



Sustainability Management

Our vision and the policy for achieving a sustainable society.

Sustainability Management in the Fujitsu Group

Policy, Promotion Scheme, and Review

The Fujitsu Group has always been seen by society as a trustworthy and responsible enterprise through its delivery of products and services. However, in the current era of VUCA (*1) we face major changes and the future is difficult to predict. It is therefore important that we, as a member of the global community, conduct business activities under the leadership of senior management that are aimed at resolving environmental, societal and economic problems and that will produce beneficial impacts for society. In April 2020, we established a Sustainability Management Committee that will drive a sustainability-focused management approach under the supervision and direction of the Board of Directors Meeting and the Executive Management Council Meeting. As of fiscal 2023, the committee is made up of members of the Board of Directors, including Representative Directors Mr. Tokita (Chairman), Representative Directors Mr. Furuta (Vice Chairman), and Director Mr. Isobe.

The objective of this committee is sustainability management that takes into account environmental, societal and economic impacts as well as stakeholder (*2) interests, ensuring that the company prospers in the long term as a responsible global enterprise. Specific initiatives will be in line with our values and our purpose, set out in the revised Fujitsu Way, and will include boosting our efforts in non-financial areas. These include respect for human rights, acceptance of diversity and equity, human resource development, maintenance of the global environment and contributing to the development of regional communities. Our goal is to achieve sustainable, long-term improvement in the corporate value of the Fujitsu Group.

The committee is scheduled to meet every six months, and on an ad hoc basis as required, to check on the progress of our activities in non-financial areas and to confirm and discuss if we are on track to meet our targets for the non-financial indicators. The committee will also discuss new activities, including in sustainability businesses, and then report to the Executive Management Council Meeting and the Board of Directors Meeting with the results. The committee is chaired by the CEO, who will nominate executives with a perspective on sustainability management for appointment as committee members. (As of May 2023, the committee had 13 members, including the chair.) The first committee meeting was held in April 2020, followed by semiannual meetings – with the most recent meeting held in March 2023. To date, the meetings have been characterized by lively discussions on topics such as the COVID-19 pandemic, the accelerating global movement toward carbon neutrality, the ideal future shape of the Fujitsu Group, the mission of the committee, details of the non-financial indicators, an overview of Global Responsible Business activities and progress toward achieving the related targets.



System Chart

*1 VUCA: Volatility, Uncertainty, Complexity, Ambiguity

*2 The Fujitsu Group's stakeholders: The Fujitsu Group regards our people, customers, partners, community and shareholders as its stakeholders. Government authorities, NPOs, NGOs, and similar organizations are also particularly important stakeholders within this community.

Global Responsible Business

Since its CSR Promotion Committee established the Basic Strategy Working Group in 2010, the Fujitsu Group has identified Five Priority Issues in its Basic CSR Policy and has been promoting activities that address those priority issues. The working group conducted interviews with outside experts regarding the expectations and demands on Fujitsu, based on an awareness of global CSR standards and social issues.

However, recent years have seen a further ramping up of demand for initiatives aimed at responding to challenges on a global scale, including the adoption of the Sustainable Development Goals (SDGs) by the United Nations and the coming into effect of the COP 21 Paris Agreement related to climate change. The Fujitsu Group has employed a materiality analysis in a Groupwide review of the priority issues to ensure that they reflect changes in its business over the past several years. The result was the establishment of a unified framework for the priority issues under the new name of Global Responsible Business (GRB).

Global Responsible Business

The GRB framework aims to foster the mindset and corporate culture necessary to realize the Fujitsu Way by engaging in specific activities that address our priority issues and to earn and maintain the social trust that is a prerequisite for global business activities. All Group employees must be constantly aware that their companies are part of society and aim to not only pursue profits but also reduce the negative impact of their business activities on sustainability issues while maximizing the positive.

To achieve these objectives, we specified goals for each priority issue with March 2023 set as the deadline for achievement and we have been engaged in a range of activities. We have set new goals with a deadline of March 2026 and, in order to carry out higher-level activities globally while taking into account the differences between countries and regions in such areas as local laws and labor markets, we have set Groupwide targets for all employees. Employees based at our headquarters who are responsible for each of the priority issues led efforts in formulating these targets, while personnel in overseas regions with similar responsibilities also provided input in this regard. We will continue to work on specific measures toward achieving the goals.

Raising Awareness and Disseminating Information Internally and Externally



To realize our corporate purpose, we engage in businesses that have a beneficial impact on resolving challenges in society, and to conduct our operations in a responsible manner throughout all business activities, we are implementing a range of measures to raise awareness and enhance our employees' understanding of GRB. In addition, we disseminate information outside the company to convey to stakeholders the Fujitsu Group's position on sustainability management and related initiatives





- At internal and external events and presentations, we introduce the non-financial framework around Fujitsu's sustainability management and explain how an executive leader has been appointed for each of the priority issues as we implement initiatives on a global basis.
- Employee understanding is further enhanced through our intranet sites in Japanese and English, which are updated as required by GRB operations staff.
- We published a series of 10 articles in Fujitsu's in-house magazine, in both Japanese and English, featuring overviews of each of the priority issues as well as specific initiatives. A survey conducted on this series revealed that approximately 90% of those who read the articles responded that they developed a deeper understanding of GRB, while around 60% stated that they had changed their way of thinking and behavior. This illustrates the link to improved understanding and empathy.
- We conduct employee awareness surveys in relation to sustainability and utilize the responses when planning and implementing internal and external initiatives.
- In terms of business involvement, we incorporate the GRB perspective in our proposal process to help our customers solve their sustainability-related management issues. Contents on GRB initiatives such as environment and wellbeing are included in the proposal materials provided to customers, as we work to promote further usage and deployment in frontline business interactions.

Reference




- [GRB Goals for FY2025](#)
- [GRB Goals and Major Achievements in FY2022](#)



GRB (Global Responsible Business) Goals for FY2025



"WHAT FUJITSU ASPIRES TO BE" and "GOALS FOR FY2025"	
 <p>Human Rights and DE&I</p>	<p>◆Human Rights</p> <p>In both the real-world and digital societies, consideration for "human dignity" is reflected in all our corporate activities and we constantly work to "create human-centric value".</p> <p><Goals></p> <p>Prevent and mitigate Human Rights risks throughout our value chain</p> <ul style="list-style-type: none"> • Conduct continuous Human Rights e-learning courses (maintain an attendance rate of 90% or more) • Hold annual Stakeholder Dialogue sessions • Work with our partners, customers and NGOs to establish activities that enable Human Rights, using Fujitsu's expertise and technologies <hr/> <p>◆Diversity, Equity & Inclusion (DE&I)</p> <p>Be a responsible business that reflects the diversity of our world. Build an inclusive and equitable culture where everyone belongs and can be completely themselves. We will celebrate difference and ensure that people can succeed regardless of their personal identity. Through inclusive design and innovation, we will endeavor to make a positive impact within society and empower each other to make the world more sustainable.</p> <p><Goals></p> <p>Ensure all employees feel supported and respected at Fujitsu regardless of age, gender, culture, ethnicity, sexual orientation, identity, and ability</p> <ul style="list-style-type: none"> • Improve the average employee engagement survey score relating to the question on "Respect for individuals" by 7 points (to 80) <p>Build an inclusive and equitable culture where everyone belongs and can be completely themselves</p> <ul style="list-style-type: none"> • Improve the average employee engagement survey score relating to the question on "Equal opportunity" by 4 points (to 74) <p>Have equal representation of women in Fujitsu with an additional focus on leadership roles</p> <ul style="list-style-type: none"> • Increase the ratio of women in leadership roles to 20% across Fujitsu <p>Reflect the societies we work in, from executive level downwards and promote respect and tolerance to achieve a culturally aware and unbiased work environment</p> <ul style="list-style-type: none"> • Build and deliver an integrated, holistic strategy for Culture and Ethnicity which is globally relevant and incorporates local initiatives <p>Drive LGBTI+ inclusion best practice to support employees and their families across all Fujitsu locations</p> <ul style="list-style-type: none"> • Implement FWEI (Fujitsu Workplace Equality Index) Standards to deliver opportunity and belonging for LGBTI+ colleagues <p>Ensure that all employees, customers, and members of society can use our solutions, products, services, and systems and can understand our communications</p> <ul style="list-style-type: none"> • Advocate and improve digital accessibility as part of corporate strategy which covers brand communication, customer experience and workplace
 <p>Well-being</p>	<p>Achieve a state in which each individual can realize their work and private life as they envision, and they have the discretion and decision-making power to achieve self-realization.</p> <p><Goals></p> <p>Each employee can understand and talk about their own Well-being</p> <ul style="list-style-type: none"> • Well-being: <ul style="list-style-type: none"> • Send messages globally to promote understanding of Well-being • Develop Well-being Indicators

	<ul style="list-style-type: none"> Occupational Health & Safety Zero occurrences of serious accidents
 <p>Environment</p>	<p>Fujitsu will fulfill its social responsibilities as a global corporate SX leader. In addition to achieving our carbon neutrality goals, we will solve various environmental challenges by providing innovative solutions through co-creation with our customers.</p> <p><Goals> (*)</p> <p>Fulfill our social responsibilities and help to resolve environmental challenges</p> <ul style="list-style-type: none"> Reduce greenhouse gas (GHG) emissions from Fujitsu facilities and the supply chain with the aim of achieving Science Based Targets (SBT) net zero Avoid risks associated with our business activities and minimize our impact on the environment Help to resolve environmental challenges for customers and society through our business operations <p>* Specific targets are set in the Fujitsu Group Environmental Action Plan (Stage XI)</p>
 <p>Compliance</p>	<p>Ensure that all officers and employees within the Fujitsu Group conduct their business activities with a high level of compliance awareness, and through those activities the Fujitsu Group becomes a trusted corporate group that is chosen by stakeholders for investment, business transactions, and employment and that fulfills its role as a model for society.</p> <p><Goals></p> <p>To ensure that the entire organization is familiar with the Fujitsu Way Code of Conduct, relating to compliance, the Global Compliance Program (GCP) will be implemented throughout the Group to instill a high level of awareness toward compliance. The management team will take the lead in fostering a corporate culture where no employees tolerate any kind of misconduct (Zero Tolerance). We will expand our corporate activities in accordance with the GCP and also seek the understanding of all stakeholders involved in our business</p> <ul style="list-style-type: none"> Send out annual messages on the importance of compliance from management in Fujitsu's head office, including the CEO, and from the heads of Group companies in each country Provide annual compliance training to more than 100 business partners Prevent bribery and cartels from occurring
 <p>Supply Chain</p>	<p>The Fujitsu Group will realize a responsible supply chain that takes into consideration human rights, health and safety, and the environment and also ensures diversity.</p> <p><Goals></p> <p>Prevent and reduce human rights risks in the supply chain</p> <ul style="list-style-type: none"> To prevent problems from occurring, create a system that promotes visualization of suppliers and identification of issues in parallel with requests for compliance with procurement guidelines <p>Promote GHG emission reductions in the supply chain</p> <ul style="list-style-type: none"> Request major suppliers to set numerical targets in line with international standards in order to jointly promote GHG emission reductions (The goal is that emission reduction targets equivalent to SBT WB2°C be set by major suppliers) <p>Ensure supply chain diversity</p> <ul style="list-style-type: none"> Establish diversity indicators and activities based on the social needs in each region and country Create a system to measure the status of supplier initiatives, with activities in Japan defined as women's empowerment
 <p>Community</p>	<p>Every employee is increasing their empathy for social issues and engaging in activities through collaboration and co-creation with a wide range of stakeholders, making a significant and positive impact on society, thereby creating growth opportunities for Fujitsu and contributing to the realization of Our Purpose.</p> <p><Goals></p> <p>Foster our corporate culture for community activities* and make an impact on society</p> <ul style="list-style-type: none"> Employees participate in community activities (20% of employees) <p>* Community activities: Activities aimed at creating value by resolving challenges in society through global cooperation with local communities, which are important stakeholders</p>

GRB (Global Responsible Business) Goals and Achievements in FY2022

	"WHAT FUJITSU ASPIRES TO BE" and "GOALS FOR FY2022"	Major Achievements in FY2022
 Human Rights and DE&I	<p>◆Human Rights</p> <p>In both the real-world and digital societies, consideration for "human dignity" is reflected in all our corporate activities and we constantly work to "create human-centric value".</p> <p><Goals></p> <p>Embedding "respect for human rights" within the Fujitsu Group</p> <ul style="list-style-type: none"> • Completion rates for global human rights training : 80% 	<ul style="list-style-type: none"> • Conducted e-learning on business and human rights for all Group employees in 16 languages worldwide. Attendance rate: 92%
	<p>◆Diversity, Equity and Inclusion (DE&I)</p> <p>Be a responsible business that reflects the diversity of our world. Build an inclusive and equitable culture where everyone belongs and can be completely themselves. We will celebrate difference and ensure that people can succeed regardless of their personal identity.</p> <p>Through inclusive design and innovation, we will endeavor to make a positive impact within society and empower each other to make the world more sustainable.</p> <p><Goals></p> <p>Cultivation of inclusive corporate culture.</p> <ul style="list-style-type: none"> • The Fujitsu Group aims to achieve at least consolidated 69% from 66%(FY2019) / non-consolidated 63% from 59%(FY2019), in favorable answers to Diversity, Equity and Inclusion question in the engagement survey by FY2022. • The Fujitsu Group aims to achieve at least consolidated 10% from 8%(FY2019) / non-consolidated 9% from 6%(FY2019) female leadership by FY2022. 	<ul style="list-style-type: none"> • Favorable answers rate of engagement survey related to "Diversity, Equity and Inclusion" question <ul style="list-style-type: none"> • Consolidated 73% • Non-consolidated 69% • Female leadership rate <ul style="list-style-type: none"> • Consolidated 10.8%* • Non-consolidated 9.1% <p>* In the past, standards for leadership rates were set by region, but from FY2023 a unified global standard has been set at 15% on a consolidated basis.</p>
 Well-being	<p>To create an environment where all employees can work positively and healthily in both mind and body. We will also endeavor to provide opportunities for employees to develop personally and display their abilities to the fullest extent.</p> <p><Goals></p> <p>Providing a positive work environment</p> <ul style="list-style-type: none"> • An average score of 71 globally for "Work Life Balance" and "Well-being (*1)" in the engagement survey <p>Provide opportunities for employees to develop personally and display their abilities to the fullest extent</p> <ul style="list-style-type: none"> • An average score of 70 globally for "Growth Opportunities" in the engagement survey 	<ul style="list-style-type: none"> • Global average score for "Work Life Balance" and " Well-being (*1)" : 67 • Global average score for "Growth Opportunities" : 71
 Environment	<p>Fujitsu will fulfill its social responsibilities as a global corporate environmental leader. We aim to contribute to achieving the 1.5°C climate change goal of the Paris Agreement and also to resolving environmental challenges, through such measures as developing innovative solutions that make effective use of resources.</p> <p><Goals></p> <p>Fulfill our social responsibilities and help to resolve environmental challenges</p>	<ul style="list-style-type: none"> • Greenhouse gas emissions reduction rate: <ul style="list-style-type: none"> • Actual 47.5% ; 403,000 tons-CO₂ against a target of 37.8% or more reduction; down to 478,000 tons-CO₂ or less (reduced by 4.2% each year compared with FY2013) • Renewable energy usage ratio: actual 30.0% against a target of 16% or more

	<ul style="list-style-type: none"> • Reduce greenhouse gas emissions at Fujitsu sites by 37.8% or more from the base year level (reduce by 4.2% each year compared with FY2013) • Avoid risks associated with our business activities and minimize our impact on the environment • Help to resolve environmental challenges for customers and society through our business operations 	<ul style="list-style-type: none"> • Avoid risks and minimize our impact on the environment : [Business sites] • Improve power usage effectiveness (PUE) at datacenters: actual 1.57 against a target of 1.54 • Water usage: actual 87,645 m³-reduction from the previous year against a target of 30,000 m³ or more • Promote eco design for resource savings and circulation and increase resource efficiency of newly developed products: actual 11.2% against a target of 10% or more (compared with FY2019). [Supply Chain] <ul style="list-style-type: none"> • Reduce CO₂ emissions due to power consumption during product usage: actual 25% against a target of 17% (compared with FY2013). • Reduce CO₂ emissions and conserve water resources in the upstream supply chain: request the Fujitsu Group's key partners to undertake reduction activities, 100% completed • Help to resolve environmental challenges: <ul style="list-style-type: none"> • Transfer of carbon-neutral knowledge to business units • Improving the professional skills of employees by conducting in-house education such as seminars, workshops and e-learning courses • Support customer proposals to resolve environmental issues
 <p>Compliance</p>	<p>Ensure that all officers and employees within the Fujitsu Group conduct their business activities with a high level of compliance awareness and through those activities, the Fujitsu Group fulfills our social responsibilities and earns the trust of our stakeholders.</p> <p><Goals></p> <p>To further disseminate compliance-related part of the Fujitsu Way Code of Conduct throughout the entire organization, the Global Compliance Program is rolled out for the entire Fujitsu Group, thereby instilling a high level of compliance awareness in the organization, and the management is to take the lead in fostering a corporate culture where each employee does not tolerate any wrongdoings (Zero Tolerance).</p> <ul style="list-style-type: none"> • Deliver messages from the president or the heads of each business group/region on the importance of compliance (at least once a year) 	<ul style="list-style-type: none"> • Delivered messages to all employees from the CEO, the heads of each business region, and presidents of Group companies in each country on the importance of compliance at Fujitsu Compliance Week to coincide with International Anti-Corruption Day
 <p>Supply Chain</p>	<p>In its supply chain, the Fujitsu Group will achieve responsible procurement that embraces diversity and gives full consideration to human rights, the environment and health & safety.</p> <p><Goals></p> <ul style="list-style-type: none"> • The Fujitsu Group will achieve responsible procurement in its supply chain. 	<ul style="list-style-type: none"> • Availability of any of the following documents : 100% <ul style="list-style-type: none"> • A platinum or gold level of site recognition under the RBA Audit Recognition program • Written consent with the Fujitsu Group CSR Procurement

	<p>To ensure that its major suppliers comply with the international standards for responsible procurement, the Fujitsu Group will obtain one of the following documents from its major manufacturing subcontractors and parts suppliers for its core products (Target KPI =100%)</p> <ul style="list-style-type: none"> • A platinum or gold level of site recognition under the RBA (*2) Audit Recognition program • Written consent with the Fujitsu Group CSR Procurement Guideline (equivalent to the RBA Code of Conduct) • Promotion of supply chain diversity We set supply chain diversity as our goal of Responsible Business and promote it globally. • Reduction of Greenhouse Gas (GHG) Emissions in Supply Chain We requested our foremost suppliers to set the quantitative targets complying with international standards to reduce GHG emissions 	<p>Guideline Achievement: 100% obtained</p> <ul style="list-style-type: none"> • Achieved procurement KPIs from enterprises with diverse attributes, such as SMEs, women's management, and minority enterprises in the UK, the Americas, and Oceania <p>Achievements:</p> <ul style="list-style-type: none"> • Achieved key targets in each region/country • Determined women's empowerment as the perspective and target for diversity in Japan • Completed to request 293 companies to participate in our briefing for target setting <p>Achievement: Understood the situation with suppliers, requested responses and provided support in line with targets</p>
 <p>Occupational Health and Safety</p>	<p>The Fujitsu Group's first priority in all business activities is to protect the health and safety of our employees both in mind and body by providing a safe and healthy work environment tailored to the different cultures in which we operate.</p> <ul style="list-style-type: none"> • We will foster a culture that does not tolerate accidents, incidents and poor safety performance. • We will ensure safety is a core business value, and make safety important and personal in order to influence people's decisions and behavior • We will completely eliminate the loss of business opportunities due to preventable illnesses, injuries, and unexpected work-related accidents <p><Goals></p> <p>The Fujitsu Group will maintain a safe and comfortable working environment, and promote employees' mental and physical health in every workplace.</p> <ul style="list-style-type: none"> • Zero occurrences of serious accidents • Implementing health and safety-related management reviews at the global level, conducted once a year 	<ul style="list-style-type: none"> • One serious accident • Replaced management reviews in each country/region with meeting structures (such as the Central Safety and Health Committee and the Europe, GD and Americas OH&S Leadership Forum)
 <p>Community</p>	<p>Our employees, who possess an awareness that they belong to a global society, will have a positive impact not just on society, but on the economy and on business, by increasing their empathy for social issues and engaging in the co-creation of activities.</p> <p>We will evaluate, analyze and communicate the impact that our employees have made, and offer greater value to society.</p> <p><Goals></p> <p>Contributing to the transformation of both our corporate culture and mindset of employees</p> <ul style="list-style-type: none"> • Rate of increase in the number of employees participating in social contribution activities related to social issues : 10% increase compared with FY 2019 under the "new normal" situation 	<ul style="list-style-type: none"> • Increase of 38% compared with FY 2019

(*1) "Work Environment" has been changed to "Well-being" from FY22.

(*2) RBA: Responsible Business Alliance

[Fujitsu Joins EICC, a Global Corporate Social Responsibility Coalition \(renamed as the Responsible Business Alliance \(RBA\) in October 2017\)](#)

SDG-related Activities in Fujitsu

SDG-related Activities in Fujitsu

The Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 are a set of common goals to be achieved worldwide by 2030. Fujitsu's purpose is "to make the world more sustainable by building trust in society through innovation" and our company has made a commitment, both internally and externally, to contribute to achieving the SDGs. As a global enterprise that for decades has leveraged technology to create value for society, Fujitsu has a responsibility to proactively contribute to societal transformation. To help make the world more sustainable, we aim to generate larger and more beneficial impacts for society, which will also help to spur ongoing sustainable corporate growth. Fujitsu explained the [Value Creation](#) Concept for 2030 in the Medium-Term Management Plan which was released in May 2023. Our aim is to contributing SDGs by working on the Essential Contributions of Materiality : "Solving global environmental issues", "Developing a digital society", "Improving people's well-being".

Fujitsu believes the SDGs essentially define a system transformation that must be achieved by 2030 and that will act as the foundation for a world in which more than 9 billion people are able to live well, within planetary boundaries, by 2050. The issues highlighted in the SDGs involve a complex web of environmental, social, and economic elements. One key to solving these inherent problems is through digital transformation (DX). Fujitsu will harness the power of digital technology to create ecosystems that transcend industry boundaries and assist in the transformation of our customers and our own organizations, while playing a part in delivering fundamental changes to the way society interacts and contributes to the resolution of societal challenges.

The SDGs are an overarching framework of global social and environmental needs and form a common language for all stakeholders. Fujitsu will use its efforts to realize the SDGs as an opportunity for co-creation with a wide range of stakeholders, including international agencies, national and regional governments, private companies, non-governmental organizations (NGOs), and non-profit organizations (NPOs). By embracing a multifaceted approach to societal challenges, we can create and maximize positive impacts on an even larger scale.

➤ [Value Creation Model](#)

Practical Application Within Fujitsu

We have built a framework that prompts all our employees to consider which of the 169 targets defined in the SDGs are relevant to our services and solutions when they are engaged in product planning and business discussions and when they issue press releases.

The objective is to make our employees routinely conscious of whether they are contributing to achieving the SDGs so that they approach their business activities from the standpoint of addressing social issues

Fujitsu's Commitment to the Sustainable Development Goals (SDGs)



The Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 represent a set of common goals to be achieved worldwide by 2030. Fujitsu's purpose — "to make the world more sustainable by building trust in society through innovation" — is a promise to contribute to the vision of a better future empowered by the SDGs

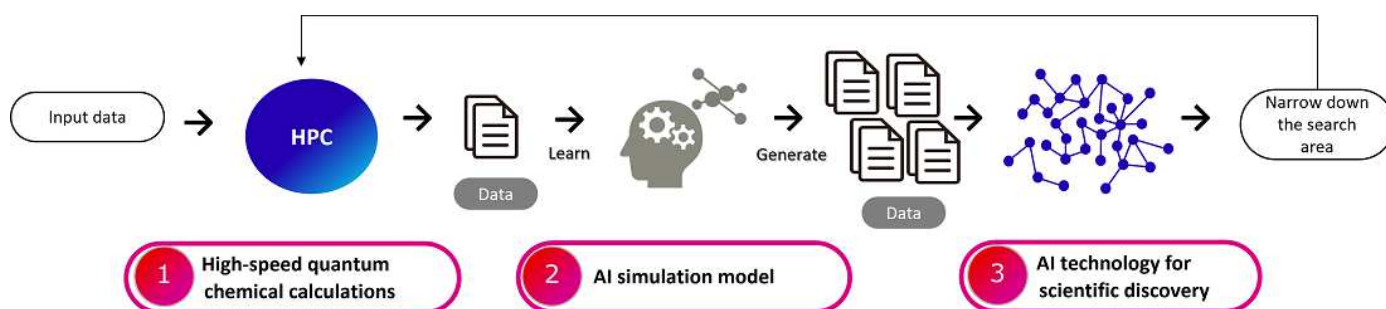
Using Digital Technology and Services to Contribute to the SDGs

Contributing to zero emissions by accelerating new catalyst discovery for clean ammonia production

Ammonia represents a promising carbon-neutral, next-generation energy source because it does not emit CO₂ when burned and it is easier to transport than hydrogen. However, the current ammonia industrial production methods give rise to the emission of large amounts of CO₂ in the manufacture of the hydrogen raw material, through the burning of fossil fuels such as natural gas and oil.

In April 2022, Fujitsu began joint research with Atmonia ehf.^(*1) to accelerate the development of catalysts for the clean production of ammonia, which will contribute to a reduction in CO₂ emissions. In February 2023, the two companies succeeded in reducing the search time for catalyst candidates by more than half by leveraging high-performance computing (HPC) and AI techniques to develop technology that improves the efficiency of materials discovery. Using Fujitsu's HPC, a large number of quantum chemistry simulations were performed based on Atmonia's ammonia synthesis simulation data. An AI simulation model was then developed by training the huge amounts of generated data from the simulations. The trained AI simulation model was used to rapidly generate much larger number of catalyst candidates than those generated by the simulations. Further, Fujitsu employed its proprietary AI causal discovery technology to narrow down suitable materials for alloy catalysts from more than 10,000 ammonia synthesis catalyst candidates.

The two companies aim to contribute to carbon neutrality by using HPC and AI-powered technology to improve the efficiency of materials search and by selecting catalyst candidates at an early stage and thereby making sustainable ammonia synthesis a practical reality.



Overview of the technologies developed and applied

*1 Atmonia ehf is a start-up based in Reykjavik, Iceland, that uses computer simulations and experiments to develop catalysts for the efficient production of ammonia. The CEO is Guðbjörg Rist

Japanese text only:

- > [Fujitsu and Atmonia leverage HPC and AI technology in joint project to contribute to carbon neutrality](#)
- > [Fujitsu and Atmonia succeed in development of new technology that accelerates search for disruptive catalyst for enabling sustainable ammonia production](#)

[Significant reduction of search times through quantum chemical simulation with HPC and AI](#)

Key SDGs related to this project



(7.a)



(9.1, 9.5)

Teijin and Fujitsu collaborate on initiatives to achieve sustainable lifecycles through recycled materials and environmentally conscious design(*2)

Working toward a common global goal of carbon neutrality, Teijin Limited and Fujitsu began a collaboration in July 2022 on an environmental value(*3) creation platform project. The aims are to achieve circular economies, starting from the material manufacturing origin, and to popularize reliable recycled materials.

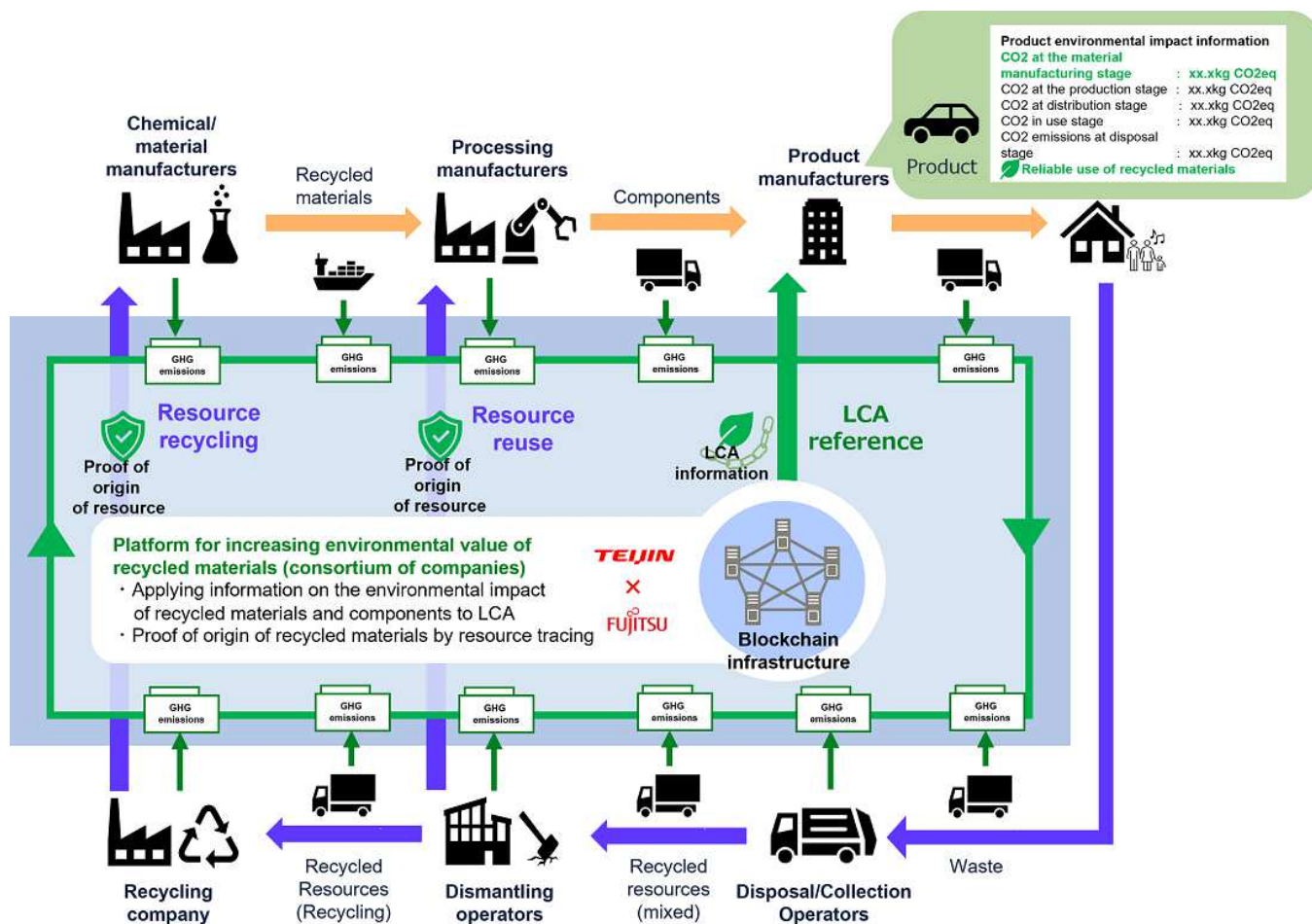


Image of platform for enhancing the environmental value of recycled materials

Teijin and Fujitsu together plan to realize and commercialize this under the Fujitsu Uvance banner, as the first circular economy business.

In January 2023, Teijin and Fujitsu began a demonstration project using the Environmentally Valuable Recycled Materials platform for bicycle frames. There were a number of problems including energy consumption in the long-distance transportation of resources(*4) and the lack of established product recovery schemes, as well as the issue of how to recycle resources from bicycles without green-washing. Despite these, this initiative demonstrated the value of the platform for tracking resources used in bicycle frame materials and information on their environmental impact. It also provided visualization of the tracked data and an assessment of the feasibility of the data collection process.

The project demonstrated the environmental value created through recycling as a business model with guaranteed reliability, and created a path for environmental value creation in resource recycling for the bicycle industry. In the future, the aim is to create value through the disclosure of the traced data to bicycle users and its use in carbon management certification.

Moving forward, the two parties plan further discussions and field trials with partner companies and organizations, and will work toward the realization of a circular economy by supporting the growth of the recycling market not only for bicycle frames but in other industries as well.

*2 Environmentally conscious design: Design that considers the whole product lifecycle and aims to reduce environmental impact.

*3 Environmental value: Added value that contributes to the environment through a reduction in the carbon footprint of product manufacture and transport.

*4 Resource transport-related energy consumption:
 CO₂ emissions related to transportation: The issue arising from the global shipment of bicycle frames, more than 90% of which are manufactured in Asia (China).
 Environmental problems relating to waste disposal in landfill: The issue of the disposal in landfill of more than 90% of bicycle frames that return to Asia for disposal.

- > Teijin and Fujitsu agree to jointly develop a blockchain-based commercial platform to promote sustainable use of recycled materials
- > Fujitsu and Teijin start joint trials with V Frames and Advanced Bikes to enhance the environmental value of recycled carbon fiber used in the manufacturing process of bicycle frames
- > Realizing a Sustainable Life Cycle - A joint project by Teijin and Fujitsu

Key SDGs related to this project



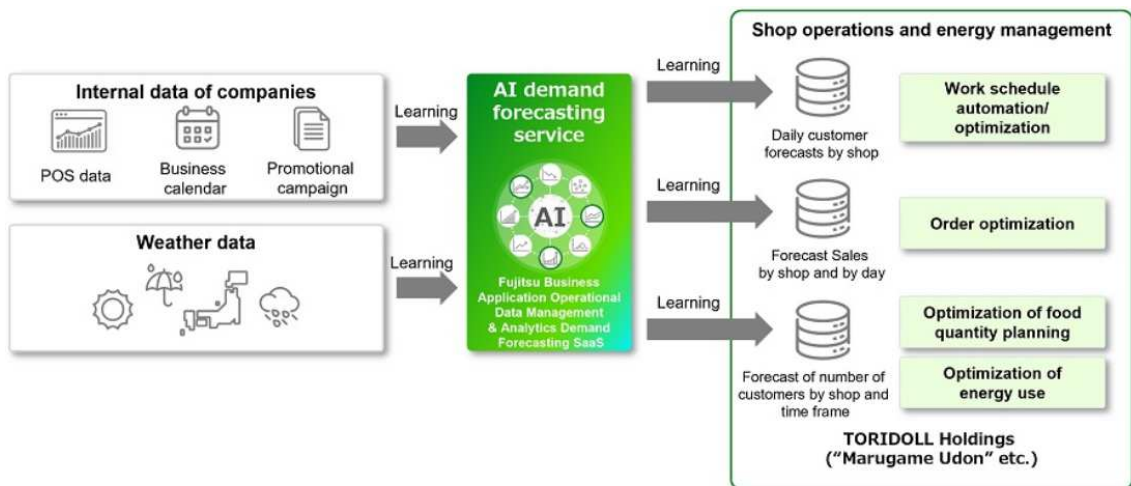
Contributing to a sustainable society through demand forecasting

Fujitsu is continuing to progress its Digital Shifts initiative, one of the key focus areas under its global business brand Fujitsu Uvance, to realize data-driven management and an agile shift to the "new normal."

In November 2022, Fujitsu and TORIDOLL Holdings Corporation demonstrated the effectiveness of an AI demand forecasting service that uses a dynamic ensemble model, based on patented technology from Fujitsu Research, to predict the number of customers and sales of its Marugame Udon brand by shop, day, and time. The trial of the service had begun in a staged way in June 2021. With a corporate mission to "provide dining experiences that move its customers", TORIDOLL Holdings had formulated a "DX Vision 2028" to leverage digital technologies in its transformation into a truly global food company.

Based on the results demonstrated, TORIDOLL Holdings then decided to deploy the service at all Marugame Udon noodle shops in Japan.

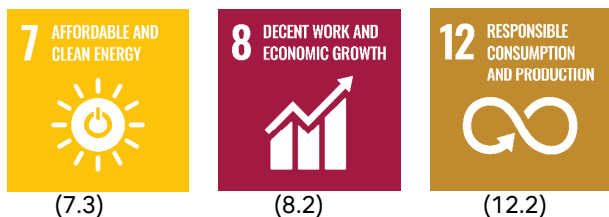
Incorporating AI and machine learning from data characteristics to imitate human thought processes, the dynamic ensemble model can optimally combine multiple demand forecasting models using automatic tuning. Fujitsu's demand forecasting technology provides stable and highly accurate demand forecasts by leveraging a learning model that accurately captures the characteristics of individual prediction objects that change according to various factors including periodicities, external factors and trends. It will also promote the use of forecast data in various planning operations including order placement, production planning, and work scheduling.



Overview of the AI Demand Forecasting Service

- > [Fujitsu delivers digital transformation with AI demand forecast service for TORIDOLL noodle shops throughout Japan](#)

Key SDGs related to this project

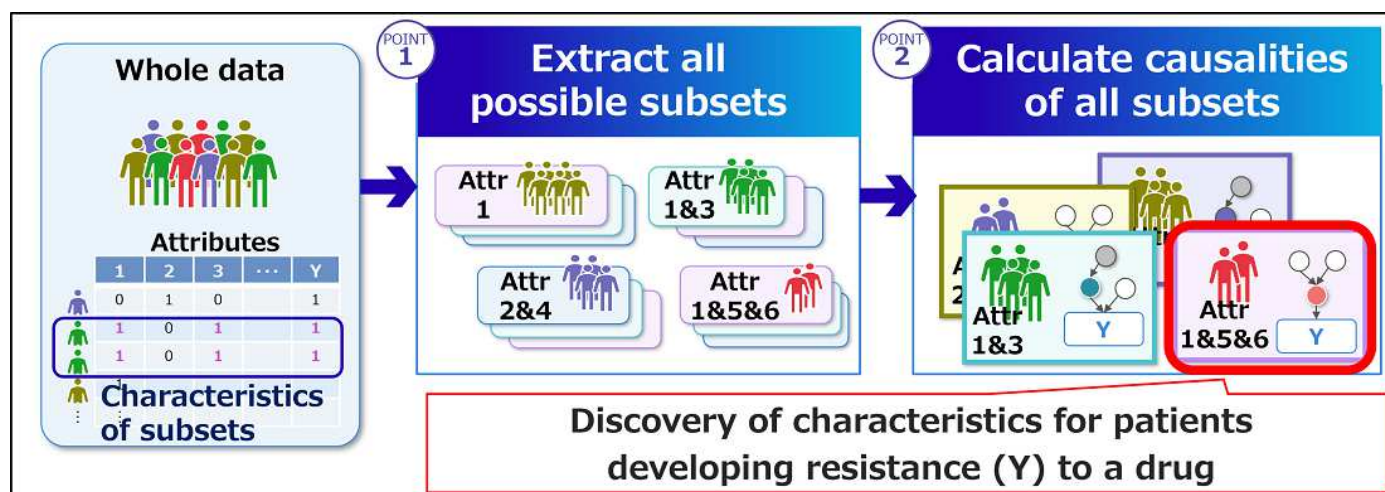


Supercomputer Fugaku and Discovery AI used in new technology for high-speed discovery of causes of cancer drug resistance

In a patient undergoing continued treatment with targeted cancer drugs (*5), the spread and re-appearance of drug-resistant cancer cells represents an ongoing threat to full remission. To understand the mechanism behind the development of cancer resistance, detailed data and new analysis methods are essential. Fujitsu has further developed Explainable AI such as Wide Learning (*6), which explains the basis for decision making, and Discovery AI which enables the discovery of unknown causal relationships.

One development challenge was to accelerate the speed of processing calculations for a comprehensive search targeting all 20,000 human genes, which on a standard computer would take more than 4,000 years. Fujitsu implemented parallel conditional and causal algorithms on the supercomputer Fugaku to maximize computational performance so that all human genes could be analyzed in a reasonable timeframe. In addition, technology was developed that used Discovery AI to extract in one day promising genetic combinations causing conditions that might create drug resistance. This permitted high-speed calculation of conditional and causal relationship data for the entire human genome within a single day, successfully identifying the genes that caused resistance to lung cancer therapy drugs.

In future, Fujitsu will utilize the new technology to discover complex intersecting causes and resolve decision-making challenges in a variety of fields including marketing, system operations and manufacturing.



Overview of Discovery AI

*5 Molecularly targeted drugs: Therapeutic drugs designed to act only on the molecule (protein, gene, etc.) causing the disease.

*6 Official website for [Hello, Wide Learning!](#)

- > [Fujitsu and Tokyo Medical and Dental University Leverage World's Fastest Supercomputer to Perform Cancer Gene Network Analysis in Less than a Day](#)
- > [Fujitsu and Tokyo Medical and Dental University leverage world's fastest supercomputer and AI technology for scientific discovery to shed light on drug resistance in cancer treatment](#)

Key SDGs related to this project



(3.4)



(9.5)

Digital collaboration demonstrates possibilities for reducing CO₂ emissions in EV charging

The Electric Vehicle (EV) market has shown strong growth, mainly in Europe and China, with its aim of achieving the decarbonization of transportation. However, the increased demand for EVs, resulting in a greater load on the electricity network during charging, has posed a challenge for energy suppliers, and transport operators have struggled to control charging-related CO₂ emissions. Unless charging uses green power, the impact of EVs on CO₂ emissions reduction is decreased.

In a digital collaboration initiative with the World Business Council for Sustainable Development (WBCSD), Dutch consulting firm Arcadis NV and British electricity company National Grid plc, Fujitsu



demonstrated its Fleet Management Optimization (FMO) solution for maximizing delivery efficiency. The goal was to reduce CO₂ emissions from EV charging. Green power generation is subject to fluctuations due to weather conditions. In this demonstration, focusing on charging during periods with an ample supply of green power leads to reduced CO₂ emissions and stability of the energy supply and demand balance. Simulation analysis was performed using FMO with delivery EV data from Arcadis as well as data on the greenness of electricity from National Grid. The results showed that by optimizing the charging schedule of delivery vehicles for transport operators, CO₂ emissions from charging could be reduced by 15%. Based on this demonstration, Fujitsu is developing a Fleet CO₂ Reduction solution, to support the use of green power for EV charging and reducing CO₂ emissions.

Through cross-industry data sharing and collaboration with governments in various countries, Fujitsu will contribute to carbon neutrality by offering solutions that optimize the entire logistics and transportation service sector.

> Fujitsu embarks on digital collaboration with WBCSD for carbon neutral transportation

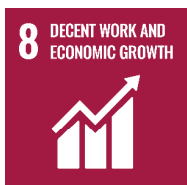
> Japanese text only:

15% reduction in CO₂ emissions demonstrated during EV charging: Inter-company data sharing is key

Key SDGs related to this project



(7.a)



(8.2)



(9.4)



(11.3)



(13.1)



(17.17)

United Nations Global Compact

Fujitsu announced its support of the United Nations Global Compact in December 2009. The Fujitsu Group is committed to global sustainability Activities that uphold the 10 principles of the Global Compact. Through this commitment, we will meet the demands of various stakeholders in international society, and uphold responsible management as a true global ICT company contributing to the creation of a sustainable society.

What is the Global Compact?

<The 10 principles of the UN Global Compact>

The UN Global Compact consists of 10 principles in the four areas of human rights, labor, the environment, and anti-corruption with which companies should rigorously comply.

Human Rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses.

Labor

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labor;

Principle 5: the effective abolition of child labor; and

Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: undertake initiatives to promote greater environmental responsibility; and

Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.









Please refer to the ["GRI Standard/UN Global Compact \(GC\) Index"](#) for the relationship between our sustainability activities and the United Nations Global Compact, as described in the ["Sustainability"](#) sites and ["Fujitsu Group Sustainability Data Book"](#).

* We have been reporting our COP (Communication on Progress) at the Advanced Level since FY 2012.







External Recognition and Awards

Fujitsu Group continues to be highly regarded throughout the world for its social and environmental initiatives, which have won awards from external organizations and led to inclusion in the following stock market indexes.

Inclusion status for major stock market indexes related to Socially Responsible Investment (SRI)

Stock market index	Description	Logo
Dow Jones Sustainability Indices (Asia Pacific)	Fujitsu has been chosen for inclusion in the Dow Jones Sustainability Index (DJSI), the world's leading Socially Responsible Investment (SRI) index. DJSI is a stock index offered cooperatively by US-based S&P Dow Jones Indices that selects companies for their excellent sustainability, based on an analysis from the perspective of governance and economics, the environment, and society.	 <p>Member of Dow Jones Sustainability Indices Powered by the S&P Global CSA</p>
FTSE4Good Index Series	FTSE is an investment-related organization established by the London Stock Exchange which has created this globally-recognized SRI index that evaluates companies based on their environmental, social and governance practices. Fujitsu continues to be elected.	
CDP	International non-profit organization CDP represents a network of institutional investors that control over \$96 trillion in assets. CDP scores over 5,000 companies throughout the world on their environmental action and identifies those that it rates highest as the "A List." Fujitsu has been selected for the CDP's A List for both climate change and water security in a row. Fujitsu also received the highest rating, A, in the "Supplier Engagement Rating (SER)" and was certified as a "Supplier Engagement Leader Board".	
MSCI ESG Select Leaders Indexes (World)	These world-renowned ESG (Environmental, Social, Governmental) indexes were developed by global stock index provider MSCI. Companies with outstanding ESG performance are selected for the indexes, and Fujitsu has been continuingly included.	
MSCI ESG RATINGS	MSCI's ESG survey measures exposure to industry-specific ESG risks and risk management capabilities relative to peers. our company won the top prize of "AAA."	
ISS ESG Corporate Rating	Germany-based CSR ratings company ISS-oekom produces these corporate responsibility ratings which rate companies according to environment, social, and governance topics. The ratings have conferred Prime Status on Fujitsu since 2011.	

Major external recognition and awards received from FY 2020 onward

Recognition, Award and Other Index	Scope	Description	Logo
EcoVadis Platinum rating	Fujitsu Group	EcoVadis is the world's largest provider of business sustainability ratings, with a global network of more than 90,000 rated companies.	
HRC Equality Index	Fujitsu America	Human Rights Campaign (HRC) Foundation's Corporate Equality Index is the national benchmarking tool on corporate policies, practices and benefits pertinent to lesbian, gay, bisexual, transgender and queer employees. Fujitsu scored 100 on the HRC Index for the second year on a row.	
Times top 50 Employer for Women (UK)	Fujitsu	The Times Top 50 Employers for Women are committed to gender equality in the workplace and have each taken action to make this happen. Fujitsu has been listed for outstanding progress and examples of best practice, impact, innovation, and individual achievement.	
Stonewall Top 100 LGBT inclusive employer (UK)	Fujitsu	Fujitsu was listed in the Stonewall Top 100 Employers. This list is compiled from the Workplace Equality Index – the UK's leading benchmarking tool for LGBT inclusion in the workplace.	
ABA100	Fujitsu Australia	Fujitsu Australia has been selected as an ABA100 Winner for Sustainability in The Australian Business Awards 2020. The Australian Business Award for Business Sustainability [BSA] recognizes organizations that execute initiatives that demonstrate leadership and commitment to sustainable business practices.	
PEZA Awards for Community Outreach Programs	Fujitsu Philippines GDC	Fujitsu Philippines GDC scooped the Outstanding Community Projects Award from the Philippine Economic Zone Authority (PEZA). The award was conferred at PEZA's 25th Anniversary and Investors' Day, held on December 10, 2020 at the PEZA Auditorium in Pasay City, Metro Manila.	
Responsible companies, odpowiedzialnych Firm 2020	Fujitsu Poland GDC	Fujitsu Poland GDC was ranked 8th in the "Responsible Companies Ranking" published by Responsible Business Forum. The category was "Services, commerce and transportation".	