

Konica Minolta, Inc. Sustainability Report 2023

Contents

(Website information as of October 2023)

Contents	1
Sustainability	3
Message from the CEO	5
Message from the Executive Officer	7
Basic Approach and Systems for Sustainability Management	12
Sustainability Strategy	15
• Material Issue Evaluation and Identification Process	19
• Sustainability Targets and Results	24
Material Issues	27
• Material Issue 1: Improving Fulfillment in Work and Corporate Dynamism	27
• Material Issue 2: Supporting Healthy, High-Quality Living	35
• Material Issue 3: Ensuring Social Safety and Security	39
• Material Issue 4: Addressing Climate Change	43
Climate-related Financial Information Disclosure (TCFD)	47
• Material Issue 5: Using Limited Resources Effectively	59
Activity Report	63
• Environment	63
Policy	65
Konica Minolta Environmental Policy	65
Environmental Management Concept	67
Eco Vision 2050	69
System	72
Environmental Management System	72
Strategy	76
Identifying Environmental Material Issues	76
Konica Minolta's Environmental Activities	81
Overview of Environmental Activities	81
Creating Products and Solutions to Solve Environmental Issues	
(Green Products Certification System)	82
Production Activities to Solve Environmental Issues	
(Green Factory Certification System)	86
Decarbonization of Suppliers	
(Carbon Neutral Partner Activities)	90
Sales Activities to Solve Environmental Issues	
(Green Marketing Activities)	97
Cooperation with Domestic Companies to Solve Environmental Issues	
(Environmental Digital Platform)	100
Addressing Climate Change	102
Basic Concept	102
Plan and Results	103
Konica Minolta's Approach	106
Introducing Renewable Energy at Company Sites	109
Promoting Decarbonization with Products and Solutions	113
Promoting Decarbonization in Production	119
Achieving Decarbonization in Sales Activities	123
Promoting Decarbonization in Distribution	125
Adapting to Climate Change	127
Building a Recycling-Oriented Society	130
Basic Concept	130
Plan and Results	131
Konica Minolta's Approach	133
Recovery and Recycling of Used Products	134
Developing Resource-Conserving Products	137
Resource Conservation and Recycling in Production Operation	141
Turning Waste into High-Value Materials (High-Functionality Recycling)	143
Reduction of Use of Packaging Materials	145
Ensuring Product and Chemical Substance Safety	147
Basic Concept	147
Systems for Eliminating Chemical Substance Risks	148
Green Procurement System	152
Management of Chemical Substances in Products	154
Biodiversity and Water Resources	156
Basic Concept	156
Consideration of Biodiversity/	
Water Resources in Production Activities	157
Contributing to Biodiversity through Products	160
Environmental Data	161
Overall View of Environmental Impacts	161
CO ₂ Emissions Across the Entire Supply Chain	162
Soil and Groundwater	165
Environmental Labels and Certifications	166

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• Social	169
Human Capital	171
Basic Concept	171
Attracting, Developing and Promoting the Active Participation of Human Resources	173
Human Resources Systems and Operations	178
Building Organization, Culture and DNA	181
Managing Occupational Safety and Health	186
Health & Productivity Management	193
Human Capital: Diversity	208
Basic Concept and Vision of DEI	208
Promoting Women's Workplace Participation	212
Employment of People with Disabilities	219
Activities that Welcome Differences	221
Fostering a DEI-Based Organizational Culture	225
Responsible Supply Chain	228
Basic Concept	228
Konica Minolta's Approach	229
Konica Minolta's Supply Chain Management	231
Implementing CSR Procurement	236
Practicing Responsible Minerals Procurement	243
Procurement Initiatives	247
• Governance	293
Corporate Governance	294
Corporate Governance System	295
Internal Controls	314
Risk Management	315
Communication with Shareholders and Investors	318
Compliance	321
Basic Concept and Promotion System of Compliance	321
Compliance Promotion Activities	324
Putting Compliance into Practice	326
Human Rights	249
Customer Satisfaction and Product Safety	256
Basic Concept and Management System	256
Konica Minolta Quality Policy	258
Achieving Top-Tier Quality and Reliability	259
Enhancing the Security of Products and Services	263
Creating New Quality Value	267
Providing Useful Products to Meet Social Needs	273
Use of Artificial Intelligence	276
Contributing to Society	279
Basic Concept	279
Health, Medicine and Sports	281
Environmental Actions in the Society	285
Scholarship, Research and Education	288
Disaster Relief and Volunteerism	291
Information Security	328
Konica Minolta Information Security Policy	330
Evaluation by External Parties	331
Stakeholder Engagement	339
Participation in Initiative	342
ESG data	347
• Environmental Data	348
• Social Data	362
• Governance Data	369
List of Policies	372
External Assurance	373
Guidelines Index	374
• GRI Standards Index	374
• ISO26000 Index	402
• UN Global Compact Index	404
• SASB INDEX	405
Sustainability Reporting Policy	407

Sustainability



Message from the CEO

> Greater Management
Focus and Passion on Sustainability
for Elevating Our Corporate Value



- > Message from the Executive Officer
- > Basic Approach and Systems for Sustainability Management

Sustainability Strategy

- > Sustainability Strategy
- > Targets and Results

Material Issues



Improving Fulfillment
in Work and
Corporate Dynamism



Supporting Healthy,
High-Quality Living



Ensuring Social
Safety and Security



Addressing
Climate Change



Using Limited
Resources Effectively

Activity Report

> Social



This section introduces Konica Minolta's initiatives to strengthen the capacity and diversity of its human resources, raise customer satisfaction, provide safe products, protect human rights, and ensure social responsibility across the supply chain.

Highly Relevant Material Issues



Improving Fulfillment
in Work and
Corporate Dynamism



Supporting Healthy,
High-Quality Living



Ensuring Social
Safety and Security

> Environment



This section introduces Konica Minolta's medium-term environmental strategy, initiatives to reduce environmental impact in business activities, and efforts to achieve "Carbon Minus" status.

Highly Relevant Material Issues



Addressing
Climate Change



Using Limited
Resources Effectively

> Governance



This section introduces Konica Minolta's corporate governance, compliance, risk management and information security measures.

> Evaluation by External Parties

> Stakeholder Engagement

> Participation in Initiative

> ESG data

> List of Policies

> Report Archives

> Reporting Policy

> External Assurance

> Guidelines Index

Message from the CEO



Sustainability at the heart of management

Since the 2003 management integration that created the Konica Minolta of today, sustainability has been at the heart of the Group's management. In 2020, when we envisioned what society would be like a decade later in 2030, we used this illustration to backcast and identify five material issues for the Group. Though there is an urgent need to restore our performance in the challenging business environment we face today, our management policy remains unchanged: we will aim to enhance our corporate value over the medium-to long-term by contributing to solving social issues through our business activities based on the aforementioned five material issues.

In fiscal 2022, we established new environmental targets for addressing climate change, one of our material issues. Even before that and in advance of our peers, we established a bold target of reaching Carbon Minus status by fiscal 2030 in fiscal 2017, and have even moved forward this target's achievement year to fiscal 2025. Carbon Minus refers to the state of using our businesses to help reduce CO₂ emitted not only by us but also by our customers and society as a whole across Scopes 1, 2 and 3, and the goal of thereby reaching negative total CO₂ emissions. We will achieve this, and simultaneously grow our earnings, through unprecedented work to pitch the emissions-reducing environmental value of our office, Professional Print, and other businesses. Also, we have set a target to achieve Net Zero CO₂ emissions across Scopes 1, 2, and 3 by fiscal 2050, and we are accelerating reductions in Konica Minolta product lifecycles. Separately, with regard to the material issue of using limited resources effectively, we have set a new target of reducing natural resource use in our products by 90% from fiscal 2019 levels by fiscal 2050, and have been taking measures to achieve the target.

One element not yet mentioned that is absolutely essential for sustainable corporate growth is human capital. Even the very best high-level strategies are nothing without the employees on the frontlines who actually implement them and make them work, and we are therefore committed to supporting and uplifting our talent to instill passion and pride in their work. Our global employee survey will absorb employee feedback for driving greater organizational capability, with a goal of achieving the industry average employee engagement score of 7.7 in fiscal 2025, and reaching the top 25% of industry peers in fiscal 2030. In order for our management to more profoundly commit to addressing climate change, and supporting and uplifting human capital, we have incorporated our CO₂ emissions reduction rate and employee engagement score in evaluations for medium-term stock bonuses(performance-linked) for Directors and Executive Officers as of fiscal 2023. This will help make our officers more mindful not only of ROE and other financial targets, but also building greater non-financial capital, and will lead to further enhancement of corporate value.

Achieving corporate growth through greater sustainability of society

We are entering a new Medium-term Business Plan period as of fiscal 2023. Fiscal 2023 marks the 150th anniversary of our company's founding and the 20th anniversary of our management integration. My aim is to make this year one that is remembered as a major turning point toward a new beginning for Konica Minolta. During this upcoming plan, we will utilize our material issues as guideposts for creating even more robust businesses that help to resolve society's issues, driving greater growth.

As we take these steps forward, I humbly ask for your ongoing support and understanding, whether shareholder, investor, customer, or employee.



Toshimitsu Taiko
Director, President and CEO,
Representative Executive Officer
Konica Minolta, Inc.
October 2023

Message from the Executive Officer



Since the Integration of Konica and Minolta's Management in 2003, Sustainability Has Constantly Been at Our Management's Core

For Konica Minolta, sustainability means contributing to the realization of a sustainable society by solving social and environmental issues through its business activities, while growing as a company. In our view, we can achieve sustainable growth by solving social and environmental issues through economically rational business. Since the management integration in 2003, we have constantly positioned sustainability at the core of our management, seeking growth while helping to solve social and environmental issues based on this concept. In 2020, we evaluated the impact that social and environmental issues have on the Company from an opportunity and risk perspective with any eye toward creating a sustainable society that should be achieved in ten years, in 2030. By back-casting from there, we identified five material issues. We have maintained this basic approach in the new Medium-term Business Plan, which starts from fiscal 2023, and are pursuing the realization of material issues according to the new value creation process.

Achieving Corporate Growth by Constantly Cycling Through the Value Creation Process

In the new Medium-term Business Plan, we will continue to deploy and cycle through the value creation process by positioning “co-creation with customers” at the core. Our business is designed to create value by backcasting based on future social issues. In this process, we especially focus on co-creation with customers through strengthening businesses. The source of our value creation is our close relationships with our customers and it increases the certainty that we remain profitable, and have a broad impact on society through those customers. We will provide even greater value to society by pursuing co-creation with our customers to addresses specific social and environmental issues, while further expanding business and achieving sustainable growth. Together with our customers, we seek to achieve a major social impact unachievable by our company alone by changing the industrial value chain focusing long-term on changes in end-users and society beyond our customers. To this end, we will make greater use of our diverse human capital than ever before and integrate our technologies across businesses.

Achieving Material Issues Through a New Value Creation Process

Under the new process for value creation, we will achieve the following five material issues through our business activities: “Improving fulfillment in work and corporate dynamism,” “Supporting healthy, high-quality living,” “Ensuring social safety and security,” “Addressing climate change,” and “Using limited resources effectively.”

For example, the vision of the Professional Print Business is to create a world where high value-added printed materials are efficiently used, and the environmental impact of printing is minimized by “shifting from analog to digital printing.” Our digital printing system, which includes decorative printing, is labor saving, requires no high-skill to use, and enables remote operation, providing a substantial reduction in work time, and leading to a cleaner working environment at the printing site and a more creative and dynamic workplace. In addition, we seek to transform the entire printed materials supply chain, including our brand owner clients who pursue the potential of printing and the logistics sites that deliver printed materials. In the new Medium-term Business Plan, with the reduction of environmental impact now a global trend, we have set the digitalization of label printing, packaging printing, and textile printing as our areas of focus in the industrial printing field. Working together with our target customers, who are printing companies and brand owners that are strongly conscious of sustainability, we will grow our business through digitalization and create significant social and environmental value by focusing on manufacturing products that satisfy customers and can be used by professionals.

In the Healthcare Business, our mission is to “enable convenient and advanced medical care by advancing familiar modalities and IT services.” We will contribute to “early diagnosis,” “lower medical care costs,” and “improved Quality of Life (QOL)” by advancing medical care through these two axes: 1) making the invisible visible through high-value-added imaging and enabling advanced medical care, and 2) supporting workflow reforms and greater operational efficiency in clinics using the power of medical IT.

This is how we will continue to be indispensable to our customers and society, we will maximize the use of our intangible assets, the source of our value creation, and co-create with our customers to not only contribute to society, but also to convert these assets into financial value and achieve business growth.

Toward Business Growth Through Environmental Activities

Konica Minolta has extensive experience accumulated over the years to help it achieve its long-term vision. To reduce the environmental impact that we are responsible for, such as product lifecycle CO₂ emissions, we conduct Green Factory activities to promote energy-saving, decarbonization, and conserving energy in our production processes, and Green Products activities to promote the environmental friendliness of our products, such as reducing their environmental impact when our customers use them. We also conduct Green Marketing activities that link this kind of low-environmental-impact performance to sales. The Company has set up a system where all functions, including development, production, and sales, are each responsible for reducing product lifecycle CO₂ emissions.

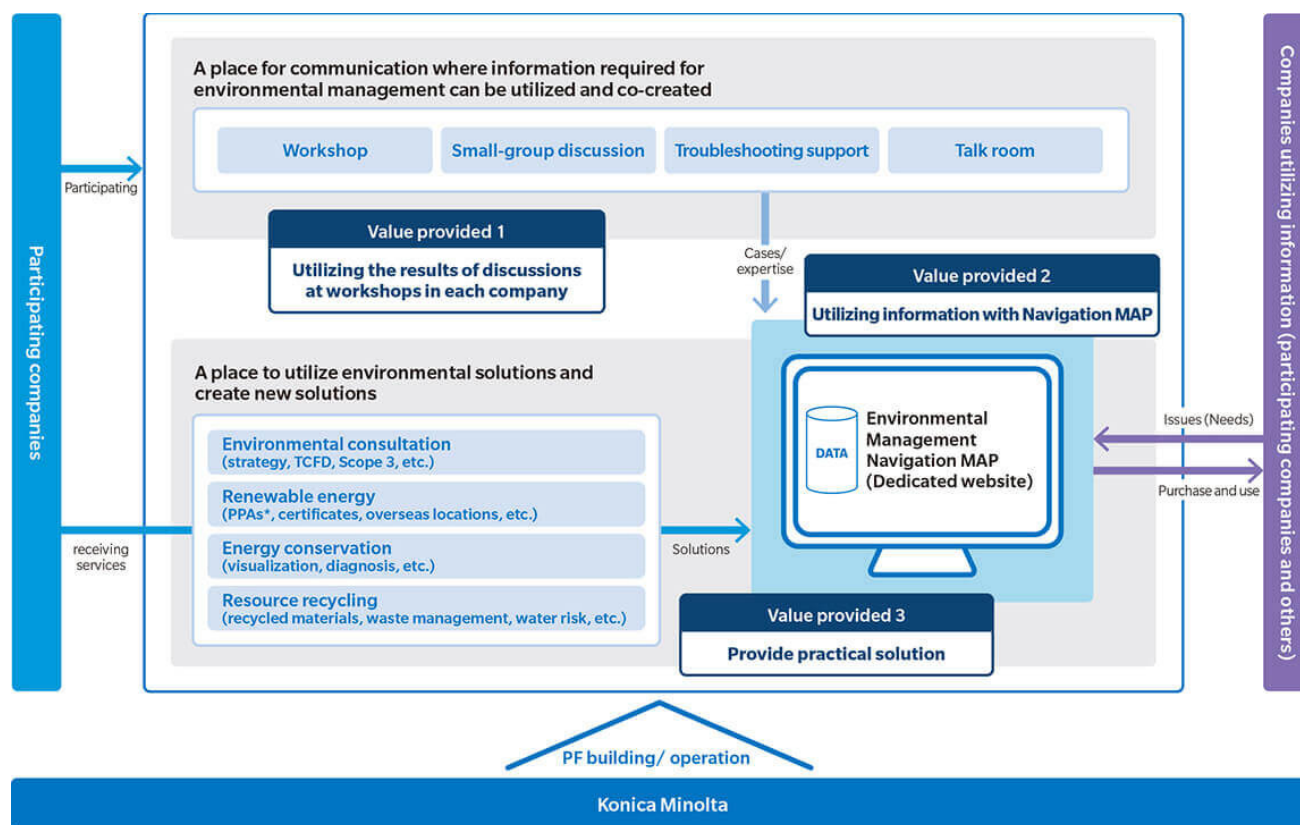
We have also long been committed to helping reduce CO₂ emissions and resources beyond the product lifecycle. The previously mentioned “shift from analog to digital printing” promoted by the Professional Print Business eliminates the need for plates used in each process compared to conventional analog printing, and greatly reduces the work of adjusting color and position. The result is that customers can significantly reduce their CO₂ emissions and resource use. This is a further contribution to printing on media other than paper. In the textile industry, where environmental concerns have recently become increasingly important, the switch from screen printing to digital printing eliminates the need for cleaning water and energy for fixing, which are mainly responsible for the environmental impact of the dyeing process.

We are also trying to create new environmental contributions in the Industry Business domain, an area that we seek to strengthen in our Medium-term Business Plan for 2025. A specific example is the introduction of inkjet systems at the manufacturing sites of our Inkjet (IJ) cComponent bBusiness. In the manufacturing process of electronic devices such as printed circuit boards and displays, special printing for flexible packaging, building materials, and solar cells, we seek to transform our customers’ workflows and achieve new manufacturing process by using inkjet printing technology. For example, in the solder resist manufacturing mask process for printed circuit boards, the inkjet method can greatly simplify the process compared to the conventional process using the photographic development method. Not only are we improving the work environment at our customer’s companies through process reduction, but we also expect a significant reduction in environmental impact through the elimination of VOCs (volatile organic compounds) and waste fluids.

Accelerating Decarbonization by Collaborating with Suppliers and Partners

One of our distinctive initiatives to reduce the environmental impact outside of the product lifecycle is our “Carbon Neutral Partner Activity” that supports the reduction of CO₂ emissions at suppliers. In the past, environmental and energy specialists had to visit procurement sites to provide support, which limited the number of companies that could be served to three or four per year. However, Konica Minolta has developed a system that automatically performs energy conservation diagnosis, which enables us to collaborate with about ten suppliers per year. Support for these CO₂ reductions will result in a spillover effect on environmental impact reductions outside of our own procurement, thereby contributing to reducing our environmental impact outside our scope of responsibility. In recent years, creating a more sustainable supply chain has become an important issue, so we are taking steps to decarbonize the entire supply chain by leveraging our long years of experience and increased efficiency through DX. The Environmental Digital Platform launched in fiscal 2020 is another of our priority initiatives. Launched as an ecosystem for reducing environmental impact, the Environmental Digital Platform was started with 16 companies, but the number of participating companies had expanded to 86 as of July 2023. The platform seeks to promote the creation of innovation through collaboration and co-creation among companies and to solve environmental issues on a global scale by raising operational efficiency through workshops and sharing knowledge on the themes of carbon neutrality and the circular economy and by pooling and capitalizing on knowledge from different industries.

Environmental Digital Platform



* PPA: Power Purchase Agreement

Aiming for Net Zero CO₂ and Zero Use of Natural Resources by 2050

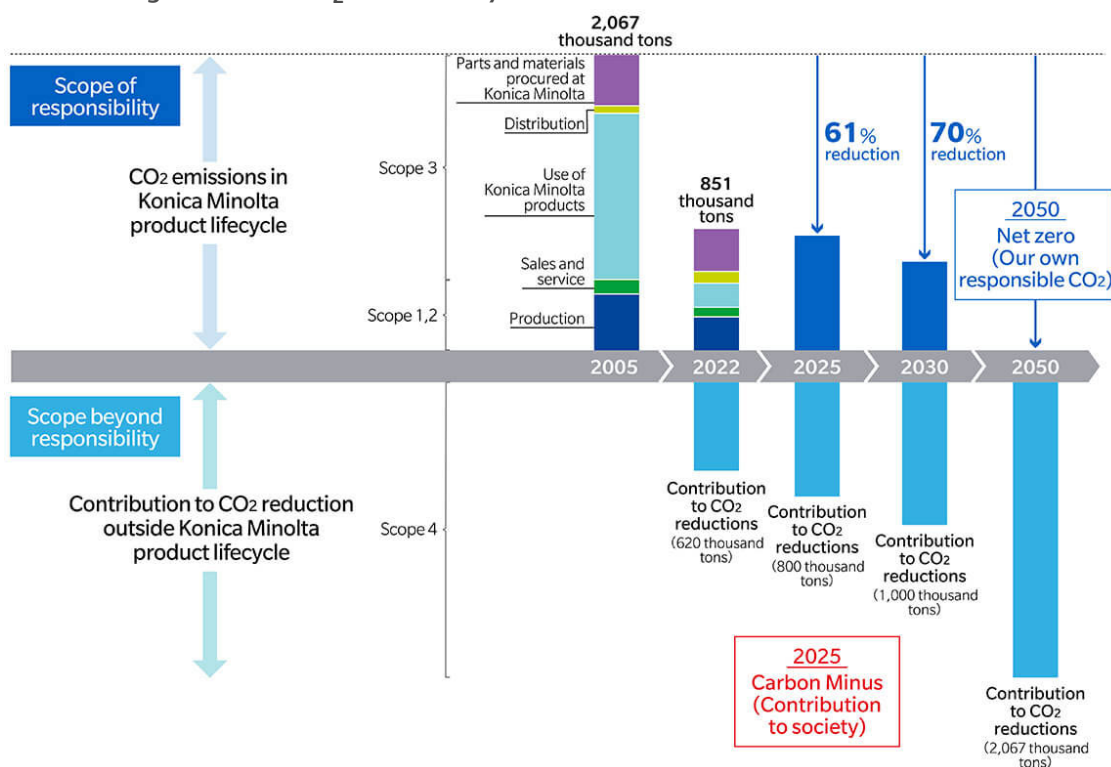
Based on the above initiatives, we have formulated Eco Vision 2050, our long-term environmental vision that includes the unique concept of Carbon Minus in our environmental management. Carbon Minus seeks to not only reduce the lifecycle environmental impact of products within the scope of our responsibility, but also to contribute to the reduction of environmental impact that we are not responsible for, and to create a state wherein this reduction exceeds the emissions generated by Konica Minolta, through collaboration with customers and suppliers. We believe that this approach and our initiatives embody the concept of environmental management of “growing our business by solving environmental challenges and also creating new businesses,” which has resulted in our non-financial activities being highly assessed by various stakeholders.

At the same time, the transition to a decarbonized and recycling-oriented society in the global market is occurring at a rapidly increasing pace, making it necessary to speed up our efforts a notch to maintain our non-financial activities at an effective level. Therefore, we have also re-examined our long-term environmental vision which consists of non-financial indicators, in our new Medium-term Business Plan.

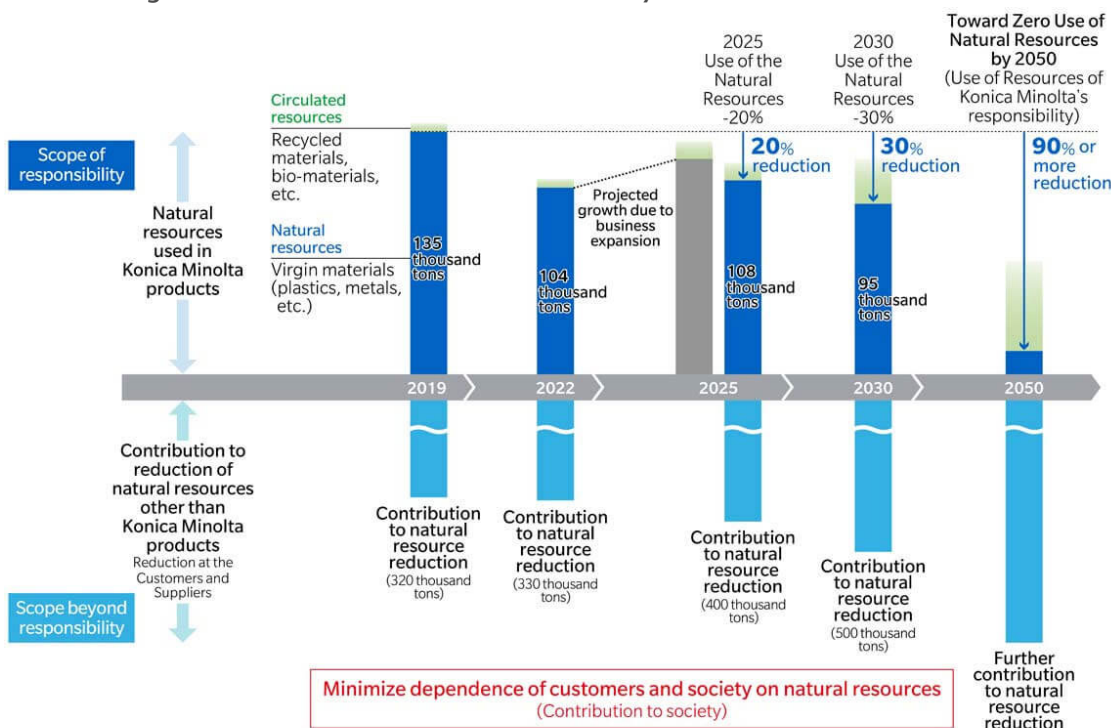
With regard to climate change, we had previously set the goal of reducing product lifecycle CO₂ emissions, which is within the scope of our responsibility, by 80% from the fiscal 2005 level by 2050, but we have now set the goal of achieving Net Zero emissions by 2050. This shows our intention to adapt our business to a decarbonized society. In addition, we have decided to push forward our goal of achieving Carbon Minus emissions from 2030 to 2025, wherein our contribution to CO₂ reductions outside the scope of our responsibility exceeds the emissions within the scope of our responsibility. With society shifting significantly to decarbonization, we seek to demonstrate the value of contributing to society through our business by showing that our contribution exceeds our own emissions, and that this will drive our business growth.

We have also set two long-term targets to reduce resource use for 2050, which are divided into, 1) resources within the scope of our responsibility and, 2) contribution to resource reductions. For resources within the scope of our responsibility, we will reduce our resource use and replace it with circulated resources to achieve zero use of natural resources. We will also maximize our contribution to reducing global resources in products other than our own. In parallel with a decarbonized society, we will create new businesses and achieve growth by building a recycling-oriented society.

Environmental New Target: Net Zero CO₂ emissions by 2050



Environmental New Target: Toward zero use of natural resources by 2050



*Natural resources: Resources that require new drilling or mining, such as crude oil or mineral resources, and are generally synonymous with depletable resources.

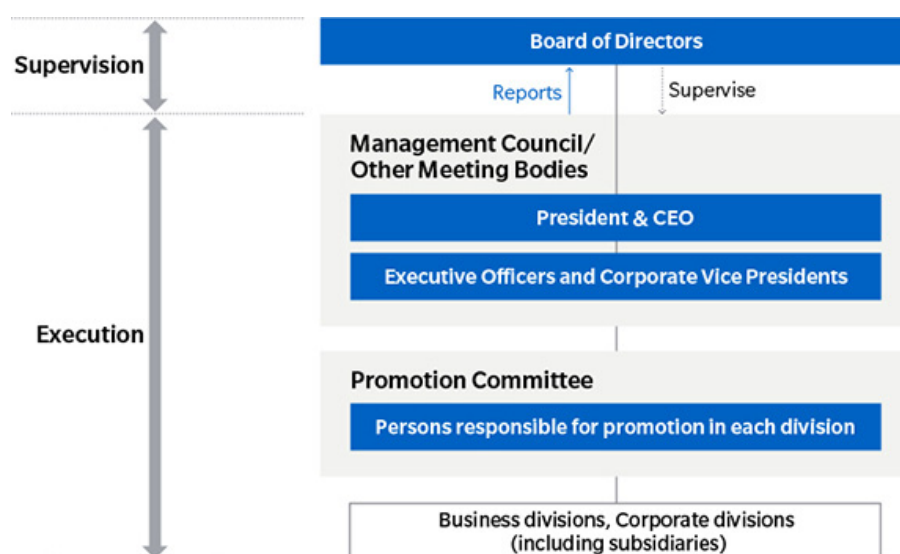
Further Advancing Our Sustainability Management

The President and CEO has overall responsibility and authority for the Company's sustainability management. As the person responsible for the Corporate Planning Headquarters, I promote the Group's sustainability management and report on the state of our progress at board meetings and receive advice and feedback.

I am proud of the leadership we have shown in our ongoing sustainability efforts, especially in the environmental field. On the other hand, I recognize that our sustainability initiatives do not necessarily generate profits, or they do generate profits, but they are invisible to investors and other stakeholders, and this is a major issue. Making progress towards resolving this issue is a major goal of our Medium-term Business Plan.

As General Manager of the Corporate Planning Headquarters, I will lead the Company to ensure that the new value creation process has spread to and is incorporated in each and every business and employee, and that the management team including the Board of Directors, fully supports these activities.

Sustainability Management System



October 2023

Noriyasu Kuzuhara

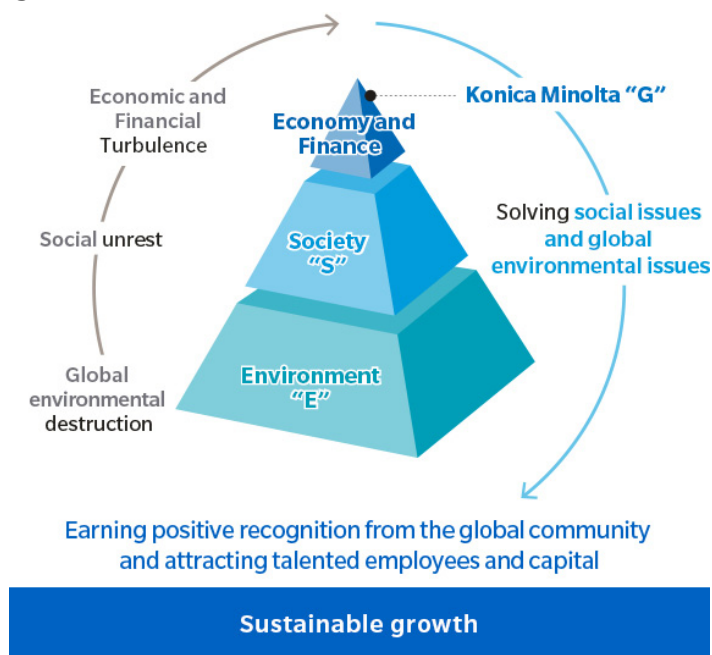
Director, Executive Vice President and Executive Officer

General Manager, Corporate Planning Headquarters

Basic Approach and Systems for Sustainability Management

Basic Approach: Grow the Business by Providing New Value That Helps Build a Sustainable Society

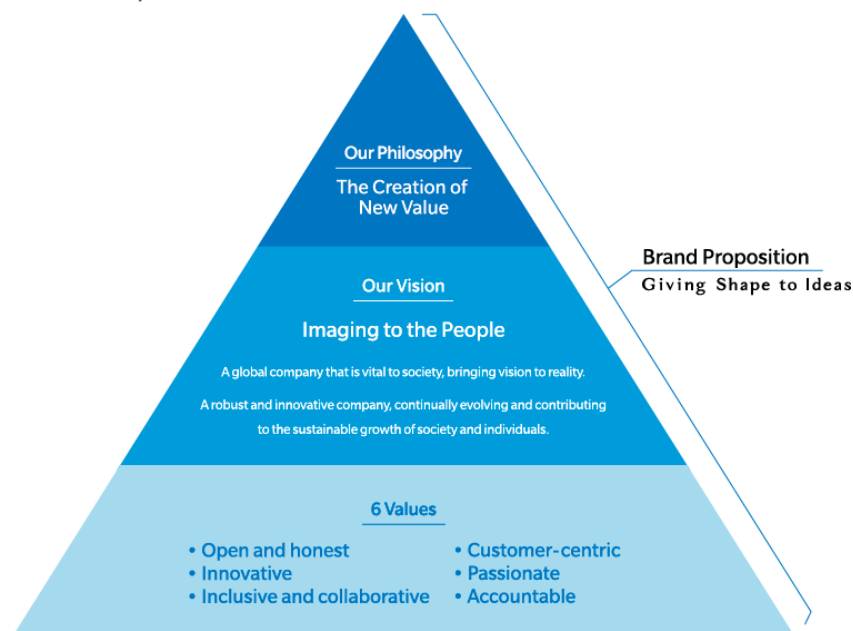
Konica Minolta has prospered together with society by continuing to provide the new value required in each era, living up to its philosophy, “The Creation of New Value.” Helping to build a sustainable society also promotes corporate sustainability. If greater social unrest is triggered by the destruction of the global environment, it will also impact economies and financial systems worldwide. However, by working to solve global environmental and social problems, Konica Minolta can minimize future risks while creating opportunities for growth.



Corporate Philosophy

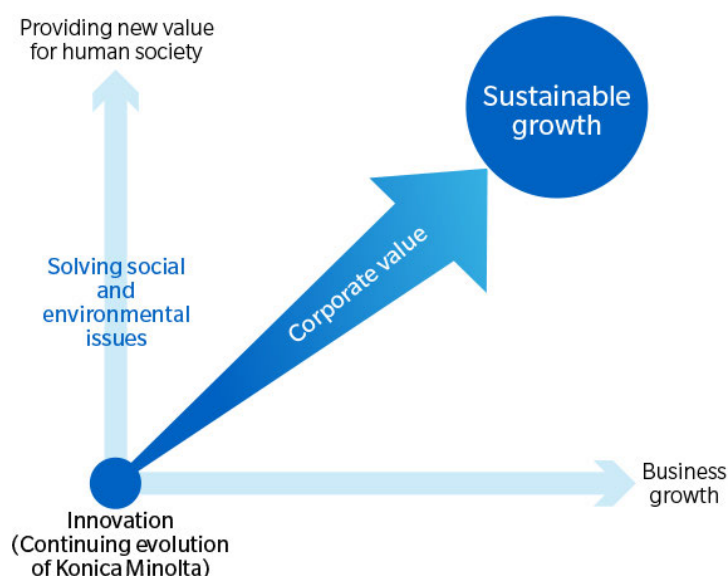
The Konica Minolta Philosophy consists of “Our Philosophy,” which has remained unchanged since the launch of Konica Minolta in 2003; “Our Vision,” which looks forward to 2030; the “6 Values” that guide its corporate culture as a wellspring of value creation, and Brand Proposition.

By continually evolving with its customers through innovation, Konica Minolta contributes to the realization of a sustainable society and continues to take on the challenge of both the growth of its business and the creation of new value for the global environment and all of human society.



Enhancing Corporate Value for Sustainable Growth

For a company to grow sustainably, it must continually provide new value for human society as well as achieve business growth. To further its own evolution, Konica Minolta is determined to generate innovation to help solve social and environmental issues. By linking this effort to financial performance, Konica Minolta seeks to enhance its corporate value and achieve sustainable growth.



Konica Minolta Group Charter of Corporate Behavior

Konica Minolta's efforts to achieve sustainability are based on the Konica Minolta Group Charter of Corporate Behavior and its basic approach to sustainability management. The Konica Minolta Group Guidance for the Charter of Corporate Behavior is shared globally and illustrates desirable behavior in each of the categories included in the Charter as a basis for understanding and practicing desired behavior.

› [Konica Minolta Group Charter of Corporate Behavior](#)

Respect for International Best Practices

The Konica Minolta Group respects and follows widely adopted international social responsibility initiatives, including the Global Compact initiated by the United Nations.

Sustainability-Related Principles, Charters, and Norms That Konica Minolta Observes

Universal Declaration of Human Rights

Sustainable Development Goals (SDGs)

United Nations Guiding Principles on Business and Human Rights

OECD Guidelines for Multinational Enterprises

ISO26000




Japan Business Federation (Nippon Keidanren) Charter of Corporate Behavior

■ Support for the Japan Business Federation Charter of Corporate Behavior

Konica Minolta, Inc., is a member of the Japan Business Federation (Nippon Keidanren) and respects its Charter of Corporate Behavior.

› [Japan Business Federation \(Nippon Keidanren\) Charter of Corporate Behavior](#) 

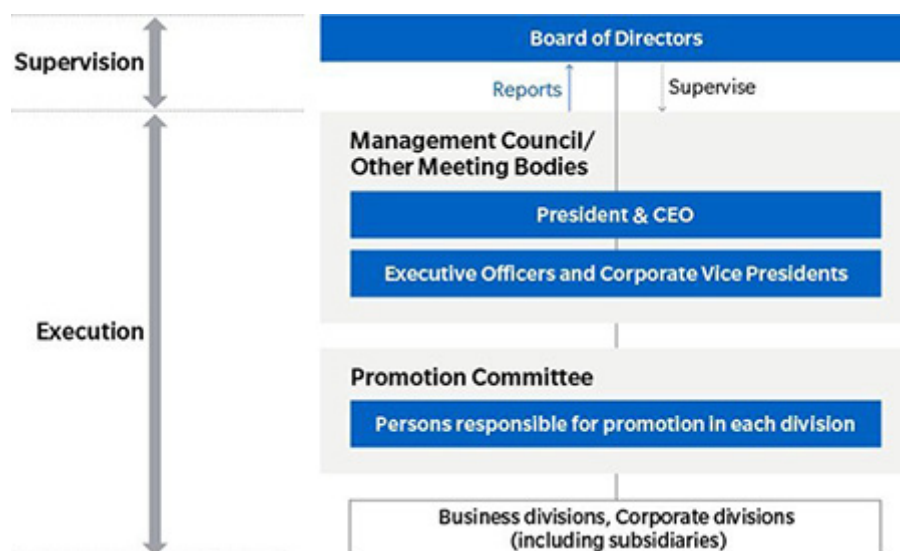
Sustainability-Related Organizations in Which Konica Minolta Participates or Is a Signatory

- United Nations Global Compact
 - › Responsible Business Alliance (RBA)
 - › Responsible Minerals Initiative (RMI)
- Japan Electronics and Information Technology Industries Association (JEITA), Responsible Minerals Trade Working Group, Conflict-Free Sourcing Working Group
- [RE100](#)
- [Task Force on Climate-related Financial Disclosures \(TCFD\)](#)
- [Japan Climate Initiative \(JCI\)](#)
- ["Challenge Zero," Japan Business Federation \(Nippon Keidanren\)](#)
- [Electrical and Electronics Industries' "Carbon Neutrality Action Plan"](#) 
- [Japan Partnership for Circular Economy \(J4CE\)](#) 
- [Initiative based on the Declaration of Biodiversity by Keidanren](#) 

Sustainability Management System

At Konica Minolta Inc., the President and CEO, who is a member of the Board of Directors, is tasked with the ultimate responsibility and authority for overall sustainability management and is also responsible for its effectiveness. The actual sustainability management activities for the entire Group are executed by each Group executive for corporate sustainability, under the President. Just like other key management issues, discussions and decisions on key sustainability issues are made at the Management Council and other meetings attended by the President, Executive Officers, and Corporate Vice Presidents. Each Group executive in charge creates a medium-term management plan for sustainability, which is summarized as a Company-wide business plan, and approved by the Board of Directors after discussion and approval by the Management Council and other convening bodies as a management plan for the entire Group. In the process of formulating the medium-term management plan, each executive in charge of sustainability, led by the executive in charge of corporate planning, reviews material issues by conducting a rolling review of the amount of change in risk, and revises it, as necessary. After deliberation and approval by the Management Council and other convening bodies, the Board of Directors approves it. Each executive in charge of sustainability has established a Promotion Committee as necessary as an organization to review and promote the medium-term sustainability plan. For example, the Company has established the "Environmental Promotion Committee" as an organization to review and promote the medium-term environmental plans. Chaired by the executive in charge of the environment, the council is comprised of persons responsible for promotion appointed by the heads of the business and corporate divisions. The Committee discusses the medium-term environmental plan and the annual plan, checks the quarterly progress, and reviews the Group's environmental issues.

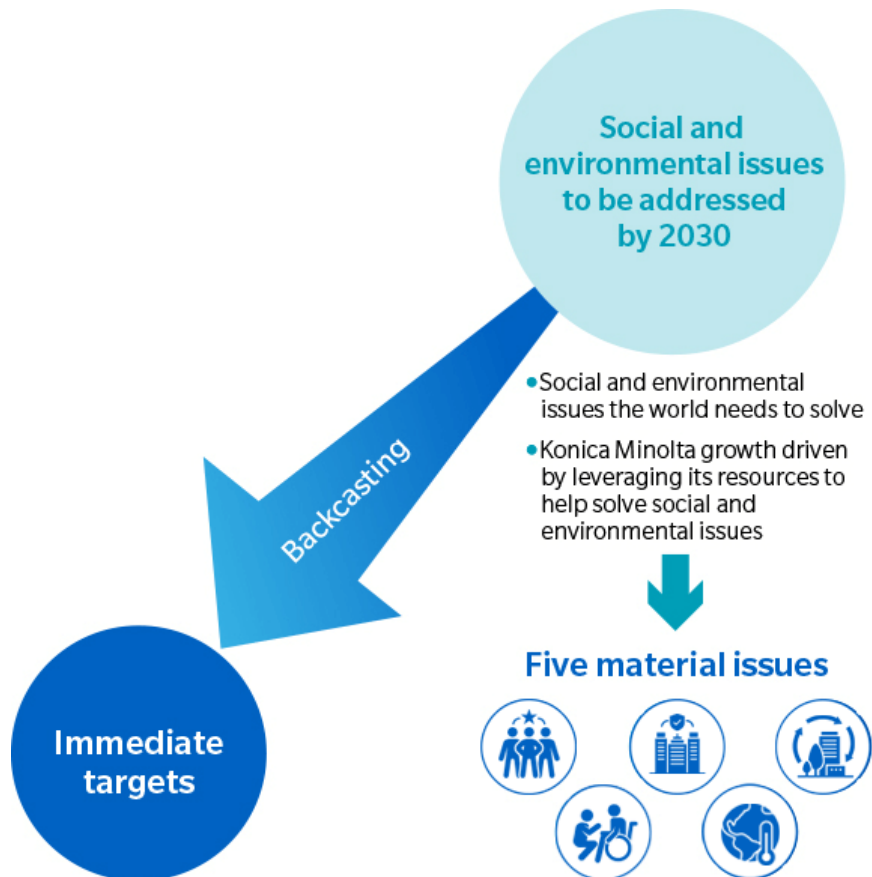
Since fiscal 2017, the company has been promoting sustainability as part of its management activities by including non-financial indicators such as ESG in the performance evaluation items of executive officers. However, from fiscal 2023, Konica Minolta will further promote sustainability initiatives as part of its management activities by linking the CO₂ emissions reduction rate and employee engagement score to medium-term stock compensation as important non-financial indicators.



Sustainability Strategy

Helping to Solve Social Issues through Businesses Focused on Five Material Issues

The future is difficult to predict in a complex world characterized by population growth, developed countries with declining birthrates and aging populations, rapid digital transformation, greater use of biotechnology, multipolarity in international relations, and a worsening climate crisis. Given the uncertain future the world faces, Konica Minolta has decided to identify the social and environmental issues it must help address. While reaffirming its corporate DNA, the company clarified issues to be addressed by 2030, and then backcasted from that year to determine the targets it must tackle immediately.



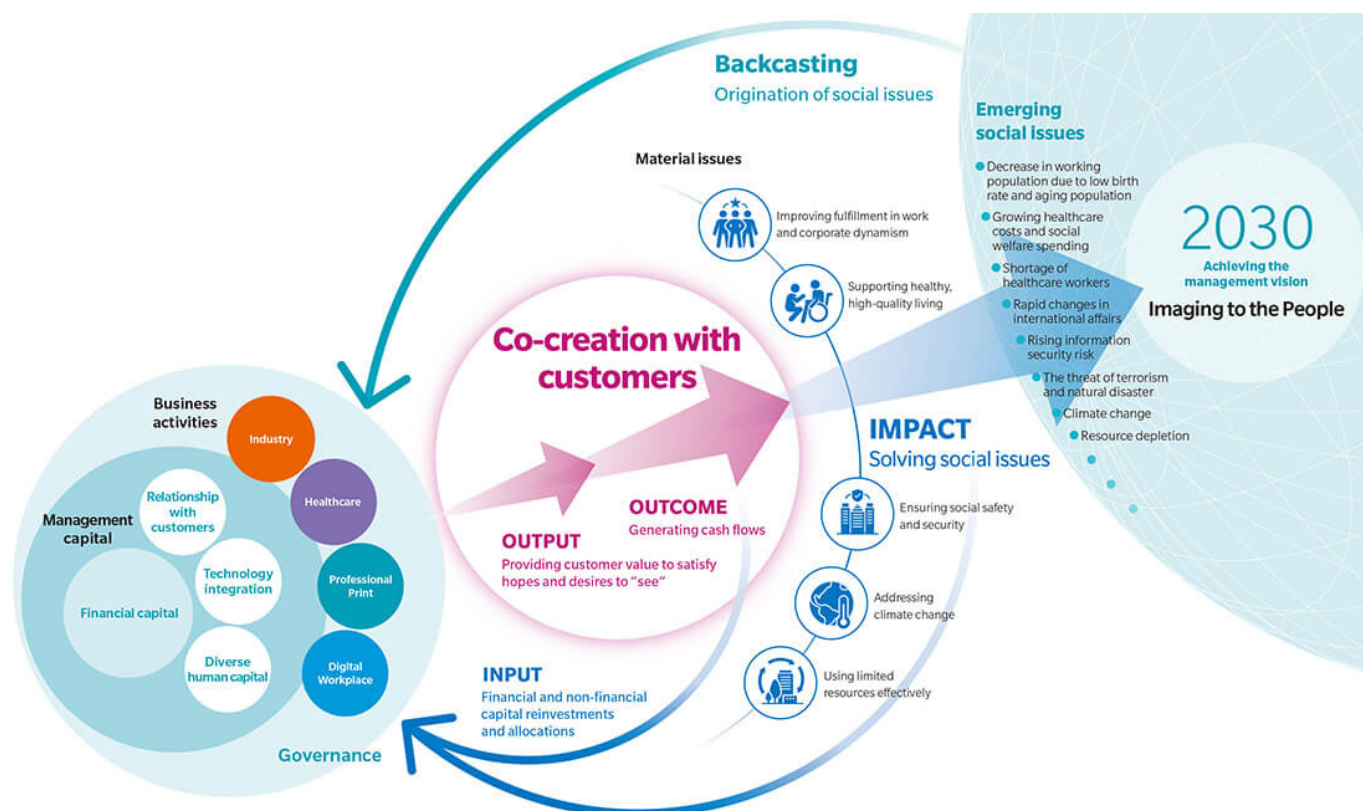
After gaining insight into social and environmental issues expected to be critical by 2030 by examining the UN Sustainable Development Goals (SDGs) and macro trends, Konica Minolta conducted a materiality analysis from the perspectives of social issues that must be solved and Konica Minolta's business growth. This led to the identification of five new material issues for Konica Minolta to tackle starting in 2020. For each of these issues, vision was also established, thereby clarifying Konica Minolta's medium and long-term directions for value creation.

Vision for 2030 and Five Material Issue

Material issue	Vision for 2030	Related SDGs
 <u>Improving fulfillment in work and corporate dynamism</u>	Increase labor productivity for corporate clients, society, and Konica Minolta. Make time for creativity, and promote workplaces where all individuals can thrive.	       
 <u>Supporting healthy, high-quality living</u>	Promote health and high quality of life of clients, society, and at Konica Minolta. Help individuals lead fulfilling lives.	  
 <u>Ensuring social safety and security</u>	Enhance safety and security in the workplaces of corporate clients and in society. Minimize risks posed by Konica Minolta products and services.	   
 <u>Addressing climate change</u>	Reduce CO ₂ emissions by Konica Minolta. Enhance CO ₂ emissions reduction at corporate clients and suppliers.	   
 <u>Using limited resources effectively</u>	Promote the effective use of resources at Konica Minolta, while also helping corporate clients and suppliers to achieve effective use.	     

These five material issues are linked to Konica Minolta's business growth strategy and are the basis for promoting each business activity. Konica Minolta will pursue initiatives that integrate business growth and social sustainability to create customer and social value that align with the value creation process.

Value Creation Process



Backcasting from social issues envisioned for 2030, Konica Minolta meets the client's needs through products and solutions from its four business. Not only by leveraging its strengths in intangible assets (customer relationships, fusion of technologies, and diverse human resources), Konica Minolta also seeks to create customer value through co-creation with customers. At the same time, the Company will continuously repeat this process of generating cash flow, which is the resulting economic value, and expand the impact of solutions for social and environmental issues.

Click below for details on the material issue identification process.

› [Material Issue Evaluation and Identification Process](#)

Sustainable Products that Create Customer Value and Social Value

Identifying products and solutions that solve social and environmental issues by material issue.

› [Products that contribute to each material issue](#)

Opportunities and Risks for Material Issues

The material issues and the related opportunities and risks as of 2022 are shown in the table below. Each of Konica Minolta's businesses works to create value with an awareness of material issues. For example, in the Industry Business, Konica Minolta is working to resolve the issue of passing on the skills of top workers by automating the inspection process, which relies on the skills of experienced workers at production sites, and to reduce the number of required workers, and contribute to greater quality of end products, and improve fulfillment in work and corporate dynamism. In the professional print business, the Company is helping to address climate change and use limited resources effectively by transforming its customers' supply chains to reduce transport, storage, disposal, and intermediate materials through production conducted with the right timing, quantities, and location. Furthermore, in the healthcare business, we contribute to "supporting healthy, high-quality living" by realizing precision medicine and early detection and diagnosis.

Sustainability risks are addressed as part of the management of material issues and risk management process.

	Social and environmental issues (Assumptions for 2030)	Opportunities	Risks
Improving fulfillment in work and corporate dynamism	Bridging the digital divide and eliminating the labor shortage Opportunity gaps for employment and creation	Transforming workflow and supply chain to help customers improve productivity and shift to more creative work	Declining employee diversity, independence, and ability to innovate due to stagnant efforts to create workplaces that promote diversity
Supporting healthy, high-quality living	Lower sustainability of medical and nursing care Restricted medical care access Reduced social security spending	Contributing to early diagnosis, lower medical costs, and higher QOL through imaging and medical IT services	
Ensuring social safety and security	Risk of workplace accidents due to aging facilities, etc.	Ensuring the safety and security of businesses and society through image monitoring Ensuring customer quality through advanced measurement and inspection	Damage to company or society due to serious accidents caused by products or services
Addressing climate change	Adaptation to changes associated with the transition to a carbon-neutral world Impact of climate change on society, the economy, and ecosystem	Reducing the impact of energy and CO ₂ on client companies and society by transforming the workflow and supply chain	Declining competitiveness due to delayed transition to sustainable energy Delayed business restructuring to accommodate the paperless trend Supply chain disruptions due to abnormal weather
Using limited resources effectively	Adaptation to changes associated with the transition to a circular economy Impact of resource depletion on society, the economy, and ecosystem	Reducing resource use and improving resource efficiency at client companies and in society by transforming the workflow and supply chain	Declining competitiveness due to delayed switching to sustainable raw materials Increasing material costs due to raw material shortages and supply instability

Material Issue Evaluation and Identification Process

Updating the Material Issues

The future is difficult to predict in a complex world characterized by population growth, developed countries with declining birthrates and aging populations, rapid digital transformation, greater use of biotechnology, multipolarity in international relations, and a worsening climate crisis. Given the uncertainty the world faces, Konica Minolta has decided to identify the social and environmental issues it must help address. While reaffirming its corporate DNA, the company clarified the issues to be addressed by 2030, and then backcasted from that year to determine the targets it must tackle immediately.

Konica Minolta believes that a sustainable and decentralized society with greater individual autonomy is on the horizon. When it arrives, organizations and individuals will be creating all kinds of value utilizing an explosively expanding amount of data. Along with greater prosperity based on individualization and diversification, countries will be able to solve many pressing social and environmental issues. Advanced technology will be required both for greater prosperity and to solve issues.

After gaining insight into social and environmental issues expected to be critical by 2030 by examining the UN Sustainable Development Goals (SDGs), macro trends and various stakeholder requirements, Konica Minolta conducted a materiality analysis from the perspectives of social issues that must be solved and Konica Minolta's business growth. This led to the identification of five new material issues for Konica Minolta to tackle. By addressing these five material issues, Konica Minolta will support the human quest for purpose in life and contribute to global sustainability.

Evaluation and Identification Process

Step 1. Issue Awareness

First, Konica Minolta made a list of diverse environmental, social, and economic issues by referencing international frameworks and guidelines such as the GRI Standards and SDGs, as well as macro trends in each specialized field.

The list was prepared by referring to the Wedding Cake Model of the SDGs. This structural model was developed by the Stockholm Resilience Center* as a way to understand the SDGs, and it helps to clarify the relationships among the SDGs. With this model, the 17 goals are divided into three layered categories, like the tiers of a wedding cake. These tiers from bottom to top are biosphere, society and economy. The model illustrates that achieving the biosphere and society-related SDGs can help to build a sustainable economy and society, upon which companies can help build the foundation for a sustainable economy. With this relationship in mind, Konica Minolta identified the issues of greatest importance to its business.

During this identification process, Konica Minolta also considered social and environmental changes, regulatory and policy trends, and stakeholder requirements, all in light of the company's current and potential business areas as well as the corresponding supply and value chains.

※ [Stockholm Resilience Center](#) 

Frameworks and Guidelines referred to:

- GRI Standards
- Sustainability Accounting Standards Board (SASB)
- ISO 26000
- Sustainable Development Goals (SDGs)
- The Ten Principles of the UN Global Compact
- OECD Guidelines for Multinational Enterprises
- Task Force on Climate-related Financial Disclosure (TCFD)
- Macro trends in various climate change and other specialized fields (the Paris Agreement, the European circular economy, etc.)
- International Integrated Reporting Council (IIRC), International Integrated Reporting Framework
- Stockholm Resilience Center's Wedding Cake Model for the SDGs

Evaluations, dialogues and requirements for Konica Minolta from stakeholders

- Dialogue with investors and other stakeholders at IR briefings, business briefings, etc.
- Dialogue with CDP and other international NGOs and NPOs
- Items requested in various ESG surveys
- [Dialogue with customers on Green Marketing activities](#)
- [Dialogue with companies participating in the Environmental Digital Platform](#)
- [Dialogue with investors and other stakeholders at the TCFD Consortium Roundtable](#)

Step 2. Issue Identification and Prioritization

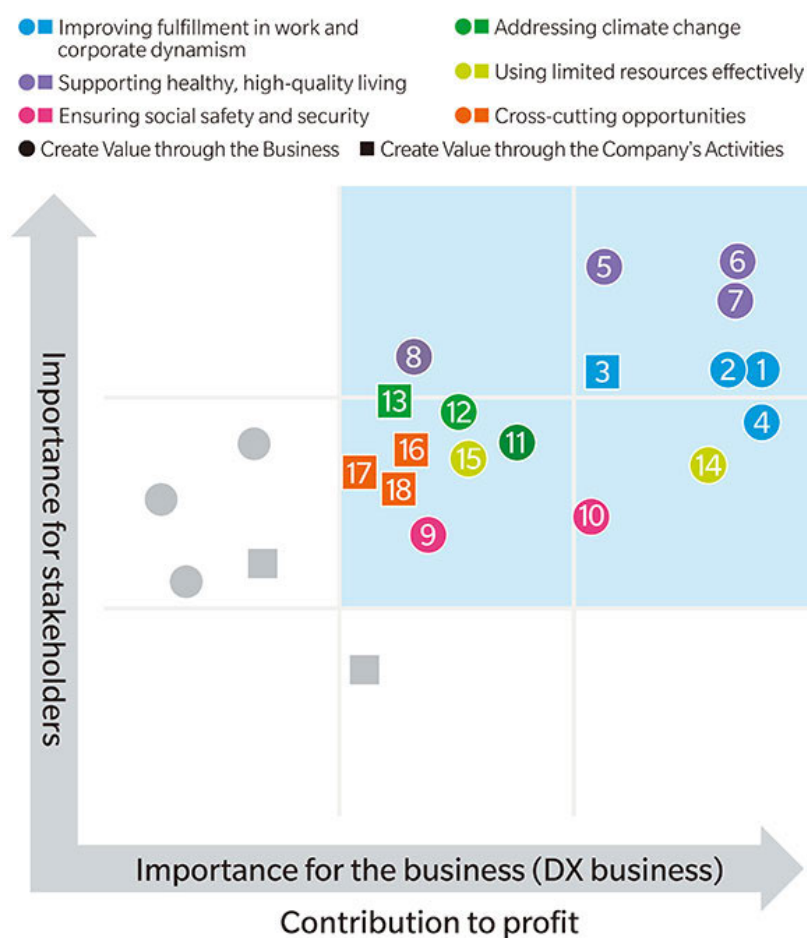
From the initial list of issues, Konica Minolta identified fields that are particularly relevant to its business, and then conducted a prioritization process.

Konica Minolta's materiality analysis is unique in that it assesses both risks and opportunities. By evaluating both these aspects, the company aims to fulfill expectations for enterprises to tackle the SDGs. The expectation is that companies treat social and environmental issues as opportunities to grow their businesses, while helping to solve the issues through their business activities.

In performing the materiality analysis, Konica Minolta evaluated and prioritized the issues based on the two perspectives of importance to stakeholders and importance to the business.

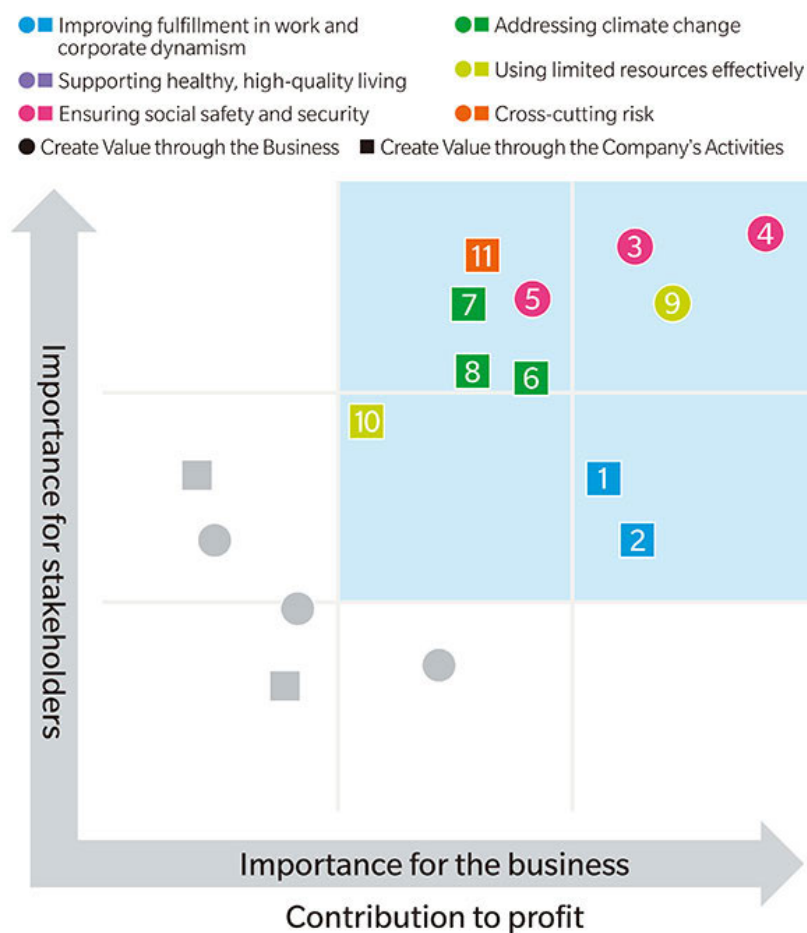
Customers, business partners, shareholders, investors, and employees were defined as part of the analysis. Importance to stakeholders was quantified by scoring each issue from one to five. To analyze financial impact and importance to the business, each issue was similarly scored based on the amount of potential earnings for opportunity issues, and the amount of potential loss for risk issues.

[Opportunities for Each Material Issue]



Improving fulfillment in work and corporate dynamism	① Improving productivity of customer organizations and increasing time for creativity by providing work-style solutions using digital technology
	② Improving productivity and enhancing workplace motivation in the supply chains of customer organizations by providing products and services that transform the workflows of frontline workers
	③ Realizing the full potential of human resources, who are the source of new value, and creating workplaces organizations where individuals thrive
	④ Eliminating labor shortages and strengthening cyber security by eliminating the gap in IT access faced by small and medium enterprises
Supporting healthy, high-quality living	⑤ Transforming caregiver workflow with imaging IoT-based systems and onsite consulting services, and creating a labor pool in the caregiving industry
	⑥ Promoting disease prevention and early detection by providing high value-added medical services, and reducing medical expenses
	⑦ Streamlining drug development by promoting innovation in drug discovery processes utilizing genetic testing technology
	⑧ Improving healthcare accessibility in developing countries
Ensuring social safety and security	⑨ Improving safety and security at client sites and for society by providing products and services such as gas leak monitoring services
	⑩ Supporting the quality produced by corporate clients by offering products and services that facilitate high-tech measurement and inspection
Addressing climate change	⑪ Reducing energy consumption and CO ₂ emissions of customers and society by providing manufacturing process solutions
	⑫ Promoting a paperless and ubiquitous computing society by providing solutions for work style reform
	⑬ Contributing to drastic CO ₂ emissions and cost reductions by helping business partners to reduce their environmental impact using DX technology
Using limited resources effectively	⑭ Constructing efficient supply chains for client companies using on-demand production
	⑮ Reducing workflow and supply chain loss for client companies
Cross-cutting opportunities	⑯ Fostering a corporate culture that encourages role models for the generation of SDG innovation
	⑰ Improving ESG relations with investors
	⑱ Enhancing customer relations by making the most of ESG initiatives

[Risks for Each Material Issue]



Improving fulfillment in work and corporate dynamism	1 Mismatches between employee skills and their work due to rapid changes in systems and environments
	2 Declines in employee diversity, independence, and ability to innovate due to stagnated efforts to create workplaces that promote diversity
Ensuring social safety and security	3 Loss of public confidence in the event of a product or service-related accident that results in death or injury to a user
	4 Loss of public confidence in the event of a serious information security accident related to a product or service, which results in a personal data leak or privacy infringement
	5 Impacts on operations and product shipments due to the use of substances that pollute ecosystems and pose human health hazards
Addressing climate change	6 Skyrocketing energy prices, increased material costs due to raw material shortages, and supply instability
	7 Greater use of paperless systems due to skyrocketing energy prices and raw material shortages
	8 Supply chain disruptions due to abnormal weather
Using limited resources effectively	9 Decline in competitiveness due to delayed participation in the circular economy
	10 Production or shipment delays due to water-related risks and water resource depletion
Cross-cutting risk	11 Decline in public confidence due to lack of governance at business partners

Step 3. Results Confirmation and Issue Identification

As an organization that promotes the Group's Medium-term Sustainability Plan, the committee confirmed the appropriateness of the material issue evaluation process and the prioritized issues. The selected material issues were then discussed by senior management and approved by the Board of Directors. The process used to identify material issues is reviewed as necessary during the development of the Medium-Term Business Plan, which guarantees the validity of the issues selected and the corresponding plan.

Sustainability Targets and Results

Konica Minolta has set indicators in line with its material issues and uses them to manage progress.

Initiatives from FY2020 to FY2025

In 2030, Konica Minolta defined the social and environmental issues it should address, and used backcasting to identify five material issues (priority issues) to tackle in 2020: Improving fulfillment in work and corporate dynamism; Supporting healthy, high-quality living; Ensuring social safety and security; Addressing climate change; and Using limited resources effectively. For each of these issues, visions for 2030 were also established, thereby clarifying Konica Minolta's medium and long-term directions for value creation.

Konica Minolta reports on the targets and action plans to create social and environmental value and economic value in line with these five material issues were also formulated.

Click image to jump to the page

List of Targets and Results

Sustainability Targets and Progress FY2020-FY2025

Status of achievements (self assessment) (○: 100% or more, △: 80% or more, ×: less than 80%)

Improving Fulfillment in Work and Corporate Dynamism											
Aims for 2030: Increase labor productivity for corporate clients, security, and service quality. Make time for creativity, and promote workplaces where all individuals can thrive											
Theme	Indicators	FY2020		FY2021		FY2022		FY2023	FY2024	FY2025	FY2026 Target
		Results	Targets	Results	Targets	Results	Targets	Targets	Targets	Targets	Assessment
Increasing customer productivity and making time for creativity											
Creating an organization that drives real potential value for individuals can thrive	Strategic assignments for manager candidates (%) ¹⁾	70	70	66	100	100	100				○
	Number of 34 leaders ²⁾ (people)	0	0	24	25	24	40				×
	Empowering 34 human resources ³⁾	500				814		1000			×
	Employee engagement score ⁴⁾	GES designing	GES designing	6.4	GES implementation	6.4	10% score increase or GES compared to FY2021			7.7 (Industry average)	△
	Equity ⁵⁾ No.1			7.1 (24.1)		7.4 (24.1)				8.0 (1.0) or more	×
	Fraction of opinion ⁶⁾ No.1			6.9 (24.1)		7.2 (24.1)				8.0 (1.0) or more	×
	Percentage (%) of management positions ⁷⁾ held by women ⁸⁾	7.0		8.1		8.5				12% or more	△
Percentage of women getting new graduate recruits (%) ⁹⁾											
		100	100% or more	95	100% or more	95	Maintain 100% or more	Maintain 100% or more			○

Notes: Target scope: Konica Minolta, Inc. (hereinafter, the scope of targets of this report) is in the scope of the Group Companies and the data for Konica Minolta, Inc. is presented in bold.
¹⁾ Percentage of employees assigned to strategic business units.
²⁾ 34 leaders: leaders who can meet customer needs with digital solutions.
³⁾ 34 leaders: leaders who can meet customer needs with digital solutions.
⁴⁾ GES score: The average score of responses on a scale of 1 to 5 to the survey questions in the Global Employee Survey.
⁵⁾ Human resources with the technology to produce imaging data and various sensor information leveraging AI technologies will be deep learning to support decision making and assessment of various conditions.
⁶⁾ Engagement: Question applicable to FY2021 is "How 'satisfaction' of the long-term vision and strategies?" and "What encourages them to thrive?" Question applicable to FY2022 is "How 'engagement' 'loyalty' and 'satisfaction'?"
⁷⁾ Number of opinion: Applicable question: "Do you agree/ disagree to your department/ team?"
⁸⁾ Management positions: referred to as "Manager" in Konica Minolta, Inc.
⁹⁾ Time of completion: As of April 1 of the following fiscal year. ¹⁰⁾ Target value as of April 1, 2025.

List of Targets and Results

Sustainability Targets and Progress FY2020-FY2025

Status of achievements (self-assessment) ○: 100% or more, △: 80% or more, <: less than 80%

Improving Fulfillment in Work and Corporate Dynamism

Vision for 2030: Increase labor productivity for corporate clients, society, and Konica Minolta. Make time for creativity, and promote workplaces where all individuals can thrive.

Themes		Indicators	FY2020		FY2021		FY2022		FY2023	FY2024	FY2025	FY2030	FY2022 Target Achievement Status
			Results	Targets	Results	Targets	Results	Targets	Targets	Targets	Targets	Targets	
Increasing customer productivity and making time for creativity													
Creating an organization that draws out potential talent so that individuals can shine	Social and environmental value	Strategic assignments for manager candidates (No.) ^{a1}	70	70	98	100	100	100					○
		Number of DX leaders ^{a2} trained (people)	-	-	24	27	24	40					x
		Imaging-IoT human resources ^{a3}	500	-	-	-	814	-	1000		50% or more engineers in each business unit	-	-
		GES score ^{a4}	GES designing	GES designing	6.4 (GES implementation Problem identification and goal setting)	GES implementation Problem identification and goal setting	10% score increase in GES compared to FY2021	6.6	-	-	7.7 (Industry average)	Top 25% of the industry	x
		Equity ^{a5 Note 1}	-	-	7.1 (6.1)	-	7.4 (6.1)	-	-	-	8.0 (7.0) or more	-	-
		Freedom of opinion ^{a6 Note 1}	-	-	6.9 (6.5)	-	7.2 (6.6)	-	-	-	8.0 (7.5) or more	-	-
		Percentage (%) of management positions ^{a7} held by women ^{a8}	7.2	-	9.1	8	10% or more	11% or more	-	-	13% or more	18% or more ^{a10}	△
		Percentage of women among new graduate recruits (No.) ^{a9}	23	30% or more	35	30% or more	37	Maintain 30% or more	Maintain 30% or more	-	-	-	○

Note: Target score: Konica Minolta, Inc. However, the scope of targets of the GES score ("4") is the Konica Minolta Group (worldwide) and the data for Konica Minolta, Inc. in parentheses in Note 1.

¹ Percentage of employees assigned to strategic leadership positions

² DX leader: Leaders who can meet customer needs with digital solutions

³ Human resources with the technology to analyze imaging data and various sensor information leveraging AI technologies such as deep learning to support decision-making and assessments at various workites

⁴ GES score: The average score of responses, on a scale of 0 to 10, to relevant questions in the Global Employee Survey

⁵ Engagement: Question applicable in FY2021. Is there "personalization of the long-term vision and strategies," "creation of an environment where all individuals can thrive," and "that encourages them to thrive"? Question applicable in FY2022: Is there "engagement," "loyalty," and "satisfaction"?

⁶ Equity: Applicable question: Are "people of all backgrounds treated fairly in my department/team"?

⁷ Freedom of opinion: Applicable question, "Is your opinion respected in my department/team"?

⁸ Management positions referred to as "Exempt" in Konica Minolta, Inc.

⁹ Time of completion: As of April 1 of the following fiscal year.

¹⁰ Target value as of April 1, 2030.

Supporting Healthy, High-Quality Living

Vision for 2030: Promote health and high quality of life at corporate clients, in society, and Konica Minolta. Help individuals lead fulfilling lives.

Themes		Indicators	FY2020		FY2021		FY2022		FY2023	FY2024	FY2025	FY2030	FY2022 Target Achievement Status
			Results	Targets	Results	Targets	Results	Targets	Targets	Targets	Targets	Targets	
Promote Health and High Quality of Life at Corporate Clients													
Building Safe and Comfortable Workplaces Where Employees Feel Motivated	Improve organizational health	Rate of reduction in Level 4 workplaces ¹ (No.) ^{2,3}	38	15	69	30	38	50					x
		Percentage of workplaces where stress levels exceed the appropriate range ⁴	-	-	-	-	13.3%	-	-	-	9.3%	-	-
		Percentage moving to higher level of organizational health (No.) ⁵	-	-	5.1	5	15	10					○
		Average score of the organizational health survey (10-point scale) results	-	-	-	-	6.1	-	-	-	7.7	-	-
	Social and environmental value	Number of employees who are at high risk physically (employees with the highest health risks) ^{6,7}	24% increase	4% decrease	30% decrease	8% decrease	6% decrease	12% decrease	-	-	-	-	x
		Presenteeism: Percentage of employees with moderate or greater impaired work function due to health problems ⁸	-	-	-	-	18.2%	-	-	-	15.1%	-	-
		Number of leave-of-absence days taken due to mental health problems ^{9,10,11}	15.1% increase	3% decrease	10.1% increase	7% decrease	36.8% increase	13% decrease	-	-	-	-	x
		Absenteeism ¹²	-	-	-	-	-	-	-	-	17.0% decrease	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-

Note: Target score: Konica Minolta, Inc. However, the scope of targets and results of employees who are at high risk physically (employees) has expanded to include Group employees in Japan from fiscal 2021.

Note 2: As a result of a change to the calculation method in fiscal 2021, results have been revised retroactively to fiscal 2020 figures.

¹ Level 4 workplaces: Workplaces deemed to have the highest level of stress based on the results of a four-level stress check

² Rate of change from fiscal 2019 results

³ Workplaces with stress levels that exceed the appropriate range: Workplaces with a total health risk of 120 or higher in stress check (A total health risk of 100 is the national average)

⁴ Presenteeism: A condition in which an employee is present at work, but their performance is declining due to some physical disorder. It is evaluated using the Work Functioning Impairment Scale (WFIS), a survey developed at the University of Occupational and Environmental Health, Japan to measure the degree of impaired work function due to health problems. In Japan, a score of 21 or higher on this survey is said to indicate moderate or greater impaired work function.

⁵ Absenteeism: Condition of not being able to come to work due to illness or poor health

⁶ Percentage of reduction from FY2022 results

⁷ Person on leave: Employee on leave (including unscheduled absence and temporary retirement). The number of days of leave of absence does not include fixed days off, paid vacations, and absence due to work-related injury.

Ensuring Social Safety and Security

Vision for 2030: Enhance safety and security in the workplaces of corporate clients and in society. Minimize risks posed by Konica Minolta products and services.

Themes		Indicators	FY2020		FY2021		FY2022		FY2023	FY2024	FY2025	FY2030	FY2022 Target Achievement Status
			Results	Targets	Results	Targets	Results	Targets	Targets	Targets	Targets	Targets	
Provide Safety and Security in the Work and Daily Lives of Corporate Clients													
Minimizing Risks Related to the Safety and Security of Konica Minolta Products and Services	Eliminate substances that affect health	Social and environmental value	Number of serious accidents ¹⁾ caused by chemical substances	0	0	0	0	0	0	0	0	0	○
		Economic value	Serious business losses due to chemical substance management (JPY)	0	0	0	0	0	0	0	0	0	○
	Reinforce efforts to ensure health when products and services are used	Social and environmental value	Number of serious product-related accidents ¹⁾	0	0	0	0	0	0	0	0	0	○
		Economic value	Major business losses related to product safety (JPY)	0	0	0	0	0	0	0	0	0	○
	Completely eliminate serious information security incidents	Social and environmental value	Number of serious information security incidents ¹⁾	0	0	0	0	0	0	0	0	0	○
		Economic value	Major business losses related to information security (JPY)	0	0	0	0	0	0	0	0	0	○

¹ Serious accident: A case that causes serious harm to the product user's life and/or body and cases that cause serious and significant impact on the business of the product user

² Serious product-related accidents refer to those accidents that cause serious harm to the product user's life and/or body and accidents that cause serious damage to assets other than the product, to assets other than the product

³ Serious security incidents refer to those security incidents that cause serious and significant harm to the product user's business

Addressing Climate Change

Vision for 2030: Reduce CO2 emissions by Konica Minolta. Enhance CO2 emissions reduction at corporate clients and suppliers.

Themes	Indicators	FY2020		FY2021		FY2022		FY2023	FY2024	FY2025	FY2030	FY2050	FY2022 Target Achievement Status
		Results	Targets	Results	Targets	Results	Targets	Targets	Targets	Targets	Targets	Targets	
Reducing Energy Usage and CO ₂ Emissions by Transforming Customer Processes	Social and environmental value	578	590	585	700	624	640	630	720	800	1,000	2,060	△
	Economic value	51	56	56	66	76	71	89	97	100	-	-	○
CO ₂ emissions over the product lifecycle ^{1,2}	Social and environmental value	821	-	790	-	850	970	-	-	800	650	0 (net zero)	○
	Economic value	60	-	61	-	58	57	-	-	61	70	100	○
Reduction of CO ₂ emissions (thousand tons)	Social and environmental value	4	4	12	10	18	18	6	13	20	-	-	○
	Economic value	79	89	2,700	2,100	450	350	280	560	840	-	-	○
Reduction of environmental impact of Konica Minolta production sites ³	Social and environmental value	7	6	10	12	20	20	3	8	34	-	-	○
	Economic value	6.5	-	8.5	-	12.3	10	-	-	-	50	100	○
Energy Usage and CO ₂ Emissions Reduction Related to Konica Minolta Sites, Business Partners, Products and Services	Social and environmental value	14	16	25	28	53	50	22	47	78	-	-	○
	Economic value	676	770	597	690	777	690	-	-	840	-	-	○
Reduction of environmental impact through the use/procurement of Konica Minolta products and services	Social and environmental value	1.1	1.0	2.8	2.1	6.4	5.0	1.8	3.5	4.1	-	-	○
	Economic value	16	15	43	32	103	77	42	81	94	-	-	○
Reduction of environmental impact at suppliers using DX ⁴	Social and environmental value	285	320	303	-	318	408	372	-	-	-	-	△
	Economic value	212	160	153	-	230	181	257	-	-	-	-	○
Reinforcing Engagement with Customers Using DX	Social and environmental value	692	700	892	-	989	1,000	1,100	-	-	-	-	△
	Economic value	-	-	-	-	-	-	-	-	-	-	-	-

Note: Targets and results have been revised retrospectively to fiscal 2020 figures as the method of calculating the effects of measures was changed in fiscal 2021.

¹ Contribution to CO₂ reduction: Volume of CO₂ emissions reduced at customers, business partners and the broader society

² Cumulative reductions for each fiscal year from FY2020 - FY2022 - FY2023 - FY2025: Total reduction amount for each fiscal year due to the measures implemented from the first fiscal year of each period to the relevant fiscal year

³ Green Products: Name changed from Sustainable Solution in FY2023. Promotes the solving of social and environmental issues by defining and certifying solutions that help to solve social and environmental issues and expand sales

⁴ Enhanced customer relations: Number of business opportunities gained by providing customers with environment-related technologies and know-how

⁵ Sales contribution: Total amount of sales of products proposed at the above-mentioned business negotiations

⁶ CO₂ emissions over the product lifecycle, from procurement, production, distribution, sales and service to use by the customer

⁷ Business negotiation participation: Number of proposed products for which a quotation was submitted out of the number of enhanced customer relations

Using Limited Resources Effectively

Vision for 2030: Promote the effective use of resources at Konica Minolta, while also helping corporate clients and suppliers to achieve effective use.

Themes	Indicators	FY2020		FY2021		FY2022		FY2023	FY2024	FY2025	FY2030	FY2022 Target Achievement Status
		Results	Targets	Results	Targets	Results	Targets	Targets	Targets	Targets	Targets	
Effective Use of Resources by Transforming Customer Business Processes	Social and environmental value	320	330	320	350	340	350	360	380	400	500	△
	Economic value	53.0	58.0	59.9	71.0	79.3	78.0	89.0	97.0	100.0	-	○
Toward Zero Natural Resources ¹	Social and environmental value	-	-	-	-	104	-	-	-	108	95	-
	Economic value	-	-	-	-	20	-	-	-	19	30	-
Reduction of environmental impact of Konica Minolta production sites ²	Social and environmental value	0.6	0.5	1.3	1.0	1.7	1.7	0.2	0.5	0.8	-	○
	Economic value	130	110	260	200	470	300	Goal setting	-	-	-	○
Effective Use of Resources Relating to Konica Minolta Sites, Suppliers, Products and Services	Social and environmental value	12	14	12	14	12	15	13	14	14	-	△
	Economic value	676	770	597	690	777	690	-	-	840	-	○

Note: Targets and results have been revised retrospectively to fiscal 2020 figures as the method of calculating the effects of measures was changed in fiscal 2021.

¹ Natural resources: Resources that involve new mining, such as crude oil and mineral resources, and are generally synonymous with depletable resources.

² Cumulative reductions for each fiscal year from FY2020 - FY2022 - FY2023 - FY2025: Total reduction amount for each fiscal year due to the measures implemented from the first fiscal year of each period to the relevant fiscal year

³ Set as a target that includes the reduction of plastic waste in Japan as part of activities to reduce and recycle plastic waste from products that use plastic based on the Act on Promotion of Resource Circulation for Plastics enacted in Japan

⁴ Green Products: Name changed from Sustainable Solution in FY2023. Promotes the solving of social and environmental issues by defining and certifying solutions that help to solve social and environmental issues and expand sales

Cross-cutting Activities Supporting Material Issues

Attract ESG investment by providing solutions to social issues and sustainable growth

Themes	Indicators	FY2020		FY2021		FY2022		FY2023	FY2024	FY2025	FY2030	FY2022 Target Achievement Status
		Results	Targets	Results	Targets	Results	Targets	Targets	Targets	Targets	Targets	
Attract ESG investment by providing solutions to social issues and sustainable growth	Social and environmental value	ESG initiatives continue to earn top marks	High assessment	High assessment	High assessment	High assessment	High assessment					○

Response to Social Trends in Regards to Supply Chain

Themes	Indicators	FY2020		FY2021		FY2022		FY2023	FY2024	FY2025	FY2030	FY2022 Target Achievement Status	
		Results	Targets	Results	Targets	Results	Targets	Targets	Targets	Targets	Targets		
CSR procurement	Percentage of suppliers requested to carry out CSR activities		100% of suppliers asked to take CSR measures during the medium-term plan's period (FY2020-FY2022)	100%	100% of suppliers asked to take CSR measures during the medium-term plan's period (FY2020-FY2022)		100% of suppliers asked to take CSR measures during the medium-term plan's period (FY2020-FY2022)	100% of suppliers asked to take CSR measures during the medium-term plan's period (FY2023-FY2025)	100% of suppliers asked to take CSR measures during the medium-term plan's period (FY2023-FY2025)	100% of suppliers asked to take CSR measures during the medium-term plan's period (FY2023-FY2025)		○	
	Number of CSR assessments	Four Group manufacturing sites, 40 suppliers	CSR assessments carried out at all Group manufacturing sites and important suppliers (about 100 companies) during the medium-term plan's period (FY2020-FY2022)	13 Group manufacturing sites, 30 suppliers	CSR assessments carried out at all Group manufacturing sites and important suppliers (about 100 companies) during the medium-term plan's period (FY2020-FY2022)	Four Group manufacturing sites, 28 suppliers	CSR assessments carried out at all Group manufacturing sites and important suppliers	CSR assessments carried out at all Group manufacturing sites and important suppliers	CSR assessments carried out at all Group manufacturing sites and important suppliers	CSR assessments carried out at all Group manufacturing sites and important suppliers		○	
	Number of CSR third-party audits (RBA-VAP)	One supplier	CSR third-party audits (RBA-VAP) carried out at particularly important Group manufacturing sites and particularly important suppliers (total of seven sites) during the medium-term plan's period (FY2020-FY2022)	Two Group manufacturing sites, one supplier	CSR third-party audits (RBA-VAP) carried out at particularly important Group manufacturing sites and particularly important suppliers (total of seven sites) during the medium-term plan's period (FY2020-FY2022)	Audits carried out at three Group manufacturing sites, four suppliers	CSR third-party audits (RBA-VAP) carried out at particularly important Group manufacturing sites and particularly important suppliers (total of seven sites) during the medium-term plan's period (FY2020-FY2022)	CSR third-party audits (RBA-VAP) carried out at particularly important Group manufacturing sites and particularly important suppliers	CSR third-party audits (RBA-VAP) carried out at particularly important Group manufacturing sites and particularly important suppliers	CSR third-party audits (RBA-VAP) carried out at particularly important Group manufacturing sites and particularly important suppliers		○	
	Number of final product production sites receiving RBA certification (Silver or higher)*	0	0	0	0	3	7	7	8	8	8	-	○
	Economic value	Loss of sales opportunities	0	0	0	0	0	0	0	0	0	0	○
Practicing responsible minerals procurement	Percentage of suppliers returning conflict mineral surveys (0)	96	Maintained at 95% or higher in every year	96	Maintained at 95% or higher in every year	96	Maintained at 95% or higher in every year	Maintained at 95% or higher in every year	Maintained at 95% or higher in every year	Maintained at 95% or higher in every year	Maintained at 95% or higher in every year	○	
	Percentage responding to requests for surveys from customers (0)	100% response	Maintained at 100% or higher in every year	100% response	Maintained at 100% or higher in every year	100% response	Maintained at 100% or higher in every year	Maintained at 100% or higher in every year	Maintained at 100% or higher in every year	Maintained at 100% or higher in every year	Maintained at 100% or higher in every year	○	

* Total number of manufacturing sites that have conducted third-party audits for new or continuing RBA certification and hold SILVER or higher RBA certification.

Occupational Safety and Health

Themes			FY2020		FY2021		FY2022		FY2023	FY2024	FY2025	FY2030	FY2022 Target Achievement Status
			Results	Targets	Results	Targets	Results	Targets	Targets	Targets	Targets	Targets	
Preventing occupational accidents	Social and environmental value	Serious accidents ¹⁾	0	0	0	0	0	0	0	0	0	-	○
	Economic value	Major business losses caused by serious accidents (¥M)	0	0	0	0	0	0					○
	Social and environmental value	Rate of lost-worktime injuries ²⁾ (%)	0.17	0.21	0.19	0.19	0.18	0.15	0.14	0.12	0.10 or less	0.10 or less	△

*1 Serious accidents: (1) Death, disease requiring a long recovery period (or the possibility thereof), an injury resulting in a disability (or the possibility thereof), or a specific contagious disease
(2) An accident resulting in the death or injury of three or more workers during work at one point or the contraction of a disease (including accidents not accompanied by lost worktime)
*2 Frequency rate of lost-worktime injuries: The number of persons absent from work per one million total actual working hours for current employees

Material Issue 1: Improving Fulfillment in Work and Corporate Dynamism

Background

Social and Environmental Issue Outlook for 2030

Many economies around the world, including Japan, are expected to see labor shortages. As industrial structures change, there will be imbalances in the type of labor force needed. There will be labor shortages in some areas and more mismatches between the skills people have and the skills jobs require. By 2030, a total labor shortage of about 100 million people is anticipated in the countries that make up the top 70% of global GDP. For example, technologies such as AI, robotics and automation will increase productivity and alleviate labor shortages, but new jobs will be created that require more creative skills. This will occur not just on the manufacturing floor, but in offices as well. While it is important to increase productivity with technology, human creativity must also be fostered to solve the global labor shortage.

Opportunities for Konica Minolta to Create value, and Risks to Be Minimized

Opportunities

- Through Konica Minolta businesses
 - Improving productivity and fulfillment in work through process and supply chain transformation based on the digitalization of manufacturing sites
 - Eliminating labor shortages through an automated, labor saving, and skill-free system
 - Improving productivity of customer organizations and increasing time for creativity by transforming work styles through DX
- Internal action to create value
 - Providing innovative services by realizing the full potential of human resources, who are the source of new value, and creating organizations where individuals thrive
 - Improving productivity by enhancing education to reinforce human capital for DX and by applying DX in company processes through data utilization, and providing innovative DX services to customers

Risks

- Affecting Konica Minolta
 - Mismatches between employee skills and their work in the event of rapid changes in systems and environments and the rise of new technologies
 - Declines in employee diversity, independence, and ability to innovate in the event that efforts to create workplaces that promote diversity stagnate

Vision for 2030 and Medium-Term Plan

Vision for 2030: Increase labor productivity for corporate clients, society, and Konica Minolta. Make time for creativity, and promote workplaces where all individuals can thrive.

Related SDGs:



Themes (Economic Value): Increasing customer productivity and making time for creativity

Themes (Social and Environmental Value): Creating an organization that draws out potential talent so that individuals can thrive

Indicators		Results			Targets			
		FY2020	FY2021	FY 2022	FY2022	FY 2023	FY 2024	FY2025
Strategic assignments for manager candidates (%) ^{*1}		70	98	100	100	-		
Number of DX leaders ^{*2} trained (people)		-	24	24	40	-		
Imaging-IoT human resources ^{*3}		500	-	814	-	1000	-	50% or more engineers in each business unit
GES score ^{*4}	Engagement ^{*5}	GES designing	6.4 (GES implementation Problem identification and goal setting)	6.6	10% score increase in GES compared to FY2021	-		7.7(Industry average)
	Equity ^{*6} <small>Note1</small>	-	7.1 (6.1)	7.4 (6.1)	-			8.0 (7.0) or more
	Freedom of opinion ^{*7} <small>Note1</small>	-	6.9 (6.5)	7.2 (6.6)	-			8.0 (7.5) or more
Percentage of management positions ^{*8} held by women ^{*9} (%)		7.2	9.1	9.9	10% or more	11% or more	-	13%or more
Percentage of women among new graduate recruits ^{*9} (%)		23	35	37	Maintain 30% or more		-	

Note: Target scope: Konica Minolta, Inc. However, the scope of targets of the GES score (^{*4}) is the Konica Minolta Group (worldwide) and the data for Konica Minolta, Inc. in parentheses in Note 1.

^{*1} Percentage of employees assigned to strategic leadership positions

^{*2} DX leader: Leaders who can meet customer needs with digital solutions

^{*3} Human resources with the technology to analyze imaging data and various sensor information leveraging AI technologies such as deep learning to support decision-making and assessments at various worksites

^{*4} Target scope: Regular employees of Konica Minolta, Inc. as of April 1 following each fiscal year

^{*5} Engagement: Applicable question "How likely is it you would recommend Konica Minolta as a place to work?" (This has been corrected due to an error in the question description. The same question has been used in the evaluation since FY2021.)

^{*6} Equity: Applicable question "people of all backgrounds treated fairly in my department/team?"

^{*7} Freedom of opinion: Applicable question "Is your opinion respected in your department/team?"

^{*8} Management positions referred to as "Exempt" in Konica Minolta, Inc.

^{*9} Time of compilation: As of April 1 of the following fiscal year.

Konica Minolta's Approach

As work styles become more diversified, Konica Minolta looks to provide solutions that increase productivity and enable creativity-inspiring work styles in diverse locations, while enhancing personal motivation, fulfillment in work, and corporate growth. Specifically, by utilizing options like measurement and inspection worksite automation, on-demand production, imaging IoT, document management, and reducing the amount of time spent on basic tasks, Konica Minolta is helping customers to improve their productivity and shift their focus to creative work. By combining imaging IoT and digital technologies, Konica Minolta can make the inefficiency hidden in a customer's workflow visible. Moreover, the company can take a close look at the customer's workflow and provide services tailored for its particular business. With these capabilities, Konica Minolta will help customers to increase productivity and make time for creativity, while also helping to minimize the disadvantages in terms of IT access, recruitment, and entrepreneurial opportunities.

At Konica Minolta itself, the emphasis will be on realizing the full potential of human resources and empowering individuals to thrive and produce new value. Konica Minolta will do this by developing workplaces and a corporate culture where individual employees can reach their full potential with a sense of personal motivation and engagement.

Businesses: Increasing Customer Productivity and Making Time for Creativity

- Shortening lead time compared to conventional processes through on-demand production
 - › [Using Digital Technology to Reduce the Environmental Impact of Commercial Printing-- Digital Inkjet Printer AccurioJet KM-1 series](#)
- Improving productivity at the printing sites with automatic quality optimization unit
 - › [Solving social issues and printing site needs – Intelligent Quality Optimizer IQ-501](#)
- Making time for creativity by automating the inspection process at production sites
 - › [Revolutionizing the Visual Inspection Process of Automobiles - Automatic Visual Inspection System](#)
- Improving customer productivity and creativity through workstyle reform and decision support
 - › [Supporting corporate work style reforms — Workplace Hub](#)
- Making time to provide care services by streamlining care staff workflow
 - › [Providing Nursing Care Solutions to Address the Issues of a Super-Aged Society — HitomeQ Care Support](#)

Internal Action: Creating an organization that draws out potential talent so that individuals can thrive

- Systematically develop leaders by selecting young employees early on and strengthening the pipeline of women candidates for director positions
 - › [Attracting, Developing and Promoting the Active Participation of Human Resources](#)
- Creating a corporate culture in which individuals can thrive
 - › [Building Organization, Culture and DNA](#)
- Promoting diversity & inclusion
 - › [Promoting Women's Workplace Participation](#)
 - › [Activities that Welcome Differences](#)
 - › [Fostering a DEI-Based Organizational Culture](#)
 - › [Employment of People with Disabilities](#)

Using Digital Technology to Reduce the Environmental Impact of Commercial Printing — Digital Inkjet Press AccurioJet KM-1 Series

Related SDGs



Digital Inkjet Press AccurioJet KM-1 series

Using Digital Technology to Reduce the Environmental Impact of Commercial Printing

Rising environmental awareness is driving demands for the field of commercial and industrial printing to break away from conventional methods where large amounts are printed and surplus is discarded. In the world of marketing, meanwhile, labels and packages for each event are being produced in small lots, and product/marketing strategies targeting individual consumers, such as including specific people's names, is gaining ground.

Konica Minolta's digital inkjet press AccurioJet KM-1 series produces high image quality and excellent color stability comparable to that of conventional offset printing and can handle a wide range of printing papers. In addition, AccurioJet KM-1e is capable of printing not only on paper, but also on a wider range of print media, including plastic materials, which are in high demand for waste reduction. This allows the user to minimize waste. In addition, the KM-1e's HD mode options deliver unparalleled printing quality for a digital printer. It also helps to reduce environmental impact by supporting compatibility with an increasing number of applications, becoming more and more useful across customers' diverse operations. It also helps to reduce the labor-hours needed in the printing process due to its user-friendly operability, even for unskilled workers.



Digital inkjet printer AccurioJet KM-1 e

› [Site for production print products](#)

Revolutionizing the Visual Inspection Process of Automobiles - Automatic Visual Inspection System

Related SDGs



Automatic Visual Inspection System

Issues

Improvement and stabilization of automotive visual inspection quality, and labor saving



Konica Minolta's Solution

Tunnel-type automatic inspection technology automates the inspection of paint defects and the flush & gap of car bodies. AI data analysis enables detailed classification and analysis of defects as well as automatic correction.

The need for automation of automotive production lines is increasing due to protracted labor shortages. Notably, visual cosmetic inspection to check the paint and the flush & gap of car bodies still relies heavily on visual human inspection, so improving and stabilizing inspection accuracy and labor saving are significant issues.



The Konica Minolta Group has combined its traditional strength in color measurement and control of the car exterior with [the automotive inspection technology of Eines Systems, a leading auto visual inspection company that joined the Group in 2019](#), to enable automatic quality inspection, root cause analysis of line defects, and automatic correction of paint defects. The tunnel-type paint defect inspection system and the flush & gap inspection system enable automated non-contact inspection in automotive production lines. The paint defect inspection system can even detect defects as small as the diameter of mechanical pencil lead. It can also classify and analyze paint defects in detail with the aid of AI data analysis.

In addition to improving inspection accuracy and efficiently allocating inspectors, the system reduces quality loss by tracing the results of defect analysis back to the cause of the defect and making improvements. It also utilizes the acquired defect data for traceability and factory DX, thereby contributing to the automation of not only visual inspection but also the entire factory.

Konica Minolta currently holds the top position of the global market for tunnel-type inspection systems for paint cosmetic inspection and flush & gap measurement and is working to further disseminate its system. Konica Minolta will also contribute to manufacturing lines for electric vehicles (EVs), which are expected to spread and evolve, with its wide variety of inspection know-how and technologies.



For more information about our solutions, click here.

-  [Eines Systems website: Paint Quality Inspector](#)
-  [Technology > Automatic inspection technology for automotive production lines](#)

Supporting customers to Digital Transformation—Workplace Hub

Related SDGs



Workplace Hub

Supporting customers to Digital Transformation

All business sites nowadays have a rising need to utilize digital innovation to generate greater efficiency and productivity, as well as to enable teleworking. However, many small and medium-size enterprises are still tied to paper documents and conventional workplaces due to issues such as a shortage of IT personnel and administrative burdens. Konica Minolta's Workplace Hub, which is being rolled out globally, is an all-in-one IT service package that is customizable to corporate clients' business challenges. It combines IT infrastructure/ services, multi-functional peripherals (MFPs), and maintenance/management. Workplace Hub provides an IT environment safeguarded by world-class security and offers "work styles that are a step ahead" based on the IT system maturity. By ensuring safety and security for personnel working remotely, while helping to promote collaboration in and outside the company, Workplace Hub can facilitate the customer's digital transformation (DX).



Workplace Hub, a workflow transformer

Providing Nursing Care Solutions to Address the Issues of a Super-Aged Society—HitomeQ Care Support

Related SDGs

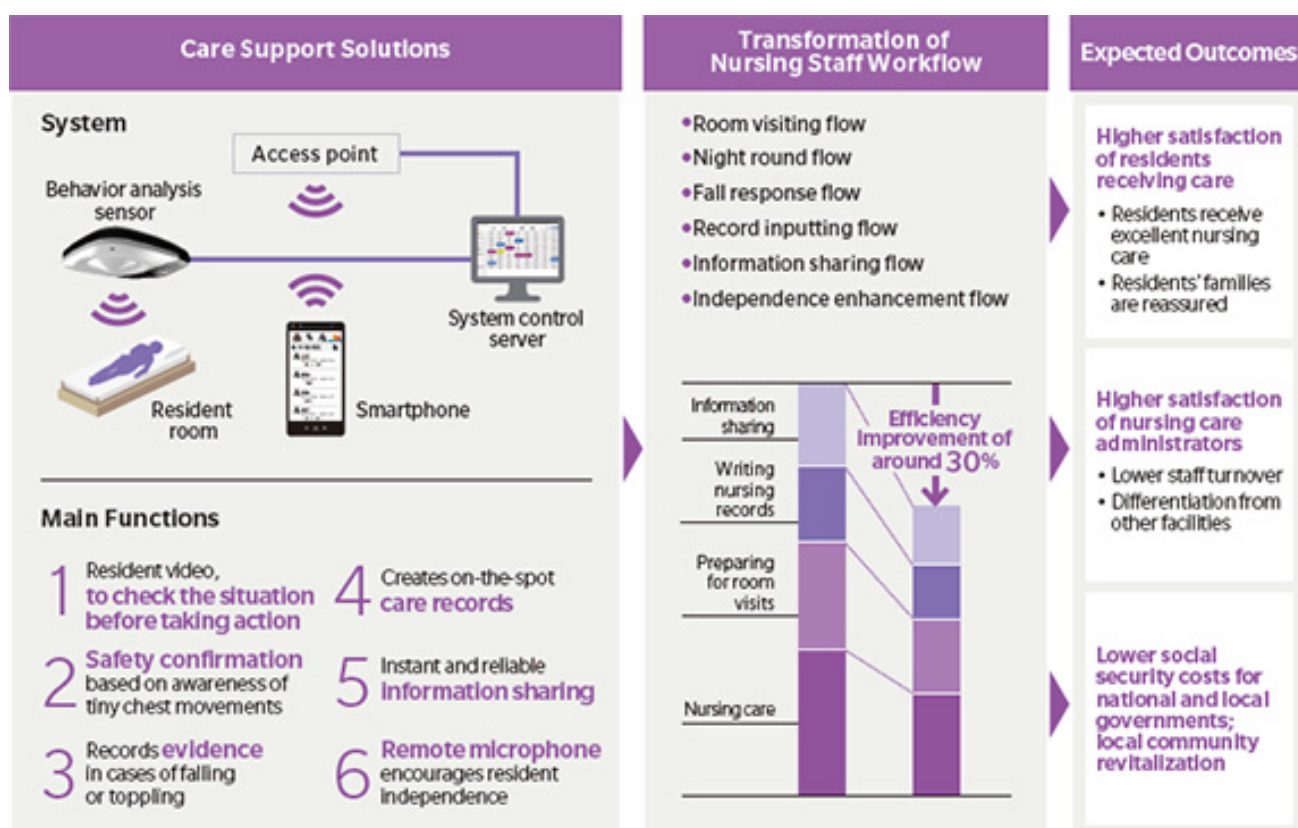


Transforming Nursing Care Staff Workflow and Helping to Eliminate Chronic Nursing Care Staff Shortages

With the number of people needing nursing care in Japan increasing in recent years, the shortage of care workers has become a social issue. To address the situation, Konica Minolta's HitomeQ Care Support is helping to transform nursing care workflows. This service detects certain resident behaviors using near-infrared cameras installed on the ceiling along with sensors that detect movement, and then notifies nursing care staff through their smartphones. It helps the staff to determine the best response after grasping the situation and enables information sharing among staff in real time, greatly improving the efficiency of work.

One facility where this service was introduced reported an average efficiency improvement of 30% for nursing care staff. The extra time saved can now be used to enhance resident self-sufficiency, such as through rehabilitation assistance, and for education and training for nursing staff. This, in turn, enables provision of higher quality care, which has improved the satisfaction of residents and their families as well as nursing staff and facility administrators.

As a result of changes to nursing care benefits in April 2021, Japan's nursing care took a sharp turn toward a more scientific approach. Shifting from subjective evaluations, which until now had relied on the caregiver's front-line experience and gut instinct, to objective evaluations driven by digital technology, has enabled a deeper approach into evidence-based scientific nursing care tailored to each individual, and helped nursing care staff to play an active role as skilled professionals.



Material Issue 2: Supporting Healthy, High-Quality Living

Background

Social and environmental issue outlook for 2030

Due to population aging, the number of people suffering from diseases in developed countries is expected to grow. With a corresponding increase in the demand for medical treatment and nursing care, social security costs will also climb. In sparsely populated areas and developing countries, there are concerns that healthcare access could become difficult. In addition, the gap between supply and demand for nursing care in Japan is expected to grow to approximately 500,000 patients by 2030.* Similar issues are also anticipated in other developed countries in the near future.

As part of productivity and safety improvement at medical facilities and seniors care sites, the quality of and access to medical services need to be enhanced, and social security costs have to be reduced. This can be done through the prevention and early detection of disease. It can also be accomplished by shortening the development period for new drugs through improved candidate success rates and greater clinical trial efficiency.

Opportunities for Konica Minolta to create value

Opportunities

■ Through Konica Minolta businesses

- Promoting disease prevention and early detection by providing high value-added medical services, and reducing medical expenses
- Advancing medical care and improving accessibility by enabling advanced medical treatment in a convenient manner
- Streamlining drug development by fostering innovation in drug discovery processes utilizing genetic testing technology
- Transforming caregiver workflow with imaging IoT and creating a labor pool

■ Internal action to create value

- Improving employee engagement and innovation capability by developing safe and comfortable workplaces where employees feel motivated

Vision for 2030 and Medium-Term Plan

Vision for 2030: Promote health and high quality of life at corporate clients, in society, and Konica Minolta. Help individuals lead fulfilling lives.

Related SDGs:   

Theme (Economic Value): Provide health and high quality of life to our customers

Theme (Social and Environmental Value): Building safe and comfortable workplaces (companies) where employees feel motivated

	Indicators	Results			Targets	
		FY2020	FY2021	FY2022	FY2022	FY2025
Improve organizational health	Rate of reduction of Level 4 workplaces*1 (%) *2	38	69	38	50	-
	Percentage of workplaces where stress levels exceed the appropriate range*3	-	-	13.3%	-	9.3%
	Percentage moving to higher level of organizational health (%) *4	-	5.1	15	10	-
	Average score of the organizational health survey results (10-point scale)	-	-	6.1	-	7.7
Employee health	Number of employees who are at high risk physically (employees with the highest health risks) ^{Note1 *2}	24% increase	30% decrease	6% decrease	12% decrease	-
	Presenteeism Percentage of employees with moderate or greater impaired work function due to health problems *5	-	-	18.2%	-	15.1%
	Absenteeism*6	Number of vacation days due to mental health problems ^{Note2*2}	15.1% increase	10.1% increase	36.8% increase	13% decrease
		Average reduction*7 in the number of days of leave for the person on leave *8	-	-	-	17% decrease

Note

Target scope: Konica Minolta, Inc. However, the scope of targets and results of employees who are at high risk physically(Note1) has expanded to include Group employees in Japan from fiscal 2021.

Note 2: As a result of a change to the calculation method in fiscal 2021, results have been revised retroactively to fiscal 2020 figures.

- *1 Level 4 workplaces: workplaces deemed to have the highest level of stress based on the results of a four-level stress check.
- *2 Rate of change from fiscal 2019 results
- *3 Workplaces with stress levels that exceed the appropriate range: Workplaces with a total health risk of 120 or higher in stress check (A total health risk of 100 is the national average)
- *4 The rate of year-on-year change in the number of workplaces whose results in the organizational health survey (5-point scale) improved from less than 3.5 to 3.5 or higher (upper level)
- *5 Presenteeism: A condition in which an employee is present at work, but their performance is declining due to some physical disorder. It is evaluated using the Work Functioning Impairment Scale (WFun), a survey developed at the University of Occupational and Environmental Health, Japan to measure the degree of impaired work function due to health problems. In Japan, a score of 21 or higher on this survey is said to indicate moderate or greater impaired work function.
- *6 Absenteeism: Condition of not being able to come to work due to illness or poor health.
- *7 Percentage of reduction from FY2022 results
- *8 Person on leave: Employee on leave (including unscheduled absence and temporary retirement). The number of days of leave of absence does not include fixed days off, paid vacations, and absence due to work-related injury.

Konica Minolta's Approach

Konica Minolta will make the most of its proprietary Dynamic Digital Radiography (DDR) technologies and genetic testing to improve healthcare access and help reduce social security costs. These technologies can help detect diseases early and reduce the risk of severe illness, thereby reducing treatment costs. In addition, the company will expand access to nursing care by providing solutions that streamline care staff workflow.

Konica Minolta possesses DDR technology that uses its proprietary image processing technology to improve the ability to discriminate, quantify movement, and visualize pulmonary function information in images with movement, as well as imaging diagnostic technology that can help pinpoint the cause of disease by utilizing diagnostic technology at the molecular level such as genes and proteins. In addition, the company has the human resources and technical capabilities needed to visit care facilities in person to assess staff workflow and propose specific improvements. With these capabilities, Konica Minolta will contribute to improved treatment and facilitate the creation of even more effective medicines, thereby enhancing people's quality of life while helping to lower healthcare costs.

At Konica Minolta itself, the aims will be to foster employees' engagement with their own physical and mental health and promote more advanced health management by building a health-first corporate culture.

Businesses: Improving Patient Quality of Life While Reducing Expenses

- Improving patient quality of life while reducing healthcare costs by providing high-value-added medical treatment

Image processing to make lesions easier to see/Diagnostic support services

- › From "Still Images" to "Videos" – DDR System (Release)
- › Informity: An ICT service that supports medical institutions and healthcare professionals in their medical treatment, work, and management (Release)
- › Global Launch of Next-Generation Precision Diagnostic Platform (LATTICE™) (Release)
- › Supporting Drug Discovery as Well as Accurate and Efficient Cancer Diagnosis — Precision Medicine

- Expanding care capacity by streamlining care staff workflow

- › Providing Nursing Care Solutions to Address the Issues of a Super-Aged Society — HitomeQ Care Support

Internal Action: Building Safe and Comfortable Workplaces Where Employees Feel Motivated

- Promoting health-oriented business administration

- › Health & Productivity Management
- › Managing Occupational Safety and Health

Supporting Drug Discovery as Well as Accurate and Efficient Cancer Diagnosis—Precision Medicine

Related SDGs



Precision Medicine

Supporting Drug Discovery as Well as Accurate and Efficient Cancer Diagnosis

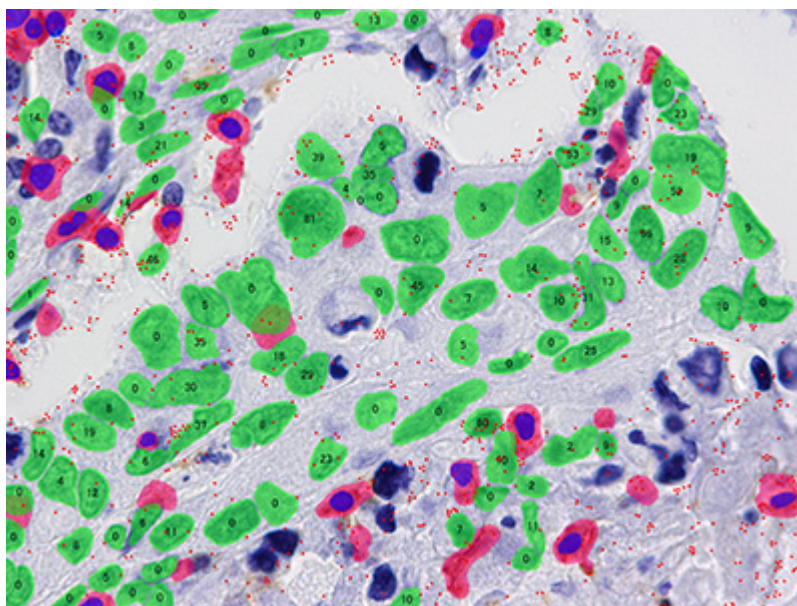
The significant side effects and ballooning costs of cancer treatment have become social issues. Precision medicine, in which medications are chosen for patients who have been grouped according to their physiological characteristics as analyzed based on genes and proteins, is gaining attention as a solution.

Konica Minolta makes accurate and efficient cancer diagnosis a reality by combining its original technology for making visible specific proteins such as those found in cancer cells with technologies of two Konica Minolta Group companies in the US. In June 2019, Konica Minolta began joint R&D on next-generation comprehensive cancer gene panel testing with the University of Tokyo and the National Cancer Center Japan Research Institute. This has launched the company's full-scale participation in the effort to promote cancer genomic medicine in Japan. In July 2022, Konica Minolta received marketing approval from the Ministry of Health, Labour and Welfare for its system for cancer genomic profiling exams.

Group company Ambry Genetics Corporation, a major genetic diagnostic provider in the US, has expanded its genetic diagnostic services for cancer patients by launching the CARE Program, which offers these services to healthy and unaffected individuals. The CARE Program uses medical interviews to identify people with a risk of hereditary cancer, provides counseling and tests, and then uses the results to propose a cancer examination plan tailored to each individual. Leveraging this expertise, Ambry Genetics launched the CARE Program in Japan in April 2021 in collaboration with the Seirei Social Welfare Community.

Moreover, Konica Minolta has begun a collaboration with Amazon Web Services (AWS) on LATTICETM, an integrated diagnostic data platform that combines genomics, pathology and radiology data with other critical medical information to create the next generation of diagnostic tests. Konica Minolta will use LATTICE to provide cutting-edge analytics services for clinical trials and drug discovery around the world.

Going forward, Konica Minolta will continue to provide comprehensive services to pharmaceutical companies, academia, medical institutions, companies and employers.



Original technology differentiates cancer cells

Material Issue 3: Ensuring Social Safety and Security

Background

Social and environmental issue outlook for 2030

Due to the aging of factories and equipment, staff shortages and the retirement of veteran employees with a wealth of experience, among other factors, the risk of disasters at manufacturing sites has increased and the risk of workplace accidents is also considered to rise. In order to attract personnel, however, companies must provide safer workplace environments. In addition, cyber-attacks have become increasingly frequent and sophisticated. The unprecedented damage they have caused is estimated at as much as 90 trillion dollars* worldwide.

To make society safer and more secure, it is vital to visualize threats to social infrastructure and workplaces, as well as information security risks, and to improve the products and services that contribute to people's work and livelihoods.

* Source: ["Risk Nexus," Zurich Insurance Group and the Atlantic Council, 2015](#)

Opportunities for Konica Minolta to create value, and risks to be minimized

Opportunities

- Through Konica Minolta businesses
- Creating safe workplaces at client companies through process transformation based on digitalization of manufacturing sites
- Ensuring the quality of client company's products and services and reducing accidents in the market by enabling advanced measurement
- Increasing the safety and security of manufacturing sites and of society by visualizing potential dangers with imaging IoT

Risks

- Affecting Konica Minolta
- Damage to client companies or society due to a serious accident caused by a product or service
- A major security incident related to a product or service that leads to an information leak or privacy infringement

Vision for 2030 and Medium-Term Plan

Vision for 2030: Enhance safety and security in the workplaces of corporate clients and in society. Minimize risks posed by Konica Minolta products and services.

Related SDGs:



Theme: Provide safety and security in the work and daily lives of customers

Theme: Minimizing safety and security risks of the Company's products and services

Themes	Indicators		Results			Targets			
			FY 2020	FY 2021	FY 2022	FY 2022	FY 2023	FY 2024	FY 2025
Eliminate substances that affect health	Social and environmental value	Number of serious accidents* ¹ caused by chemical substances	0	0	0	0	0		
	Economic value	Serious business losses due to chemical substance management (JPY)	0	0	0	0	-		
Reinforce efforts to ensure health when products and services are used	Social and environmental value	Number of serious product-related accidents* ²	0	0	0	0	0		
	Economic value	Major business losses related to product safety (JPY)	0	0	0	0	-		
Completely eliminate serious information security incidents	Social and environmental value	Number of serious information security incidents* ³	0	0	0	0	0		
	Economic value	Major business losses related to information security (JPY)	0	0	0	0	-		

*1 Serious accident: A case that causes serious harm to the product user's life and/or body and cases that cause serious and significant impact on the business of the product user

*2 Serious product-related accident: A case that causes serious harm to the product user's life and/or body and cases that cause serious damage to assets other than the product

*3 Serious security incident: A case in which product security has a serious and significant harm to the product user's business

Konica Minolta's Approach

Konica Minolta will contribute to creating a safe and secure society, and provide solutions that help create secure manufacturing sites and IT systems. Specifically, the company will work to provide solutions that make risks visible in workplaces using imaging IoT technology and to achieve workplaces that ensure a high degree of information security.

Konica Minolta possesses proprietary technologies in the fields of optical and image processing, as well as analysis and imaging AI technologies. It is also deeply involved in the main processes at each stage of the supply and value chains for various industries. Using the valuable information it has accumulated through these activities, Konica Minolta is able to offer solutions that help customers to raise product quality and enhance safety and security in the workplace, while driving innovation across various industries. With the technology to visually detect changes and warning signs invisible to the human eye, the company will continue providing new value in areas such as public security, factory safety, and product inspection.

As a manufacturer, Konica Minolta also evaluates all risks at each stage of its product and service life cycles, and works to minimize information security risks and health problems.

Businesses: Providing safety and security in the workplaces of corporate clients and in society

- Monitoring related to safety and security such as management of infrastructure and critical facilities, quality inspection, etc.
 - › [Imaging-IoT platform to accelerate DX in society](#)
 - › [Contributing to Safety and Security as well as Environment-friendly Operation by Visualizing Gas Leaks — Gas Monitoring Solution](#)
- Providing occupational safety support solutions
 - › [Launching forklift truck accident reduction service using image IoT \(Japanese news release\)](#)
- Providing solutions that help to improve customers' information security
 - › [Information security technology](#)

Internal Action: Minimizing Risks Related to the Safety and Security of Konica Minolta Products and Services

- Enhancing user safety for products and services
 - › [Achieving Top-Tier Quality and Reliability](#)
- Eliminating chemical substances harmful to health
 - › [Management of Chemical Substances in Products](#)
 - › [Reduction of Chemical Substances Risks in Production](#)
- Thoroughly preventing major information security accidents
 - › [Enhancing the Security of Products and Services](#)
 - › [Information security technology](#)

Contributing to Safety and Security as well as Environment-friendly Operation by Visualizing Gas Leaks --Gas Monitoring Solution

Related SDGs



Gas Monitoring Solution

Contributing to Safety and Security as well as Environment-friendly Operation by Visualizing Gas Leaks

In recent years, growing risk of incidents and/or fires that originate as a gas leak events due to deterioration of plants in Japan has become a social issue needing to be addressed. At the same time, given the advance of an aging society coupled with a low birthrate, the number of skilled maintenance operators is also declining. This has created a need for continuous monitoring that does not rely on labor skills but can secure the operation safety during gas leak repairs. Konica Minolta provides a solution that enables early discovery and handling of abnormalities through continuous plant monitoring. Using Konica Minolta's optical technology and image processing technology to visualize the sourcing point and concentration level of gas leaks enables maintenance operators to conduct appropriate maintenance operation of the plant regardless their maintenance skill levels. Meanwhile, in the United States, public concern for methane leaks from shale wells and oil refineries is growing due to the fact that the global warming potential of methane is 25 times greater than that of carbon dioxide. Interest in Konica Minolta's gas monitoring solutions that can also detect methane leaks is growing too. We will continue to meet the needs for gas visualization with our technology and contribute to the fight against global warming.



Gas monitoring solution makes gas leaks visible

Material Issue 4: Addressing Climate Change

Background

Social and environmental issue outlook for 2030

The Paris Agreement provides a framework for the world to move more quickly and ambitiously to build a low-carbon global society. At the same time, there are concerns that the needed changes will not happen fast enough and climate change will have a harsh impact on the world. If and when the low-carbon society is achieved, the energy structure of entire industries will have changed significantly, including the widespread use of renewable energy and dramatic energy savings. On the other hand, if dire climate change predictions materialize, rising sea levels will submerge coastlines and damage biodiversity. There will likely also be frequent severe weather events, such as typhoons and hurricanes, which could have a significant impact on both industry and people's lives.

In order to transition to a low-carbon global society, there needs to be a fundamental change in how energy is used, which means conventional workflows must be dramatically reformed. In addition, it is vital to build an industrial structure that can withstand severe weather events in case dire climate change predictions materialize.

Climate-related Financial Information Disclosure (TCFD)

- › Basic Concept
- › Strategy
- › Metrics and Targets
- › Governance
- › Risk Management

Opportunities for Konica Minolta to create value, and risks to be minimized

Opportunities

- Through Konica Minolta businesses
 - Reducing energy consumption and CO₂ emissions of customers and society by providing manufacturing process solutions
 - Promoting a paperless and ubiquitous computing society by providing solutions for work style reform
- Internal action to create value
 - Contributing to dramatic CO₂ emissions and cost reductions by helping business partners to reduce their environmental impact using DX technology

Risks

- Affecting Konica Minolta
 - Soaring energy prices, increased material costs due to raw material shortages, and supply instability
 - Greater use of paperless systems due to rising energy prices and raw material shortages
 - Supply chain disruptions due to abnormal weather

Vision for 2030 and Medium-Term Plan

Vision for 2030: Reduce CO₂ emissions by Konica Minolta while expanding CO₂ emissions reductions at corporate clients and suppliers.

Related SDGs:



• Results of Previous Medium-Term Plan

Themes		Indicators	Results	Results			Targets
				FY2020	FY2021	FY2022	FY2022
Reducing Energy Usage and CO ₂ Emissions by Transforming Customer Processes		Social and environmental value	Amount of contribution to CO ₂ reduction (thousand tons)* ¹	578	585	624	640
		Economic value	Solution sales (billion yen)	51	56	76	71
Energy Usage and CO ₂ Emissions Reduction Related to Konica Minolta Sites, Business Partners, Products and Services	Reduction of environmental impact of Konica Minolta production sites * ²	Social and environmental value	Reduction of CO ₂ emissions (thousand tons)	4	12	18	18
		Economic value	Monetary equivalent of energy reduction (million yen)	79	270	450	350
		Social and environmental value	Amount of CO ₂ reduced through procurement of renewable energy (thousand tons)	7	10	20	20
	Reduction of environmental impact through the use of Konica Minolta products and services	Social and environmental value	Reduction of CO ₂ emissions (thousand tons)	14	25	53	50
		Economic value	Sales from green products (billion yen)	676	597	777	690
	Reduction of environmental impact at suppliers using DX* ²	Social and environmental value	Amount of contribution to CO ₂ reduction (thousand tons)* ¹	1.1	2.8	6.4	5.0
		Economic value	Monetary equivalent of energy reduction (million yen)	16	43	103	77

New Medium-Term Plan for FY2025

Themes	Indicators			Targets		
				FY2023	FY2024	FY2025
Reducing Energy Usage and CO ₂ Emissions by Transforming Customer Processes	Social and environmental value		Amount of contribution to CO ₂ reduction (thousand tons)* ¹	630	720	800
	Economic value		Solution sales (billion yen)	89	97	100
Energy Usage and CO ₂ Emissions Reduction Related to Konica Minolta Sites, Business	Reduction of environmental impact of Konica Minolta production sites * ²	Social and environmental value	Reduction of CO ₂ emissions (thousand tons)	6	13	20
		Economic value	Monetary equivalent of energy reduction (million yen)	280	560	840
		Social and environmental value	Amount of CO ₂ reduced through procurement of renewable energy (thousand tons)	3	8	34
	Reduction of environmental impact through the use of Konica Minolta products and services	Social and environmental value	Reduction of CO ₂ emissions (thousand tons)	22	47	78
		Economic value	Sales from green products (billion yen)* ³	-	-	840
	Reduction of environmental impact at suppliers using DX* ²	Social and environmental value	Amount of contribution to CO ₂ reduction (thousand tons)* ¹	1.8	3.5	4.1
		Economic value	Monetary equivalent of energy reduction (million yen)	42	81	94

Note: Targets and results have been revised retrospectively to fiscal 2020 figures as the method of calculating the effects of measures was changed in fiscal 2021.

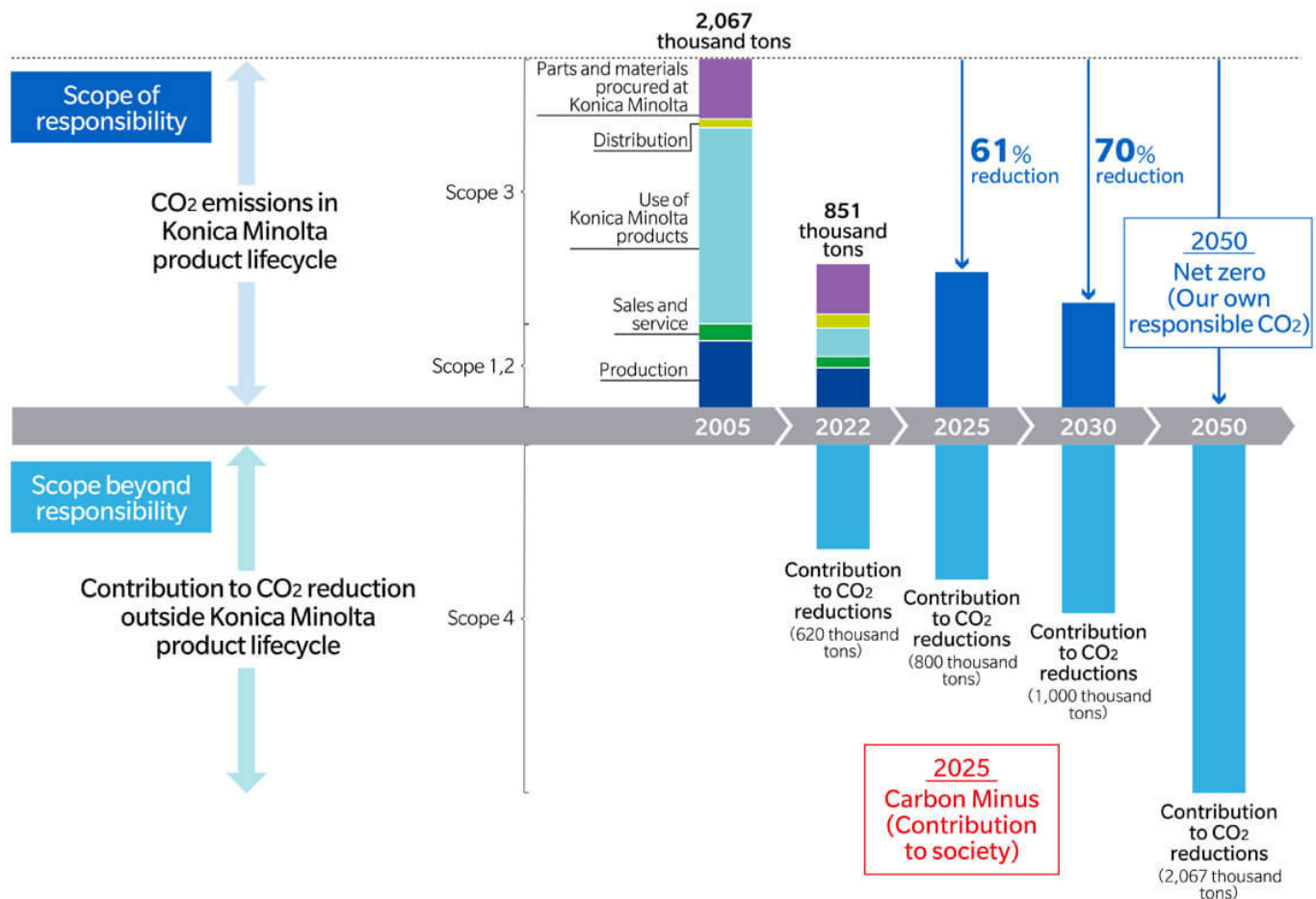
- *1 Contribution to CO₂ reduction: Volume of CO₂ emissions reduced at customers, business partners and the broader society
- *2 Reduction amount for each fiscal year due to the measures implemented during medium-term plan
- *3 Green Products: Name changed from Sustainable Solutions in FY2023. Konica Minolta will push forward to solve social and environmental issues by defining and certifying solutions that contribute to solving those issues and expand sales.

Konica Minolta's Approach

With the formulation of its Medium Term Business Plan 2025, Konica Minolta has declared it will achieve Carbon Minus status by 2025, five years earlier than its previous target of 2030.

As its business shifts from products to services through DX, Konica Minolta will shift its Carbon Minus initiatives to activities that leverage DX as well. Konica Minolta will help transform the conventional business model of mass production and disposal by supporting clients with on-demand production, imaging IoT technology, and other efforts, while helping to minimize energy use in the digital society.

Leveraging digital transformation (DX) technologies, Konica Minolta will pursue collaboration with even more corporate clients and business partners, taking on the challenge of promoting broad-scale environmental impact reduction. The company aims to achieve sustainable growth dramatically expanding its contribution to the reduction of environmental impact while improving financial performance. This will be done by utilizing digital technology to introduce the Carbon Neutral Partner Activities that provide business partners with Konica Minolta environmental expertise, and by promoting the Environmental Digital Platform launched in June 2020.



Businesses: Reducing Energy Usage and CO₂ Emissions by Transforming Customer Processes

- Reducing energy usage and CO₂ emissions in customer business processes through on-demand printing and production
 - › Using Digital Technology to Reduce the Environmental Impact of Commercial Printing — Digital Inkjet Printer AccurioJet KM-1 Series
 - › Energy Conservation and Greenhouse Gas Prevention with Products — UV Inkjet Digital Printing Machine That Helps
- Streamlining gas leak inspection work and compliance activities related to global warming prevention regulations
 - › Contributing to Safety and Security as well as Environment-friendly Operation by Visualizing Gas Leaks — Gas Monitoring Solution
- Collaborating with customers globally through the Environmental Digital Platform, a DX-based ecosystem
 - › Supporting Customers to Solve Their Environmental Issues

Internal Action: Energy Usage and CO₂ Emissions Reduction Related to Konica Minolta Sites, Business Partners, Products and Services

- Reducing environmental impact and costs at Konica Minolta sites
 - › Green Factory Certification System
 - › Decarbonization in Production Operations
- Reducing environmental impact and costs at business partners using DX
 - › Carbon Neutral Partner Activities
- Reducing the environmental impact of products
 - › Green Products Certification System

Climate-related Financial Information Disclosure (TCFD) : Basic Concept

▶ Identifying Environmental Material Issues **Climate-related Financial Information Disclosure (TCFD)**

▶ Basic Concept ▶ Governance ▶ Strategy ▶ Risk Management ▶ Metrics and Targets

Disclosure on four themes based on TCFD recommendations

Konica Minolta's environmental management is based on the concept of "growing our business by solving environmental challenges and also creating new businesses." The goal is to become a company that is vital to society by helping to solve climate change and other global environmental challenges while pursuing corporate growth. There is a limit to what one company can do on its own to solve the problem of global climate change. This is why Konica Minolta seeks to achieve Carbon Minus status by proactively contributing to the reduction of CO₂ emissions on the planet. Konica Minolta defines "Carbon Minus status" as "making a greater contribution to CO₂ reductions (reductions other than Scope 1, 2, and 3) in areas outside the scope of our responsibility than the volume of CO₂ emissions in areas we are responsible for (Scope 1, 2, and 3 emissions)." Considering recent social demands, we have decided to seek net zero CO₂ emissions that fall within the scope of our responsibility. Konica Minolta hopes to accelerate the effects of decarbonization, broaden its ties with stakeholders, and grow its business together by not only fulfilling its social responsibilities but also helping all stakeholders fulfill theirs.

Transition Plan to a Low-Carbon Society

Konica Minolta has set a medium-term Science Based Targets (SBT) for CO₂ emissions reduction in 2030 with the aim of helping to build a low-carbon society. As a transition plan to achieve the target, the Group has established short-, medium-, and long-term measures to reduce CO₂ emissions for which we it is directly responsible by setting CO₂ emissions reduction measures such as the development of energy-saving production technologies, introduction of renewable energy-derived electricity, conversion of its business to a paperless operation, and consideration of CO₂-free fuels.

In addition, Konica Minolta has identified "addressing climate change" as one of the five material issues to be tackled in its long-term vision. Contributing to the solving of social issues through our business activities helps to raise our corporate value over the medium to long term.

Specifically, Konica Minolta will promote Green Product activities that incorporate value for decarbonizing products and services at the planning and development stage, Green Factory activities to achieve decarbonization during production, carbon neutral partner activities to achieve decarbonization together with suppliers, and Green Marketing activities and the environmental digital platform to support customers' decarbonization in sales and services. In addition, Konica Minolta plans to move up its plan to introduce renewable energy-derived electricity, in Europe, North America, Japan and ASEAN.

As a result of transforming its business portfolio as it heads toward 2025, there is a possibility that Scope 1 and 2 emissions will increase due to the expansion of business, especially the Industry Business. Therefore, in addition to the measures above, the Company is also considering measures to reduce CO₂ emissions by leveraging internal carbon pricing.

At the same time, Konica Minolta will significantly reduce CO₂ emissions at customer sites and help to support a recycling-oriented society. Digital solutions for on-demand production that transform the supply chains in the printing and apparel industries, functional materials that reduce the carbon footprint of products, and hyperspectral imaging that improves the sortability and recycling rate of used plastics, will transform the mass production and mass disposal business model and raise the productivity of client companies, thus eliminating wasted uptime and reducing energy consumption and fossil resource use.

In 2018, Konica Minolta agreed to support the final report, "[Recommendations of the Task Force on Climate-related Financial Disclosures](#)," of the Task Force on Climate-related Financial Disclosures (TCFD), established by the G20 Financial Stability Board (FSB). The Group will disclose its climate change initiatives using the TCFD framework.



▶ Environmental Management System

▶ Identifying Environmental Material Issues **Climate-related Financial Information Disclosure (TCFD)**

▶ Basic Concept ▶ Governance ▶ Strategy ▶ Risk Management ▶ Metrics and Targets

Climate-related Financial Information Disclosure (TCFD) : Governance

▶ Identifying Environmental Material Issues ▼ Climate-related Financial Information Disclosure (TCFD)

▶ Basic Concept | ▶ Governance | ▶ Strategy | ▶ Risk Management | ▶ Metrics and Targets

Organizational Governance of Climate-related Risks and Opportunities

In 2008, Konica Minolta approved the goal of reducing CO₂ emissions across the entire lifecycle of its products by 80% compared to fiscal 2005 by the Board of Directors. In 2017, the Company added a Carbon Minus target as part of its commitment to contributing, working with business partners, customers and other stakeholders, to contribute to emission reductions for customers and the broader society greater than the emissions directly related to the Company's products and operations. Anticipating the creation of a sustainable society in 2030, 10 years from now, Konica Minolta formulated its long-term management vision by a resolution of the board of directors in 2020 and identified the material issues (including "addressing climate change") that Konica Minolta must confront. As part of its new medium-term business strategy, in May 2023, the board of directors approved a new target of achieving "carbon minus" by 2025 and net zero greenhouse gas emissions across the entire value chain by 2050.

At Konica Minolta, the president has the ultimate responsibility for and authority over climate change issues and is responsible for the effectiveness of environmental management, including climate change. The officers in charge of the environment assigned by the president (Group environmental officers) pursue environmental management and prepare medium-term plans, while the progress of these activities is routinely reported to the Executive Committee and the Board of Directors where they are discussed as management issues. In the process of formulating the medium-term plan, materiality is also subject to ongoing review of the degree of change in risk led by Group environmental officers and evaluations and specific revisions are made as needed. This is then discussed and approved by the management council and other meeting bodies and approved by the Board of Directors.

In addition, to increase the incentives for executive officers to achieve the medium-term CO₂ targets, we have set the "CO₂ emissions reduction rate" as a non-financial indicator among the evaluation indicators that make up the medium-term stock bonus (performance-linked).

The Group's environmental officers report every month to the president, chairman of the Board of Directors and the Audit Committee set up by the president on issues including progress made with environmental management and climate change issues. The Audit Committee routinely monitors and reviews the status of the overall implementation of environmental management led by the president.

At the Audit Committee meeting held in November 2022, we reported on the development and operation of the system for promoting sustainability management, including "Addressing Climate Change." The Company is pursuing the medium-term targets and annual plan related to climate change under the supervision of the Board of Directors.

Please refer to "[Corporate Governance](#)" for more details on the governance structure.

For details on the evaluation and identification process for material issues, [see Here](#).

▶ Identifying Environmental Material Issues ▼ Climate-related Financial Information Disclosure (TCFD)

▶ Basic Concept | ▶ Governance | ▶ Strategy | ▶ Risk Management | ▶ Metrics and Targets

Climate-related Financial Information Disclosure (TCFD) : Strategy

▸ Identifying Environmental Material Issues ▾ Climate-related Financial Information Disclosure (TCFD)

▸ Basic Concept | ▸ Governance | ▸ Strategy | ▸ Risk Management | ▸ Metrics and Targets

Click to jump to the corresponding section in this page

▾ Impact on the Organization's Business, Strategy, and Finances of Climate-related Risks and Opportunities

▾ Adapting to Climate Change

Impact on the Organization's Business, Strategy, and Finances of Climate-related Risks and Opportunities

Implementation and Results of Climate Change Scenario Analysis

Konica Minolta has identified business risks that could adversely affect the performance of the Group in 2030, and business opportunities that can be created by proactively addressing the challenges of climate change, assuming the following two scenarios: one in which the temperature increase is kept below 2°C (equivalent to 1.5°C) and a low-carbon global society is achieved, and one in which the temperature increase exceeds 2°C and the predicted physical effects of climate change materialize.

Konica Minolta utilizes as a framework described below to conduct scenario analysis, employing a process that involves identifying target business areas. This process includes identifying major climate-related risks and opportunities, reviewing existing scientific scenarios for climate change, reviewing and clearly defining risks and opportunities for those scenarios as well as their financial impacts, and reviewing the direction, policies, and strategies for future responses. The climate financial impacts identified by the scenario analysis are reported and discussed at the Environment Promotion Committee, which includes representatives of the divisions of the Konica Minolta Group, and then approved by the officer in charge of environment, who indicates and formulates the direction, policies, strategies and measures for future responses.

If the average global temperature increase is kept below 2°C (equivalent to 1.5°C) and a low-carbon global society is achieved:

If the world as a whole moves toward becoming low-carbon, regulations relating the environment can be stricter, the Group may face additional obligations and costs related to legal compliance. With growing demands from stakeholders for the procurement of renewable energy, it is possible that investments, loans and sales opportunities could be lost, and the corporate brand value could also be damaged. Also the decline in the use of paper in offices and higher costs for manufacturing and procurement as fossil fuels and fossil resources are replaced with alternatives could also affect the Konica Minolta Group's earnings.

Konica Minolta is taking the following measures to address these risks based on its long-term vision for net zero emissions by 2050.

The Company is striving for more efficient production processes, developing and improving its production technologies, and promoting Green Factory activities that reduce both CO₂ emissions and costs. It is also a member of the RE100 international leadership initiative with the aim of operating its business on 100% renewable energy.

The Group is gradually reviewing its electricity purchase contracts of its production and sales bases in Europe, North America and China, and switching to renewable energy-derived electricity.

In addition, the Group is promoting Carbon Neutral Partner activities, in which it digitizes the technologies and know-how of its energy conservation and provides them to its suppliers, so that they can work together with the Group to reduce energy consumption. Through these activities, the Group aims to maximize energy cost reductions and CO₂ emission reductions throughout its supply chain. Over an activity period of three years, the Group will reduce CO₂ emissions by 6% through energy conservation, and then support its suppliers to convert to 100% renewable energy-derived electricity. These efforts can not only address transition risk, but also improve its sales competitiveness based on a strong supply chain and create new business opportunities.

On the other hand, the Company believes that helping to solve its customers' climate change-related issues will lead to business opportunities. Combining Konica Minolta's accumulated imaging and IT technologies, it expects to increase sales by providing services and solutions that help society and customers to achieve their transition plans. As a means for maximizing opportunities, the Company is maximizing its contribution to solving climate change issues at the business planning and product planning stages through activities to create green products. It is pursuing this initiative with the mid- to long-term vision of achieving carbon minus by 2025.

In the short to medium term, the Company will provide digital solutions that transform the supply chain of the printing and apparel industries, functional materials with lower product carbon footprints, hyperspectral imaging that helps improve sortability and recycling rates of used plastics, and transform the production process through inkjet technology. Konica Minolta aims to create new business opportunities through collaboration with suppliers and business partners from an environmental and energy perspective.

Addressing the "Risks" of Climate Change

Impact on Konica Minolta		Target Segment	Classification	Financial Impact	Timeline	Handling
procurement and manufacturing costs	Stakeholder demand for renewable energy procurement	Industry business, digital workplace business	Market evaluation	Medium	Short-term	Introduce renewable-energy-derived electricity at production, R&D, and sales sites
	Replacing fossil resources and fuels in production	Industry business	Policies/Laws	Medium	Medium to long-term	Examine the introduction of CO ₂ -free fuels, examine the introduction of ICP, and optimize the procurement strategy
	Response to new emissions regulations and laws	Industry business, digital workplace business, professional printing business, healthcare business	Policies/Laws	Strong	Short to medium term	Develop energy-saving production technology
Increase in product development costs	Response to the market and new regulations on product energy efficiency	Digital workplace business, professional printing business	Policies/Laws Market	Medium	Short-term	Product energy-saving design in keeping with new environmental labeling standards, compliant with public procurement and bidding requirements
Decrease in sales due to changes in demand for products and services	Decrease in office demand due to acceleration toward a paperless society	Digital workplace business	Market	Strong	Short to medium term	Convert business to paperless operation

The "Opportunities" of Climate Change

Impact on Konica Minolta		Target Segment	Classification	Financial Impact	Timeline
Higher sales due to change in demand for products and services	Digital solutions that transform the printing industry supply chain	Professional printing business	Products/Services	Strong	Short- to medium -term
	Functional materials with lower product carbon footprints	Industry business	Products/Services	Medium	Short- to medium -term
	Digital solutions that transform the apparel industry supply chain	Professional printing business	Products/Services	Minimal	Short- to medium -term
	Hyperspectral imaging that helps improve the separability and recycling rate of used plastics	Industry business	Products/Services	Minimal	Medium -term
	Transformation of the production process with inkjet technology	Industry business	Products/Services	Minimal	Short- to medium -term

If the average global temperature increase exceeds 2°C and the predicted physical effects of climate change materialize:

If physical risks due to climate change materialize around the world, unstable procurement of paper materials could result in the loss of business opportunities due to damage of forest resources caused by climate disasters. Also, if chronic climate change effects were to continue, such as altered weather patterns, and the supply of raw materials could be reduced or halted. As a result, operations of the Group and its suppliers might be temporarily halted, and production and shipping could be delayed.

As a measure to adapt, the Company now trace raw material supply routes back to the crude raw materials and work to secure multiple suppliers and examine alternative materials for raw materials that face high risk when it comes to securing stable supply.

In the professional printing and office printing businesses, the Company has multiple production bases in Japan, Europe, and North America that produce and fill printing toner and produce parts for consumables. The Company is working to establish highly resilient supply chain systems that can supply products in the regions where they are needed.

In the mainstay office printing business, the Company will shift to a business model that does not depend on paper output and reduce its dependence on forest resources by expanding its service package fee structures.

At Konica Minolta's production sites and those of its major suppliers, the Company analyzes water risk using Aqueduct, an assessment tool developed and provided by the World Resources Institute (WRI). Sites with high water risk systematically take countermeasures. Moreover, Konica Minolta has prepared a Business Continuity Plan (BCP), a specific action plan for ongoing operations in the event that large-scale natural disasters occur. In addition to systems set up for each business division and subsidiary, it has also set up an initial response system, that collects information on the extent of damage immediately after a disaster and determines whether the BCP should be activated. On the other hand, even if the impacts of climate change materialize, that could create business opportunities.

In the medium term, it can tap into societal demand for imaging IoT and sensing solutions to prevent the effects of abnormal weather and natural disasters and ensure preventive maintenance of infrastructure, as well as healthcare solutions, which can be used at disaster medical care sites.

Addressing the "Risks" of Climate Change

Impact on Konica Minolta		Target Segment	Classification	Financial impact	timeline	Handling
Lower revenue due to a reduction in production capacity	Insufficient or interrupted supply of natural resources due to changes in climate patterns	Industry business	Chronic physical	Strong	Long-term	Product design and development not dependent on particular natural resources
	Supply chain interruptions following large-scale natural disasters	Digital workplace business, professional printing business	Acute physical	Strong	Medium-term	Establish business continuity management (BCM), decentralize production and supply of consumables by region
	Depletion of water resources and restrictions on water intake	Digital workplace business, professional printing business and industry business	Chronic physical	Minimal	Long-term	Water risk assessment and reduction of water consumption at production and procurement sites
Decrease in sales due to changes in demand for products and services	Limited access to forest resources due to abnormal climate and forest fires	Digital workplace business, professional printing business	Chronic physical	Strong	Long-term	Turn the shift to paperless into business opportunity

The "Opportunities" of Climate Change

Impact on Konica Minolta		Target Segment	Classification	Financial impact	Timeline
Increase in sales due to changes in demand for products and services	Image IoT and sensing solutions that contribute to disaster prevention and the mitigation of abnormal climate and natural disasters	Industry business	Products/Services	Minimal	Medium-term
	Healthcare solutions utilizing diagnostic imaging at disaster medical sites	Healthcare business	Products/Services	Minimal	Medium-term

Climate-related risks and opportunities for Konica Minolta

	Risks	Opportunities	
	Impact on procurement	Impact on direct operations	Impact on product and service demand
If the average global temperature increase is kept below 2°C (equivalent to 1.5°C) and a low-carbon global society is achieved	Higher procurement and manufacturing costs <ul style="list-style-type: none">● Stakeholder demand for renewable energy procurement Short-term● Replacing fossil resources and fuels in production Long-term Medium-term● Response to emissions regulations and laws Medium-term Short-term		Increase in product development costs <ul style="list-style-type: none">● Response to the market and new regulations on product energy efficiency Short-term Lower sales <ul style="list-style-type: none">● Decrease in office demand due to acceleration toward a paperless society Medium-term Short-term Higher sales <ul style="list-style-type: none">● Digital solutions that transform the printing industry supply chain Medium-term Short-term● Functional materials with lower product carbon footprints Medium-term Short-term● Digital solutions that transform the apparel industry supply chain Medium-term Short-term● Hyperspectral imaging that helps improve the separability and recycling rate of used plastics Medium-term● Transformation of the production process with inkjet technology Medium-term Short-term
	Lower revenue due to a reduction in production capacity <ul style="list-style-type: none">● Insufficient or interrupted supply of natural resources due to changes in climate patterns Long-term● Supply chain interruptions following large-scale natural disasters Medium-term● Depletion of water resources and restrictions on water intake Long-term		Lower sales <ul style="list-style-type: none">● Limited access to forest resources due to abnormal climate and forest fires Long-term Higher sales <ul style="list-style-type: none">● Image IoT and sensing solutions that contribute to disaster prevention and the mitigation of abnormal climate and natural disasters Medium-term● Healthcare solutions utilizing diagnostic imaging at disaster medical sites Medium-term

<Assumptions for scenario analysis>

- Scientific scenarios used: IPCC RCP2.6, RCP8.5 IEA NZE 2050, CPS
- Classification of risks and opportunities: Transition risks (policies and laws, technologies, markets, reputation), physical risks (acute physical, chronic physical), opportunities (resource efficiency, energy, products/services, markets, resilience)
- Definition and evaluation criteria for "financial impact": "Large": additional cost or profit decrease of 1 billion yen or more, "Medium": additional cost or profit decrease of 100 million to 1 billion yen, "Minimal": additional cost or profit decrease of less than 100 million yen
- Definition and evaluation criteria for "financial effect": "Large": Profit of 10 billion yen or more, "Medium": Profit of 1 to 10 billion yen, "Minimal": Profit of less than 1 billion yen
- Definition and evaluation criteria for "timeline": "Long term": 10 years or more, "Medium term": 3 to 10 years, "Short term": 1 to 3 years

Adapting to Climate Change

Based on the results of scenario analysis in case the physical impacts of climate change materialize, the Company has established initiatives to adapt to climate change upstream (suppliers), in operations (production and R&D), and downstream (customers). It identifies the characteristics and features of each country and region that will have an impact, establish countermeasures to be taken, and implement them throughout the entire supply chain.

[For more information on the risks and opportunities of adapting to climate change, please see “Konica Minolta Group’s Adapting to Climate Change.”](#)

☒ Identifying Environmental Material Issues | ☒ Climate-related Financial Information Disclosure (TCFD)

› Basic Concept | › Governance | › **Strategy** | › Risk Management | › Metrics and Targets

Climate-related Financial Information Disclosure (TCFD) : Risk Management

▶ Identifying Environmental Material Issues

▼ Climate-related Financial Information Disclosure (TCFD)

▶ Basic Concept | ▶ Governance | ▶ Strategy | ▶ Risk Management | ▶ Metrics and Targets

Process Used to Identify, Assess and Manage Climate-Related Risks

Konica Minolta carries out risk management so as to maximize returns while minimizing negative impacts and assesses risks from a medium- and long-term perspective. Environmental risks, including climate change are assessed and managed from a medium- and long-term perspective by assessing the impact and uncertainty of climate change risks under two scenarios: “If the average global temperature increase is kept below 2°C (equivalent to 1.5°C) and a low-carbon society is achieved” and “If the average global temperature increase exceeds 2°C and the predicted physical effects of climate change materialize.” In addition, we have positioned this environmental risk as a management risk for the whole Group and the Risk Management Committee manages that risk.

The Group Environment Promotion Committee discusses plans and measures on the response to climate change at its quarterly environmental meetings and also reassesses the extent of changes to risks twice a year. The Group Environmental Officers report to the president on progress made with the plan every month. Important environmental issues are also reported by the Group Environmental Officers to the Management Council, Risk Management Committee meetings, and other meeting bodies. The Board of Directors receives regular reports on the progress of the management plan for addressing climate change at their meetings, and they monitor the plan’s execution. The following frameworks were used for classifying risk. Policy and law, technology, markets, and reputation were used for transition risk. Acute physical and chronic physical were used for physical risk.

Please refer to [“Risk Management”](#) for more details on risk management systems and processes.
Please refer to [“Evaluation and Identification Process for Material Issues”](#) for more details on the relevance of material issues, which are the targets of risk management.

▶ Identifying Environmental Material Issues

▼ Climate-related Financial Information Disclosure (TCFD)

▶ Basic Concept | ▶ Governance | ▶ Strategy | ▶ Risk Management | ▶ Metrics and Targets

Climate-related Financial Information Disclosure (TCFD) : Metrics and Targets

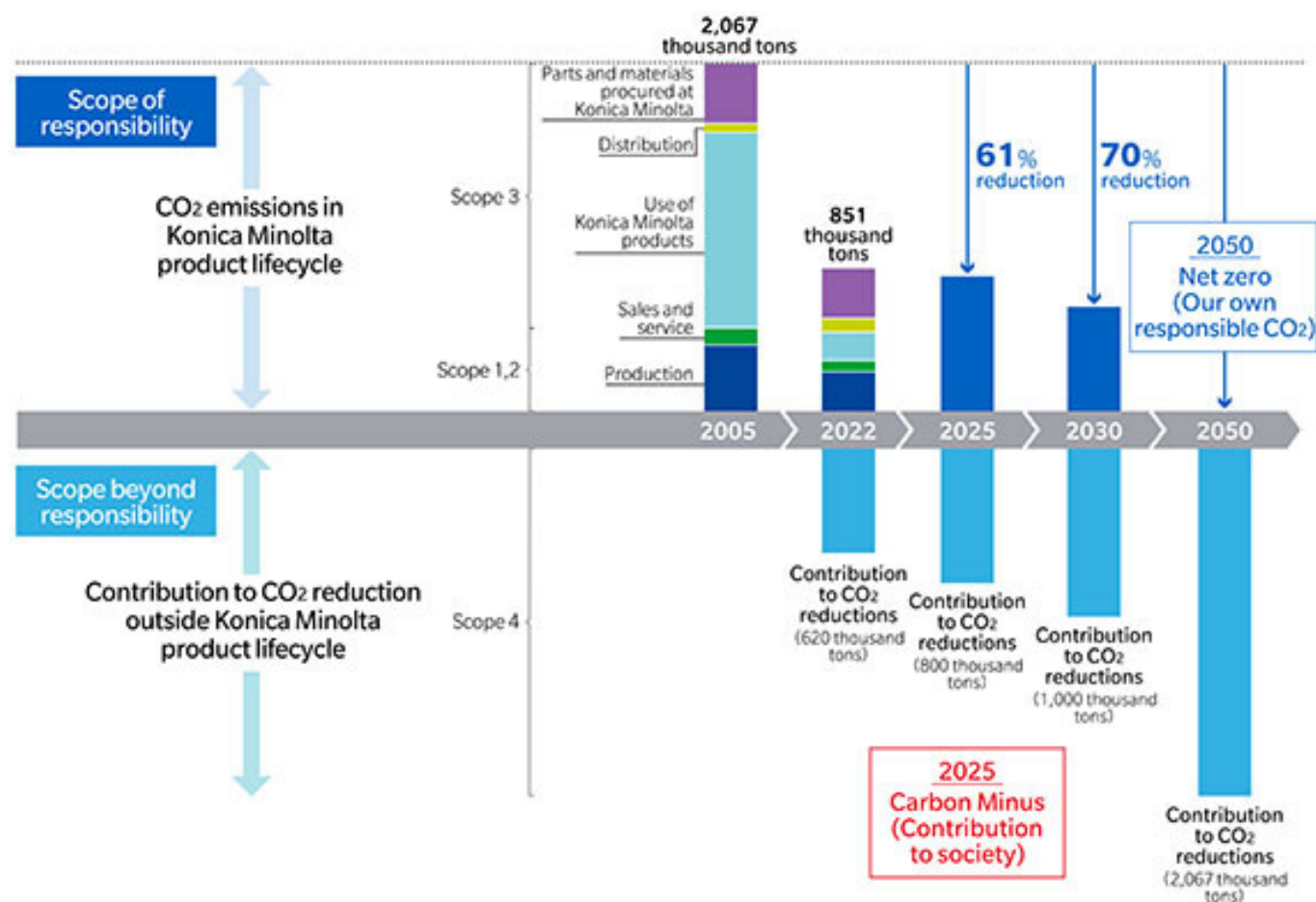
Identifying Environmental Material Issues Climate-related Financial Information Disclosure (TCFD)

Basic Concept Governance Strategy Risk Management Metrics and Targets

Metrics and Targets Used to Assess and Manage Climate-related Risks and Opportunities

Konica Minolta seeks to achieve Carbon Minus status by actively helping to reduce global CO₂ emissions in cooperation with its stakeholders, especially suppliers and customers. The Group defines Carbon Minus status as contributing more to CO₂ emissions in areas outside of our responsibility (reduction of other than Scope 1, 2 and 3) than to CO₂ emissions reductions in areas we are responsible for (Scope 1, 2, and 3 emission). Based on recent social demands, we have decided to target “net zero” CO₂ emissions in areas we are responsible for. Konica Minolta hopes to accelerate the effects of decarbonization, broaden its ties with stakeholders, and grow its business together, by not only helping stakeholders fulfill their social responsibilities but also fulfilling ours.

Carbon Minus and Net Zero Targets



(For more information on targets and results, please refer to [Sustainability Targets and Results](#))

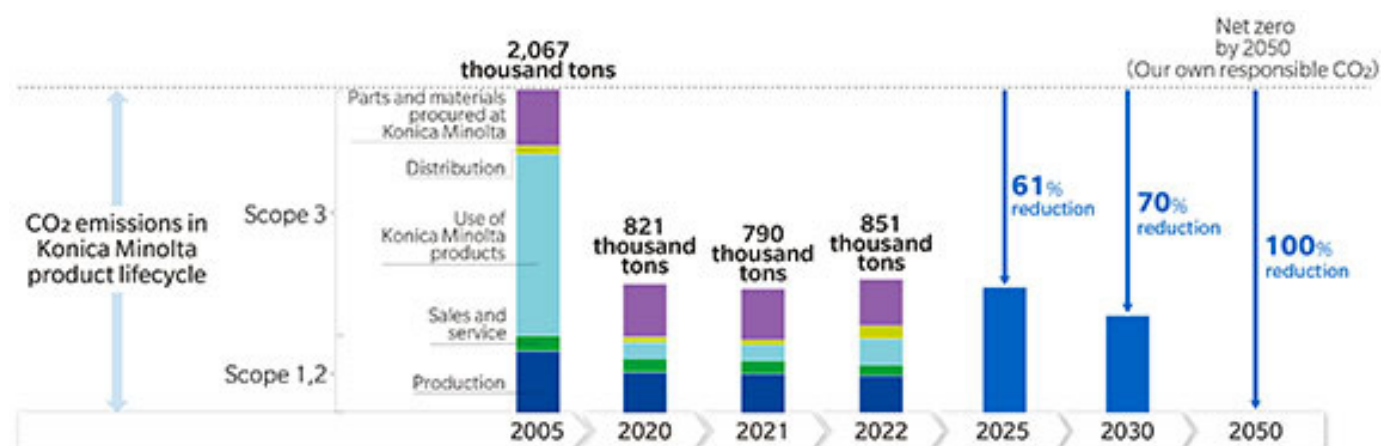
For detailed data, please refer to [the Environmental Data](#) on the [ESG Data](#) page.

1. Greenhouse Gas Emissions (Scope 1, 2, and 3 Emissions)

Konica Minolta has established the goals of reducing CO₂ emissions over the product lifecycle, as its metric for managing the risks posed by climate change. Product life cycle CO₂ emissions include all Scope 1 and 2 emissions (CO₂ emissions generated during the production stage and the sales and service stage) and the main components of Scope 3 emissions (CO₂ emissions at the procurement stage, distribution stage, and product use stage).

In the medium term, Konica Minolta has set a target of a 70% reduction compared to 2005 CO₂ emission levels by 2030, and in the short term, a 61% reduction by 2025. In fiscal 2022, the reduction was 850,000 tons (Scope 1 and Scope 2 were 150,000 tons each, and the primary Scope 3 was 550,000 tons).

CO₂ Emissions in the Product Lifecycle (Scopes 1, 2, and 3)



(Unit: thousand tons-CO₂)

	Results				Targets	
	FY2005 (Base year)	FY2020	FY2021	FY2022	FY2025	FY2030
Product life cycle CO₂ emissions	2,067	821	790	851	800	650
Scope 1 (Production, Sales and service)	254	147	159	151	-	180
Scope 2 (Production, Sales and service)	220	159	164	151	-	180
Scope 3 (Procurement, Distribution, Product Use)	1,592	515	467	548	-	470
Category 1 (Purchased goods and services)	397	295	247	296	-	470
Category 4 (Upstream transportation and distribution) Of which, distribution of products	58	23	41	83	-	470
Category 11 (Use of sold products)	1,137	197	179	169	-	470

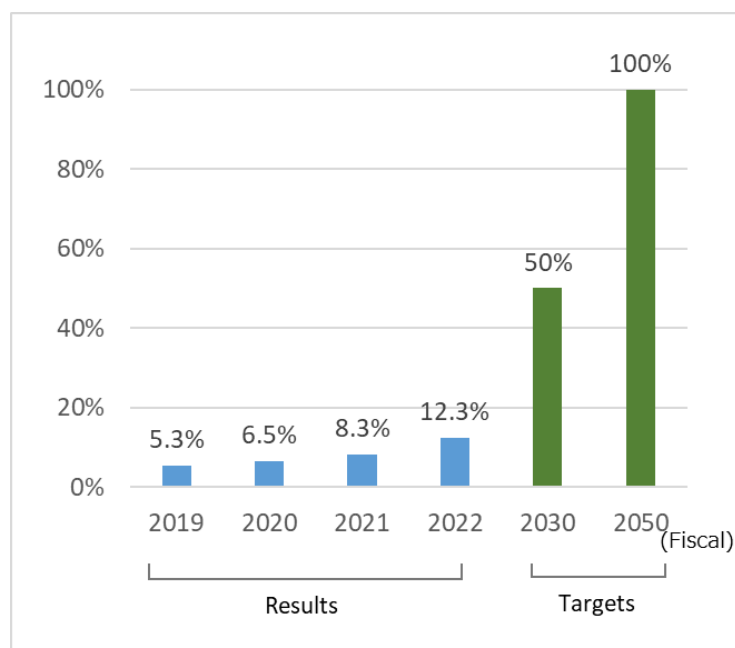
Note: Figures may not add up due to rounding.

2. Transition Risk

Konica Minolta believes that conducting business with a focus on quickly conforming to the needs of renewable energy-based society that is not reliant on fossil fuels, which are a major cause of man-made CO₂ emissions, is a necessary condition for any company to grow sustainably. Based on this belief, Konica Minolta has adopted the “ratio of electricity derived from renewable energy” as a management indicator for transition risk and set a target of procuring 100% renewable energy for use in its business operations by 2050. In the medium term, we have set a target of increasing the ratio to more than 50% by 2030. In fiscal 2022, the ratio reached 12.3%, exceeding the target of 10% or more.

In the Business Technologies Business, which accounts for about 75% of the Konica Minolta Group’s total sales, it is becoming increasingly clear that stakeholders are demanding that the Group introduce renewable energy procurement, so it is prioritizing transition risk as a priority action item. In fiscal 2022, Konica Minolta installed solar power generation equipment and used renewable energy certificates to achieve 100% renewable energy at its main production base for office equipment in Malaysia. As a result, it has achieved 100% renewable energy at all MFP production sites and has converted 33% of the total electricity consumption of its Business Technologies Business to renewable energy. In fiscal 2023, the Group will bring renewable energy use up to 37%, and will continue to conduct annual risk reviews and consider introducing renewable energy-derived electricity in projects with potential risks.

Ratio of electricity derived from renewable energy



* Ratio of renewable energy-derived electricity to the Konica Minolta Group's overall energy use (not including co-generated power) in fiscal 2019

* Ratio of renewable energy-derived electricity to the Konica Minolta Group's overall energy use beginning after fiscal 2020.

3. Physical Risk

The Business Technologies Business accounts for about 75% of the Konica Minolta Group's total sales. The Business Technologies Business, the Group's core business, delivers products to customers in 150 countries around the world. Therefore, a large-scale climate disaster in any part of the world could affect the Group's production and supply capacity. To strengthen the Group's cost competitiveness and supply products to the market quickly, the Konica Minolta Group will continue to employ overseas production and maintain a policy of procuring parts and materials from multiple suppliers around the world.

In addition, to prepare for such a disaster risk, the Group is working to ensure a highly resilient supply chain structure that can supply products at the place of consumption by developing multiple Konica Minolta sites in Japan, Europe, and North America to produce and supply parts for consumables in the Professional Print Business and the Office Business, as well as printing toner. In addition, the Group is transforming its business portfolio from a traditional MFP-centered business model that relied on physical goods to the Digital Workplace Business that provides new digital solutions.

4. Climate-related Opportunity

Konica Minolta believes that as society transforms in the direction of decarbonization, the solving of climate change issues will provide business opportunities and lead to sustainable corporate growth. By actively introducing innovative technologies and combining them with Konica Minolta's strengths in imaging-IoT technology and digital input and output, the Group seeks to both solve environmental issues and expand business by creating solutions that help solve social issues, including climate change.

The Group has also established metrics for both the economic and environmental value it creates by providing products and solutions to stakeholders. the economic value metrics are: the volume of sales of green products that help address climate change, and the percentage of total group sales they represent.

Economic Value

In fiscal 2022, actual sales of green products that help address climate change came to 776.6 billion yen, compared to a target of 695.5 billion yen. This represented 68% of the Konica Minolta Group's total sales.

In fiscal 2025, Konica Minolta has redefined the criteria for green product sales that help address climate change and has set a target of 61% of total sales.

Environmental Value

In fiscal 2022, CO₂ emissions reduction during product usage was 28 thousand tons, against a target of 25 thousand tons. The contribution to CO₂ reductions was 624 thousand tons, against a target of 644 thousand tons.

In fiscal 2025, the Group has set targets of reducing CO₂ emissions during product usage by 23 thousand tons and contributing to CO₂ reductions by 800 thousand tons, which is more than the amount of CO₂ emissions in the lifecycle of its products.

5. Capital deployment

Konica Minolta is transforming has identified “addressing climate change” as one of the five material issues to be addressed in its long-term management vision. The Company is investing capital in business activities that contribute to improving corporate value and achieving a low carbon society over the medium to long term. R&D expenses for projects that help address climate change (contribute to CO₂ reduction) totaled 27.8 billion yen in fiscal 2022, accounting for about 43% of the Konica Minolta Group’s total R&D expenses.

6. Remuneration

In order to increase incentives to achieve the goals of the Medium-term Business Plan and to promote the ownership of the Company's shares, Konica Minolta has introduced the CO₂ emission reduction rate as one of its non-financial indicators for evaluation that comprise the performance-linked medium-term stock remunerationn.

Executive remuneration for the President and CEO and other Executive Officers will be determined in the range of 0% to 200% after the completion of the Medium-term Business Plan, depending on the degree of achievement of the targets, and will be delivered in the form of Company stock. It is selected as an evaluation indicator in order to address climate change while linking environmental value to business growth.

› [Click here for more information on remuneration\(Governance Structure and Operations > Compensation for Directors and Executive Officers\)](#)

› [Click here for more information on Green Products\(Sustainability > Environmental Activities > Sustainable Solutions \(product initiatives\):Konica Minolta's Approach\)](#)

› [Click here for more information on Green Factory\(Sustainability > Environmental Activities > Sustainable Factory \(procurement and production initiatives\):Konica Minolta's Approach\)](#)

› [Click here for more information on Green Marketing\(Sustainability > Environmental Activities > Sustainable Marketing: Konica Minolta's Approach\)](#)

[▶ Identifying Environmental Material Issues](#) | [☑ Climate-related Financial Information Disclosure \(TCFD\)](#)

› [Basic Concept](#) | › [Governance](#) | › [Strategy](#) | › [Risk Management](#) | › [Metrics and Targets](#)

Material Issue 5: Using Limited Resources Effectively

Background

Social and environmental issue outlook for 2030

Given the world's growing population and the growing rate of resource consumption, it is estimated that the equivalent of two earths will be needed by 2030. In order to make more effective use of limited resources, companies need not only to recover and recycle waste, but also to reduce the volume of resources wasted. This means that drastic workflow innovations are required, such as using on-demand production and IoT technology, to reduce resource waste in the supply chain. Circular economies also need to be created by developing material technologies that facilitate recycling, while building better networks for recovering used resources.

Opportunities for Konica Minolta to create value, and risks to be minimized

Opportunities

- Through Konica Minolta businesses
 - Constructing efficient supply chains for client companies using on-demand production
 - Reducing workflow and supply chain loss for corporate clients

Risks

- Affecting Konica Minolta
 - Decline in competitiveness due to delayed participation in the circular economy
 - Production or shipment delays due to water-related risks and water resource depletion

Vision for 2030 and Medium-Term Plan

Vision for 2030: Promote the effective use of resources at Konica Minolta, while also helping corporate clients and suppliers to achieve effective use.

Related SDGs:



Results of Previous Medium-Term Plan

Themes		Indicators		Results			Targets
				FY2020s	FY2021	FY2022	FY2022
Effective Use of Resources by Transforming Customer Business Processes		Social and environmental value	Reduction of waste discharge of customers (thousand tons)	320	320	340	350
		Economic value	Solution sales (billion yen)	53	59.9	79.3	78
Effective Use of Resources Relating to Konica Minolta Sites, Suppliers, Products and Services	Reductions to environmental impact from Konica Minolta production sites*1	Social and environmental value	Reduction of waste discharge (thousand tons)*2	0.6	1.3	1.7	1.7
		Economic value	Monetary equivalent of waste reductions (million yen)	130	260	470	300
	Reduction of environmental impact through the use of Konica Minolta products and services	Social and environmental value	Amount of resources saved and recycled (thousand tons)	12	12	12	15
		Economic value	Sustainable solution sales (billion yen)	676	597	777	690

New Medium-Term Plan for FY2025

Themes		Indicators		Targets		
				FY2023	FY2024	FY2025
Effective Use of Resources by Transforming Customer Business Processes		Social and environmental value	Reduction of waste discharge of customers (thousand tons)	360	380	400
		Economic value	Solution sales (billion yen)	89	97	100
Effective Use of Resources Relating to Konica Minolta Sites, Suppliers, Products and Services	Reductions to environmental impact from Konica Minolta production sites*1	Social and environmental value	Reduction of waste discharge (thousand tons)*2	0.2	0.5	0.8
		Economic value	Monetary equivalent of waste reductions (million yen)	-	-	-
	Reduction of environmental impact through the use of Konica Minolta products and services	Social and environmental value	Amount of resources saved and recycled (thousand tons)	13	14	14
		Economic value	Sustainable solution sales (billion yen)	-	-	840

Note: Targets and results have been revised retrospectively to fiscal 2020 figures as the method of calculating the effects of measures was changed.

*1 Cumulative reduction effect for each fiscal year from FY2020 to FY2022 and FY2023 to FY2025. Total reduction effects of measures implemented from the first year of each fiscal year to the relevant fiscal year for each year.

*2 Targets set for plastic waste reduction and recycling activities based on the Law for Recycling Plastic Materials enacted in Japan, including the reduction of plastic waste at major sites in Japan.

Konica Minolta's Approach

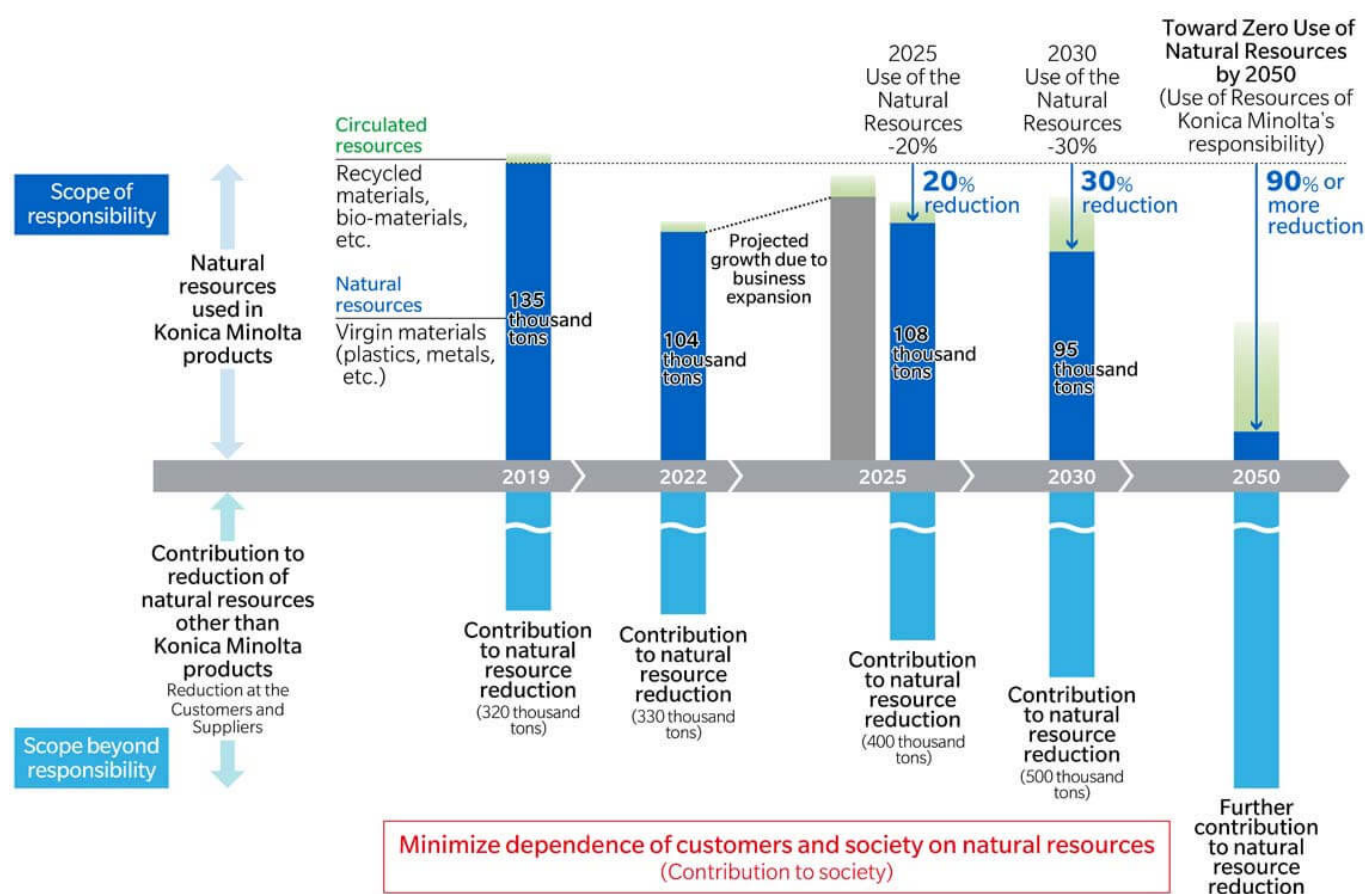
In 2023, Konica Minolta set a new vision for the materiality “Using limited resources effectively” and added it as one of the items in Eco Vision 2050. The Company will reduce resource consumption and expand its use of recyclable resources to reduce its dependence on the earth’s resources* to zero by 2050 for the resources used in its products.

To reduce the use of the earth’s resources in products other than its own, Konica Minolta will help transform work-styles and manufacturing processes that make effective use of the resources of customers and society through on-demand production and imaging IoT using the solutions it provides.

For example, in the field of commercial printing, the company is providing support for the transition to on-demand printing, thereby transforming the business model of mass production and disposal. The widespread use of Konica Minolta products for small-batch, decentralized printing can accelerate innovation in the printing industry’s supply chain while achieving resource conservation and waste reduction.

Moreover, Konica Minolta will not only effectively use renewable materials that contribute to waste reduction in the broader society, but also leverage DX technologies to promote collaboration with even more corporate clients and business partners, taking on the challenge of broad-scale environmental impact reduction. It will promote the creation of circular models linked to business models.

*Natural resources: Resources that require new drilling or mining, such as crude oil or mineral resources, and are generally synonymous with depletable resources.



*Natural resources: Resources that require new drilling or mining, such as crude oil or mineral resources, and are generally synonymous with depletable resources.

Businesses: Effective Use of Resources by Transforming Customer Business Processes

- Eliminating inventory and disposal in customer processes using on-demand printing and production
 - › Using Digital Technology to Reduce the Environmental Impact of Commercial Printing — Digital Inkjet Printer Accuriojet KM-1
- Reducing customer workflow and supply chain loss utilizing materials and process technologies that use them
 - › Dramatically Improving Productivity of Polarizer Manufacturers with Obliquely Oriented QWP Film
- Contributing to resource recycling through sensing technology
 - › Identification of plastic materials for recycling – hyperspectral imaging

Internal Action: Effective Use of Resources Relating to Konica Minolta Sites, Suppliers, Products and Services

- Reducing environmental impact and costs at Konica Minolta sites
 - › Green Factory Certification System
 - › Resource Conservation and Recycling in Production Operations
- Reducing supplier environmental impact and costs using DX
 - › Carbon Neutral Partner Activities
- Creating circular models linked to business models
 - › Resource Conservation and Recycling of Products
 - › Product Recycling



Environment

Konica Minolta is based on the concept of growing existing businesses and creating new ones by helping to solve environmental problems such as climate change. The aim is to grow the company and become an enterprise that is vital to the world.

Policy

- › Konica Minolta Environmental Policy
- › Environmental Management Concept
- › Eco Vision 2050

System

- › Environmental Management System

Strategy

- › Identifying Environmental Material Issues
- › Participation in Initiative
- › Climate-related Financial Information Disclosure (TCFD)

Konica Minolta's Environmental Activities

- › Overview of Environmental Activities
- › Creating Products and Solutions to Solve Environmental Issues (Green Products Certification System)
- › Production Activities to Solve Environmental Issues (Green Factory Certification System)
- › Decarbonization of Suppliers (Carbon Neutral Partner Activities)
- › Sales Activities to Solve Environmental Issues (Green Marketing Activities)
- › Cooperation with Domestic Companies to Solve Environmental Issues (Environmental Digital Platform)

Addressing Climate Change

- › Basic Concept
- › Konica Minolta's Approach
- › Promoting Decarbonization with Products and Solutions
- › Achieving Decarbonization in Sales Activities
- › Adapting to Climate Change
- › Plan and Results
- › Introducing Renewable Energy at Company Sites
- › Promoting Decarbonization in Production
- › Promoting Decarbonization in Distribution

Building a Recycling-Oriented Society

- › Basic Concept
- › Konica Minolta's Approach
- › Developing Resource-Conserving Products
- › Turning Waste into High-Value Materials (High-Functionality Recycling)
- › Plan and Results
- › Recovery and Recycling of Used Products
- › Resource Conservation and Recycling in Production Operation
- › Reduction of Use of Packaging Materials

Ensuring Product and Chemical Substance Safety

- › Basic Concept
- › Green Procurement System
- › Systems for Eliminating Chemical Substance Risks
- › Management of Chemical Substances in Products

Biodiversity and Water Resources

- › Basic Concept
- › Contributing to Biodiversity through Products
- › Consideration of Biodiversity/Water Resources in Production Activities

Environmental Data

- › Overall View of Environmental Impacts
- › ESG Data
- › CO₂ Emissions Across the Entire Supply Chain

-
- › Environmental Labels and Certifications

- › SDS (MSDS)

Environmental Sitemap

This is an environmental sitemap that provides a broad overview of Konica Minolta's environmental initiatives.

Konica Minolta Environmental Policy

▶ Konica Minolta Environmental Policy

▶ Environmental Management Concept

▶ Eco Vision 2050

The Konica Minolta Group aims to promote sustainable development and profitable growth. We integrate environmental, economic and social perspectives into our business strategies so that our business activities are implemented in harmony with human lives and with the environment in all aspects.

Our concept is to make steady progress toward resolution of environmental challenges based on quantitative measurement and analysis of reliable data in regard to environmental performance and impact. This basic concept is demonstrated in the following affirmation:

"Management Based On Facts"

1. Working toward a sustainable society as a global citizen

In response to the call for a sustainable society, we will conduct business activities from the perspective of on-going enhancement of performance in environmental preservation, economic growth and social responsibilities (ethics). Every one of us will enhance its knowledge and awareness on the environment, economies and societies on a global scale and act with responsibility in pursuit of a sustainable society.

2. Compliance with laws and other requirements

We will comply with legal requirements in respective countries and regions, as well as our Group standards. In addition, we will respect, in an equitable manner, expectations of our stakeholders and consensus in the international community.

3. Consideration for the environment throughout the entire life cycle of products and services

We are committed to reducing the environmental load in all stages throughout the entire life cycle of products and services, recognizing that responsibility for a product rests with its manufacture.

4. Initiatives to counter global warming

We will continuously reduce greenhouse gas emissions that derive from our business activities from the perspective of the life cycle of our products and services throughout the entire Group, recognizing that global warming is one of the most important world issues.

5. Initiatives toward a recycling-oriented society

We are always reviewing what we can do as a corporate citizen in order to create recycling-oriented society while striving for minimizing consumption of natural resources and promoting "Zero Waste Emission" activities. In addition, we will accelerate initiatives for the recovery and recycling of end-of-life products and packaging materials.

6. Prevention of chemical pollution and minimization of potential risks to the environment

We will take every countermeasure for preventing chemical pollutions, recognizing that chemical substances can impose significant impact on human health and safety and the environment. At the same time, we will continuously suppress use of chemicals and reduce discharge volume in order to minimize environmental risks.

7. Promotion of information disclosure

We will execute accountability to all the stakeholders by actively disclosing environmental information and ensuring risk communication. We will as well make every effort to accomplish our commitment to the societies. Our Environmental Policy is to be disclosed to the public.

8. Establishment of environmental objectives and targets

We establish and administer environmental objectives, targets, and management programs to translate this Environmental Policy into reality. We will continuously review such objectives, targets and programs for further improvement of our environmental performance.

April 1, 2022



Toshimitsu Taiko
President and CEO
Konica Minolta, Inc.

In order for a company to grow sustainably in the future, it is essential not only to pursue economic value but also to address important issues facing society including environmental problems. Based on the environmental policy, Konica Minolta will continue to reduce environmental impact across the whole product lifecycle, from product development through procurement, manufacturing, distribution, sales, customer service and recycling, under the philosophy of “The Creation of New Value.” In the product lifecycle, we will expand our business by M & A and enter new projects in our business activities, including suppliers, outsourcing partners and customers.

We will also contribute to the realization of a sustainable society by providing our employees with the necessary educational opportunities so that each and every employee can create environmental and social value as well as economic value through their business activities.

[▶ Konica Minolta Environmental Policy](#)

[▶ Environmental Management Concept](#)

[▶ Eco Vision 2050](#)

Environmental Management Concept

[Konica Minolta Environmental Policy](#)
[Environmental Management Concept](#)
[Eco Vision 2050](#)

Expand Business Contributions by Resolving Environmental Problems

Konica Minolta aims to be “a global company that is vital to society, bringing vision to reality,” and “a robust and innovative company, continually evolving and contributing to the sustainable growth of society and individuals.” This will allow Konica Minolta to realize its management philosophy of “the creation of new value.” Konica Minolta practices sustainability and environmental management that integrates efforts to help resolve social and environmental issues with corporate growth. With the understanding that sustainability and environmental initiatives are themselves management strategies, the company believes that their significance lies in integrating to a higher degree the effort for “supporting people to achieve their own purpose” and “realizing a sustainable society” through its business activities.

Konica Minolta aims to achieve further growth as a global company and to realize a sustainable society. To achieve this vision, it is necessary to identify social challenges as business opportunities and generate innovative solutions, which in turn will drive Konica Minolta’s own sustainable growth.

Konica Minolta’s environmental management is based on the concept of growing existing businesses and creating new ones by helping to solve environmental problems such as climate change. The aim is to grow the company and become an enterprise that is vital to the world.

For example, a changeover from the electricity consumed in factories and offices to clean electricity that emits no greenhouse gases (GHG) would incur previously unnecessary costs, such as costs for installing solar panels and other equipment for generating renewable energy-derived electricity, and for purchasing emission credits. In addition, product design and production process innovation are essential for recycling resources and reducing emissions of hazardous substances and could pose a risk of reducing productivity and quality. However, a necessary precondition to achieving a sustainable business, is to create environmental value with no loss of business value. Konica Minolta practices environmental management and views it as a business opportunity to create new business value by maintaining a close connection with stakeholders including customers, suppliers, and society.

Policy of Environmental Management in the Konica Minolta Style



Creation of Shared Value with Stakeholders

When working to overcome environmental challenges on a global scale, there is a limit to what can be achieved by just one company. This is why it is essential to expand the impact of environmental efforts by working with stakeholders such as suppliers, customers, and local communities.

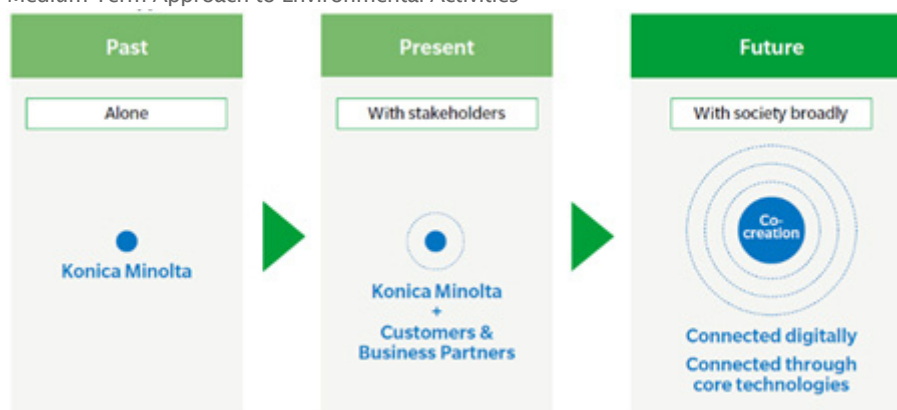
Konica Minolta is working to develop its business together with the society by contributing to reduce CO₂ of society as a whole by collaborating with stakeholders, including business partners and customers.

CO₂ reduction activities at Konica Minolta's suppliers have produced tremendous results. As a result of passing on knowhow for raising environmental and business value to a total of 49 companies up until fiscal 2022, Konica Minolta achieved a CO₂ reduction of 21,000 tons and an effective resource utilization of 3,000 tons, which led to a cost reduction equivalent to 600 million yen. Of the 21,000 tons of CO₂ reductions, 3,000 tons are reductions achieved from the manufacture of parts and materials procured in-house, and 18,000 tons are reductions in CO₂ emissions from the manufacture of parts of materials not procured in-house. The company believes that, by working with its suppliers, it can go beyond its responsibility to support their activities that fulfill their social responsibility and contribute more actively to reducing CO₂ emissions on this planet. Moreover, through its sustainable marketing activities started in 2014, Konica Minolta has been providing its own environmental expertise and helping to solve environmental issues of customers who share Konica Minolta's environmental management, thereby building a relationship of trust and making Konica Minolta to be chosen as a business partner. Through this activity, Konica Minolta has established relationships with more than 500 customer companies.

For example, the company launched a digital environmental platform as a measure to collaborate with more companies. In its sustainable marketing activities, the company is limited to exchanging information only with client companies. However, if environmental information is digitally distributed among the company's 500 established client companies, participating companies can take their environmental management to a new level. This led Konica Minolta to create the "Environmental Digital Platform," a mechanism for sharing information on environmental management launched in June 2020, which serve as an ecosystem for co-creating environmental management. Konica Minolta aims to make dramatic leaps in boosting the effect this ecosystem has in reducing the environmental impact of the broader society.

› Environmental Digital Platform

Medium-Term Approach to Environmental Activities



Eco Vision 2050

[▶ Konica Minolta Environmental Policy](#)
[▶ Environmental Management Concept](#)
[▶ Eco Vision 2050](#)

Long-Term Environmental Target Eco Vision 2050

Given the urgency of global environmental issues, global businesses have a great responsibility to help build a more sustainable society by reducing environmental impact.

With Eco Vision 2050, Konica Minolta exemplifies its determination to fulfill its long-term environmental responsibilities.

Eco Vision 2050

- 1-1. Reduce CO₂ emissions throughout the product lifecycle by 61% by 2025, compared to fiscal 2005 levels and help to reduce more than 800 thousand tons of CO₂ emissions other than those in Scope 1, 2, and 3 to achieve Carbon Minus status
- 1-2. Reduce CO₂ emissions throughout the product lifecycle to **net zero by 2050**
- 2-1. Reduce the use of **the earth's natural resources in our products by 90% or more by 2050**
- 2-2. Contribute more to reducing use of the earth's natural resources through products other than our own
- 3. Work to promote restoration and preservation of biodiversity

Addressing Climate Change

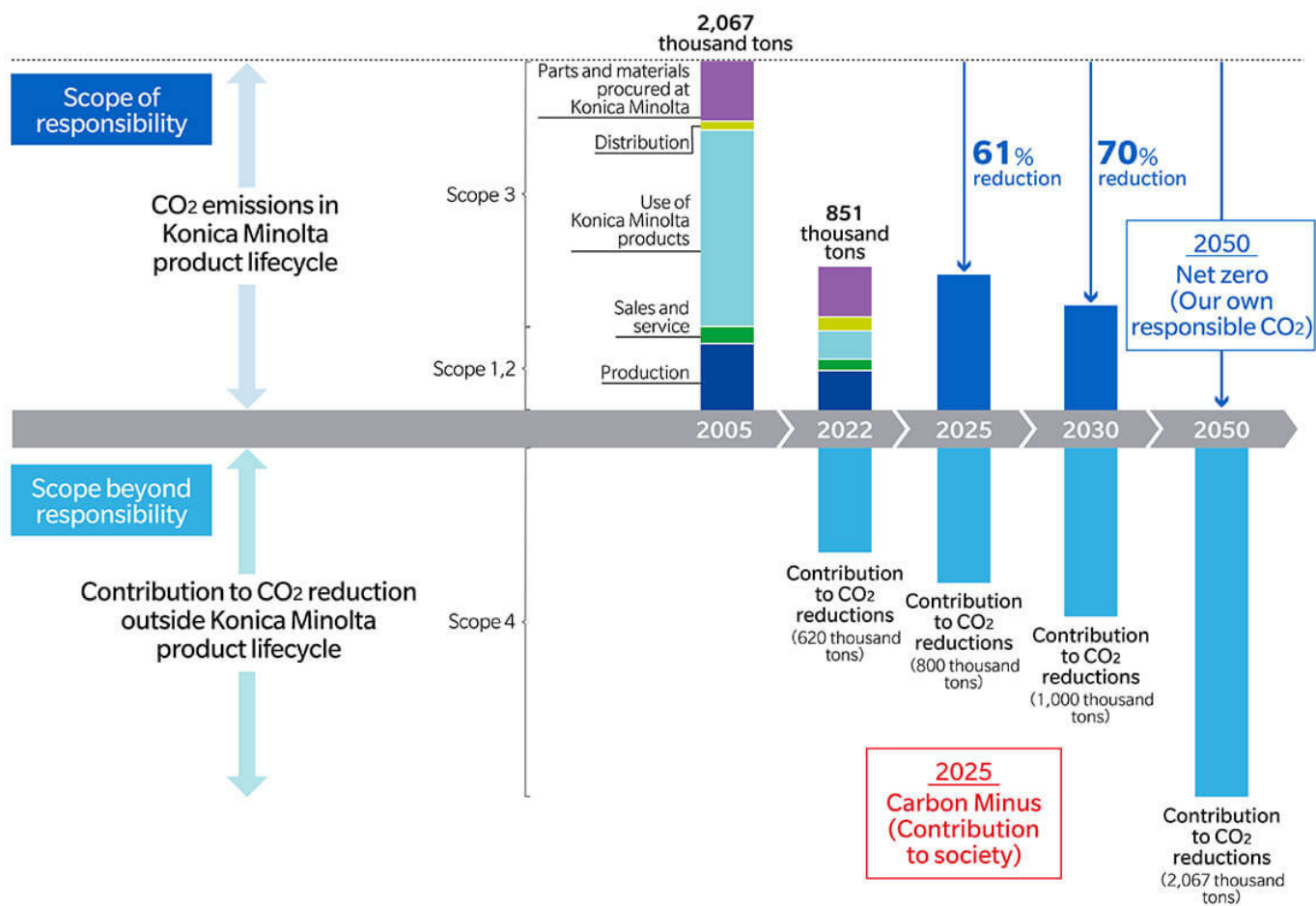
In Eco Vision 2050, its long-term environmental vision, Konica Minolta's addresses one of the material issues, "addressing climate change," from a long-term perspective. With approval by the Board of Directors, in 2009, the vision set the challenging goal of reducing CO₂ emissions from products throughout their entire lifecycle by 80% by 2050, compared to fiscal 2005 levels. In recent years, many companies have begun to reduce CO₂ emissions throughout the entire product lifecycle, including the supply chain, as well as CO₂ emissions from their own production processes. However, since 2009, Konica Minolta has been working to reduce CO₂ emissions throughout the entire lifecycle and has steadily accumulated a track record of reductions. In 2017, the issue of climate change was identified as an opportunity, and the Company added a commitment to achieve Carbon Minus status across its business activities and help to reduce CO₂ emissions for society.

In May 2023, the Board of Directors approved the revision of Eco Vision 2050 and set a new vision of reducing CO₂ emissions in the product life cycle from the previous 80% to net zero by 2050.

At the same time, although we had planned to achieve carbon minus by 2030, we have decided to achieve it by 2025, five years ahead of schedule.

We will more quickly provide product and service technology and knowhow developed at Konica Minolta to its stakeholders and expand its contribution to CO₂ emissions reduction.

Carbon Minus means not only to reduce CO₂ emissions for which we are responsible over the product lifecycle through energy-saving production processes and products, but also to share our knowhow on how to achieve both decarbonization and cost reductions with our customers and suppliers, to create a state where the amount of CO₂ reduction outside of our responsibility exceeds the amount of emissions. Konica Minolta will accelerate the effects of decarbonization by not only fulfilling its own social responsibility, but also by supporting the social responsibility activities of its stakeholders. It also expands the ties between the company and its stakeholders, and grow its business together. CO₂ emissions for which Konica Minolta is responsible are CO₂ emissions directly related to its products and business. Specifically, they are CO₂ emissions related to the lifecycle of the company's products, including the manufacture of parts and materials that it procures, production within the company, distribution of its products, sales and service within the company, and the use of its products by customers. On the other hand, CO₂ emissions generated by suppliers with parts and materials procured from other companies, and CO₂ emissions generated by customers with products from other companies are outside of the company's responsibility. However, Konica Minolta can contribute by reducing CO₂ emissions outside of its responsibility by providing its CO₂ reduction knowhow and technologies, and by helping customers to transform their production processes using Konica Minolta's products and services. In Konica Minolta's view, Carbon Minus consists of activities that are outside of the company's responsibility and are more proactive in reducing CO₂ emissions on the planet. Konica Minolta also hopes that visualizing the invisible effects of its activities will provide an opportunity for more people to gain a quantitative understanding of its achievements and become actively involved in CO₂ reduction activities.



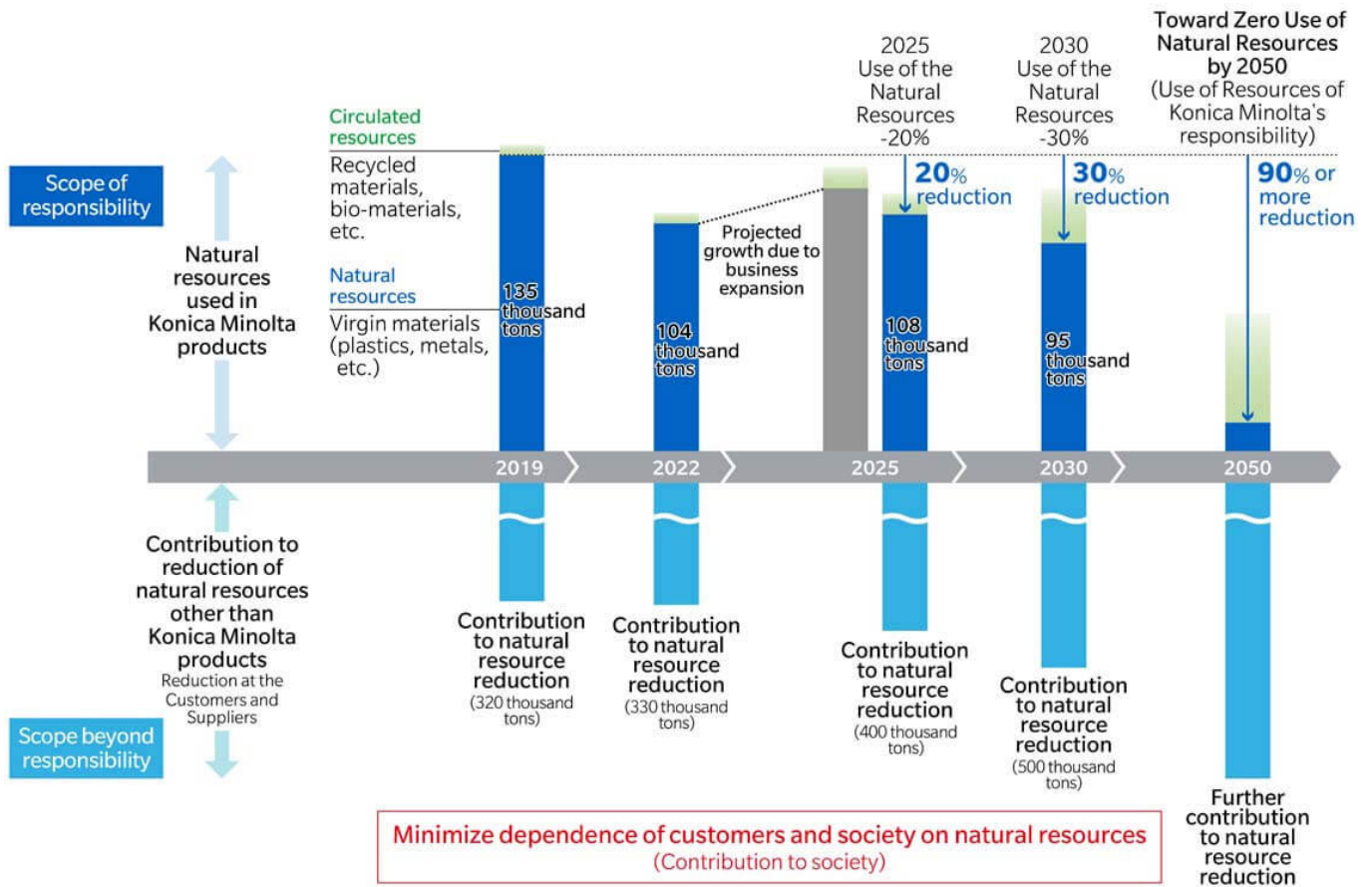
Using Limited Resources Effectively

In May 2023, Konica Minolta set a new vision for the fifth material issue, "Using Limited Resources Effectively," adding it to the scope of Eco Vision 2050. Its vision is to "Aim for Zero Use of the Earth's Natural Resources" in order to achieve a business that does not depend on the depleted earth's natural resources* to provide its products and services.

Specifically, Konica Minolta will not only reduce the amount of resources used in its products, but also proactively shift to recyclable resources including recycled materials and bio-materials with the aim of reducing use of the earth's natural resources by at least 90% by 2050. At the same time, we will maximize the contribution that our customers, suppliers, and other stakeholders make to reducing their use of the earth's natural resources by contributing to this reduction with our own products and sharing our know-how.

*Earth's Natural Resources

Resources that involve new mining, such as crude oil and mineral resources, which are generally synonymous with depletable resources.



*Natural resources: Resources that require new drilling or mining, such as crude oil or mineral resources, and are generally synonymous with depletable resources.

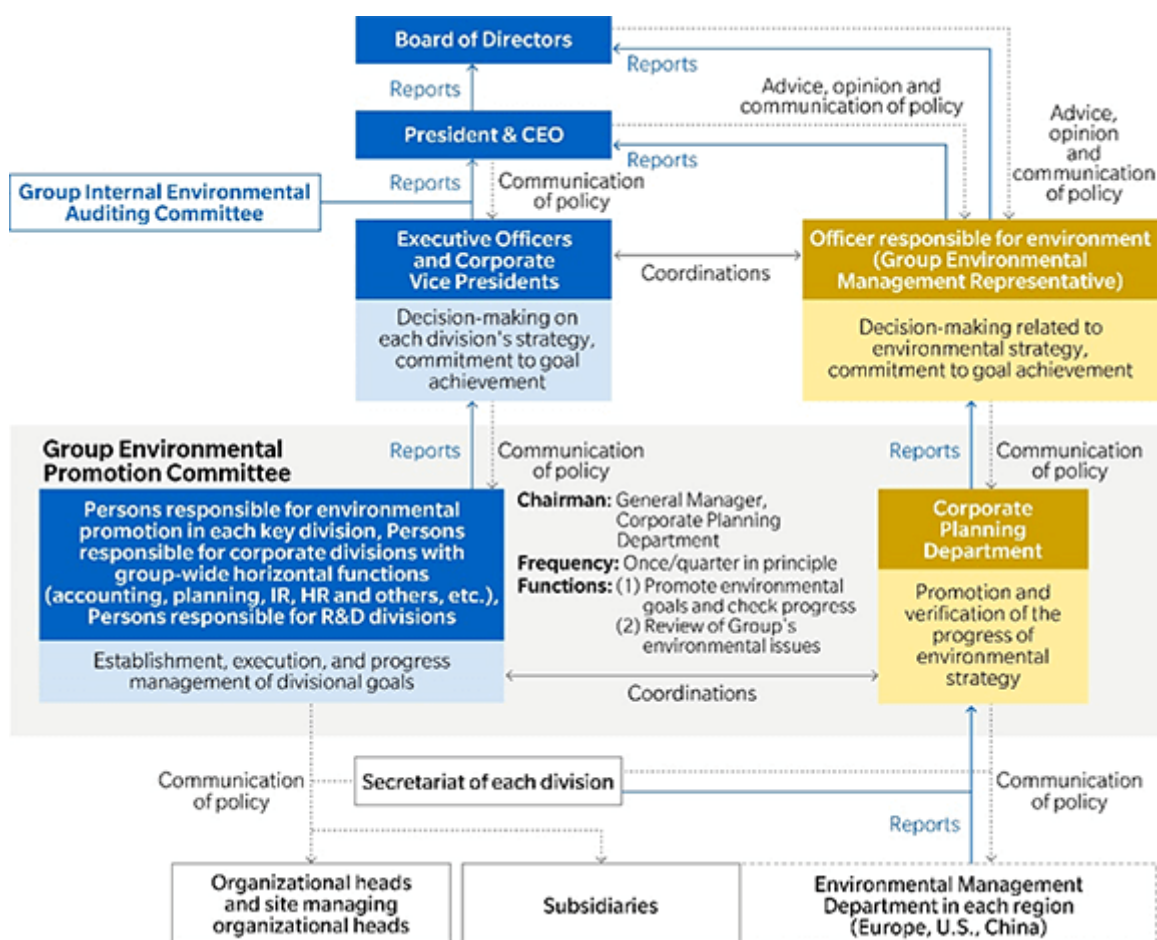
Environmental Management System

Promotion system

All aspects of environmental management are overseen by the President and CEO of Konica Minolta, Inc.

The President has ultimate responsibility for and authority over all environmental management including climate change issues and is also accountable for its effectiveness. The President appoints the Officer responsible for environment (Group Environmental Management Representative) to execute environmental management and handle environmental measures. The Officer responsible for environment formulates a medium-term plan for the environment, which is then approved by the Board of Directors as a corporate management plan. In addition, the Officer responsible for environment initiatives reports monthly to the President and the Audit Committee established by the Board of Directors to report progress made on environmental management.

Konica Minolta has established a Group Environmental Promotion Committee headed by the General Manager of the Environmental Management Department, which serves as the organization implementing the medium-term environmental plan for the whole Group. The committee, in which persons responsible for environmental promotion in each key division participate, deliberates the Group's medium-term environmental plan and annual plans. It also checks quarterly progress and conducts investigations related to the Group's environmental issues.



Organization of Group Environmental Management

Environmental Audits

At Konica Minolta, the Group Internal Environmental Auditing Committee, which is chaired by the head of the Corporate Audit Division, directs the internal environmental auditing for the entire Group.

Through internal environmental audits, which are conducted at least once a year, the Group verifies the adequateness and effectiveness of management systems. Additionally, by checking the implementation status of the medium-term plan, audits ensure that management systems are functioning effectively in all the Group's organizations.

Environmental Management System

Operating management system based on ISO 14001

To raise the efficiency of environmental management throughout the Group as a whole, Konica Minolta operates its management system based on ISO 14001, and it has established a basic policy of requiring that all group production sites around the world work to obtain ISO 14001 certification.

Konica Minolta is engaged in Sustainable Solutions, Sustainable Factory, and Sustainable Marketing activities throughout the product lifecycle. In addition, targets are set within these activities to help solve business and environmental issues, and environmental efforts are integrated into the core business activities. This approach is consistent with ISO 14001:2015.

In order to promote environmental activities efficiently throughout the entire Group, Group companies in Japan acquired integrated Group ISO 14001:2015 certification in fiscal 2016. Meanwhile, activities under ISO 14001:2015 are also conducted at Group sites outside Japan based on the approach of integrating environmental and core business activities. These companies completed certification in the first half of fiscal 2018.

Environmental Risk Management

Konica Minolta treats environmental risks as business risks. Risks are managed under the Risk Management Committee, which is chaired by the officer in charge of risk management, who is appointed by the board of directors, to prevent risks from coming to a head.

The committee conducts risk assessments of corporate activities, and confirms the identified risks and necessary measures to minimize them. It also confirms and reviews whether the risk management system is functioning effectively. The findings of the Risk Management Committee are reported regularly to the Audit Committee, which consists of directors who are not also serving as executive officers. Risks that are particularly important in terms of management and business are reported to and discussed with the Board of Directors.

Konica Minolta views risks as “uncertainties that could affect the organization’s revenue and losses.” With the understanding that risks are not only negative, but are also opportunities with positive aspects, the company views risk management as an activity to curb the negative aspects of risk while maximizing returns.

Compliance with Environmental Regulations

As environmental problems such as global warming and the depletion of energy resources increase in scope to encompass entire regions, and indeed, the entire planet, government policies and regulations at the regional and national levels around the world are being reconsidered and strengthened in order to ensure sustainable growth.

As a global business enterprise, Konica Minolta is building its global compliance system to ensure that all of its production sites and sales offices comply with all legal regulations.

Konica Minolta is building management systems centered on environmental organizations in Europe, North America, China and Japan to ensure that production sites and sales companies in each region respond appropriately to environmental laws. Under these systems, steps are taken to comply with relevant laws and regulations, such as chemical substance regulations, restrictions on chemicals contained in products, recovery and recycling regulations and energy saving regulations.

In fiscal 2022, Konica Minolta continued to conduct status checks of all Group companies and found no serious violations of environment-related laws and regulations.

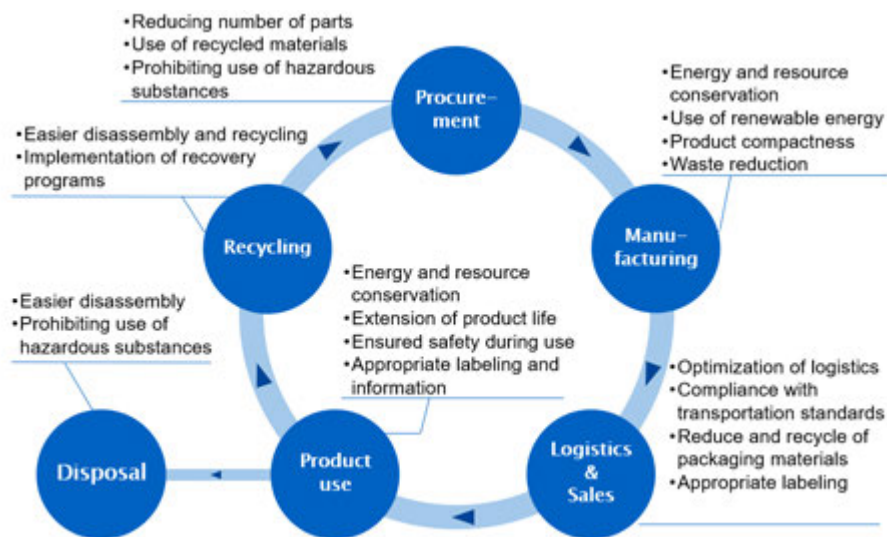
Product Assessment System

Konica Minolta ensures compliance with laws and regulations and strives to minimize its environmental impact by conducting equipment assessments when it installs, moves, or disposes of equipment, and product assessments when it develops or changes products.

Product assessment

When developing a new product, the Konica Minolta Group identifies the impact the product would have on the environment throughout its lifecycle, from its manufacture and distribution to its use and disposal, while setting evaluation criteria and carrying out assessments.

The Group sets targets in line with its own evaluation criteria for environmental impact, and carries out product assessments as part of its product commercialization flow. Only products whose status is checked and that have cleared the targets are sent to market. This rigorous process has ensured that Konica Minolta complies with the most recent environmental laws, properly manages hazardous chemical substances, improves the environmental performance of its products, and complies with various countries' environmental labeling schemes.



Emergency Response

Reporting rules in the event of crises have been established to ensure that the company responds promptly and appropriately to crises caused by various risks. Konica Minolta's executive officers and affiliated companies' executive officers are very familiar with these rules. In line with these reporting rules, the executive officer in charge of crisis management takes the leading role in managing information on disasters and accidents that occur around the world and other crises.

Regarding the environment, emergency response procedures have been established at Group companies in Japan that have acquired integrated ISO 14001 certification. Based on the group-wide rules stipulated in the Konica Minolta Environmental Management Manual, each department has identified potential situations during an emergency or natural disaster that could have a significant impact on the environment. The departments have also established the necessary crisis response procedures, and they regularly test them. The test results are then reviewed and modified as necessary.

In accordance with emergency response guidelines created by each department, training is held at least once a year to help minimize damage in the event of a major accident. For example, evacuation drills are carried out to practice for a potential explosion caused by solvent ignition, and similar drills are done to prepare for a potential external chemical spill caused by chemical leakage into a rainwater drainage structure.

Each department has also established an emergency communication system to report to the Officer responsible for environment on the same day as the incident, and all are working to take appropriate measures.

Environmental Education

Each Group company with integrated ISO 14001 certification provides a range of environmental education to its employees in order to enhance their awareness of and ability to perform environmental activities. Many employees participate in training programs to raise the level of the Group's environmental activities. The content ranges from specialized knowledge to the understanding of issues related to global environmental problems. At least once a year, training is given to new hires, internal environmental auditors, and those involved in chemical substance management related to products.

Environmental Education and Training System

	New hires / Junior-level employees / Senior-level employees	Managers
General education	New hires education	New manager education
	Education at each site	
	Education in each department (compliance matters / target management)	
Specialized education	Internal environment auditor education (New appointees / Refresher training)	
	Product-related chemical substance control education ◆ For planning/management/product development /production/quality assurance/sales departments ◇ For equipment products/auxiliary materials /chemical products/chemicals	

Identifying Environmental Material Issues

Identifying Environmental Material Issues

Climate-related Financial Information Disclosure (TCFD)

Environmental Targets of the Medium-Term Environmental Plan 2025

Environmental Material Issue Evaluation and Identification Process

Companies today must address a wide range of environmental issues, such as climate change and resource depletion. In light of this, recent changes in society, and the evolving business environment, Konica Minolta has identified material issues related to the environment. The company aims to prioritize these issues and promote initiatives for helping to solve them, while also achieving business goals. Konica Minolta has identified five material issues from the perspective of sustainability and then analyzed the material issues related to the environment — “addressing climate change,” “using limited resources effectively,” “ensuring social safety and security (safety of chemical substances)” — in even more detail so that it could set specific measures.

To identify its material issues, the Group first made a comprehensive list of environmental issues by incorporating international guidelines, as well as various stakeholder requirements. Then, it identified key issues based on their importance to stakeholders and their importance for the business. To determine importance to the business for each issue, the impacts were quantitatively evaluated using five levels. Risk analysis was used to calculate the amount of profit that would be lost if a certain risk materialized, as well as the amount of profit that could be generated if a potential opportunity was seized. In determining the importance of each issue, the Group maintained objectivity by seeking the opinions of outside experts.

The Officer responsible for environment (Group Environmental Officer), who chairs the Group Environmental Promotion Committee, verified this evaluation process and the resulting material environmental issues, before identifying the ones that should be prioritized.

Process for Identifying Material Issues

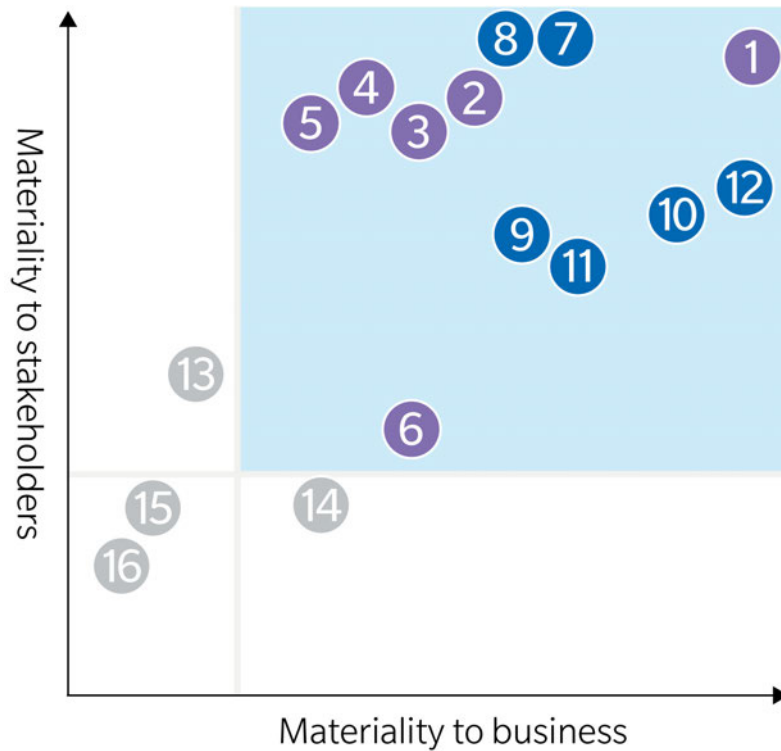


Identifying Material Issues from Both Risks and Opportunities

When evaluating and identifying material issues related to the environment, Konica Minolta identified various environmental factors related to its business in terms of both risks and opportunities. Based on these findings, material issues were selected where solutions can lead to business growth. The company reviews each material issue annually to ensure the issues selected and related plans are appropriate.

Through this process, goals for reinforcing the business are matched with environmental targets. The plan then becomes a commitment for both top management and the entire organization, resulting in effective environmental management. The Medium-Term Environmental Plan 2025 identifies the three most important issues as “addressing climate change,” “using limited resources effectively,” and “ensuring social safety and security (safety of chemical substances).”

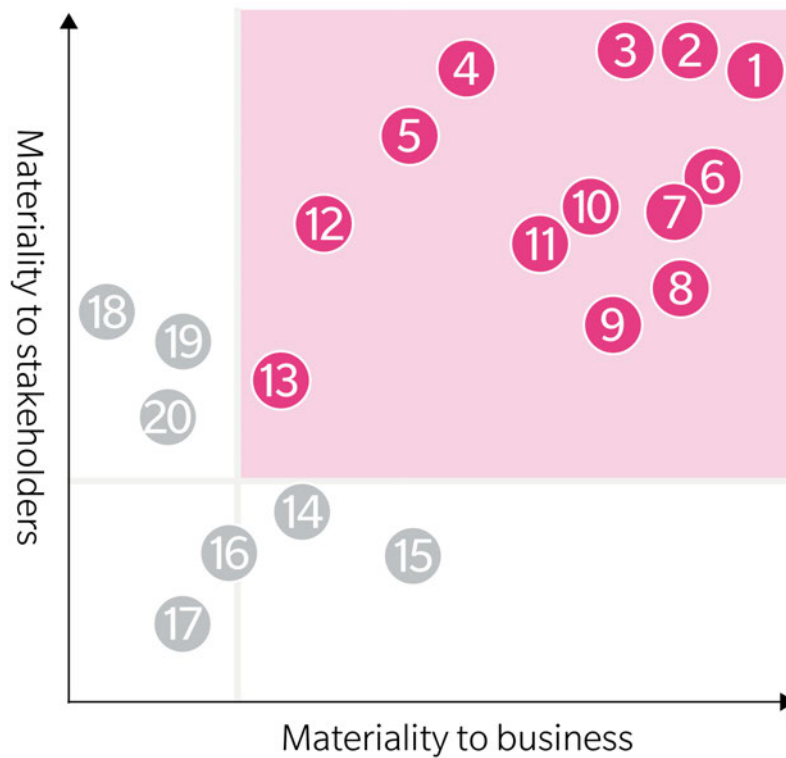
[Opportunities for Each Material Issue]



* Items marked in purple are reduction beyond scope of Konica Minolta responsibility and items marked in blue are reduction for which Konica Minolta is responsible.

	Materiality Items (Opportunity)
1	Digital solutions that transform the supply chains of the printing and apparel industries
2	Transform customer manufacturing processes with inkjet technology
3	Sensing technology that contributes to the sorting and recycling of used plastics
4	Ecosystem that helps companies solve environmental issues and create new innovations
5	Promote energy reduction and renewable energy with suppliers
6	Expand business through gas monitoring to prevent leaks
7	Early introduction of renewable energy
8	Reduce costs through energy reduction
9	Develop new markets and strengthen competitiveness through recovery and effective utilization of Konica Minolta products
10	Provide materials, parts, and product services with a low carbon footprint
11	Utilize renewable resources
12	Reduce energy and paper consumption through work style reforms in offices and other locations
13	Cut costs by improving resource efficiency
14	Contribute to water infrastructure, help to counter obsolescence, and support monitoring
15	Create technologies that contribute to use of renewable energy and new energy
16	Create technologies that contribute to ecosystem recovery

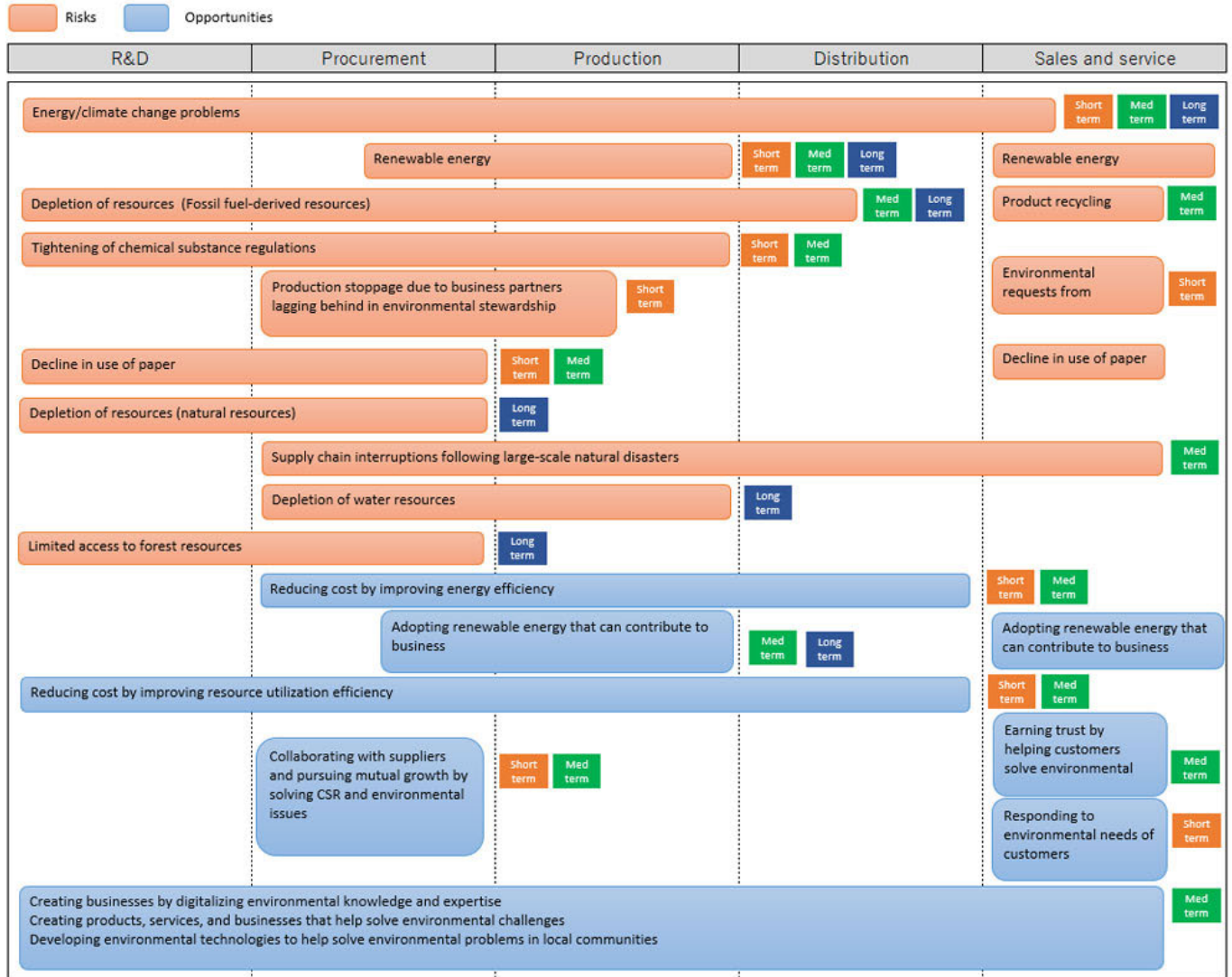
[Risks for Each Material Issue]



	Materiality Items (Risks)
1	Ban on substances that contaminate ecosystems and damage the health of people (response to stricter regulation on chemical substances)
2	New emissions regulations and tax system, rising energy prices, rising manufacturing costs due to fossil fuel alternatives
3	Delay in introduction of renewable energy
4	1.5°C/net zero target and inadequate performance
5	Delayed introduction of internal carbon pricing and linked officer compensation
6	Delayed provision and disclosure of carbon footprint and footprint reduction
7	Declining competitiveness due to unsustainable resource use, insufficient supply of natural resources, and restricted access to forest resources
8	Supply chain interruptions due to large-scale natural disasters
9	Inadequate support for low carbonization and energy-saving Konica Minolta components
10	Delay in supporting products and components for the circular economy
11	Delay in supporting containers and packaging for the circular economy
12	Decline in stakeholder assessment due to lack of support for non-financial disclosure
13	Costs incurred for measures to prevent soil contamination
14	Depletion of resources (precious metals)
15	Delays or stoppages in procurement and production due to depletion of water resources and water risks
16	Costing of virtual water
17	Impact of ecosystem destruction due to manufacturing and use of raw materials
18	Soil contamination
19	Water contamination
20	Legal compliance and management of waste

Important Environmental Issues for Product Life Cycles

Konica Minolta identifies material environmental issues, including risks and opportunities, throughout its value chains. These are issues that need to be specifically addressed by relevant departments including product planning and development, procurement and production, as well as sales and service. The Group also determines when business risks and opportunities related to important environmental issues are likely to materialize, based on short, medium, and long-term perspectives.



Impact of Business Risks and Opportunities Related to Important Environmental Issues

As current environmental and social issues become even more serious, risks may materialize and affect Konica Minolta's business activities. In the long term, manufacturing will face even greater risks, such as substitution of fossil resources and fossil fuels, shortages and supply disruptions of natural resources due to changes in climate patterns, depletion of water resources and water withdrawal restrictions, and limited access to forest resources due to extreme weather and forest fires. These risks need to be addressed. In the short and medium terms, there are also risks such as stakeholder demands for renewable energy-derived electricity procurement, rising fossil resource and fossil fuel prices, new product energy efficiency regulations and market responses, reduced use of paper in the office, non-sustainable resource use, reduced product competitiveness due to non-renewable design, and supply chain disruptions caused by a major climate disaster. Unless it takes suitable measures now, the Group will likely be faced with higher costs, loss of business opportunities and shutdowns due to damage to facilities and labor environment. Failure to comply with new chemical control regulations, including those that restrict certain chemical content in products, could lead to lost sales opportunities and lower revenues.

On the other hand, Konica Minolta believes it can create business opportunities by providing solutions to help solve these environmental issues. By actively introducing cutting-edge technology and combining it with Konica Minolta's strengths in imaging IoT technology and digital input and output, the Group is transforming itself into a digital company with insight into implicit challenges. The aim is to create solutions that help resolve social and environmental issues, including climate change. With regard to the global environment, the Group is working to address issues such as climate change, resource depletion, and waste by incorporating them into its medium and long-term business strategies. For example, environmental impact can be lowered by reducing production, transportation, inventory, and disposal in the manufacturing industry. Konica Minolta believes that it is contributing to this solution by providing on-demand equipment for industrial printing of materials such as packaging, labels, and textiles. In addition, providing products and solutions that reduce the environmental impact of our customers' production processes will lead to opportunities in industries that are subject to diverse environmental demands. These efforts illustrate how Konica Minolta sees environmental management as a key business strategy. In short, the company believes the purpose of environmental management is both to achieve business expansion and improve environmental issues.

Target Setting Process

The President has ultimate responsibility for and authority over all environmental management including climate change issues and is also accountable for its effectiveness. The President appoints the Officer responsible for environment (Group Environmental Officer) to execute environmental management and handle environmental measures. The Officer responsible for environment Group Executive formulates a medium-term plan for environment, which is then approved by the Board of Directors as a corporate management plan. In addition, the Officer responsible for environment reports monthly to the President, the chairman of the Board of Directors, and the Audit Committee established by the Board of Directors to report progress made on environmental management and on issues including climate change. The Audit Committee summarizes the important issues from those reported as matters to report at the Board of Directors meetings.

Konica Minolta has established a Group Environmental Promotion Committee headed by the General Manager of the Environmental Management Department, which serves as the organization implement the medium-term environmental plan for the whole Group. The committee, in which persons responsible for environmental promotion in each key division participate, deliberates the Group's medium-term environmental plan and annual plans. It also checks quarterly progress and conducts investigations related to the Group's environmental issues.

› [Organization of Group Environmental Management](#)

Targets and Results

› [Click here for information on targets and results \(Konica Minolta's Sustainability > targets and results\)](#)

› [Identifying Environmental Material Issues](#) | › [Climate-related Financial Information Disclosure \(TCFD\)](#)

Overview of Environmental Activities

▶ Overview of Environmental Activities	▶ Green Products Certification System	
▶ Green Factory Certification System	▶ Carbon Neutral Partner Activities	▶ Green Marketing Activities
▶ Environmental Digital Platform		

Overview of Konica Minolta's Environmental Activities

Green Activities for Resolving Environmental Issues

Konica Minolta used backcasting to identify its vision for 2030, and then defined the actions it should take in the short and medium term. The Group is now carrying out environmental activities to help resolve social and environmental issues across its value chains.

The first, Green Products Activities, are focused on creating solutions to resolve social and environmental issues at the planning and development stages. The second, Green Factory Activities and Carbon Neutral Partner Activities, both help to reduce environmental impact at the manufacturing and procurement stages. The third, Green Marketing Activities, which includes Konica Minolta's Environmental Digital Platform, help to strengthen relationships with customers and resolve environmental management issues at the sales and service stages.

The Konica Minolta Medium-term Environmental Plan 2025 sets targets and specifies action plans for creating social, environmental, and economic value through each of these activities, and the company is pursuing these efforts accordingly.



▶ Overview of Environmental Activities	▶ Green Products Certification System	▶ Green Factory Certification System
▶ Carbon Neutral Partner Activities	▶ Green Marketing Activities	▶ Environmental Digital Platform

Creating Products and Solutions to Solve Environmental Issues (Green Products Certification System)

➤ Overview of Environmental Activities	➤ Green Products Certification System	
➤ Green Factory Certification System	➤ Carbon Neutral Partner Activities	➤ Green Marketing Activities
➤ Environmental Digital Platform		

Background and Issues

Given growing concern about environmental and social challenges such as climate change and economic disparity, people's values are shifting from pursuing material wealth to helping to improve the quality of society. By understanding the evolving values of society and contributing solutions, Konica Minolta is able to continue to provide competitive solutions that enhance its profitability.



Vision

While working to provide solutions that help solve challenges faced by customers and society as a whole, Konica Minolta also aims to encourage the widespread adoption of these solutions by broadly promoting their value. By taking initiatives like these, which also contribute to the achievement of the Sustainable Development Goals (SDGs), Konica Minolta strives to help build a sustainable society, earn social confidence, and achieve sustainable growth along with the broader society as a company of choice.

As one key measure to achieve this vision, Konica Minolta has been implementing its Green Products Certification System since 2011. By defining solutions that help to resolve social and environmental issues, certifying products and services, and using this process to grow sales, the Group is helping to resolve social and environmental issues from an SDG perspective.



Key Measures and KPIs

Reduction of energy use and CO₂ emissions achieved by reforming customer business processes

(Unit: thousand tons)

KPI	Result			Target			
	FY2020	FY2021	FY2022	FY2022	FY2023	FY2024	FY2025
Reduction of environmental impact through the use and procurement of Konica Minolta products and services*	14	13	28	25	22	25	31
Resources saved and recycled resources used in Konica Minolta products*	12	11	12	12	13	14	14
Reduction of CO ₂ emissions in society through Konica Minolta Products and solutions	578	579	624	644	630	720	800
Customer's contribution to reducing the earth's resources through Konica Minolta products and solutions	320	320	340	350	360	380	400

* Cumulative reduction amount for each period from fiscal 2020 to fiscal 2022 and from fiscal 2023 to fiscal 2025. Total reduction amount for each fiscal year due to the measures implemented from the first fiscal year of each period to the relevant fiscal year.

Note: Reduction amount for each fiscal year due to the measures implemented during medium-term

Note: Both targets and results have been revised retroactively to fiscal 2020 figures due to a fiscal 2021 change in the method of calculating effects of measures.

Initiatives in Certification System

Konica Minolta has integrated its business strategy and pursuit of sustainable management, and is convinced that true value creation that helps resolve social issues is the foundation for growing its business. To this end, the company is raising the energy-saving functions of its products and helping to reduce CO₂ emissions during their use by customers. It is also reforming customers' manufacturing process and workstyles to create products and solutions that resolve social and environmental issues from the perspective of the Sustainable Development Goals (SDGs).

Under the Green Products Certification System, Konica Minolta has designated certification criteria for environmental issues for which it seeks a solution. It sets criteria for each of the business and product characteristics and assesses the products that meet these standards with a three-step ranking. This system is designed to promote the creation of products and solutions that reduce environmental impact and help to solve social issues from the perspective of the SDGs.



Products that Contribute to Material Issues

In addition to solving environmental issues, Konica Minolta is creating products and solutions that contribute to solving social issues for each of its businesses based on the five material issues identified.

In the Digital Workplace Business, the Company creates office solutions that help customers improve their workflow and create more productive time, as well as MFPs that have further advanced energy and resource-saving performance.

In the Professional Print Business, the automatic quality optimization unit IQ-501, which contributes to improved work performance at printing sites, and digital printers that improve productivity by transforming work processes from analogue to digital and contribute dramatically to energy and resource use reduction, are certified as solutions that address material issues.

In the Healthcare Business, the Company develops sustainable solutions such as genetic testing solutions and compact, lightweight digital X-ray devices that contribute to patient health and quality of life through the early detection of diseases. In the Industry Business, we consider solutions that similarly contribute to social and environmental issues such as HitomeQ Care

Support, which helps to improve productivity and time saving at nursing care sites, and gas-monitoring solutions, which prevent greenhouse gas leaks and contribute to safety and security at sites.

	Digital Workplace Business	Professional Printing Business	Healthcare Business	Industry Business
Improving fulfillment in work and corporate dynamism	>Office solutions	<ul style="list-style-type: none"> • IQ-501 >Production printers • Textile printers 		>Nursing care solutions >Automatic behavior analysis >Hyperspectral imaging
Supporting healthy, high-quality living			>Genetic testing technologies <ul style="list-style-type: none"> • Digital X-ray system / Diagnostic ultrasound system 	
Ensuring social safety and security				>Gas monitoring solution
Addressing climate change	<ul style="list-style-type: none"> • MFPs 	>Production printers <ul style="list-style-type: none"> • Textile printers 		>Gas monitoring solution >Hyperspectral imaging
Using limited resources effectively	<ul style="list-style-type: none"> • MFPs 	>Production printers <ul style="list-style-type: none"> • Textile printers 	<ul style="list-style-type: none"> • Digital X-ray system / Diagnostic ultrasound system 	>Hyperspectral imaging <ul style="list-style-type: none"> • Spectrophotometer / Luminance meter • Functional materials • Ultra-thin TAC films • IJ Components
Sales	Total: 908.6 billion yen			

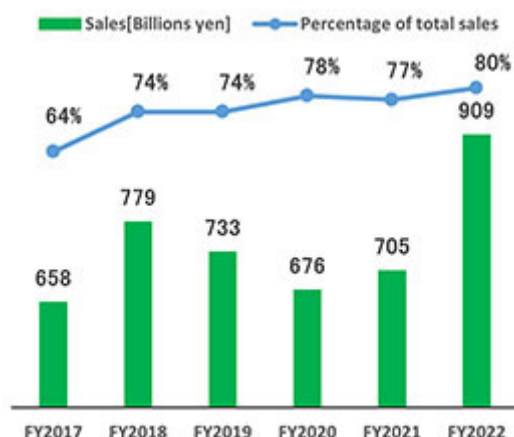
Fiscal 2022 Activity Results

Fiscal 2022 sales, including those products and services that were carried over from the Green Products Certification System implemented since fiscal 2011, and the Sustainable Solutions Certification System, which certifies products that contribute to solving social and environmental issues and was introduced in fiscal 2022, totaled 908.6 billion yen, accounting for 80% of the Group's total sales.

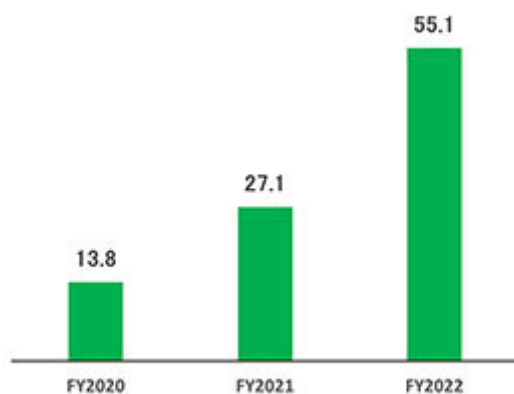
In addition, improvements in the environmental performance of these products have resulted in a CO₂ emissions reduction of 55.1 thousand tons and the amount of resources saved and recycled was 12.4 thousand tons.

Konica Minolta will continue to expand sustainable products and services that help to solve social and environmental issues.

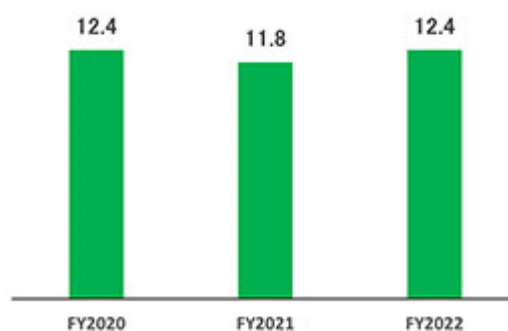
Sales of Sustainable Solutions



CO₂ Reductions Achieved Through Use of Konica Minolta Products [Thousand tons]



Amount of Resources Conserved and Renewable Resources Used Through Use of Konica Minolta Products [Thousand tons]



Production Activities to Solve Environmental Issues (Green Factory Certification System)

- ▶ Overview of Environmental Activities
- ▶ Green Products Certification System
- ▶ Green Factory Certification System
- ▶ Carbon Neutral Partner Activities
- ▶ Green Marketing Activities
- ▶ Environmental Digital Platform

Background and Issues

As environmental problems grow increasingly serious, society requires more efficient use of energy and resources. The reduction of environmental impact in the production process, especially in the manufacturing industry, has a huge effect on reducing the impact of society as a whole, and therefore, it is thought important to achieve large reductions.



Vision

Konica Minolta streamlines production processes, develops and improves production technologies, and takes steps to reduce its environmental impact while cutting costs.

To this end, Konica Minolta is conducting Green Factory activities to reduce the environmental impact of its manufacturing sites, while also pursuing energy conservation, effective use of resources, and the adoption of renewable energy.



Key Measures and KPIs

- Reduction of environmental impact of Konica Minolta production sites utilizing the company's own know-how and cutting-edge environmental technologies:
Sustainable Factory Activities

(Unit: thousand tons)

KPI	Result			Target			
	FY2020	FY2021	FY2022	FY2022	FY2023	FY2024	FY2025
Reduction of CO ₂ emissions at Konica Minolta production sites	4	12	18	18	6	13	20
Reduction of waste discharge at Konica Minolta production sites	0.6	1.3	1.7	1.7	0.2	0.5	0.8

Note: Cumulative reduction for each period from fiscal 2020 to fiscal 2022 and from fiscal 2023 to fiscal 2025. Total reduction for each fiscal year due to measures implemented from the first fiscal year of each period to the relevant fiscal year.

Initiatives in Production

Konica Minolta has long promoted green-factory activities at its inhouse production sites to simultaneously reduce its environmental impact and lower costs. The Company has launched a new Green Factory Certification System, which requires that Company production sites meet two standards: environmental impact reduction standards to evaluate energy and resource conservation measures, and guideline standards to evaluate the quality of activities.

In the guideline standards, reflecting recent rising societal demands, the Company has included the expansion of renewable energy and CSR procurement as new indicators. Ensuring that its own production sites meet these two standards, the Company will accelerate its efforts to contribute to the global environment and provide solutions to social issues.

Green Factory Certification Standards^{*1}

		Chemical plant site	Assembly/high load site
Environmental Impact reduction Environmental impact reduction standards to be achieved by Konica Minolta production sites	CO ₂ emissions	3% reduction annually (9% over 3 years)	2% reduction annually (6% over 3 years)
	Waste discharge	2% reduction annually (6% over 3 years) ^{*2}	2% reduction annually (6% over 3 years) ^{*2}
Guideline Standards for biodiversity and other initiatives to be pursued by Konica Minolta production sites	Guideline compliance status	Complying with guidelines on items such as: <ul style="list-style-type: none"> • VOC reduction • Biodiversity (water, soil, marine plastic, etc.) • CSR procurement • Expanding introduction of renewable energy-derived power, etc. 	

*1 Targeting major production sites that have a large environmental impact on Konica Minolta and are deemed a priority in the medium-term business plan.

*2 Set as a target that includes the reduction of plastic waste at major sites in Japan as part of activities to reduce and recycle plastic waste from products that use plastic based on the Act on Promotion of Resource Circulation for Plastics enacted in Japan.

Fiscal 2021 Activity Results

In fiscal 2022, six sites achieved Sustainable Factory Certification Standards: Konica Minolta Chemical Co., Ltd., Konica Minolta Business Technologies (Malaysia), Konica Minolta Supplies Manufacturing France, Konica Minolta Mechatronics Co., Ltd., Performance Materials Business Unit, and Tokyo Site (Hino/Hachioji). All 10 main Konica Minolta production sites meet the Green Factory certification criteria, which launched in fiscal 2020, along with the four sites that already achieved this certification in fiscal 2021. In addition to the above-mentioned standards, the Sustainable Factory Certification System implemented from fiscal 2020 to fiscal 2022 included activities to reduce the CO₂ emissions of suppliers, customers, and stakeholders in local communities by leveraging the know-how developed at each production site. Due to COVID-19, it was difficult to use the usual onsite visits to identify measures to reduce environmental impact, but Konica Minolta achieved its goals by building a new system for promoting environmental activities employing DX, including tools for energy-saving diagnostics developed by Konica Minolta and remote onsite diagnostics.



Konica Minolta Chemical Co., Ltd., certified as a Sustainable Factory in September 2022.



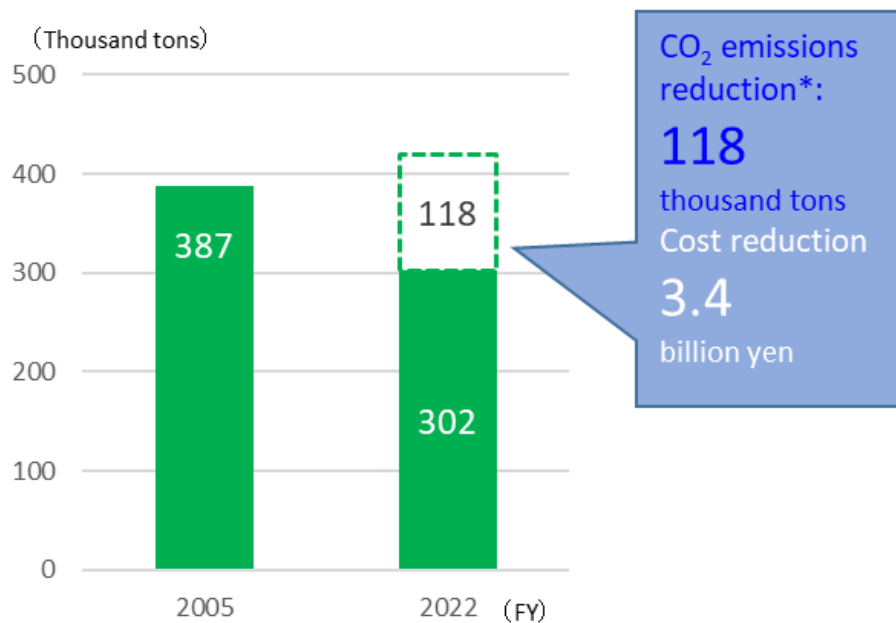
Performance Materials Business, certified as a Sustainable Factory in March 2023.



Konica Minolta Mechatronics Co., Ltd., certified as a Sustainable Factory in March 2023.

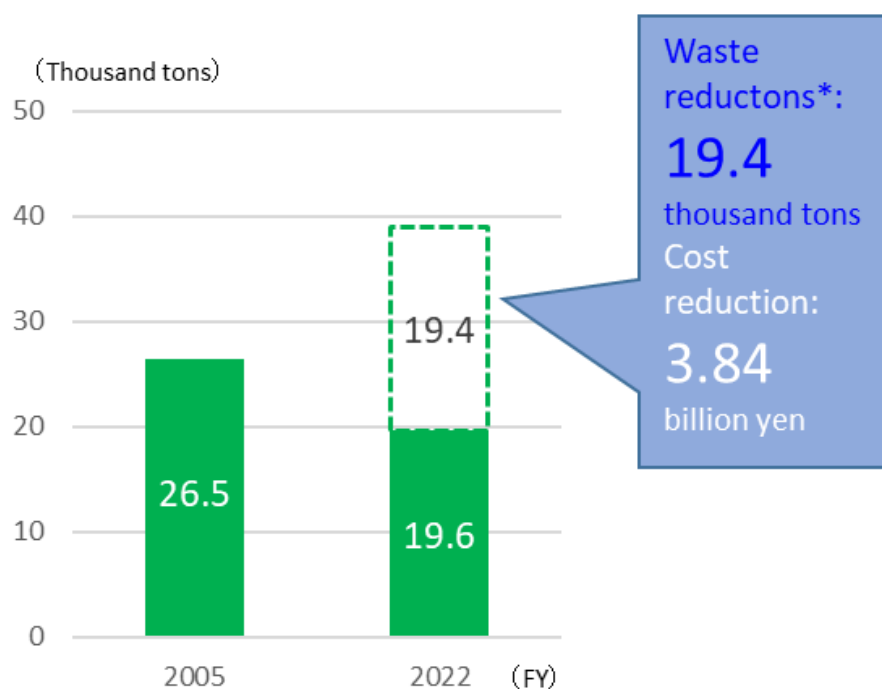
As a result of these initiatives, in fiscal 2022, CO₂ emissions at the production stage were cut by 118 thousand tons, waste substances were reduced by 19 thousand tons, and cost-cutting had a total effect of 7.2 billion yen.

CO₂ Emissions Reduction Effect during Production



*The amount of reduction is calculated by subtracting the actual fiscal 2022 emissions amount from the estimated amount of emissions that would be produced if environmental conservation activities had not been implemented since fiscal 2005.

Waste Reduction Effect during Production



*The amount of reduction is calculated by subtracting the actual fiscal 2022 emissions amount from the estimated amount of emissions that would be produced if environmental conservation activities had not been implemented since fiscal 2005.

Decarbonization of Suppliers (Carbon Neutral Partner Activities)

- [▶ Overview of Environmental Activities](#)
[▶ Green Products Certification System](#)
- [▶ Green Factory Certification System](#)
[▶ Carbon Neutral Partner Activities](#)
[▶ Green Marketing Activities](#)
- [▶ Environmental Digital Platform](#)

Background and Issues

As more effective use of energy and resources is demanded throughout society, there is a limit to what one company alone can do to reduce its environmental impact. Global corporations are being asked to expand the scope of their activities to include suppliers of parts and materials, and to increase their contribution to the global environment throughout the supply chain.



Vision

Konica Minolta seeks to share the environmental technologies and know-how it has developed, work together with its suppliers to reduce their environmental impact, and contribute significantly to the environment throughout the supply chain.

Konica Minolta's Carbon Neutral Partner Activities provide suppliers with the energy-saving and renewable energy know-how that the Company has developed at its own worksites. This is expected to help reduce their environmental impact and lower costs, thereby making Konica Minolta a top choice of customers and responding to the growing demand for solutions that promote carbon neutrality.



Key Measures and KPIs

- Dramatic reduction of environmental impact at suppliers using DX

(Unit: thousand tons)

KPI	Results			Targets			
	FY2020	FY2021	FY2022	FY2022	FY2023	FY2024	FY2025
Reduction of CO ₂ emissions at suppliers	1.1	2.8	6.4	5.0	1.8	3.5	4.1

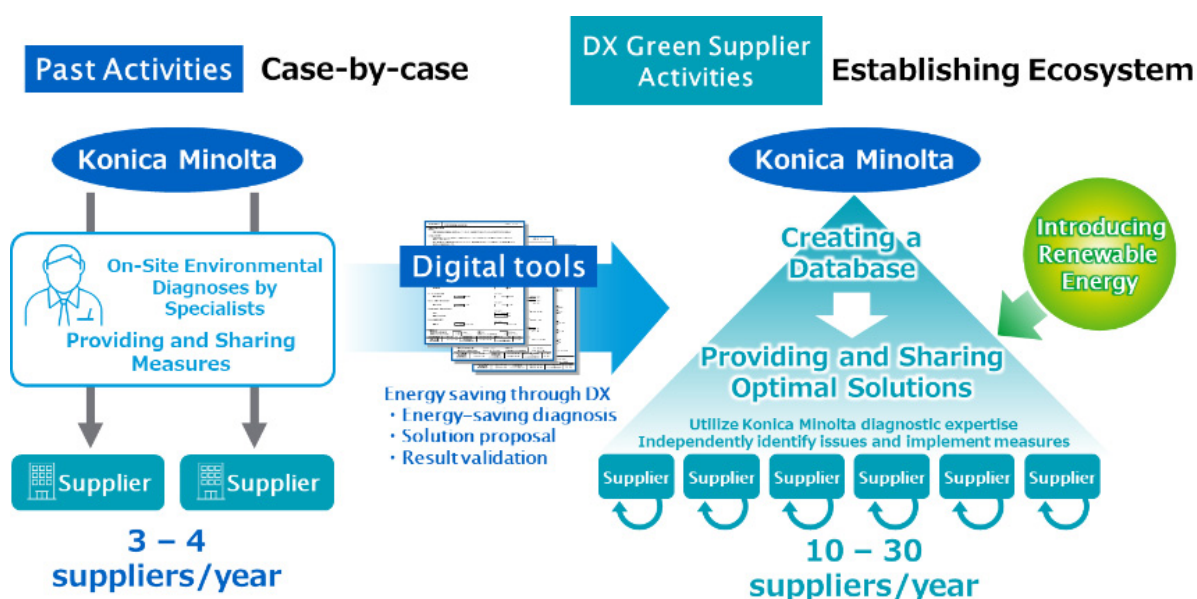
Note: Cumulative reduction amount for each period from fiscal 2020 to fiscal 2022 and from fiscal 2023 to fiscal 2025. Total reduction amount for each fiscal year due to the measures implemented from the first fiscal year of each period to the relevant fiscal year.

Note: Targets and results have been revised retrospectively to fiscal 2020 figures as the method of calculating the effects of measures was changed in fiscal 2021.

Overview of the Activities

Konica Minolta works hard not only to reduce its own environmental impact and costs but also those of its suppliers. The Company does this by providing them with the environmental technologies and expertise it has accumulated through its own environmental impact reduction efforts at its production sites (e.g., Green Factory Activities). In the past, Konica Minolta has conducted Green Supplier Activities, having specialists visit supplier sites to conduct an environmental diagnosis and propose improvements that take into account cost reduction effects and return on investment. However, in order to expand the number of companies benefiting, it has developed an energy conservation assessment tool for this purpose by digitalizing the expertise of experts, establishing an innovative new program that does not require on-site visits.

In fiscal 2021, Konica Minolta initiated Carbon Neutral Partner Activities that expand on its existing Green Supplier Activities and incorporate the social movement toward carbon neutrality. The Carbon Neutral Partner Certification System was established to certify carbon neutral suppliers based on not only energy conservation (CO₂ emissions reduction) but also targets for the introduction of renewable energy. These activities are meant to enhance the value of both our suppliers and Konica Minolta in society.



Carbon Neutral Partner Certification System

Konica Minolta has established two metrics: 1) energy conservation (reduction of CO₂ emissions) and 2) introduction of renewable energy, as well as two activity levels. It is important to consider introducing renewable energy sources only after making sufficient progress in energy conservation. Therefore, we have started to operate a system in which all suppliers that participate in the initiative are required to achieve Level 1 energy conservation standards within three years of the start of their activities.

Activity levels	Metrics	Target (After 3 years of activity)
Level 1	CO ₂ emission reduction rate	6%
Level 2	CO ₂ emission reduction rate	6%
	Rate of electricity derived from renewable energy sources	100% of electricity usage

Fiscal 2022 Activity Results

Konica Minolta has been promoting its activities to provide environmental technologies and know-how cultivated through its own environmental impact reduction activities, including Sustainable Factory Activities, at its production sites, and by fiscal 2021, it had provided this knowledge to 40 suppliers. In fiscal 2022, it has initiated activities with 10 new suppliers who have endorsed our carbon neutral partner activities. Cumulatively, since the start of activities in 2014, CO₂ emissions have been reduced by 21,000 tons, and 3,000 tons of resources have been put to effective use, reducing environmental impact.



Companies That Support Konica Minolta's Environmental Impact Reduction Activities (Green Supplier Activities, etc.) in the Supply Chain and Achieved the Activity Targets

Achievement Date	Company	Activity Launch
Mar. 2016	Shenzhen Changhong Technology Co., Ltd.	FY2014
Mar. 2017	Toyo Communication Technology (Shenzhen) Co., Ltd.	FY2014
Mar. 2017	Allied Technologies (Saigon) Co., Ltd.	FY2015
Aug. 2017	Szepak Precision (Wuxi) Co., Ltd.	FY2015
Aug. 2017	Catthai Manufacturing & Trading Co., Ltd. (CATHACO., Ltd.)	FY2016
Mar. 2018	Well King Plastic Manufacturing Co., Ltd.	FY2015
Mar. 2019	Changshu Xinda Plastic Molding & Injection Co., Ltd.	FY2016
Mar. 2019	Guppy Plastic Industries (Penang) Sdn. Bhd.	FY2016
Mar. 2019	Triplus Industry Sdn. Bhd.	FY2016
Mar. 2020	Dongguan Konka Mould Plastic Co., Ltd.	FY2017
Mar. 2020	Pendge Precision Technology (Shenzhen) Co., Ltd.	FY2017
Mar. 2020	Shanghai KUMHO_SUNNY Plastics Co., LTD.	FY2017
Mar. 2020	Nippon Seiki Consumer Products (Thailand) Co., Ltd. Thai Nippon Seiki Co., Ltd.	FY2017
Mar. 2020	Asian Stanley International Co., Ltd.	FY2017
Jul. 2021	Shenzhen EVA Precision Technology Group Limited Yihe Plastic and Electronic Products (Shenzhen) Co., Ltd..	FY2018
Jul. 2021	Allied Precision Technologies (M) Sdn. Bhd.	FY2018
Jul. 2021	Pacestar Industries (Melaka) Sdn. Bhd.	FY2018
Mar. 2022	Shanghai Xintonglian Packaging Co., Ltd.	FY2019
Mar. 2022	Dongguan Zhongxing Electronics Co. Ltd.	FY2019
Mar. 2022	Yihe Precision Industry (Suzhou) Co Ltd.	FY2019
Mar. 2022	Sun Mansfield Manufacturing (Dongguan) Co., Ltd.	FY2019
Mar. 2022	Mansfield (Suzhou) Manufacturing Co., Ltd.	FY2019

Voice of a Supplier | Shenzhen EVA Precision Technology Group Limited Yihe Plastic and Electronic Products (Shenzhen) Co., Ltd

We have only one Earth. Environmental conservation is one of the most important social responsibilities for all companies, and at Yihe we are making every effort to conserve the environment. Konica Minolta has provided us with a great deal of support in this regard.

In particular, we are deeply grateful to Konica Minolta for their onsite guidance and support in our Green Supplier Activities, which has provided us with much learning and growth.

We will continue our efforts to become a world-class environmental conservation company and contribute to the reduction of global environmental impacts by continuing our effort to mitigate global warming, support a recycling-oriented society, and reduce the risk of chemical substances.

There is an old Chinese proverb which states, "The road of practice is long, far, and endless, but I will continue my search for the truth through twists and turns." This expresses the truth about reducing environment impact as well — it is a long road to a distant destination, but I will continue to act with the belief that things will surely get better along the way as each one of us takes action.



Hu Xiaofeng, Vice President, Yihe Electric Group, Yihe Holdings

Voice of a Supplier | Allied Precision Technologies (M) Sdn. Bhd.

With the global climate changes, it has increased the impact to our environment and natural resources. We must renew our production processes and establish environmental-friendly operations in our manufacturing field. We are grateful to Konica Minolta, for inviting us to participate in the Green Supplier Activity program since 2018. Through this program, Konica Minolta has taught us the best practices in using fewer material resources, reduce and recycle materials, saving energy resources and moderate emissions from our manufacturing processes. With Konica Minolta's guidance, we have introduced various green activities to our manufacturing processes. This has enabled us to achieve greater costs savings and effectively reduce the carbon footprint in our operations. Moving forward, Allied will continue to practice environmental conservation and strengthen our business strategies as a Green Manufacturer.



Angeline Tan
Managing Director
Allied Precision Technologies (M) Sdn. Bhd



Allied Precision Technologies (M) Sdn. Bhd Achieved Green Supplier Activity Targets

Voice of a Supplier | Asian Stanley International Co., Ltd.

Our basic environmental philosophy is to minimize the impact on the environment of all of our corporate activities and create productive value and harmony with the environment so that our irreplaceable earth and the rich benefits of its biodiversity can be passed down to the next generation in a sound condition. Environmental activities are an important component of these efforts. By carrying out Green Supplier activities with Konica Minolta, we learn ways of creating energy conservation effects and their perspective, and these efforts lead to concrete results. Moreover, these activities help us to achieve our targets for the entire factory, not just the environmental team, and this raises awareness and initiatives company-wide. I think that continuing these activities is of utmost importance, and we will continue to conserve energy and resources, prevent contamination, and develop products and carry out manufacturing activities that reduce environmental impact.



Shigeru Kawasumi
President
Asian Stanley International Co., Ltd.

Voice of a Supplier| Nippon Seiki Consumer Products (Thailand) Co., Ltd.

Thank you for two and a half years of advice. Through the Green Supplier activities, we have been able to change awareness about the environment, including members' energy loss and waste and reductions to CO₂ emissions. Not only did we benefit from the actual effects, but we made many realizations. Going forward, we plan to share and develop the experiences and knowledge we have received through these activities to achieve sustainable growth.



Hiroshi Mizuochi
General Manager
Nippon Seiki
Consumer Products
(Thailand) Co., Ltd.

Voice of a Supplier| Guppy Plastic Industries (Penang) Sdn. Bhd.

Our environmental conservation activities started with small and simple activities since our inception days. Our program continues internally and later on, enhanced to include involvement with external parties such as the local council, schools, and the public. The program included city beautification, zero waste, and school beautification.

Recent years are showing the rise of the negative impact to the environment from plastic products. However, we as plastic injection moulding manufacturer remained positive in our position as a diversified supplier in supplying to various industries.

Green Supplier Activity by Konica Minolta has given us the opportunity to further enhance our program to higher level. The program will support us in meeting our goal which also aligned with our environmental policy that is to contribute toward environmentally sustainable development.

We have shared good practices and gained additional knowledge from the Konica Minolta team and appreciate the exposure of the new ideas and methodologies introduced in implementing waste elimination. We look forward for continuous support from Konica Minolta in our journey to improve the quality of life for our employees, business partners, and future generations.



BK Goh
Managing Director
Guppy Plastic Ind.
Sdn. Bhd.



Guppy Plastic Industries (Penang) Sdn. Bhd. Achieved Green Supplier Activity Targets

Voice of a Supplier | Well King Plastic Manufacturing Co., Ltd.

We view environmental conservation as an extremely important initiative in the context of China's recent pursuit of rapid economic growth and the advancement of its manufacturing industry. Konica Minolta's Eco Vision 2050 is aimed at sustainable growth, which is an approach that matches the course we wish to follow.

In the manufacturing industry, resource and energy consumption increase with business expansion and rises in production. This is why I believe that the "waste elimination activities" we worked on as part of the Green Supplier activities are essential for a growing manufacturing industry. Moreover, Konica Minolta's sharing of its environmental expertise enabled us to reduce our environmental impact while increasing our performance, giving us the experience of simultaneously contributing to the environment and supplying competitive products.

We will continue to practice environmental conservation and energy reduction activities and will do our best to pursue sustainable development in collaboration with Konica Minolta.

Happy Tsai
President
WELLMEI HOLDING CO., LTD.

Voice of a Supplier | Szepak Precision (Wuxi) Co., Ltd.

Through the Green Supplier activities, we received a wealth of advice on things such as energy conservation, resource reduction measures, and calculation methods. Thanks to Konica Minolta, we were able to take the first steps toward environmental contribution. For environmental measures requiring investment, we received proposals from a management perspective, including measures sorted into short-, medium-, and long-term investments, as well as by depreciation period. The government also has several requirements for environmental conservation measures, and we were able to work even more positively on them by pursuing the Green Supplier activities. In the future, we would like to develop self-diagnosis mechanisms while applying diagnostic tools from Konica Minolta.

Yushi Ueda
Director / General Manager
Szepak Precision (Wuxi) Co., Ltd.

Voice of a Supplier | Allied Technologies (Saigon) Co., Ltd

In our daily lives, we receive much information about global warming, the greenhouse effect, and CO₂ emissions, which are contributing to environmental risk with rising temperatures, rising sea levels and extreme weather conditions that affect the lives of human beings and other living organisms around the world.

Konica Minolta introduced the Green Supplier Activity at Allied Vietnam in 2015. Through the program, my team has been introduced to the benefits these activities can have for the company. We understand that it can contribute to cost reduction, increased sales opportunities, reduced business risk, and the environmental awareness of every employee.

Through the program, Konica Minolta, working with Allied, evaluated ways to save energy and reduce waste, took productive measures to make plans, and executed to meet the targets set. This, in turn, met the wider goal of working to curb global warming and supporting a recycling oriented society.

During the activity, Konica Minolta continuously shared with Allied many methods for reducing energy use, and also shared their experience with best practices to enable us to execute the program effectively.

Moving forward, Allied will continue to sustain the activities that are in place, and will also continue to make plans for reducing energy and recycling waste, working to be part of a company that exercises its social responsibility to the community.

Tung Gee Khim
Group Operation Manager
Allied Technologies (Saigon) Co., Ltd.

Voice of a Supplier | Changhong Technology Co., Ltd.

As part of the Green Supplier activities, Konica Minolta environmental manufacturing experts visited our production site, and we discussed environmental measures for molding machines and utilities use. Preparing for the actual implementation of the suggested measures, we visited a Konica Minolta production site in China, and we were able to address our situation while discussing specific ways to proceed. The local government places great importance on energy-saving activities, and we received a monetary incentive after reporting the energy-saving initiatives we took through the Green Supplier activities. We were able to reduce our emissions by 800 tons per year, and also contributed to CO₂ emissions reduction in China.

Xu Yanping

President

Changhong Technology Co., Ltd.



Visiting a Konica Minolta site to see environmental measures

Voice of a Supplier | Toyo Communication Technology (Shenzhen) Co., Ltd.

I think the biggest feature of the Green Supplier Initiative is the way in which Konica Minolta is committed to coming into suppliers' sites and working with them to make improvements.

Indeed, the people who visited our factory did not just bring the methods cultivated in Japan as-is; rather, they thought together with us about what kinds of measures we need. This method improved the motivation of our employees, and an attitude of thinking on one's own and devising improvements started to spread throughout the company.

Going forward, we are determined to keep cooperating with Konica Minolta to form and implement environmental plans and measures, and foster a system and culture that values environmental management.

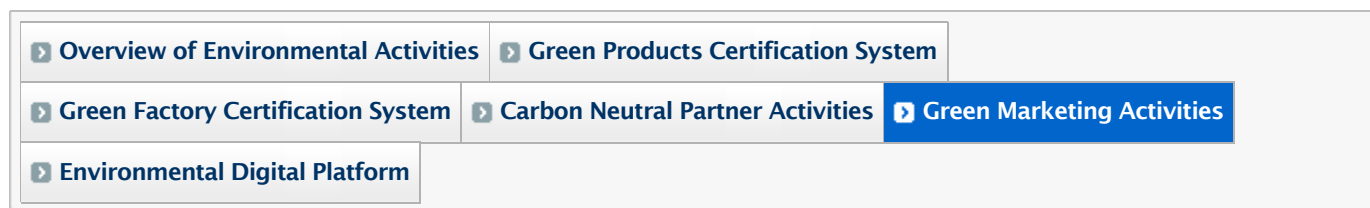
Lou Yiliang

Chairman and Managing Director

Toyo Communication Technology (Shenzhen) Co., Ltd.

[▶ Overview of Environmental Activities](#) | [▶ Green Products Certification System](#) | [▶ Green Factory Certification System](#)
[▶ Carbon Neutral Partner Activities](#) | [▶ Green Marketing Activities](#) | [▶ Environmental Digital Platform](#)

Sales Activities to Solve Environmental Issues (Green Marketing Activities)



Background and Issues

With growing public demands to address environmental problems such as climate change and resource depletion, corporations are expected to carry out environmental activities that not only minimize risks but also promote business growth. To do this, companies need to reach beyond their own organizations and share value with customers, local communities, and other stakeholders. By promoting activities together, companies and their stakeholders can raise their level of contribution to global environment preservation throughout the value chain.



Vision

Konica Minolta has been contributing to the entire value chain by sharing its expertise and experience with customers to help resolve their environmental challenges. It seeks to strengthen relationships with customers and continually create shared value, building on the foundation of trust they have with Konica Minolta.



Key Measures and KPIs

Contribution to sales made using DX to strengthen engagement with customers and solve customers' issues

Konica Minolta helps to solve its customers' environmental issues by providing the outstanding environmental technologies and expertise it is known for, and also by creating new business opportunities leveraging greater engagement. Moreover, the company is maximizing these efforts through its Environmental Digital Platform. Konica Minolta, with the leadership of its sales division, has grown sales by improving performance on the KPIs of enhanced customer relations (acquisition of customer's project data), business negotiation participation (providing quotations), and sales contribution (acquisition of contracts).

The Company also expanded its business activities by providing the Environmental Digital Platform (Environmental DPF).

- 1) Support customers in reducing energy use and CO₂ emissions by transforming their business processes
- 2) Contribute to the expansion of Konica Minolta product sales by strengthening customer engagement
- 3) Develop visuals to illustrate the amount of CO₂ reductions achieved by Environmental Digital Platform solutions and explore counting the amount reduced by the solution towards our Carbon Minus contributions (CO₂ reductions at customers, business partners and the broader society).

Using DX to Strengthen Customer Engagement

Key measures (KPI)	Results			Target	
	FY2020	FY2021	FY2022	FY2022	FY2023
Enhancing customer relations (No. of times)	285	303	338	408	372
Participating in business negotiations(No. of time)	212	153	230	181	257
Sales contribution (million yen)	692	892	989	1000	1100

*1 Enhanced customer relations: Number of business opportunities gained by providing customers with environment-related technologies and know-how

*2 Business negotiation participation: Number of proposed products for which a quotation was submitted out of the number of enhanced customer relations

*3 Sales contribution: Total amount of sales of products proposed at the above-mentioned business negotiations

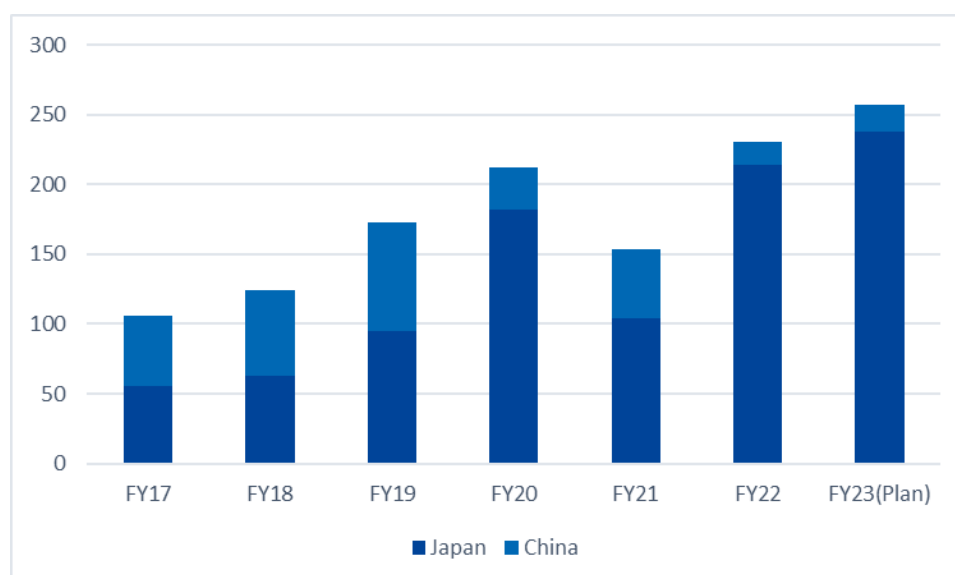
Overview of Activities

The solutions provided by Konica Minolta include not only products and services, but also environmental expertise that is useful to customers. Through Green Marketing activities that provide the proven environmental expertise the company already possesses, Konica Minolta seeks to build corporate relationships by working with customers who appreciate its approach to environmental management to help them solve environmental issues. The aim of these efforts is to become the business partner of choice for companies around the world.

Fiscal 2022 Activity Results

Konica Minolta provided environmental seminars and lectures to an audience of 400 people from 250 companies to introduce Konica Minolta's approach to environmental management, including practical examples. With direct visits difficult to COVID-19, Konica Minolta held online meetings with 191 companies to exchange views on the environment in fiscal 2022. In these sessions, the Company heard about customers' environmental issues and introduced practical examples of Konica Minolta's environmental work. Since 2014, the Company has provided its environmental technologies and know-how to more than 1,200 customers. Through this enhanced engagement, Konica Minolta has increased the number of business meetings that have resulted in business opportunities year after year.

Business negotiation participation*



*Business negotiation participation: Number of proposed products for which a quotation was submitted at business opportunities gained by providing customers with environment-related technologies and know-how

Support to Reduce Environmental Impact and Reform Work Styles

Designing good times for the Company and its employees through practical work-style reform in Konica Minolta's own offices

Konica Minolta offers office solution services that contribute to work style reforms, on top of reducing environmental impact, through optimization of office environments. Konica Minolta Japan, Inc. has been implementing its own work-style reform since 2013, in search of a better way to work.

It has been implementing various office solutions such as optimal MFP placement, reduction of printing volume and document storage space by digitizing documents, and introduction of telework to reduce business travel.

As a result of implementation of further measures to realize new work styles after 2020, it has achieved reductions in environmental impact and costs by reducing the amount of copier paper output by 70%, the amount of documents stored by 38%, and the amount of electricity used by 18.6%^(*1). In addition, work style reform reduced overtime work by 39%, and business productivity was maintained and improved through telework^(*2), enabling the design of good working hours for both the company and employees.

Based on the knowledge gained through this in-house practice, Konica Minolta has developed a concept for work-style transformation and offers "Design Your Time!" as a unique office solution service.

*1: Comparison between FY2019 and FY2021

*2: Comparison between FY 2018 and FY 2021

Helping to Reduce Environmental Impact to Solve the Environmental Issues of Customers

Bizhub Eco

Konica Minolta has been developing Bizhub Eco service package revolving around MFPs to solve customers' environmental issues and concerns in Europe. Bizhub Eco uses Konica Minolta's Optimized Print Services (OPS) to set the installed MFPs to the most energy and resource-efficient setting for the usage situation of the customer. For a fee, the package also includes a carbon offset for the entire product lifecycle, biodiversity protection measures in the form of tree planting activities, and local NPO support. By also providing signage to explain the green activities promoted by Bizhub Eco, Konica Minolta facilitates internal communication in the 'customers' office.

[▶ Overview of Environmental Activities](#) | [▶ Green Products Certification System](#) | [▶ Green Factory Certification System](#)
| [▶ Carbon Neutral Partner Activities](#) | [▶ **Green Marketing Activities**](#) | [▶ Environmental Digital Platform](#)

Cooperation with Domestic Companies to Solve Environmental Issues (Environmental Digital Platform)

- | | | |
|--|---------------------------------------|------------------------------|
| ▶ Overview of Environmental Activities | ▶ Green Products Certification System | |
| ▶ Green Factory Certification System | ▶ Carbon Neutral Partner Activities | ▶ Green Marketing Activities |
| ▶ Environmental Digital Platform | | |

Background and Issues

With growing public demands to address environmental problems such as climate change and resource depletion, corporations are expected to carry out environmental activities that not only minimize risks but also promote business growth. To do this, companies need to reach beyond their own organizations and share value with customers, local communities, and other stakeholders. By promoting activities together, companies and their stakeholders can raise their level of contribution to global environment preservation throughout the value chain.



Vision

Global environmental problems are pressing challenges facing the whole world and cannot be solved by the isolated efforts of individual companies. Recognizing this, Konica Minolta has already opened up its reservoir of expertise in environmental management for business growth and cost reduction, has been sharing it with many other companies through digitization of our expertise.

Konica Minolta is in the process of digitally sharing its environmental expertise with a base of more than 1,200 companies that it has built through its sustainable marketing activities. By allowing these companies to share their environmental knowledge with each other and by providing a place to collaborate and create new value, Konica Minolta believes it can dramatically increase its contribution to environment. Konica Minolta launches the Environmental Digital Platform, aiming to help reduce the environmental impact of industry and society as a whole. The platform will enable companies to share and utilize their outstanding environmental technologies and expertise that Japanese companies have amassed.

Pilot run Trial operation of the Environmental Digital Platform began in June 2020 with 16 companies participating. The platform was expanded to full-scale operations in December 2020, with 84 companies participating as of April 2023. Konica Minolta aims to drive innovation with a co-creation approach in which companies share and utilize the knowledge and expertise they have acquired through practice and efficiently resolve environmental issues in mutual cooperation. The expertise on environmental strategies and renewable energy held by the participating companies, consulting and software for energy conservation diagnosis, and solutions that can be put into use immediately such as environmental products, are shared. Konica Minolta also helps match companies who can help each other solve their respective issues. Konica Minolta hopes that the broad use of this service by companies other than the participating companies can help solve environmental issues on an even bigger scale.

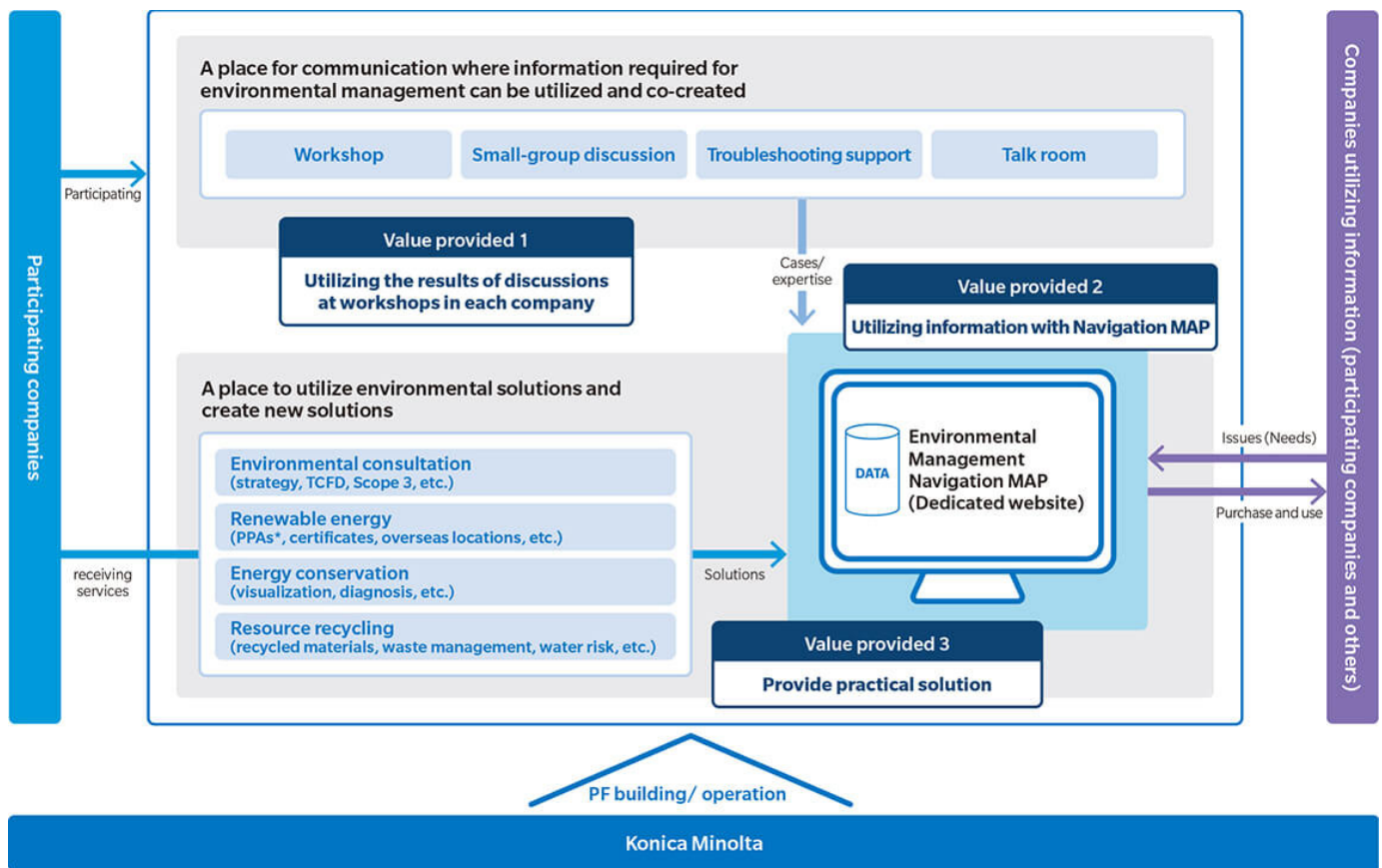


Key Measures and KPIs

Target: Create new contributions to CO₂ reductions by fiscal 2022

Overview of the Activities

The Environmental Digital Platform, which not only shares expertise but offers its results to a broad section of society, consists of the Environmental Solution Co-Creation Service, which brings together the knowledge of participating companies on issues that are difficult for a single company to solve on its own so that new solutions can be created, and the Environmental Solution Provision Service, in which participating companies share and utilize the environmental expertise they put into practice. The information that is shared is then made visible with the Environmental Management Navigation MAP (Guideposts for Solutions). Wide use of the Environmental Management Navigation makes it possible for companies to solve their own environmental issues. Konica Minolta has also launched talk room and troubleshooting support where users can seek advice and have their concerns addressed, thereby actively facilitating communication among the participating companies. Going forward, Konica Minolta will help to resolve environmental issues on a global scale by promoting digitalization, increasing the number of participating companies, building up data, and expanding the Platform as a DX business.



Environmental Digital Platform

- Overview of Environmental Activities
- Green Products Certification System
- Green Factory Certification System
- Carbon Neutral Partner Activities
- Green Marketing Activities
- Environmental Digital Platform**

Basic Concept

▶ Basic Concept	▶ Plan and Results	▶ Konica Minolta's Approach
▶ Introducing Renewable Energy at Company Sites	▶ Promoting Decarbonization with Products and Solutions	
▶ Promoting Decarbonization in Production	▶ Achieving Decarbonization in Sales Activities	
▶ Promoting Decarbonization in Distribution	▶ Adapting to Climate Change	

Basic Concept

In recent years, global warming shown by rising average temperatures as well as natural disasters due to abnormal weather including droughts, heat waves, and heavy rains have become more frequent worldwide. Climate change is one of the world's most serious social issues and is exerting various harmful effects on the lives and economic activities of everyone. The world is rapidly and ambitiously transitioning to a low-carbon model under the Paris Agreement, which was agreed among the member countries of the United Nations Framework Convention on Climate Change.

Konica Minolta's environmental management is based on the concept of "growing existing businesses and creating new ones by helping to solve environmental problems such as climate change." The goal is to be a company that is essential to society by helping to solve climate change and other global environmental challenges while pursuing corporate growth. There is a limit to what one company can do on its own to solve the problem of global climate change. This is why Konica Minolta seeks to achieve [Carbon Minus](#) status by proactively contributing to the reduction of CO₂ emissions on the planet in collaboration with stakeholders, primarily business partners and customers. The Company defines Carbon Minus status as "making a greater contribution to CO₂ reductions in areas outside the scope of our responsibility than the volume of CO₂ emissions in areas we are responsible for." It refers to a situation where the Company's customers and users of its products in the broader society contribute more to the reduction of CO₂ emissions (including Scope 1, 2, and 3 emissions) than the emissions directly related to its own products and operations. Konica Minolta will continue to accelerate the effects of decarbonization, broaden its ties with stakeholders, and grow its business together with them by sharing the know-how for achieving both decarbonization and cost reductions with customers and business partners and helping all stakeholders fulfill their responsibilities.

For CO₂ emissions that are directly related to products and businesses (Scope 1, 2, 3 emissions), Konica Minolta has set medium-term [Science Based Targets \(SBTs\)](#) for CO₂ emissions reduction by 2030. As a roadmap to reaching the target, the Group has established short-, medium-, and long-term measures to reduce CO₂ emissions for which it is directly responsible by taking CO₂ emissions reduction initiatives such as developing energy-saving production technologies, introducing renewable energy-derived electricity, converting its business to a paperless operation, and considering adoption of CO₂-free fuels. Furthermore, Konica Minolta is working to solve social and environmental issues through its products and services and has formulated a business plan to both generate sales and reduce CO₂ emissions. The Company also believes that conducting business with a focus on quickly conforming to the needs of a renewable energy-based society that is not reliant on fossil fuels is a necessary condition for any company to grow sustainably. It is therefore a member of the [RE100](#) international leader initiative, which aims to conduct business using 100% renewable energy. The Company has set a target of using 100% renewable energy for the electricity procured for use in its business operations by 2050.

▶ Basic Concept	▶ Plan and Results	▶ Konica Minolta's Approach
▶ Introducing Renewable Energy at Company Sites	▶ Promoting Decarbonization with Products and Solutions	
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▶ Promoting Decarbonization in Distribution	▶ Adapting to Climate Change	

Plan and Results



Plan

Konica Minolta assesses its efforts of addressing climate change by setting quantitative targets for the short, medium, and long term, and these targets consider both social and environmental value, along with economic value. Working to achieve the Company's [Eco Vision 2050](#) targets and [Carbon Minus](#) goal, each division sets reduction targets and draws up plans for each fiscal year in the medium-term plan, and proactively takes steps to achieve them.

Konica Minolta has set a target of reducing CO₂ emissions throughout the lifecycle of its products by 61% compared to fiscal 2005 by fiscal 2025, while at the same time generating 800,000 tons of CO₂ emission reductions that benefit its customers, suppliers, and the broader society. The goal is to achieve Carbon Minus status by fiscal 2025 through these initiatives.

Vision for 2030 and Medium-Term Plan

Vision for 2030: Reduce CO₂ emissions by Konica Minolta, enhance CO₂ emissions reduction at corporate clients and suppliers

Related SDGs:



Themes		Indicators		Results			Targets
				FY2020	FY2021	FY2022	FY2022
Reducing Energy Usage and CO ₂ Emissions by Transforming Customer Processes		Social and environmental value	Amount of contribution to CO ₂ reduction (thousand tons)* ¹	578	585	624	640
		Economic value	Solution sales (billion yen)	51	56	76	71
Energy Usage and CO ₂ Emissions Reduction Related to Konica Minolta Sites, Business Partners, Products and Services	Reduction of environmental impact of Konica Minolta production sites * ²	Social and environmental value	Reduction of CO ₂ emissions (thousand tons)	4	12	18	18
		Economic value	Monetary equivalent of energy reduction (million yen)	79	270	450	350
		Social and environmental value	Amount of CO ₂ reduced through procurement of renewable energy (thousand tons)	7	10	20	20
	Reduction of life cycle environmental impact of Konica Minolta products (product use and procurement)	Social and environmental value	Reduction of CO ₂ emissions (thousand tons)	14	25	53	50
		Economic value	Sales from sustainable solutions (billion yen)	676	597	777	690
	Reduction of environmental impact at suppliers using DX* ²	Social and environmental value	Amount of contribution to CO ₂ reduction (thousand tons)* ¹	1.1	2.8	6.4	5.0
		Economic value	Monetary equivalent of energy reduction (million yen)	16	43	103	77

Themes		Indicators		Targets		
				FY2023	FY2024	FY2025
Reducing Energy Usage and CO ₂ Emissions by Transforming Customer Processes		Social and environmental value	Amount of contribution to CO ₂ reduction (thousand tons)* ¹	630	720	800
		Economic value	Solution sales (billion yen)	89	97	100
Energy Usage and CO ₂ Emissions Reduction Related to Konica Minolta Sites, Business Partners, Products and Services	Reduction of environmental impact of Konica Minolta production sites * ²	Social and environmental value	Reduction of CO ₂ emissions (thousand tons)	6	13	20
		Economic value	Monetary equivalent of energy reduction (million yen)	280	560	840
		Social and environmental value	Amount of CO ₂ reduced through procurement of renewable energy (thousand tons)	3	8	34
	Reduction of life cycle environmental impact of Konica Minolta products (product use and procurement)	Social and environmental value	Reduction of CO ₂ emissions (thousand tons)	22	47	78
		Economic value	Sales from sustainable solutions (billion yen)	-	-	840
	Reduction of environmental impact at suppliers using DX* ²	Social and environmental value	Amount of contribution to CO ₂ reduction (thousand tons)* ¹	1.8	3.5	4.1
		Economic value	Monetary equivalent of energy reduction (million yen)	42	81	94

Note Targets and results have been revised retrospectively to fiscal 2020 figures as the method of calculating the effects of measures was changed in fiscal 2021.

*1 Contribution to CO₂ reduction: Volume of CO₂ emissions reduced at customers, business partners and the broader society

*2 Cumulative reductions for each fiscal year from FY2020 - FY2022 and FY2023 - FY2025. Total reduction amount for each fiscal year due to the measures implemented from the first fiscal year of each period to the relevant fiscal year.

Details on Task Force on Climate-related Financial (TCFD) disclosures are available [here](#).

Results

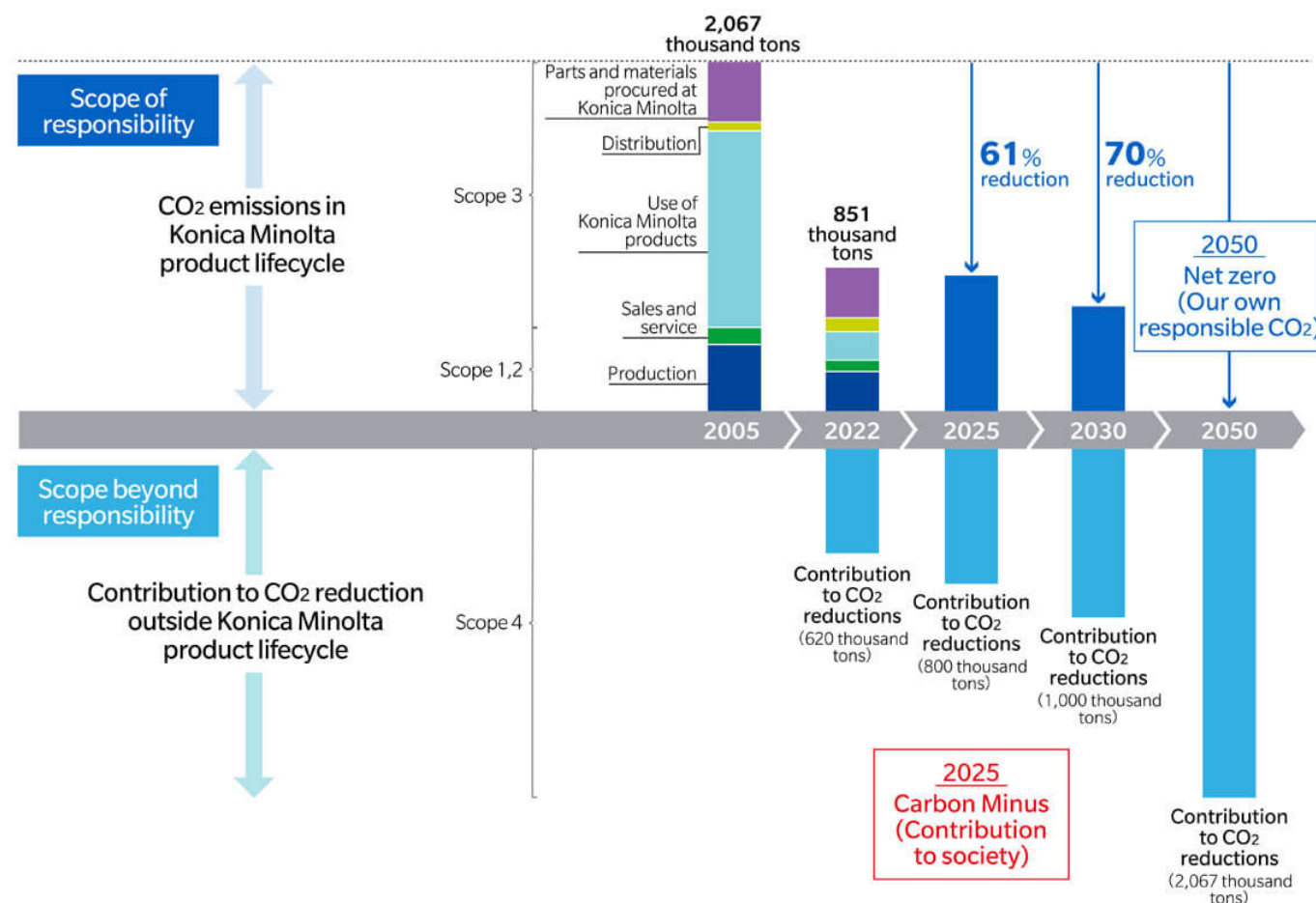
Progress of the Medium-Term Plan for Fiscal 2022

In its medium-term business plan through fiscal 2022, Konica Minolta achieved reductions that exceeded its CO₂ emissions reduction plan through energy saving and renewable energy at its production sites, reduced CO₂ emissions in its products' lifecycle, and reduced the environmental impact of its suppliers through use of DX. The economic value (in terms of solution sales and energy reduction monetary value) of these indicators was also exceeded due to the solid performance of the planned measures.

As for the reduction of energy and CO₂ through the transformation of customers' work processes, their contribution to CO₂ reduction fell slightly below plan, but the planned sales of the target solutions were achieved.

Progress on Achieving Carbon Minus Status

CO₂ emissions in the lifecycle of Konica Minolta products in fiscal 2022 were approximately 850,000 tons, 58% reduction compared to fiscal 2005. This result was due to the visible effects of the Company's CO₂ emissions reduction efforts. Konica Minolta's contribution to CO₂ emissions reduction outside of its products' lifecycles was 624,000 tons, bringing it one step closer to Carbon Minus status.



(For more information on targets and results, please refer to [Sustainability Targets and Results](#))

For detailed data, please refer to [the Environmental Data](#) on the [ESG Data](#) page.

- [Basic Concept](#) |
 [Plan and Results](#) |
 [Konica Minolta's Approach](#)
- [Introducing Renewable Energy at Company Sites](#) |
 [Promoting Decarbonization with Products and Solutions](#)
- [Promoting Decarbonization in Production](#) |
 [Achieving Decarbonization in Sales Activities](#)
- [Promoting Decarbonization in Distribution](#) |
 [Adapting to Climate Change](#)

Konica Minolta's Approach

➤ Basic Concept	➤ Plan and Results	➤ Konica Minolta's Approach
➤ Introducing Renewable Energy at Company Sites	➤ Promoting Decarbonization with Products and Solutions	
➤ Promoting Decarbonization in Production	➤ Achieving Decarbonization in Sales Activities	
➤ Promoting Decarbonization in Distribution	➤ Adapting to Climate Change	

Key Measures

To achieve Carbon Minus status, it is necessary to accelerate both the reduction of CO₂ emissions in the product lifecycle, which is the manufacturer's responsibility, and the contribution to CO₂ emissions reduction by its customers and business partners, which is outside the scope of the company's responsibility.

Konica Minolta believes that the use of digital transformation (DX) can dramatically reduce CO₂ emissions from both sources.

In-House Initiatives

1. Green Factory Activities

We have been conducting Green Factory activities for more than 10 years. In the Sustainable Factory Certification System, a program conducted during the medium-term business plan from fiscal 2020 to fiscal 2022, all major production sites achieved their numerical targets. In addition to accelerating environmental impact and cost reduction efforts that have been promoted so far, the Company will create factories that contribute to sustainable growth by addressing the growing social demand for renewable energy and CSR procurement.

		Raw material production site	Assembly/high load site
Environmental Impact reduction Environmental impact reduction standards to be achieved by Konica Minolta production sites*	CO ₂ emissions	3% reduction annually (9% over 3 years)	2% reduction annually (6% over 3 years)
	Discharge volume	2% reduction annually (6% over 3 years)*	2% reduction annually (6% over 3 years)*
Guideline Standards for biodiversity and other initiatives to be pursued by Konica Minolta production sites	Guideline compliance status	Complying with guidelines on items such as: <ul style="list-style-type: none"> • VOC reduction • Biodiversity (water, soil, marine plastic, etc.) • CSR procurement • Expanding introduction of renewable energy-derived electricity, etc. 	

* Targets set for activities to reduce and recycle industrial waste from products that use plastic, including the reduction of plastic waste at major sites in Japan, based on the Plastic Resource Circulation Act enacted in Japan.

2. Expand renewable energy-derived electricity use

Konica Minolta has been promoting the switch to renewable energy sources, mainly at its overseas bases, including five manufacturing sites in China, Malaysia, the U.S. and France, and 70 sales bases in Europe. Ahead of fiscal 2023, Konica Minolta will consider the optimal methods for each region globally, and reinforce its initiatives to expand the procurement of power derived from renewable energy sources.

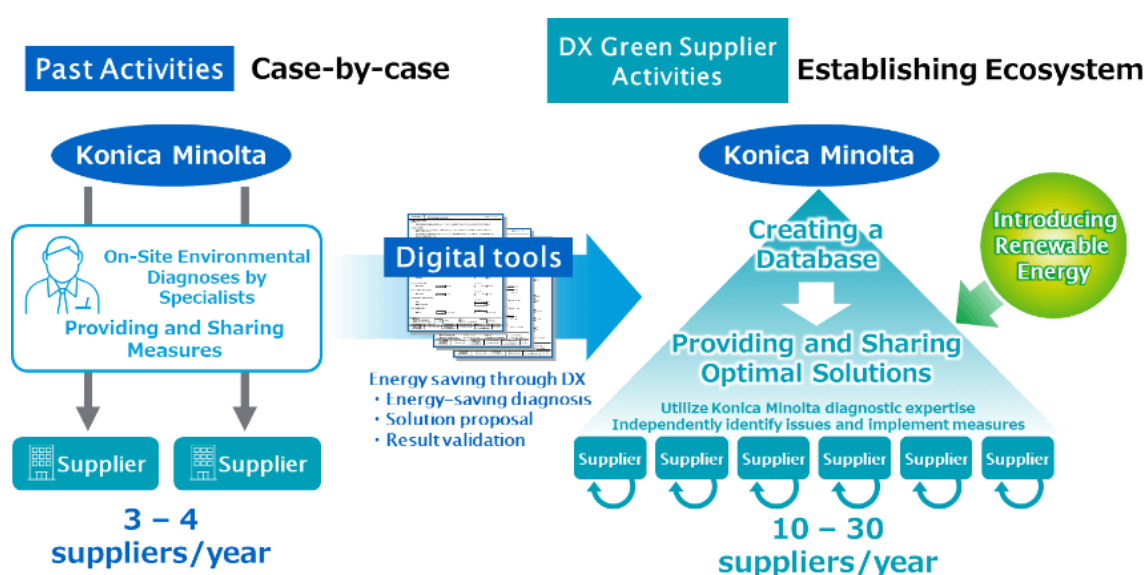
Initiatives Carried Out with Suppliers

1. Carbon Neutral Partner Activities

In order to collaborate with even more business partners, Konica Minolta began promoting Digital Green Supplier activities in fiscal 2020. The aim is to dramatically reduce CO₂ emissions across the entire supply chain by launching Digital Green Supplier activities using digital transformation (DX) technology.

Previously, experts carried out energy diagnostic activities with direct visits to factories; but now, by making these digital, suppliers can carry out all the steps from diagnosis to identification of issues and implementation of measures on their own. This efficient approach means that Konica Minolta can support more suppliers with their environmental activities. Digitalization will allow the company to support more than 10 times more suppliers.

Furthermore, in October 2021, the Group developed the DX Green Supplier Certification System and launched the Carbon Neutral Partner Certification System. It will support the decarbonization of its suppliers by utilizing digital tools to manufacture with as little energy as possible, and by using renewable energy-derived electricity sources.



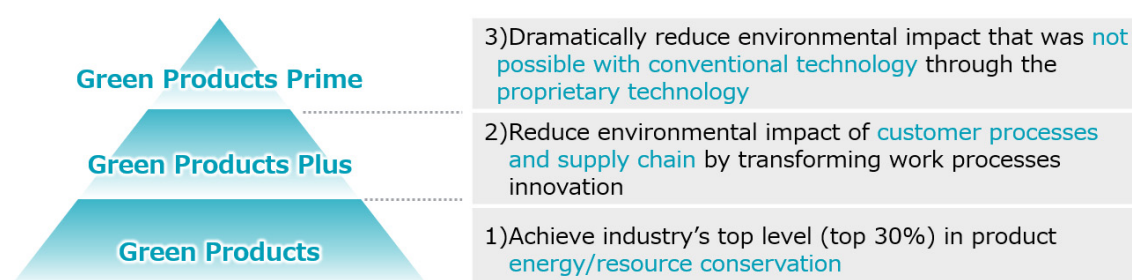
Initiatives Carried Out with Customers

1. Green Products Activities

The Green Products Certification System was launched in fiscal 2011. With the new System, criteria are established for different businesses and product characteristics with respect to certification standards for environmental issues that Konica Minolta seeks to help solve. Successful products are certified at one of three levels, based on the degree of achievement. Konica Minolta will further reduce the environmental impact for which it is directly responsible by creating solutions that solve society's environmental issues through its products and services.

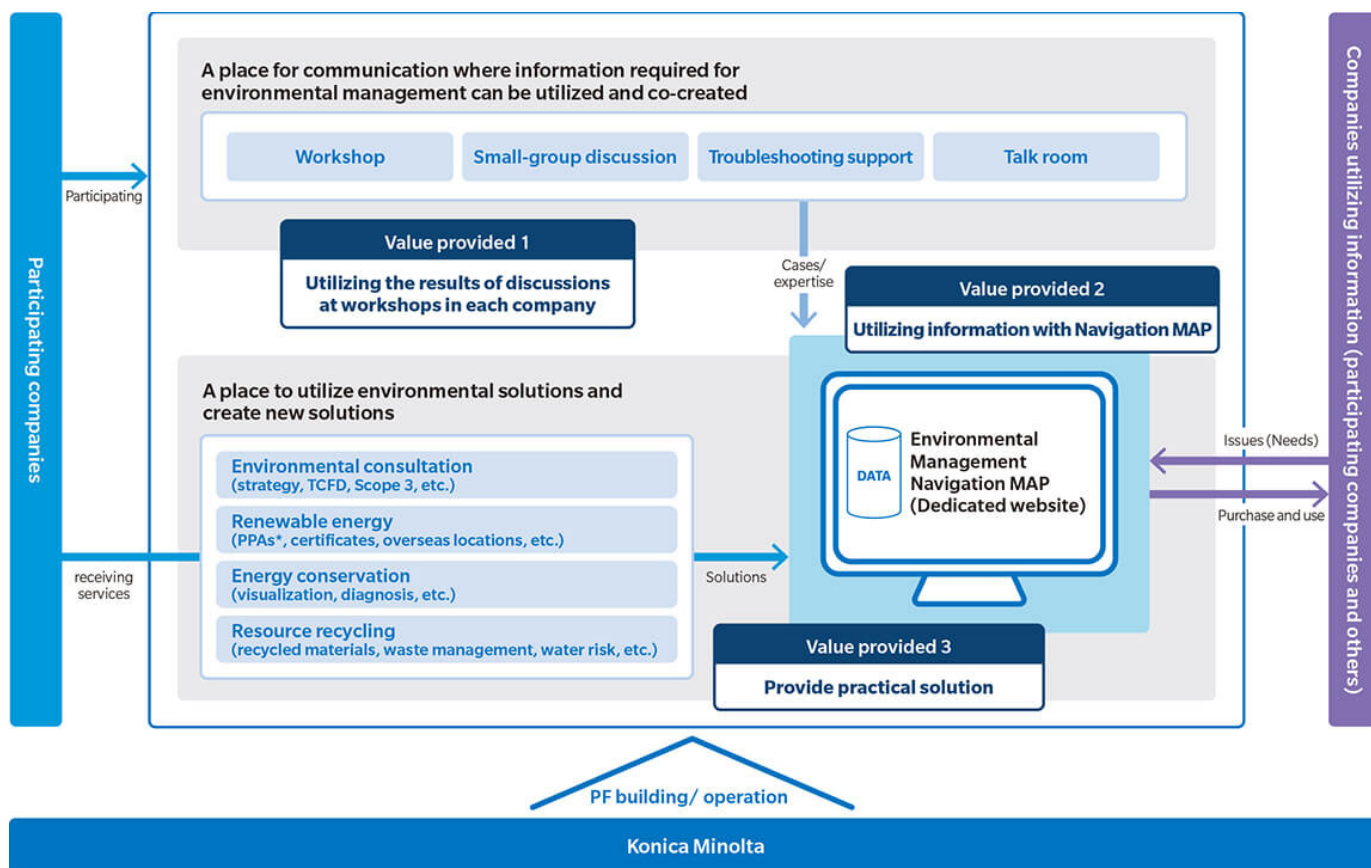
Not only does this system raise the energy conservation of its products and cut CO₂ emissions during customer use, it supports customers' business by providing products and services that transform production processes through the digital on-demand printing of packages, labels, and textiles providing solutions for various industries and promoting customers' DX, while also helping to reduce environmental impact through process transformation.

Green Products Certification System



2. Environment Digital Platform

In fiscal 2020, Konica Minolta launched the Environment Digital Platform, an ecosystem for environmental management. Konica Minolta and participating companies share and build up their environmental knowledge and expertise and co-create new value, which will enhance environmental management efficiency. This ecosystem will lead to dramatic increases Konica Minolta's contribution to and effectiveness in reducing environmental impact. The program started with 15 participating companies, and this number had already increased to 84 by the end of April 2023. This unique approach to co-creation is expected to keep expanding, going forward.



▶ Basic Concept | ▶ Plan and Results | ▶ **Konica Minolta's Approach**

- ▶ Introducing Renewable Energy at Company Sites | ▶ Promoting Decarbonization with Products and Solutions
- ▶ Promoting Decarbonization in Production | ▶ Achieving Decarbonization in Sales Activities
- ▶ Promoting Decarbonization in Distribution | ▶ Adapting to Climate Change

Introducing Renewable Energy at Company Sites

➤ Basic Concept	➤ Plan and Results	➤ Konica Minolta's Approach
➤ Introducing Renewable Energy at Company Sites	➤ Promoting Decarbonization with Products and Solutions	
➤ Promoting Decarbonization in Production	➤ Achieving Decarbonization in Sales Activities	
➤ Promoting Decarbonization in Distribution	➤ Adapting to Climate Change	

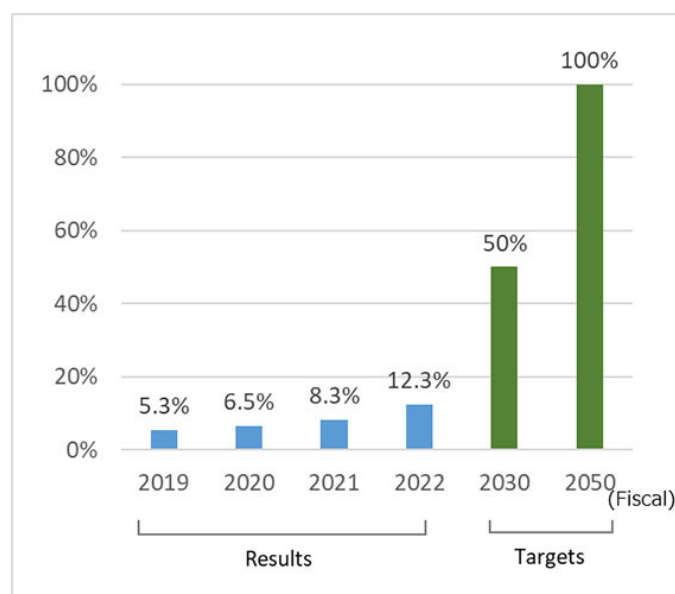
It is thought that the greatest cause of global warming is the increase in greenhouse gas emissions due to human activity since the Industrial Revolution. The key to curbing climate change and building a decarbonized society is to reduce fossil fuel dependency while maximizing the use of renewable energy that emits no greenhouse gases.

Participation in RE100, Which Aims to Run Businesses with 100% Renewable Energy

In January 2019, Konica Minolta joined RE100, a global leadership initiative that brings together businesses committed to sourcing 100% renewable energy for their operations.

Konica Minolta aims to procure 100% of the power used in its own business activities from renewable energy sources by 2050. By doing so, Konica Minolta will accelerate its efforts to achieve Eco Vision 2050 while also helping to reduce global CO₂ emissions by expanding the use of renewable energy. As a medium-term step toward achievement of its long-term goal, Konica Minolta set an internal target of sourcing renewable electricity for 30% of its electricity use by 2030 and has raised this target to 50% in fiscal 2023. The Group will start reviewing its power procurement contracts one-by-one at production sites and sales sites, starting with countries and regions where renewable electricity is relatively widespread, and begin switching over those sites to renewable electricity where it is possible, and accelerate its introduction in the years ahead. In fiscal 2022, the renewable electricity usage ratio* increased to 12.3%.

* Ratio of renewable energy-derived electricity to the total electricity consumption of the Konica Minolta



* Ratio of renewable energy-derived electricity to the Konica Minolta Group's overall energy use (not including co-generated power) in fiscal 2019

* Ratio of renewable energy-derived electricity to the Konica Minolta Group's overall energy use beginning after fiscal 2020.

Expanding Use of Renewable Energy at Production and R&D Sites

In addition to Konica Minolta Business Technologies (Dongguan) Co., Ltd and Konica Minolta Business Technologies (Wuxi) Co., Ltd., which have already achieved 100% use of renewable energy-derived electricity, Konica Minolta Supplies Manufacturing U.S.A., Inc. and Konica Minolta Supplies Manufacturing France S.A.S. also achieved 100% renewable energy-derived electricity in fiscal 2021 by switching to electricity with renewable energy certificates. In February 2021, a new plant of Konica Minolta Mechatronics, Inc. was completed in Toyokawa City, Aichi Prefecture. A photovoltaic power generation system (installed area of 2,632 m² with a generating capacity of 500 kW) was installed in conjunction with the completion of construction, and is expected to provide approximately 11% (estimate) of the electricity used at the plant.

In March 2023, Konica Minolta Business Technologies (Malaysia), our MFP production site in Malaysia, achieved 100% renewable energy. A solar power generation system has been installed that covers 20% of their total electricity usage, while the remainder is procured from renewable energy-derived electricity power certificates.

Through these initiatives, all of the Konica Minolta Group's overseas MFP production sites have achieved 100% renewable energy.



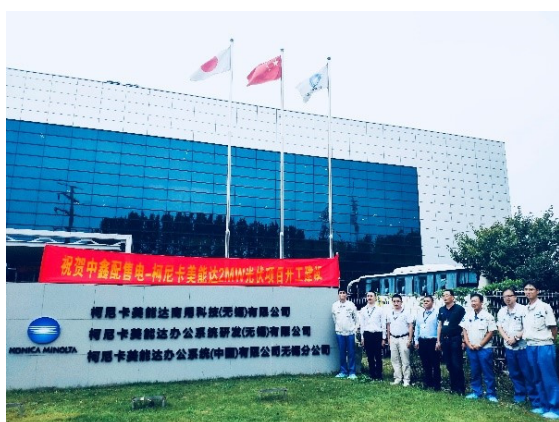
Konica Minolta Business Technologies (Malaysia) and roof-mounted solar panels



New factory of Konica Minolta Mechatronics Co., Ltd.



Solar power panels installed on the roof



Konica Minolta Business Technologies (Wuxi) Co., Ltd



Solar power panels installed on the roof
Left: Konica Minolta Business Technologies (Dongguan) Co., Ltd.



Right: Konica Minolta Business Technologies (Wuxi) Co., Ltd.

Expanding Use of Renewable Energy at Sales Sites

In addition to its production and R&D sites, Konica Minolta is proactively introducing renewable energy at its numerous sales sites around the world. Konica Minolta will continue to meet the expectations of customers and society for renewable energy.

Renewable Energy Initiatives

Konica Minolta Business Solutions U.S.A., Inc. built a photovoltaic installation in a parking lot in 2013 to generate electricity to power its offices. In December 2020, the company switched its remaining purchased electricity to power derived from renewable energy and now uses 100% renewable energy.

Sales companies in eight European countries had previously switched to renewable energy, and in fiscal 2020 this effort made further progress, with sales companies in Spain and Portugal introducing renewable energy, as well.

Going forward, other sales sites will make the switch, starting with those that can conclude direct electricity contracts.



The headquarters in Germany, which is promoting the introduction of electricity from renewable energy sources at its European sales companies



Photovoltaic panel installation in the company parking lot (United States)

Konica Minolta Now Using 100% Renewable Energy At U.S. Headquarters

Since 2020, Konica Minolta has been participating in MidAmerican Energy Services' Renewable Energy Program, procuring renewable energy for its U.S. corporate headquarters in Ramsey, New Jersey. The green energy supplied through this program is a combination of biomass, geothermal, hydroelectric, solar and wind power and is supplementing the solar energy produced by the solar panels installed at the campus in 2013.

The Renewable Energy Program is Green Energy certified and meets the environmental and consumer-protection standards set forth by the nonprofit, Center for Resource Solutions. This new partnership means that the Ramsey, NJ campus now runs on 100% renewable energy.

Recognizing its environmental contributions, in May 2022 Konica Minolta was accepted into the U.S. Environmental Protection Agency's Green Power Partnership program. The program helps increase green power use among U.S. organizations as a way to reduce air pollution and other environmental impacts associated with electricity use. Using green power is a big step toward Konica Minolta's goal of becoming Carbon Minus by 2030 and helps it reduce air pollution and lower its emissions footprint, while also sending a message to other organizations across the country that green power is an affordable, accessible choice.

[▶ Basic Concept](#) | [▶ Plan and Results](#) | [▶ Konica Minolta's Approach](#)

| [▶ **Introducing Renewable Energy at Company Sites**](#) | [▶ Promoting Decarbonization with Products and Solutions](#)

| [▶ Promoting Decarbonization in Production](#) | [▶ Achieving Decarbonization in Sales Activities](#)

| [▶ Promoting Decarbonization in Distribution](#) | [▶ Adapting to Climate Change](#)

Promoting Decarbonization with Products and Solutions

➤ Basic Concept	➤ Plan and Results	➤ Konica Minolta's Approach
➤ Introducing Renewable Energy at Company Sites	➤ Promoting Decarbonization with Products and Solutions	
➤ Promoting Decarbonization in Production	➤ Achieving Decarbonization in Sales Activities	
➤ Promoting Decarbonization in Distribution	➤ Adapting to Climate Change	

Reducing Energy Consumption by Helping Customers Transform Their Processes

Textile Printer Reducing Electricity Usage through On-demand Production

The inkjet textile printer does not require the plate making and colored size mixing that is needed with conventional screen-printing. It also contributes to the reduction of energy usage, resources usage, and waste, since it enables on-demand production that uses only the amount of ink and material needed. It reduces environmental impact significantly, with a 57% reduction in electricity usage compared to conventional screen-printing. In addition, it helps save energy for operations such as air conditioning and lighting by increasing customers' production efficiency.



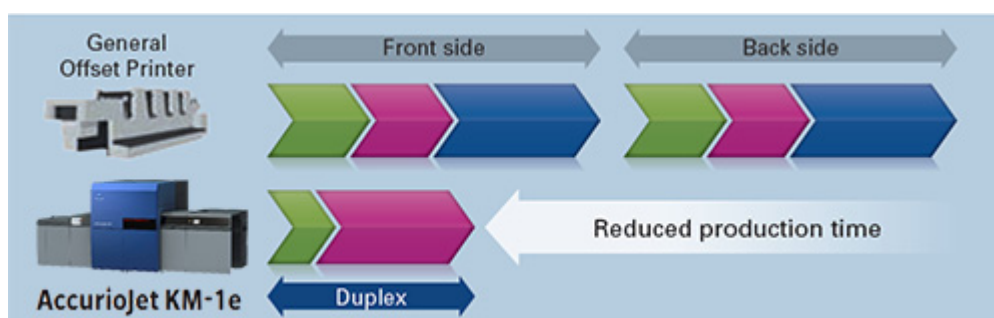
Nassenger SP-1 inkjet textile printer

UV Inkjet Digital Printing Machine That Reduces Power Consumption by Realizing Automatic Duplex Printing without Drying Time

The UV inkjet digital printer, AccurioJet KM-1e, offers high productivity equivalent to that of the previous AccurioJet KM-1. Utilizing the key characteristics of Konica Minolta's unique UV inkjet ink, it can be used for special printing media that were difficult to accommodate with a conventional B2 digital printer and water-based inkjet ink. The AccurioJet KM-1 enables automatic duplex, high-quality printing. Unlike general offset printing, a printing plate is not required. Precise inkjet output control eliminates the need for color matching between devices, which is necessary when using multiple digital printers. This results in a significant reduction in printing preparation time. This was recognized as a three-star environmentally friendly product in the green printing certification system, which objectively screens products based on the standards of the Japan Federation of Printing Industries.



UV inkjet digital printer, AccurioJet KM-1e



Contributing to Energy Conservation in the Label Printing Process

Konica Minolta's label printers offer a printing process that employs electrophotographic technology, providing the same high-definition and stable print quality as offset printing.

In traditional offset printing, each color of UV ink often requires a dedicated plate and a high-power consumption UV lamp to cure the UV ink, which has become standard practice. Konica Minolta employs electrophotographic technology to print color images in a single pass, making it unnecessary to cure and color match each color of UV ink.

At the same time, since no plates are required, it helps reduce the energy used in manufacturing and contributes to effective resource use.

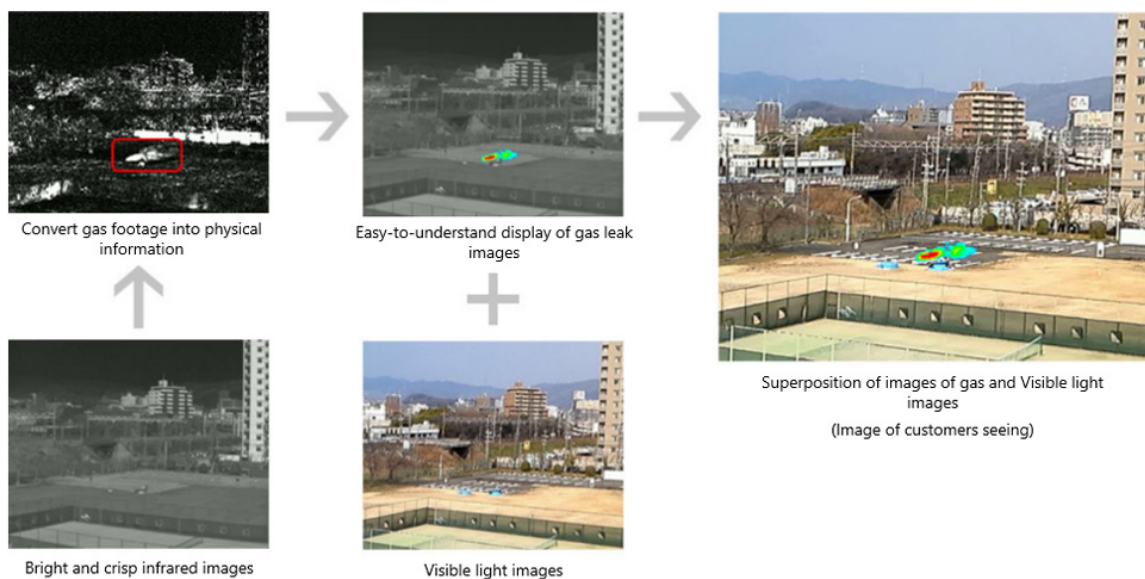


Label Printer
AccurioLabel 400

Using Imaging Technology to Prevent Leaks of GHGs

Gas monitoring solutions apply lens design technology and imaging processing technology, which are Konica Minolta's core technologies, to provide a system that enables anyone to intuitively understand and visualize where and how much hydrocarbon gas, which contributes to global warming, is leaking.

This encourages constant monitoring for unusual events in a way that does not require manual effort. It also allows for rapid, appropriate maintenance that does not depend on the maintenance staff's skill level. Both of these will contribute to the customer's safety and peace of mind. In addition, this solution helps to curb the impact that the leak of gases with a high global warming effect has on climate change.

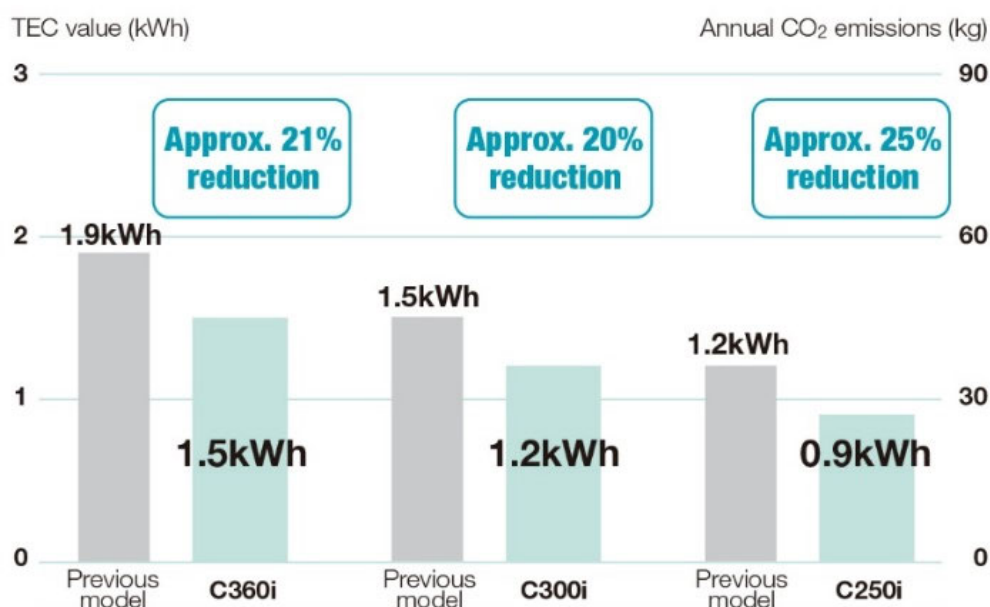


Energy Conservation in MFPs and Digital Printers

Reduction of Power Consumption During Product Use

Konica Minolta is working on the development of low-temperature fixing toner and efficient fixing systems to help save power. The bizhub C360i series released in 2019 offers standard power consumption (TEC value) for one week that is approximately 20% to 26% less than the previous model. By reducing the TEC value, CO₂ emissions are also greatly reduced.

Comparison of TEC values between a previous model and the bizhub C360i series



Simitri V Toner Fixable at a Low Temperature

In MFPs, heat is needed to fix toner to paper, and the power used for that purpose accounts for more than 60% of total power consumption. Konica Minolta has been conducting research and development into toners that can be fixed at lower temperatures, and has developed Simitri V Toner, a proprietary polymerized toner. The company successfully reduced the fixing temperature by about 15 degrees Celsius compared to a previous MFP model (C368). This, combined with a new fixing device, is helping to reduce MFP power consumption. Moreover, Simitri V Toner requires approximately 25% less water to manufacture compared to a previous polymerized toner.

Pad Pressure Fixing System Reduces Power Consumption for Printing

In order to start printing from an MFP, the fixing rollers have to be heated to a certain temperature. Konica Minolta has adopted a pad pressure fixing system for its latest i-Series MFPs in order to efficiently utilize Simitri V Toner, the company's new low-temperature fixing toner. With this new fixing system, the belt and rollers have been reduced in diameter and insulated, thereby substantially cutting the power needed for heating the fixing device during MFP operation.

 [Relevant link: Technology Report 2020 \(Vol.17\)](#)

LED Light Source Reduces Power Consumption During Scanning

Konica Minolta uses LED, which has greater power-saving performance than fluorescent lamps, as the light source for scanners in its MFPs. This has also improved scanning speeds, since LED lights increase the brightness of manuscript exposure.

“Power Save” Feature Reduces Power Consumption When Product Not in Use

Konica Minolta equips its MFPs with a “power save” feature that puts the machine into an energy-saving state, such as automatically turning off the control panel display when the machine has not been used for a certain amount of time. This does not hinder everyday work, since the machine automatically returns to normal mode during power save when it receives a fax or a print signal from a PC.



Proximity Sensor That Can Save Electricity Without Lowering Operational Efficiency

Konica Minolta equips its MFPs with a proximity sensor that automatically returns the machine to normal mode from sleep mode just by bringing a finger close to the control panel. This allows energy savings without lowering operational efficiency, as no time needs to be spent pressing buttons to bring the machine out of sleep mode.



Energy-saving Designs That Power Only the Areas Needed

Konica Minolta minimizes power consumption through energy-saving designs that enable power supply only to areas needed for each function—for example, not starting up the printer control panel when printing from sleep mode or not turning on the toner fixing heater when using the scanner or fax..

“Print Preview” to Reduce Misprints

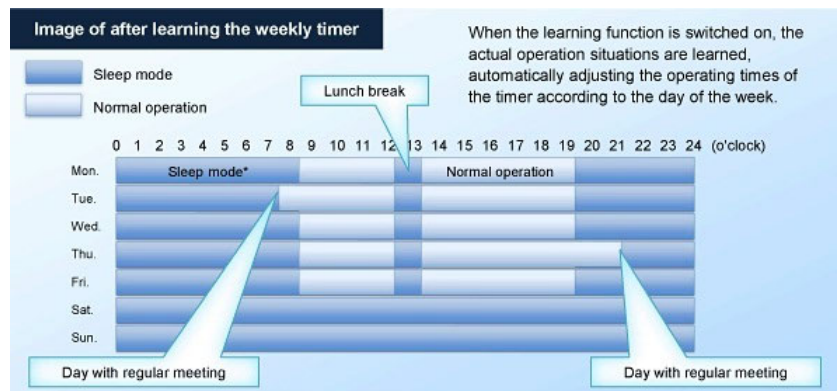
Misprints can be prevented, as it is possible to preview the finished document on the machine’s LCD screen before printing. This saves paper and also reduces wasteful power consumption.



Preview screen

Weekly Timer with a Learning Function

A weekly timer that automatically switches between normal mode and power-saving mode at pre-set times enables efficient electricity savings according to office use, such as at lunchtime, at night, and days off. The machines are also equipped with a learning function that automatically makes corrections when there is a difference between timer settings and actual usage, based on usage data for a four-week period. This enables operational management with greater energy-savings effects.



Eco Dashboard Increases Users’ Environmental Awareness

Graphs showing environmental contribution are displayed to increase users’ environmental awareness. Reductions for different indicators, such as power consumption and use of toner and paper are displayed on the control panel and can be checked by department and user.



* The above feature is not available on all models.

Planetarium Projector Contributes to Energy Conservation

Planetarium Projector Reduces Energy Consumption by Using LED Light Sources

Konica Minolta's Cosmo Leap Σ is an optical planetarium projector for medium-sized domes. The new projector provides bright stars shining with an energy-efficient and compact design almost equivalent to the Infinium Σ , an optical planetarium developed to showcase the beauty of bright stars shining in the night sky.

By using ultra bright LEDs with optical technology, the stellar images projected on the screen are about 2.5-fold brighter than with the conventional model, but power consumption has been reduced by almost half.



Cosmo Leap Σ

➤ Basic Concept | ➤ Plan and Results | ➤ Konica Minolta's Approach

➤ Introducing Renewable Energy at Company Sites | ➤ **Promoting Decarbonization with Products and Solutions**

➤ Promoting Decarbonization in Production | ➤ Achieving Decarbonization in Sales Activities

➤ Promoting Decarbonization in Distribution | ➤ Adapting to Climate Change

Promoting Decarbonization in Production

➤ Basic Concept	➤ Plan and Results	➤ Konica Minolta's Approach
➤ Introducing Renewable Energy at Company Sites	➤ Promoting Decarbonization with Products and Solutions	
➤ Promoting Decarbonization in Production	➤ Achieving Decarbonization in Sales Activities	
➤ Promoting Decarbonization in Distribution	➤ Adapting to Climate Change	

Promoting Energy Savings at Production Sites

In line with its Green Factory certification system for comprehensively evaluating environmental activities at production sites, Konica Minolta strives to increase energy productivity and to reduce CO₂ emissions from production operations through a variety of measures.

Energy Conservation Support Program

Konica Minolta has implemented an Energy Conservation Support Program in order to promote the reduction of CO₂ emissions at production sites. Under this program staff members within the Group who are experts in process design, production equipment design, and energy management visit production sites and conduct inspections of everything from the energy management situation to the status of utilities and production equipment such as air conditioning and boilers, based upon which they recommend measures suited to each site. Using these recommendations, the expert staff and personnel at each site conduct simulations of the energy-saving effects, which help with implementing the measures.



Energy Conservation Support Program

Examples of Main Measures

Improve productivity	Industrial engineering (IE) work analysis, yield rate improvement, installation of automatic machines, takt time reduction, production space optimization
Optimize equipment operation time	Shutdown during downtime, reduction of standby power consumption
Reconsider air conditioning operation	Temperature setting optimization, operating time optimization
Save energy in lighting	Thinning out lighting, conversion to high-efficiency lighting
Save energy in molding machines	Infrared heating, installation of servo motors, cylinder insulation
Save energy in compressed air	Installation of inverters, limited number of units, air pressure optimization
Reconsider refrigerator operation	Refrigerator integration, reconsideration of exit temperature setting
Use waste heat	Heat exchange at exhaust/intake, reduction of steam production by using waste heat from dehumidifiers
Reduce heat radiation loss	Steam piping insulation, piping integration, reduction of valve leaks

Examples of Initiatives

TOPIC | Introducing the State-of-Art Energy-Saving Equipment (Konica Minolta Mechatronics, Inc.)

Konica Minolta Mechatronics headquarters (Digital Manufacturing Center MIKAWA) , which began full-scale operations in June 2021, has installed the latest high-efficiency equipment, including a large temperature difference air conditioning system, two separate chillers, direct expansion coil-type total heat exchangers, and LED lighting. Compared with conventional facilities, this installed system reduces CO2 emissions by more than 400 metric tons per year. A photovoltaic power generation system has been installed on the rooftop, and the electricity generated is consumed in-house, contributing to the realization of a decarbonized society.



Chiller that improves energy efficiency by dividing the system into two temperature zones for different applications

Pursuing Energy Savings by Reviewing the Operation of Clean Rooms with High Energy Loads (Konica Minolta Business Technologies (Dongguan) Co., Ltd.)

Konica Minolta Business Technologies (Dongguan) Co., Ltd., which manufactures MFPs and other products in Dongguan, Guangdong Province, China, has achieved dramatic energy savings by conducting reviews of the operational status of clean rooms with high energy loads in the factory. Specifically, it took another look at the temperature and humidity conditions while keeping them within product specification requirements, shutting down air conditioning on holidays, optimized the ventilation frequency while maintaining cleanliness, reduced clean room equipment operating time by installing a timer, and reduced clean room floor space through layout review. The implementation of these measures has saved energy used by cold energy source equipment and ventilation equipment. In addition, in November 2017, full-scale use of renewable energy began, with the installation of photovoltaic equipment on the roof of the plant, and in January 2019, the share of electricity consumption from renewable energy sources reached 100%.



Konica Minolta Business Technologies (Dongguan) Co., Ltd.

Energy Savings through Smaller Production Space and Shorter Production Time (Konica Minolta Business Technologies (Wuxi) Co., Ltd.)

Konica Minolta Business Technologies (Wuxi) Co., Ltd., located in Jiangsu Province, China, has adopted industrial engineering (IE) work analysis as a new endeavor aimed at reducing environmental impact through increased productivity. The analysis is based on specialized analytical knowhow cultivated in Japan by Konica Minolta. By thoroughly reconsidering operability and line of flow of production lines, the company reduced production space, shortened production times, and cut energy consumption, including air conditioning and lighting. In addition, all its power now comes from renewable energy sources. This was achieved by installing a solar power generation system in January 2020, and then using green power certificates to meet its remaining electrical needs. The company has become a corporate leader for environmental protection in China, and was certified by the city of Wuxi as a "Clean Manufacturing Company" in 2017.



Konica Minolta Business Technologies (WUXI) Co., Ltd.

Utilizing Waste Heat from Production and Curbing Heat Dissipation to Ensure Energy Conservation (Konica Minolta Supplies Manufacturing Co., Ltd.)

With its head office in Kofu, Yamanashi Prefecture, Konica Minolta Supplies Manufacturing Co., Ltd. makes developers and photosensitive drums for multi-functional peripherals (MFPs). The company has achieved sharp reductions in energy consumption by utilizing the waste heat from the toner production process and curbing the heat dissipation from steam pipes.

Heat exchange with high-temperature water is typically used, but the company actively uses the waste heat from low-temperature water generated in the toner production process through heat exchange and produces heated water to be used in other processes. This significantly reduces the gas consumed to produce heated water.

The company also installed an automated control system to supply steam only when and in amounts needed to prevent heat from dissipating from the pipes.

In addition, outside air is used for drying, but the amount of air required differs significantly depending on fluctuations in the humidity of the outside air. The company controls the dew point of the outside air sucked in constantly, then curbs the blower's air volume and number of rotations to conserve energy. It has also upgraded from NAS batteries to large-capacity lithium ion rechargeable batteries in order to adapt to momentary power interruptions and power outages. As a result, heaters no longer have to be used, conversion loss has been reduced and efficiency has improved, delivering significant energy conservation.



Kofu head office at Konica Minolta Supplies Manufacturing Co., Ltd.

Pursuing Energy Savings with High-Efficiency Air Conditioning Systems and Other Energy-Saving Measures (Konica Minolta Business Technologies (Malaysia) Sdn. Bhd.)

Konica Minolta Business Technologies (Malaysia) Sdn. Bhd., which assembles MFPs, has achieved major energy savings by actively employing high-efficiency air conditioning systems.

Since Malaysia is a tropical country where air conditioning use is high, the company has installed a large-temperature-difference air conditioning system and a temperature-stratified air-conditioning system and thus has reduced electricity consumption compared with conventional air conditioning.

In the areas between each factory building, dedicated individual air conditioners had been required, but individual air conditioners were discontinued by supplying surplus cold air from air conditioners in other processes.

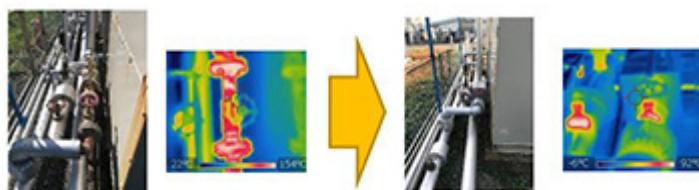
Furthermore, in the resin molding process, vented cylinders were installed to remove the moisture and gas contained in resin, during the process. As a result, the drying step that was required before resin could be utilized is no longer necessary, resulting in significant energy savings and improved productivity. In this way, the company has promoted high-efficiency air conditioning operations throughout the plant, along with production process improvements.



Konica Minolta Business Technologies (Malaysia) Sdn. Bhd.

Thermal insulation for pipes to reduce dissipative heat loss Konica Minolta Chemical Co., Ltd.

Konica Minolta Chemical, which manufactures chemical products in Japan, worked to reduce dissipative heat loss from pipes created in boilers, and particularly unheated parts such as flanges and bulbs. Thermography is used to measure surface temperature and identify areas of high heat dissipation. This allowed pipes to be efficiently insulated, reducing heat dissipation loss.



Installing a Gas Turbine Cogeneration System That Provides High Energy Efficiency by Effectively Using Exhaust Heat

On February 1, 2017, the Konica Minolta Kobe Site began operating a gas turbine cogeneration system that uses city gas as fuel. This system provides distributed power generation (7,000 kW class power generation output) that generates power in the places where energy is needed. By effectively utilizing exhaust heat generated at that time, it is possible to achieve overall efficiency at a high 80-90% energy efficiency (general thermal power plants are at about 40%), which greatly contributes to energy saving and CO₂ emission reduction.



Gas turbine

This system is superior from the standpoints of both energy saving and environmental preservation because the fuel uses city gas with high combustion efficiency and low impurity, generates virtually no dust or sulfur oxides, and generates low amounts of nitrogen oxides thanks to the latest low-NO_x combustion technology.



Boiler

Primary Advantage of Installation

CO₂ reduction: CO₂ reduction of 20% or more compared with previous methods

Peak cut: Leveling of electricity demand: Electric power peak cut rate is 70%

BCP: The system supplies power to the premises critical load in the case of emergency

Subsidies: Subsidy support was received from the Energy Use Rationalization Business Support Program, in recognition of the high energy savings of the installed equipment.

At this site, the company has continued to install energy-saving equipment, streamlined product manufacturing processes. The operation of this system is positioned as the core of the energy saving and CO₂ emissions reduction plan.

New Environmentally Friendly Research Building SKT

The new R&D building (SKT) opened in April 2014 at Konica Minolta Tokyo Site Hachioji integrates environmental facilities that will contribute to environmental impact reduction, including solar panels on the roof, an atrium that brings in lots of natural light, daylight sensors to reduce lighting electricity consumption, effective natural ventilation, and use of well water. As a building with excellent environmental friendliness, SKT received the highest certification, "Class S," in the Comprehensive Assessment System for Built Environment Efficiency (CASBEE), which is an evaluation of the environmental performance of buildings led by Japan's Ministry of Land, Infrastructure, Transport and Tourism. The building also won a fiscal 2014 Good Design Award from the Japan Institute of Design Promotion (JDP).



SKT's atrium

- ▶ Basic Concept | ▶ Plan and Results | ▶ Konica Minolta's Approach
- ▶ Introducing Renewable Energy at Company Sites | ▶ Promoting Decarbonization with Products and Solutions
- ▶ Promoting Decarbonization in Production | ▶ Achieving Decarbonization in Sales Activities
- ▶ Promoting Decarbonization in Distribution | ▶ Adapting to Climate Change

Achieving Decarbonization in Sales Activities

➤ Basic Concept	➤ Plan and Results	➤ Konica Minolta's Approach
➤ Introducing Renewable Energy at Company Sites	➤ Promoting Decarbonization with Products and Solutions	
➤ Promoting Decarbonization in Production	➤ Achieving Decarbonization in Sales Activities	
➤ Promoting Decarbonization in Distribution	➤ Adapting to Climate Change	

Reducing CO₂ Emissions Associated with Sales Activities

Introducing Eco-friendly Vehicles to Its Sales Fleet and Promoting Eco-driving

Konica Minolta promotes the management and reduction of CO₂ emissions from the business vehicles operated by its sales companies around the world. The Group is promoting measures such as reducing the amount of travel through more efficient sales and service activities, introducing eco-friendly vehicles with low emissions of CO₂, and eco-driving to reduce energy consumption.

Eco-driving Initiatives at a Sales Company in Japan

Konica Minolta Japan, Inc. has installed a vehicle operation management system in company-owned vehicles. This system constantly gathers and stores data about the way company-owned cars are being used, including dangerous driving habits such as sudden acceleration and deceleration, as well as driving time, fuel consumption, and so on. Based on the data, drivers of company vehicles are given safe driving guidance. It is also used in eco-driving initiatives to lower fuel costs and reduce the environmental impact of company vehicle use. In addition, the Company is actively introducing vehicles with start stop systems to promote eco-driving.

Showroom in France Achieves Environmental Label

At a printing center, countless pages must be printed to meet the customers' needs for printed materials. At the same time, the environmental impact of this energy and resource consumption must also be minimized.

Sales company Konica Minolta Business Solutions France S.A.S., has earned the environmental label Imprim'Vert for its showroom, Digital Imaging Square. This certifies that organizations using the showroom for printing will be complying with the major standards for environmental management.

Obtaining Carbon Offsets for Trade Shows in Germany

Konica Minolta Business Solutions Europe GmbH aims to offset all of the CO₂ generated when participating in exhibitions and trade fairs for the purpose of sales promotion, and to achieve carbon neutral sales activities.

Contributing to the Reduction of Environmental Impact through Print on Demand (POD) Service

Contributing to cost reductions and energy savings by undertaking customers' printing work

The POD service offered by Kinko's Japan Co., Ltd. handles printing in a short time according to customers' requests. For example, by using this service during their busy seasons, customers no longer need to always have enough of their own printers ready to handle the print volume of peak times. This allows customers to keep down costs for installing and maintaining equipment, and it also translates into resource and energy savings for society as a whole.



Carbon Offsetting Service

Carbon Offsetting for Office and Production Printing

Enabling carbon neutrality is a carbon-offsetting service that uses emissions credits to offset CO₂ emissions at every stage of the product lifecycle, from procurement to use. Konica Minolta Business Solutions Europe introduced the service for office and production printers in July 2015 and offers it across the whole of Europe.

So far it has been introduced in 11 countries, including Germany, France, and the Netherlands, to offset CO₂ emissions throughout the product lifecycle. In addition to these activities, the company uses carbon offsetting for CO₂ emissions from commuting and business trips as well as events such as international exhibitions. It has offset a total of over 68 thousand tons of CO₂ emissions thus far as a result. Konica Minolta will increase the number of countries eligible in order to contribute more to the creation of a sustainable planet and society.

Konica Minolta Japan, Inc. has started a new service in which it calculates the amount of CO₂ emitted during the product life cycle of an installed digital printer (AccurioPress), and provides J-credits equivalent to the amount of CO₂ required for carbon offsetting, so that customers can use products with virtually zero CO₂ emissions. This service will help clients reduce greenhouse gas emissions and create business opportunities by widely appealing to companies that require environmentally friendly printed materials.

-
- ▶ Basic Concept
 - ▶ Plan and Results
 - ▶ Konica Minolta's Approach
 - ▶ Introducing Renewable Energy at Company Sites
 - ▶ Promoting Decarbonization with Products and Solutions
 - ▶ Promoting Decarbonization in Production
 - ▶ **Achieving Decarbonization in Sales Activities**
 - ▶ Promoting Decarbonization in Distribution
 - ▶ Adapting to Climate Change

Promoting Decarbonization in Distribution

▶ Basic Concept	▶ Plan and Results	▶ Konica Minolta's Approach
▶ Introducing Renewable Energy at Company Sites	▶ Promoting Decarbonization with Products and Solutions	
▶ Promoting Decarbonization in Production	▶ Achieving Decarbonization in Sales Activities	
▶ Promoting Decarbonization in Distribution	▶ Adapting to Climate Change	

In order to reduce CO₂ emissions associated with distribution, transportation must be streamlined and means of transportation with little environmental impact must be chosen. Konica Minolta is reducing CO₂ emissions derived from distribution operations by measures such as shortening transportation distances through optimization of logistics facilities and routes worldwide, reducing the number of containers through improved loading efficiency.

Major Initiatives

Optimizing Shipping Container Loading Efficiency

Konica Minolta is reducing CO₂ emissions and increasing the efficiency of shipping container loading during transportation by employing consolidated services based on loads. In the Business Technologies Business, for example, when Konica Minolta delivers office equipment to various European countries from its distribution center in Germany, achieving optimal loading efficiency according to the size, shape and changes in the logistic quantity of products is one of the key challenges. The company has been improving loading efficiency through the introduction of a loading simulation program. Furthermore, since fiscal 2016, Konica Minolta has improved loading efficiency by optimizing the packaging form to suit the shipping conditions, focusing on marine transportation of parts procured in Japan to plants in China and ASEAN for assembly, shipment of products from Chinese warehouses to distributors worldwide, and land transportation of products manufactured in Mexico into the U.S.

Promoting a Modal Shift

Konica Minolta has been promoting a modal shift for the transportation of products and parts, switching from aircraft and trucks to ships, railways, and other means that emit less CO₂.

In Europe, for instance, it uses barges that run along the Rhine River as the means of transportation from the Port of Rotterdam in the Netherlands to its base warehouse in Emmerich, Germany. In the U.S., it has reduced CO₂ emissions by using railroads when transporting cargo from the Port of Los Angeles on the West Coast to the interior and the East Coast.

Reconsidering Distribution Routes and Consolidating Logistics Facilities

Konica Minolta is restructuring its logistics facilities both in Japan and outside of Japan for reducing CO₂ emissions from its distribution processes.

In fiscal 2022, the company continued its efforts from the previous fiscal year to streamline logistics by optimizing distribution routes for products and service parts shipped from office equipment production and distribution sites in China and ASEAN to customers worldwide.

In production procurement, at its Malaysian factory, Konica Minolta took the external warehouses and parts supplier production sites dotted around distant locations and consolidated them in the vicinity of the factory, establishing a Smart Industrial Center (SIC). This reduced the transportation distance considerably, enabling achievement of just-in-time (JIT) supply to the factory. Transportation distances were also reduced considerably by changing parts shipped to Malaysia from Chinese parts suppliers to Malaysian production.

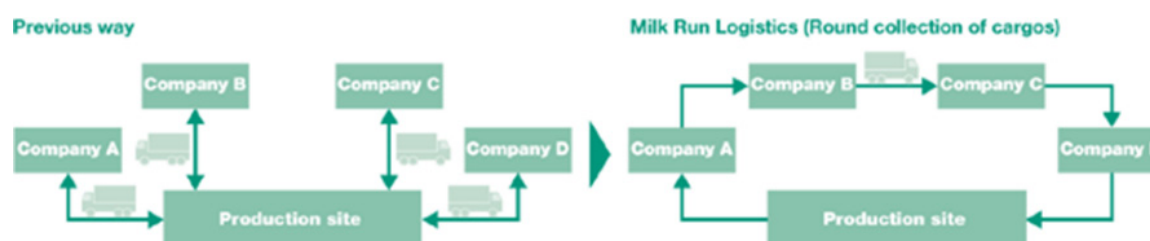
Moreover, with the proactive utilization of a lead logistics provider (LLP) for distribution in Japan, Konica Minolta reorganized distribution sites, revised routes, and utilized sharing with other companies, thereby strategically reducing CO₂ emissions from distribution activities. Improving the efficiency of distribution routes and sites has also led to reductions in the space and energy used at distribution warehouses.

Milk Run Logistics (Common Collection of Cargos)

The term "milk run" originally came from the milk collecting system of dairy producers who visited dairy farms to collect milk in a single vehicle. In the manufacturing industry, it refers to a collection method in which a single vehicle is used to make rounds picking up goods from various suppliers instead of requesting each supplier to deliver goods individually.

Konica Minolta is using milk run logistics in Wuxi City and the suburbs of Shanghai and Suzhou in East China, where office equipment component manufacturers are concentrated, and in the suburbs of Dongguan and Shenzhen in South China, as well as in Kuala Lumpur and Johor in Malaysia. This helps to reduce CO₂ emissions by shortening the total driving mileage of the trucks.

In addition, the Group is also reducing waste by using re-usable boxes instead of cartons to transport the parts.



Joint Transport

Konica Minolta Japan, Inc., a sales company, carries out joint distribution of office equipment with Epson Sales Japan Corporation, including installation work, in the Kanto and Koshinetsu areas in Japan. In Japan, nine Company manufacturers joined the Joint Arterial Logistics Delivery of the Japan Business Machine and Information System Industries Association (JBMA) and began preliminary implementation of the Last One Mile Joint Delivery in the northern Hokkaido region in November 2021. ([Ref: JBMA website in Japanese](#))

These initiatives result in high-quality delivery and installation operations that raise the satisfaction of customers and help reduce CO₂ emissions.

Reducing CO₂ Emissions Associated with Shipping by U.S. Sales Company

Konica Minolta Business Solutions U.S.A., Inc. is a member of the SmartWay program operated by the United States Environmental Protection Agency (EPA). This initiative helps companies improve their supply chain sustainability by measuring, benchmarking and improving the efficiency of freight transport.

As a member of this program, the company is working on:

- Reducing emissions and fuel consumption in logistics activities
- Shipping more than 50% of goods through EPA designated SmartWay carriers
- Using railway cars and Smartway truck trailers, avoiding vehicle idling, and reducing transport distances
- Shipping multiple orders together

▶ Basic Concept | ▶ Plan and Results | ▶ Konica Minolta's Approach

▶ Introducing Renewable Energy at Company Sites | ▶ Promoting Decarbonization with Products and Solutions

▶ Promoting Decarbonization in Production | ▶ Achieving Decarbonization in Sales Activities

▶ **Promoting Decarbonization in Distribution** | ▶ Adapting to Climate Change

Adapting to Climate Change

➤ Basic Concept	➤ Plan and Results	➤ Konica Minolta's Approach	
➤ Introducing Renewable Energy at Company Sites	➤ Promoting Decarbonization with Products and Solutions		
➤ Promoting Decarbonization in Production	➤ Achieving Decarbonization in Sales Activities		
➤ Promoting Decarbonization in Distribution	➤ Adapting to Climate Change		

Adapting to Climate Change

When combating climate change, the most important and necessary actions are mitigation measures to reduce the greenhouse gas emissions that are causing the crisis. Since it takes a long time for the effects of mitigation to appear, we must immediately begin efforts to significantly reduce emissions. Even if we maximize our efforts to reduce emissions over the long term however, a certain degree of climate change will be unavoidable due to the greenhouse gas emissions that have already accumulated in the atmosphere.

Extreme weather events have a huge impact on our lives, and many weather observation records have been broken in recent years. There are concerns that large-scale flooding and deadly heat waves will only become more frequent and serious going forward. For this reason, adaptation measures are essential to minimize the physical impacts that occur as the climate changes. Konica Minolta is implementing adaptation initiatives throughout its supply chain to mitigate the physical impacts that climate change is having on natural ecosystems and on social and economic systems. Since the effects of climate change are manifested in various ways depending on geographic, economic, and social circumstances, there are no universal adaptation measures. Therefore, we are working to identify how each country and region might be affected by climate change, in order to devise the measures that need to be taken.

Upstream (Suppliers)

Securing Multiple Suppliers Based on Manufacturing that Avoids Reliance on People, Countries, Places, and Market Fluctuations

Large-scale natural disasters cause supply chain disruptions. To prevent any resulting delays in customer product delivery, we trace our upstream supply routes all the way back to the basic raw materials. For raw materials with a high stable supply risk, we are working to secure multiple suppliers while investigating alternative materials. We select suppliers to achieve manufacturing that does not rely on people, countries, places, or market fluctuations.

➤ [Click here for more on these initiatives: Supply Chain Management](#)

Carbon Neutral Partner Activities (Reducing Water Consumption by Suppliers)

Water resources represent an essential ecosystem service for both the daily activities of employees and the production activities of suppliers. As climate change intensifies, weather patterns will change, resulting in more frequent heavy rains and large-scale droughts. This will make it difficult to maintain the same level of available water resources, which could lead to shortages and impact the entire supply chain.

Accordingly, Konica Minolta is promoting Carbon Neutral Partner Activities. We are sharing the environmental technologies and expertise we have developed through Green Factory activities with our suppliers. They are investigating and implementing measures to reduce their water use in accordance with prescribed guidelines.

➤ [Click here for more on these initiatives: Conservation of Biodiversity/Water Resources in Production Activities](#)

Operations (Production / R&D)

Green Factory Activities (Water Risk Assessment and Mitigation Measures, and Water Conservation)

Worsening climate change poses an increased risk of major storm and flood damage, landslides, and long-term sea level rise. Having sites located in geographically susceptible locations can make it difficult to continue production and R&D activities. Konica Minolta pays attention to water resource availability as a chronic physical risk posed by climate change. In fiscal 2013, we adopted a comprehensive risk assessment method called Aqueduct to look at water use and flooding at major Konica Minolta Group sites and suppliers worldwide. This enables us to identify sites with high water risk, and implement the necessary measures.

› [Click here for more on these initiatives: Conservation of Biodiversity/Water Resources in Production Activities](#)

Business Continuity Management

The Konica Minolta Group has established a business continuity plan (BCP), as a concrete emergency action plan, which covers the Group and its global supply chain. The aim is to ensure that even if a site is damaged by a large-scale natural disaster, important operations will not be interrupted (and even if they are interrupted, they can be resumed in the shortest possible time). We have also created an initial response system to collect information on the situation immediately after a disaster. This covers our mainstay digital workplace business, as well as our healthcare business, which makes equipment that will be in high demand in the event of a disaster. The initial response system is also used to determine whether the BCP needs to be activated.

› [Click here for more on these initiatives: Risk Management](#)

Downstream (Customers)

Industry Business

Wide Area Monitoring System to Detect Gas Leaks

Methane (CH₄) is a widely used flammable gas, often found in shale gas and other sources. It is a greenhouse gas that is more than 25 times as potent as carbon dioxide (CO₂) for trapping heat in the atmosphere. Natural disasters and aging infrastructure can cause gas pipelines to leak, allowing methane to escape invisibly into the atmosphere. Konica Minolta is developing a Disaster Prevention Diagnostic Service that makes methane leaks visible and helps prevent fires and explosions. Our handy gas leak inspection system with a built-in battery can streamline initial inspections immediately after a disaster.

SenrigaN Nondestructive Inspection Solution

After a natural disaster such as a typhoon or flood, it takes great deal of time and effort to carry out the corrective maintenance needed to restore infrastructure and essential services for residents. As a priority measure for national resilience, Japan is aiming to deploy preventive infrastructure maintenance, and is taking measures to bolster aging infrastructure.

Konica Minolta's SenrigaN nondestructive inspection solution realizes easy non-invasive inspection of pre-stressed concrete (PC) steel materials inside bridges. It detects invisible fractures and corrosion caused by road salt. The measurement results can be checked immediately using a handheld tablet, offering better maintenance efficiency. This also helps reduce any potential damage caused by a natural disaster.

Preventing Ocean Accidents Through Rip Current Detection

With the acceleration of climate change, typhoons and hurricanes are getting bigger, causing more destructive storm surges and waves. Rip currents caused by tides and waves make up about 51% of swimmer accidents along the Japanese coastline.

Konica Minolta's rip current detection system automatically detects the location of rip currents using IoT camera devices installed on beaches. The system provides the information needed to make this hazard visible, and helps prevent accidents involving beachgoers.

Digital Workplace Business

Regionally Distributed Production and Supply of MFP Cartridges (Toner)

Climate change is expected to generate localized and extreme disasters such as floods and landslides that are large-scale, short-term, and more frequent. Whenever these disasters become severe, procurement and distribution in an affected area can be disrupted, halting the supply of products.

To minimize such disaster risks, we have established production bases in Japan, Europe, and North America. These sites produce printing toner and cartridges (and related parts) for our mainstay professional printing business and office printing business. In this way, we are striving to secure a highly resilient supply chain network that can produce products in the regions where they are consumed.

Digital Workplace Solutions to Support New Work Styles

In order to minimize the impact of climate change, in addition to controlling greenhouse gas emissions it is important to protect carbon sinks, such as rainforests, and maintain forest ecosystems. Excessive deforestation not only reduces carbon sinks but can also drive wild animals closer to human settlement. This can lead to the spread of infectious diseases including dangerous pathogens that people have not yet encountered. From the perspective of forest resource conservation, and to help facilitate new work styles during a pandemic involving a previously unknown infectious disease, Konica Minolta is developing new digital solutions to reduce reliance on paper printing in the office. As part of this, we are expanding sales of new Digital Workplace products. These integrated IT service platforms enable remote collaboration among workplace members, while ensuring robust information security.

Healthcare Business

AeroDR Mobile Solution for Medical Relief in Disaster Zones

In areas where natural disasters have occurred, it is often necessary to carry out medical relief activities without electricity or fuel. Konica Minolta's AeroDR Mobile Solution is an X-ray imaging system that continues to operate after the power supply is cut. It is extremely portable and can even be used outdoors. It allows X-ray images to be viewed on the spot and can be charged during transport.

World's First Pulse Oximeter and 40 Years of Expertise

As climate change accelerates deforestation, humans and wildlife are coming into contact more often, creating opportunities for unknown pathogens to spread and create new infectious diseases. Konica Minolta's pulse oximeter can be used to measure blood oxygen levels (SpO₂) and pulse rates without having to draw blood.

Social Contribution Activities

Local Emergency Water Source Creation

In case of a major natural disaster, Konica Minolta, Inc. has established a system at its office in Hino, Tokyo, for accessing well water using its own power generation equipment. At the same time, this emergency water source is available to a nearby hospital designated for disaster relief, as part of local disaster preparedness efforts.

› [Click here for more on these initiatives: Providing a Water Source for Community Disaster Prevention](#)

Participating in Recovery Zone Support Activities

After Great East Japan Earthquake in 2011, Konica Minolta dispatched about 100 employees to the affected areas and participated in reconstruction support activities. Since 2013, we have participated in a project to regenerate protective coastal forests in the disaster zones. With the aim of preserving and regenerating the coastal ecosystems, we have been involved in activities to restore disaster prevention and mitigation functions in the affected areas.

› [Click here for more on these initiatives: Participating in Recovery Zone Support Activities](#)

› Basic Concept | › Plan and Results | › Konica Minolta's Approach

› Introducing Renewable Energy at Company Sites | › Promoting Decarbonization with Products and Solutions

› Promoting Decarbonization in Production | › Achieving Decarbonization in Sales Activities

› Promoting Decarbonization in Distribution | › Adapting to Climate Change

Basic Concept

▶ Basic Concept	▶ Plan and Results	▶ Konica Minolta's Approach	▶ Recovery and Recycling of Used Products
▶ Developing Resource-Conserving Products	▶ Resource Conservation and Recycling in Production Operations		
▶ Turning Waste into High-Value Materials (High-Functionality Recycling)			
▶ Reduction of Use of Packaging Materials			

Basic Concept

Given the world's growing population and the growing rate of resource consumption, it is estimated that the equivalent of two earths will be needed by 2030. In order to make more effective use of limited resources, companies need not only to recover and recycle waste, but also to reduce the volume of resources wasted. This means that drastic workflow innovations are required, such as using on-demand production and IoT technology, to reduce resource waste in the supply chain. Circular economies also need to be created by developing material technologies that facilitate recycling, while building better networks for recovering used resources.

▶ Basic Concept	▶ Plan and Results	▶ Konica Minolta's Approach	▶ Recovery and Recycling of Used Products
▶ Developing Resource-Conserving Products	▶ Resource Conservation and Recycling in Production Operations		
▶ Turning Waste into High-Value Materials (Upycling)			
▶ Reduction of Use of Packaging Materials			

Plan and Results

➤ Basic Concept	➤ Plan and Results	➤ Konica Minolta's Approach	➤ Recovery and Recycling of Used Products
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➤ Turning Waste into High-Value Materials (High-Functionality Recycling)			
➤ Reduction of Use of Packaging Materials			

Vision for 2030 and Medium-Term Plan 2025

Vision for 2030: Promote the effective use of resources at Konica Minolta, while also helping corporate clients and suppliers to achieve effective use.



Themes		Indicators		Results		
				FY2020	FY2021	FY2022
Effective Use of Resources by Transforming Customer Business Processes		Social and environmental value	Reduction of waste discharge of customers (thousand tons)	320	320	340
		Economic value	Solution sales (billion yen)	53	59.9	79.3
Solution sales (billion yen)	Reductions to environmental impact from Konica Minolta production sites* ¹	Social and environmental value	Reduction of waste discharge (thousand tons)* ²	0.6	1.3	1.7
		Reduction of waste discharge (thousand tons)* ²	Monetary equivalent of waste reductions (million yen)	130	260	470
	Reduction of environmental impact through the use of Konica Minolta products and services	Social and environmental value	Amount of resources saved and recycled (thousand tons)	12	12	12
		Amount of resources saved and recycled (thousand tons)	Sustainable solution sales (billion yen)	676	597	776.6

Themes		Indicators		Targets			
				FY2022	FY2023	FY2024	FY2025
Effective Use of Resources by Transforming Customer Business Processes		Social and environmental value	Reduction of waste discharge of customers (thousand tons)	350	360	400	450
		Economic value	Solution sales (billion yen)	78	89	97	100
Solution sales (billion yen)	Reductions to environmental impact from Konica Minolta production sites*1	Social and environmental value	Reduction of waste discharge (thousand tons)*2	1.7	0.2	0.5	0.8
		Reduction of waste discharge (thousand tons)*2	Monetary equivalent of waste reductions (million yen)	300	-	-	-
	Reduction of environmental impact through the use of Konica Minolta products and services	Social and environmental value	Amount of resources saved and recycled (thousand tons)	15	13	14	14
		Amount of resources saved and recycled (thousand tons)	Sustainable solution sales (billion yen)	690	-	-	840

*1 Cumulative reductions for each fiscal year from FY2020 - FY2022 and FY2023 - FY2025. Total reduction amount for each fiscal year due to the measures implemented from the first fiscal year of each period to the relevant fiscal year.

*2 Set as a target that includes the reduction of plastic waste at major sites in Japan as part of activities to reduce and recycle plastic waste from products that use plastic based on the Act on Promotion of Resource Circulation for Plastics enacted in Japan.

Note: Targets and results have been revised retrospectively to fiscal 2020 figures as the method of calculating the effects of measures was

Plan

In its medium-term plan through 2025, Konica Minolta has set KPIs for “emissions reduced by transforming customer business processes with Konica Minolta solutions,” “emissions reduced from Konica Minolta’s manufacturing processes,” and “resources effectively used in Konica Minolta products and services,” and is working to achieve them.

As for the effective use of resources of customers, Konica Minolta expects to reduce emissions by reducing the use of printing plates, test printing, and other resources by promoting the change from analog to digital printing in the industrial printing industry.

Konica Minolta expects to reduce emissions at its own production sites by pursuing productivity improvements and reducing secondary material use. To increase the resources effectively used in its products, the Company will use small, lightweight, and recycled materials.

Results

In fiscal 2022, the number of industrial digital printing machines in use in the market fell below plan, so the expected emissions reduction benefits for customers were not achieved.

On the other hand, emission reductions at Konica Minolta’s production sites exceeded its plan thanks to successful emissions reduction measures at each site.

In terms of the effective use of resources in Konica Minolta products and services, the sales volume of products that use small, lightweight, and recycled materials, and their environmental benefits, were below plan.

Konica Minolta's Approach

▶ Basic Concept	▶ Plan and Results	▶ Konica Minolta's Approach	▶ Recovery and Recycling of Used Products
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▶ Turning Waste into High-Value Materials (High-Functionality Recycling)			
▶ Reduction of Use of Packaging Materials			

Konica Minolta's Approach

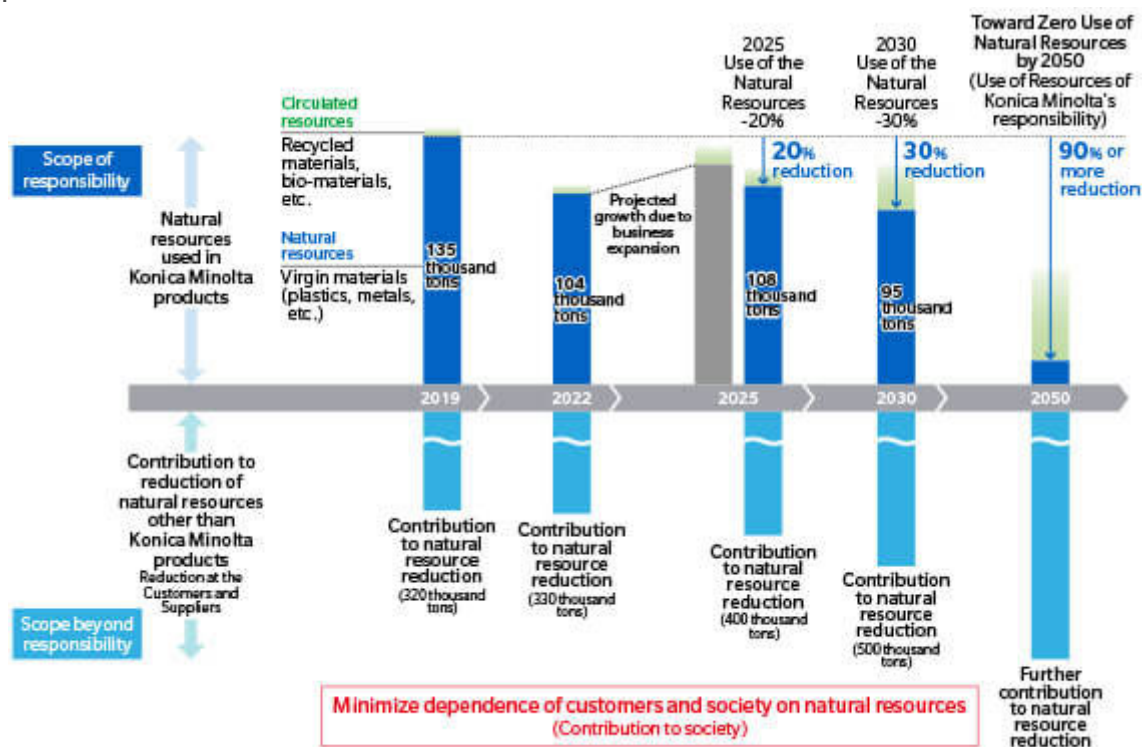
We will speed up efforts to achieve our long-term vision of "Using Limited Resources Effectively" that was established in May 2023. In increasing our contribution to reducing the use of natural resources,* Konica Minolta will promote work-style and manufacturing-process reforms by facilitating on-demand production, and imaging IoT that help make effective use of customer's and society's resources.

For example, in the field of commercial printing, the Company is providing support for the transition to on-demand printing, thereby transforming the business model of mass production and disposal. The widespread use of Konica Minolta products for small-batch, decentralized printing can accelerate innovation in the printing industry's supply chain while helping to conserve resources and reduce waste. To promote collaboration with more companies, including customers and business partners, we will leverage DX to try to further reduce their environmental impact and build a circular model that is linked to their business model.

"Aiming for zero use of the earth's native resources" is to reduce the amount of the earth's native resources used by 90% or more by 2050. We will accomplish this by not only reducing the amount of resources used in our products, but also by proactively switching to recyclable resources such as recycled materials and biomaterials.

* Earth's Native Resources:

Resources that involve new mining, such as crude oil and mineral resources, and are generally synonymous with depletable resources.



*Natural resources: Resources that require new drilling or mining, such as crude oil or mineral resources, and are generally synonymous with depletable resources.

Recovery and Recycling of Used Products

➤ Basic Concept	➤ Plan and Results	➤ Konica Minolta's Approach	➤ Recovery and Recycling of Used Products
➤ Developing Resource-Conserving Products		➤ Resource Conservation and Recycling in Production Operations	
➤ Turning Waste into High-Value Materials (High-Functionality Recycling)			
➤ Reduction of Use of Packaging Materials			

Konica Minolta has developed recovery and recycling programs for used products in regions around the world, each one tailored to local legal systems and market conditions.

Recovery and Recycling of Used Products

Konica Minolta has a program for collecting used MFPs, printers and other products from customers through the Konica Minolta Group's sales companies around the world. These products are recycled by contractors that meet the legal requirements, and obtain approval in each country.

Konica Minolta's recovery and recycling program complies with the waste disposal laws in each country. When forming agreements with contractors, Konica Minolta asks them to comply with the necessary laws and regulations in each location. Moreover, Konica Minolta conducts audits using reports on recycling conditions and appropriate disposal obtained via regular on-site monitoring. In Japan, Konica Minolta carries out on-site inspections once every three years to confirm recycling conditions, including compliance with environmental laws and regulations.

For example, in Japan, after collecting used MFPs and printers from eight collection centers, the used products are recycled at seven designated contractors. The collected products are taken apart by hand, rather than crushed mechanically, to raise the recycling rate. After dismantling, metal and plastic parts are separated, for example, and many are reused as materials. Those that cannot be reused as materials are reused as fuel.

In fiscal 2022, Konica Minolta sold a total of 69.0 thousand tons of office equipment worldwide. Meanwhile, 13.6 thousand tons of end-of-life office equipment were recovered by major sales companies in Japan, China, the United States, and Europe. Of this amount, 13.5 thousand tons of material were recycled.



Recycling process at a designated contractor

In addition, Konica Minolta has received approval from Japan's Ministry of the Environment to dispose of copiers, MFPs and printers that it has sold based on a special system for wide-area treatment of industrial waste. Konica Minolta operates a fee-based recovery program for collecting and recycling used printers and copiers from corporate clients.

Outside Japan, Konica Minolta is undertaking recycling programs tailored to conditions in specific countries. In Europe, for example, the company has adopted measures in compliance with the EU directive on the disposal of waste electrical and electronic equipment (WEEE). It meets the legal and environmental labeling requirements in various countries including Asian countries such as China and India.

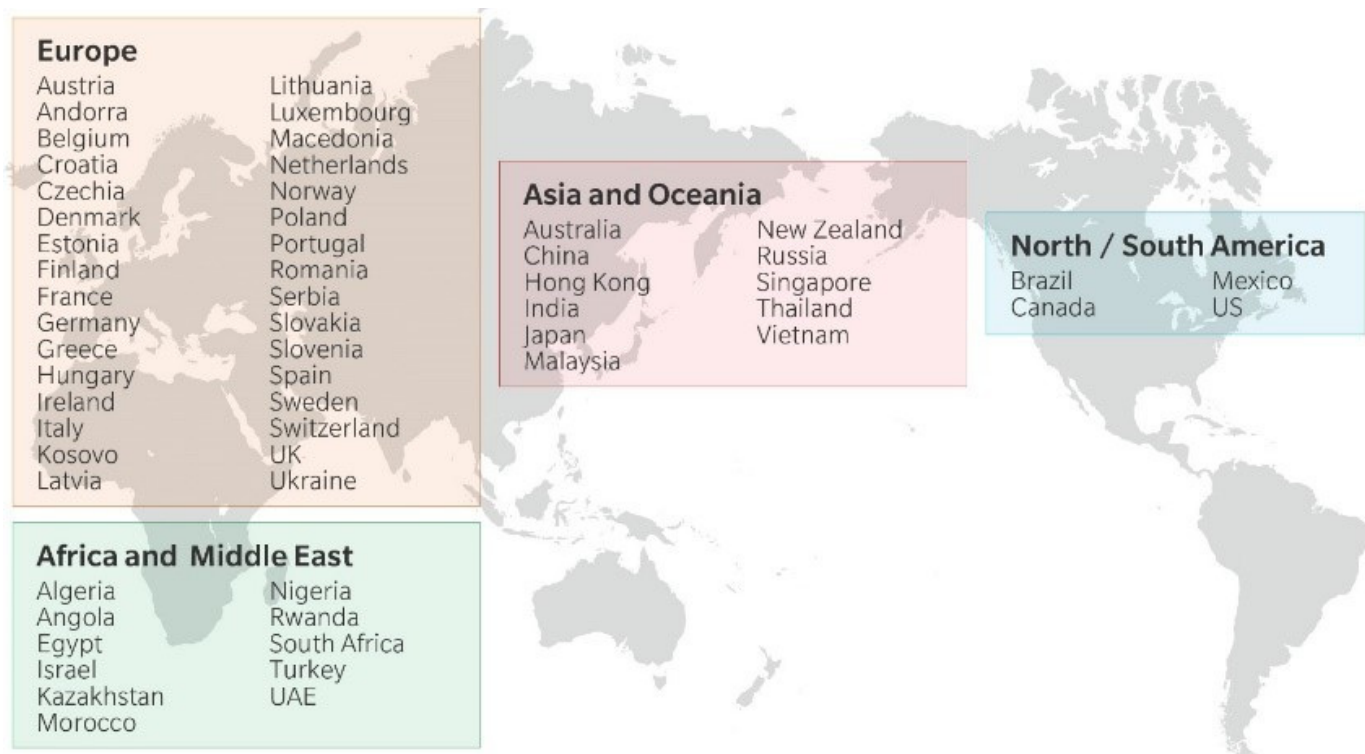
Recovery and Recycling of Used Toner Cartridges

Konica Minolta offers the Clean Planet Program, a recycling program for used toner cartridges for laser printers and MFPs, in over 20 countries, including Europe, the U.S., and Japan (in Europe, programs have started in Belgium, the Netherlands, and Norway, and there are plans for gradual expansion). In Australia, Konica Minolta also offers its own recovery and recycling programs.

To solve the recycling issue, customers can order collection boxes through the customer portal and return the boxes once they are full.

Collected toner cartridges are recycled using the latest technology in collaboration with Close the Loop, a leading recycling company, in order to maximize recovery of secondary raw materials. The cartridges are not incinerated or disposed of in landfills.

- › [To Japan's Used Cartridge Collection Program](#)
- › [To the Clean Planet Program in the U.S.](#) 
- › [To the Clean Planet Program in Canada](#) 
- › [To the Clean Planet Program in Europe](#) 



Areas Where Toner Cartridge Recovery and Recycling System Has Been Conducted

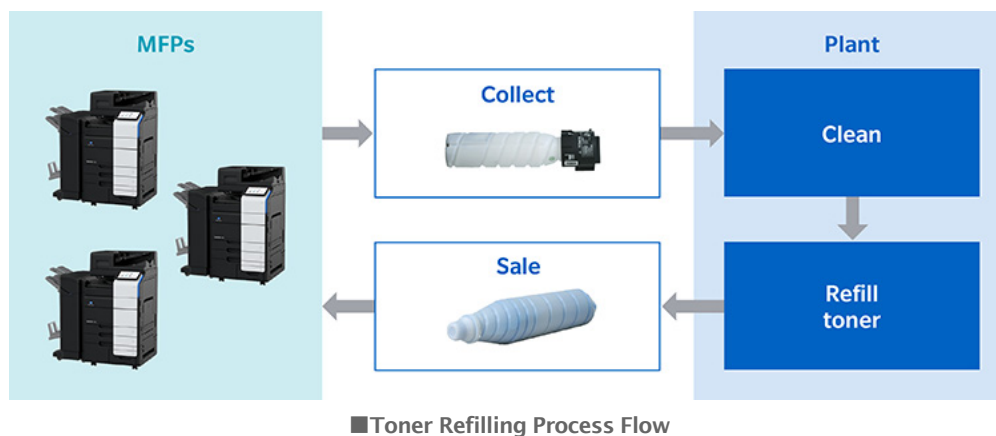
Machines collected in Japan in fiscal 2022

- Estimated collection rate: 82%
- Recycling rate: 99%

See [Environmental Data](#) in [ESG Data](#) for more information on product recovery and recycling.

Reuse of used toner bottles (toner refill)

Konica Minolta has been administering a program in which used toner bottles are collected and recycled. In order to make further contributions to the circular economy that society demands, the Company developed a system to supply used toner bottles that had been refilled with toner in 2021, and launched sales in Europe. In this way, Konica Minolta has been not only reducing the use of plastic, but also contributing to reductions in the energy used when toner bottles are cast.



Participation in Industry Organizations and Networks

Initiatives in Japan

Konica Minolta participates in the recovered equipment exchange system run by the Japan Business Machine and Information System Industries Association (JBMIA). Through this initiative, equipment turned in by manufacturers of copiers, MFPs and digital printers, including Konica Minolta, are collected at shared collection centers and returned to manufacturers, thus promoting the recovery and recycling of products in the industry overall. There are 35 collection sites and nine exchange centers for collected machines from Hokkaido to Okinawa, covering all of Japan.

Initiatives in Europe

In France, Konica Minolta Business Solutions France S.A.S. established CONIBI with joint investments from 17 office equipment manufacturers and contracted recovery operations to this joint company. CONIBI created its own free collection system and promotes the recycling of toner cartridges and consumables.

➤ [CONIBI](#)

Recycling Support at Customer Sites Due to Improvement of Deinking Process

In the European market, a deinking process is required for recycling printed copy paper. Konica Minolta Business Solutions Europe GmbH has been certified for deinking by the International Association of the Deinking Industry (INGEDE). Deinking enables high-level paper recycling and helps promote the effective use of resources.

- [Basic Concept](#) | ➤ [Plan and Results](#) | ➤ [Konica Minolta's Approach](#) | ➤ [Recovery and Recycling of Used Products](#)
- [Developing Resource-Conserving Products](#) | ➤ [Resource Conservation and Recycling in Production Operations](#)
- [Turning Waste into High-Value Materials \(Upcycling\)](#) | ➤ [Reduction of Use of Packaging Materials](#)

Developing Resource-Conserving Products

➤ Basic Concept	➤ Plan and Results	➤ Konica Minolta's Approach	➤ Recovery and Recycling of Used Products
➤ Developing Resource-Conserving Products	➤ Resource Conservation and Recycling in Production Operations		
➤ Turning Waste into High-Value Materials (High-Functionality Recycling)			
➤ Reduction of Use of Packaging Materials			

Resource Savings through Process Transformation at Customers

Inkjet Textile Printer Reducing Use of Water Resources

The inkjet textile printer does not require the plate making and colored size mixing that is needed with conventional screen-printing. It also contributes to the reduction of resources usage and waste, since it enables on-demand production that uses only the amount of ink and material needed. Compared to conventional screen-printing, it reduces environmental impact significantly, with a 97% reduction in sizing usage, and a 62% reduction in water resources usage.



Nassenger SP-1 inkjet textile printer

Inkjet Press That Saves Resources During Printing

UV Inkjet Digital Press

Rising environmental awareness is driving demands for the field of commercial and industrial printing to break away from conventional methods where large amounts are printed and surplus is discarded. In the world of marketing, meanwhile, labels and packages for each event are being produced in small lots, and product/marketing strategies targeting individual consumers, such as including specific people's names, is gaining ground.

Konica Minolta's digital inkjet printer AccurioJet KM-1 produces high image quality comparable to that of conventional offset printing and can handle a wide range of printing papers. It enables production of printed matter in just the quantity needed, at the time needed, to suit the customer's exact needs. This, in turn, reduces environmental impact by minimizing waste. As one example, the printer has been equipped with ink consumption reduction mode, which helps to reduce ink waste. This solution also helps to reduce the labor-hours needed in the printing process due to its user-friendly operability, even for unskilled workers.



UV inkjet digital printer, AccurioJet KM-1e

Contributing to Resource Recycling through Sensing Technology

Konica Minolta's hyperspectral Imaging, a sensing technology for multi-wavelength spectroscopic measurement of the visible to infrared light range, makes the non-destructive identification of chemical substances possible. The technology can automate the identification of plastic materials for recycling and the inspection of foreign substances in food and pharmaceuticals, thereby helping to solve environmental problems and more effectively use resources.

The appropriate sorting of each material is important when recycling plastic products. Each plastic material has its own unique reflective properties, and the SPECIM FX-17 hyperspectral camera enables the identification of PET, PP, PVC, HDPE, PS, etc. at the raw material level. The SPECIM FX-50, which is photosensitive in the long wavelength part of the infrared region, can be used to accurately sort even black plastic materials, which had been difficult until now.

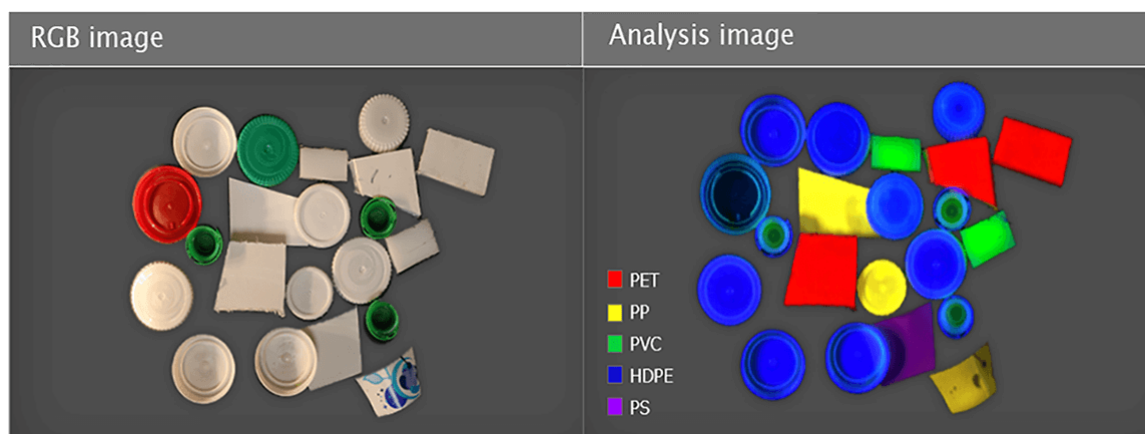


Image taken with Konica Minolta's hyperspectral camera

Making Office Equipment Smaller and Lighter

Making products smaller and lighter contributes greatly to reducing raw materials use and energy consumption during production as well as environmental impact during disposal. Through technical development leveraging its core technologies, Konica Minolta is working at reducing the size and weight of its office equipment while increasing their performance. It is also actively pursuing the development of new products with low environmental impact.

Example of product launched in 2021

The digital printing system AccurioPress C7100 offers automation, efficiency and skill-less functions on par with high-speed machines, but its width has been reduced by about 15% and its weight by about 25% compared to conventional machines.



Digital Printing System
AccurioPress C7100

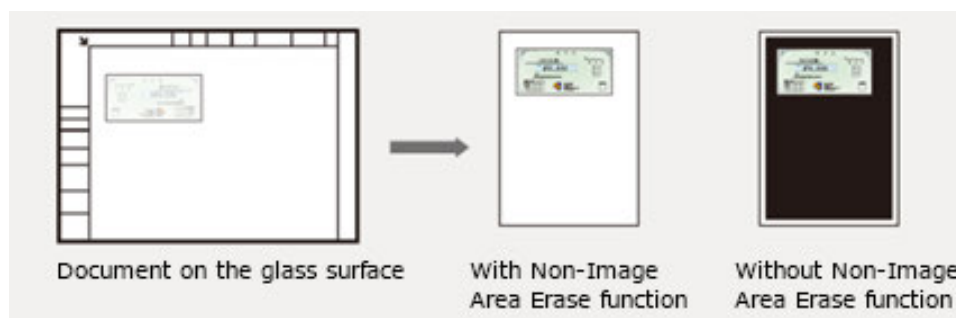
Longer Product Life for Office Equipment

The process unit required for Electrophotographic image forming for MFP has a limited lifespan and sometimes needs to be replaced. Konica Minolta has been working to extend the life of MFP drum units, which is particularly short. With the i-Series it has achieved a 20% longer lifespan compared to a previous model (C368). In addition, by also installing a mechanism to predict when the unit is likely to wear out, the customer can now replace the unit at the optimal point and avoid any image defects.

Conserving Resources with Office Equipment

Non-Image Area Erase function” Saves Toner

When copying a page from a thick book, the lid often needs to remain open, creating a black area around the document. With this function however, the printed page is automatically detected and the surrounding dark area is eliminated. This reduces unnecessary toner use.

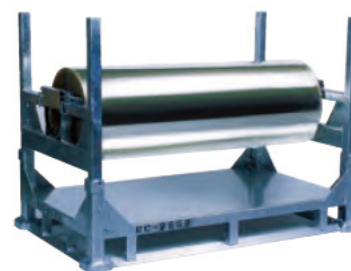


Conserving Resources with Functional Materials

Making Thinner TAC Films to Protect Liquid Crystal Polarizers

Konica Minolta has drawn on its strengths in film making technology to make increasingly thin TAC film, which protects polarizers in liquid crystal displays. This not only reduces the weight of IT products such as note PCs and smartphones, it also reduces the materials used, thereby contributing to resource conservation.

* TAC: Abbreviation for the substance triacetylcellulose



TAC film

Dramatically Improving Productivity of Polarizer Manufacturers with Obliquely Oriented QWP Film

Utilizing its proprietary optical design technology and the optical properties of cellulosic materials, Konica Minolta has developed obliquely oriented QWP film, which allows users to see the exact colors of images on display even through polarized sunglasses. Furthermore, the oblique orientation of the optical axis eliminates the necessity of cutting the film into sheets and bonding them obliquely in the production process of polarizers. This enables roll-to-roll production of polarizers, thereby helping polarizer manufacturers to drastically increase productivity. Besides enhancing display visibility when viewed through polarized sunglasses, a piece of QWP film also serves as a polarizer protection film, thus contributing to reducing the thickness of displays and the number of parts required for their production.



The image of the “Display with PET film” is an example of how an image can appear when PET (polyethylene terephthalate) film is applied on a display in place of QWP film.

Making Healthcare Products Lighter

Cassette Digital Radiography Systems

The AeroDR series of cassette digital radiography systems is compact, light, and easy to carry around. These products are contributing to the spread of digital radiography (DR), which reduces patients' exposure to X-rays compared to film radiography and enables the immediate display of high-precision images. As use increased, so did demand for even lighter models.

Accordingly, in December 2016, Konica Minolta launched the AeroDR fine, which, at 2.6 kg, is among the lightest wireless DR detectors.* The grip was improved so that the panel can be easily held with one hand, and the portable DR is now easier to carry around.

* As of November 28, 2016, among 14x17 inch wireless portable DRs.



AeroDR fine

Diagnostic Ultrasound Systems

The SONIMAGE HS1, launched in 2014, has a large market share in orthopedics and is highly regarded in the field of anesthesiology as well, thanks to its superior quality images featuring clear delineation of muscle, tendon, and nerve bundle, and its operability.

The SONIMAGE MX1, released in March 2018, inherits the technology of the HS1, and also features new technology. It is 4.5 kilograms, 43% lighter than the conventional model.*

* Conventional model: SONIMAGE HS1



SONIMAGE MX1

-
- ▶ Basic Concept
 - ▶ Plan and Results
 - ▶ Konica Minolta's Approach
 - ▶ Recovery and Recycling of Used Products
 - ▶ **Developing Resource-Conserving Products**
 - ▶ Resource Conservation and Recycling in Production Operations
 - ▶ Turning Waste into High-Value Materials (Upcycling)
 - ▶ Reduction of Use of Packaging Materials

Resource Conservation and Recycling in Production Operations

▶ Basic Concept	▶ Plan and Results	▶ Konica Minolta's Approach	▶ Recovery and Recycling of Used Products
▶ Developing Resource-Conserving Products	▶ Resource Conservation and Recycling in Production Operations		
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Promoting Resource Conservation and Recycling at Production Sites

Konica Minolta has implemented a variety of measures to reduce and recycle waste generated from production operations and is striving to reduce the amount of waste discharged, with the aim of creating a recycling-oriented society.

Examples of Main Measures

Reduce material loss	Improvement in materials, parts, and product yield rates
Reduce packaging materials	Switching to simple packaging, increasing quantities inside packages
Reuse packaging materials	Switching to reusable shipping containers within the company, between production sites, with parts suppliers, and between countries
Reduce mold scrap	Adoption of dies with no molding scrap, minimization and internal recycling of molding scrap
Reduce press scrap	Minimization of feed pitch
Reduce support materials	Reuse of cleaning solvents, reuse of molding machine oil
Reuse pallets	Switching to reusable pallets with parts suppliers, changing the size of pallets for parts and using them to ship products

Examples of Initiatives

Reducing the Amount of Waste Discharged by Applying the 3Rs to Plastic Mill Ends

Konica Minolta makes an active effort to apply the 3Rs (reduce, reuse, and recycle) to the mill ends generated at production sites in the molding processes for plastic parts. Konica Minolta Business Technologies (WUXI) Co., Ltd. and Konica Minolta Business Technologies (Dongguan) Co., Ltd., which are companies producing business technologies products in China, reduced their use of plastic raw material by developing and installing molding dies that do not generate mill ends.

They reduced the material input through the use of hot runners in molding dies, the minimization of runner sizes, and the pulverization and reuse of runner mill ends. Then, they made effective use of unneeded mill ends as material in such things as parts racks used in factories and parts boxes used in the shipment of parts from suppliers.

Reducing Packaging Material Waste

Konica Minolta is making efforts to reduce the disposal of packaging materials used at production sites when procuring materials and parts. For instance, it has simplified packaging, such as switching from stretch film for wrapping parts boxes together to packing belts that can be reused, and it has reduced the amount of packaging materials used by changing the number of units purchased when procuring materials to increase the number of units packed into boxes. Additionally, it has changed parts boxes from cardboard to reusable foldable boxes made using mill ends recycled from plastic parts. For parts procured overseas, interior materials of parts are returned to overseas suppliers for reuse and the same steel pallets used for overseas shipment from Japan are used for parts shipped to Japan from overseas, thereby reducing packaging materials both in Japan and overseas and reducing emissions. Konica Minolta Business Technologies (Malaysia) Sdn. Bhd., which assembles MFPs in Malaysia, uses ABS plastic recovered from used game machines as a material for containers used in procurement and in-process transport in an effort to efficiently use resources. In an effort to streamline logistics, Konica Minolta Business Technologies (Malaysia) established a Smart Industry Center (SIC) in January 2018, which brings together major suppliers in a suburb near its plant. The aim is to reduce packaging and make more effective use of resources. This is done by adopting recycled ABS resin for shared plastic pallets used when parts are delivered within the SIC and to the factory.

Reducing Wastewater Discharge

The Group is actively working to reduce wastewater generated in production processes. Konica Minolta Chemical Co., Ltd., which produces chemical products in Japan, is working to reduce the volume of its wastewater discharge. It is doing this by concentrating waste liquid using its own distillation equipment and treating some of the wastewater at the company's own wastewater treatment facility.

Lowering Defect Rates Using Production Data

Konica Minolta is striving to improve its product defect rates by utilizing various data gathered from production facilities for quality improvement. Konica Minolta Mechatronics Co., Ltd., the mother plant for Konica Minolta's digital manufacturing, is collecting various data by monitoring production equipment and product inspections as necessary. This enables the detection of data parameters that strongly correlate with the occurrence of product defects. By checking for changes in these parameters, the company aims to achieve highly efficient manufacturing that helps prevent the occurrence of defects. Implementation of these efforts is being accelerated at all Konica Minolta production sites.

Using Fewer Pallets for Shipments

In the U.S., Konica Minolta Supplies Manufacturing (USA), which produces consumables for Business Technologies, changed its design for product loading volume on wood pallets used when shipping products. The company is improving the number of products loaded per pallet and reducing the amount of wood pallets used.

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- ▶ Basic Concept | ▶ Plan and Results | ▶ Konica Minolta's Approach | ▶ Recovery and Recycling of Used Products
 - ▶ Developing Resource-Conserving Products | ▶ **Resource Conservation and Recycling in Production Operations**
 - ▶ Turning Waste into High-Value Materials (Upcycling) | ▶ Reduction of Use of Packaging Materials

Turning Waste into High-Value Materials (High-Functionality Recycling)

▶ Basic Concept	▶ Plan and Results	▶ Konica Minolta's Approach	▶ Recovery and Recycling of Used Products
▶ Developing Resource-Conserving Products		▶ Resource Conservation and Recycling in Production Operations	
▶ Turning Waste into High-Value Materials (High-Functionality Recycling)			
▶ Reduction of Use of Packaging Materials			

Incorporating Resource Saving and Circular Economy Concepts in Products

High-Functionality Recycling That Increases the Value of Materials (Application of Recycled Materials)

Konica Minolta views plastic as one of the high-risk materials due to the fact that its raw material, petroleum, is a finite natural resource, and because ocean plastic pollution has become a major public concern. In order to use post-consumer recycled plastic (PCR) for MFP parts, which require a high degree of functionality, Konica Minolta is actively working on technology development to produce high-functionality recycled plastic and is expanding recycled plastic use in many products. Sales of products utilizing these high-functionality recycling technologies were approximately 440 billion yen in fiscal 2022. This represents 66% of our Digital Workplace and Professional Printing business sales.

Recycling Used PET Bottles and PC Gallon Bottles into an Outer Casing Material for MFPs

Konica Minolta has been striving to develop innovative technologies to recycle various kinds of plastic. In addition to transforming PET and PC plastic from beverage bottles and gallon jugs into exterior materials for MFPs, the company is also recycling ABS resin recovered from used game machines into inner casing materials. The company has developed technologies that ensure that the recycled plastic components have the necessary strength, flame resistance and molding usability. Now, it has taken its chemical processing technology even further. For MFP products launched in fiscal 2019, the percentage of PCR* was raised to about 70% for PC/PET plastic in exterior materials and to about 95% for ABS plastic in inner casing materials. As a result, the use of recycled materials has increased to about 25% for total resin content by weight in the MFP main body.

* Percentage of post-consumer recycling (PCR): The percentage of material collected from the market that is used in recycled raw materials.





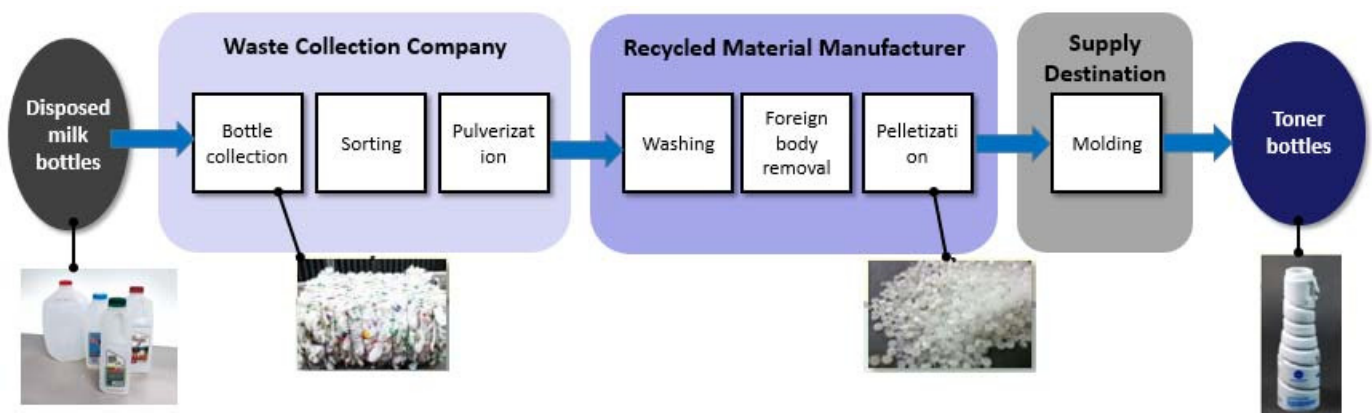
Bizhub C360i series using recycled PC/PET

Recycling Used Milk Bottles into Toner Bottles

Konica Minolta recycles milk containers made from polyethylene and turns them into toner bottles for MFPs. It developed washing technology that removes the smell of milk and minute cells that would lead to quality degradation and established a mass production system in Mexico and Malaysia. The company has succeeded in raising the percentage of PCR in the raw material used for toner containers to 40% and intends to increase it to 100% in the future.



Toner bottles made from recycled material



Milk Bottle Recycling Process

- Basic Concept | ➤ Plan and Results | ➤ Konica Minolta's Approach | ➤ Recovery and Recycling of Used Products
- Developing Resource-Conserving Products | ➤ Resource Conservation and Recycling in Production Operations
- **Turning Waste into High-Value Materials (Upcycling)** | ➤ Reduction of Use of Packaging Materials

Reduction of Use of Packaging Materials



Konica Minolta is actively working to reduce the environmental impact of packaging materials through improved design and recycling.

Major Initiatives

Reduction of Use of Packaging Materials

In order to substantially reduce the use of packaging materials for its office multi-function peripherals (MFPs) and production printing machines, Konica Minolta is developing new buffer materials, as well as optimizing technologies for conventional buffer materials and expanding their use.

In 2019, Konica Minolta developed a new air cushioning material* that converts the various impact energies produced during transport into heat energy and succeeded in increasing the cushioning efficiency. Compared to conventional packaging from 2005, new packaging that includes this cushioning material uses 83% less styrene foam by weight ratio.

In addition to developing its own technologies, the company has also worked to reduce the use of styrene foam with packaging designs that replace styrene foam with cardboard using TOTO LTD. cardboard cushioning technology (PAT P6362025).

This improvement resulted in smaller packing boxes and a substantial reduction in the use of styrene foam, contributing to greater transportation efficiency, which in turn helped to substantially reduce CO₂ emissions during distribution.

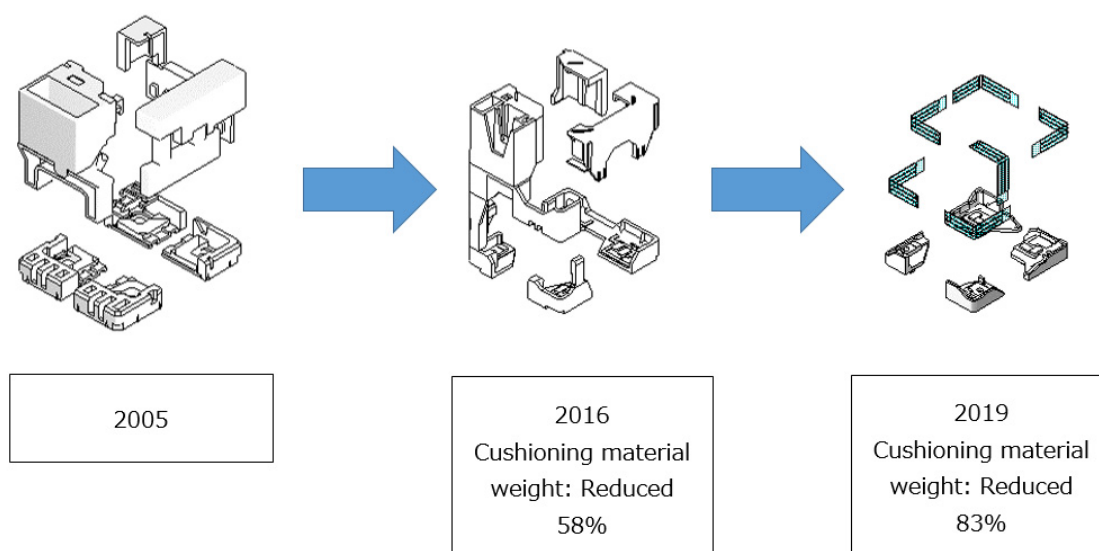
The various initiatives undertaken in 2022 reduce the environmental impact of the company's packaging throughout the entire supply chain from procurement, assembly, distribution, recovery and recycling by the equivalent of approximately 1,200 tons in CO₂ emissions per year.

In order to expand the effects, in addition to increasing the types of office MFPs and production printing machines covered by these initiatives, the company also expanded it to peripheral equipment and consumables.

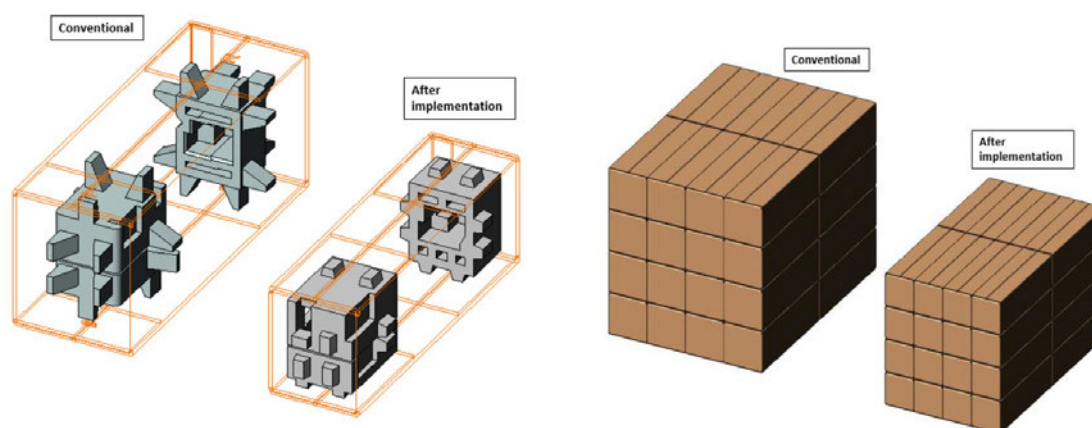
*The new air cushioning material won various awards from the Japan Productivity Center. It also won the President's Award, one of the top-ranked Japan Star awards, at the Japan Packaging Contest 2019 sponsored by the Japan Packaging institute. In fiscal 2020, it won the 44th Kinoshita Award in the improvement and rationalization category.



Example of downsized packaging for office MFPs and the application of new air cushioning material



Example of downsized packaging for consumables



Recycling Used Packaging Materials

Konica Minolta's sales companies worldwide are also working hard to recycle used packaging materials. Konica Minolta Business Solutions (UK) Ltd., a sales company in the UK, established the "Greenhub" recycling center inside its logistics warehouse. It separates used packaging materials for MFPs and production printing machines into cardboard, styrene foam, film, and wood, and then sells them to a local recycling operator as material for recycling. In the Greenhub, it pulverizes and compresses styrene foam, which has poor transportation efficiency due to its large volume relative to weight, in an effort to reduce environmental impact associated with its transportation. The Group is carrying out similar initiatives at sales companies in France, Belgium, Germany, Japan and China.



Foamed polystyrene crusher

Basic Concept

- ▶ **Basic Concept**
- ▶ Systems for Eliminating Chemical Substance Risks
- ▶ Green Procurement System
- ▶ Management of Chemical Substances in Products

Basic Concept

Working on reducing chemical risks based on the concept of the precautionary principle

There is international consensus on the need for companies that manufacture and use chemical substances to take steps to minimize the adverse effects of chemicals, not only on human health, but also on the environment. Based on this shared perception, many countries around the world are revising their regulations concerning chemical substances. Having taken a position in advance of this new international current, and based on a concept known as the "precautionary principle," Konica Minolta has focused on enhancing its advance evaluation of chemical risks, reducing the emission of harmful substances into the atmosphere, and eliminating hazardous substances from production processes and products to improve safety management for workers and product users.

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- ▶ **Basic Concept**
 - ▶ Systems for Eliminating Chemical Substance Risks
 - ▶ Green Procurement System
 - ▶ Management of Chemical Substances in Products

Systems for Eliminating Chemical Substance Risks

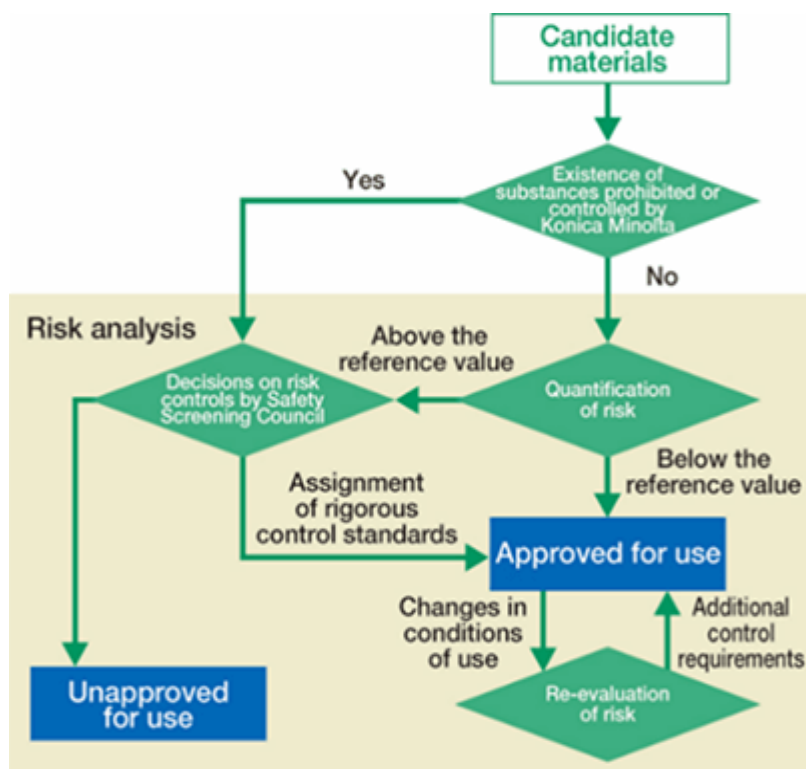
- Basic Concept
- **Systems for Eliminating Chemical Substance Risks**
- Green Procurement System
- Management of Chemical Substances in Products

Prior Risk Assessment of Chemical Substances

Using its unique safety verification system to achieve the appropriate management of chemicals

Risk assessment of candidate materials using a safety verification system

Konica Minolta has established a safety verification system that assesses the risk of candidate materials when considering the use of new chemicals in the process of creating products. Using this system, the Group practices appropriate management based on comprehensive chemical risk assessment in terms of product safety, environmental safety, and work safety.



Designation of prohibited and restricted chemical substances

Konica Minolta designates prohibited and restricted chemicals based on its own criteria in order to eliminate chemicals with unacceptable hazards in the prior risk assessment carried out before the adoption of a chemical substance. These criteria include not only chemicals regulated by law, but also chemicals recognized as significantly hazardous by specialized institutions.

Calculating risk points for chemicals

Konica Minolta calculates points for the hazard risk of substances based on a unique calculation method used in its safety verification system. This quantifies the hazardousness based on three factors: (1) type and degree of hazardousness; (2) level of safety measures; and (3) amount used. Using these numbers, it is possible to compare different types of risks—such as the danger of an explosion or serious health effects such as carcinogenicity—on the same scale. In this way, Konica Minolta quantitatively assesses the risks of hazardousness in chemicals.

Risk management that envisions substance usage

Since risks differ depending on the form of exposure, Konica Minolta classifies substances into five categories that envision usage, ranging from use under strict safety controls (e.g., at production sites) to use by the general public, which cannot be assumed to take safety measures. It then specifies safety requirements according to the different risks in order to carry out more practical risk management.

When there is a necessity to use highly hazardous chemicals, Konica Minolta holds a safety determination meeting to stipulate rigorous management conditions for minimizing risks in terms of procurement, storage, handling, and disposal.

Risk assessment during continual use

Even after incorporating a chemical into the production process following risk assessment, Konica Minolta checks periodically to make sure that there are no changes in the amount used or the conditions of use. If there are any changes, a risk assessment is performed again to ensure appropriate management.

Reducing and Fully Phasing out Chemicals

Reducing VOCs based on Konica Minolta's own risk management indicators

Konica Minolta assesses risk based on a chemical's hazardousness and amount of use and is committed to finding alternatives and reducing those substances judged to have a high risk. Since 1993 it has been making efforts to reduce atmospheric emissions of volatile organic compounds (VOCs) from production sites worldwide. It identified VOCs with particularly high risks for full phase-out, and has maintained the full phase-out status for those identified items.

Reducing atmospheric emissions of VOCs

Konica Minolta is systematically reducing VOCs in line with its own environmental impact index, which multiplies the impact on the human body and the environment by a location coefficient as a management indicator. Each site has established reduction goals in line with the Sustainable Factory Certification System and is working to achieve them.

See [Environmental Data](#) in [ESG Data](#) for more information

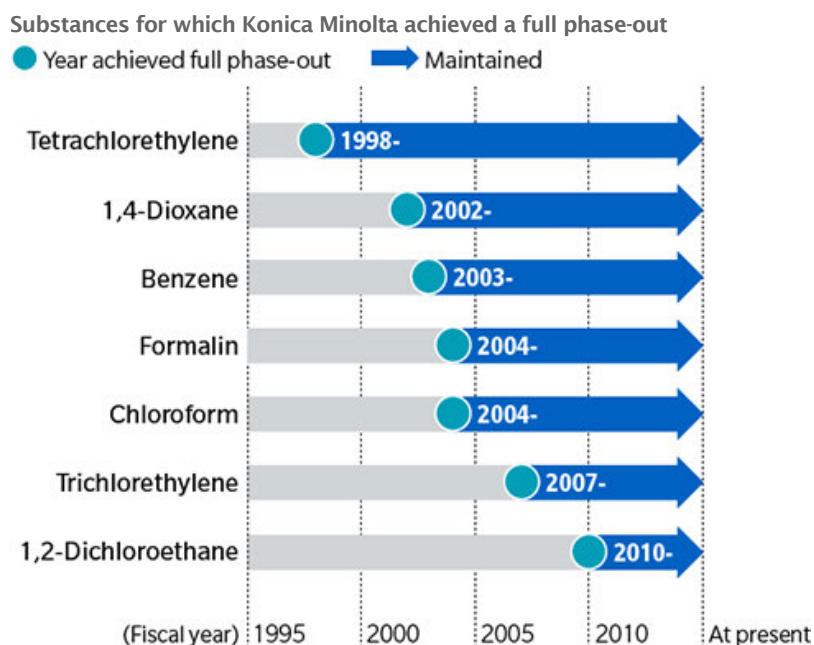
Calculation of Environmental Impact Index

	Hazard coefficient	Example of substances
Substances that pose a risk to human health	×100	1, 2-dichloroethane
Substances that pose a risk to ecosystems Substances that pose a risk of atmospheric pollution	×10	dichloromethane, ethyl acrylate, n-heptane
Substances that pose a risk of having an indirect adverse impact on the environment	×1	isopropyl alcohol, methanol, ethanol, acetone, ethyl acetate

- * Environmental impact index: An index unique to Konica Minolta.
Environmental impact index (point) = Atmospheric emissions of VOCs [t] × Hazard coefficient × Location coefficient
Hazard coefficient: Set at 1-fold, 10-fold, or 100-fold depending on the severity of the impact on human health and the environment (set independently by Konica Minolta based on the coefficient used in the safety evaluations conducted by Kanagawa Prefecture in Japan)
Location coefficient: Outside the industrial park: 5; inside the industrial park: 1

Substances for Which Konica Minolta Achieved a Full Phase-Out

Konica Minolta earmarked the VOCs below for full phase-out, having judged them as having an especially high risk based on the hazardousness and amount of use of each substance and made systematic efforts from early on toward that end. Those efforts resulted in the achievement of a full phase-out in fiscal 2010, which has been maintained ever since.



Countermeasures against Contamination of Soil and Ground Water

Striving to manage the state of contamination through regular monitoring, to facilitate cleanup, and to prevent the spread of contamination

Konica Minolta has implemented countermeasures at sites where soil or ground water contamination has been identified to ensure that the contaminants do not affect the surrounding environment. This is followed up by periodic observation and strict management.

The Group has organized a specialist team to manage remediation of polluted sites and to prevent the spread of contamination. Detailed surveys conducted under the team's supervision serve as the basis for developing countermeasures and examining suitable purification technologies.

The Group reports the results of its observations and remediation efforts to local government agencies.

› [Summary of Contaminated Soil or Ground Water at Operation Sites](#)

Dealing with Asbestos

Konica Minolta is conducting a survey into the usage of sprayed asbestos in the buildings of all its sites and affiliated companies in Japan. It had confirmed that there are no health risks for exposure to residual asbestos. Going forward, it will continue to systematically remove the asbestos.

Dealing with PCBs (Condition of Storage)

Konica Minolta takes steps for the proper storage and management of PCB wastes kept in all its sites and affiliated companies in Japan to prevent leakage. It also reports the condition of storage to the government in accordance with the law. Since fiscal 2007, it has been commissioning the disposal of wastes with high concentrations of PCBs to JESCO,* completing this disposal in fiscal 2021. The Group will continue efforts to replace and dispose of equipment for which low-concentration PCB contamination is a concern by the end of fiscal 2027, the deadline for treatment.

* JESCO: Japan Environmental Storage & Safety Corporation

Condition of Storage of PCB Waste in Japan (as of March 31, 2023)

Stored items	Unit	Quantity
		Figures in parentheses indicates low-concentration PCBs
Transformers	Units	0 (0)
Capacitors	Units	8 (8)
Fluorescent ballasts	Units	0 (0)
Other devices	Units	2 (2)
PCB oil	kg	0 (0)
PCB pollutants	kg	0 (0)

Trace PCB contaminated materials during operation (as of March 31, 2023, Japan)

Stored items	Unit	Trace PCB contaminated materials
Transformers	Units	3

Green Procurement System

- Basic Concept
- Systems for Eliminating Chemical Substance Risks
- Green Procurement System
- Management of Chemical Substances in Products

Implementing green procurement to assess the chemical constituents of parts and components and give preference to those with the least environmental impact

Green Procurement System

Konica Minolta operates a Green Procurement System in compliance with laws and regulations for chemical substances.

In the operation of the SIGMA Green Procurement System, the Group ensures its compliance with the RoHS directive,^{*1} and also rapidly complies with more stringent regulations on chemical substances in products by expanding its coverage to include substances of very high concern (SVHCs) on the candidate list for authorization and other substances restricted under REACH regulations.^{*2} Through these efforts in assessment and management of chemical substances in products, the Group is keeping an eye on trends in regulations and alternative technologies and is working on plans to eliminate hazardous materials in order to be sure it avoids risks.

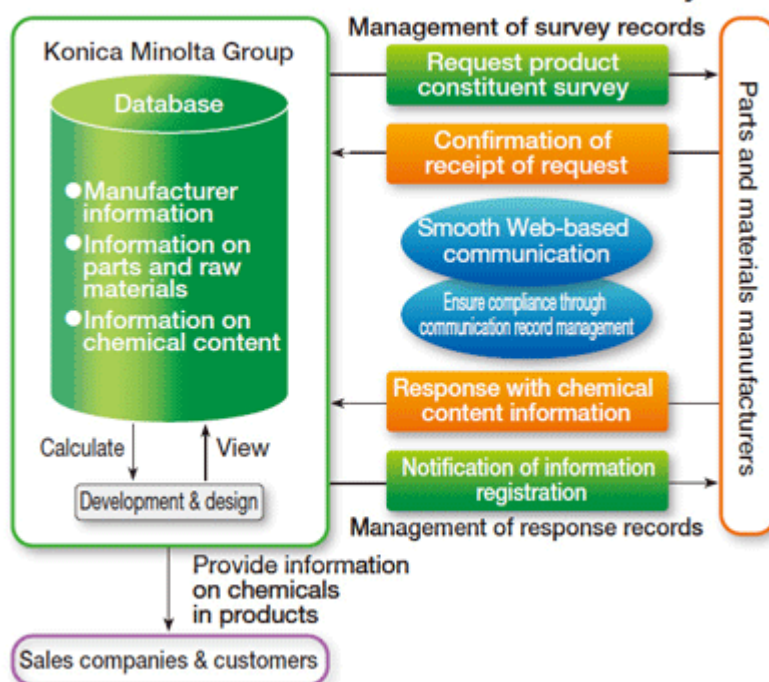
In addition, in order to ease the workload of suppliers, the Group uses the chemSHERPA^{*3} scheme to define the substances covered in its survey. Moreover, the Group regularly provides information on trends in environmental laws and regulations (revision of the Green Procurement Guidelines) to its suppliers to ensure understanding of Konica Minolta's initiatives.

*1 RoHS directive: Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment

*2 REACH regulations: Regulations enacted by the EU in June 2007 concerning the registration, evaluation, authorization and restriction of chemicals, to consolidate existing regulations concerning chemical substances.

*3 chemSHERPA: A scheme developed by Japan's Ministry of Economy, Trade and Industry to facilitate the sharing of information on chemical substances contained in products in the supply chain. The Joint Article Management Promotion-consortium is responsible for its administration.

Overview of the SIGMA Green Procurement System



Main Features

- Japanese, English and Chinese language support
- Supports a standard chemical substance survey (chemSHERPA)
- Checking for prohibited substances and collection of information on reported substances in products
- Sharing of information from surveys and responses with business partners
- Storage of communication records in databases ensures compliance through tracking
- Simplifies the response to changes in regulations and substances subject to control

› [Green Procurement Guidelines \(Japanese, English, Chinese\)](#) 

Environmental Collaboration

The Business Technologies Business has built strong partnerships through the Environmental Collaboration initiative to strengthen suppliers' environmental management.

This is an initiative to help suppliers develop independent environmental management.

In addition to guidance on chemical substance management and document management including of measurement results and material information,

Konica Minolta also provides education to suppliers' employees and certifies those who pass as internal evaluators for suppliers. We also perform QC environmental diagnosis for new business sites and provide guidance based on the results.

[▶ Basic Concept](#) | [▶ Systems for Eliminating Chemical Substance Risks](#) | [▶ Green Procurement System](#)
| [▶ Management of Chemical Substances in Products](#)

Management of Chemical Substances in Products

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| ➤ Basic Concept | ➤ Systems for Eliminating Chemical Substance Risks | ➤ Green Procurement System |
| ➤ Management of Chemical Substances in Products | | |

Management of Chemical Substances in Products

Konica Minolta manufactures and sells office equipment such as digital MFPs and printers, industrial printers, and chemical products such as toner and ink, which are consumables for the aforementioned products, as well as medical devices, measuring instruments, optical components, and performance materials. As chemical substances regulations for products have been tightened around the world, the Group has not only ensured its compliance with the law but also has established internal standards that ensure the environmental performance and safety of products, thereby practicing the appropriate management of chemical substances so that it can grow its business in these diverse products globally.

Compliance with the RoHS Directive*¹

Since the European RoHS Directive, which restricts the amount of specified hazardous substances that can be contained in products, came into effect in 2006, voices calling for compliance with the directive have spread to regions other than Europe. The scope of the directive has also been expanded step by step, with medical devices and control and monitoring devices becoming subject to the directive in 2014.

Konica Minolta has managed chemical substances based on the RoHS Directive since the directive first came into effect. In 2011, with the revisions made to the Directive, the Group reviewed its system for the management of chemical substances and made a declaration of conformity with the revised standards.

The RoHS Directive has become stricter due to revisions such as the addition of specific phthalates (2019) to restricted substances and the expiry of exemptions. Konica Minolta has already complied with the changes and will continue to grasp the trend of upcoming revisions accurately and take systematic steps to remain in compliance.

*¹ RoHS Directive: A directive relating to restrictions on the use of specified hazardous substances contained in electrical and electronic devices

Compliance with REACH Regulations*²

European REACH regulations are comprehensive regulations on the management of chemical substances covering registration, evaluation, authorization, and restrictions when using any chemical substances, whether existing or new. The regulations apply to chemical substances included not only in chemical goods, but also various articles (e.g., devices and molded items). Since coming into effect in 2007, they have been put into force in a phased manner.

Konica Minolta systematically registered substances that only have preliminary registration as chemical goods in order to comply with the regulations. Then, it completed registration by the end of the registration period on May 31, 2018. With respect to articles, the company carefully monitors the authorization candidate substances (substances of very high concern [SVHC]) that are periodically added and investigates matters concerning their use as part of the Group's green procurement surveys. The Group properly manages information for articles containing more than 0.1% of a substance and has also been registering SVHC content information in a public database since January 2021.

*² REACH regulations: Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals

Compliance with IEC 62474

Based on the regulated substances and substance groups that are included in the Declarable Substance List (DSL) of IEC 62474 (Material Declaration for Products of and for the Electrotechnical Industry) created by the International Electrotechnical Commission (IEC), Konica Minolta has established standards for prohibited and monitored substances used in its equipment products, and fulfills its compliance obligations with regard to the regulations of each country. Though IEC 62474 contains many substances that are not regulated by law, Konica Minolta is systematically working to eliminate these.

Response to Toxic Substances Control Act (TSCA)

Up until now, the TSCA* in the United States governed chemical products, but, starting in 2021, it will also be applied in stages to chemical substances included in articles (equipment, molded products, etc.), in addition to chemical products. Konica Minolta systematically complies with this regulation.

* The Toxic Substances Control Act (TSCA) is a US law intended to control the harmful chemical substances under the jurisdiction of the Environmental Protection Agency (EPA) and prevent risks to people's health and the environment.

➤ Basic Concept | ➤ Systems for Eliminating Chemical Substance Risks | ➤ Green Procurement System
| ➤ **Management of Chemical Substances in Products**

Basic Concept

▶ Basic Concept

▶ Consideration of Biodiversity/Water Resources in Production Activities

▶ Contributing to Biodiversity through Products

Basic Concept

Recognizing that biodiversity, the foundation for the bountiful lives people enjoy, is facing critical challenges, Konica Minolta maintains a deep awareness of the impact that its business activities have on biodiversity and takes steps to conserve biodiversity and ensure its sustainable use.

Konica Minolta is working to promote restoration and preservation of biodiversity as one of the commitments under its long-term environmental vision, Eco Vision 2050. Utilizing the Ecological Service Review (ESR) for companies that was developed using the Millennium Ecosystem Assessment, an environmental assessment conducted under the auspices of the United Nations, Konica Minolta identified business activities that depend on and impact ecosystems for all of its Group businesses worldwide. The Company then created a “relationship map” that summarizes by product life cycle stage the benefits that its business activities obtain from the ecosystem, as well as the impact they have on it. This map is evaluated to identify specific items to be addressed.

The assessment and identification process reflects third-party opinions obtained from interviews with two specialized organizations, including Japan's Ministry of the Environment. Konica Minolta will seek to gain even deeper insight into the relationship between its business activities and biodiversity, and to organize and enhance its information disclosure based on international trends in the new disclosure framework for natural capital.

Consideration of Biodiversity/Water Resources in Production Activities

▶ Basic Concept ▶ **Consideration of Biodiversity/Water Resources in Production Activities**

▶ Contributing to Biodiversity through Products

Consideration of Biodiversity at Production Sites

Efforts to Fulfill the Guidelines for Biodiversity

In Konica Minolta's Eco Vision 2050, its long-term environmental vision, the Company commits to restoring and conserving biodiversity. It uses the Ecological Service Review (ESR), a biodiversity service assessment for companies developed by the Millennium Ecosystem Assessment, an environmental assessment carried out at the recommendation of the United Nations. This review looked at all of the Konica Minolta Group's businesses to identify business activities that depend on and affect ecosystems. A correlation map was then prepared for each product life cycle stage, summarizing the benefits that Konica Minolta's business activities receive from biodiversity and their impact on biodiversity. After assessing these results, Konica Minolta identified the specific areas it will address. This evaluation and identification process reflected the views of third parties, with interviews conducted of two expert institutions, including Japan's Ministry of Environment.

Konica Minolta is working to preserve biodiversity as part of its unique Green Factory Certification System for comprehensive evaluation of the environmental activities of its production sites. In 2011, it established Guidelines for Biodiversity Preservation that sets targets and standards for items that we evaluated and identified as having a high impact and dependence on biodiversity in our business activities. The Guidelines were incorporated as one of its standards for the Green Factory Certification System. In 2020, Konica Minolta reviewed its Guidelines, expanded the requirements to 48 items, and established the green factory guidelines for water resources and biodiversity to strengthen its standards. Konica Minolta has asked that all of its key production sites comply with these guidelines. The Company will further deepen its coordination with stakeholders such as business partners and the community, contribute to the local environment on a broader scale, and resolve social issues.

Green Factory Guidelines for Water Resources and Biodiversity <Extracted>

<Consideration of water resources>

- Reduction targets are set for total water intake, or for water used on site, and reduction measures are implemented
- If groundwater is used, measures must be taken to reduce the amount used

<Consideration of wastewater>

- In order to prevent ecological damage to rivers and lakes, a risk management system must be established to eliminate highly polluted wastewater
- Checks are in place to determine the impact on ecosystems such as aquatic habitats of wastewater emitted into public water areas

<Proper management of greenery at factories>

- Invasive alien species that are likely to have a negative impact on ecosystems are not planted or sown on the factory's premises
- When planting trees on factory grounds, management and protection must be accorded to any rare species that are discovered

Consideration of Water Resources

Konica Minolta monitors and manages the volume of water use at each site and strives to reduce its total water consumption in line with the reduction targets it has established.

Konica Minolta's key production sites around the world have set targets for reducing water intake, and they are working to reduce water use under the green factory guidelines for water resources and biodiversity, which are part of the Green Factory

Certification System. In fiscal 2022, a water intake reduction target of 439,000m³ compared to fiscal 2015 was set. As a result of initiatives taken by production sites, water intake was reduced by 439,000m³ compared to fiscal 2015 levels.

A key initiative at Konica Minolta's production sites is water recycling measures. Konica Minolta's key production sites are also reviewing their use of water in plants and working to make reductions. After considering the impact on users and the backup system in the event of problems, the sites decided to reuse drain water, which has relatively few impurities and is easy to reuse, as a supplementary feed for the cooling tower. Additional measures include reducing the volume of heated water used and the energy required to produce the heated water, such as changing temperature controls to only steam rather than a two-stage control process involving steam and hot water during in-process regulation of reaction temperatures. The sites are also working to save water through other detailed efforts. These include reducing tool cleaning frequency by coating mesh surfaces on tools so material is less likely to adhere, and moving away from equipment cleaning using water to cleaning with automatically dispersed compressed air. Moreover, sites are collecting rainwater for use in cooling towers. They are also working to efficiently use water resources outside of the production process as well through measures such as installing water-saving faucet valves, checking for leakage from piping and repairing piping damage.

In fiscal 2013, the Group adopted an analysis method using the WRI^{*1} AQUEDUCT^{*2} to conduct a comprehensive risk assessment on usage of water resources at production and R&D sites and major suppliers around the world, and confirms water risk levels every year. In fiscal 2022, the Group evaluated ten new suppliers, and no sites were rated as having an extremely high Overall Water Risk.

There was one site that was assessed as having high water stress, but sales at this site account for less than 1% of the Group's overall sales. Water intake at this site in fiscal 2022 was 87,000m³ and water consumption was 12,000m³. With a target of reducing water intake by 600m³ annually, the Group reduced product cleaning water by improving yields and introduced water-saving faucets for all lifestyle water faucets. As a result, water intake was reduced by 800m³ in fiscal 2022.

In the future, the Group will continue to conduct water risk assessments when establishing new sites and changing the business environment, and it will take measures to reduce water use as necessary.

Additionally, production sites that use groundwater as their main intake source have set reduction targets with an indicator of the percentage of groundwater use accounted for in production output (i.e., per unit of production). They are making efforts to reduce the use of groundwater, such as by turning off the supply of cooling water when production is stopped.

*1 WRI (World Resources Institute)

*2 Aqueduct: World maps and information showing the latest water risks published by the WRI. Produced based on 12 key water risk indicators such as physical water stress and regulatory risk related to water resources.

Consideration of Wastewater

Konica Minolta regularly conducts compliance assessments on a global basis to confirm the status of compliance with laws, ordinances, agreements, and other relevant regulations related to effluent, with the aim of preventing water pollution from effluent.

The Group has assessed the effect of effluent on the ecosystem at production sites that release effluent used in the production process into rivers. It adopted WET,* a new effluent management method using bioassays that is gaining worldwide attention, when conducting the assessments. With the cooperation of Japan's National Institute for Environmental Studies, the Group conducted tests using three aquatic species (algae, crustaceans, and fish). The results indicated that there was no negative impact (algae: inhibition of growth; crustaceans: inhibition of breeding; fish: reduced hatching rate or reduced survival rate after hatching) on any of the three test organisms.

* WET (Whole Effluent Toxicity): A method that assesses the aggregate toxic effect of wastewater on aquatic life rather than the evaluation of individual chemical substances. Unlike conventional effluent management methods, it enables holistic assessment of the effect of an effluent, detecting impact caused by any non-regulated chemical substance or the combined impact of multiple substances.



Proper Management of Greenery at Factories

Konica Minolta practices proper management of greenery on the grounds of the Group's production sites. By preparing greenery management lists for each site and conducting periodic checks, it makes sure that there are no invasive species, including sowing seeds.

Additionally, when rare species are discovered at a site, efforts are made to protect the species by making employees and visitors aware of its presence by putting up signs and fences. For instance, the Tokyo Site Hino is managing and protecting Golden Orchid (*Cephalanthera falcata*) and Japanese lily (*Lilium speciosum*), which are endangered species.



Golden orchid at the Tokyo Site Hino

Consideration of Biodiversity in Procurement

In the Group's procurement activities, Konica Minolta aims to help build a sustainable society by building strong relationships with business partners to fulfill social responsibilities, based on transparency and fairness. In order to reduce the impact of its procurement activities on ecosystems, Konica Minolta has set an example by establishing a procurement policy. It has established a Supplier Code of Conduct and asks that business partners cooperate to minimize the negative effect on natural resources.

Konica Minolta also promotes Green Supplier Activities to reduce environmental impact while also reducing costs in order to provide suppliers with the environmental technology and expertise it has amassed in its Green Factory activities. In these activities, Konica Minolta's environmental experts visit suppliers and consider and implement measures to reduce water use. Konica Minolta asks that its suppliers manage water appropriately by complying with the Konica Minolta Supply Chain Code of Conduct, based on its CSR procurement program.

In addition, Kinko's Japan, a sales subsidiary in Japan, has acquired CoC certification, a certification for the management of FSC processing and distribution processes, and provides printed materials with the FSC certification mark through on-demand printing.

Contributing to Biodiversity through Products

➤ Basic Concept | ➤ Consideration of Biodiversity/Water Resources in Production Activities

➤ Contributing to Biodiversity through Products

Chlorophyll Meters Contributing to the Management of Effects on the Environment from Chemical Fertilizers

The chlorophyll meter developed by Konica Minolta easily measures in a non-destructive manner the amount of chlorophyll in crops such as rice, wheat, and corn without damaging the plants. Periodically measuring the amount of chlorophyll makes it possible to practice appropriate fertilizer management according to the growth situation. In this way, Konica Minolta contributes to the implementation of agriculture that is friendly on the surrounding biodiversity by avoiding the effects of over-fertilization on the ecosystem, including the soil and groundwater.



SPAD-502Plus chlorophyll meter

Evaluating Light Sources Related to Plant Growth

LED and organic EL technologies are attracting attention as next-generation lighting products. LED in particular has spread not only to general lighting, but also to plant-growing facilities.

The Spectrophotometer CL-500A produced by Konica Minolta can help manage lighting in plant-growing facilities. It can also measure photosynthetic photon flux density (PPFD) and the illuminance spectral waveform of light sources, in applications related to plant cultivation.



Spectrophotometer CL-500A

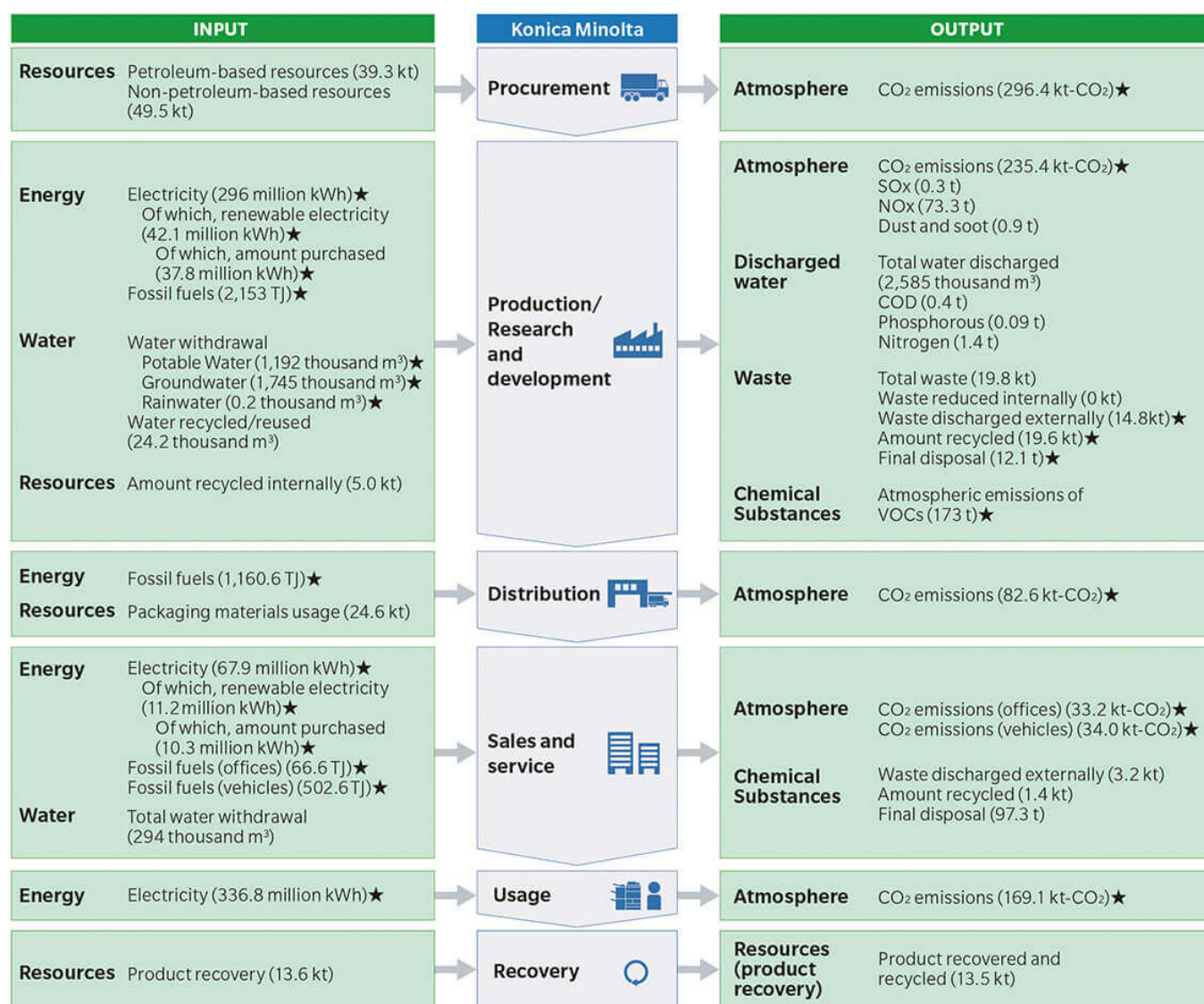
➤ Basic Concept | ➤ Consideration of Biodiversity/Water Resources in Production Activities
| ➤ Contributing to Biodiversity through Products

Overall View of Environmental Impacts

[Overall View of Environmental Impacts](#)
[CO₂ Emissions Across the Entire Supply Chain](#)
[Soil and Groundwater](#)

Konica Minolta measures the amount of energy and resources used in all its business activities, as well as the amount of greenhouse gases emitted and the amount of waste produced at each stage of a product's life cycle. These results are analyzed and used to facilitate concrete approaches to improvement.

Overall View of Environmental Impacts Resulting from Business Activities (Fiscal 2022)



★ Indicators assured by third-party

See [Environmental Data](#) in [ESG Data](#) for more information and calculation standards.

[Overall View of Environmental Impacts](#)
[CO₂ Emissions Across the Entire Supply Chain](#)
[Soil and Groundwater](#)

CO₂ Emissions Across the Entire Supply Chain

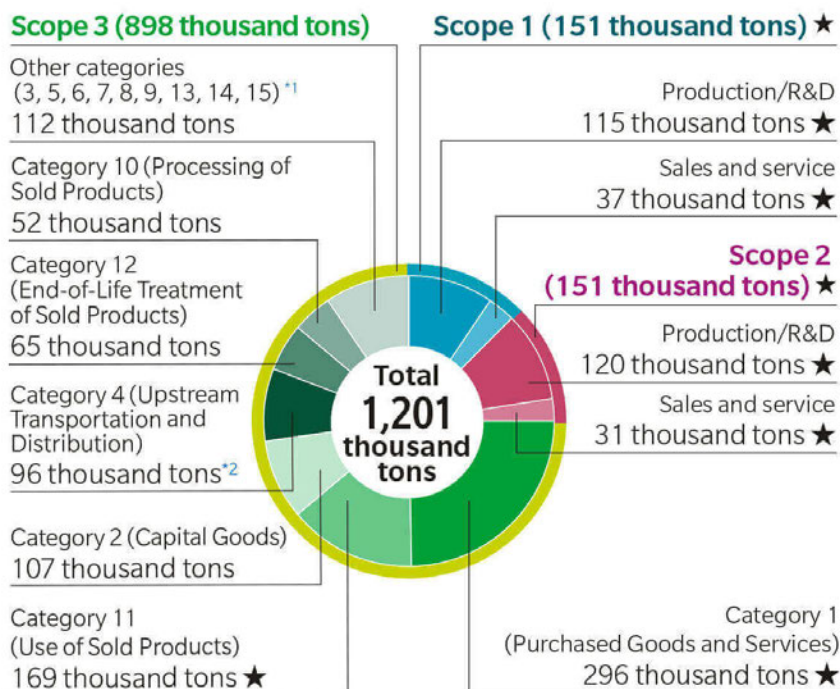
[Overall View of Environmental Impacts](#)
[CO₂ Emissions Across the Entire Supply Chain](#)
[Soil and Groundwater](#)

CO₂ Emissions Across the Entire Supply Chain

Konica Minolta has calculated the CO₂ emissions associated with the Group's activities across its entire supply chain, from the upstream to the downstream aspects of its operations, based generally on the standards of the GHG Protocol*, the international standard. In fiscal 2022, the calculation showed that CO₂ emissions throughout the supply chain were approximately 1.20 million tons, which represents an increase of approximately 11% from fiscal 2021. Emissions from the Group's activities including direct emissions from fuel use (Scope 1) plus indirect emissions from the consumption of purchased electricity, heat or steam (Scope 2) totaled approximately 0.30 million tons, or approximately 25% of all emissions. Other indirect emissions (Scope 3) associated with the Group's activities totaled approximately 0.90 million tons, accounting for approximately 75% of all emissions. CO₂ emissions for "purchased goods and services" accounted for 24.7% of emissions across the entire supply chain. Since the amount of resources needed per product declined thanks to the development of the latest models with resource-saving designs, but CO₂ emissions have increased due to the increase in sales volume. In terms of the "use of sold products," which accounted for 14.1% of emissions, the Group is working to develop features that encourage customers to save energy, in addition to reducing the power consumption of the products themselves. Konica Minolta will share information with relevant stakeholders in the future based on the results of these calculations and move forward with CO₂ emissions management and reduction activities throughout the supply chain.

* GHG Protocol: International standard for calculating and reporting greenhouse gas (GHG) emissions

CO₂ Emissions Across the Entire Supply Chain (FY2022)



^{*1} Categories 3 (Fuel and Energy-Related Activities), 5 (Waste Generated in Operations), 6 (Business Travel), 7 (Employee Commuting), 8 (Upstream Leased Assets), 9 (Downstream Transportation and Distribution), 13 (Downstream Leased Assets), 14 (Franchises) and 15 (Investments)

^{*2} CO₂ emissions attributed to product distribution: 83 thousand tons ★

Note: Figures do not necessarily add precisely to the total due to rounding.

★: Indicators assured by third party.

See [Environmental Data](#) in [ESG Data](#) for more information

Method of Calculation in Each Category of Scope 3 Emissions

Category	Overview	Method of Calculation
1	Purchased goods and services	Calculated by multiplying the sales amount or production amount of office equipment and consumables by a cradle-to-gate CO ₂ emission factor for each of the materials that make up a product; and for other products, multiplying the amount of material used by a cradle-to-gate CO ₂ emission factor for that material.
2	Capital goods	Calculated by multiplying the amount of investment in capital goods purchased over the year by a CO ₂ emission factor per investment value.
3	Fuel- and energy-related activities	Calculated for emissions from the extraction, production, and transportation of fuels purchased by the Group or by electricity producers for the electricity purchased by the Group. (Fuel) Calculated by multiplying the annual purchased volume by a cradle-to-gate CO ₂ emission factor for each type of fuel. (Fuels purchased and used by electricity producers) Calculated by multiplying the annual purchased volume of electricity by source, by a CO ₂ emission factor for each source. Proportion of sources in electricity generation for each country is identified from the Proportions of Generated Power by Source in Major Countries, published by the Federation of Electric Power Companies of Japan.
4	Upstream transportation and distribution	Emissions in this category are the sum of: A) emissions related to transportation of parts and raw materials the Group purchases, and B) emissions related to transportation of the Group's products. A) Calculated for emissions related to procurement distribution from suppliers to Konica Minolta's plants. Calculated by multiplying transport distance by cargo weight, and then multiplying that value by the CO ₂ emission factor for each means of transportation. B) Calculated for emissions related to shipping and distribution internationally, within Japan, within China. Calculated by multiplying transport distance by cargo weight, and then multiplying that value by the CO ₂ emission factor for each means of transportation.
5	Waste generated in operations	Calculated for waste (not including valuables) from production, R&D, and sales offices. Calculated by classifying waste into different types and multiplying the amount of each type of waste entrusted to a party outside the company by a CO ₂ emission factor for each method of waste disposal.
6	Business travel	For business travel by employees of Group companies in Japan, the emissions are calculated by multiplying the annual business travel expenditure by a CO ₂ emission factor per expense for travel for each means of transportation. The CO ₂ emission factor used is that for travel by domestic air flight in Japan, which is the highest among the emission factors for all methods of travel. For Group companies outside Japan, it is estimated by multiplying the number of employees of each company by the emission amount per employee calculated based on the result in Japan.
7	Employee commuting	Calculated by multiplying the annual commutation cost by a CO ₂ emission factor per expense. The CO ₂ emission factor used is for "automobiles (buses and ride-sharing in sales vehicles)," which is the highest among the emission factors for all commuting methods. For Group companies outside Japan, it is estimated by multiplying the number of employees of each company by the emission amount per employee calculated based on the result in Japan.
8	Upstream leased assets	Most leased assets are calculated as Scope 1 and 2 emissions. Scope 3 applies only to some leased assets (e.g., data centers). Calculated by multiplying the actual annual power consumption for the leased servers by a CO ₂ emission factor for electrical power.

Category	Overview	Method of Calculation
9	Downstream transportation and distribution	Calculated for emissions related to distribution of Konica Minolta products sold by dealers. Estimated by identifying a CO ₂ emission factor per unit of sales based on the emissions from distribution for direct sales by the main sales companies and multiplying this by dealer sales volume.
10	Processing of sold products	Konica Minolta's product lineup includes semi-finished product. Emissions in this category are calculated by identifying a CO ₂ emission factor per unit of sales based on the Scope 1 and Scope 2 emissions and sales volume of the main parts sales destinations and multiplying this by overall sales volume.
11	Use of sold products	Calculated by multiplying the number of units operating in the market (inferred from sales units each year and the life of the product) by the estimated annual amount of electrical consumption* for each model and the CO ₂ coefficient equal to the fiscal 2005 world average value specified by the GHG Protocol. The calculation method used by Konica Minolta is slightly different from the GHG Protocol method, but it enables the Group to calculate the emissions that more accurately reflect the Group's business operations and thus allows it to implement initiatives to reduce CO ₂ emissions smoothly.
12	End-of-life treatment of sold products	Calculated for emissions related to the end-of-life treatment of products themselves and their containers and packaging. Calculated by multiplying the weight of materials that make up the products sold by a CO ₂ emission factor for each type of disposal method. The calculation is made for anticipated future emissions from the end-of-life treatment of products sold in the previous fiscal year, which will be reported as the data of that fiscal year.
13	Downstream leased assets	Calculated for buildings and equipment leased from Konica Minolta to third parties, by multiplying the actual value of annual energy consumption of leased equipment by the CO ₂ emission coefficients.
14	Franchises	Emissions from Kinko's franchises in Kyushu, Hiroshima, and Shikoku fall under this category. Estimated based on the proportion of employees, based on energy usage at the head office of Kinko's Japan Co., Ltd.
15	Investments	Calculated for the emissions from the main companies in Konica Minolta's investment portfolio, in which Konica Minolta holds specified investment stocks. Calculated by multiplying the invested companies' CO ₂ emissions by Konica Minolta's shareholding ratio (%) in those companies (number of shares held by Konica Minolta / number of shares issued).

* The annual amount of electrical consumption for office equipment is estimated based on the Typical Electricity Consumption (TEC Ver 2.0) value set by the International Energy Star Program, and for equipment for healthcare system it is estimated based on each product's specifications.

Soil and Groundwater

[Overall View of Environmental Impacts](#)
[CO2 Emissions Across the Entire Supply Chain](#)
[Soil and Groundwater](#)

Surveys and Measures Taken on Soil and Groundwater Contamination

Efforts regarding soil and groundwater contamination

Konica Minolta is striving to manage the state of contamination through regular monitoring, to facilitate cleanup, and to prevent the spread of contamination.

It conducts robust management through periodic observation at sites where soil or groundwater contamination has been identified in order to implement measures to ensure that the contaminants do not affect the surrounding environment.

The Group has organized a special team to manage remediation of polluted sites and to prevent the spread of contamination.

Detailed surveys conducted under the team's supervision serve as the basis for developing countermeasures and examining suitable purification technologies.

The Group reports the results of its observations and remediation efforts to local government agencies.

Summary of Contaminated Soil or Groundwater at Operation Sites

Operation Site	Substances	Progress in Fiscal 2022
Tokyo Site Hino (Hino, Tokyo)	Fluorine, Boron, Mercury, Benzene, Lead	The Company has continued to periodically monitor groundwater at the site boundary and has confirmed that amounts of these substances do not exceed standards.
Tokyo Site Hachioji (Hachioji, Tokyo)	Hexavalent chromium	The Company has continued to purify groundwater and prevent dispersion by pumping water at the site. It has periodically monitored the groundwater and confirmed that there is no runoff of this substance from the site.
Kofu Site (Chuo, Yamanashi Prefecture)	Fluorine	The Company has continued to periodically monitor groundwater at the site boundary and has confirmed that amounts of fluorine do not exceed standards.
Mikawa Site, Western Zone (Toyokawa, Aichi Prefecture)	TCE ^{*1}	The Company has continued to periodically monitor groundwater and has confirmed that amounts of this substance do not exceed standards.
Sakai Site (Sakai, Osaka)	TCE, PCE ^{*2} , c-DCE ^{*3} , Boron, Lead, Arsenic, Cadmium	The Company has found that amounts of lead, arsenic, and cadmium do not exceed standards at periodically monitored wells. It continues to purify and prevent dispersion of other substances by pumping up water at the site.
Osaka Sayama Site (Osaka Sayama, Osaka)	TCE, PCE, c-DCE	The Company continues to pump water on site and use bio-barrier methods to purify and prevent dispersion of groundwater.
Konica Minolta Mechatronics Co., Ltd. Ueta Plant (Toyohashi, Aichi Prefecture)	TCE, c-DCE, Hexavalent Chromium	The Company has continued to purify and prevent dispersion of groundwater by pumping water at the site.
Konica Minolta IJ Product Co., Ltd. Head Office (Fuefuki, Yamanashi Prefecture)	TCE, PCE, c-DCE	The Company has continued to purify and prevent dispersion of ground water through pumping, permeable reactive barriers, and bio-barriers.
Konica Minolta Supplies Manufacturing Co., Ltd. Head Office (Kofu, Yamanashi Prefecture)	TCE, PCE, c-DCE	The Company has continued to monitor regularly groundwater at observation wells located on site.

*1 TCE: trichloroethylene

*2 PCE: tetrachloroethylene (perchloroethylene)

*3 c-DCE: cis-1,2-dichloroethylene (resolvent of TCE and PCE)

Environmental Labels and Certifications

- ▼ Environmental Labels
- ▼ Products Registered in the Green Purchasing Network
- ▼ Green Printing Certification
- ▼ Recyclable Printing Materials

Environmental Labels

Actively providing environmental information about products through environmental labels.

Type I Environmental Labels

Type I environmental labelling refers to labels indicating that an independent certification body certifies that a product has a low environmental impact.

Blue Angel Mark

Launched in Germany in 1978 as the world's first environmental labelling system, the Blue Angel has been the ecolabel of the German Federal Government. It is an independent and credible label that sets stringent standards for environmentally friendly products and services. Since receiving the world's first Blue Angel certification in the field of copiers in January 1992, Konica Minolta has continued to receive certification for new products by clearing the certification bar each time it has been raised.



International Energy Star Program

Products that meet certain standards can be registered as Energy Star devices as part of an energy-saving program for imaging equipment that was implemented in 1995 through an agreement between the Japanese and U.S. governments. In fiscal 2022, models with the latest International Energy Star Program certification (*including equivalent models sold in the EU and Japan), accounted for 53.4% of sales of Konica Minolta's printers, MFPs and digital printing systems.



Eco Mark

The Eco Mark was established by the Japan Environment Association in 1989 as a standard environmental labeling system in Japan. Konica Minolta's basic policy is to obtain Eco Mark certification for all its office equipment.



EPEAT (Electronic Product Environmental Assessment Tool)

This is an environmental assessment system established with the objective of encouraging the market development and sale of environmentally preferable products. The Global Electronics Council (GEC) runs and registers certifications. The program began in 2006 with labels for computers, and expanded to include imaging equipment in 2013. Products are assessed on a total of 59 criteria that address the product's life cycle, including not only the reduction and ban of harmful substances and energy conservation, but also recycling services. Products are registered with an assessment of either gold, silver or bronze.



In October 2017, Konica Minolta expanded the scope of its certifications beyond the US and acquired Canada's EPEAT certification.

In fiscal 2022, models with EPEAT certification (including equivalent models sold in the EU and Japan), accounted for 58.6% of sales of Konica Minolta's printers, multifunction printers and digital printing systems.

► [Information on EPEAT](#)

China Environmental Labelling

This is China's environmental labeling program, introduced by the Chinese government in 1994. Konica Minolta continues to earn this certification for its IT office equipment.



EcoLogo

Established by the Canadian government in 1988, EcoLogo is one of the most widely respected environmental standard and certification systems in North America. Since earning EcoLogo certification for MFPs in the newly established Office Machines category ahead of the competition in 2009, Konica Minolta has been proactive in obtaining certification.



Organic Textile Standard (GOTS)

In the past, there were many systems certifying textiles as organic. An international working group was formed to develop these into an integrated international standard, and this resulted in the establishment of the Organic Textile Standard (GOTS) in 2005. GOTS also sets safety standards for the ink used in textile products, and in fiscal 2014, Konica Minolta applied for registration of reactive dye ink as an ink that meets these standards, becoming the first Japanese manufacturer to be registered with GOTS.

ZDHC MRSL

Certification by ZDHC,^{*1} which consists mainly of major apparel companies in Europe and the United States, is designed to ensure the proper management of chemical substances in the manufacture of textile and footwear products and requires compliance with the MRSL.^{*2} Konica Minolta has obtained this certification for reactive dye and disperse dye inks used in textiles (textile products).

*1 ZDHC: Zero Discharge of Hazardous Chemicals

*2 MRSL: Manufacturing Restricted Substance List

Bluesign®

This certification, issued by Bluesign Technologies headquartered in Switzerland, was created in response to calls for environmentally friendly textile products, and requires that materials be free of hazardous substances and that emissions of hazardous components into water, soil, and air be minimized during the material's production. Konica Minolta has obtained this certification for reactive dye inks for textiles (textile products).

ECO PASSPORT by OEKO-TEX®

One of the certifications issued by the Oeko-Tex® Association, which certifies that dyes and pigments contain no hazardous components. Konica Minolta has obtained this certification for disperse dye inks for textiles (textile products).

Global Recycled Standard (GRS)

One of the certifications issued by The Textile Exchange, a global non-profit organization founded in 2002 to create leaders in the textiles/materials industry. This certification is intended to promote the use of recycled materials and requires restrictions on hazardous chemical use. Konica Minolta has obtained this certification for disperse dye inks for textiles (textile products).

Type II Environmental Labels

Type II environmental labeling verifies/certifies the environmental characteristics of a product according to a company's own standards.

Konica Minolta Green Products Certification System

Konica Minolta adopted its Green Products Certification System in fiscal 2011 and has been using it ever since to evaluate and certify products that have excellent environmental performance. The purpose of the system is to contribute to the reduction of customers' and society's environmental impact by creating environmental value in line with the Group's business and product characteristics, while increasing profits. Konica Minolta has reviewed the indicators to be evaluated to stay in step with social change, and will continue to assess products' environmental value and their effect in reducing the environmental impact, while also recognizing the contributions that its solutions make in resolving environmental and social issues.



› [Green Products Certification System](#)

Type III Environmental Labels

Type-III environmental labeling provides information on the environmental impact of a product, based on quantitative measurement of environmental impact through the product's entire life cycle, from raw material procurement to production, sales, usage, disposal, and recycling.

Eco Leaf Environmental Label

The Eco Leaf Environmental Label is Type-III environmental labeling, and Konica Minolta has been disclosing environmental impact data concerning its office equipment under this label since 2002, the year when the system was started. Eco Leaf offers a system certification program whereby a third-party institution certifies that a company has mechanisms for the proper and effective gathering of environmental impact data. Konica Minolta has obtained this certification for its copier and printer businesses.



› [List of Konica Minolta's Eco Leaf Certified Products](#)

› [Eco Leaf Environmental Label](#)

Products Registered in the Green Purchasing Network

Konica Minolta has registered products that comply with Japan's Green Purchasing Law and the guidelines of the Green Purchasing Network (GPN^{*}) in the GPN's online database of environmentally friendly products, and discloses that information.

^{*} Green Purchasing Network (GPN): A network of companies, governments, and consumers established in February 1996 to promote green purchasing initiatives.

› [Green Purchasing Network Registered Products \(Japanese only\)](#)

Green Printing Certification

The green printing certification functions as a voluntary environmental standard for the printing industry by the Japan Federation of Printing Industries. Certification is granted to the printing plant and to the materials and equipment purchased by the plant. Konica Minolta has received certification for its products in the dry toner digital printer field of green printing materials and equipment category.

Certified Konica Minolta Products are shown on the List of Certified Green Printing Materials and Equipment Products.

› [Green Printing Certification System](#)

› [List of Certified Green Printing Materials and Equipment Products\(Japanese only\)](#)

Recyclable Printing Materials

Recyclable Printing Materials are materials that do not interfere with the recycling of printed materials and are certified by the Paper Recycling Promotion Center. The purpose of such certification is to expand the use of waste paper, especially printed and information paper. The certification is also reflected in the determination standards for designated printing procurement items under the Act on Promoting Green Purchasing, overseen by Japan's Ministry of the Environment. Konica Minolta has been certified and registered in the area of recyclable dry toners.

Certified Konica Minolta products are shown under Recyclable Dry Toner in the Select from Material Brands section.

› [Recyclable Printing Materials Database\(Japanese only\)](#)