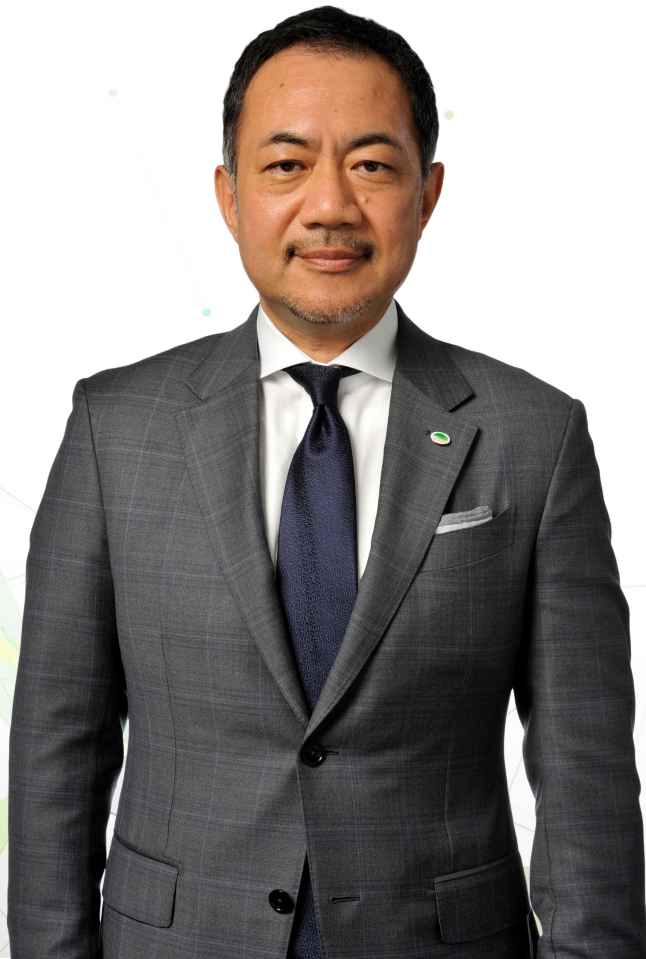


Hitachi Group IT Performance Report 2022

Year ended March 31, 2022



Message from CIO



By utilizing data and technology, Hitachi aims to achieve a sustainable society, one in which each person can readily participate, while at the same time we protect the environment of the world we live in. We are promoting social innovation businesses that provide value to our customers and society with growth based on *Digital, Green, and Innovation* approaches at the core.

In IT departments, it is our mission to bring about a transformation towards IT that contributes to the expansion of social innovation businesses worldwide, and to that end, we have formulated the 2024 Hitachi Group IT Medium-Term Plan. By constructing a digital management platform and restructuring IT, we will reach cost levels and data utilization that rank among the best in the world, while also remaining agile, efficient, and strong.

By constructing a **digital management platform** that achieves the growth, speed, and efficiency required by management, we are engaging in the preparation and establishment of initiatives including the group-wide CRM Platform, the platforms and tools for accelerating digital transformation, and a shared worldwide ERP platform, while at the same time standardizing and consolidating our IT services.

Moreover, we are taking decisive action to restructure our IT assets, costs, resources, and governance to keep operating cost increases in check while promoting **global coordination of our IT human resources and diversity among our human resources**.

With respect to the changes and increasing risks confronting us in our business environment (such as natural disasters, international crises, and our handling of COVID-19 both now and in the future), we aim to achieve a more flexible IT architecture and zero-trust approach as we further **strengthen our IT**.

I believe that by engaging in co-creation with customers through these initiatives, we can improve the value of our customers' businesses.

It is my hope that you find the information within this report useful.

A handwritten signature in black ink, appearing to read 'S. M. S.', written in a cursive style.

CIO, and General Manager of the IT Strategy & Digital Integration Division
Vice President and Executive Officer,
Hitachi, Ltd.

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Basic IT Policies

Hitachi aims to provide value to our customers and to society through the realization of a sustainable society. The IT departments have formulated the 2024 Hitachi Group IT Medium-Term Plan in line with Hitachi's growth strategy. The plan seeks to transform IT so that it will contribute to the expansion of social innovation businesses worldwide.

Basic IT Policies

Basic IT Policies

We have formulated the 2024 Hitachi Group IT Medium-Term Plan based on the 2024 Medium-Term Management Plan.

Under the 2024 Hitachi Group IT Medium-Term Plan, our goal is to contribute to the expansion of social innovation businesses worldwide and to achieve cost levels and data utilization that rank among the best in the world. We will accomplish this by constructing a digital management platform and restructuring IT.

2024 Hitachi Group IT Medium-Term Plan (basic strategies to become what we need to be)

Hitachi aims to achieve a sustainable society by using data and technology. To support these efforts, **we have formulated the 2024 Hitachi Group IT Medium-Term Plan, which defines the major policies related to constructing a digital management platform and restructuring IT.**

The mission of IT departments is to become agile and trusted partners, and to contribute to the acceleration of digitalization and business growth by providing technologies, human resources, and data solutions. To achieve this, **we aim to reform our internal processes to make them more efficient while promoting digital management. We can achieve these aims by establishing an infrastructure and tools that accelerate the adoption of a standardized, shared IT platform and accelerate data utilization.**

In addition, by taking actions such as consolidating and organizing our legacy IT assets, optimizing our IT service costs, and adopting new technologies, we will take decisive action to restructure our IT assets, costs, resources, and governance and thereby keep operating cost increases in check.

Moreover, with respect to diversification and the changes and increasing risks that we face in our business environment, we are working to strengthen our IT and related controls through such efforts as adopting more flexible IT architectures and preparing and reviewing various IT rules and guidelines.

Executing Hitachi growth strategies

Hitachi aims to achieve a sustainable society by ensuring a rich supply of internal human resources, and by providing value to our customers and to society with growth based on *Digital, Green, and Innovation* approaches at the core. **The IT departments are supporting growth strategies by making use of IT and digital technologies, establishing shared platforms, coordinating IT human resources globally, and more, and are contributing to the execution of these strategies.**

They are also contributing to efforts to make Hitachi carbon-neutral by establishing IT platforms that increase the visibility of environmental data throughout the entire Hitachi Group and by providing IT operations that have a low environmental impact. Furthermore, the departments are planning ways to reflect on our ways of thinking and conduct training on mindsets related to the environment and diversity among employees.

Seven goals of Corporate IT



Establish **standardized**, shared IT platforms



Utilize data to enhance management



Allocate IT resource priority to growth fields and regions



Improve digital literacy to accelerate DX#1



Modernize legacy IT assets



Reallocate IT resources and consolidate IT budgets in shared areas



Improve transparency and optimization of IT costs

#1 DX: Digital transformation

Major Global Policies

To contribute to the expansion of social innovation businesses and to the realization of digital management, we aim to build a digital management platform that will be shared throughout the Hitachi Group. Even as we expand our company scope and portfolio, this shared platform will provide information for growth and keep costs down.

Major Global Policies 1 Constructing a Digital Management Platform

Group-wide CRM^{#1} Platform

We are building a CRM platform to consolidate and visualize data about markets, customers, and projects globally, as well as to contribute to enhanced information-provision and sales activities in the marketing departments at all Hitachi companies.

By creating chunks of data that help us to comprehensively visualize the relationship between the Hitachi Group and our customers, we will strengthen marketing and sales activities through the entire Group.

Visualizing customer and project information for all companies

To strengthen our marketing and sales activities, we need to visualize the state of business at all Hitachi companies in real time, as well as gather and store data that is the same level of quality globally. We can then **share this data throughout the Hitachi Group to visualize customer contact histories, order data, negotiation pipelines, competitor data, and macro market data.**

Providing insights gleaned from data analysis

We will provide data-analysis functionality to achieve sophisticated utilization of consolidated data. Data on orders and procurement records at the BU^{#3} and Group company level has traditionally been searchable in a more compartmentalized manner, such as by industry, region, or customer. With the Group-wide CRM Platform, we will combine data from both external (market scale and growth rate) and internal (orders, sales, gross margins, etc.) sources to enable the exploration of data across a more diverse set of criteria.

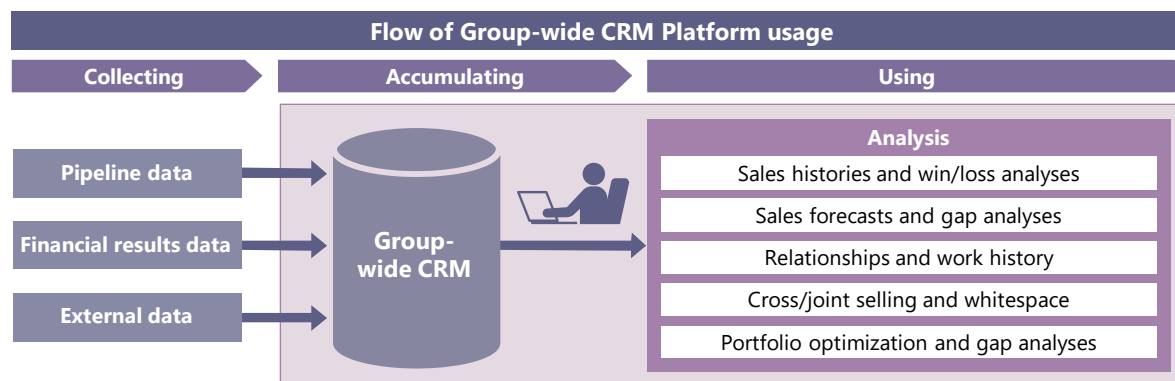
Sales coverage rate

98%

Sales coverage rate = Sales of companies under the plan / Sales of companies that have introduced SFDC^{#2}
The value for sales of companies under the plan is current as of the end of March 2022.

Deepening sales activities by putting data to use

By assigning priorities to different opportunities and visualizing the status of projects, we will support cross-sales expansion and the creation of social innovation businesses across multiple departments. Our initiatives will support whitespace searches via the analysis of external and internal data in order to visualize data that could not previously be seen, as well as more developed proposals that make use of shared data on orders made, orders received, and customer data. In addition, by reducing the level of effort required to prepare proposals via the use of consolidated customer-relevant data and case examples, we will promote stronger sales activities. These efforts will not only make it possible to engage in more efficient sales activities, but will also allow us to generate proposals that maximize the value of the Hitachi Group for our customers.



#1 CRM: Customer relationship management

#2 SFDC: Brand name for a series of products provided by Salesforce Japan Co., Ltd, such as sales support systems and customer management systems

#3 BU: Business unit

Major Global Policies 1 Constructing a Digital Management Platform

DX - Expanded Data Utilization

We are continuously advancing the preparation of environments for accumulating and analyzing data, in order to expand the usage of data and produce business-related benefits. By creating templates based on case examples of data utilization and associated knowledge, in addition to distributing this information both inside and outside the company, we will promote DX as part of standard operations and develop and distribute DXaaS^{#1} offerings that are linked to shared ERP^{#2} platforms. Through these efforts, we will contribute to the strengthening of managerial effectiveness and business competitiveness.

No. of DX cases (cumulative):

305 cases

DX cases that use Lumada's internal environment. Results are from the end of FY 2021.

Expanding the benefits to business by creating and widely distributing case examples of DX that use Lumada^{#3}

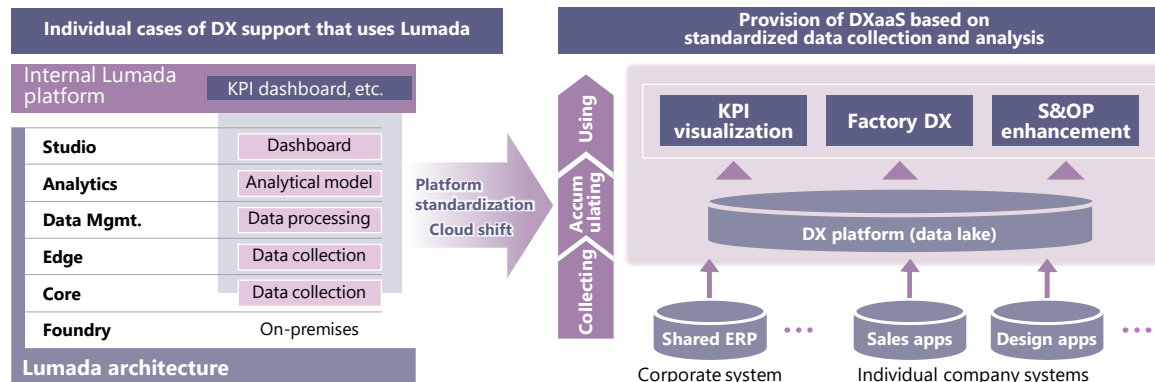
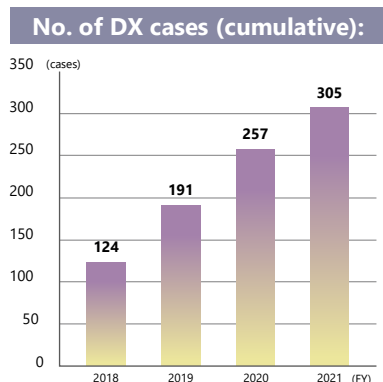
Improving the efficiency and accuracy of data analysis is indispensable for creating benefits through the expansion of data utilization. **We are creating templates based on the knowledge accumulated from the results of projects within the Hitachi Group, and are preparing a Lumada internal environment as a platform for widely distributing and re-using this information.** The benefits generated apply beyond the Hitachi Group. By providing templates to customers outside the Hitachi Group, we are also aiming to contribute to the business departments.

Lumada's internal environment is used in a wide variety of operational areas, such as sales, procurement, production, maintenance, and management. We have recorded a cumulative total of 305 cases where this environment has been used. This total is about 2.5 times the number compared to the cumulative total of 124 cases recorded in FY 2018.

We are developing and distributing DXaaS in coordination with a shared ERP platform in order to further promote making business operations more standardized and efficient via DX. By using DXaaS to unify data sources, we will standardize the data collection and analysis work that is required for individual businesses and operations.

■ DXaaS:

- KPI visualization: Non-customized visualization of data required to make management decisions.
- Factory DX: Data collection and analysis to optimize factors such as work costs and time, inventory, and product quality. By feeding this data back via PLM^{#4} or other means, we create benefits throughout the entire manufacturing process.
- S&OP^{#5} enhancement: Improving the accuracy of adjustments for manufacturing and sales, as well as more rapid managerial decision-making and shorter cycles.



#1 DXaaS: DX as a service
 #2 ERP: Enterprise resource planning
 #3 Lumada: A collective name for the solutions, services, and technologies that make use of Hitachi's cutting-edge digital technologies to create value from customer data and accelerate digital innovations.
 #4 PLM: Product lifecycle management
 #5 S&OP: Sales and operations planning

Major Global Policies 1 Constructing a Digital Management Platform

DX - More Efficient Operational Processes

We are moving forward with efforts to establish and widely distribute digital tools and solutions for business reforms and for making business more efficient.

We continue to provide support for the standardization of core operational processes and for making ongoing operations more efficient. These goals are accomplished, for example, through the sharing of case studies and knowledge and through the expansion of templates.

Automating and enhancing operational processes by utilizing digital technologies

Throughout the Hitachi Group, we are promoting more efficient operations via the introduction of RPA^{#1}. To this end, we are engaged in efforts to establish shared platforms that allow us to see the effects of consolidated management, as well as guidelines for stronger governance, in addition to administering RPA user meetings that assemble persons promoting RPA within the Hitachi Group. As a result, RPA has been introduced to a cumulative total of 120 departments as of the end of FY 2021, helping to reduce work hours by about 500,000 hours. We are aiming for even greater expansion in the future.

In FY 2021, we began promoting the visualization and analysis of operational processes by utilizing process mining.

Regarding the IT departments' efforts to promote the standardization of core operational processes and introduce a shared ERP platform, we are advancing the use of the efficient "Fit to Standard"^{#2} approach through the application of process mining in the analysis of current operations. With respect to the operational issues discovered through this analysis, we have been moving forward with operational improvements that make use of tools to increase the efficiency of operations, such as RPA, AI-OCR^{#3}, and chatbots.

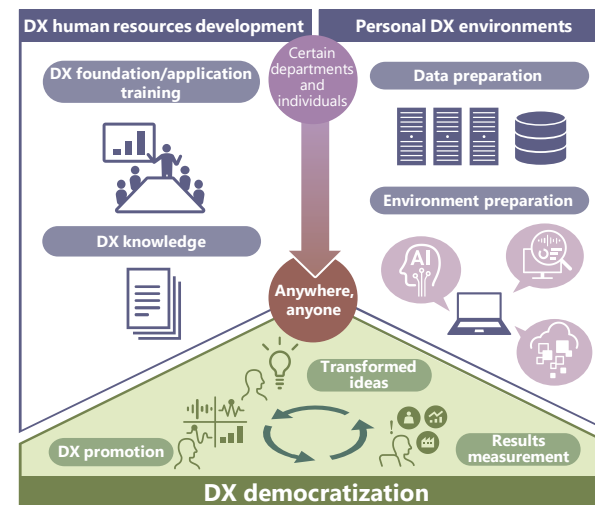
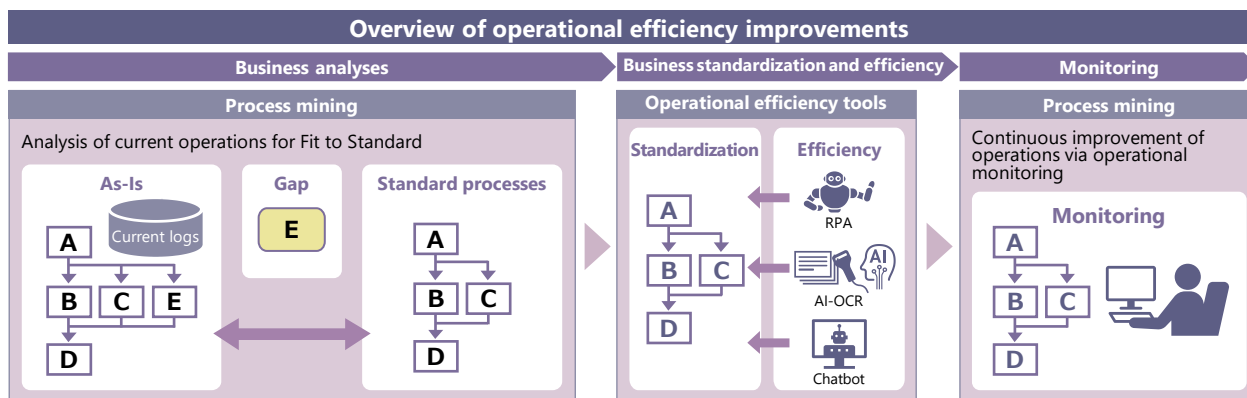
No. of work hours reduced through the introduction of RPA

500,000 hours

Cumulative total through FY 2021
Calculated based on log data obtained from servers managed through the common RPA platform

Empowering employees through the democratization of DX

We aim to accelerate DX and develop an innovative corporate culture by promoting DX to regular employees, so that they can handle a variety of different operations (in fields such as manufacturing, procurement, and HR) without having to rely on IT specialists. Our goal is to achieve the development of DX-oriented human resources, transforming individual mindsets and spreading greater digital literacy, while at the same time preparing personal DX environments, such as with tools and data.



#1 RPA: Robotic process automation #2 Fit to Standard: Method for aligning operations with standard ERP functionality. By applying standardized functionality to the greatest extent possible and avoiding additional development, this method enables the introduction of shorter time frames and lower costs while conforming to best practices.
#3 AI-OCR: Technology that combines artificial intelligence (AI) with optical character recognition (OCR), where text data is derived from imported data such as scanned paper documents.

Major Global Policies 1 Constructing a Digital Management Platform

DX - Support for Decision-Making

By establishing a digital management platform, we are promoting more rapid and sophisticated decision-making. This capability can be applied to areas such as the provision of result-forecasts and risk data, data visualization and simulations for procurement supply chains and stronger resilience, visualization of CO₂ emissions, and identification of irregular procurement values.

Use of global management information and more advanced management decisions

To enable managerial decision-making that not only spans the entire Hitachi Group but is also more timely and more flexible, **we are establishing a digital management platform that collects raw data, such as sales figures and indirect cost details for various Group companies, making it possible to efficiently aggregate and analyze this data.** Most recently, we have been engaged in using AI^{#1} for predictive management based on global management data that was accumulated in the digital management platform. Through results forecasting and factor analyses, we can identify worsening and improvements in results at an early stage, which supports decision-making in advance.

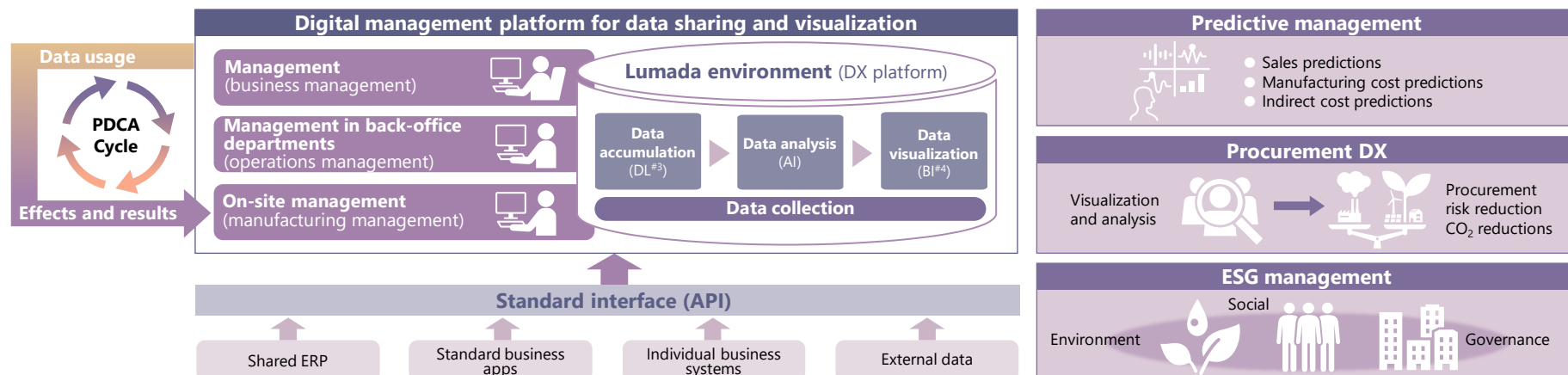
With procurement DX, we visualize and analyze the data collected in the digital management platform, working to build a mechanism for identifying irregular values for various indicators related to procurement operations. We do this to identify procurement risks based on global trends at an early stage and to quickly respond to these risks, to draw up policies for reducing CO₂ emissions, and to understand the business impact of materials and rising prices.

Moreover, we are expanding on our available linkage of systems and data types to align with usage needs, such as those for sales, human resources, and production.

In addition, we are making use of services provided by

Lumada for time-series predictions, regression analyses, and other use cases, as well as supporting the visualization and analysis of information that contributes to ESG^{#2} management.

Data governance is extremely important for data accumulation and usage platforms, for which accuracy, comprehensiveness, and integrity are required. **To accelerate the usage of management information globally, we are defining common rules throughout the Hitachi Group related to the usage of finance data, while at the same time establishing monitoring systems for data quality and working to maintain and improve quality.**



#1 AI: Artificial Intelligence

#2 ESG: Environment, social, and governance

#3 DL: Data lake

#4 BI: Business Intelligence

Major Global Policies 1 Constructing a Digital Management Platform

Global Shared ERP Platform

By standardizing core operational processes and introducing a shared ERP platform, we can achieve the dual aims of rapid decision-making via the consolidation of data and the slimming down of IT assets for lower IT costs and greater flexibility.

Benefits from building a shared ERP platform

70 billion yen

Cumulative benefits through FY 2025

Standardizing shared operational processes

The current versions of ERP systems that were introduced and individually operated by Hitachi Group companies will reach the end of their support periods in 2027. The Hitachi Group is taking this opportunity to **consolidate and share applications and to work towards greater efficiency. This will enable Hitachi to respond rapidly, for example by shifting human resources and asset resources to competitive business areas, and by effectively reorganizing businesses.**

We will build ERP instances that are appropriate for and at the minimum required scale for each business model, consolidating and migrating the Group-wide ERP systems that exist through 2027 into a shared ERP platform.

Making development more efficient and IT assets more lightweight, with lower IT costs

To maximize the standardization and sharing of these aspects for each business model, we are promoting the introduction of the "Fit to Standard" method.

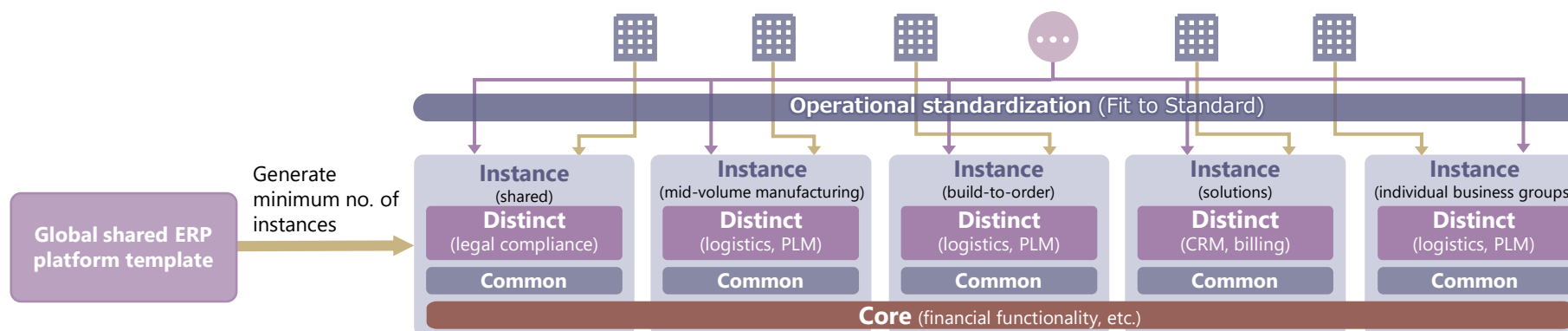
A shared ERP platform is engaged to raise the proportion of Core areas^{#1} and Common areas^{#2}, while also organically allocating the appropriate amount of Distinct areas^{#3} that provide support for business competitiveness.

Through this approach, **we can bring over the capabilities of the legacy systems that have been individually developed and operated at various Hitachi Group companies and incorporate them into shared ERP, which in turn accelerates the slimming down of our IT assets.** Furthermore, by keeping the development scope to the minimum required level, we can both maintain business competitiveness and keep IT costs down.

Accelerating management by collecting information and using the latest technologies

The shared ERP platform will contribute to data-driven management and the acceleration of DX adoption, through the centralized management of Hitachi Group management data as a core system function and linkage with other shared IT platforms.

By fully utilizing standard ERP system functionality and maintaining the latest major version updates, we can prepare an environment that is able to readily accept the latest advances in technology in a timely manner. By utilizing advanced cloud services and solutions, we are contributing to flexible and rapid responses to changes in the business environment, and are helping to build a sustainable society.



#1 Core area: Used in common for all business entities.

#2 Common area: Used in common at the business model level.

#3 Distinct area: Used at the business unit or Hitachi Group company level.

Major Global Policies 1 Constructing a Digital Management Platform

IT-GBS #1

Through standardizing and consolidating IT operational processes, we can offer more advanced maintenance and operation services at a lower cost. We will accelerate the transition of existing resources and create resource reserves for improvements and innovations.

Improving cost-effectiveness by consolidating operations

We are making progress in standardizing our IT operational processes on a global scale, consolidating IT systems that have been promoted individually at various Hitachi Group into shared IT services (IT infrastructure and ERP). This consolidation of operations allows us to provide low-cost IT services and optimize IT resources, as well as improve cost-effectiveness.

In addition, we are aiming for greater efficiency by performing operations at low-cost sites globally.

Improving user convenience and the speed of new business launches

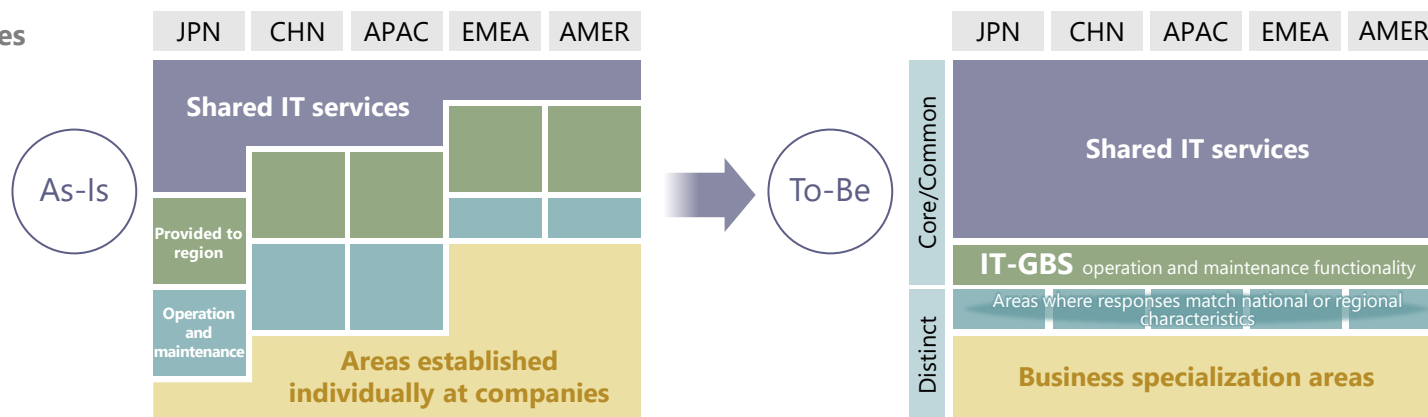
We will provide shared IT services globally at a uniform level of quality, so that employees of the Hitachi Group can devote themselves to their businesses without regard to location (such as country or region). Moreover, we are promoting the use of processes and innovations that apply the latest technologies. By doing so, we will improve convenience for employees, while at the same time helping to accelerate the establishment and expansion of sites that accompany business launches and global development.

Improving compliance and security

By compartmentalizing business operations and incorporating compliance requirements, we achieve stronger compliance by making it possible to eliminate exceptions, separate permissions, and monitor for abnormal situations.

Furthermore, by promoting the application of shared IT services worldwide that meet Hitachi's security standards, we continue to strengthen the security of the Hitachi Group overall.

Establishing shared IT services



Major Global Policies **2** Restructuring IT

Restructuring IT Assets and Costs

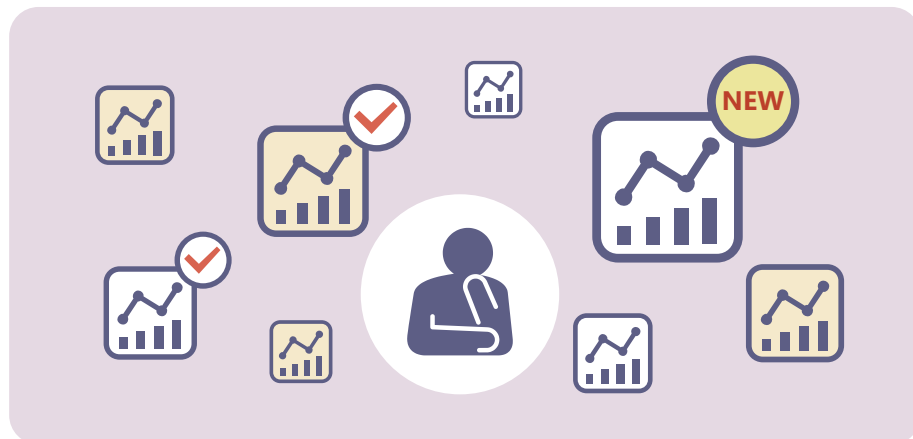
We will achieve more lightweight IT assets and reduced maintenance costs through the organization of legacy IT and the consolidation and integration into modernized, shared services.

Through a review of IT service costs throughout the entire Hitachi Group, we are promoting simple and low-cost IT operations.

More lightweight IT assets and reduced maintenance costs

Up to this point, the various companies of the Hitachi Group have owned and operated IT assets according to their own unique operational processes, but this practice has led to duplicated IT assets and IT operating costs within the Hitachi Group.

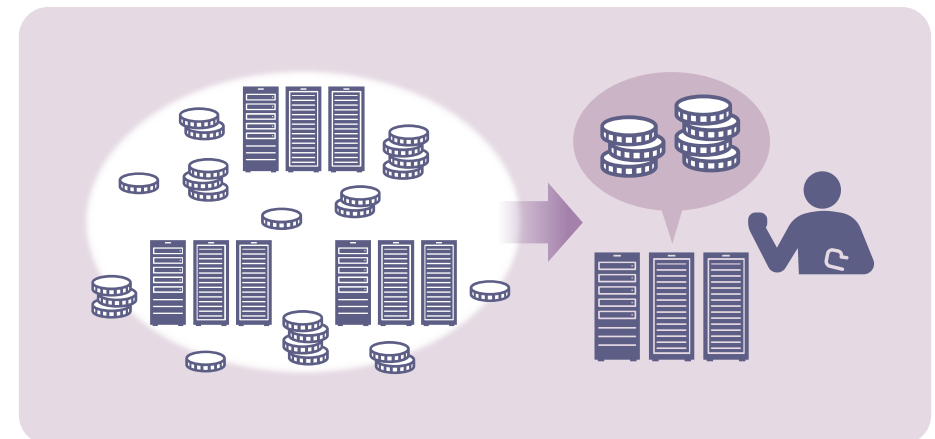
This situation must change, and as we continue to strengthen our corporate governance, we are working towards a greater standardization and use of shared offerings for operational processes and IT operations that span the entire Hitachi Group. By consolidating to shared services, shifting to the cloud, and organizing legacy IT, we are promoting more lightweight IT assets and reducing maintenance costs. Through these efforts, we can keep rising regular IT costs in check as our businesses expand, while at the same time securing growth investments that contribute to management and business.



Consolidating and integrating IT assets through modernization

By modernizing legacy IT at various Hitachi Group companies, we are moving towards consolidation into company-wide shared IT services that are agile, efficient, and strong.

In addition, we will carefully examine and categorize the IT assets and costs of all Hitachi Group companies into shared IT areas (core IT) and business-specialized IT, and consolidate the IT assets of the unique core IT areas that each Hitachi Group company has had up to this point into shared IT services. In this way, we can expand the proportion of core IT as well as restructuring costs.



Major Global Policies **2** Restructuring IT

Allocating IT Resources for Growth

To build and promote a digital management platform, we are emphasizing the allocation of IT resources and transferring authority to growth areas. In addition, we are reviewing IT budgeting systems in order to accelerate shared offerings and standardization.

Optimizing IT governance from a global perspective

We are allocating IT resources and authority in areas that are important for business growth, in support of rapid business decision-making.

1. Satisfying IT requirements of business units and Group companies in various regions
2. Thoroughly implementing regional security, compliance, and human resources policies
3. Spreading the project to build a digital management platform to regions

In order to accelerate these initiatives, we are optimizing IT governance from a global perspective.

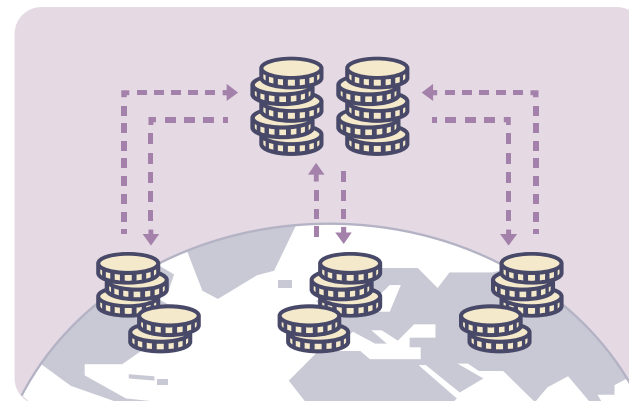


Consolidating management of IT budgets in shared areas for the Hitachi Group

To achieve faster and definite implementation of policies shared across the Hitachi Group, we will reform budgeting systems so that IT budgets are managed in a consolidated manner.

By optimizing the allocation of IT budgets according to business scale and importance, we can protect against the over-expansion of and duplicate investments in business specialization areas. We will ensure a sufficient IT budget for shared areas.

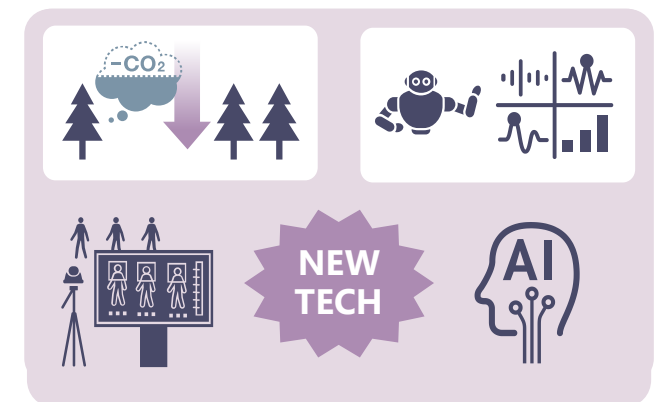
On the other hand, we will ensure transparency as regards IT cost efficiency by continually comparing against past results and benchmarks at other companies.



Adopting new technologies rapidly and widely

We will also achieve more advanced and more efficient services by actively adopting new technologies throughout the process of standardizing and modernizing systems.

In addition, we will also work to build a foundation for executing future reforms in the area of "IT as a tool of management", such as improving the visibility of environmental indicators by constructing a digital management platform, and improving managerial speed by providing information in real time.



Major Global Policies **3** Adopting the Latest Technologies

Technology Strategies That Support Management Reforms

With an eye always on the latest information technologies, we will make active use of them to increase the agility, efficiency, and strength of our IT infrastructure while contributing to corporate transformation and global business expansion.

Under the 2024 Hitachi Group IT Medium-Term Plan, we are focusing on five different fields and promoting consideration of their application within the Hitachi Group.



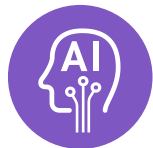
1 IT for Sustainability

We will provide IT solutions and operations that support the goal of carbon neutrality for the Hitachi Group, achieved through the encouragement of the consolidation and visualization of environmental data and the introduction of devices or services with low CO₂ emissions.



2 Work-style Transformation

We are advancing virtual-office concepts for achieving improvements in the promotion of global collaboration and employee engagement, aiming to effect quality-of-life improvements through next-generation work-style and operational reforms.



3 Democratization of DX

By constructing platform environments that can improve digital literacy among regular employees and by training human resources, we can empower every employee through the democratization of DX.



4 Edge & Cloud Computing

We are moving forward with the rapid adoption of cutting-edge technologies based on the prerequisites of "cloud-first" and "asset-light", such as hybrid cloud and edge computing.



5 Trust & Resiliency

We will offer security platforms that support the safe and secure distribution of data, through automatic responses to cyberattacks based on a zero-trust framework and the automation of security operations.

Major Global Policies **4** Global Efforts

Contributions to Regional Business Strategies in Global Areas

The IT departments in each of the five global areas are contributing to the smooth and efficient management of business through various measures tailored to each region's particular characteristics and business strategies.



Hitachi America Ltd. | Jaya Ramaswamy

America's market is a key focus for Hitachi with 72 companies and over 27,000 employees, 19 R&D labs and operating in 37 states. The Americas' leadership team believes in collaborative innovation to overcome challenges, drive adoption, ease transition and build a sustainable future. To take advantage of the massive growth opportunities, especially in the areas of the environment and sustainability, Hitachi has redefined the strategy for data driven digital transformation, sustainability, resilient manufacturing supply chains, access to clean energy and resilient power grids etc.

The IT department of Hitachi America Ltd. continues to pioneer in transformation initiatives and be a value-driven IT partner for the Americas' Businesses. The IT department of Hitachi America Ltd. has been instrumental in driving Cloud based solutions, Enterprise digital solutions, BPM, and Low-Code integrations, adaptation of new ServiceNow capabilities to enable unified user experience. In collaboration with regional business, IT drives "One Hitachi" initiatives – shared ERP platform, CRM, DX and aids operational efficiencies through RPA. Information Security team collaborates with the extended Americas' IT and business team that deliver unified security solutions.



Hitachi Europe Ltd. | Jeremy Tjebbes

Hitachi Europe Ltd. has continued to grow and consolidate IT shared services across Europe, reducing IT costs for Hitachi and improving collaboration by sharing platforms and systems. As we are coming out of COVID-19 and establishing our new ways of working the uptake of IT shared services in Europe has been exceptional in FY2021, outperforming our previous year revenue by 35%.

For FY2022 we are excited to build on this success and to lead one of the first shared ERP platform deployments in Hitachi, helping to build a shared S/4HANA platform for wider deployment across the Hitachi Group.

We are proud and excited to be part of the team building the future platform for Hitachi!



Hitachi (China), Ltd. | Bao Long

In China, we have a challenge in complying with newly applied digital laws, as well as region specific IT environment and business process standard, in order to efficiently support various kind of Hitachi business requirement in China from the IT perspective. Especially the impact of Data Security Law might be serious, since it might restrict global data exchange as for individual data and important data, Government defines. Although the detail is still so unclear that it remains huge gray zone, the Law has become active, and some others has been already punished by it.

As for those services or global data exchange, which might become risky in China, we are preparing the China version of Hitachi Group shared services under the leadership of HQ/IT division.

We may do our best to better comply with this special environment, and prepare for valuable solution not only for China local business but also help global unified type of business to take proper action in China.

Major Global Policies **4** Global Efforts

Contributions to Regional Business Strategies in Global Areas

The IT departments in each of the five global areas are contributing to the smooth and efficient management of business through various measures tailored to each region's particular characteristics and business strategies.



Hitachi Asia Ltd. | Anang Zainuddin

The IT department of Hitachi Asia Ltd. continues to contribute to Hitachi business in our region through maximizing value of IT and DX. We identified promotion areas for global and regional shared services for the Hitachi Group and promote better IT governance and security.

Some key challenges that we had to overcome, on high cost of operation, business strategy changes and volatile business environment, happening in ASEAN countries.

We took steps to prioritize resiliency and achieve a lower, more agile cost base, a more flexible workforce and re-prioritize projects focusing on key functions, while actively outsourcing others.

We will continue to promote work style modernization and closer relationship through our regional activities. Through technology adoption, we will expand our shared services for the Hitachi Group. We will ensure the Hitachi Group continue to strengthen and enhance IT governance and security, so as to protect our Hitachi branding.



Hitachi India Pvt. Ltd. | Shibata Hideyuki

In India, there are many manufacturing factories and some of factories have been proceeding digitalization.

We have supported their plan by supporting it as project manager or proposing proper solutions.

And to proceed business in India securely, we have conducted many cybersecurity management and enlightenment activities for the Hitachi Group companies simultaneously. We visited 19 offices/factories for IT security assessment and improved IT security level.

IT Infrastructure and Modernization

With a shift to a zero-trust and internet-based architecture for IT infrastructure, the entire Hitachi Group will achieve a safe and secure IT environment for both its employees and businesses. Business will expand through the introduction of new ways of working and the adoption of cloud services.

IT Infrastructure and Modernization **1** Next-Generation Architecture

Next-Generation IT Architecture Based on Zero-Trust Security

In the world of the internet, where cyberattacks are becoming increasingly sophisticated and skillful year after year, we are engaged in efforts to achieve safe and secure IT environments for both our employees and businesses throughout the entire Hitachi Group, in order to grow our businesses by introducing new ways of working and adopting cloud services.

IT infrastructure for achieving zero-trust security

In recent years, the Hitachi Group has seen a move towards an expansion of remote work, with our employees, many of whom are now working from home, performing their work by accessing information assets over the internet. In addition, to expand our businesses, it has become essential to promote DX, adopt cloud services, as well as collaborate with other companies.

On the other hand, in the world of the internet, we are seeing more sophisticated and skillful cyberattacks, with an increasing number of attacks and level of damage. As such, **we are pivoting in the direction of adopting an architecture based on zero-trust security with a focus on the internet. By deploying measures to defend against our employees and businesses from threats on the internet, we aim for an environment where cloud services can be used safely for all of our business operations, including those related to factory OT, research, and development.**

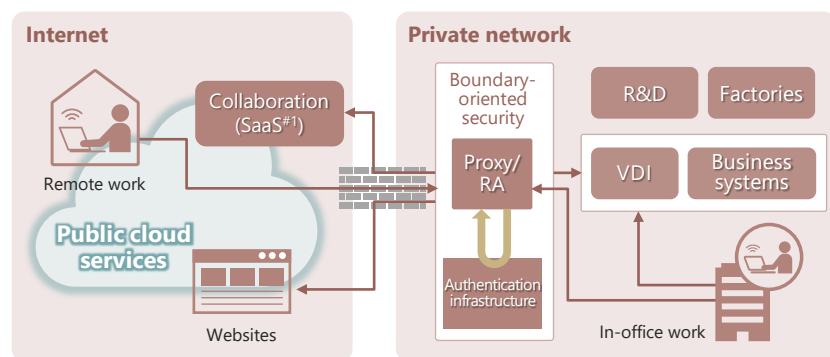
Shift to the cloud and cloud-appropriate security measures

All communications will be controlled by having them pass through a security gateway, achieving an environment in which information assets can be safely accessed, whether they are on-premises or in the cloud.

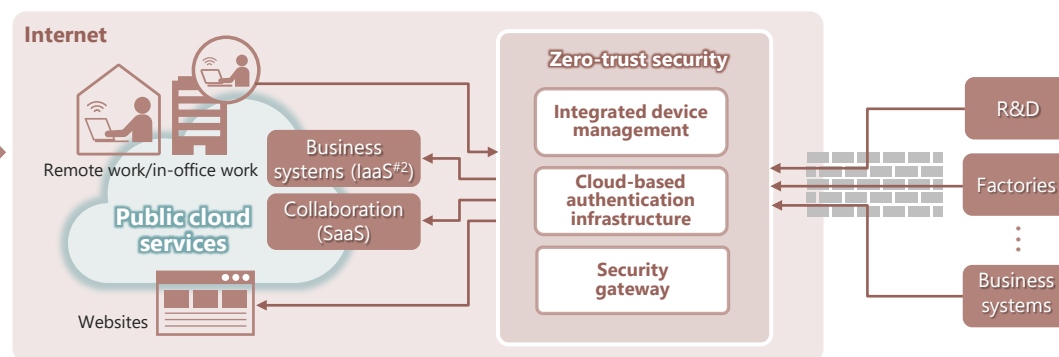
By strengthening the security of devices that access the internet, we will provide integrated management through the cloud not only of the distribution of software and patches, but also of the devices themselves. Moreover, along with the transition of our business systems to the cloud, we will also implement a cloud-based authentication infrastructure for greater convenience. We are aiming for enhanced authentication that incorporates multiple authentication factors, including biometric authentication, device authentication, and risk-based authentication.

We will deploy platforms that feature these measures within the Hitachi Group, and thereby contribute to stronger security throughout the entire Hitachi Group.

IT infrastructure based on boundary-oriented security



IT infrastructure for achieving zero-trust security



#1 SaaS: Software as a Service #2 IaaS: Infrastructure as a Service

IT Infrastructure and Modernization **2** Cloud and Edge Strategy

Making IT Assets More Lightweight via the Cloud, and Adopting Edge Computing

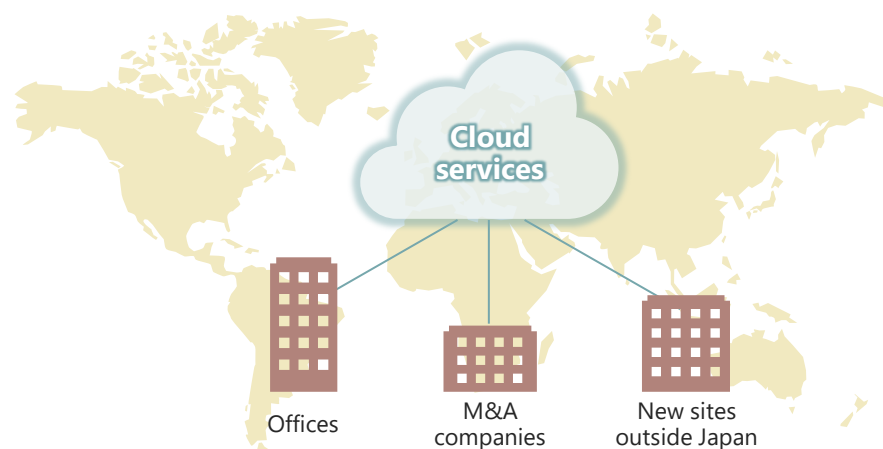
In response to trends such as sudden changes in business environments and lifestyles as well as the promotion of DX and data utilization, we are formulating strategies for cloud and edge computing that incorporate an expanded migration to public cloud services, support for multiple cloud environments, and the use of edge data centers, based on the prerequisite of a cloud-first and asset-light approach.

Cloud strategy

We will migrate various IT infrastructure and applications to the cloud, making the IT assets owned by individual companies more lightweight. In addition, by using cutting-edge technologies and adopting globally standard applications, we enable rapid responses to environmental changes such as expansions in our business portfolio.

In addition to the shift to the cloud for internal IT infrastructure environments, such as email and file-sharing, we will also build workflows by linking various business applications across multiple cloud platforms. By doing so, we are contributing to improved operational productivity by standardizing and automating operational processes.

Furthermore, we are working on changing the mindset of our employees, by advocating a cloud-first and asset-light approach where the latest technologies can be put to use right away without a group needing to own any particular IT assets.

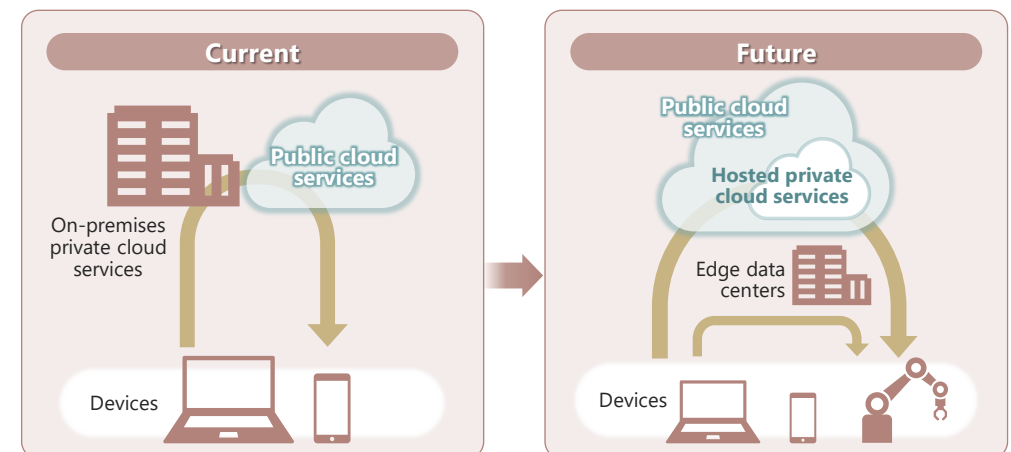


Edge strategy

We are providing platforms that seamlessly link edge and cloud computing solutions, such as PCs, smart devices, and IoT^{#1} devices, with an aim to realize development environments and manufacturing locations that will accelerate DX.

We aim to achieve environments that are highly agile and that allow for data utilization, such as by implementing machine learning in the cloud and applying the resultant models to edge computing for inference.

In addition, we are focused on the spread of 5G communication for fast and high-volume transmissions of data, the adoption of CPS^{#2}, and support for real-time solutions that use AR^{#3}, VR^{#4}, and data visualization. **We are also considering the use of edge data centers that are capable of processing large volumes of data quickly and with low latency, in locations where infrastructure such as 5G environments has been established and that are physically close to devices installed in on-site environments.**



IT Governance and Security

Throughout the entire Hitachi Group, including companies in business reorganizations and companies integrated as a result of M&As, we are working to ensure security, compliance, and business continuity for internal IT. To respond to the risk of information leaks and increasing cyberattacks, as well as to ensure proper use of software, we are continuing our efforts to strengthen our IT controls.

IT Governance and Security 1 IT Rules and Standards

Establishing IT Rules and Standards

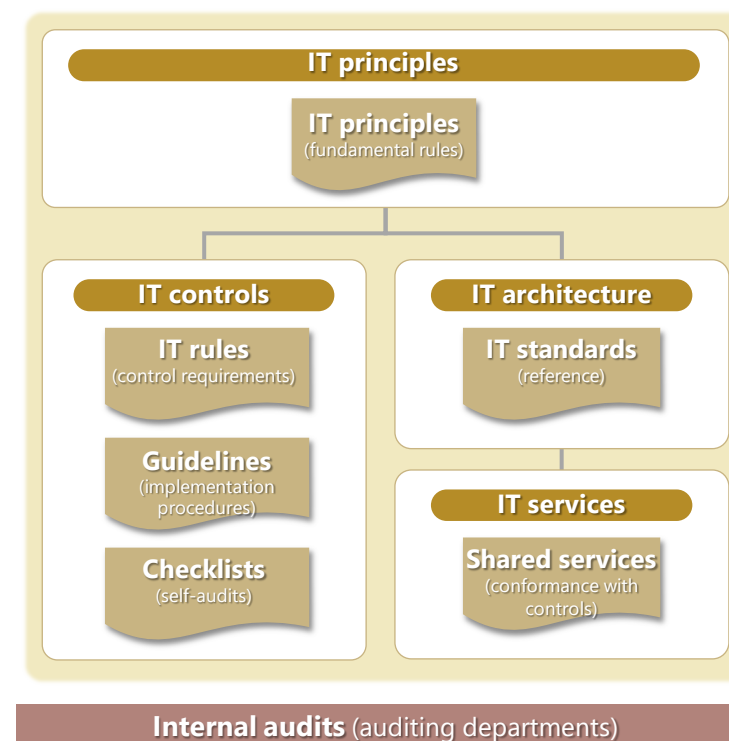
To reduce internal IT risks, we have established IT rules and standards for all Hitachi Group companies. These stipulate the essential requirements for IT controls and provide the basis for IT standardization, centered around aspects such as information security, IT compliance, and business continuity.

Ensuring IT governance throughout the entire Hitachi Group

To support global business through internal IT, we must ensure that requirements in areas such as information security, IT compliance, and business continuity are met, and we must reduce both IT risks and IT costs. Within the Hitachi Group, many different and different-sized Hitachi Group companies exist all around the world in different business areas, making it important for us to define requirements that can be incorporated consistently for effective governance at all of these companies.

For this reason, we have defined certain IT principles that serve as universal rules acceptable within the IT departments of all Hitachi Group companies, regardless of region, type of business, or size. The IT rules and standards that are shared throughout the Hitachi Group are defined as the requirements for IT controls. They focus on measures to mitigate IT risks, and IT architecture, which forms the basis of IT standardization. Furthermore, in addition to providing IT services that conform to these standards and performing thorough internal audits, we are establishing the Hitachi Group IT controls framework, which is a mechanism for ensuring IT governance throughout the entire Hitachi Group.

Hitachi Group IT controls framework



IT Governance and Security **2** Initiatives to Enhance IT Controls

Thorough Compliance with IT Controls

Throughout the entire Hitachi Group, including companies resulting from business reorganizations and companies that have been integrated as a result of M&As, we are working to ensure information security, IT compliance, and business continuity for internal IT, and are encouraging the standardization and sharing of IT.

We are engaged in a thorough application of IT controls, by establishing IT rules and standards as well as by performing self-diagnostics and internal audits.

Promoting compliance with IT controls

To reduce internal IT risks, we require compliance with the IT rules that define essential requirements for IT controls. These rules center around aspects such as information security, IT compliance, and business continuity for the Hitachi Group companies.

To encourage compliance, we have defined self-diagnostic checklists for confirming the status of compliance with IT rules and guidelines, and have introduced a system whereby the various Hitachi Group companies are obligated to regularly perform self-diagnostics of their company IT systems and take corrective actions as necessary. Furthermore, if any defects are detected through internal audits conducted by auditing departments, requests for corrective action are sent out to the Hitachi Group companies, leading to thorough compliance with IT controls.

Applying the self-diagnostic system thoroughly

The self-diagnostic system is not limited to the Hitachi Group companies within Japan, but rather applies to the Hitachi Group companies outside of Japan as well. **In order to ensure that this system is used widely among the Hitachi Group companies, after clearly explaining the system to the applicable companies in each business group in advance, we implemented controls whereby the self-diagnostics are performed at subsidiaries under the responsibility of the relevant business group.** As a result of these efforts, the rate of companies performing self-diagnostics was 60% across the entire Hitachi Group in FY 2012, but we have maintained a rate of at least 90% each year from FY 2020 onwards (with 95% in FY 2020 and 92% in FY 2021). As we aim for 100%, we are continuing to enhance our efforts through cooperation with the parent companies of business groups.

In addition, **Hitachi is providing to the Hitachi Group companies the services that are required to comply with the IT rules and guidelines (such as authentication and antivirus measures).** Along with the increase in cyberattacks in recent years, with respect to measures to address particularly high-risk software vulnerabilities, we have begun offering services to support the implementation of measures at the Hitachi Group companies as we clarify the response procedures and guidelines. For the Hitachi Group companies that struggle to implement sufficient measures on their own, we are working on applying services and raising the standard of measures taken.

Self-diagnostic
implementation rate

92 %

From the percentage of self-diagnostic results submitted regarding IT controls for FY 2021

Responding to business integration, such as via M&As

Against the backdrop of increasing business integration as a result of M&As, we are strengthening our efforts to reduce IT risks for the integrated Hitachi Group companies. Specifically, among the aforementioned self-diagnostic checklists, we have selected certain items that require priority compliance at integrated companies (such as taking measures against vulnerabilities). In addition, in the event that any deficiencies are detected among such items after self-diagnostics for the priority items are performed at the integrated companies, we request that the parent-company business groups acquiring such companies implement corrective actions by the appropriate deadlines.

IT Governance and Security **3** IT-BCP

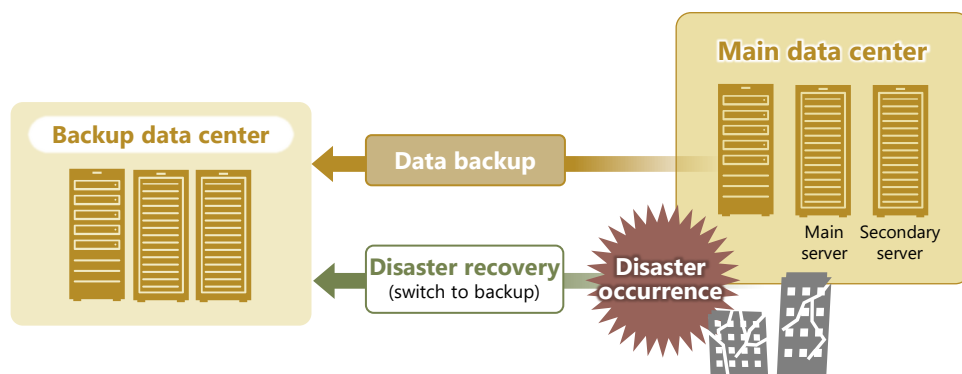
IT-BCP ^{#1}: Supporting Business Continuity by Using IT

With respect to large-scale earthquakes (such an earthquake is said to have a high probability of occurring in Japan in the near future) and natural disasters arising from global warming, as well as various other kinds of emergencies, such as pandemics and cyberattacks, we are formulating and operating IT-BCPs that enable us to support business continuity for the Hitachi Group through IT.

Responding to disasters

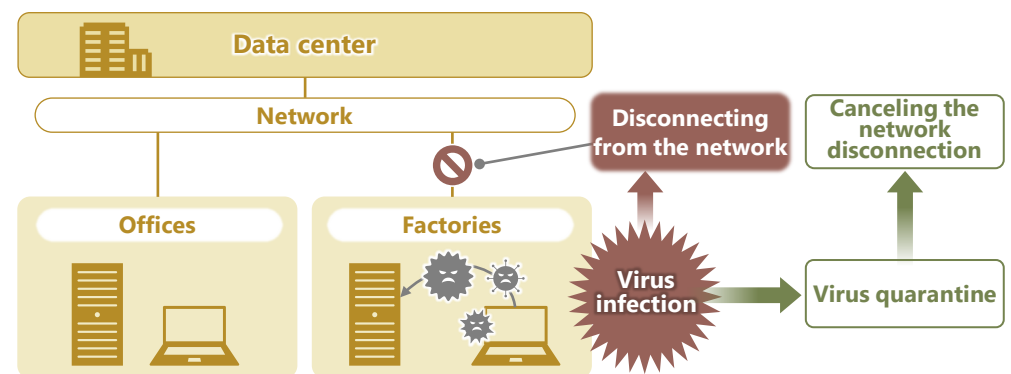
With respect to events such as large-scale earthquakes, we are engaged with server installation and operation fundamentals for achieving robust data centers, as well as defining disaster-response levels that correspond to the recovery time objectives for each service. As such, we have established secondary servers and data-backup environments to ensure data security, while at the same time using configurations whereby systems that provide services important for business continuity are allocated across multiple data centers so that we can quickly recover from any disaster. We conduct regular drills according to these BCP measures to prepare for emergencies.

Moreover, we have established remote-work environments given the need to support new styles of working brought on by the pandemic. We are defining the operation of systems that are required to continue remote work by priority level based on the impact of such operations on maintaining societal functions, and are drafting the relevant operating plans.



Responding to cyberattacks

To address cyberattacks, we are transitioning to an architecture based on boundary-oriented security and zero-trust security to achieve robust security measures. As such, we have assumed various scenarios in which we are targeted by cyberattacks, such as ransomware or targeted attack emails, worm viruses, and unauthorized accesses to public-facing servers, and have established procedures for responding to them from initial response to recovery, according to the type of attack. These responses include actions such as isolating infected systems by disconnecting them from the network, quarantining the virus, and then canceling the network disconnection. We are endeavoring to implement safe system operation and rapid recovery. Furthermore, in order to normalize and improve our BCPs, we regularly review our response procedures. For example, we conduct drills against envisioned cyberattacks and constantly prepare against new threats.



IT Governance and Security **4** IT-PMI

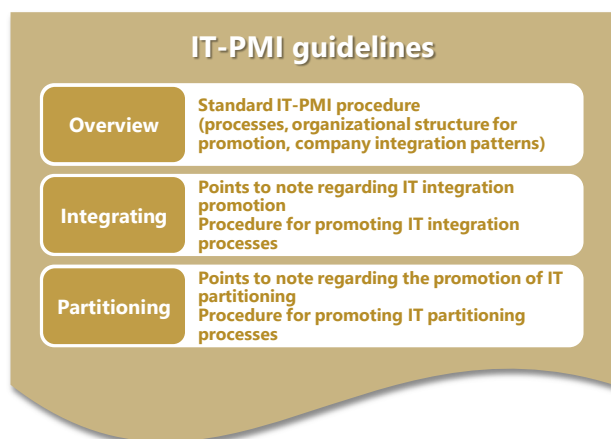
Promoting IT-PMI^{#1} Globally

In preparation for the investment in priority business fields and the sale and reorganization of fields with low profitability under the Hitachi Group's 2024 Medium-Term Management Plan, we are engaged in initiatives to lower risks and increase efficiency via IT-PMI globally.

Reducing risks and improving efficiency via IT-PMI

The Hitachi Group continues to promote active investments in important fields. The Group has completed several large-scale and global mergers and acquisitions, including those involving GlobalLogic, Hitachi Energy (former Hitachi ABB Power Grids), and Hitachi Astemo. Along with these mergers and acquisitions, the IT departments are promoting IT-PMI, which includes activities for integrating and partitioning IT.

To allow the Hitachi Group to lower risks and improve efficiency alongside IT-PMI, we have adopted IT-PMI guidelines that systematize the processes to be performed in a standard manner.



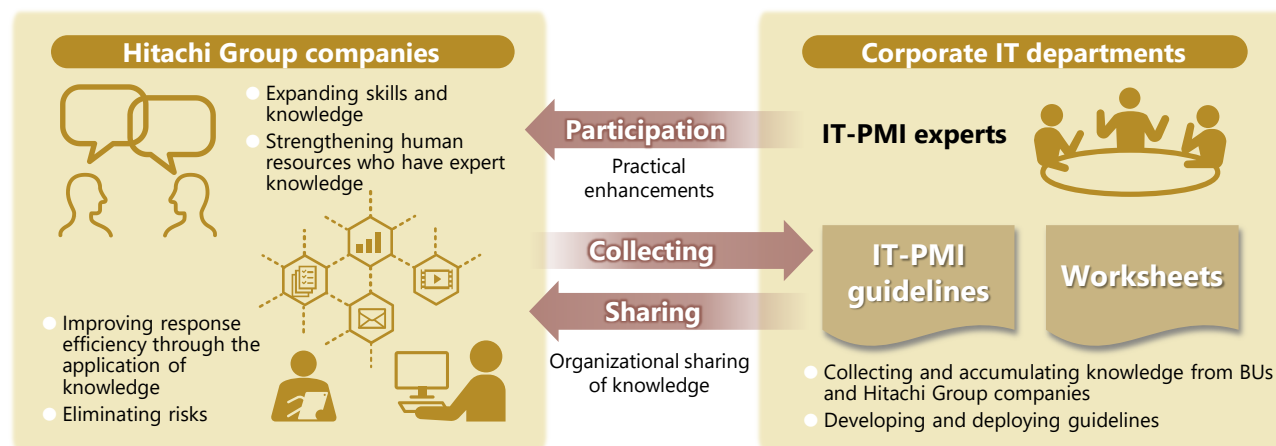
Continually expanding the IT-PMI guidelines

The creation of synergy through M&As is required not only for the business departments, but also for IT departments. **During FY 2021 we established worksheets and processes that contain knowledge regarding the creation of IT synergies. Utilizing this knowledge has begun within the Hitachi Group.**

With integration cases in particular, it is quite common for IT assets and functionality to be duplicated between the acquiring company and the company being acquired, and we can expect the creation of synergies in terms of cost.

Enhancing the capability to support IT-PMI projects

To achieve the business income and expenditure plans of M&As, it is important to ensure that there is no divergence from the plans for IT-PMI costs and IT operating costs. To this end, we are ensuring that all personnel related to M&As, and not only those in the IT departments, share a common understanding. In addition, by having IT-PMI experts strategically involve themselves with actual projects, we can further consolidate skills and knowledge. We are improving our project-support capabilities by enhancing resources.



#1 IT-PMI: IT post-merger integration (IT integration following the merging or acquisition of companies)

Environment and Talent Management

At IT departments, in coordination with the ESG policies of the entire Hitachi Group, we are actively engaging in solutions to problems related to the environment and impact reduction.

In addition, we are accelerating the reallocation of IT resources, the training of human resources, and the securing of diverse human resources, promoting the coordination of IT human resources globally.

Environment and Talent Management **1** Environmental Initiatives

Environmental Activities

At IT departments, while we are engaged in the ongoing and expanded promotion of IT operations that have a limited impact on the environment, we are also contributing to making Hitachi carbon-neutral by 2030. This will be accomplished through realizing KPI measurements and data visualization related to environmental contributions throughout the entire Hitachi Group via the promotion of IT usage and DX.

Rate of reduction in CO₂ emissions due to server consolidations at Hitachi data centers

40%

Results for reductions in FY 2021 (compared to FY 2010)

Promoting IT operations that have a low environmental impact

① Reviewing the use and operation of IT devices

We are promoting server consolidations and rationalizations of data centers throughout the Hitachi Group companies. In FY 2021, we moved our plans forward, consolidating servers in our internal data centers and cutting power consumption by about 400,000 kWh. We reduced CO₂ emissions by about 40% (compared to FY 2010 levels). In the future, we will be moving forward with consolidation and effectiveness of IT equipment to achieve even more effective reductions.

② Improving management processes

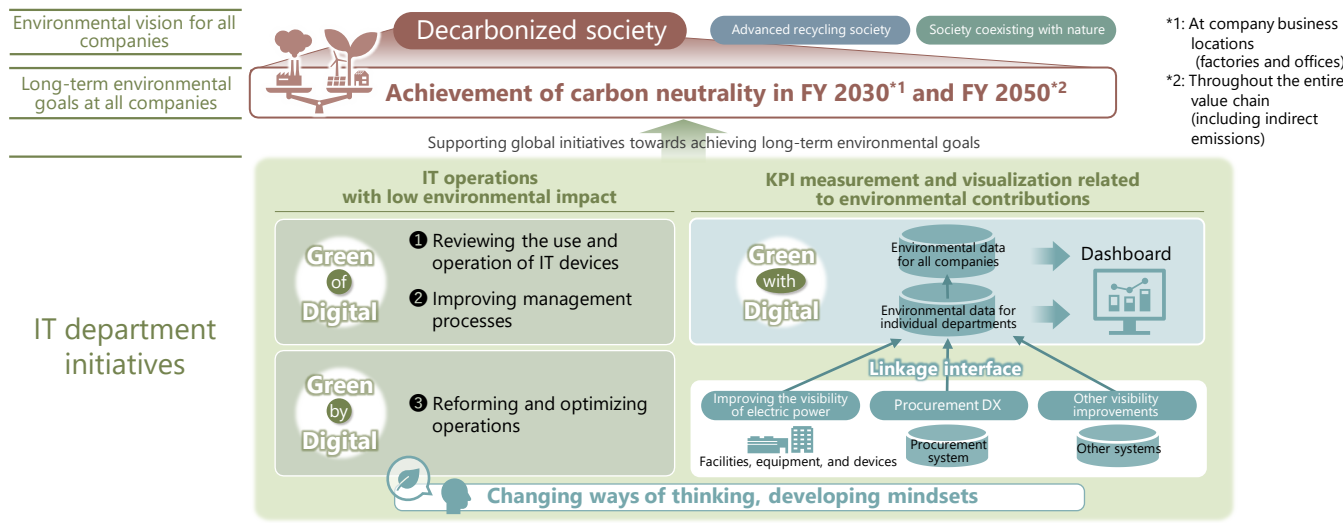
To achieve environmentally conscious procurement, in FY 2021 the IT departments selected priority partners with which to do business. In the future as well, we will coordinate and promote measures for the environment. Furthermore, in FY 2021, we introduced a checklist for performing environmentally oriented assessments at the planning and conception stages of IT services shared among all companies, and established processes for operating them. From FY 2022 onwards, we will continue to thoroughly implement these operations.

③ Reforming and optimizing operations

Alongside the transition in work styles focused on working remotely, we reviewed workflow-based operations and took steps to reduce paper printing. In FY 2021, we cut the volume of paper used annually in Japan throughout the Hitachi Group by about 50% (compared to FY 2018). We plan to continue to maintain these levels even after the pandemic has subsided.

Enabling KPI measurements and data visualization related to environmental contributions

Through the use of a shared ERP platform that is used throughout the entire Hitachi Group, we are working to accomplish the automatic collection and centralized management of environmental data. In addition, by introducing a dashboard, we aim to improve visualization of the data necessary for managing GHG^{#1} emissions based on the supply chain emissions calculations defined by Japan's Ministry of the Environment.



*1: At company business locations (factories and offices)
*2: Throughout the entire value chain (including indirect emissions)

#1 GHG: Greenhouse gases

Environment and Talent Management **2** Organizational Structure for Promoting DX

Organizational Structure for Promoting DX

In order to contribute to accelerated DX promotion and business growth throughout the entire Hitachi Group, the IT departments are formulating and promoting DX-related policies and strategies; providing expertise, shared platforms, and services; and training digital human resources.

Promoting organic linkages among IT departments in the Hitachi Group

The Hitachi Group is promoting internal operating reforms and business structure reforms through DX that makes use of digital technologies. Through these activities, **we are working to formulate and promote the IT and DX strategies of the Hitachi Group, establish a digital management platform, and provide a CoE^{#1} implementation of IT and DX expertise. At the same time, we will provide IT services and solutions that are shared globally.**

With linkage between the departments promoting corporate reforms and the IT departments, we are promoting DX throughout all companies by using a top-down approach.

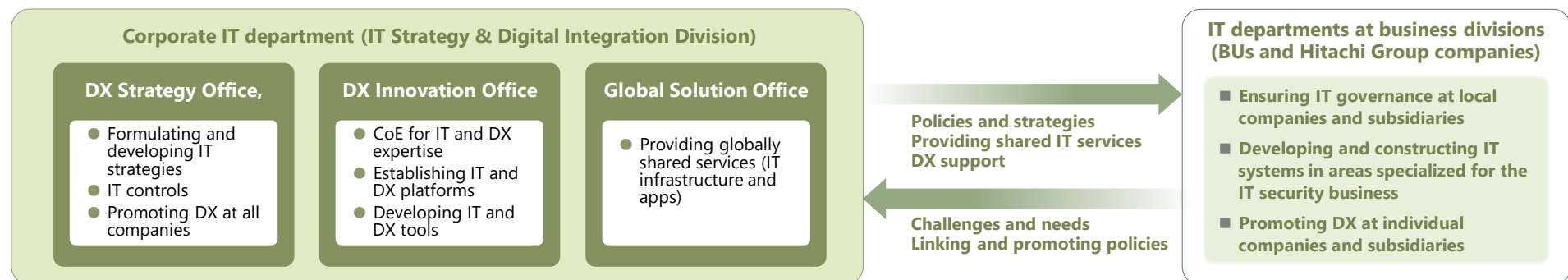
Alongside these efforts, with respect to the challenges and needs of the business departments, the IT departments will provide support regarding the provision of platforms, analytical support, human resources training, and more, while also contributing to the promotion of DX by using a bottom-up approach.

Moreover, through the promotion of DX internally, accumulated knowledge and expertise relating to DX will be stored in Lumada, allowing us to provide value to society through sharing and collaborative creation with our customers and partners.

Developing human resources who have digital expertise

Securing human resources with digital expertise who will promote DX throughout the entire Hitachi Group is of great importance, and we are engaged in managing IT and DX human resources at a global scale. **We are making efforts to strengthen training of human resources to increase their digital expertise, such as by building training systems and conducting specialist training through certification systems.**

In addition, in order to allow all employees to continuously improve in the knowledge and skills required for DX promotion, **we are developing a diverse range of activities, including the transmission of various information, training courses and e-learning, practical exercises involving on-site challenges and data importing, and internal communication activities.**



Environment and Talent Management **3** Personnel Management

Global IT Personnel Management

We will train human resources who have the capabilities to contribute via IT to the global business expansion of the Hitachi Group, transforming our IT human resources portfolio. We will actively promote diversity, aiming to further change how employees think and develop their mindsets.

Percentage of personnel within Japan who handle global matters

About **60%**

Target value for FY 2024
Percentage of IT human resources portfolio Levels 1 to 3

Transforming the IT human resources portfolio

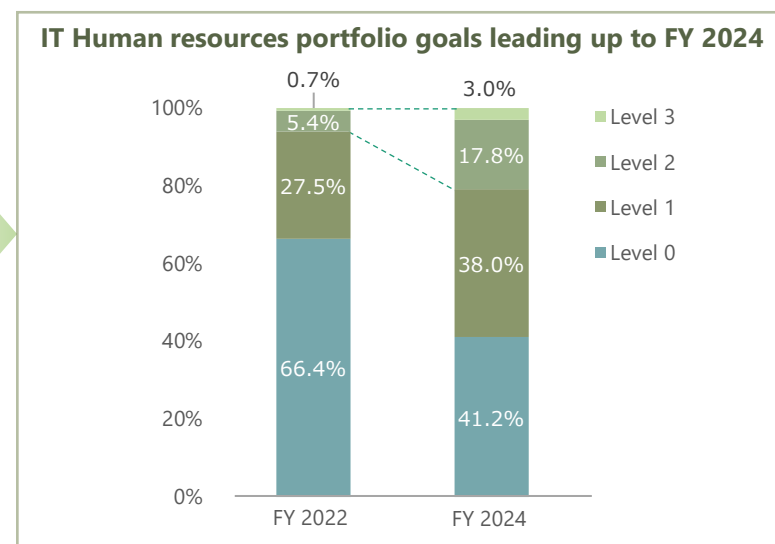
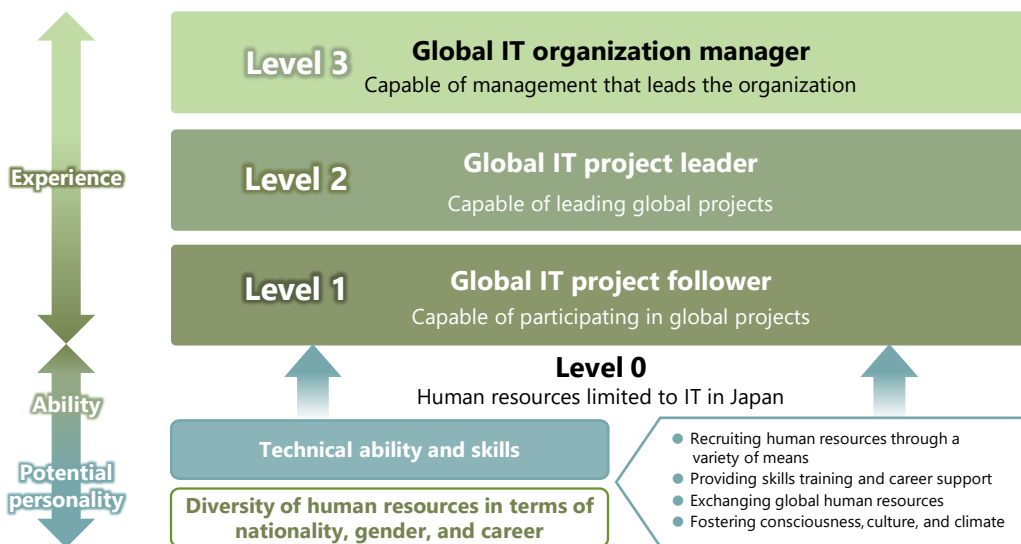
We aim to have our IT departments be among the best in the world, and will work to obtain and train global IT human resources and improve technical skills.

Specifically, as we look towards achieving the goals of the 2024 Hitachi Group IT Medium-Term Plan, we will envision what we want our human resources to look like and, as we review our IT human resources portfolio, support the corresponding career paths and the strengthening of the requisite technical capabilities and skills. Moreover, by having employees working in Japan participate in global projects, we will obtain greater abilities to handle global matters.

Promoting Diversity, Equity and Inclusion (DEI#1)

Our promotion of DEI is unified with the management strategy for the Hitachi Group, with IT departments actively engaged in the goal of achieving sustainable growth for both companies and employees.

From a medium- to long-term perspective, our goal is to realize an organization without bias in terms of nationality, gender, or experience (that is, experience outside the Hitachi Group) as we diversify our human resources. At the same time, we are working to achieve more active communication with employees in the future while we aim to achieve a culture (consciousness and climate) that allows a diverse range of people to thrive, through a fair and independent career-oriented support structure.



 **Hitachi, Ltd. IT Strategy & Digital Integration Division**

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