their skills in order to return to work.

170 Total training hours per year: 18,593 hours
Average household income: Increased from USD 120 to USD 180 per month

»CDS System in Adolescent Mental Health

Area: Chile Period: From November 2024

With 16.5% of young people in Chile having mental disorders, NTT DATA developed a mental health support system for adolescents, providing chat-based psychological first aid

»Support to Alleviate Period Poverty

Area: Middle East and Africa Period: 2024

Addressed period poverty, which causes one in four girls to miss school every month, by providing reusable menstrual pads, helping at least 350 girls to recover the equivalent of 10,500 school days

At least 350

»Support for STEM Education in Public Schools

Area: India Period: 2024

NTT DATA has provided high-quality STEM and robotics education in India, working with NGOs and communities to address educational disparities and supporting the establishment of STEM labs and teacher training

6,299 people ages 12 to 16 leaning robotics

»Forest Regeneration with Native Species

Area: India Period: 2024

Data centers in India engaged in activities focused on reforestation using the Miyawaki method, a technique that encourages the rapid growth of dense, native forests with the aim of restoring biodiversity and combating climate change

Site area: 9 acres At least 5,500 native saplings planted

»Support for Environmental Improvement Around the Ganges River

Area: India Period: 2024

NTT DATA provided financial and technical support for a startup project to tackle water quality, air quality and sound pollution issues around the Ganges River in India, including changing diesel boats to solar power and introducing new floating charging systems

Society | Inclusive Society

Social Contributions (Japan Case Studies)

NTT DATA also engages in various social contribution activities within Japan by leveraging the Group's strength: technical capabilities. We focus especially on IT education to nurture IT talent that will support the next generation, providing support to a wide range of people, from education programs for elementary and junior high school students to IT education support for NPOs, etc.

*The number of people, amount of donations and number of copies, etc. are based on the results for fiscal 2024.

Education

NTT DATA ACADEMY

Approx. **1,900** (parent-child)

Area: Nationwide

Since fiscal 2020, NTT DATA has been conducting an IT education program called NTT DATA Academia targeting elementary school students to impart knowledge about programming and IT systems.

YONONAKA GAKU IT EDUCATION

Approx. **18,000**

Area: Nationwide

NTT DATA and ARROWS Inc. provide IT classes to junior high students nationwide with the theme of creating the future with IT to nurture next-gen IT talent.

CAREER ROUNDTABLE DISCUSSION FOR FEMALE JUNIOR HIGH AND HIGH SCHOOL STUDENTS

Approx. **100**

Area: Nationwide

Since 2024, NTT DATA has participated in the Girls Meet STEM Career program organized by the Shintaro Yamada D&I Foundation, which provides tours of offices and roundtable discussions for female junior high and high school students, to promote interests in next-gen IT talent.

NPTech INITIATIVE

Approx. **200**

Area: Nationwide

Training programs are provided by NTT DATA Group, four other IT companies, Japan's National Women's Education Center, and the Japan NPO Center to support NPOs by enhancing their utilization of IT technology.

Health

Anaphylaxis response LINE Introduction page (in Japanese only)

JOINT DEVELOPMENT OF ANAPHYLAXIS SUPPORT TOOLS

Approx. **1,500**

Area: Nationwide (mainly Kobe)

NTT DATA partnered with the Kobe-based Foundation for Biomedical Research and Innovation/Kobe City Medical Center General Hospital since 2021 to offer a smartphone tool for quick reference on dealing with food allergies when they occur. Use of the tool is expanding, particularly in hospitals in Hyogo Prefecture.

Environmental Conservation

SATOYAMA FARMING EXPERIENCE

60

Area: Kanagawa Prefecture

CIJ and NTT DATA have jointly conducted farming experience programs and workshops at mandarin farms in Oimachi, Kanagawa Prefecture. Since 2023, they have been certified as Oimachi SDGs Partners.

Donations

SPONSORSHIP FOR THE OLYMPIAD IN INFORMATICS

JPY 15,000,000

FOOD DONATIONS

Area: Nationwide

106kg

USED BOOK DONATIONS

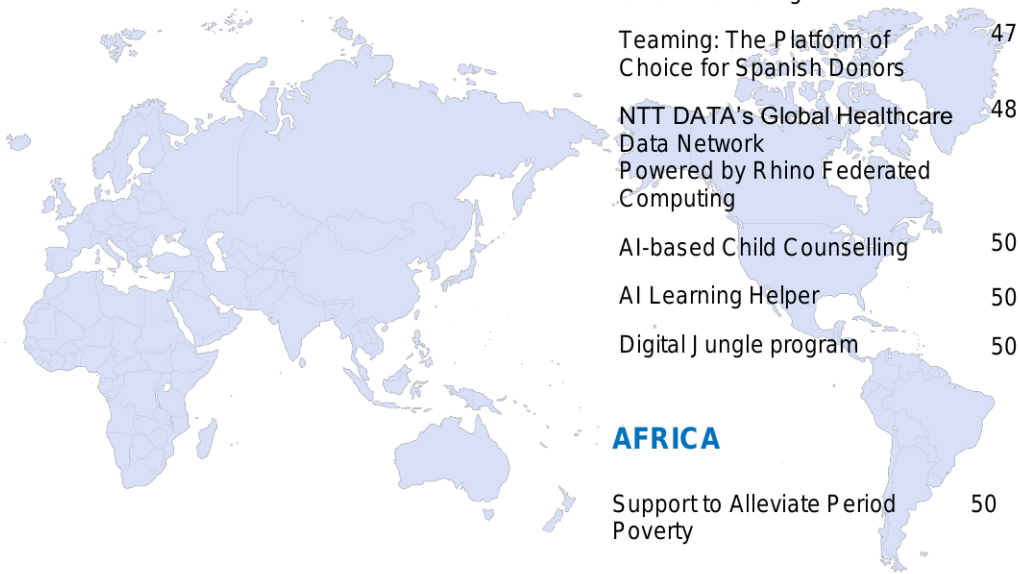
Area: Nationwide

Approx. **3,000 books**

CASE STUDY INDEX

NORTH & SOUTH AMERICA

ASIA



EUROPE

AFRICA

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