Konica Minolta, Inc. Sustainability Report 2021

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(Website information as of September 2021)

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Message from the President

Redefining the risks and opportunities facing our company as society is dramatically changed by COVID-19

COVID-19 has had a major impact on societies and economies around the world, greatly accelerating changes to our values and the way we work and live, and has had a great impact on the business of the Konica Minolta Group. This year has seen the Group face many new risks and opportunities due to such changes to society and human behavior.
Such risks include an acceleration in the decline of print volumes due to the reduced numbers of employees commuting to an office caused by the expansion and normalization of working from home. This is a structural change that we were expecting to happen gradually, but COVID-19 has certainly accelerated such change. The cancelation of events and closing of stores has led to a drastic decline in demand for commercial printing.
On the other hand, COVID-19 has accelerated behavioral changes in the way we live and work, which can be expressed by keywords such as individualization/decentralization and remote /non-contact services, and has led to demand for safety, security, and health. I believe that such changes to society provide us with a new business opportunity. For example, the popularization of working from home has increased the importance of information security. This has led to various customers asking us for proposals on workflow reforms that utilize the advanced security technologies and digitalization of the Company, and our solutions have been well received. Various workplaces have also been investigating methods for avoiding infection and ensuring social distancing, and this has led to many inquiries about projects such as temperature screening services via image diagnosis, remote medical care at hospitals, and services for automating the inspection process at factories. With COVID-19 also increasing consumer interest in health, I feel that demand for services that support personalized medical care and early diagnosis will certainly grow.
We have been promoting the three-year DX2022 medium-term business plan since fiscal 2020, and the fundamental objectives of DX2022 are to "leap to highly profitable businesses through DX" and to "evolve into a company clearly committed to solving social issues." Viewing the social changes being prompted by COVID-19 as an opportunity, we seek to establish high-profit businesses that contribute to solving social issues.

Placing sustainability at the foundation of management strategy to improve our medium to long-term corporate value

To formulate DX2022, we held deep discussions on what we want society to be like a decade from now in the year 2030, and what environmental/social issues we will need to solve in order to achieve that vision. As the world moves toward an autonomous distributed society that develops sustainably, we have redefined our purpose as contributing to "Support people to achieve their own purpose" and "Realize a sustainable society."

This is the stance that has been at the foundation of our management strategy since the merger between Konica and Minolta in 2003, and since being appointed President, I have focused management based on my belief that contributing to the realization of a sustainable society where everyone can live with a purpose is the only way to achieve the sustainable growth of the Company. This idea has carried over to our employees and we are seeing more and more voluntary initiatives, such as projects for solving social issues that were proposed and started by young employees. I find it extremely encouraging that we have such human resources that truly want to improve the world.

In fiscal 2020, we clarified our five material issues for contributing to solving social issues via our business activities as " 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." In regard to climate change in particular, we have worked toward long-term goals since establishing the Eco Vision 2050 long-term environment plan in 2009. In fiscal 2020, we pushed forward our timeline for achieving Carbon Minus status to the ambitious target of 2030. We aim to increase the amount that we can contribute to reducing CO_2 emissions at client companies and business partners compared to our own CO_2 emissions, by sharing our expertise and knowledge on environmental management in order to reduce the environmental impact of the entire value chain. As for to material issues not related to the environment, we will continue to quantify the social and economic impact that our business activities have, and set specific KPIs to accelerate our initiatives.

Guided by our philosophy—"The Creation of New Value," we will continue to create environmental/social value and economic value via all kinds of business activities. We will also contribute to a sustainable society as a company clearly committed to solving social issues, while simultaneously improving our medium to long-term corporate value, and I hope for the continued support of all of our stakeholders.

Shoei Yamana
President and CEO, Representative Executive Officer
Konica Minolta, Inc.
August 2021

Message from the Sustainability Officer

Balance New Value Creation for the Environment and Human Society with Business Growth

Pursuing sustainability for society can lead to higher sustainability for companies. 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, we can minimize future risks while creating opportunities for growth.
Konica Minolta's management vision is "Imaging to the People," and we are working hard to help build a sustainable society by continuing to evolve by practicing co-innovation with our customers. We will continue to take on the challenge of innovation that can promote both the growth of our business and the creation of new value for the global environment and all of humanity.

Promote Activities in Line with Five Material Issues

In fiscal 2020, Konica Minolta established and began activities for its long-term vision, which looks ahead to 2030, and its medium-term business plan, DX2022. When establishing the plan, social issues that the Company should address in 2030 were clarified, and the issues that should be addressed from a medium-term perspective were set through backcasting. Using the SDG framework, social and environmental issues were identified for 2030. The importance of these were assessed from the relationship with the Company's business, and the five material issues (important issues) that the Company should address were identified. This makes the vision that Konica Minolta should aspire to even more clear.
The material issues of "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" express the themes that will enable Konica Minolta to generate substantial social value by utilizing its intangible assets to advance its business. 2030 visions have been set for each of the five material issues, and the Company has confirmed the direction of value creation in the medium to long term.

Promote Activities in Line with Five Material Issues

Resolving Social and Environmental Issues through DX Business

The world is looking to corporate innovation to help solve today's increasingly urgent social and environmental issues. Konica Minolta will work to transform the workflows used in the workplace using tools to visualize them and contribute to society by making people's lives even more fulfilling. The foundation will be the Company's unique imaging IoT platform. By combining AI and IoT technology with imaging technology, one of Konica Minolta's strengths, the Company will create high value-added, high-revenue businesses utilizing data such as images continuously acquired from on site.

Regarding the material issue of "improving fulfillment in work and corporate dynamism," we are providing solutions that increase productivity and make creativity-inspiring work styles possible in diverse locations — all the while supporting people so that they may achieve their own purposes, improving fulfillment in work, and fostering corporate dynamism as work styles continue to diversify.

With regard to "supporting healthy, high-quality living," another material issue, we are enhancing the diagnostic function of local clinics and other neighborhood primary care settings by providing diagnostic imaging analysis technology that uses AI, and by supporting diagnosis through a network of specialists. In addition, we are helping to make the workflow concerning elderly people at nursing care facilities visible using image analysis and AI to reduce the burden on caregivers. By making it possible to provide more finely tuned nursing care services, Konica Minolta is also helping seniors to remain independent.

In order to address the material issue of "ensuring social safety and security," we are providing technology to enable non-contact and remote monitoring and inspection at factories and plants. By predicting process irregularities and risks in ways that surpass the visual skills of frontline workers, we aim to prevent accidents and ensure the safety and security of factories and surrounding communities.

Regarding the other material issues including "addressing climate change" and "using limited resources effectively," Konica Minolta will support more efficient production by reforming customers' conventional production procedures through on-demand production. Raising production efficiency leads to reductions in customers' CO_2 emissions and helps to rein in customers' use of resources.

Carbon Minus in 2030: GX Green Transformation

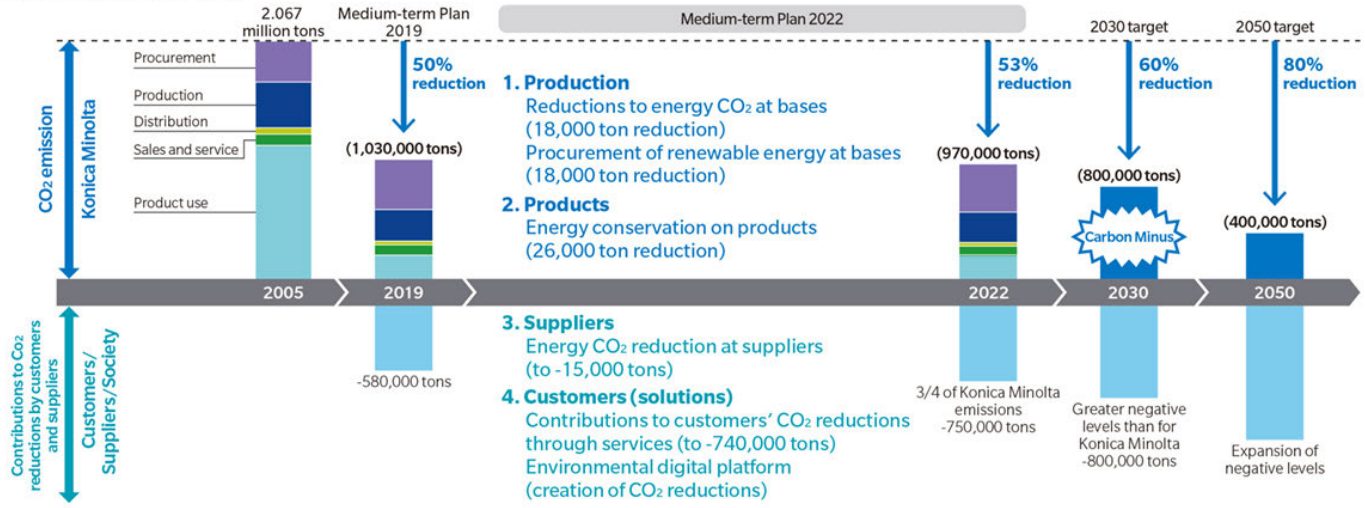
Environmental problems such as climate change are urgent issues that have been brought up at G7 meetings. Companies have significant responsibilities in curbing environmental impact and creating sustainable societies. Konica Minolta expresses its strong determination to fulfill this responsibility in its long-term environmental vision looking ahead to 2050, Eco Vision 2050. In 2009, Eco Vision 2050 set an ambitious target of reducing CO_2 emissions for the lifecycle of Konica Minolta products by 80% of fiscal 2005 levels by 2050. In 2017, the Company added the concept of Carbon Minus to signal its commitment to reducing society's CO_2 emissions to negative levels through its business, and expanded measures to encompass the entire supply chain. In 2020, Konica Minolta declared that it would achieve Carbon Minus in 2030, 20 years earlier than its deadline for meeting this goal.

We view Carbon Minus as an activity in which efforts to reduce CO_2 emissions at customers and suppliers surpass the Company's CO_2 emissions across the entire product lifecycle thanks to products and services offered by Konica Minolta. With the Company's business changing from products to services through DX, Konica Minolta will also shift to activities utilizing DX in its efforts to achieve Carbon Minus status. Konica Minolta calls this GX (Green Transformation).

To achieve Carbon Minus, Konica Minolta will accelerate its initiatives to reduce CO_2 emissions at every stage, including its own manufacturing, products, support for suppliers, and the provision of services to its customers. The Medium-term Sustainability Plan 2022, which was established at the same time as DX2022, lowers the emissions volume to 970,000 tons by reducing CO_2 emissions along the life cycle of Konica Minolta products by 53%. In addition, the Company is aggressively introducing renewable energy, and has set targets of 30% for 2030 and 100% by 2050. The target for fiscal 2022 has been raised from 6.5% in fiscal 2020 to 10%.

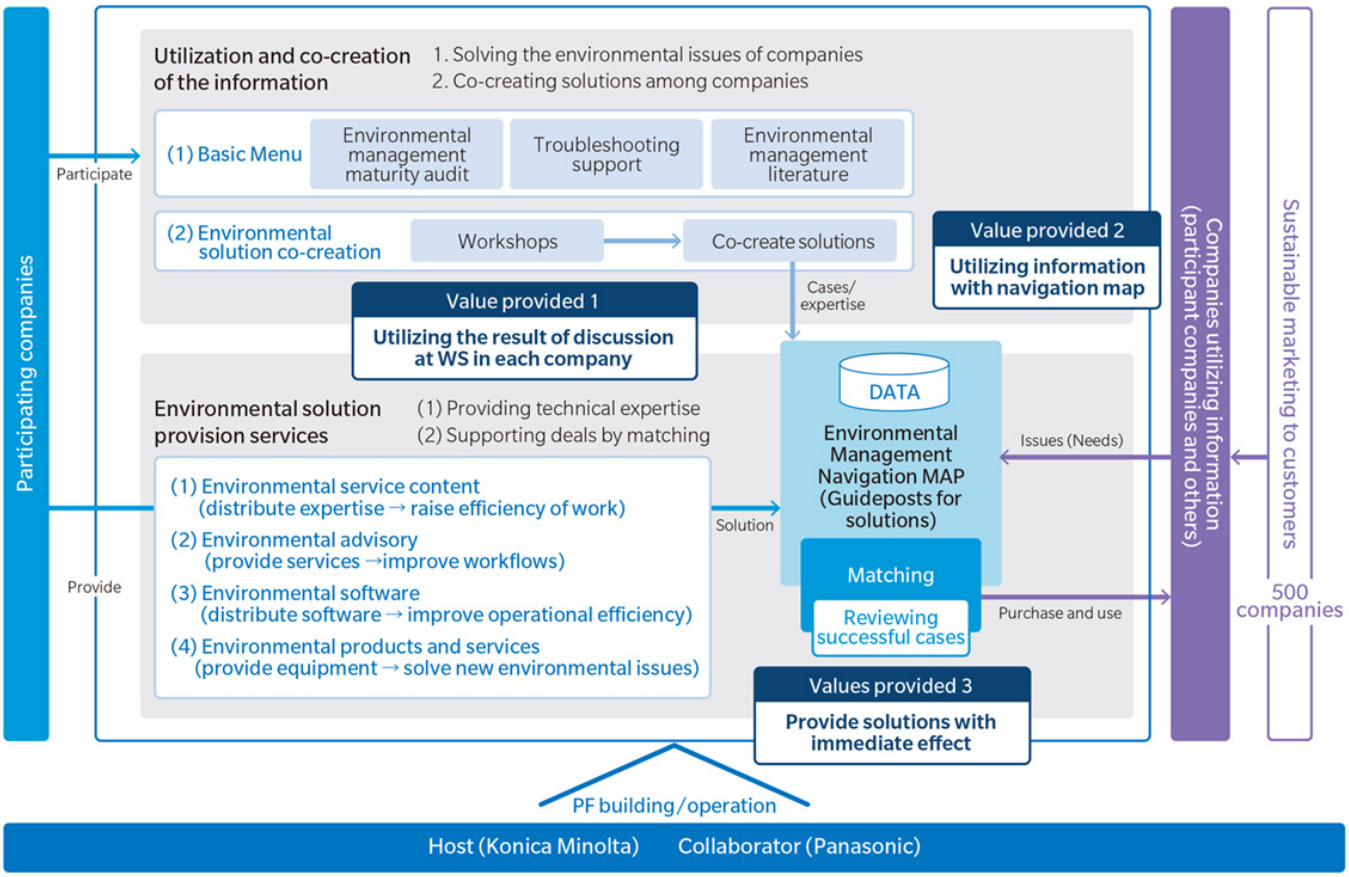
By helping suppliers and customers reduce CO_2, such as reforming customers' operating processes by introducing the Company's on-demand print system, Konica Minolta can increase its contributions to CO_2 reductions to 750,000 tons. These initiatives will enable the Company to bring its contributions to CO_2 reductions to three-fourths of its own CO_2 emissions.

Carbon Minus by 2030



Collaborating with more companies through DX and making bold reductions in CO_2

Konica Minolta aims to collaborate with more companies using digital technology and achieve its challenging target of realizing Carbon Minus in 2030.
One of the key initiatives for this is DX Green Supplier Activities. Up until this point, Konica Minolta's environment and energy experts have visited customers and helped them with energy conservation diagnoses, but the Company has now developed a system that enables these diagnoses to be done automatically. After trial and error at several companies, the Company introduced the system on a full scale from fiscal 2020. By using a digital system, diagnoses can be done remotely. Compared to the previous approach of visiting in person, the Company expects to conserve even more energy with efficiency that is several times greater.
Another important initiative is the Environment Digital Platform, launched as an eco system to reduce environmental impact. In June 2020, 16 companies began activities, and the number of participating companies increased to 44 (as of the end of July 2021). The value provided by this platform can be roughly divided into three categories. First, participating companies hold discussions and use the information gathered at workshops in their environmental management. Second, the Navigation MAP, which compiles information that helps to improve environmental management, can be used to search for information when necessary. Third, when a solution with immediate efficacy is needed, companies are matched with a solution company that has the environmental technology and expertise.
Konica Minolta aims to raise efficiency by bringing together the wisdom of companies in different industries and using this information, while accelerating the resolution of environmental issues through an affiliation between companies, promoting co-creation and the development of innovations, and helping to resolve environmental issues on a global scale.
We are determined to achieve sustainable corporate growth by delivering on our three-year medium-term business plan. We will do this by pursuing collaboration with many different companies in order to bring about drastic reductions of environmental impact in society as well as drive our own growth.

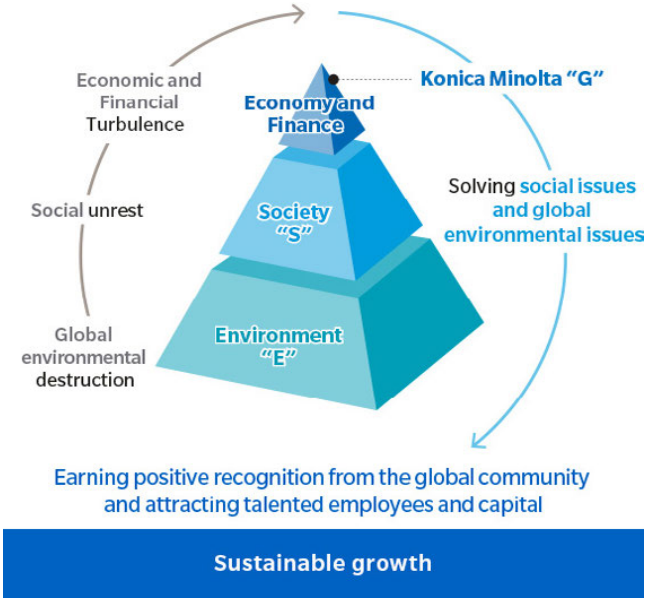


August 2021
Takenori Takahashi
Corporate Vice President
General Manager, Corporate Sustainability Operations
Konica Minolta, Inc.

Basic Approach and Systems for Sustainability Management

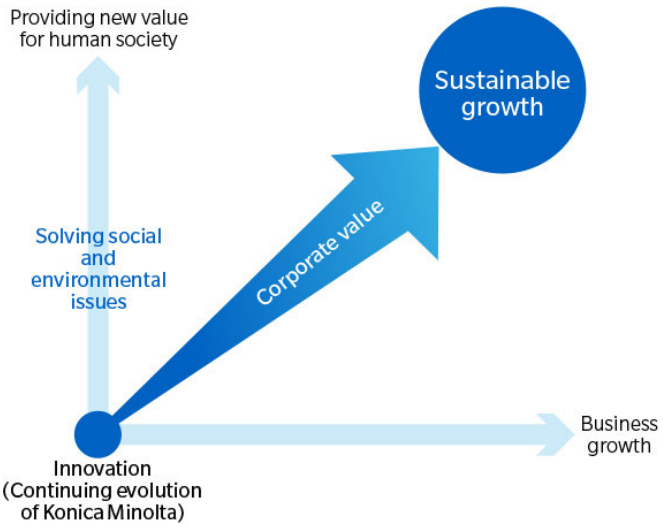
Basic Approach: Grow the Business by Providing New Value That Helps Build a Sustainable Society

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.
Konica Minolta's management vision is "Imaging to the People." It states the company’s determination to be a robust, innovative company, continually evolving and contributing to the sustainable growth of society and individuals. Konica Minolta will continue to take on the challenge of innovation — and co-innovation with customers — that can promote 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
- Konica Minolta Group Charter of Corporate Behavior (PDF:325KB, in ten languages)
- Guidance for Charter of Corporate Behavior

Respect for International Best Practices

The Konica Minolta Group Guidance for the Charter of Corporate Behavior clearly states that the Group will respect and follow 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 and Implementation Guidance for Charter of Corporate Behavior.

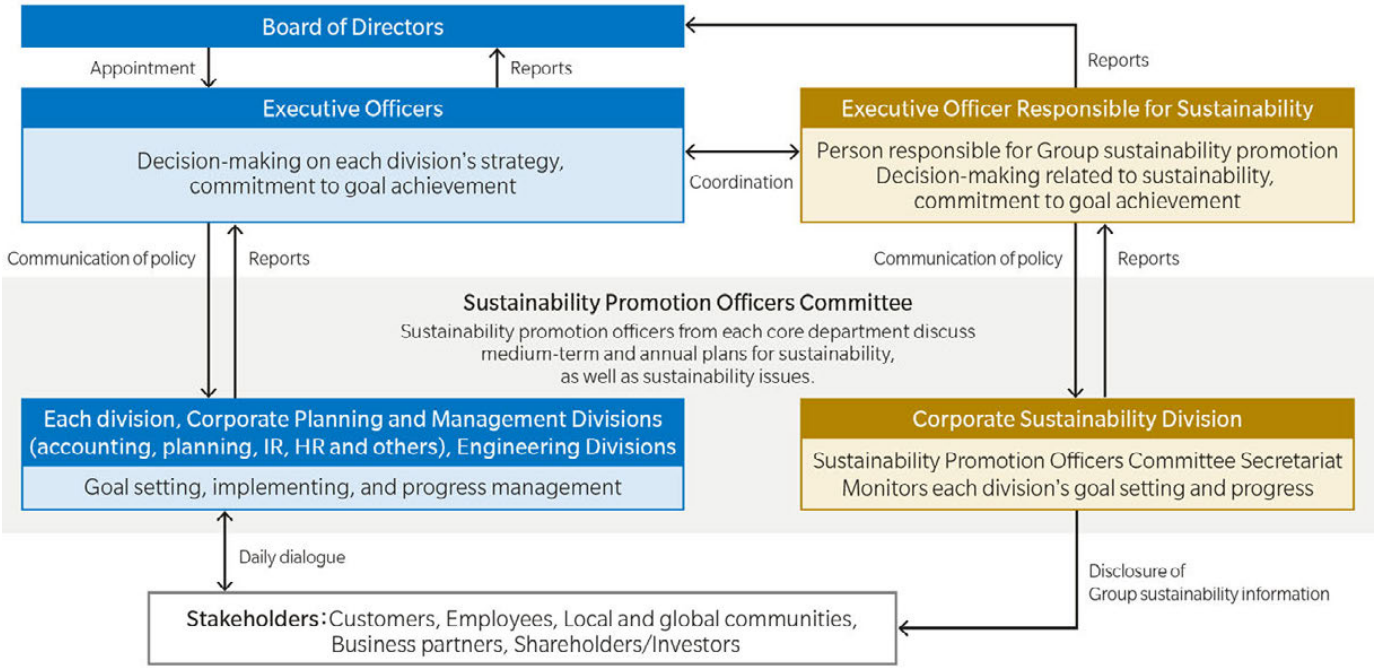
- Japan Business Federation (Nippon Keidanren) Charter of Corporate Behavior
- Outline of the Implementation Guidance for Charter of Corporate Behavior

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)

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 the effectiveness of the company's sustainability management. The actual sustainability management activities for the entire Group are executed by the Group Executive for Corporate Sustainability, under the President. The Group Executive for Corporate Sustainability creates a medium-term plan for sustainability, which is approved by the Board of Directors as a management plan for the entire Group. The Group Executive for Corporate Sustainability then reports monthly to the President and the Audit Committee established in the Board of Directors on progress made on and issues in sustainability management.
The same Group Executive also reports annually on sustainability progress under the medium-term management plan DX2022 (FY2020-FY2022) during Board of Directors meetings, and obtains advice and opinions.
The company established a Group Sustainability Promotion Committee as an organization that promotes the Group's medium-term sustainability plan. The Corporate Sustainability Division serves as the secretariat of the Committee, whose members are persons responsible for sustainability promotion appointed by the heads of the business divisions, corporate planning and management divisions (planning, IR, HR and others), and R&D divisions. The Committee discusses the medium-term sustainability plan and the annual plan, checks the quarterly progress, and reviews the Group's sustainability 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.



Basic Approach and Systems for Sustainability Management

Konica Minolta Group Charter of Corporate Behavior

Corporations, in addition to being economic entities engaged in the pursuit of profit through fair competition, should be beneficial to society at large. For this reason, Konica Minolta Group shall behave in a socially responsible manner and shall have all of its directors, officers, and employees clearly acknowledge the spirit of this Charter of Corporate Behavior.

Senior management shall recognize that the fulfillment of the spirit of this Charter is its own role and responsibility, and shall take the initiative to ensure that all directors, officers, and employees fully understand the Charter. In addition, the management shall constantly pay attention to the opinions of internal and external parties, and shall promote the implementation of effective systems to secure ethical corporate behavior.

1. Beneficial and Safe Products

We shall strive to earn the confidence of consumers and clients through the development and provision of socially beneficial products and services with the utmost consideration for safety.

2. Fair and Transparent Corporate Activities

We shall, in the pursuit of fair and transparent corporate activities, comply with laws and social regulations and act in accordance with international rules and the articles of incorporation.

3. Communications with Society and Information Disclosure

We shall communicate with society at large and disclose corporate information fairly and adequately.

4. Environmental Protection

We shall acknowledge the seriousness of global environmental issues, and shall act voluntarily and affirmatively to protect the environment.

5. Contribution to Society

We shall, with a global perspective, affirmatively make contributions to society while respecting local customs and cultures.

6. Respect for Employees

We shall endeavor to make the lives of employees comfortable and fulfilling, provide a safe work environment, and respect each employee's personality and individuality.

7. Responsible Actions

In the event of a violation of the principles of this Charter, in order to solve the problem, senior management shall investigate the cause of the violation and develop reforms to prevent its recurrence in accordance with corporate compliance procedures. Prompt public disclosure of precise information and an explanation regarding the violation shall be made, and responsibility for the violation shall be clarified. Strict and fair disciplinary action shall be taken, including with respect to senior management where necessary.

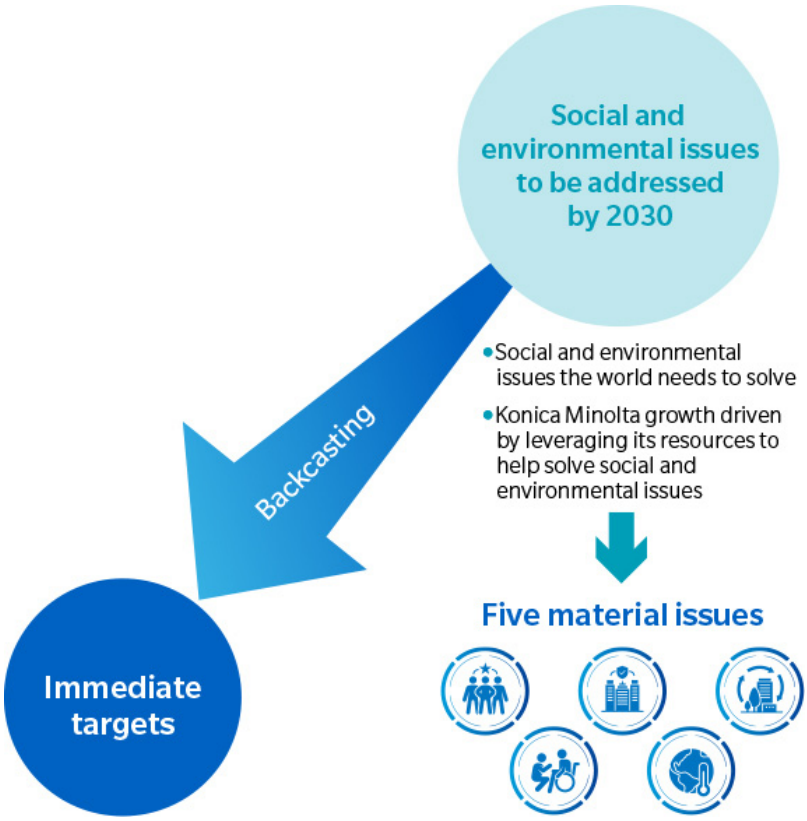
Established on October 1, 2003

The Konica Minolta Group is an economic entity engaged in the pursuit of profit through fair competition that seeks to be of benefit to society at large. As such, the Group complies with laws and social regulations and acts in accordance with international rules in pursuit of fair and transparent corporate activities.
“Fair and Transparent Corporate Activities” include activities other than any illegal or unfair (fraudulent) activities such as corruption, antitrust violations, illegal political contributions, or illegal charitable contributions and sponsorships.

Sustainability Strategy

Five New Material Issues to Be Solved Through Digital Transformation (DX)

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: (1) improving fulfillment in work and corporate dynamism; (2) supporting healthy, high-quality living; (3) ensuring social safety and security; (4) addressing climate change; and (5) using limited resources effectively. For each of these issues, vision were also established, thereby clarifying Konica Minolta's medium and long-term directions for value creation.

These five material issues are linked to Konica Minolta's business growth strategy and are now the cornerstones for action in each business area. In alignment with the value creation process of each business unit, Konica Minolta will implement initiatives for both business growth and sustainability to create value for customers and the broader society.

Vision for 2030 and SDGs Related to Each Material Issue

Material issue	Vision for 2030	Related SDGs
Improving fulfillment in work and corporate dynamism	Increase labor productivity for corporate clients, society, and Konica Minolta. Make time for creativity, and promote workplaces where all individuals can thrive.	
Supporting healthy, high-quality living	Promote health and high quality of life at corporate clients, in society, and Konica Minolta. Help individuals lead fulfilling lives.	
Ensuring social safety and security	Enhance safety and security in the workplaces of corporate clients and in society. Minimize risks posed by Konica Minolta products and services.	
Addressing climate change	Reduce CO_2 emissions by Konica Minolta. Enhance CO_2 emissions reduction at corporate clients and suppliers, and reduce the carbon footprint of society.	
Using limited resources effectively	Promote the effective use of resources at Konica Minolta, while also helping corporate clients and suppliers to achieve effective use.	

Click below for details on the material issue identification process.

- Material Issue Evaluation and Identification Process

Medium-Term Sustainability Plan 2022

As the first step toward achieving its long-term vision, Konica Minolta established the medium-term business plan "DX2022" in 2020. The DX2022 plan aims to "leap to highly profitable businesses through DX," and “evolve into a company clearly committed to solving social issues" by 2022. Under the plan, key performance indicators have been set to measure the creation of social and environmental value as well as economic value for each of the five material issues. By working to solve social and environmental issues, Konica Minolta can also foster its own growth.

Helping to Solve Social and Environmental Issues by Advancing Konica Minolta's Imaging IoT Technology and Combining It with Digital Technology

Today's increasingly urgent social and environmental issues can only be solved by innovation. By combining imaging IoT and digital technologies to "make the invisible visible," Konica Minolta will work to transform the workflows used in the workplace and contribute to society by making people's lives even more fulfilling.

Improving fulfillment in work and corporate dynamism

As work styles continue to diversify, we are providing solutions that increase productivity and make creativity-inspiring work styles possible in diverse locations — all the while supporting the human quest for purpose in life, improving fulfillment in work, and fostering corporate dynamism.

Supporting healthy, high-quality living

Konica Minolta is enhancing the diagnostic function of clinics and other neighborhood primary care settings by providing diagnostic imaging analysis technology that uses AI, and by supporting diagnosis through a network of specialists. In addition, the company is helping to make the workflow at nursing care facilities visible using image analysis and AI to reduce the burden on caregivers. By making it possible to provide more finely tuned nursing care services, Konica Minolta is also helping seniors to remain independent.

Ensuring social safety and security

Konica Minolta is providing solutions to enable non-contact and remote monitoring and inspection at factories and plants. By forecasting and predicting trouble or danger in ways that surpass the visual capabilities of frontline workers, the company aims to prevent accidents and ensure the safety and security of factories and surrounding communities.

Addressing climate change

Konica Minolta helps corporate clients in the commercial printing industry streamline their operations and reduce energy consumption. The company is providing solutions for transforming their workflow while enhancing their productivity, in addition to reducing its own CO_2 emissions.

Using limited resources effectively

Konica Minolta is contributing to reduced resource consumption by helping corporate clients in the commercial printing industry to shift to on-demand printing. This will eliminate the need for printing plates used in traditional offset printing and reduce customer process inventory.

Driving Drastic CO_2 Emissions Reduction with DX, to Achieve Carbon Minus by 2030 Instead of 2050

With the implementation of the new long-term vision and the DX2022 medium-term business strategy, Konica Minolta has decided to bring forward its goal to achieve Carbon Minus status to 2030. Utilizing digital transformation (DX) technologies, Konica Minolta will promote collaboration with even more corporate clients and business partners, taking on the challenge of broad-scope reduction in environmental impact.
In response to the material issues of addressing climate change and using limited resources effectively, Konica Minolta will help transform the socially conventional business model of mass production and disposal by facilitating the adoption of on-demand production, work style reform, and edge computing. It will foster the transition to a fully paperless world while helping to minimize energy use in the digital society.
One example of this is the digitization of its Green Supplier Activities, which provide business partners with Konica Minolta environmental expertise. Until recently, the company's specialists visited the factories of business partners to perform energy-saving diagnoses. By now, by digitizing and automating its diagnostic expertise, the company has developed a system that allows business partners to perform energy-saving diagnosis and implement measures on their own. Konica Minolta anticipates that this will dramatically expand the scope of its activities and further accelerate environmental impact and cost reduction.
Another key initiative is the company's Environmental Digital Platform, launched in June 2020. This system helps to improve the efficiency of environmental management by allowing Konica Minolta and each participating company to share their knowledge and expertise in order to co-create new value. The platform has a place for participants to co-create solutions and a place to share and utilize proven solutions. Through these two digital spaces, Konica Minolta aims to help solve environmental issues on a global scale. The goal is to accelerate the resolution of environmental challenges through collaboration between companies, and to promote innovation through co-creation.

Sustainability Strategy

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 Sustainable 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

The Konica Minolta Group Executive for Corporate Sustainability, who chairs the Group Sustainability Promotion 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 annually, which guarantees the validity of the issues selected and the corresponding plan.

Sustainability Strategy

Sustainability Targets and Results

Konica Minolta has set indicators in line with its material issues based on the medium-term management plan, and uses them to manage progress.

Initiatives in the Medium-term Sustainability Plan 2022 (FY2020-FY2022)

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.

Under the Medium-term Management Plan DX2022 (FY2020-FY2022), a Medium-term Sustainability Plan 2022 was established, and targets and action plans to create social and environmental value and economic value in line with these five new material issues were also formulated. Konica Minolta regularly reports on the sustainability targets addressed during the Medium-term Management Plan's duration and the progress of these activities.

Click image to enlarge

List of Targets and Results

Sustainability Targets and Results during the Period of the Medium-term Management Plan DX2022 (FY2020 – FY2022)

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 Results	FY2020 Targets	FY2021 Targets	FY2022 Targets	FY2020 Target Achievement Status
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 (%) *1	70	70	100	100	○
		Number of DX leaders*2 trained (people)	–	–	27	–	–
		Employee engagement score	GES*3 designing	GES designing	GES implementation Problem identification and goal setting	Improving engagement score (Compared to FY2021)	○
		Percentage of management positions held by women (%) *4	7.2	-	8	8% or more	–
		Percentage of women among new graduate hires (%) *4	23	30% or more	30% or more	30% or more	△

*1 Percentage of employees assigned to strategic leadership positions

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

*3 GES (Global Employee Survey)

*4 Target scope: Konica Minolta, Inc.

Initiatives in the Medium-term Management Plan SHINKA2019 (FY2017-FY2019)

Under the Medium-term Management Plan SHINKA2019 (FY2017-FY2019), sustainability targets and action plans in line with materiality were set and activities pursued. The company regularly reports on the sustainability targets and the results of these activities during the three-year term of this medium-term plan.

Click image to enlarge

Sustainability Targets and Results for the Period of Medium Term Business Plan "SHINKA 2019" (FY2017-FY2019)

Targets and Results Regarding Environmental Impact

100% or above : ○ 80% of above, less than 100% : △ Less than 80% : ×

Green Products (planning and development)

Medium-Term Environmental Plan 2019	Fiscal 2017 Results		Fiscal 2018 Results		Fiscal 2019 Results	
(1) Creation of Sustainable Green Products (SGPs) sought by customers and society						
Business value						
Sales Sustainable Green Products sales:770 billion yen (sales ratio: 70%) Cost reductions Resource-saving cost reduction	Sales Sustainable Green Products sales:657.6 billion yen (sales ratio: 64%) Cost reductions Resource-saving cost reduction	○	Sales Sustainable Green Products sales:778.5 billion yen (sales ratio: 74%) Cost reductions Resource-saving cost reduction	○	Sales Sustainable Green Products sales:733.1 billion yen (sales ratio: 74%) Cost reductions Resource-saving cost reduction	△
Environmental value						
Preventing global warming CO_2 emissions reduction during product usage: 17.2 thousand tons CO_2 emissions reduction in the procurement stage: 45.9 thousand tons Supporting a recycling-oriented society Effective resource utilization: 11.3 thousand tons Reducing chemical substance risks Control emissions + Social issue solutions based on SDGs	Preventing global warming CO_2 emissions reduction during product usage: 10.9 thousand tons CO_2 emissions reduction in the procurement stage: 37.1 thousand tons Supporting a recycling-oriented society Effective resource utilization: 10.3 thousand tons	○	Preventing global warming CO_2 emissions reduction during product usage: 15.0 thousand tons CO_2 emissions reduction in the procurement stage: 41.8 thousand tons Supporting a recycling-oriented society Effective resource utilization: 12.6 thousand tons	○	Preventing global warming CO_2 emissions reduction during product usage: 14.8 thousand tons CO_2 emissions reduction in the procurement stage: 39.2 thousand tons Supporting a recycling-oriented society Effective resource utilization: 12.4 thousand tons	△
(2) Complying with government procurement standards and environmental label requirements						
Business value						

List of Targets and Results

Sustainability Targets and Results during the Period of the Medium-term Management Plan DX2022 (FY2020 – FY2022)

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 Results	FY2020 Targets	FY2021 Targets	FY2022 Targets	FY2020 Target Achievement Status
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 (%) *1		70	70	100	100	○
		Number of DX leaders*2 trained (people)		—	—	27	—	—
		Employee engagement score		GES*3 designing	GES designing	GES implementation Problem identification and goal setting	Improving engagement score (Compared to FY2021)	○
		Percentage of management positions held by women (%) *4		7.2	—	8	8% or more	—
		Percentage of women among new graduate hires (%) *4		23	30% or more	30% or more	30% or more	△

*1 Percentage of employees assigned to strategic leadership positions
*2 DX leader: Leaders who can meet customer needs with digital solutions
*3 GES (Global Employee Survey)
*4 Target scope: Konica Minolta, Inc.

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 Results	FY2020 Targets	FY2021 Targets	FY2022 Targets	FY2020 Target Achievement Status
Promote health and high quality of life at corporate clients								
Building safe and comfortable workplaces where employees feel motivated*1	Improve organizational health	Social and environmental value	Rate of reduction in Level 4 workplaces (%) *2	38	15	30	50	○
			Percentage moving to higher level of organizational health (%) *3	–	–	5	10	—
	Employee health *4		Number of employees who are at high risk physically (employees with the highest health risks)	24% increase	4% decrease	8% decrease	12% decrease	×
			Number of leave-of-absence days taken due to mental health problems	13% increase	3% decrease	7% decrease	13% decrease	×

*1. Target scope: Konica Minolta, Inc.
*2 The rate of reduction from fiscal 2019 levels in the number of Level 4 workplaces, which have the highest level of stress (workplaces deemed to have the highest level of stress based on the results of a four-level stress check)
*3 The rate of year-on-year change in the number of workplaces whose results in the organizational health survey improved from less than 3.5 to 3.5 or higher (upper level) *4 Rate of change from fiscal 2019 results

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 Results	FY2020 Targets	FY2021 Targets	FY2022 Targets	FY2020 Target Achievement Status
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	○
		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	○
		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	○
		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 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 product-security incidents that cause serious and significant harm to the product user's business

Addressing Climate Change

Vision for 2030: Reduce CO_2 emissions by Konica Minolta. Enhance CO_2 emissions reduction at corporate clients and suppliers, and reduce the carbon footprint of society.

Themes		Indicators		FY2020 Results	FY2020 Targets	FY2021 Targets	FY2022 Targets	FY2030 Targets	FY2050 Targets	FY2020 Target Achievement Status
Reducing Energy Usage and CO_2 Emissions by Transforming Customer Processes		Social and environmental value	Amount of Carbon Minus contributions*1 (thousand tons)	565	590	700	740			△
		Economic value	Solution sales (billion yen)	51	56	66	76			△
Energy Usage and CO_2 Emissions Reduction Related to Konica Minolta Sites, Business Partners, Products and Services	CO_2 emissions over the product lifecycle*2		Reduction of CO_2 emissions (thousand tons)	821	—	—	970	800	400	—
			Reduction rate (%) over FY2005	60	—	—	53	60	80	—
	Reduction of environmental impact of Konica Minolta production sites*3	Social and environmental value	Reduction of CO_2 emissions (thousand tons)	4	4	10	18			○
		Economic value	Monetary equivalent of energy reduction (million yen)	79	89	210	430			△
		Social and environmental value	Amount of CO_2 reduced through procurement of renewable energy (thousand tons)	6	6	12	20			○
			Percentage of renewable energy use (%)	6.5	—	—	10	30	100	—
	Reduction of environmental impact through the use of Konica Minolta products and services	Social and environmental value	Reduction of CO_2 emissions (thousand tons)	24	24	26	26			○
		Economic value	Sales from sustainable solutions (billion yen)	676	670	690	700			○
	Reduction of environmental impact at suppliers using DX*3	Social and environmental value	Amount of Carbon Minus contributions*1 (thousand tons)	1.5	1.3	3.1	4.8			○
		Economic value	Monetary equivalent of energy reduction (million yen)	22	21	44	68			○

*1 Carbon Minus contributions: Volume of CO_2 emissions reduced at customers, business partners and the broader society

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

*3 Reduction amount for each fiscal year due to the measures implemented during medium-term plan

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 Results	FY2020 Targets	FY2021 Targets	FY2022 Targets	FY2020 Target Achievement Status
Effective Use of Resources by Transforming Customer Business Processes		Social and environmental value	Reduction of waste discharge of customers (thousand tons)	325	330	360	370	△
		Economic value	Solution sales (billion yen)	53	58	71	83	△
Effective Use of Resources Relating to Konica Minolta Sites, Suppliers, Products and Services	Reduction of environmental impact of Konica Minolta production sites*	Social and environmental value	Reduction of waste discharge (thousand tons)	0.6	0.5	1.0	1.2	○
		Economic value	Monetary equivalent of waste reductions (million yen)	130	110	200	260	○
	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	14	14	○
		Economic value	Sustainable solution sales (billion yen)	676	670	690	700	○

*Reduction amount for each fiscal year due to the measures implemented during medium-term plan

Cross-cutting Activities Supporting Material Issues

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

Themes		Indicators		FY2020 Results	FY2020 Targets	FY2021 Targets	FY2022 Targets	FY2020 Target Achievement Status
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	○

Response to social trends in regards to supply chain

Themes		Indicators		FY2020 Results	FY2020 Targets	FY2021 Targets	FY2022 Targets	FY2020 Target Achievement Status
CSR procurement	Social and environmental value	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)			—
		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)			○
		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)			○
		Number of final product production sites receiving RBA certification (Silver or higher)		0	0	3	4	○
	Economic value	Loss of sales opportunities		0	0	0	0	○
Practicing responsible minerals procurement	Social and environmental value	Percentage of suppliers returning conflict mineral surveys (%)		98	Maintained at 95% or higher in every year			○
		Percentage responding to requests for surveys from customers (%)		100% response	Maintained at 100% or higher in every year			○

Occupational Safety and Health

Themes		Indicators		FY2020 Results	FY2020 Targets	FY2021 Targets	FY2022 Targets	FY2030 Targets	FY2020 Target Achievement Status
Preventing occupational accidents	Social and environmental value	Serious accidents*1		0	0	0	0	—	○
	Economic value	Major business losses (JPY)		0	0	0	0	—	○
	Social and environmental value	Rate of lost-worktime injuries*2 (%)		0.17	0.21	0.19	0.15	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

Sustainability Targets and Results for the Period of Medium Term Business Plan "SHINKA 2019" (FY2017-FY2019)

Targets and Results Regarding Environmental Impact

100% or above：○　80% of above, less than 100%：△　Less than 80%：×

Green Products (planning and development)

Medium-Term Environmental Plan 2019	Fiscal 2017 Results		Fiscal 2018 Results		Fiscal 2019 Results	
(1) Creation of Sustainable Green Products (SGPs) sought by customers and society						
Business value						
Sales Sustainable Green Products sales:770 billion yen (sales ratio: 70%) **Cost reductions** Resource-saving cost reduction	**Sales** Sustainable Green Products sales:657.6 billion yen (sales ratio: 64%) **Cost reductions** Resource-saving cost reduction	○	**Sales** Sustainable Green Products sales:778.5 billion yen (sales ratio: 74%) **Cost reductions** Resource-saving cost reduction	○	**Sales** Sustainable Green Products sales:733.1 billion yen (sales ratio: 74%) **Cost reductions** Resource-saving cost reduction	△
Environmental value						
Preventing global warming CO_2 emissions reduction during product usage: 17.2 thousand tons CO_2 emissions reduction in the procurement stage: 45.9 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 11.3 thousand tons **Reducing chemical substance risks** Control emissions **+ Social issue solutions based on SDGs**	**Preventing global warming** CO_2 emissions reduction during product usage: 10.9 thousand tons CO_2 emissions reduction in the procurement stage: 37.1 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 10.3 thousand tons	○	**Preventing global warming** CO_2 emissions reduction during product usage: 15.0 thousand tons CO_2 emissions reduction in the procurement stage: 41.8 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 12.6 thousand tons	○	**Preventing global warming** CO_2 emissions reduction during product usage: 14.8 thousand tons CO_2 emissions reduction in the procurement stage: 39.2 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 12.4 thousand tons	△
(2) Complying with government procurement standards and environmental label requirements						
Business value						
Sales Eliminate lost sales opportunities	**Sales** Eliminated lost sales opportunities	○	**Sales** Eliminated lost sales opportunities	○	**Sales** Eliminated lost sales opportunities	○
Environmental value						
Environment overall Reduce environmental impact through compliance with standards	**Environment overall** Reduced environmental impact through compliance with standards	○	**Environment overall** Reduced environmental impact through compliance with standards	○	**Environment overall** Reduced environmental impact through compliance with standards	○
(3) Dependably complying with product-related laws and regulations						
Business value						
Risk avoidance Eliminate effect on sales	**Risk avoidance** Eliminated effect on sales	○	**Risk avoidance** Eliminated effect on sales	○	**Risk avoidance** Eliminated effect on sales	○
Environmental value						
Reducing chemical substance risks Reduce hazardous chemical substance risk by conforming to laws and regulations	**Reducing chemical substance risks** Reduced hazardous chemical substance risk by conforming to laws and regulations	○	**Reducing chemical substance risks** Reduced hazardous chemical substance risk by conforming to laws and regulations	○	**Reducing chemical substance risks** Reduced hazardous chemical substance risk by conforming to laws and regulations	○

Green Factory (procurement and production)

Medium-Term Environmental Plan 2019	Fiscal 2017 Results		Fiscal 2018 Results		Fiscal 2019 Results	
(1) Excellent Green Factory activities						
Business value						
Cost reductions Energy and resource cost reduction	**Cost reductions** Energy and resource cost reduction	○	**Cost reductions** Energy and resource cost reduction	○	**Cost reductions** Energy and resource cost reduction	○
Environmental value						
Preventing global warming CO_2 emissions reduction in production activities: 19 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 2.8 thousand tons **Restoring and preserving biodiversity** Water consumption reduction: 220 thousand m^3	**Preventing global warming** CO_2 emissions reduction in production activities: 25.6 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 4.0 thousand tons **Restoring and preserving biodiversity** Water consumption reduction: 259 thousand m^3	○	**Preventing global warming** CO_2 emissions reduction in production activities: 26.5 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 7.1 thousand tons **Restoring and preserving biodiversity** Water consumption reduction: 274 thousand m^3	○	**Preventing global warming** CO_2 emissions reduction in production activities: 30.1 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 6.7 thousand tons **Restoring and preserving biodiversity** Water consumption reduction: 409 thousand m3	○

(2) Expansion of Green Supplier activities							
Business value							
Cost reductions Supplier cost reductions **Sales** Measures and expertise database creation, and knowledge commercialization	**Cost reductions** Supplier cost reductions	○	**Cost reductions** Supplier cost reductions	○	**Cost reductions** Supplier cost reductions **Sales** Measures and expertise database creation, and knowledge commercialization	○	
Environmental value							
Preventing global warming CO_2 emissions reduction at suppliers: 5 thousand tons **Supporting a recycling-oriented society** Effective resource utilization at suppliers: 0.25 thousand tons **+ Social issue solutions based on SDGs**	**Preventing global warming** CO_2 emissions reduction at suppliers: 3.4 thousand tons **Supporting a recycling-oriented society** Effective resource utilization at suppliers: 0.26 thousand tons	○	**Preventing global warming** CO_2 emissions reduction at suppliers: 9.1 thousand tons **Supporting a recycling-oriented society** Effective resource utilization at suppliers: 0.63 thousand tons	○	**Preventing global warming** CO_2 emissions reduction at suppliers: 14.7 thousand tons **Supporting a recycling-oriented society** Effective resource utilization at suppliers: 1.29 thousand tons	○	
(3) Expanded adoption of renewable energy							
Business value							
Sales Eliminate lost sales opportunities	**Sales** Eliminated lost sales opportunities	○	**Sales** Eliminated lost sales opportunities	○	**Sales** Eliminated lost sales opportunities	○	
Environmental value							
Preventing global warming Renewable energy ratio: 1% **+ Social issue solutions based on SDGs**	**Preventing global warming** Renewable energy ratio: 0.4%	○	**Preventing global warming** Renewable energy ratio: 1.5%	○	**Preventing global warming** Renewable energy ratio: 5.3%	○	
(4) Supply chain risk response							
Business value							
Risk avoidance Eliminate environmental impact from procurement, production, and sales	**Risk avoidance** Eliminated environmental impact from procurement, production, and sales	○	**Risk avoidance** Eliminated environmental impact from procurement, production, and sales	○	**Risk avoidance** Eliminated environmental impact from procurement, production, and sales	○	
Environmental value							
Environment overall Environmental impact reduction through standards compliance	**Environment overall** Environmental impact reduction through standards compliance	○	**Environment overall** Environmental impact reduction through standards compliance	○	**Environment overall** Environmental impact reduction through standards compliance	○	

Green Marketing (distribution, sales and service, and collection and recycling)

Medium-Term Environmental Plan 2019	Fiscal 2017 Results		Fiscal 2018 Results		Fiscal 2019 Results	
(1) Strengthening relationships with customers globally						
Business value						
Sales Acquire sales opportunities	**Sales** Acquired sales opportunities	○	**Sales** Acquired sales opportunities	○	**Sales** Acquired sales opportunities	○
Environmental value						
Environment overall Reduce customers' environmental impact **+ Social issue solutions based on SDGs**	**Environment overall** Reduced customers' environmental impact	○	**Environment overall** Reduced customers' environmental impact	○	**Environment overall** Reduced customers' environmental impact	○
(2) Optimizing the supply chain and linking environmental initiatives						
Business value						
Cost reductions Reduce cost of distribution and packaging	**Cost reductions** Reduced cost of distribution and packaging	○	**Cost reductions** Reduced cost of distribution and packaging	○	**Cost reductions** Reduced cost of distribution and packaging	○
Environmental value						
Preventing global warming CO_2 emissions reduction in distribution: 0.3 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 0.04 thousand tons	**Preventing global warming** CO_2 emissions reduction in distribution: 0.5 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 0.007 thousand tons	○	**Preventing global warming** CO2 emissions reduction in distribution: 0.6 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 0.03 thousand tons	○	**Preventing global warming** CO_2 emissions reduction in distribution: 0.3 thousand tons **Supporting a recycling-oriented society** Effective resource utilization: 0.42 thousand tons	○
(3) Complying with laws on collection and recycling of used products						
Business value						
Risk avoidance Eliminate effect on sales	**Risk avoidance** Eliminated effect on sales	○	**Risk avoidance** Eliminated effect on sales	○	**Risk avoidance** Eliminated effect on sales	○
Environmental value						
Supporting a recycling-oriented society Resource recycling through collection and recycling of used products	**Supporting a recycling-oriented society** Resource recycling through collection and recycling of used products	○	**Supporting a recycling-oriented society** Resource recycling through collection and recycling of used products	○	**Supporting a recycling-oriented society** Resource recycling through collection and recycling of used products	○

Targets and Results Regarding Social Impact

Social Innovation

Key Action	Fiscal 2017		Fiscal 2018		Fiscal 2019	
	Targets	Results	Targets	Results	Targets	Results
Business development that contributes solutions to social issues	・Promote new business development through core technologies and open innovation ・Promote business development at the company's five Business Innovation Centers (BICs) ・Establish KPIs for the social outcomes of new businesses	・Four BIC projects brought a product to market ・BIC Japan released "Kunkun body" body odor detector, a product that makes body odor visible ・Conducted surveys of nursing care staff about their satisfaction with Care Support Solutions®	・Promote new business development through core technologies and open innovation ・Promote business development at the company's five Business Innovation Centers (BICs) ・Continue to survey nursing care staff about satisfaction with Care Support Solutions® and implement improvements for any issues identified	・Began marketing of WoundAide, an automatic wound measurement system for medical institutions in Singapore (BIC Asia Pacific) ・Conducted surveys of nursing care staff about their satisfaction with Care Support Solutions and addressed issues	・Promote new business development through core technologies and open innovation ・Promote business development at the company's five Business Innovation Centers (BICs) ・Increase customer satisfaction with Care Support Solutions by using data to address issues	・Brought to market hybrid multilingual interpretation service, KOTOBAL, which was developed in Japan in October ・Conducted satisfaction survey of existing customers and revamped the entire service to create HitomeQ Care Support, with the addition of consulting based on identified issues

Customer Satisfaction and Product Safety

Key Action	Fiscal 2017		Fiscal 2018		Fiscal 2019	
	Targets	Results	Targets	Results	Targets	Results
Achieving top-tier quality and reliability/Enhancing the security of products and services	・Number of serious product-related accidents*1: 0 ・Risk assessment practices: 12 times/year	・Number of serious product-related accidents*1: 0 ・Risk assessment practices: 12 times/year	・Number of serious product-related accidents*1: 0 ・Number of serious security incidents*2 in the service business area: 0	・Number of serious product-related accidents*1: 0 ・Number of serious security incidents*2 in the service business area: 0	・Number of serious product-related accidents*1: 0 ・Number of serious security incidents*2 in the service business area: 0	・Number of serious product-related accidents*1: 0 ・Number of serious security incidents*2 in the service business area: 0
Creating new quality value	・Continue conducting satisfaction surveys, set targets, and make improvements	・Customer satisfaction surveys conducted according to the characteristics of each business area ・Identified issues for each business area and made improvements	・Continue conducting satisfaction surveys and implement improvements based on the results ・Construct verification processes for customer value creation using design thinking	・Customer satisfaction surveys conducted according to the characteristics of each business area and improvements made on issues ・Built the framework of verification processes for customer value creation	・Continue conducting satisfaction surveys and implement improvements based on the results ・Construct verification processes for customer value creation using design thinking	・Customer satisfaction surveys conducted according to the characteristics of each business area and improvements made on issues ・Constructed and deployed customer value verification processes in the business divisions

*1 **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.
*2 **Serious security incidents** refer to those product-security incidents that cause serious and significant harm to the product user's business.

Responsible Supply Chain

Key Action	Fiscal 2017		Fiscal 2018		Fiscal 2019	
	Targets	Results	Targets	Results	Targets	Results
Promoting CSR in the supply chain	**CSR procurement** ・Request that suppliers carry out CSR activities: 100% implementation ・CSR assessment: Complete assessments of all Group production sites and approximately 120 important suppliers by the end of fiscal 2019 ・CSR audit: Complete audits of two important Group production sites and two important suppliers by the end of fiscal 2019	**CSR procurement** ・Requested that suppliers carry out CSR activities: 100% implementation ・CSR assessment: Completed assessment of three Group production sites and 50 important suppliers ・CSR audit: Completed audit of two important Group production sites and one important supplier	**CSR procurement** ・Request that suppliers carry out CSR activities: 100% implementation ・CSR assessment: Complete assessments of all Group production sites and approximately 120 important suppliers by the end of fiscal 2019 ・CSR audit: Complete audits of two important Group production sites and two important suppliers by the end of fiscal 2019	**CSR procurement** ・Requested that suppliers carry out CSR activities: 100% implementation ・CSR assessment: Completed assessment of 18 Group production sites and 15 important suppliers ・CSR audit: Confirmed improvements in areas indicated in CSR audits at two Group production sites	**CSR procurement** ・Request that suppliers carry out CSR activities: 100% implementation ・CSR assessment: Complete assessments of 60 important suppliers ・CSR audit: Complete an audit of an important supplier	CSR procurement ・Requested that suppliers carry out CSR activities: 100% implementation ・CSR assessment: Completed assessment of 2 Group production sites and 41 important suppliers ・CSR audit: Conducted an audit of one particularly important supplier
	Response to conflict mineral issues ・Supplier response rate to conflict mineral surveys: 95% or higher ・Respond to customers' requests for surveys: 100%	**Response to conflict mineral issues** ・Supplier response rate to conflict mineral surveys: 99% ・Responded to customers' requests for surveys: 100%	**Response to conflict mineral issues** ・Supplier response rate to conflict mineral surveys: 95% or higher ・Respond to customers' requests for surveys: 100%	**Response to conflict mineral issues** ・Supplier response rate to conflict mineral surveys: 98% ・Responded to customers' requests for surveys: 100%	**Response to conflict mineral issues** ・Supplier response rate to conflict mineral surveys: Maintaining 95% or higher ・Respond to customers' requests for surveys: 100%	**Response to conflict mineral issues** ・Supplier response rate to conflict mineral surveys: 95% ・Responded to customers' requests for surveys: 100%

Human Capital

Key Action	Fiscal 2017		Fiscal 2018		Fiscal 2019	
	Targets	Results	Targets	Results	Targets	Results
Work-style reform	・Define actions and work methods required for each business portfolio and implement disruptive innovation in work-style reforms based on business process reforms and use of robotics and AI ・Improve productivity per unit of time, promote collaboration, and promote diversity	・Full-scale implementation of a remote work system ・Allowed employees to take a second job or work concurrently to promote innovation ・Introduced a job return system ・Utilized RPA*3 to enhance the efficiency of 45 operations, saving 4,200 hours	・Prepare operational and workplace environments ・ Reform operational processes ・Make the most of diverse talent ・Expand systems ・Clarify roles and authorities ・Enhance efficiency using RPA*3: Save approximately 19,000 hours	・Used system allowing second job or concurrent working: About 30 people ・Liberalized office dress code ・Introduced a new hourly leave system ・Enhanced efficiency using RPA*3: Saved approximately 19,000 hours	・Prepare operational and workplace environments ・Make the most of diverse human resources ・Enhance efficiency using RPA*3: Save approximately 28,000 hours	・Improving business and workplace environments: Constructed a new building in Takatsuki as a development base for imaging IoT and AI technologies ・Utilizing diverse human resources: Began making management appointments not based on age ・Enhanced efficiency using RPA*3: Saved approximately 31,500 hours
Developing human capital	・Continue implementing human resource development program (Global e-Juku) for global group managers ・Define ideal human resources, required abilities and skills to achieve new medium-term business plan ・Accelerate human capital development for young employees ・Create business producers who create new businesses from the customer's perspective	・Implemented Global e-Juku (34 people from 13 countries participated) ・Expanded educational programs based on a clear picture of the ideal human resources and the necessary skills and abilities ・Launched an overseas training program for young employees in Japan (total of 24 people sent overseas) ・Implemented a program for employees to learn about digital innovation creation through new business proposals	・Accelerate the development of high-potential human resources, and foster global human resources development for executives ・Promote an overseas training program for young employees in Japan ・Develop entrepreneurs who can create new businesses based on customer needs ・Develop human resources who can establish IoT business models	・Implemented Global e-Juku (16 participants) ・Offered overseas training program for young employees in Japan: 31 participants ・Implemented 9th business producers development program (Challenge Gijutsusha Forum (CGF)): 20 participants ・Enhanced internal training program in line with educational system needed to develop data scientists (DS) and KM product owners (KMPO): 254 DSs certified and 168 KMPOs registered	・Expand pool of executive candidates to globally lead transformation into a digital company with insight into implicit challenges and accelerate their development (Global E-Juku, overseas training program for young employees) ・Establish a culture and system for creating organizations full of business athletes who can win out globally (KIZUKI workshops)	・Implemented Global E-Juku: 18 participants (10 from Japan, 8 from outside Japan) ・Offered Global Assignment Program for early career talent in Japan: Total of 98 participants since FY2017 ・Held KIZUKI workshops (16 sessions, total of 326 participants)
Occupational safety and health	・Serious accidents*4: 0 ・Frequency rate of accidents causing absence from work*5: 0.1 or less ・Improve global health and safety management by senior management ・Implement comprehensive risk management to comprehensively reduce equipment, material, work, and work environment risks ・Enhance the safety culture: Top management involvement in safety promotion, workplace safety management, and individual safety awareness improvement	・Serious accidents*4: 0 ・Frequency rate of accidents causing absence from work*5: Japan, 0.22; Overseas, 0.20 ・According to Konica Minolta's original safety management indicator Unsafety Marks,*6 a 20% reduction was achieved over the past three years	・Serious accidents*4: 0 ・Frequency rate of accidents causing absence from work*5 (FY2017 to FY2019): 0.1 or less ・Improve health and safety management capability using Konica Minolta's original indicator Unsafety Marks*6 ・Advance comprehensive risk management that broadly minimizes equipment, materials, operation and work environment risks ・Enhance the safety culture: Top management involvement in safety promotion, workplace safety management, and individual safety awareness improvement	・Serious accidents*4: 1 ・Frequency rate of accidents causing absence from work*5: Japan, 0.25; Overseas, 0.20 ・According to Konica Minolta's original safety management indicator Unsafety Marks,*6 a 20% reduction was maintained for the yearly average for fiscal 2014-2016 ・Provided e-Learning to increase safety awareness to 12,000 people a month (all employees of Konica Minolta, Inc. and employees of Group companies in Japan), with about 90% taking the training	・Serious accidents*4: 0 ・Frequency rate of accidents causing absence from work*5: 0.1 or less ・Improve health and safety management capability using Konica Minolta's original indicator Unsafety Marks*6 ・Advance comprehensive risk management that broadly minimizes equipment, materials, operation and work environment risks ・Enhance the safety culture: Top management involvement in safety promotion, workplace safety management, and individual safety awareness improvement	・Serious accidents*4: 0 ・Frequency rate of accidents causing absence from work*5: Japan, 0.23; Overseas, 0.23 ・According to Konica Minolta's original safety management indicator Unsafety Marks*6, a 27% reduction was achieved compared to the yearly average for fiscal 2014-2016 ・Provided e-Learning to increase safety awareness to 12,000 people a month (all employees of Konica Minolta, Inc. and employees of Group companies in Japan), with about 86% taking the training
Improving employee health	・Curb the number of absences due to illness Number of absences due to illnesses: 38 (as of April 1, 2018) ・Reduce the number of employees with health risks (1) Rate of reduction of people with risk of requiring ongoing hospital treatment for blood pressure, blood sugar, lipids: Reduce by 21.3% from FY2016 (2) Rate of reduction of people with specific health guidance: Reduce by 14.9% from FY2016	・Curbed the number of absences due to illness Number of absences due to illnesses: 26 (as of April 1, 2018) ・Reduced the number of employees with health risks (1) Rate of reduction of people with risk of requiring ongoing hospital visits for blood pressure, blood sugar, lipids: Reduced by 4.3% from FY2016 (2) Rate of reduction of people with specific health guidance: Reduced by 3.3% from FY2016	・Curb the number of absences due to illness (Konica Minolta, Inc.) ・Reduce the number of employees with health risks (Konica Minolta, Inc.) (1) Employees with high physical health risk: Reduce by 4.5% from FY2017 (2) Employees needing specified health guidance (persons needing active support): Reduce by 3% from FY2017	・Curbed the number of absences due to illness (Konica Minolta, Inc.) Number of absences due to illnesses: 28 (as of April 1, 2019) ・Reduced the number of employees with health risks (Konica Minolta, Inc.) (1) Employees with physical health risks: Reduced by 22.3% from FY2017 (2) Employees needing specified health guidance (persons needing active support): Reduced by 3.7% from FY2017	・Curb the number of absences due to illness (Konica Minolta, Inc.) Number of absences due to illnesses: 25 or less (as of April 1, 2020) ・Reduce the number of employees with health risks (Konica Minolta, Inc.) (1) Employees with high physical health risk: Reduce by 5% from fiscal 2018 (2) Employees needing specified health guidance (persons needing active support): Reduce by 3% from FY2018	・Curbed the number of absences due to illness (Konica Minolta, Inc.) Number of absences due to illnesses: 25 (as of April 1, 2020) ・Reduced the number of employees with health risks (Konica Minolta, Inc.) (1) Employees with physical health risks: Reduced by 5.4% from FY2018 (2) Employees needing specified health guidance (persons needing active support): Reduced by 3.5% from FY2018

*3 **RPA** (Robotic Process Automation): Automating routine business processes on a personal computer
*4 **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)
*5 **Frequency rate of accidents causing absence from work** : The number of persons absent from work per one million total actual working hours for current employees
*6 **Unsafety Marks** : Numerical values obtained by assigning points based on the number, type and severity of accidents that occur in a workplace

Diversity

Key Action	Fiscal 2017		Fiscal 2018		Fiscal 2019	
	Targets	Results	Targets	Results	Targets	Results
Supporting women's career advancement	・Foster awareness and a culture supportive of diversity, with a focus on promoting participation by women ・Consider ways of supporting life events affecting both men and women, such as childbirth, child-rearing and care-taking, and consider work styles tailored to these life events ・Appoint female managers: Women hold 5% of all management positions ・Raise the percentage of women among new graduate hires	・Established a Corporate Diversity Office directly under the president ・Held workshops for key personnel groups (top management, general managers, managers, and all women employees) ・Conducted a survey to ascertain the actual situation for employees with home care responsibilities, and distributed information to relieve concerns ・Appointed female managers: Women held 5.5% of all management positions ・Actively recruited women graduates: Percentage of women among new graduate hires: 33%	・Foster awareness and a culture supportive of diversity, with a focus on promoting participation by women ・Consider ways of supporting life events affecting both men and women, such as childbirth, child-rearing and caretaking, and consider work styles tailored to these life events ・Appoint female managers (target for fiscal 2019: Women hold 7% of all management positions) ・Raise the percentage of women among new graduate hires (30% or more)	・Launched Diversity Advocates ・Held workshops for key personnel groups (top management, general managers, managers, and all women employees) ・Held lectures to prepare for and alleviate worries about caregiving ・Women held 6.2% of all management positions (as of April 2019) ・Percentage of women among new graduate hires: 31% (as of April 2019)	・Foster awareness and a culture supportive of diversity, with a focus on promoting participation by women ・Consider ways of supporting life events affecting both men and women, such as childbirth, child-rearing and caretaking, and consider work styles tailored to these life events ・Target for appointing female managers: Women hold 7% of all management positions) ・Raise the percentage of women among new graduate hires (30% or more)	・Held workshops for key personnel (managers and women employees) ・Issued messages from management to support women as an initiative for International Women's Day at overseas sites ・Promoted Diversity Advocates ・Women held 6.9% of all management positions (as of April 2020) ・Percentage of women among new graduate hires: 36% (fiscal 2019)
Utilizing employee experiences gained outside the company and abroad	・Proactively hire and train non-Japanese employees in Japan	・Percentage of non-Japanese nationals among new employees hired by Konica Minolta, Inc.: 14% (April 2018)	・Active recruitment of mid career human resources and personnel from outside of Japan ・Provide opportunities to gain experience and knowledge outside of the company ・Promote exchanges among employees globally and provide venues for innovation creation where diverse employees can inspire and learn from each other	・Percentage of non-Japanese nationals among new employees hired by Konica Minolta, Inc.: 19% (April 2019) ・Percentage of mid-career hires among total recruitment: 53% (Konica Minolta, Inc.)	・Active recruitment of mid career human resources and personnel from outside of Japan ・Provide opportunities to gain experience and knowledge outside of the company ・Promote exchanges among employees globally and provide venues for innovation creation where diverse employees can inspire and learn from each other	・Percentage of non-Japanese nationals among new employees hired by Konica Minolta, Inc.: 10 % (April 2020) ・Percentage of mid-career hires among total recruitment: 40% (Konica Minolta, Inc.) ・Providing opportunities to gain experience and knowledge outside the company: Expanded self-development support system ・Providing an innovation creation space to allow global human resources to interact, inspire, and learn from one another: Launched an initiative to create and accelerate innovation, focused on sales companies in the Europe and Asia Pacific regions

Material Issues

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.
Many jobs will need to be performed using technologies such as robotics and automation. 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 of customer organizations and increasing time for creativity by providing work-style solutions using digital technology
- Improving productivity and employee engagement in the supply chains of customer organizations by providing products and services that transform the workflows of frontline workers
- Eliminating labor shortages and strengthening cyber security by eliminating the gap in IT access faced by small and medium enterprises

■Internal action to create value

- Realizing the full potential of human resources, who are the source of new value, and creating organizations where individuals thrive

Risks

■Affecting Konica Minolta

- Mismatches between employee skills and their work due to rapid changes in systems and environments
- Declines in employee diversity, independence, and ability to innovate due to stagnated efforts to create workplaces that promote diversity

Vision for 2030 and Medium-Term Plan 2022

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	Indicators		FY2020		FY2021	FY2022
			Results	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 assignment of managerial candidates (%) *1	70	70	100	100
		Number of DX leaders*2 trained (people)	-	-	27	-
		Employees engagement score	GES*3 designing	GES designing	GES implementation Problem identification and goal setting	Improving engagement score (Compared to FY2021)
		Percentage of management positions held by women (%) *4	7.2	-	8	8% or more

*1 Percentage of employees assigned to strategic leadership positions

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

*3 GES (Global Employee Survey)

*4 Target scope: Konica Minolta, Inc.

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 Intelligent Connected Workplaces,* on-demand production, imaging IoT, 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.

* Intelligent Connected Workplace: A smart work environment that connects people and information, and where value can be created by anyone, anytime, anywhere

Businesses: Increasing Customer Productivity and Making Time for Creativity

●Improving customer productivity and creativity through work style reform and decision-making support

- Supporting Customers with Digital Transformation — Workplace Hub

●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

●Making time for creativity by automating the inspection process at production sites

- Visual Inspection Business for Automotive Field (news release)

●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 shine

●Systematically develop leaders by selecting young employees early on and strengthening the pipeline of women candidates for director positions

- Developing Human Capital

●Creating a corporate culture in which individuals can shine

- Promoting Reform of Corporate Culture and Communication

●Promoting diversity & inclusion

- Supporting Women's Career Building
- Utilizing Employee Experiences Gained Outside the Company and Abroad
- Supporting the Efforts of Diverse Employees
- Employment of People with Disabilities

Material Issue 1: Improving Fulfillment in Work and Corporate Dynamism

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 after its launch in Europe and the US in fiscal 2018, 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

Material Issue 1: Improving Fulfillment in Work and Corporate Dynamism

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

Related SDGs

Digital Inkjet Press AccurioJet KM-1

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 produces high image quality and excellent color stability comparable to that of conventional offset printing and can handle a wide range of printing papers. The new 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 reduce the environmental impact by minimizing 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.

Digital inkjet printer AccurioJet KM-1

Material Issue 1: Improving Fulfillment in Work and Corporate Dynamism

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

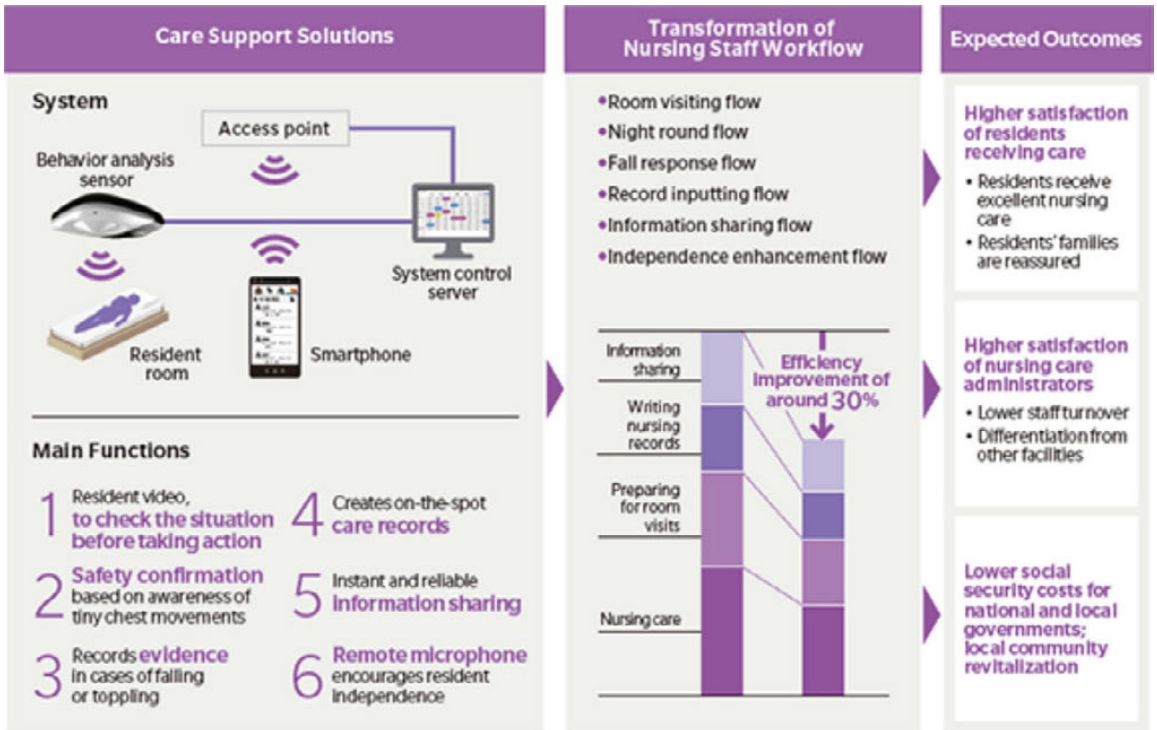
Related SDGs

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. Many nursing care businesses that had hesitated to introduce ICT are now considering it. To meet these rising needs in the market, Konica Minolta began offering a subscription service for HitomeQ Care Support that allows facilities to begin using it without an initial investment. This service provides a wide-ranging support menu for transforming operations, and these can be selected freely to address the facility's issues precisely.



Material Issues

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.

* From a report released by Japan's Ministry of Economy, Trade and Industry on April 9, 2018: Report compiled by the Study Group for Future Supply and Demand of Elderly Nursing Care Systems

Opportunities for Konica Minolta to create value

Opportunities

■Through Konica Minolta businesses
- Transforming care staff workflow with imaging IoT-based systems and onsite consulting services, and creating a labor pool in the nursing care industry
- Promoting disease prevention and early detection by providing high value-added medical services, and reducing medical expenses
- Streamlining drug development by fostering innovation in drug discovery processes utilizing genetic testing technology
- Improving healthcare accessibility in developing countries

■Internal action to create value
- Building safe and comfortable workplaces where employees feel motivated

Vision for 2030 and Medium-Term Plan 2022

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:

Themes		Indicators		FY2020		FY2021	FY2022
				Results	Targets	Targets	Targets
Promote health and high quality of life at corporate clients							
Building safe and comfortable workplaces where employees feel motivated*1	Improve organizational health	Socia and environmental value	Rate of reduction of Level 4 workplaces (%) *2	38	15	30	50
			Percentage moving to higher level of organizational health (%) *3	-	-	5	10
	Employee health *4		Number of employees who are at high risk physically (employees with the highest health risks)	24% increase	4% decrease	8% decrease	12% decrease
			Number of vacation days due to mental health problems	13% increase	3% decrease	7% decrease	13% decrease

*1 Target scope: Konica Minolta, Inc.

*2 The rate of reduction from fiscal 2019 levels in the number of Level 4 workplaces, which have the highest level of stress (workplaces deemed to have the highest level of stress based on the results of a four-level stress check)

*3 The rate of year-on-year change in the number of workplaces whose results in the organizational health survey improved from less than 3.5 to 3.5 or higher (upper level)

*4 Rate of change from fiscal 2019 results

Konica Minolta's Approach

Konica Minolta will make the most of its proprietary genetic and dynamic testing technologies 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 molecular level diagnostic technologies that can identify genes and proteins as well as dynamic diagnostic imaging technologies that can help pinpoint the cause of diseases. 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

- Konica Minolta Precision Medicine Collaborates with AWS to Create the Next Generation of Precision Diagnostics (news release)
- Supporting Drug Discovery as Well as Accurate and Efficient Cancer Diagnosis — Precision Medicine
- Addressing Medical Challenges in Emerging Countries with Remote Healthcare — Remote Healthcare Using Portable Medical Devices

●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

- Initiatives to Improve the Health of Employees
- Managing Occupational Safety and Health

Material Issue 2: Supporting Healthy, High-Quality Living

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

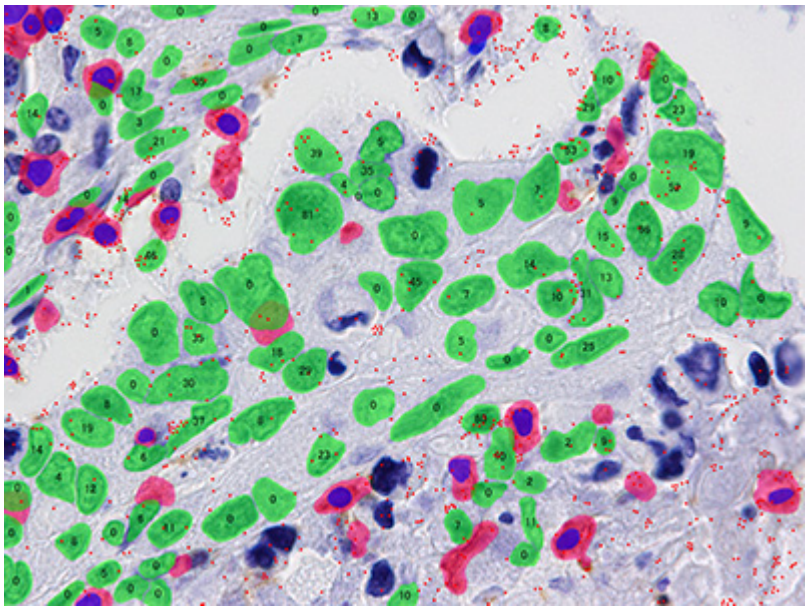
The significant side effects and ballooning costs of cancer treatment have become social issues. Precision medicine, in which medications are chosen for patients who have been grouped according to their physiological characteristics as analyzed based on genes and proteins, is gaining attention as a solution.

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.

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. This company also began offering COVID-19 tests (PCR tests) in July 2020, and in conjunction with this, provides CARE for COVID, a health management program to prevent the spread of COVID-19. CARE for COVID provides counseling through medical interviews, PCR tests, and remote medical care. California's Orange County and a wide range of companies have commissioned Ambry Genetics to carry out their tests.

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 2: Supporting Healthy, High-Quality Living

Addressing Medical Challenges in Emerging Countries with Remote Healthcare—Remote Healthcare Using Portable Medical Devices

Related SDGs

Remote Healthcare Using Portable Medical Devices

Addressing Medical Challenges in Emerging Countries with Remote Healthcare

In Bangladesh, lifestyle-related diseases are skyrocketing, and quickly responding to patient needs is a critical issue in the healthcare field. In rural areas, where 60% and more of the population lives, there is a shortage of medical facilities, equipment, and doctors. In order to receive medical treatment, patients must travel considerable distances to urban areas.
To address this challenge, Konica Minolta devised a remote diagnostic system that allows a rural clinic to take patient X-rays using portable equipment and upload the imaging data to the cloud, allowing doctors in the city to view the X-rays and make the appropriate diagnosis. After conducting a diagnostic pilot in 2017, paid medical examinations have been underway since September 2018 in the capital of Dhaka and the surrounding region, in a project adopted by the Japan International Cooperation Agency (JICA). Going forward, Konica Minolta will increase the number of examination sites outside the Dhaka region and prepare to verify the health checkup model by analyzing collected data.

X-ray exam using mobile imaging equipment

Material Issues

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
- Improving safety and security at client sites and for society by providing products and services such as those that make gas leaks visible
- Supporting the quality produced by corporate clients by offering products and services that facilitate high-tech measurement and inspection

Risks

■Affecting Konica Minolta
- Loss of public confidence in the event of a product or service-related accident that results in death or injury to a user
- Public disapproval 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
- Impacts on operations and product shipments due to the use of substances that pollute ecosystems and pose human health hazards

Vision for 2030 and Medium-Term Plan 2022

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:

Themes		Indicators		FY2020		FY2021	FY2022
				Results	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
		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
		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
		Economic value	Major business losses related to information securit (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 safe, dependable infrastructure and provide solutions that help create secure environments. Specifically, the company will work to provide solutions that make risks visible in workplaces using imaging IoT technology and to offer connected 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

●Providing occupational safety support solutions

●Advancing into quality inspection and other monitoring related to safety and security

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

●Providing solutions that help to improve customers' information security

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

Material Issue 3: Ensuring Social Safety and Security

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. In fiscal 2019, Konica Minolta was awarded a full-scale development project for the next three years after passing a careful stage-gate assessment by Japan's New Energy and Industrial Technology Development Organization (NEDO). Through this project, Konica Minolta will contribute to the realization of sustainable society by vigorously devoting itself to this and other social implementation.

Gas monitoring solution makes gas leaks visible

Material Issues

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.

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

Opportunities

■Through Konica Minolta businesses
- Reducing energy consumption and CO_2 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 CO_2 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 2022

Vision for 2030: Reduce CO_2 emissions by Konica Minolta. Enhance CO_2 emissions reduction at corporate clients and suppliers, and reduce the carbon footprint of society.

Related SDGs:

Themes		Indicators		FY2020		FY2021	FY2022
				Results	Targets	Targets	Targets
Reducing Energy Usage and CO_2 Emissions by Transforming Customer Processes		Social and environmental value	Amount of "Carbon Minus" contributions (thousand tons)*1	565	590	700	740
		Economic value	Solution sales (billion yen)	51	56	66	76
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	4	10	18
		Economic value	Monetary equivalent of energy reduction (million yen)	79	89	210	430
		Social and environmental value	Amount of CO_2 reduced through procurement of renewable energy (thousand tons)	6	6	12	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)	24	24	26	26
		Economic value	Sales from sustainable solutions (billion yen)	676	670	690	700
	Reduction of environmental impact at suppliers using DX*2	Social and environmental value	Amount of Carbon Minus contributions (thousand tons)*1	1.5	1.3	3.1	4.8
		Economic value	Monetary equivalent of energy reduction (million yen)	22	21	44	68

*1 "Carbon Minus" contributions: Volume of CO_2 emissions reduced at customers, business partners and the broader society

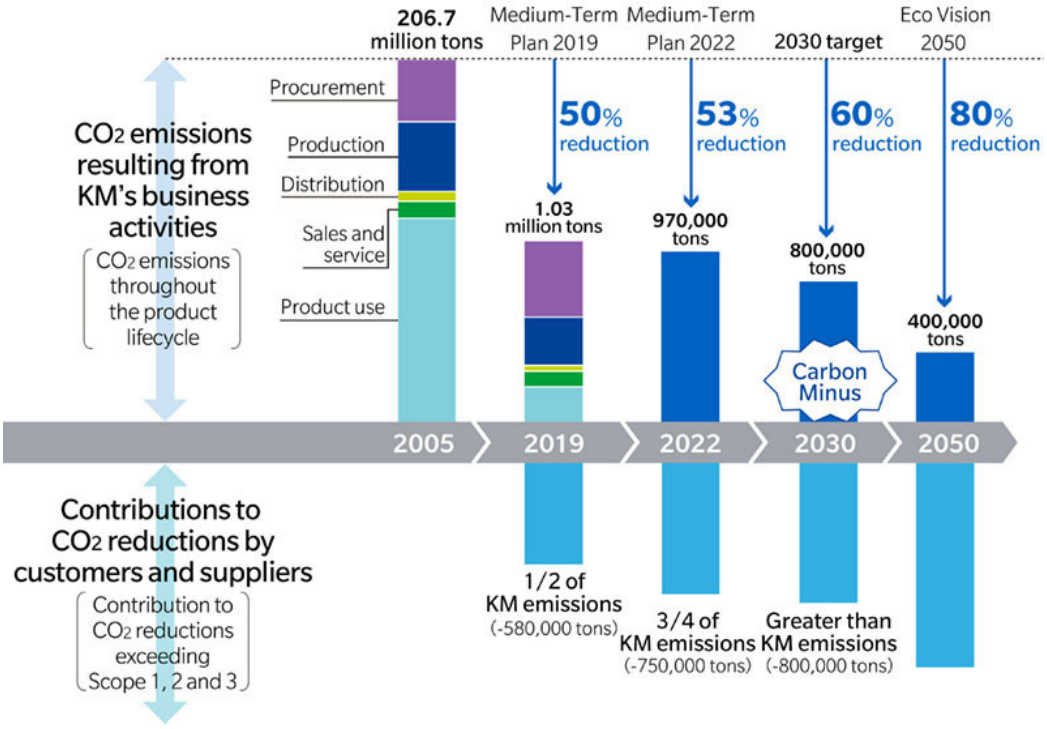
*2 Reduction amount for each fiscal year due to the measures implemented during medium-term plan

Konica Minolta's Approach

Konica Minolta has decided — with the implementation of its new long-term management vision and DX2022 medium-term business plan — to bring forward its deadline for achieving "Carbon Minus" status by 20 years to 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, work style reform, edge computing, and other efforts. It will also promote the transition to a fully paperless world, 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 DX to the Green Supplier 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 CO_2 Emissions by Transforming Customer Processes

●Reducing energy usage and CO_2 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

› Energy Conservation and Greenhouse Gas Prevention with Products — UV Inkjet Digital Printing Machine That Helps Save Energy During Printing

●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

●Streamlining customer workflow and reducing supply chain loss through process technology that makes the most of materials

› Energy Conservation and Recycling with Products — Dramatic Improvements in Productivity for Polarizing Plate Manufacturers with QWP Film Oriented Diagonally

●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 CO_2 Emissions Reduction Related to Konica Minolta Sites, Business Partners, Products and Services

●Reducing environmental impact and costs at Konica Minolta sites

- Sustainable Factory Certification System
- Saving Energy and Preventing Global Warming in Production Operations

●Reducing environmental impact and costs at business partners using DX

- Green Supplier Activities

●Reducing the environmental impact of products

- Sustainable Solutions Certification System

Material Issues

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 2022

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:

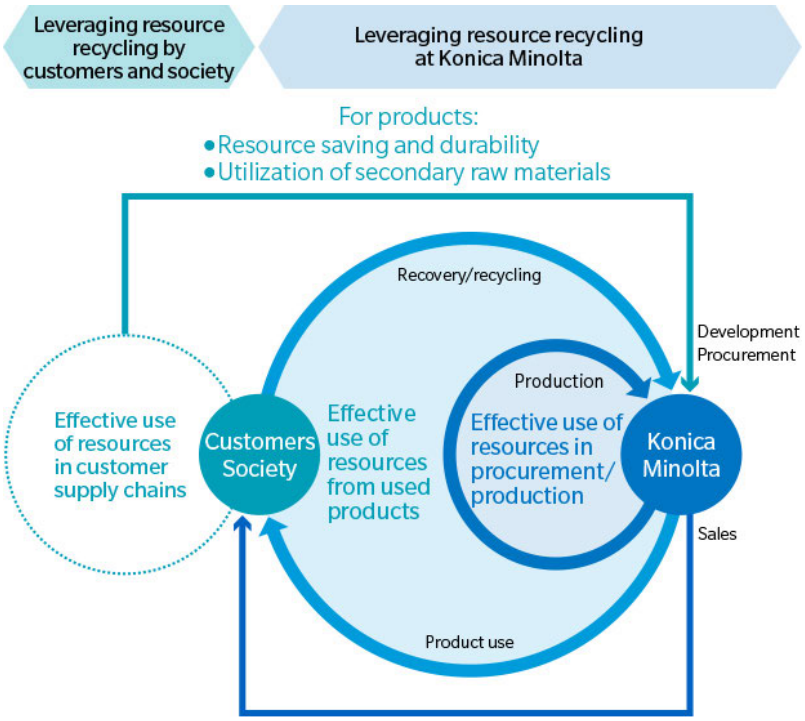
Themes		Indicators		FY2020		FY2021	FY2022
				Results	Targets	Targets	Targets
Effective Use of Resources by Transforming Customer Business Processes		Social and environmental value	Reduction of waste discharge of customers (thousand tons)	325	330	360	370
		Economic value	Solution sales (billion yen)	53	58	71	83
Effective Use of Resources Relating to Konica Minolta Sites, Suppliers, Products and Services	Reductions to environmental impact from Konica Minolta production sites*	Social and environmental value	Reduction of waste discharge (thousand tons)	0.6	0.5	1.0	1.2
		Economic value	Monetary equivalent of waste reductions (million yen)	130	110	200	260
	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	14	14
		Economic value	Sustainable solution sales (billion yen)	676	670	690	700

* Reduction amount for each fiscal year due to the measures implemented during medium-term plan

Konica Minolta's Approach

By facilitating connected workplaces, on-demand production, and imaging IoT, Konica Minolta will promote work-style and manufacturing-process reforms that help make even more effective use of customer and society 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.
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.



Sales of products and solutions that foster the effective use of 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

●Helping to solve global environmental issues by using recycling technology

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

●Reducing environmental impact and costs at Konica Minolta sites

- Sustainable Factory Certification System
- Resource Conservation and Recycling in Production Operations

●Reducing supplier environmental impact and costs using DX

- Green Supplier Activities

●Creating circular models linked to business models

- Resource Conservation and Recycling of Products
- Product Recycling

Konica Minolta carries out activities to reduce environmental impact as part of its efforts to achieve "Carbon Minus," a goal laid out in Eco Vision 2050, its long-term environmental vision for 2050. Konica Minolta aims to reduce CO_2 emissions in product development, procurement and manufacturing, sales and services, and product use, and also to contribute to a greater reduction of CO_2 emissions in the broader society than the CO_2 emissions produced in its own operations, by sharing the environmental technology, expertise and knowledge that Konica Minolta has amassed with business partners and customers.

English | Chinese

Policy & System

- Environmental Policy
- Environmental Management System
- Medium-Term Environmental Stragtegy
- Environmental Management Concept
- Eco Vision 2050
- Response to New Framework for Climate-related Financial Information Disclosure
- Participation in Initiatives

Sustainable Solutions (Product Initiatives)

- Konica Minolta's Approach
- Sustainable Solutions Certification System
- Saving Energy and Preventing Global Warming through Sustainable Solutions
- Resource Conservation and Recycling of Products
- Management of Chemical Substances in Products
- Helping Restore and Preserve Biodiversity through Products
- Provision of Product Environmental Information

Sustainable Factory (Procurement and Production Initiatives)

- Konica Minolta's Approach
- Sustainable Factory Certification System
- Saving Energy and Preventing Global Warming in Production Operations
- Resource Conservation and Recycling in Production Operations
- Green Procurement System
- Reduction of Chemical Substances Risks in Production
- Addressing Biodiversity in Production Activities (Consideration of Water Resources and Wastewater, Proper Management of Greenery at Factories)
- Green Supplier Activities

Sustainable Marketing

- Konica Minolta's Approach
- Supporting Customers to Solve Their Environmental Issues
- Providing Services to Solve Customers' Environmental Issues
- Reducing Environmental Impact in Sales Activities
- Reducing CO_2 Emissions from Distribution
- Reduction of Use of Packaging Materials
- Product Recycling

Environmental Data

- ESG Data
- Standards for Calculating Environmental Data
- CO_2Emissions Across the Entire Supply Chain

Environmental Communication

- Provision of Product Environmental Information
- Environmental Technology

Environmental Sitemap

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

Policy & System

Konica Minolta Environmental Policy

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, 2014
Konica Minolta, Inc.
President and CEO
Shoei Yamana

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.

Policy & System

Environmental Management Concept

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 management that integrates efforts to help resolve social issues with corporate growth. With the understanding that sustainability 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.

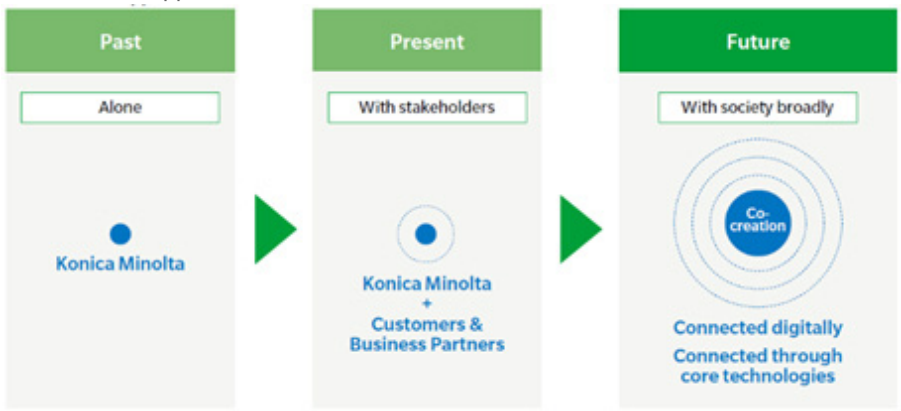
Policy of Environmental Management in the Konica Minolta Style

Creation of Shared Value with Stakeholders to Realize “Carbon Minus” Status

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 toward Carbon Minus status to reduce the environmental impact of society as a whole by collaborating with stakeholders, including business partners and customers.
For example, the company launched a digital environmental platform as a measure to collaborate with more companies. This platform is an ecosystem for sharing environmental knowledge, information and expertise to help raise environmental management efficiency for Japanese industry as a whole. Konica Minolta and the participating companies share and accumulate their environmental knowledge and expertise in order to co-create new value, thus improving the efficiency of their 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



Policy & System

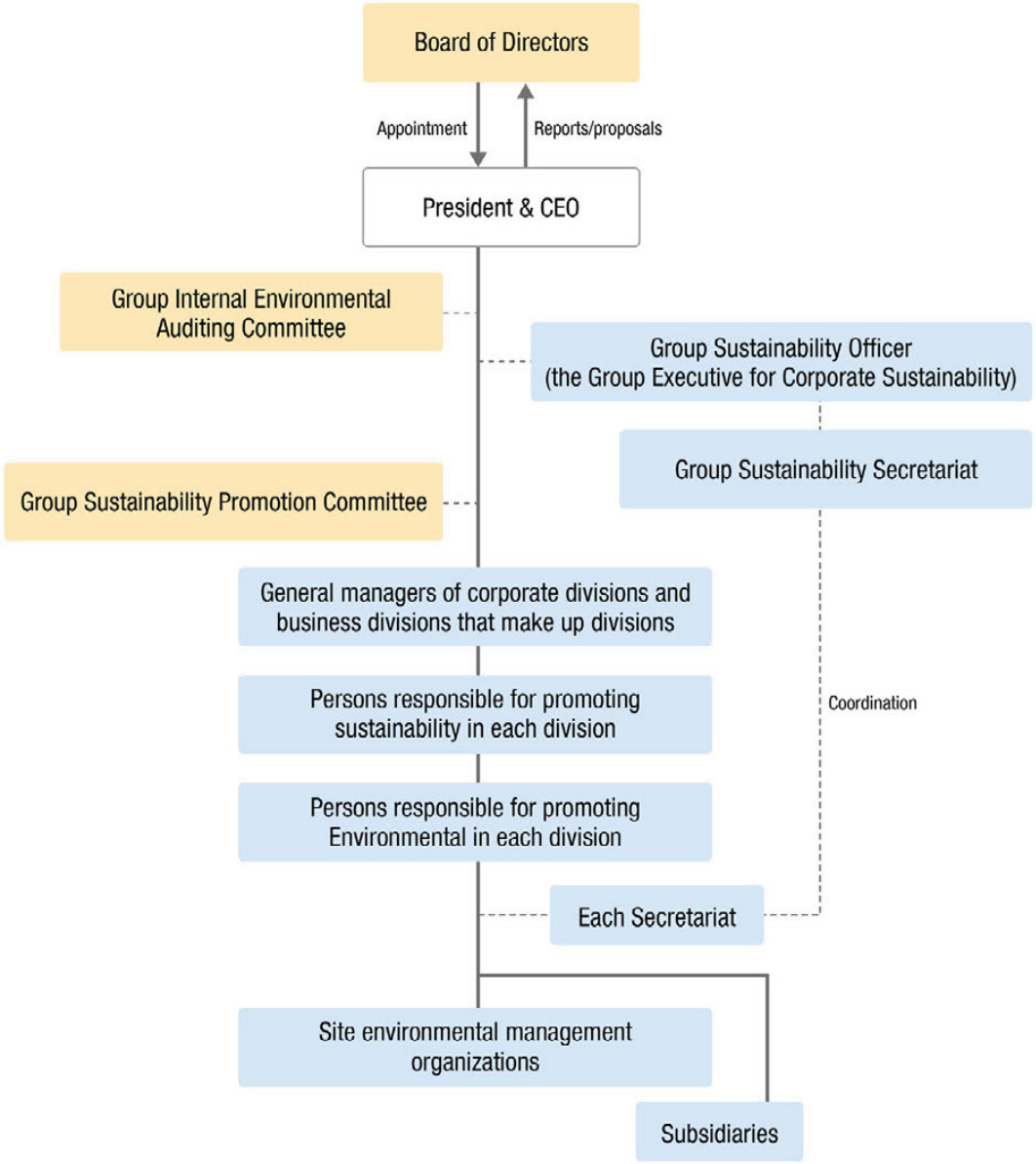
Environmental Management System

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 Group Executive for Corporate Sustainability (Group Sustainability Management Representative) to execute sustainability management and handle sustainability and environmental measures. The Group Executive formulates a medium-term plan for sustainability, which is then approved by the Board of Directors as a corporate management plan. In addition, the Group Executive for Corporate Sustainability reports monthly to the President and the Audit Committee established by the Board of Directors to report progress made on environmental management and on issues including climate change.

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



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 Green Product, Green Factory, and Green 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 have also begun 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

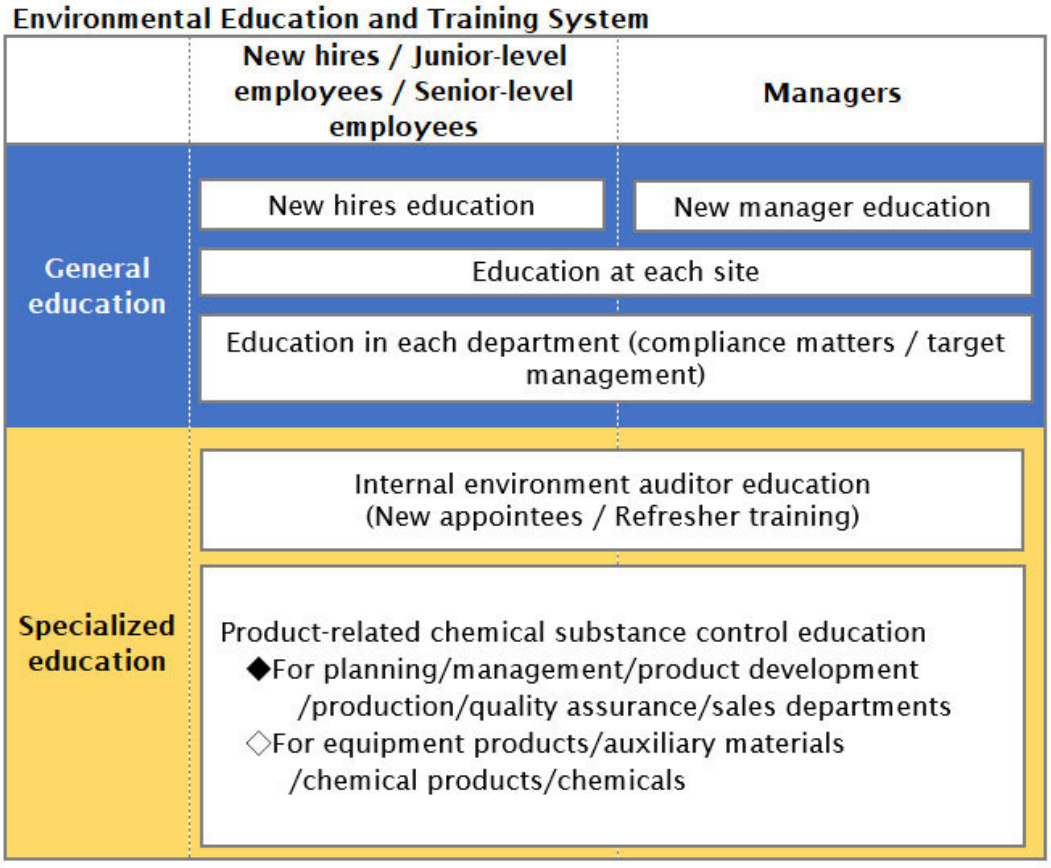
As environmental problems such as global warming and the depletion of energy resources increase in scope to encompass entire regions, and indeed, the entire planet, government policies and regulations at the regional and national levels around the world are being reconsidered and strengthened in order 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 2020, the Group conducted compliance assessments of all Group production sites and confirmed the status of compliance in keeping with the new regulations and legal revisions at sales offices. No serious violations were found with regard to environment-related laws and regulations.

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 Group Executive responsible for sustainability 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.



Policy & System

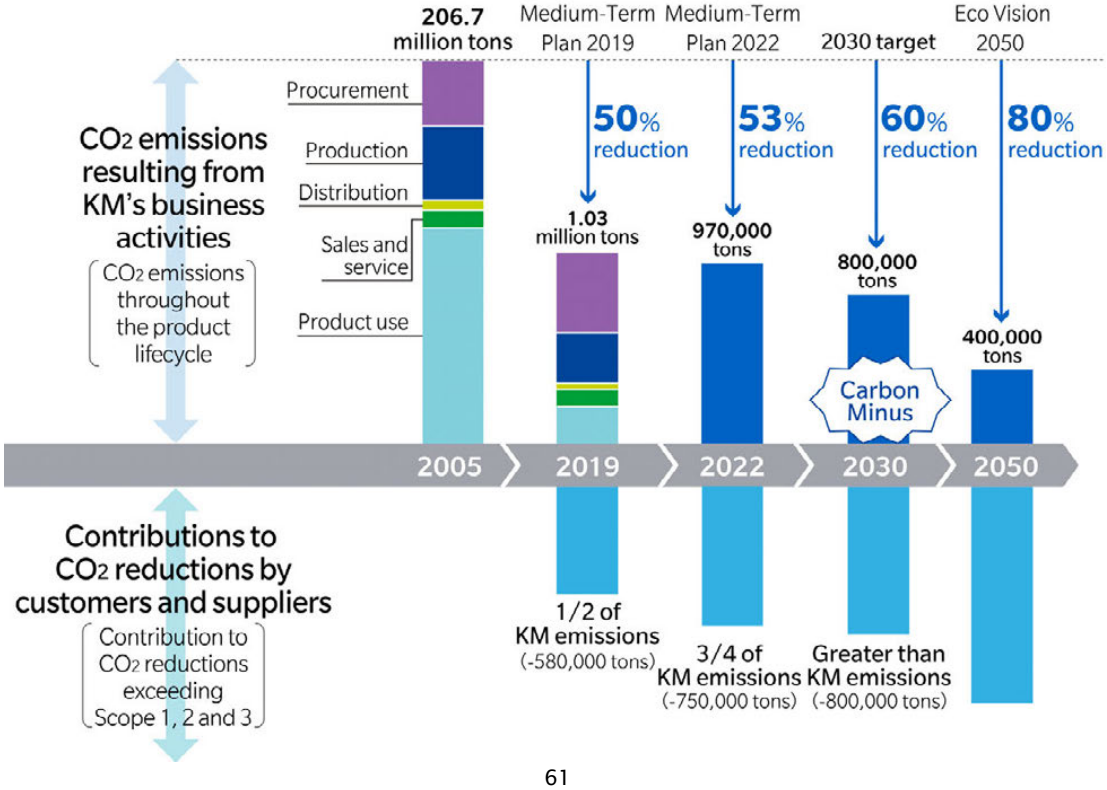
Eco Vision 2050

Long-Term Environmental Target Eco Vision 2050: Moving Forward with Carbon Minus Goals for 2030

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. The company is taking a series of actions to achieve “Carbon Minus” status.
In 2008, the Board of Directors approved Eco Vision 2050, Konica Minolta's long-term environmental vision. The vision set the challenging goal of reducing CO_2 emissions from products throughout their entire lifecycle by 80% by 2050, compared to fiscal 2005 levels. 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 deliver a net reduction in CO_2 emissions for society. To meet these goals, Konica Minolta is working hard to reduce emissions reduction throughout its supply chain.
Konica Minolta engages stakeholders such as business partners, customers, and local communities in its effort to achieve Carbon Minus status, which means ensuring that CO_2 emission reductions are greater than product lifecycle emissions of own products. Utilizing its own technology and expertise, Konica Minolta is working with stakeholders to reduce CO_2 emissions. If a total reduction effect can be achieved that exceeds the CO_2 emissions of Konica Minolta's business activities, then these efforts will help lower the CO_2 emissions of society as a whole.
In 2020, Konica Minolta made an additional commitment to achieve Carbon Minus status ahead of schedule, by 2030 instead of 2050. As what Konica Minolta offers to customers evolves from products to services, the company aims not only to reduce CO_2 emissions related to its products, but also to reduce CO_2 emissions related to services and harness this effort to drive business growth.

Eco Vision 2050

1. Reduce CO2 emissions throughout the product lifecycle by 80% by 2050, compared to fiscal 2005 levels.
   2030 Goals
   Reduce CO2 emissions throughout the product lifecycle by 60% by 2030, compared to fiscal 2005 levels. Also, through cooperation with stakeholders, achieve CO2 emission reductions greater than product lifecycle emissions, and realize Carbon Minus status.
2. Promote recycling and effective use of Earth's limited resources
3. Work to promote restoration and preservation of biodiversity



Policy & System

Medium-term Environmental Strategy

Environmental Targets and Results of the Medium-Term Sustainability Plan 2022

Environmental Material Issue Evaluation and Identification Process

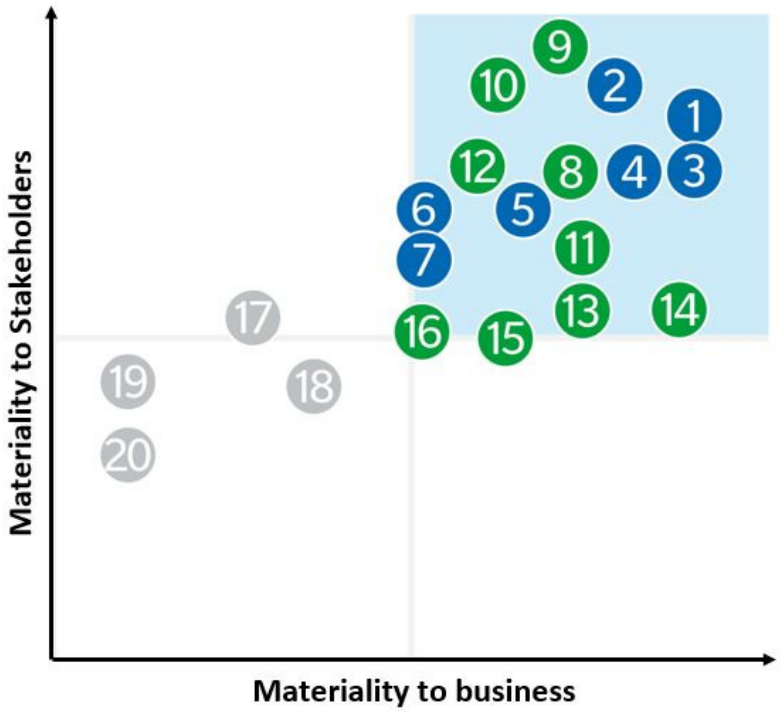
Companies today must address a wide range of environmental issues, such as climate change and resource depletion. In light of this, recent changes in society, and the evolving business environment, Konica Minolta has identified material issues related to the environment. The company aims to prioritize 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 Group Executive for Corporate Sustainability, who chairs the Group Sustainability Promotion Committee, verified this evaluation process and the resulting material issues, before identifying the ones that should be prioritized.

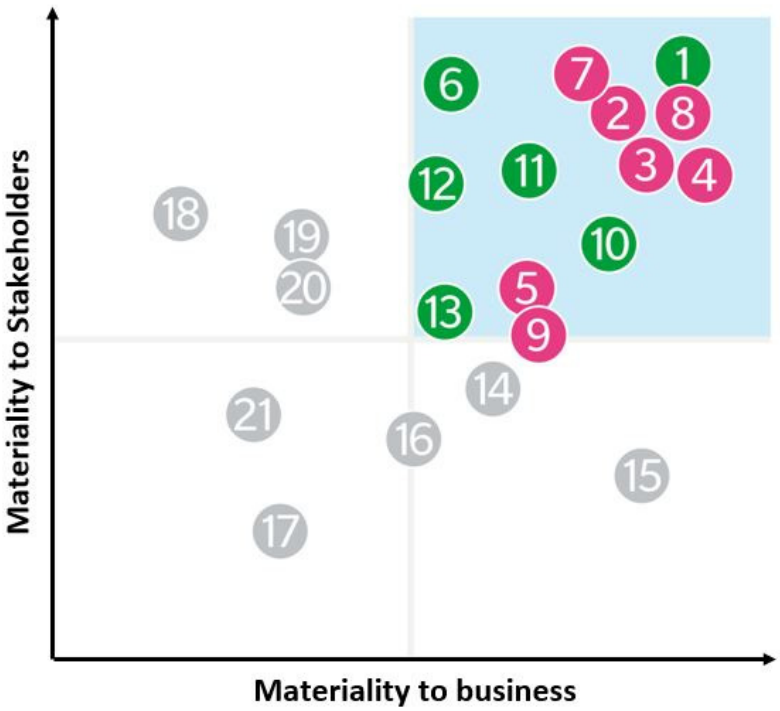
Process for Identifying Material Issues

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 Sustainability Plan 2022 identifies the three most important issues as "addressing climate change," "using limited resources effectively," and "ensuring social safety and security (safety of chemical substances)."



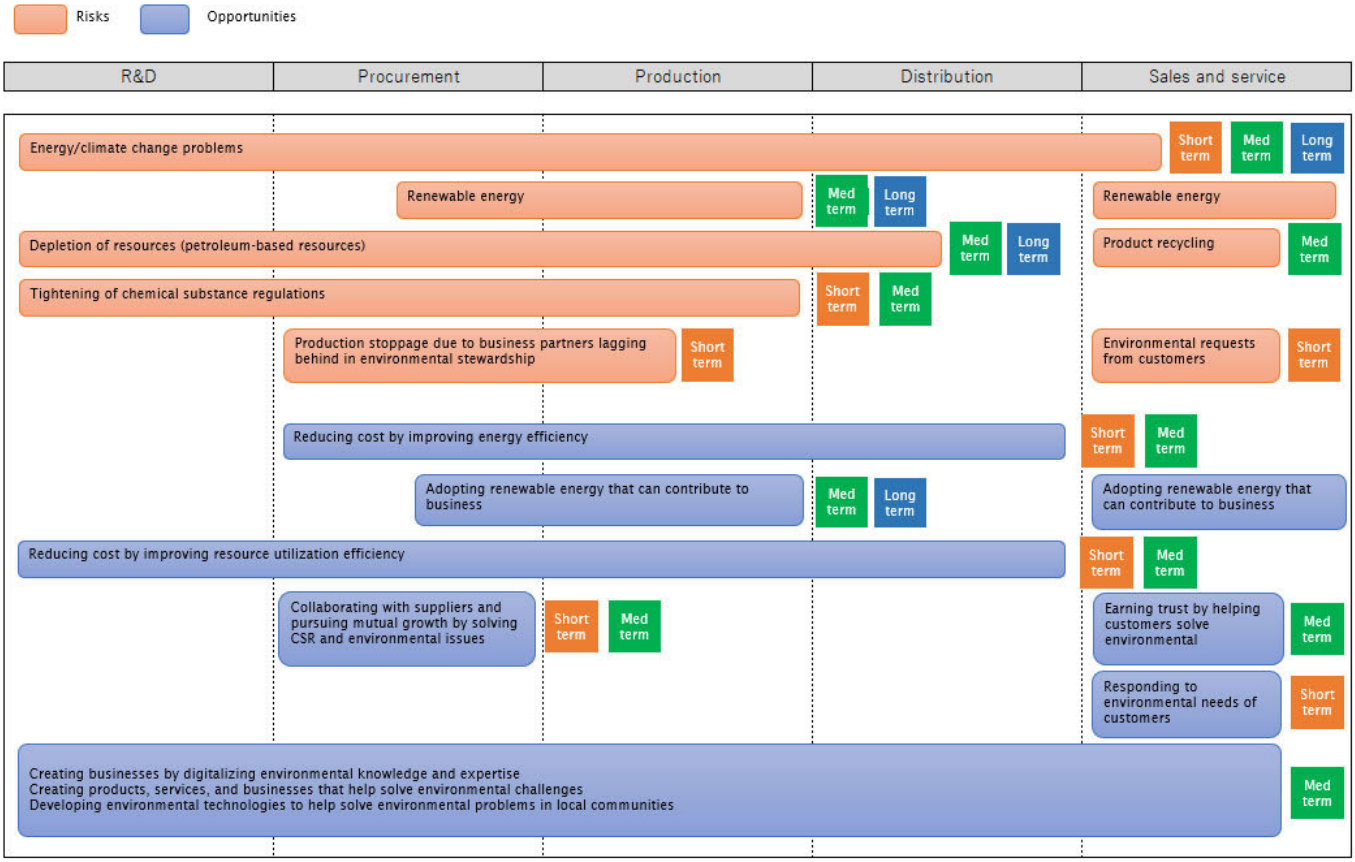
	Materiality Items (Opportunity)
1	Develop manufacturing processes with low energy, resource and CO2 load
2	Support workstyle reforms for a paperless, ubiquitous society
3	Build a waste-free customer supply chain using on-demand manufacturing
4	Reduce loss in customer work flow and supply chain
5	Improve safety and security measures in preparing for irregular climate patterns and natural disasters
6	Support early testing and drag development for unanticipated illness
7	Contribute to solutions for agricultural and food problems and new chemical substance regulations
8	Leverage ESG factors to strengthen customer engagement
9	Build ecosystems that efficiently resolve environmental problems and create new innovation
10	Leverage DX to dramatically reduce CO2 at suppliers
11	Cut costs by improving energy efficiency
12	Introduce renewable energy in anticipation of stakeholder demands
13	Cut costs by improving resource efficiency
14	Respond to environmental requests from customers
15	Respond to ESG investment/relations, sustainable finance
16	Create technologies to upcycle unnecessary plastic
17	Earn support from stakeholders for approach to diversity
18	Contribute to water infrastructure, help to counter obsolescence, and support monitoring
19	Create technologies that contribute to use of renewable energy and new energy
20	Create technologies that contribute to ecosystem recovery



	Materiality Items (Risks)
1	Ban on substances that contaminate ecosystems and damage the health of people (response to stricter regulation on chemical substances)
2	Higher costs for materials, resources, paper and concerns about their supply due to a spike in energy prices, insufficient raw materials and irregular weather
3	Supply chain interruption following large-scale climate disasters
4	Increase in procurement and manufacturing costs due to new emission regulations, carbon taxes, restrictions on the use of fossil fuels and other
5	Response to new regulations on product energy efficiency and markets
6	Demands from stakeholders for renewable energy
7	Decrease in opportunities for paper output in offices (increasing shift to paperless offices due to skyrocketing energy costs/raw material shortages)
8	Decrease in competitiveness due to inadequate response to circular economy (unsustainable use of resources, decline in product competitiveness due to designs using depletable energy)
9	Material and product supply risks due to regulations on plastic use
10	Response to customers' environmental demands
11	Drop in social trust due to insufficient governance at business partners
12	Soil contamination
13	Collection and recycling of used products
14	Depletion of resources (precious metals)
15	Delayed response to government procurement standards
16	Delays or stoppages in procurement and production due to depletion of water resources and water risks
17	Costing of virtual water
18	Impact of ecosystem destruction due to manufacturing and use of raw materials
19	Soil contamination
20	Water contamination
21	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, Konica Minolta will face even greater risks to its business. In the long term, manufacturing will need to be revolutionized to protect the global environment. Alternatives will need to be found for fossil fuels and similar resources, and energy efficiency will need to be optimized for both production and product usage. In the short and medium terms, fossil resource prices will likely rise, the need for energy conservation will increase further, supply chains could be disrupted due to abnormal weather events, and paperless offices will probably become commonplace. Unless it takes suitable measures now, the Group will likely be faced with larger capital expenditures, higher costs, and lost business opportunities. 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. Since excessive paper consumption is an issue in many companies, the Group is promoting a shift to paperless offices by providing digital workplace solutions that improve work flow efficiency. The Group is also working to reduce the enormous amount of energy that companies use to perform big data analysis these days, by offering and promoting onsite data analysis in the form of edge computing. 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 Group Executive for Corporate Sustainability (Group Sustainability Management Representative) to execute sustainability management and handle sustainability and environmental measures. The Group Executive formulates a medium-term plan for sustainability, which is then approved by the Board of Directors as a corporate management plan. In addition, the Group Executive for Corporate Sustainability 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 Sustainability Promotion Committee headed by the General Manager of the Corporate Sustainability Division, which serves as the organization implement the medium-term sustainability plan for the whole Group. The committee, in which persons responsible for sustainability promotion in each key division participate, deliberates the Group's medium-term sustainability plan and annual plans. It also checks quarterly progress and conducts investigations related to the Group's sustainability issues, including environmental ones.

Organization of Group Environmental Management

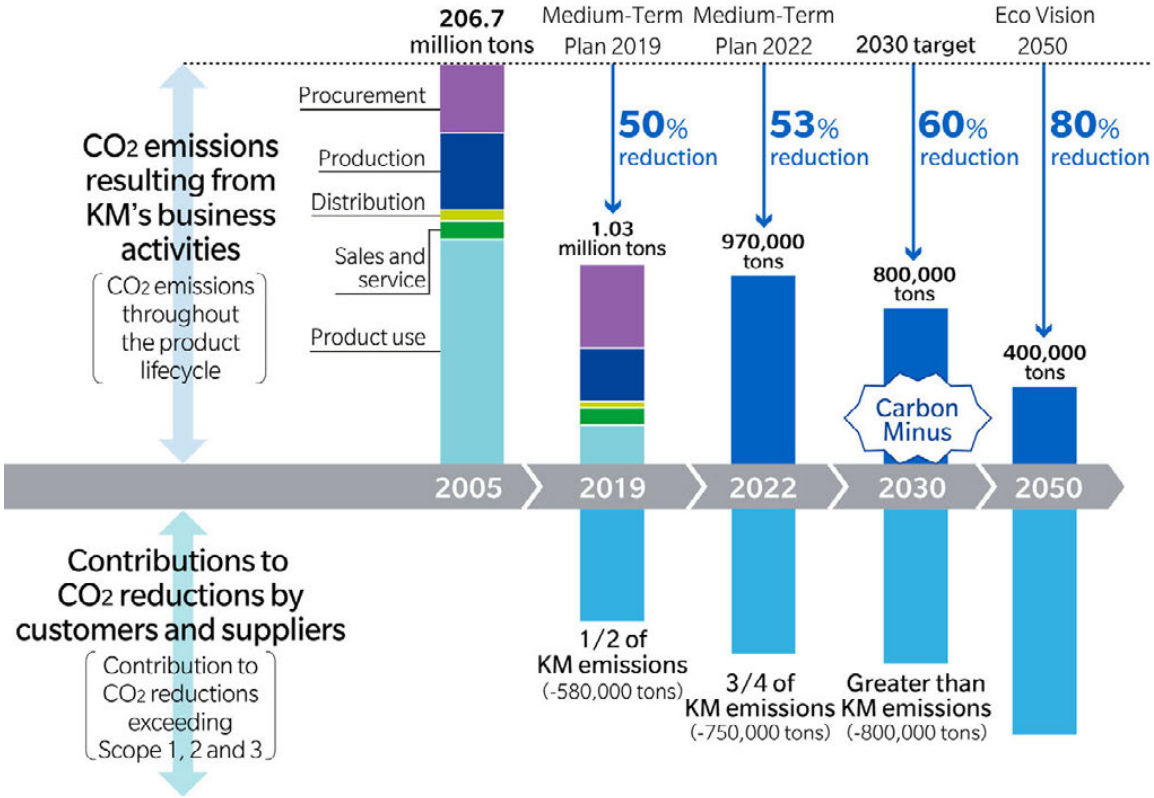
Targets and Results

Click here for information on targets and results (Konica Minolta's Sustainability > targets and results)

Environmental Strategy of the Medium-Term Sustainability Plan 2022

Creating a foundation for Carbon Minus
GX Green Transformation

With the goal of achieving Carbon Minus status by 2030 instead of 2050, Konica Minolta's target for 2022 is to reduce CO_2 emissions across the entire product lifecycle by 53% compared to fiscal 2005 levels. Three-fourths of that amount, or 720,000 tons, will come from CO_2 emissions savings generated by customers, suppliers, and society.



Key measures for 2022

To achieve the goal of Carbon Minus status even faster, it is necessary to accelerate both the reduction of the company's CO_2 emissions and the support for CO_2 emissions reduction outside the company. Konica Minolta believes that the use of digital transformation (DX) can dramatically reduce CO_2 emissions from both sources.

In-House Initiatives

1. Sustainable Factory Activities

Target: Reduce manufacturing CO_2 emissions by 18,000 tons in fiscal 2022 (reduce manufacturing CO_2 emissions by 7% compared to fiscal 2019)
The Sustainable Factory Certification System was launched in fiscal 2020. Konica Minolta is aiming to have all factories meet the Sustainable Factory certification standards by fiscal 2022. In addition to the environmental impact and cost reduction efforts that have been promoted so far, Sustainable Factories will pursue targets for 2022 in order to meet the expectations of the wider society. While further deepening cooperation with stakeholders such as customers, business partners and local communities, Sustainable Factories will utilize their own technology and expertise to help solve social issues and protect the broader global environment by expanding the participants involved.

		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)
Stakeholders Helps to solve environmental issues for the broader society (stakeholders) by using environmental technology expertise Konica Minolta acquired at its own production sites. Reduces stakeholder CO_2 emissions by an amount equivalent to the actual CO_2 emissions of the site.	CO_2 emissions at customers, suppliers and broader society (Amount of Carbon Minus contributions)	1% reduction annually (3% 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: • VOC reduction • Biodiversity (water, soil, marine plastic, etc.) • CSR procurement • Expanding introduction of renewable energy, etc.	

＊ For sites with an environmental impact that is less than 1% of the Konica Minolta total, the target is 1% reduction annually (3% over 3 years).

2. Expand renewable energy use

Target: Use renewable energy sources for 10% of procured electricity in fiscal 2022 (double the use in fiscal 2019)
Two manufacturing sites in China and 43 sales companies in Europe have completely switched to renewable sources. Ahead of fiscal 2022, 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. DX Green Supplier Activities

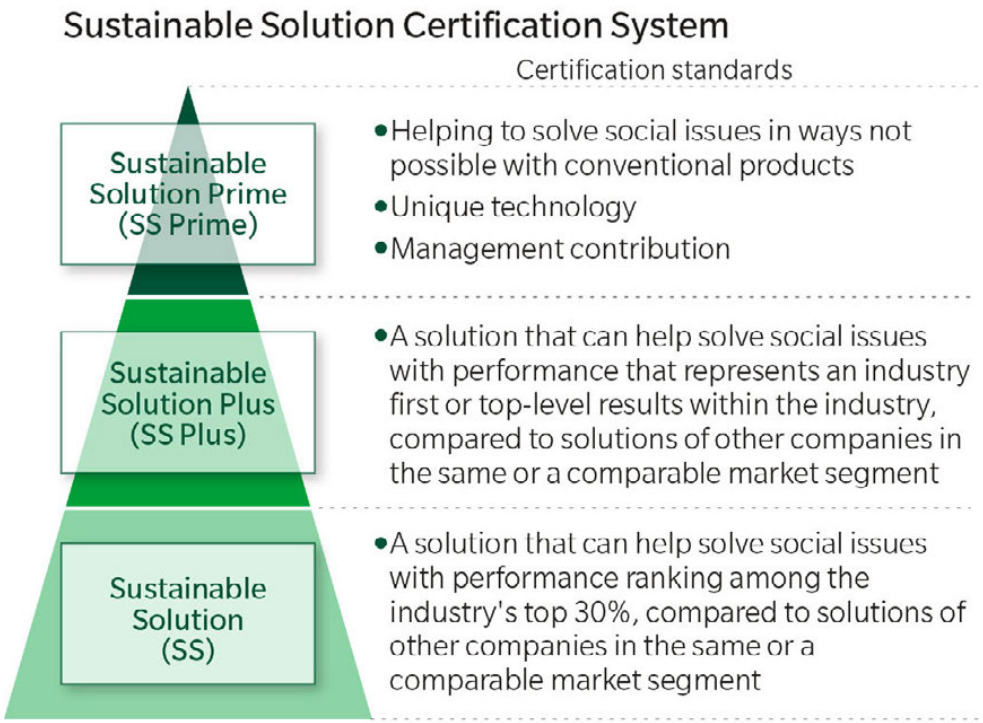
Target: Increase CO_2 reductions at suppliers to 17,000 tons in fiscal 2022
In order to collaborate with even more business partners, Konica Minolta began promoting Digital Green Supplier activities in fiscal 2020. The aim is to dramatically reduce CO_2 emissions across the entire supply chain by launching 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.

Initiatives Carried Out with Customers

1. Sustainable Solution Activities

Target: Increase customers' CO_2 reductions through product services to 710,000 tons in fiscal 2022

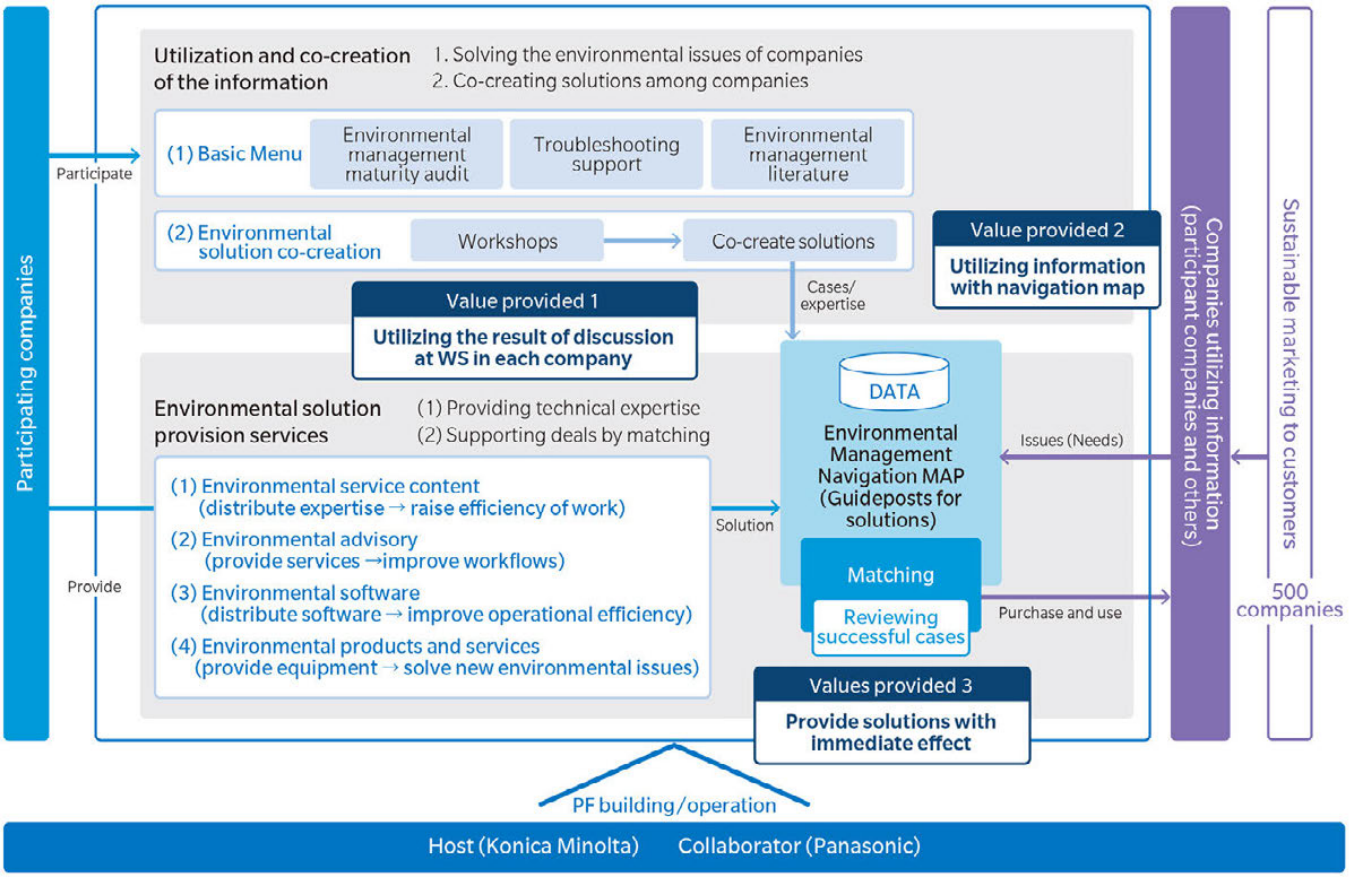
The Sustainable Solution Certification System was launched in fiscal 2020. With the new System, criteria are established for different businesses and product characteristics with respect to certification standards tailored to the individual environmental and social issues that Konica Minolta seeks to help solve. Successful products are certified at one of three levels, based on the degree of achievement. Konica Minolta will further reduce environmental impact by creating products and solutions that meet environmental label standards used around the world.
This system raises products' energy conservation and cuts CO_2 emissions during customer use. Meanwhile, by providing on-demand packages, labels, textile printing solutions through digitalization, it also improves the manufacturing process, supports a digital workplace by promoting workstyle reform transcending paper and place, and promotes work flow reform with edge-type IoT solutions. Providing products and services that encourage customers' DX supports their business, and the greater operational efficiency also helps to reduce environmental impact.



2. Environment Digital Platform

Target: Create new contributions to CO_2 reductions by fiscal 2022

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 in the effect of Konica Minolta's contributions to reducing environmental impact. The program started with 15 participating companies, and this number had already increased to 39 by the end of March 2021. This unique approach to co-creation is expected to keep expanding, going forward.



Policy & System

Response to New Framework for Climate-related Financial Information Disclosure

Disclosure on four themes based on TCFD recommendations

Konica Minolta believes that accurately assessing the risks and opportunities related to climate in its business operations and actively disclosing information to investors and a wide range of other stakeholders is essential for a company capable of sustainable growth. In light of this, 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.

- Medium-Term Environmental Strategy
- Targets and Results
- Environmental Management System

Corporate Governance

In 2008, Konica Minolta set the goal of reducing CO_2 emissions across the entire lifecycle of its products by 80% compared to fiscal 2005. This target was approved by the Board of Directors. In 2017, the company added a Carbon Minus target as part of its commitment to contributing, along with partner companies, to a carbon-neutral society. In addition, in 2020 the Board of Directors approved the inclusion of "addressing climate change" as one of the five material issues that Konica Minolta would address in its long-term management vision and the decision to move the Carbon Minus target date forward to 2030 as its goal for addressing climate change.

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 assigned by the president (Group sustainability officers) pursue environmental management and prepare medium-term plans, while also reporting 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.

Strategy

As climate change predictions materialize and the global environment continues to substantially change, this will likely cause turmoil in the economic and financial sectors. Konica Minolta recognizes these to be significant risks to its business. At the same time, the company believes that, by helping to solve environmental issues through business activities, opportunities can be created that will promote the sustainable growth of the Group.

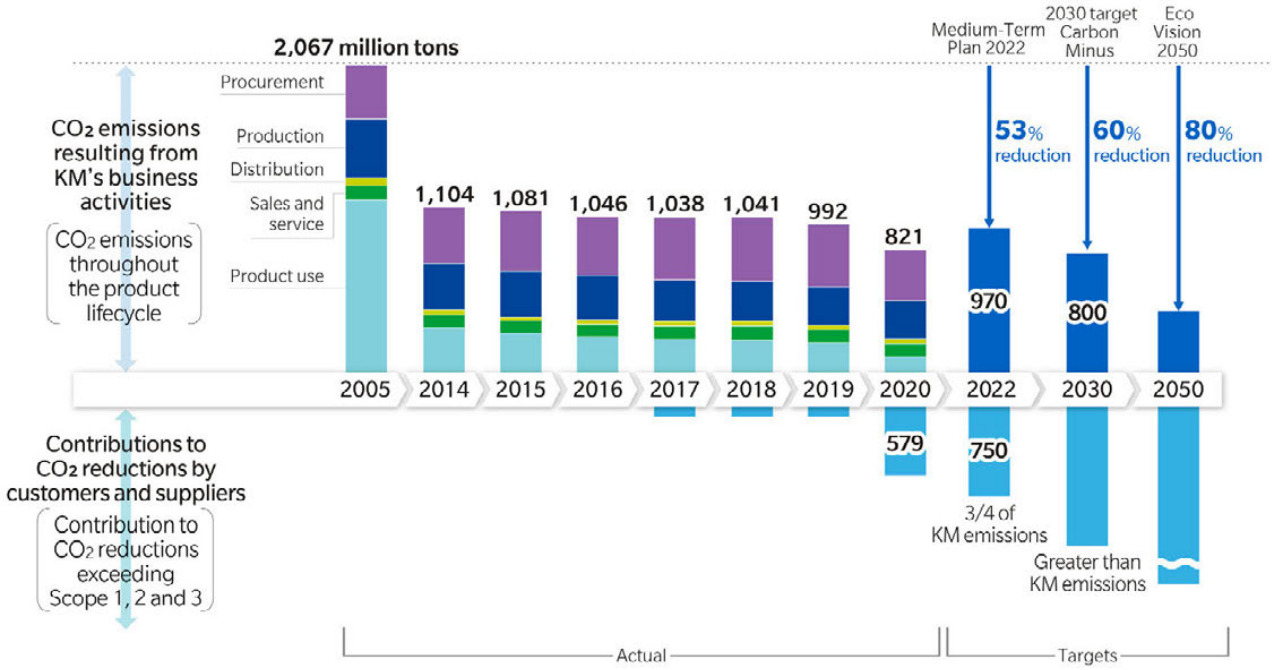
By actively introducing cutting-edge technology and combining it with Konica Minolta's strengths in imaging IoT technology and digital input and output, the Group is transforming itself into a digital company with insight into implicit challenges. In the long-term management vision formulated in fiscal 2020, "addressing climate change" was designated as one of the material issues and achieving Carbon Minus status by 2030 was set as a target. As Konica Minolta's offerings to clients shift from products to services, it aims to reduce CO_2 from services as well as CO_2 emissions from its products and turn this into business growth. By backcasting from this target and linking the medium-targets and annual plans on climate change measures to medium-term business plans for product planning, development, production, procurement and plans, Konica Minolta aims to achieve its Carbon Minus target while continuing to develop its business.
Please refer to "Konica Minolta's Climate-Related Risks and Opportunities" for more details on this issue.

Risk Management

Konica Minolta carries out risk management so as to maximize returns while minimizing negative impacts and evaluates risks from a medium- and long-term perspective. In the short and medium term, environmental risks, including climate change, are viewed as management risks for the Group overall, and are managed by the Risk Management Committee. The Committee assesses and manages the impact and uncertainty of climate change risks from a medium- to long-term perspective in two scenarios: one in which a shift to a low-carbon society has taken place and one in which the impacts of climate change have materialized. The Group Sustainability Promotion Committee discusses plans and measures on the response to climate change at its quarterly meetings and also reassesses the extent of changes to risks twice a year. The Group Sustainability Officers report to the president on progress made with the plan every month. Important environmental issues are also reported by the Group Sustainability Officer to the core meetings and Risk Management Committee meetings, among others. 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.
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.

Metrics and Targets

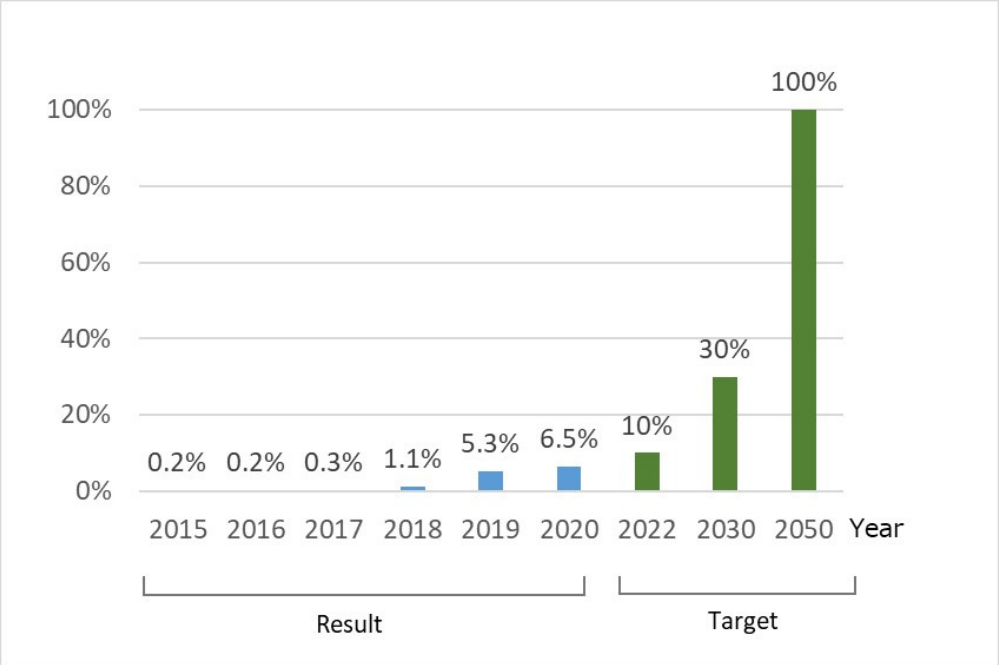
Konica Minolta has established its Eco Vision 2050, which sets the goals of reducing CO_2 emissions over the product lifecycle and achieving Carbon Minus status, as its metric for managing the risks and opportunities posed by climate change. The company aims to reduce CO_2 emissions across the product lifecycle by 80% by 2050 compared to fiscal 2005 levels.
The goal for reducing CO_2 emissions across the product lifecycle includes all of Scopes 1 and 2 (CO_2 emissions generated during the production stage and the sales and service stage) and the main components of Scope 3 (CO_2 emissions generated during the procurement stage, transportation and distribution stage, and product use stage). In the long term, Konica Minolta aims to reduce CO_2 emissions by 60% by 2030 and by 80% by 2050, and in the short term, the company aims to cut emissions by 53% by 2022, all compared to fiscal 2005 levels. Konica Minolta reduced emissions by about 820,000 tons in fiscal 2020, achieving a 60% reduction.
(Please see the medium-term environmental strategy and sustainability targets and results for details.)



The Carbon Minus target that Konica Minolta has set is a commitment to reduce CO_2 emissions beyond Scopes 1, 2 and 3 by helping customers and business partners solve environmental issues and to cut CO_2 emissions by levels exceeding the CO_2 emissions from Konica Minolta products throughout their lifecycle. Konica Minolta aims to achieve "Carbon Minus" status by 2030.
As there is a limit to how much a single company can do to achieve a carbon-neutral society, Konica Minolta is expanding its activities to include suppliers and customers in order to reduce CO_2 emissions ore broadly. The company is working to increase its contribution to environmental conservation throughout the supply chain while linking these efforts to cost reductions and increased sales.

Moreover, given projections that the use of fossil fuels will no longer be possible in the future, Konica Minolta has set targets to adapt to climate-related risks, specifically using 100% renewable energy sources for the energy used in its business activities and bringing renewable energy use* up to 30% by 2030 and 100% by 2050. The medium-term sustainability plan, which ends in fiscal 2022, set an ambitious target of a renewable energy use rate exceeding 10%. This rate reached 6.5% in fiscal 2020. Please refer to "Membership in RE100" for more details.

Renewable energy use rate



* Ratio of renewable energy-derived power to the Konica Minolta Group's overall energy use (not including co-generated power) in fiscal 2016-2019)

* Ratio of renewable energy-derived power to the Konica Minolta Group's overall energy use beginning in fiscal 2020

Click here for more information on Sustainable Solutions (Sustainability > Environmental Activities > Sustainable Solutions (product initiatives):Konica Minolta's Approach)

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

Click here for more information on Sustainable Marketing (Sustainability > Environmental Activities > Sustainable Marketing: Konica Minolta's Approach)

Konica Minolta's Climate-Related Risks and Opportunities

The Paris Agreement is a framework for addressing climate change that seeks to move the world more quickly and ambitiously to a low-carbon model. 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.
Konica Minolta is forecasting using both optimistic and pessimistic scenarios, as described below. It is identifying business risks that could adversely affect the performance of the Group in the future as well as business opportunities that can be created by proactively addressing the challenges of climate change.

If the average global temperature increase is kept below 2˚C and a low-carbon global society is achieved:
As a transitional risk, if environmental laws and regulations become even stricter in the near future, including greenhouse gas emission regulations, energy efficiency regulations, regulations relating to Europe's Circular Economy Action Plan, and new and additional tax systems such as carbon taxes, there may be additional obligations and costs for legal compliance. This might result in higher costs for the Group and loss of business opportunities. Also, Konica Minolta expects to face growing demands from stakeholders for the procurement of renewable energy, and if the company is unable to comply, investments and loans as well as sales opportunities could be lost, and the corporate brand could also be damaged. Customers' interests are also changing as they look to curb the impact of climate change, and 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 have a negative impact on the Konica Minolta Group's earnings.

Konica Minolta is striving for more efficient production processes, developing and improving its production technologies, and promoting Sustainable Factory activities that reduce both CO_2 emissions and costs. In addition, the Group aims to maximize energy cost decreases and CO_2 emission reductions throughout the supply chain by promoting Green Supplier activities. These involve sharing digitalizing the Group's energy-saving technologies and expertise while working together with suppliers to reduce energy consumption. In addition, Konica Minolta believes that in order to compete as a sustainable growth company it must be able to quickly embrace a renewable energy society that does not depend on fossil fuels. Accordingly, it is a member of RE100, a global leadership initiative in which companies aim to operate their businesses using renewable energy exclusively. Konica Minolta has set a goal of procuring all the electric power used for its business activities from renewable energy sources by 2050.
On the other hand, Konica Minolta believes that accelerating the transition to a low-carbon society should create new business opportunities. In the long term, there could be widespread demand for the company's proprietary edge IoT technology in the field of edge computing, which minimizes the use of data centers. Since this can significantly reduce energy consumption and greenhouse gas emissions, demand for this technology by society as a whole could increase along with opportunities for Group sales.
In the medium term, if Konica Minolta can respond to changes in customer demand and preferences, it could also increase sales. This might include digital workplaces that support the transition to a full-scale paperless society, on-demand production processes that transform the business model of mass production and disposal to one that restrains wasteful production, connected workplaces that do not rely on paper output and support diverse workstyles, and material processing innovation solutions that curb energy and resource usage. It could also involve technology for imaging IoT solutions for non-destructive inspection of greenhouse gas leaks from shale gas and other pipelines, as well as an ecosystem to support the environmental (sustainability) management of companies and technologies using renewable plastic and bio materials to avoid new resource extraction.
In the short term, Konica Minolta believes that active promotion of ongoing energy saving activities will reduce costs at its own factories. Not only that, it will create new business opportunities through collaboration with suppliers and business partners.

If the average global temperature increase exceeds 2˚C and the predicted effects of climate change materialize:
In terms of physical risks, more frequent abnormal climate events and forest fires around the world, stricter restrictions designed to protect forest resources, and heightened social demands could destabilize the procurement of paper materials and result in the loss of business opportunities. Also, if chronic climate change effects were to continue, such as altered weather patterns and widespread drought, procurement of natural resources might become problematic, and the supply of raw materials could be reduced or halted. This could have a negative impact on the utilization rate of factories. Moreover, major natural disasters such as large-scale typhoons, floods, or forest fires could occur due to climate change, and these could damage the Konica Minolta Group’s facilities and make it difficult for employees to perform their jobs. As a result, operations of the Group and its suppliers might be temporarily halted, and production and shipping could be delayed.
In the area of industrial materials, which are highly dependent on natural resources for their production, Konica Minolta is advancing the development of new functional films that do not require natural resources. The Group is expanding its product lineup with materials based on cellulose-elimination technology. In the MFP business, Konica Minolta is accelerating the development of new digital solutions that do not depend on paper printing in the office. The Group is expanding sales of a new product, Digital Workplace. This is an integrated IT service platform that enables remote collaboration while providing robust information security. To better respond to climate-related natural disasters, Konica Minolta is expanding its own production sites in Europe and North America as bases for producing toner refills and parts for consumables needed in the mainstay office and professional printing business areas. The Group is working to establish a highly resilient supply systems through production in consumption regions. 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. From a worldwide perspective that encompasses the entire supply chain, systems are set up for each business division and subsidiary, including the mainstay information equipment business and the medical equipment business, which will be in great demand in the event of a disaster. In addition, an initial response system has been set up, and this system will collect information on the extent of damage and other aspects immediately after a disaster and determine whether the BCP should be activated.

On the other hand, the physical impacts of climate change could also create business opportunities.
In the medium and long term, expectations for increased safety and security in the face of natural disasters could lead to new demand from society for imaging IoT and sensing solutions as preparation for abnormal climate events. In addition, unexpected diseases (including infectious diseases) are expected to occur more frequently due to the impact of climate change on ecosystems. In healthcare solutions, imaging diagnosis using the Konica Minolta Group's edge IoT technology can reduce the workload of medical practitioners, which could lead to significant business growth opportunities as a result.

Risks Opportunities

	Impact on procurement	Impact on direct operations	Impact on product and service demand
Transition risks and opportunities	**Higher procurement and manufacturing costs** ●Replacing fossil resources and fuels in production — Long-term ●Response to emissions regulations and laws in line with measures to mitigate impact of climate change — Medium-term / Short-term ●Temporary suspension of production due to restrictions on electric power supply — Medium-term		**Increase in product development costs** ●Response to the market and new regulations on product energy efficiency in line with measures to mitigate impact of climate change — Short-term **Lower sales** ●Decrease in office demand due to acceleration toward a paperless society — Medium-term ●Decline in product competitiveness due to unsustainable use of resource and non-reusable design — Medium-term **Higher sales** ●Edge computing, which does not require a data cente — Long-term ●Digital workplace to support a paperless society — Medium-term ●Technology for upgrading recycled plastics — Medium-term ●Digital on-demand printing and production that reduces unnecessary production — Medium-term ●Solutions for material processing process transformation to reduce energy use — Medium-term ●Leakage inspection system pipelines including those carrying shale gas — Medium-term ●Ecosystem that supports corporate environmental and sustainability management — Medium-term
Physical risks and opportunities	**Lower revenue due to a reduction in production capacity** ●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		**Higher sales** ●Testing and drug discovery support for unanticipated diseases (including infectious diseases) — Medium-term ●DX solutions to support healthcare settings (diagnosis, engagement, and collaboration) — Medium-term ●Safe and secure imaging IoT solutions for abnormal weather — Medium-term

Sustainable Solutions (Product Initiatives)

Konica Minolta's Approach

Konica Minolta's Approach | Sustainable Solutions Certification System
Saving Energy and Preventing Global Warming through Sustainable Solutions
Resource Conservation and Recycling of Products | Management of Chemical Substances in Products
Helping Restore and Preserve Biodiversity through Products | Provision of Product Environmental Information

Background and Issues

Given the widespread concern about environmental and social challenges such as climate change and economic disparity faced by the world today, the value that people seek is shifting from material wealth to improving 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 widely promoting their value. Through initiatives like these, while helping to realize the Sustainable Development Goals (SDGs), Konica Minolta strives to help build a sustainable society, earn social confidence, and achieve sustainable growth alongside the broader society as a company of choice.

Key Measures and KPIs

Reduction of energy use and CO_2 emissions achieved by reforming customer business processes

(Unit: thousand tons)

KPI	Result	Target		
	Fiscal 2020	Fiscal 2020	Fiscal 2021	Fiscal 2022
Reduction of CO_2 emissions through the use of Konica Minolta products	24	24	26	26
Amount of resources saved and recycled through the use of Konica Minolta products	12	12	14	14
Reduction of CO_2 emissions of customers, suppliers and broader society (Amount of carbon minus contribution)	565	590	700	740
Reduction of waste discharge of customers	325	330	360	370

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Sustainable Solutions (Product Initiatives)

Sustainable Solutions Certification System

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Outline of the 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 CO_2 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).

The Sustainable Solutions Certification System Konica Minolta launched in fiscal 2020 adds "solutions" to the "products," which have been the company's traditional focus. By certifying a broad range of products and services that help to solve environmental as well as social issues, Konica Minolta will create products and solutions in line with the business transition to an "as a service" model. For example, the company is reforming production processes by offering on-demand packages, labels and textile printing solutions digitally, and facilitating digital workplaces that promotes workstyle reform not tied to paper or places, and promoting new businesses that support workflow reform with edge-type IoT solutions. By providing these products and services that encourage customers' digital transformation, Konica Minolta will support their businesses and also help to reduce environmental impact by driving greater operational efficiency.

Under this system, Konica Minolta has designated certification standard items for each of the environmental and social issues for which it seeks a solution. It sets standards 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.

Adding "solutions" to "products" and shifting to an "as a service" model

Certification standards

Certify products and solutions that offer the environmental and social value set out in the Medium-term Sustainability Plan with the following three-stage ranking

Certification level	Certification standards
Sustainable Solution prime (SS prime)	・Products and solutions that can demonstrate a contribution to the resolution of social and environmental issues **that was not possible with conventional products** ・Equipped with **only-one technologies**; a level that enables contributions to management
Sustainable Solution plus (SS plus)	・Products and solutions that are top in **the industry or an industry-first** that can demonstrate a contribution to the resolution of social and environmental issues compared to the same segment comparable to other companies in the same industry
Sustainable Solution (SS)	・Products/solutions that can demonstrate a contribution to the resolution of social and environmental issues equivalent to the **industry's top level (within top 30%)** compared to the same segment comparable to other companies in the same industry

Example of certifications

AccurioPress C14000

Improvements to work motivation and renewed vitality at company

Contributing to **a 75% reduction in work hours** per day in printing processes compared to competitors and freeing up working hours

Response to climate change

Innovations since offset printing have contributed to a 100 ton-reduction in annual CO_2 emissions in the printing process

Fiscal 2020 Activity Results

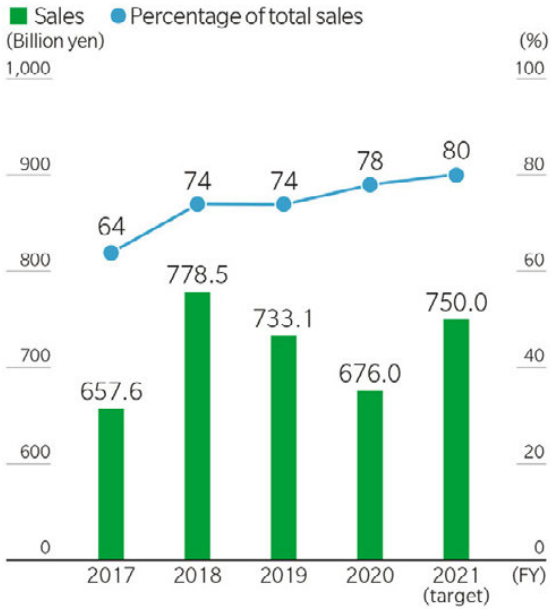
In fiscal 2020, Sustainable Solutions sales, including those products and services that were carried over from the Sustainable Green Products Certification System implemented through fiscal 2019, totaled 676.0 billion yen, accounting for 78% of the Group's total sales.

In addition, improvements in the environmental performance of these products have resulted in a CO_2 emissions reduction of 23,700 tons and the effective use of 12,300 tons of resources.

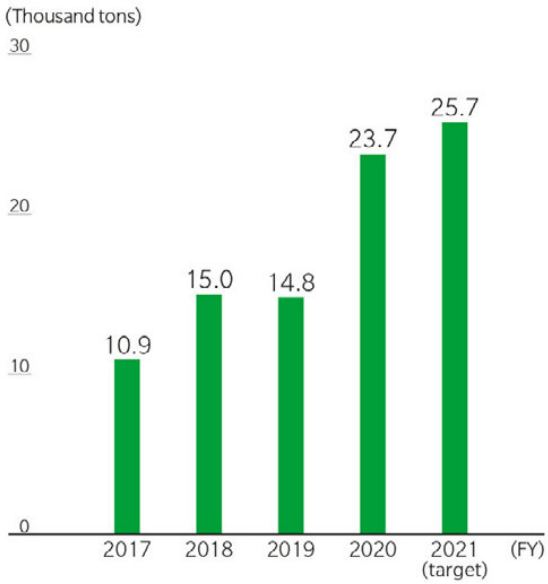
The lineup of new A3 and A4 multifunction printers was completed from fiscal 2019 to fiscal 2020, and made a major contribution to the CO_2 reduction effect during customers' product use.

In fiscal 2021, in line with the new Sustainable Solutions Certification System, Konica Minolta will raise the percentage of sustainable product services of total sales by gradually expanding the certification of products and solutions that help to solve social and environmental issues from an SDG perspective.

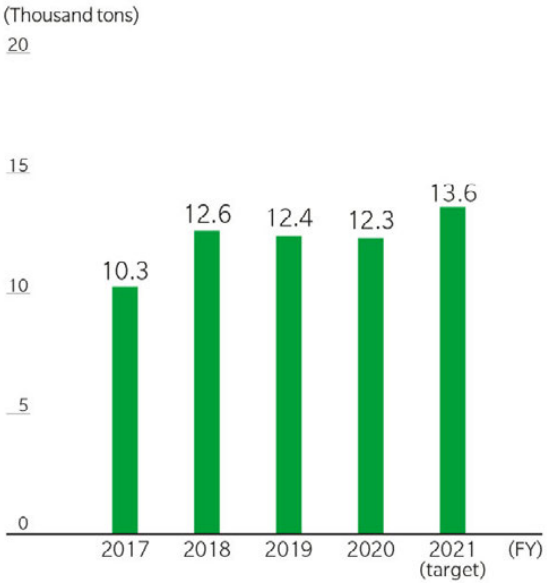
Sales of Sustainable Solutions



CO_2 Reductions Achieved Through Use of KM Products



Amount of Resources Conserved and Renewable Resources Used due to Use of KM Products



Konica Minolta's Approach | **Sustainable Green Products Certification System** | Saving Energy and Preventing Global Warming through Sustainable Solutions | Resource Conservation and Recycling of Products | Management of Chemical Substances in Products | Helping Restore and Preserve Biodiversity through Products | Provision of Product Environmental Information

Sustainable Solutions (Product Initiatives)

Saving Energy and Preventing Global Warming through Sustainable Solutions

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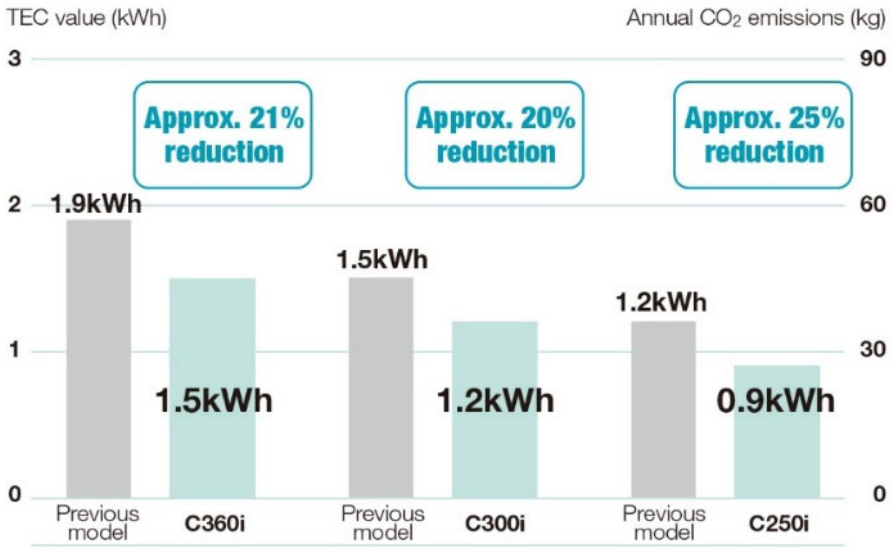
Energy Savings of Office Equipment

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, CO_2 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..

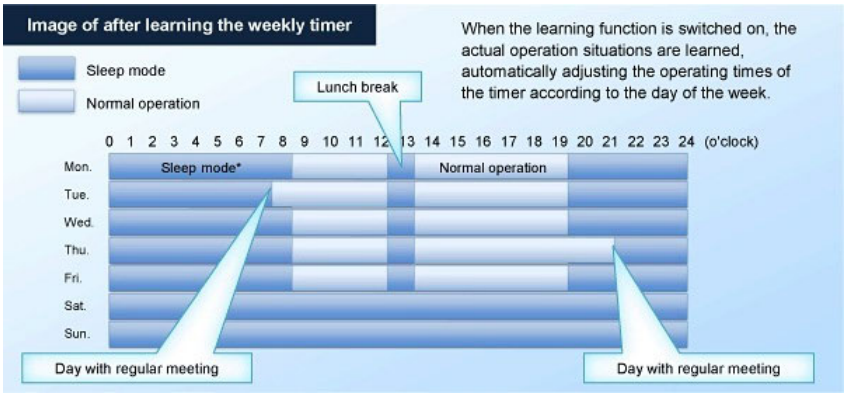
“Print Preview” to Reduce Misprints

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

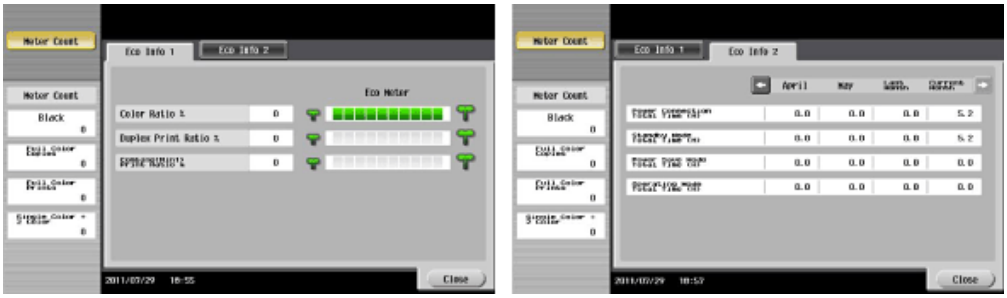
Weekly Timer with a Learning Function

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

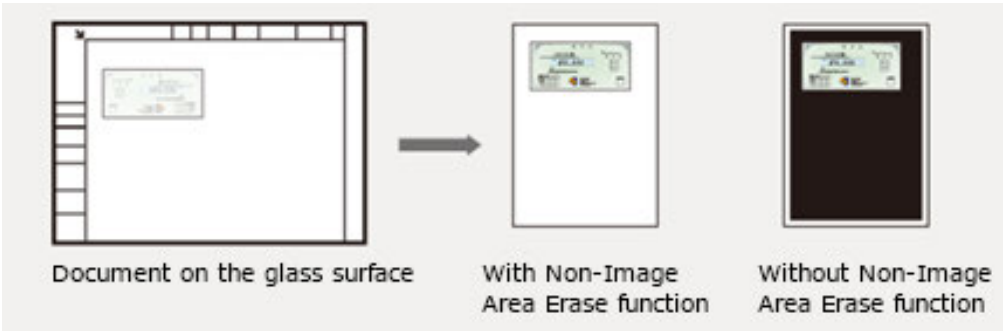
Graphs showing environmental contribution are displayed to increase users' environmental awareness. Reductions for different indicators, such as power consumption and use of toner and paper are displayed on the control panel and can be checked by department and user.



* The above feature is not available on all models.

Non-Image Area Erase function" Saves Toner

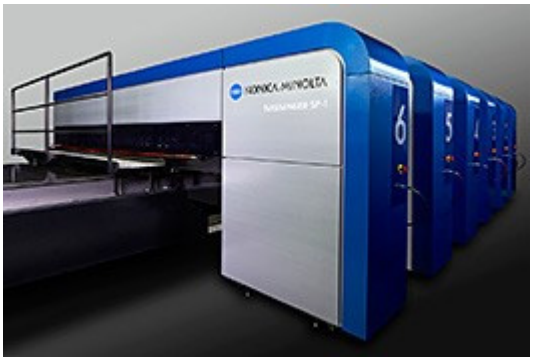
When copying a page from a thick book, the lid often needs to remain open, creating a black area around the document. With this function however, the printed page is automatically detected and the surrounding dark area is eliminated. This reduces unnecessary toner use.



Industrial Inkjets Contributing to Energy Savings in the Textile Printing Process

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.



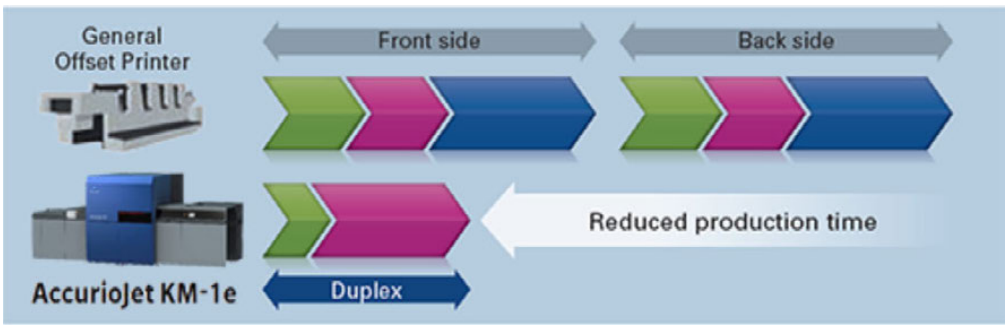
Nassenger SP-1 inkjet textile printer

UV Inkjet Digital Printing Machine That Helps Save Energy During Printing

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



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

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Resource Conservation and Recycling of Products

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Upgraded 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 upgraded recycled plastic and is expanding recycled plastic use in many products.

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.

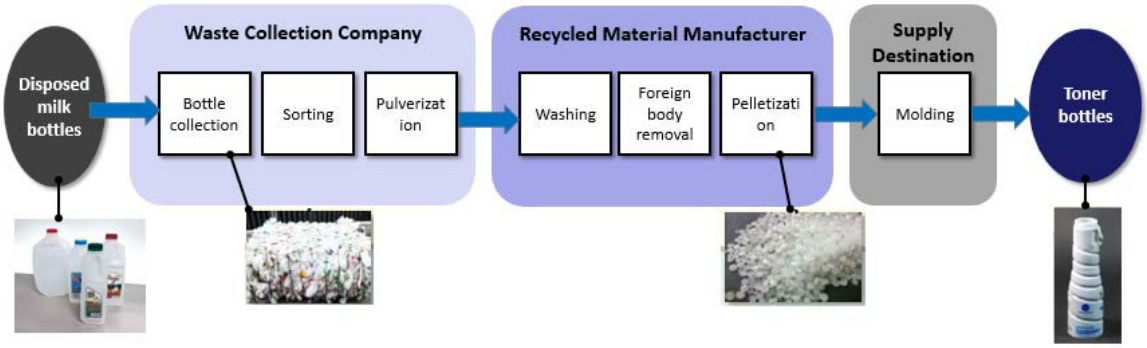
* Percentage of post-consumer recycling (PCR): The percentage of material collected from the market that is used in recycled raw materials.

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

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.

AccurioPress C7100

Longer Product Life for Office Equipment

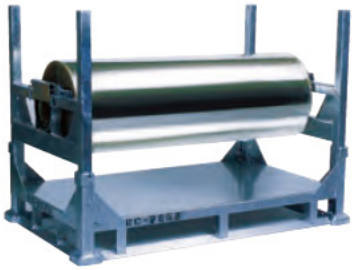
The process unit required for Electrophotographic image forming for MFP has a limited lifespan and sometimes needs to be replaced. Konica Minolta has been working to extend the life of MFP drum units, which is particularly short. With the i-Series it has achieved a 20% longer lifespan compared to a previous 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 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

Industrial Inkjet Printers Helping Reduce Use of Natural Resources in Textile Printing Process

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 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

Sustainable Solutions (Product Initiatives)

Management of Chemical Substances in Products

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Management of Chemical Substances Contained 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 to restricted substances and the expiry of exemptions. Konica Minolta has already complied with the changes and will continue to grasp the trend of 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), there are standards for prohibited and monitored substances used in Konica Minolta equipment products. Konica Minolta's office equipment products do not contain any IEC 62474 Declarable Substances, other than RoHS exempted substances and REACH-SVHC substances.

Prior Check of Substances Contained in Products

In addition to complying with chemical substance regulations in different countries, such as the RoHS Directive and REACH regulations, Konica Minolta has established standards for prohibited and monitored substances used for devices, standards for prohibited and restricted substances used for chemical products, and product safety standards in order to ensure the environmental safety of its products. Based on these standards, the Group verifies the status of parts and raw materials in advance and conducts product assessments right from the development stage, thereby eliminating hazards to the natural environment and people.

Konica Minolta's Approach | Sustainable Green Products Certification System | Saving Energy and Preventing Global Warming through Sustainable Solutions | Resource Conservation and Recycling of Products | **Management of Chemical Substances in Products** | Helping Restore and Preserve Biodiversity through Products | Provision of Product Environmental Information

Sustainable Solutions (Product Initiatives)

Helping Restore and Preserve Biodiversity through Products

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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

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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 labeling system, the Blue Angel Mark is granted to certify products and services that have a small environmental impact. 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 OA equipment that was implemented in 1995 through an agreement between the Japanese and U.S. governments. Almost all of Konica Minolta's office equipment meets the latest Energy Star standards. In fiscal 2020, models with International Energy Star Program certification (*including equivalent models sold in the EU and Japan), accounted for 86.7% of sales of Konica Minolta's imaging equipment products.

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.

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.

Hong Kong Green Label Scheme

This environmental standard and certification mark is run by the Hong Kong Green Council, a nonprofit organization. To be certified, products are required to meet stringent standards concerning the reduction of harmful substances and consideration for environmental impact throughout the product life cycle. In March 2011, Konica Minolta received certification for three color MFP models, and they became the first MFPs to be certified. Since then, the company has been obtaining certification for its products proactively.

Thai Green Label

Konica Minolta products have been awarded the Thai Green Label operated by the Thailand Environment Institute in the areas of printers (TGL-37-R1-12) and photocopiers (TGL-27-R3-13).
The Thai Green Label was systematized in 1993, and it is a requirement under Thailand's Green Public Procurement as a Type I environmental label based on ISO 14024, which started in August 1994.

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 Sustainable Solutions Certification System

Konica Minolta adopted its Green Products Certification System in fiscal 2011 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. The company launched a Sustainable Green Products Certification System in fiscal 2017 and changed the name to Sustainable Solution Certification System in fiscal 2020.

- Sustainable Solutions 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.

- Eco Leaf Environmental Label

EPEAT (Electronic Product Environmental Assessment Tool)

EPEAT has been a comprehensive environmental rating that since 2006 helps identify green computers and other electronic equipment. Imaging equipment was added as a new product category in 2013. The EPEAT is managed by the Green Electronics Council, a non-profit organization based in Portland, Oregon. It ranks products as gold, silver or bronze based on 59 environmental performance criteria considering the life cycle of imaging equipment.
In October 2017, Konica Minolta further expanded the scope of its certifications beyond the United States and Australia and acquired Canada's EPEAT certification. Konica Minolta acquired its first "gold" ranking in Australia's imaging equipment category.
In fiscal 2020, models with EPEAT certification (*including equivalent models sold in the EU and Japan) accounted for 86.7% of sales of Konica Minolta's imaging equipment products.

- Information for EPEAT

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 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.

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.

Global Organic Textile Standard (GOTS)

In the past there were many systems certifying that the fibers in textiles were organic. An international working group was formed to unify those systems and create an international standard, and as a result, the Global Organic Textile Standard (GOTS) was established in 2005. GOTS has also established safety standards for things such as the inks used in textiles. In 2014, Konica Minolta applied for registration of reactive dye ink as ink that meets those standards. It became the first ink registered with GOTS by a Japanese manufacturer.

Material Safety Data Sheets (MSDS)/Safety Data Sheets (SDS)

Konica Minolta provides Material Safety Data Sheets (MSDS) with information such as the substances contained in a product and handling precautions in order to facilitate the safe handling of chemical products. MSDS are also called Safety Data Sheets (SDS) to comply with international standards.

Article Information Sheets (AIS)

Konica Minolta provides documents with information such as the substances contained in a product and its handling precautions in order to facilitate the safe handling of articles that are not covered by MSDS, such as printing products.

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Sustainable Factory (Procurement and Production Initiatives)

Konica Minolta's Approach

Background and Issues

Today's increasingly urgent environmental challenges require society to use energy and resources more efficiently. There is a limit to the degree of environmental impact reduction that can be achieved solely by one company. Leading global companies should increase their positive contribution to global environmental preservation by expanding the focus of their activities to suppliers of parts and materials, throughout the entire supply chain.

Vision

Konica Minolta will work to make its production processes even more efficient while promoting the development and improvement of production technology, and to reduce both costs and environmental impact. The Group will also share its environmental technologies and expertise with business partners, and will work with them to reduce their environmental impacts. Konica Minolta intends to make significant contributions to protecting the environment throughout its supply chain.

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		
	Fiscal 2020	Fiscal 2020	Fiscal 2021	Fiscal 2022
Reduction of CO_2 emissions at Konica Minolta production sites	4	4	10	18
Reduction of waste discharge at Konica Minolta production sites	0.6	0.5	1.0	1.2

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

- Dramatic reduction of environmental impact at suppliers using DX:
  DX Green Supplier activities

(Unit: thousand tons)

KPI	Result	Target		
	Fiscal 2020	Fiscal 2020	Fiscal 2021	Fiscal 2022
Reduction of CO_2 emissions at suppliers (contribute to Carbon Minus status)	1.5	1.3	3.1	4.8

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

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Sustainable Factory (Procurement and Production Initiatives)

Sustainable Factory Certification System

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Initiatives in Production

Konica Minolta carries out its Green Factory activities with the aim of reducing environmental impact and costs simultaneously. In addition to the initiatives it has taken to reduce energy and conserve resources, Konica Minolta has been employing its own Excellent Green Factory certification since 2016. The certification system includes a requirement to reduce CO_2 emissions from external sources by an amount equivalent to 10% of a factory's own emissions by working in unison with suppliers, customers and communities. All of Konica Minolta's manufacturing sites have met these certification standards.
Furthermore, in fiscal 2020, Konica Minolta started the Sustainable Factory certification system to expand the introduction of renewable energy even further and include efforts to address social issues, such as CSR procurement, in its indicators. In this way, Konica Minolta is working to contribute to the environment and help solve social issues.

Sustainable Factory Certification Standards

		Chemical plant site	Assembly/high load site
Environmental Impact reduction Environmental impact reduction standards to be achieved by Konica Minolta production sites*	CO_2emissions	3% reduction annually (9% over 3 years)	2% reduction annually (6% over 3 years)
	Waste discharge	2% reduction annually (6% over 3 years)	2% reduction annually (6% over 3 years)
Stakeholders Helps to solve environmental issues for the broader society (stakeholders) by using environmental technology expertise Konica Minolta acquired at its own production sites. Reduces stakeholder CO_2 emissions by an amount equivalent to the actual CO_2 emissions of the site.	CO_2 emissions at customers, suppliers and broader society (Amount of carbon minus contributions)	1% reduction annually (3% 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: • VOC reduction • Biodiversity (water, soil, marine plastic, etc.) • CSR procurement • Expanding introduction of renewable energy, etc.	

* For sites with an environmental impact that is less than 1% of the Konica Minolta total, the target is 1% reduction annually (3% over 3 years).

Fiscal 2020 Sustainable Factory Activity Results

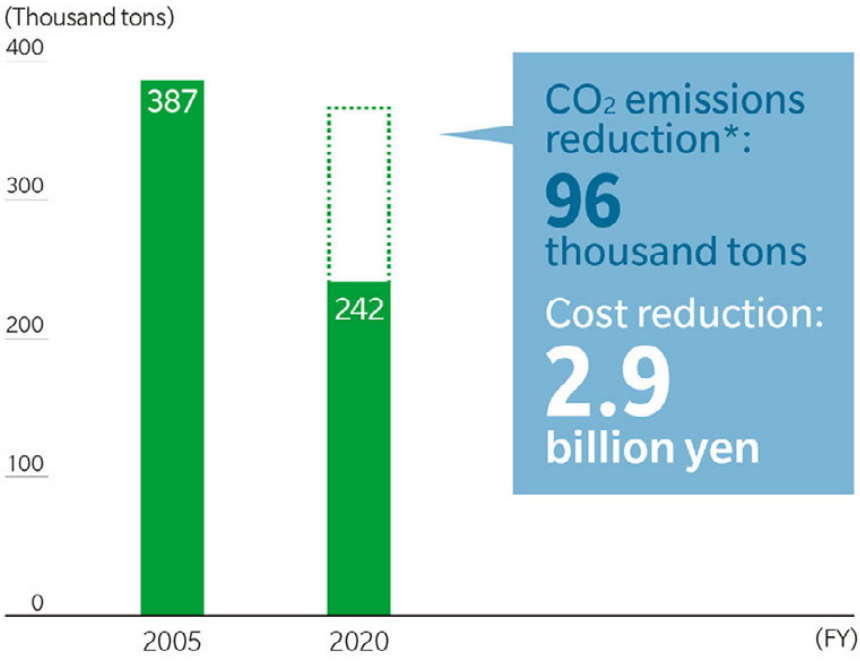
In fiscal 2020, Konica Minolta launched a new Sustainable Factory certification system and also held remote meetings to confirm the sites at which Excellent Green Factory standards had been met in fiscal 2019. Normally, the executive officer in charge of sustainability would visit the local factory and confirm implementation of these measures, but local visits were not possible due to the impact of COVID-19. Although in-person meetings to confirm achievement could not be held, Konica Minolta used various other ways of holding meetings to assess factories' initiatives and guide them to the next activity. Ultimately, by using DX to establish live feeds in real time with local factories, Konica Minolta was able to hold remote meetings to confirm conditions and verify achievements.

Explanations of activities from a factory remotely.

Konica Minolta Business Technologies (Wuxi) Co., Ltd. earned the Excellent Green Factory certification in December 2020

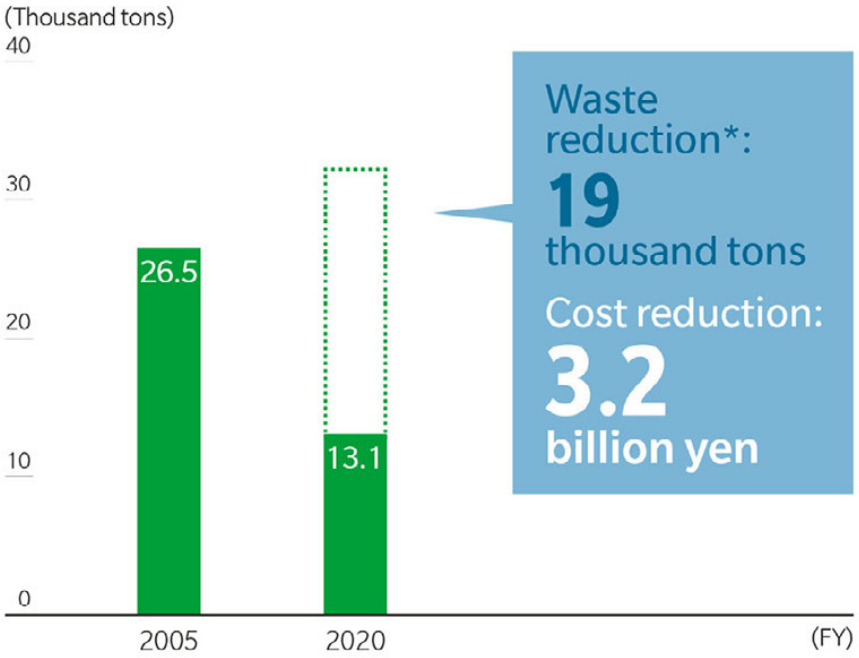
As a result of these initiatives, in fiscal 2020, CO_2 emissions at the production stage were cut by 96 thousand tons, waste substances were reduced by 19 thousand tons, and cost-cutting had a total effect of 6.1 billion yen.

CO_2 Emissions Reduction Effect during Production



*The amount of reduction is calculated by subtracting the actual fiscal 2020 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 2020 emissions amount from the estimated amount of emissions that would be produced if environmental conservation activities had not been implemented since fiscal 2005.

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Sustainable Factory (Procurement and Production Initiatives)

Saving Energy and Preventing Global Warming in Production Operations

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 CO_2 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 CO_2 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

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 CO_2 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. 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. In fiscal 2020, the renewable electricity usage ratio[*1] increased to 6.5%. At Konica Minolta Business Technologies (Wuxi) Co., Ltd., one of Konica Minolta's MFP production sites in China, 100% of the energy consumed has come from renewable energy sources since 2020. In January 2020, the company installed a solar power generating system (25,000 m^2 footprint, 1.7 MW power generating capacity), accounting for about 22%[*2] of power usage and, at the same time, it switched the source of the remaining power to power purchased with green power certificates.[*3] As a result, the manufacturing site now sources 100% of its energy from renewable sources. It is the second Konica Minolta Business Technologies facility in China to achieve this milestone, following the Dongguan site in January 2019. In addition, in February 2021 Konica Minolta Mechatronics built a new factory in Toyokawa, Aichi Prefecture. A solar power generation system with a footprint of 2,632m^2 and a power generation capacity of 500kW was installed at completion, and it is intended to provide approximately 17% (estimate) of electricity used.
Konica Minolta will adopt the optimal method for each world region, starting with manufacturing sites such as the aforementioned site in China, in order to strengthen its efforts to expand energy procurement from renewable sources.

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

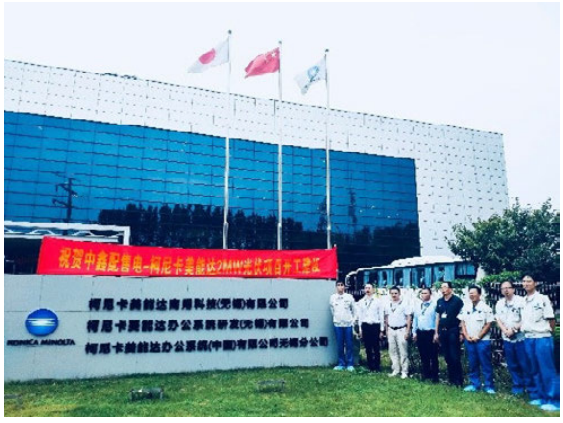
*2 Achievements from April 2020 to March 2021

*3 I-REC certification that can be used domestically in China (International Renewable Energy Certificate)

RE100 | CLIMATE GROUP | CDP

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.

Examples of Initiatives

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.

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 2019, the share of electricity consumption from renewable energy sources reached 100%. These measures have greatly contributed to the Excellent Green Factory Certification System, the Konica Minolta accreditation system launched in fiscal 2016.

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

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.

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.

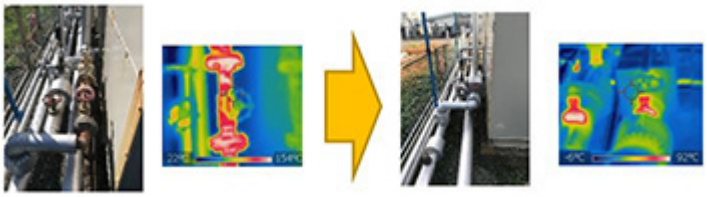
Pursuing Energy Savings with High-Efficiency Air Conditioning Systems and Other Energy-Saving Measures (Konica Minolta Business Technologies (Malaysia) Sdn. Bhd.)

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. Filming the pipes using thermography made it possible to identify the areas with significant dissipative heat loss, and by identifying the areas that required countermeasures, thermal insulation was installed in a total of 13 areas in fiscal 2020.



TOPIC: 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 CO_2 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-NOx combustion technology.


Boiler

Primary Advantage of Installation
CO_2 reduction: CO_2 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 CO_2 emissions reduction plan.

TOPIC: 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

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Sustainable Factory (Procurement and Production Initiatives)

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, and with parts suppliers
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. It also does not dispose of packaging cushioning, but instead returns it to suppliers for reuse, in order to reduce waste discharge. 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

Working on reducing chemical risks based on the concept of the precautionary principle

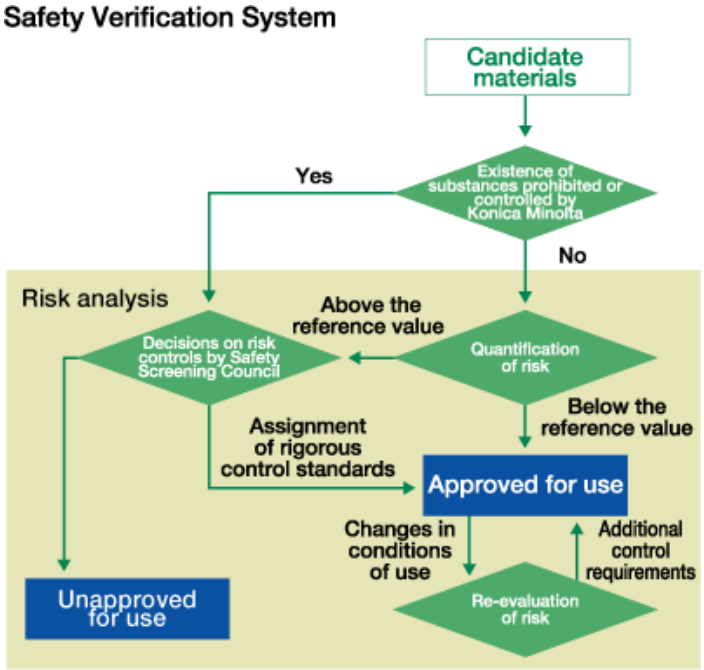
There is international consensus on the need for companies that manufacture and use chemical substances to take steps to minimize the adverse effects of chemicals, not only on human health, but also on the environment. Based on this shared perception, many countries around the world are revising their 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.

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

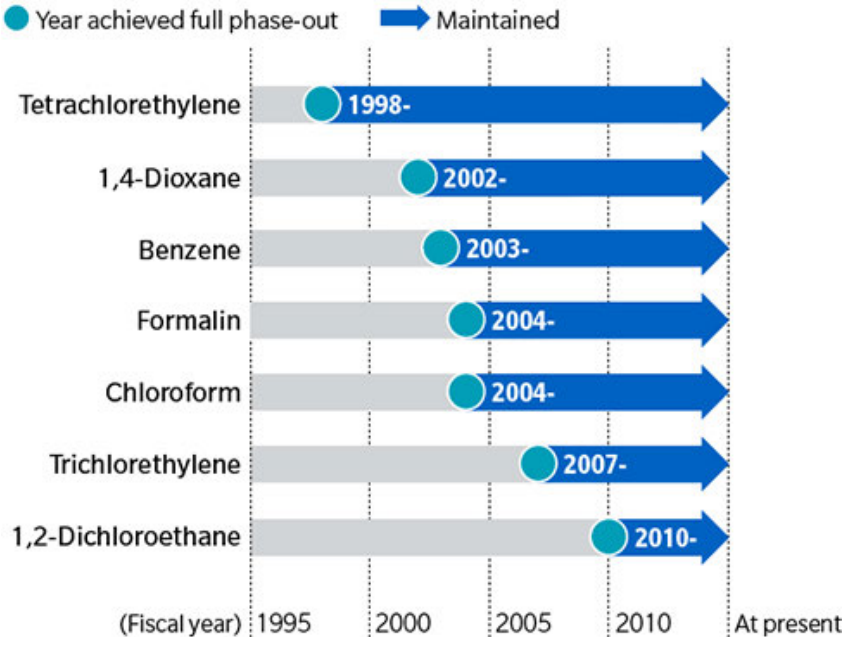
	Hazard coefficient	Example of substances
Substances that pose a risk to human health Substances that pose a risk to ecosystems Substances that pose a risk of atmospheric pollution	×100	1, 2-dichloroethane
	×10	dichloromethane, ethyl acrylate, n-heptane
Substances that pose a risk of having an indirect 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.

Substances for which Konica Minolta achieved a full phase-out



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. As of March 2014, it had confirmed that there are no health risks due to exposure. Going forward, it will continue to maintain and manage this situation while systematically removing 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. It also reports the condition of storage to the government in accordance with the law. Since 2007, it has been commissioning the disposal of wastes with high concentrations of PCBs to JESCO.* From here on the Group will continue to dispose of the waste as soon as possible according to JESCO's capacity to take in batches. Since fiscal 2012, it has also been gradually disposing of waste with low concentrations of PCBs, in light of the certification status for treatment.

* JESCO: Japan Environmental Storage & Safety Corporation

Condition of Storage of PCB Waste in Japan (March 31, 2021)

Stored items	Unit	Quantity Figures in parentheses indicates low-concentration PCBs
Transformers	Units	4 (4)
Capacitors	Units	8 (8)
Fluorescent ballasts	Units	13 (0)
Other devices	Units	2 (2)
PCB oil	kg	0 (0)
PCB pollutants	kg	941 (916)

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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 Sustainable Factory Certification System for comprehensive evaluation of the environmental activities of its production sites. In April 2011, it established Guidelines for Biodiversity Preservation. Beginning in fiscal 2020, Konica Minolta included sustainable factory guidelines for water resources and biodiversity as one of its standards for the Sustainable Factory Certification System, aiming to ensure its factories more broadly meet society's expectations. 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.

Sustainable 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 work to reduce water use under the sustainable factory guidelines for water resources and biodiversity, which are part of the Sustainable Factory Certification System. In fiscal 2020, a water intake reduction target of 413,000m^3 compared to fiscal 2015 was set. As a result of initiatives taken by production sites, water intake was reduced by 415,000m^3 compared to fiscal 2015 levels.
Konica Minolta's key production sites are also reviewing their use of water in plants and working to make reductions. These include measures to reduce 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. In addition, 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. 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 World Resources Institute's (WRI)*1 Aqueduct*2 to conduct a comprehensive risk assessment on usage of water resources at the Group's production sites and R&D sites and major suppliers around the world. Every year since, the results have confirmed that the Group has no sites with an extremely high 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 2020 was 70,000m^3 and water consumption was 11,000m^3. With a target of reducing water intake by 200m^3 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 800m^3 in fiscal 2020.
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 Supplier Code of Conduct, based on its CSR procurement program.
In addition, Konica Minolta has set standards for procuring copy paper that is environmentally friendly. Konica Minolta Japan, Inc., a sales company in Japan, has established the PPC Paper Purchase Standards, which have been implemented since 2007. The Standards stipulate that copy paper supplied to customers should be procured by taking into account the impact of forest destruction and degradation on the living environments of animals, plants and people.

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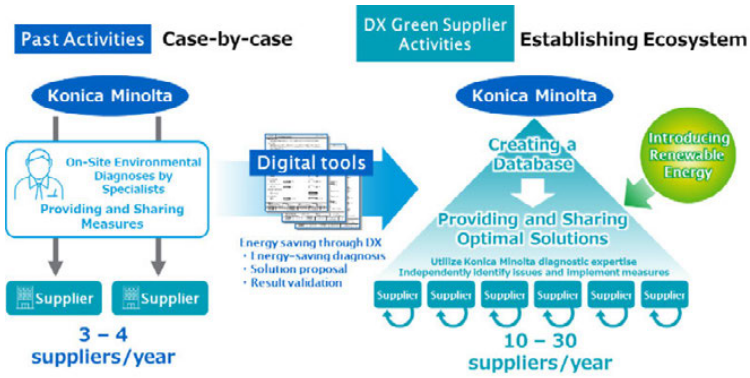
Overview of the Activities

Konica Minolta conducts Green Supplier activities to reduce both environmental impact and operating costs by providing suppliers with environmental technologies and expertise that it has developed via its Sustainable Factory activities. Konica Minolta's environmental experts propose suggestions for improvement, outlining cost reduction benefits, investment rationale, and other information. They then cooperate with suppliers as they take action to reduce their environmental impact.

In fiscal 2020, Konica Minolta started using an energy conservation diagnosis tool it built by digitalizing the expertise of energy conservation professionals, and launched its new DX-Green Supplier Activities, which do not involve in-person visits.



Fiscal 2020 Activity Results

In fiscal 2020, DX-Green Supplier activities were initiated with six new companies, bringing the total number of companies Konica Minolta is working with to 29, including those involved with the previous Green Supplier activities. Of these, 14 companies had achieved their Green Supplier activity targets, which are equivalent to the level of the Konica Minolta Sustainable Factory Certification Standards.

Green Supplier Activity Targets

Issue	Management Index	Target (2.5 years after activity launch)
Prevention of global warming	CO_2 emissions	5% reduction (compared to the last year before activity launch)
	Energy costs	5% reduction (compared to the last year before activity launch)
Waste reduction	External discharge quantity	12.5% reduction (compared to the last year before activity launch)
	Material / waste costs	Cost reduction greater than waste expenses
	Final disposal rate	0.5% or less
Reduction of chemical risk	Reduction of chemical risk	Compliance with chemical substance guidelines

Companies That Achieved Green Supplier 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

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 CO_2 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.

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 CO_2 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 program 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 CO_2 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.

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Implementing green procurement to assess the chemical constituents of parts and components and give preference to those with the least environmental impact

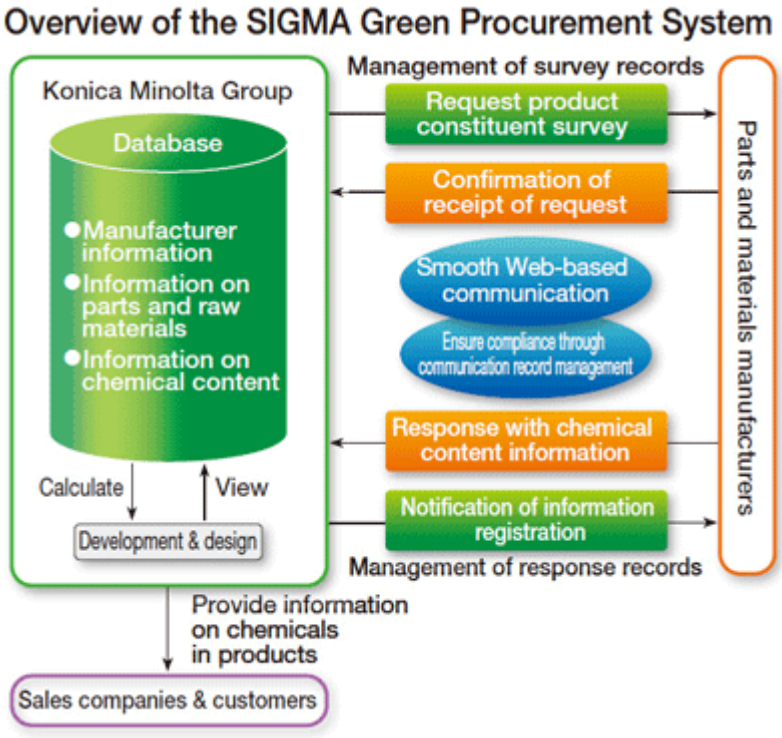
Green Procurement System

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 holds briefings on trends in environmental laws and regulations for 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.



Main Features

- Japanese, English and Chinese language support
- Supports a standard chemical substance survey (chemSHERPA)
- Separates the procedures for checking for prohibited substances and for 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 implemented Environmental Collaboration to establish strong partnerships through on-site evaluations and educational support for suppliers in order to strengthen suppliers' environmental management.
This is an initiative to help suppliers develop independent environmental management. Konica Minolta employees go directly to suppliers' factories and provide guidance based on assessment results for the management of chemical substances as well as to provide guidance in document management, including for measurement results and materials information.

Every year Konica Minolta provides education to suppliers' employees and certifies those who pass as internal evaluators for suppliers. In addition, each year the Group also conducts e-Learning for new evaluators as well as paper-based follow-up education for existing internal evaluators.

› Konica Minolta's Approach | › Excellent Green Factory Certification System
› Saving Energy and Preventing Global Warming in Production Operations
› Resource Conservation and Recycling in Production Operations
› Reduction of Chemical Substances Risks in Production
› Addressing Biodiversity in Production Activities (Consideration of Water Resources and Wastewater, Proper Management of Greenery at Factories)
› Green Supplier Activities | › **Green Procurement System**

Sustainable Marketing

Konica Minolta's Approach

Konica Minolta's Approach | Supporting Customers to Solve Their Environmental Issues
Providing Services to Solve Customers' Environmental Issues
Reducing Environmental Impact in Sales Activities | Reducing CO2 Emissions from Distribution
Reduction of Use of Packaging Materials | Product Recycling

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.

1) Support customers in reducing energy use and CO_2 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 CO_2 reductions achieved by Environmental Digital Platform solutions and explore counting the amount reduced by the solution towards our Carbon Minus contributions (CO_2 reductions at customers, business partners and the broader society).

Sustainable Marketing

Supporting Customers to Solve Their Environmental Issues

Konica Minolta's Approach
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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 Sustainable 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 2020 Activity Results

Konica Minolta provided environmental seminars and lectures in Japan to an audience of 586 people from 377 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 133 companies to exchange views on the environment. In these sessions, the Company heard about customers' environmental issues and introduced practical examples of Konica Minolta's environmental work.
In China, where environmental legislation is rapidly becoming more rigorous, Konica Minolta participated in the China International Import Expo (CIIE 2020) and introduced its approach to environmental management, which aims to solve environmental issues in tandem with business plans. In addition, Konica Minolta introduced specific examples of its environmental expertise, such as efforts to conserve energy and resources in its plants and processing technology for recycled resin. Subsequently, the Company visited interested customers and introduced practical examples of how Konica Minolta is helping to solve environmental issues and exchanged opinions.

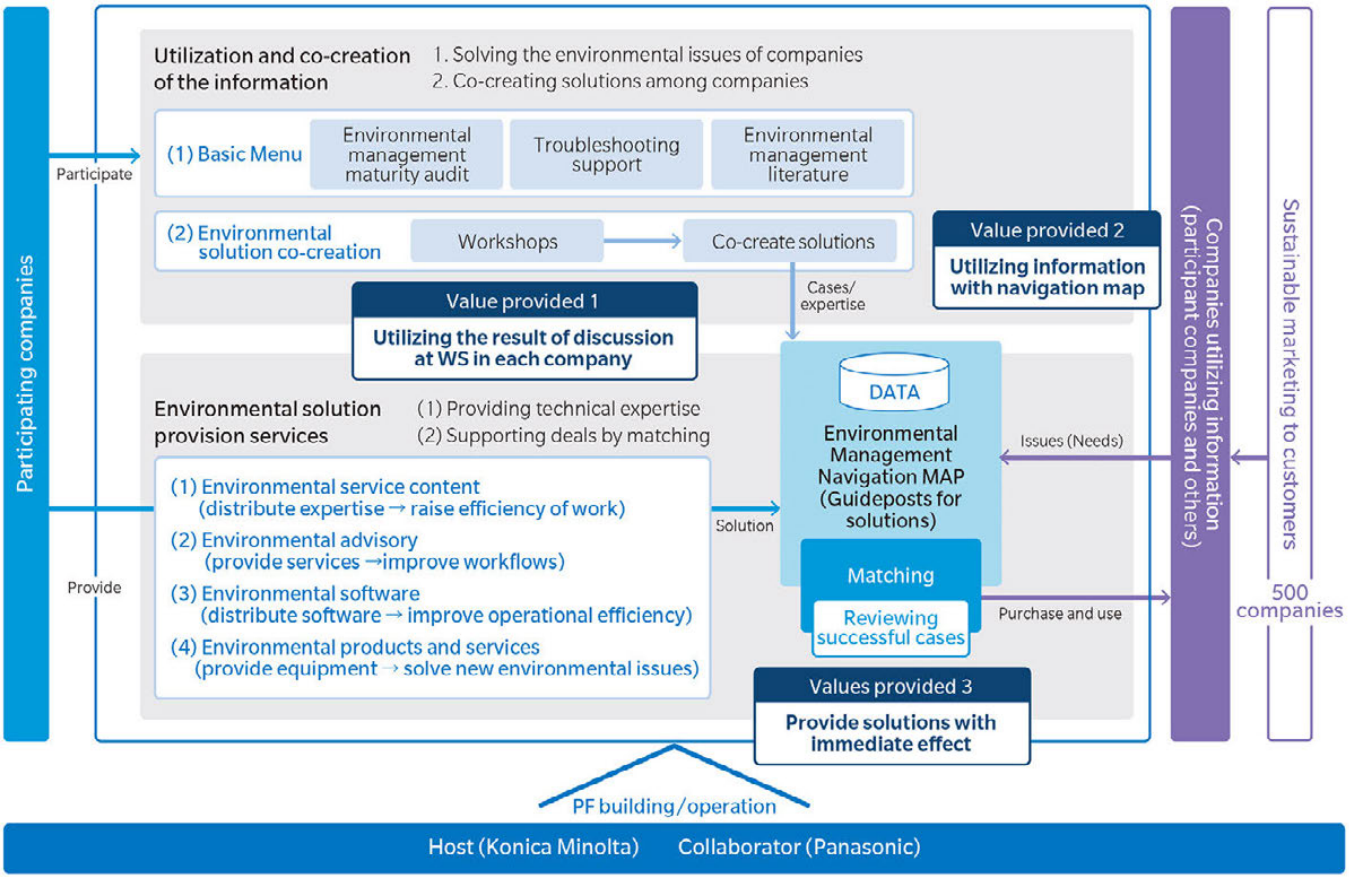
Building the Environmental Digital Platform

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 1,000 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 39 companies participating as of April 2021. 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.

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 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. 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.



Digital Environmental Platform

Example of Environmental Digital Platform Content
biz-Library : Environmental management Support Solution

Konica Minolta believes that digitizing and sharing the environmental management expertise it has accumulated with even more companies will dramatically increase its contribution to the environment. It has provided an online content service, biz-Library (environmental management), since fiscal 2016. This service provides videos and documents featuring practical case studies from Konica Minolta. The content targets seven challenges faced by many companies: (1) formulating environmental strategy, (2) responding to revised environmental ISO standards, (3) energy saving and cost reduction in factories, (4) management of chemical substances, (5) efficient use of resources and cost reductions in factories, (6) methods of calculating Scope3 CO_2 emissions, and (7) waste management by companies. Customers can use the manuals and tools actually implemented in Konica Minolta, allowing them to promote effective and efficient environmental impact reduction activities in their companies. These contents are shared on the Environmental Digital Platform mentioned above.

Efficient use of resources and cost reductions in factories

Methods of calculating Scope 3 CO_2 emissions

Waste management by companies

Voice of a Customer | Toyota Boshoku Corporation

At Toyota Boshoku Corporation, we have a 2050 Environmental Vision that lays out six environmental challenge goals, such as bringing the Group's CO_2 emissions and life-cycle CO_2 emissions to zero. We are aiming to bring together all stakeholders to create a sustainable environment in which the world's children can all live in happiness.
We began an exchange with Konica Minolta's environmental division in 2017. Conserving energy at our factories was an issue that we had in common as we expanded our businesses globally. We began by sharing our strengths and combining our energy conservation self-diagnostic tools and succeeded in developing an efficient tool for use on site that is easier to apply. Moreover, learning techniques for making the effects visible to raise motivation on site was very helpful. We were also able to deepen discussion with many participating companies across industries by participating in the Environmental Digital Platform. We are confident that we can accelerate our efforts to achieve Toyota Boshoku's 2050 Environmental Vision by sharing and co-creating knowledge on how to solve pressing issues, such as introducing renewable energy.

Konica Minolta's Approach | Supporting Customers to Solve Their Environmental Issues
Providing Services to Solve Customers' Environmental Issues | Reducing Environmental Impact in Sales Activities
Reducing CO_2 Emissions from Distribution | Reduction of Use of Packaging Materials | Product Recycling

Sustainable Marketing

Providing Services to Solve Customers' Environmental Issues

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Support to Reduce Environmental Impact and Innovate Work Styles

Enhancing the ability to provide solutions through actual practice in Konica Minolta's own offices—comprehensive solutions for work space design

Konica Minolta offers office solution services that contribute to work style reforms, on top of reducing environmental impact, through optimization of office environments. When Konica Minolta Japan, Inc. moved its head office, it took a variety of measures in its new office in order to verify for itself the effects of its solutions and also to enhance its ability to propose solutions to customers by demonstrating actual practice. This practical experience was used to create comprehensive services with office space design solutions such as the "Design Your Time!" initiative.

For example, it implemented wide-ranging office solutions such as the optimal positioning of MFPs, the reduction of printouts and document storage space through document digitization, the reduction of business trips and transportation through the adoption of teleconferencing, and the increase of information management sophistication using the cloud environment.

These solutions led to reductions in environmental impact and costs, including a 24% reduction in copy paper printouts, a 44% reduction in electricity consumption, and a 44% reduction in CO2 emissions. They also freed up more than 200 square meters of space within the office. Additionally, work style improvements stimulated communication among employees, creating a highly productive office environment marked by on-target communication. Through the use of telework, CO2 emissions from commuting are reduced, along with total travel and transportation expenses. By providing flexible and convenient work environments, employee retention rates can be increased and excellent human resources can be secured. What is more, this new office is used as a live showroom that customers can experience.

Support for Environmental Impact Reduction That Addresses Customers' Environmental Issues and Concerns

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.
(Available in France, Germany, United Kingdom, Austria, Belgium, the Netherlands, Sweden, and Switzerland)

Clean Planet Program

Konica Minolta collects used consumables from its customers via the Clean Planet recycling program in the United States and Europe.*
Using a portal site, customers can solve their printer cartridge recycling problem by ordering a collection box and returning it as soon as the box is full.
The recovered consumables are material-recycled using the latest technology in cooperation with a leading recycling company, Close the Loop, to maximize the collection of secondary raw materials. No incineration or landfills are used.
*In Europe the program has been launched in Belgium, the Netherlands and Norway, and there are plans to expand to other countries.

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.

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.

Sustainable Marketing

Reducing Environmental Impact in Sales Activities

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Reducing CO_2 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 CO_2 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 CO_2, 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.

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 CO_2 generated when participating in exhibitions and trade fairs for the purpose of sales promotion, and to achieve carbon neutral sales activities.

Adoption of Renewable Energy

Renewable Energy Initiatives

Konica Minolta is generating power using renewable energy at multiple sites. 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 Austria, Germany, and the UK had previously switched to renewable energy, and in fiscal 2020 this effort made further progress, with sales companies in Belgium, France, Lithuania, and the Netherlands introducing renewable energy. 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)

Carbon Offsetting Service

Carbon Offsetting for Office and Production Printing

Enabling carbon neutrality is a carbon-offsetting service that uses emissions credits to offset CO_2 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 CO_2 emissions throughout the product lifecycle. In addition to these activities, the company uses carbon offsetting for CO_2 emissions from commuting and business trips as well as events such as international exhibitions. It has offset a total of over 47,000 tons of CO_2 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.

Environmental Contribution Activities and Initiatives to Raise Employees' Environmental Awareness

"Sustainability Week" to Raise Employees' Environmental Awareness

Konica Minolta Business Solutions France holds a Sustainability Week that encourages eco-friendly initiatives and participation in charitable organizations, in an effort to raise employees' awareness of sustainability. Enabling contact with various initiatives, such as education about environmental policies, the sale of honey harvested by the company, the use of eco-friendly vehicles (electric cars), and appropriate waste disposal, this event is an opportunity for each and every employee to gain even greater awareness about the creation of a sustainable society.

Internal poster for Sustainability Week

Beekeeping with the Aim of Raising Awareness of Biodiversity

Konica Minolta Business Solutions France has greened the roof of its building in Paris and set up beehives for beekeeping. People in France traditionally exhibit an understanding of beekeeping even in a densely populated city such as Paris.
The honeybees raised in these beehives help pollinate many kinds of plants such as fruit trees, vegetables, and flowers, enriching the biodiversity of the surrounding area.
Moreover, the harvested honey is bottled and sold to employees, with the proceeds donated to a charity fund established by Konica Minolta Business Solutions France. The fund promotes cultural, artistic, and sporting activities for people with disabilities throughout the year. Through this initiative, the company is raising employees' awareness of the preservation of biodiversity while also contributing to the community.

Beekeeping on the roof

Supporting the Green Marathon, the Objective of Which Is Reforestation

The Green Marathon has been held in Rennes, France since 2011 with the objective of reforestation in Ethiopia. In an endorsement of this goal, Konica Minolta Business Solutions France has continued to support the marathon since its inception. The marathon intends to contribute to society in various ways, including the spirit of sport and the protection of the natural environment. It conducts an initiative to plant one tree per kilometer run by each participant, in order to support the restoration of forests. In 2019, the marathon resulted in the planting of nearly 120,000 trees. Since 2012, the cumulative distance run by participants has exceeded 840,000 kilometers, and a tree has been planted for every one of those kilometers.

Green Marathon

Raising Environmental Awareness Through Volunteering

Every year, Konica Minolta Business Solutions U.S.A. raises the sustainability awareness of its employees by offering them the opportunity to participate in volunteer activities with non-profit organizations. For the past five years, it has supported the non-profit Mahwah Environmental Volunteers Organization (MEVO) through volunteering and donations. As part of MEVO's “Seeds of Change” program, it supports a paid summer internship for a high school student to work on a farm and learn about sustainability and community leadership. The company also provide teams of employee volunteers two or three times a year. The volunteers help plant and harvest crops while learning about the local environment, as well as sustainable gardening and agriculture.
Konica Minolta Business Solutions U.S.A. employees also participate as volunteers with the New York-New Jersey Trail Conference, where they help to keep local parks, hiking trails and forests sustainable and accessible to the community. In 2020, in cooperation with the Arbor Day Foundation, employees are contributing to global reforestation activities by planting 10,000 trees in areas where forest fires have recently occurred.


New York/ New Jersey Trail Conference


Employees participating in Mahwah Environmental Volunteers Organization (MEVO)

Sustainable Marketing

Reducing CO_2 Emissions from Distribution

Konica Minolta's Approach | Supporting Customers to Solve Their Environmental Issues
Providing Services to Solve Customers' Environmental Issues
Reducing Environmental Impact in Sales Activities | Reducing CO2 Emissions from Distribution
Reduction of Use of Packaging Materials | Product Recycling

In order to reduce CO_2 emissions associated with distribution, transportation must be streamlined and means of transportation with little environmental impact must be chosen. Konica Minolta is reducing CO_2 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 CO_2 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 CO_2.

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 CO_2 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 reducing CO_2 emissions from its distribution processes by restructuring its logistics facilities both in Japan and outside of Japan.
In fiscal 2020, 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 joint transportation with other companies, thereby strategically reducing CO_2 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 the suburbs of Wuxi City in Jiangsu, China. This helps to reduce CO_2 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. These initiatives result in high-quality delivery and installation operations that raise the satisfaction of customers and help reduce CO_2 emissions.

Reducing CO_2 Emissions Associated with Shipping by U.S. Sales Company

Konica Minolta Business Solutions U.S.A., Inc. is a member of the SmartWay program at 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

Konica Minolta's Approach | Supporting Customers to Solve Their Environmental Issues | Providing Services to Solve Customers' Environmental Issues | Reducing Environmental Impact in Sales Activities | **Reducing CO_2 Emissions from Distribution** | Reduction of Use of Packaging Materials | Product Recycling

Sustainable Marketing

Reduction of Use of Packaging Materials

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Reduction of Use of Packaging Materials | Product Recycling

Konica Minolta is reducing packaging material usage by optimizing shapes and recycling.

Major Initiatives

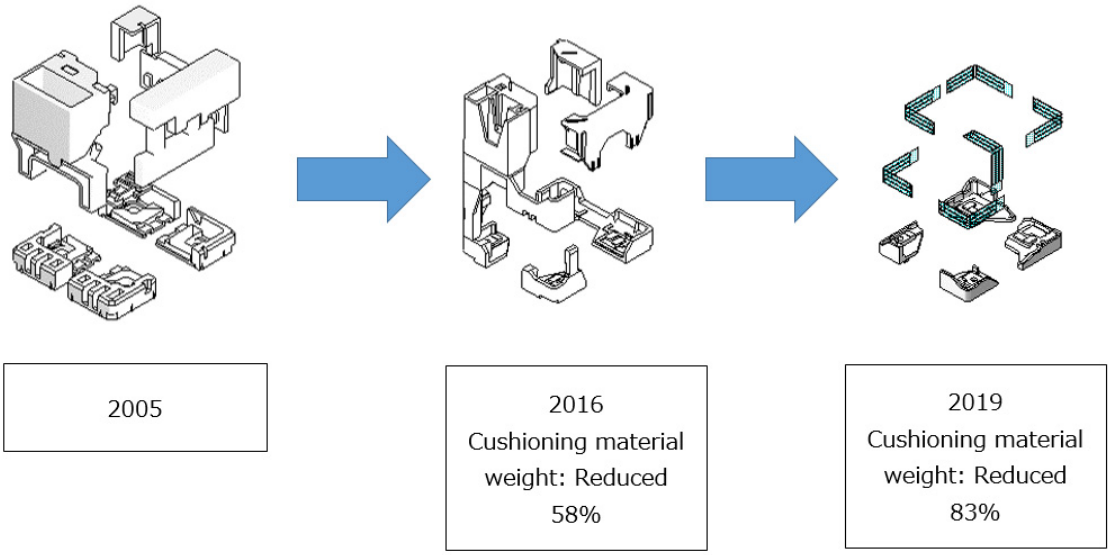
Reduction of Use of Packaging Materials

Konica Minolta has developed new buffer materials, in addition to techniques to optimize conventional buffer materials, for its multi-function peripherals (MFPs) for offices and production printing machines, thereby substantially reducing the use of packaging materials. In order to confirm the actual transportation environment, the development, production and sales departments worked together to conduct an experiment in 2016. Products were sent from production sites in China on various routes by ship, truck and railway to sales companies worldwide. After arrival, they were checked to see what impact they underwent during shipment. Using these measurements as a reference, the company reexamined its packaging design concept and succeeded in streamlining the cushioning
material while maintaining the equivalent shock resistance. This greatly reduced the amount of styrene foam used. 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 CO_2 emissions during distribution.
The various initiatives undertaken in 2020 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 CO_2 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.

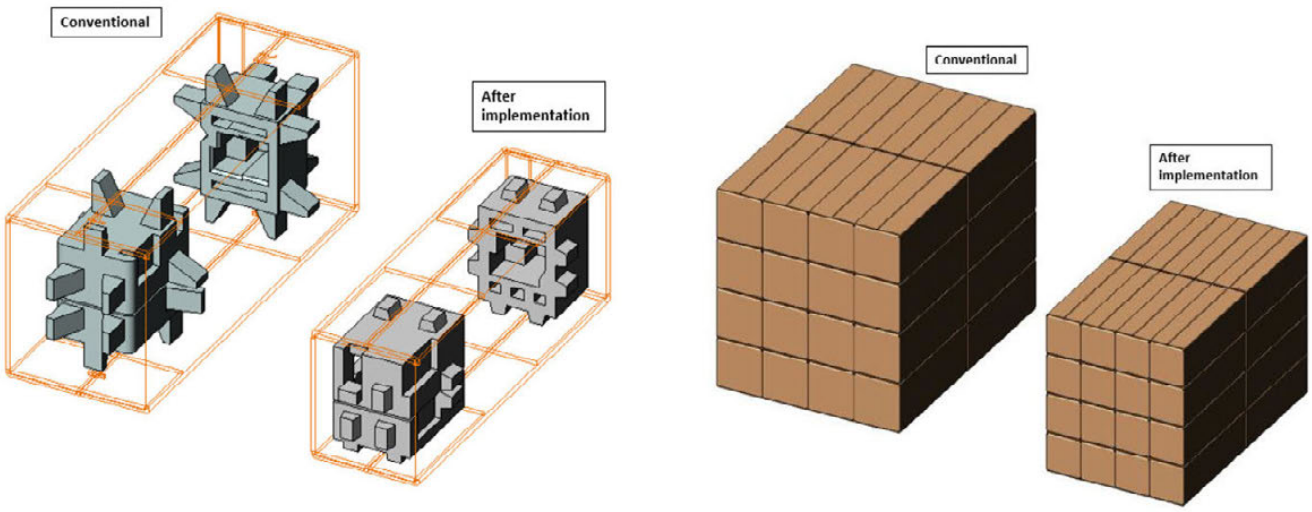
*The new air cushioning material won various awards from the Japan Productivity Center. It also won the President's Award, one of the top-ranked Japan Star awards, at the Japan Packaging Contest 2019 sponsored by the Japan Packaging institute. In fiscal 2020, it won the 44th Kinoshita Award in the improvement and rationalization category.

GOOD PACKAGING

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

Sustainable Marketing

Product Recycling

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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 2019, Konica Minolta sold a total of 97,800 tons of office equipment worldwide. Meanwhile, 14,200 tons of end-of-life office equipment were recovered by major sales companies in Japan, China, the United States, and Europe. Of this amount, 14,100 tons of material were recycled.


Recycling process at a designated contractor

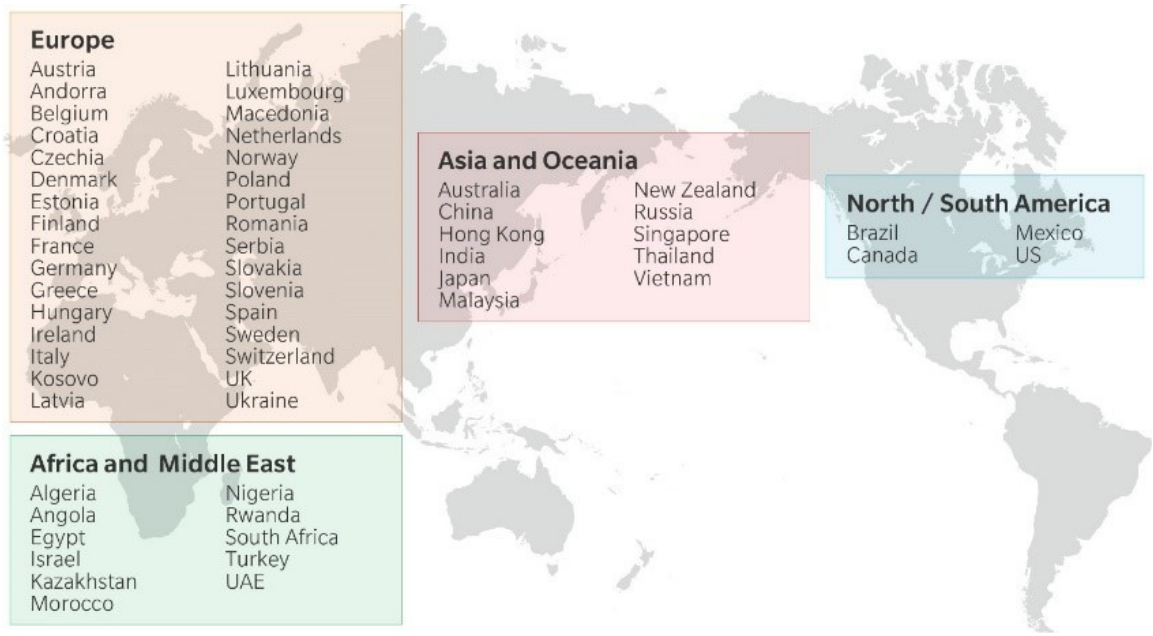
In addition, Konica Minolta has received approval from Japan's Ministry of the Environment to dispose of copiers, MFPs and printers that it has sold based on a special system for wide-area treatment of industrial waste. Konica Minolta operates a fee-based recovery program for collecting and recycling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

Konica Minolta offers systems for the free-of-charge recovery and recycling of used toner cartridges for laser printers over 20 countries including in Europe, the U.S., and Japan. In the U.S., this free-of-charge recovery system has been expanded to include used toner bottles for MFPs. In Australia, Konica Minolta also offers its own recovery and recycling programs.

- To the Clean Planet Program in the U.S.
- To the Clean Planet Program in Europe



Areas Where Toner Cartridge Recovery and Recycling System Has Been Conducted

Machines collected in Japan in fiscal 2020

- Estimated collection rate: 77%
- Recycling rate: 99%

See Environmental Data in ESG Data for more information on product recovery and recycling.

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.

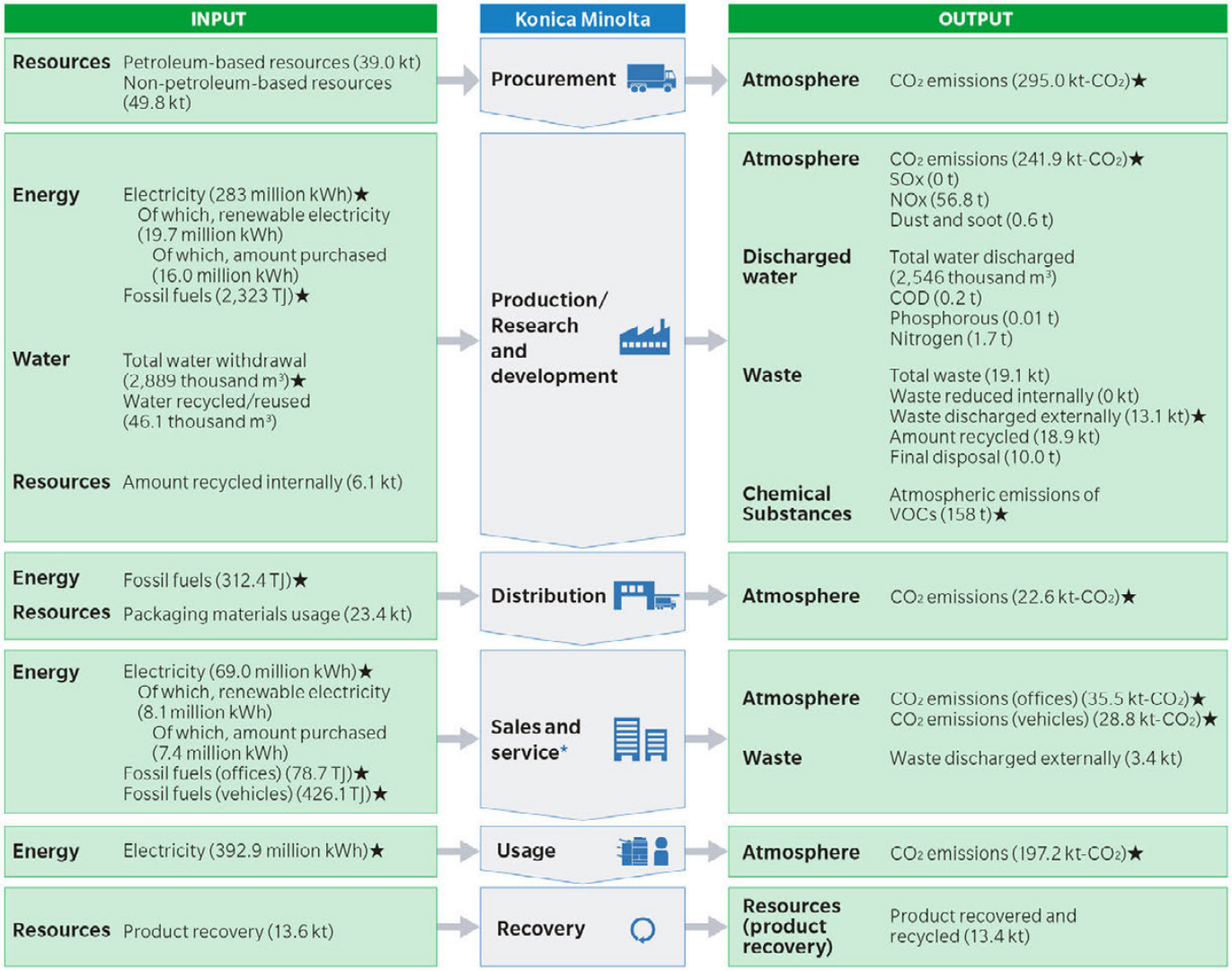
- CONIBI

Environment

Environmental Data

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 2020)



＊ Boundary: All consolidated sales companies worldwide

★ Indicators assured by third-party

Standards for Calculating Environmental Data

See the following webpage for the standards for calculating environmental data for each stage of the product lifecycle related to Konica Minolta business activities.

- Standards for Calculating Environmental Data

Environmental Data

Standards for Calculating Environmental Data

Standards for Calculating Environmental Data (CO_2 Emissions)

Boundary and Standards for Calculation

Stage		Methods of Calculation
1.Procurement	1) Boundary	Office equipment and consumable supplies, optical components, equipment for healthcare system manufactured and sold by Konica Minolta, Inc.
	2) Standards	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.Production / R&D	1) Boundary	All production and R&D sites around the world
	2) Standards	CO_2 emissions are calculated by multiplying the amount of energy used at each site by the following coefficients Fuel:Coefficients stipulated in Japan's Act on Promotion of Global Warming Countermeasures Electricity in Japan: Fiscal 2005 average value of all electrical power sources, as specified by the Federation of Electric Power Companies of Japan Electricity outside Japan: Fiscal 2005 emissions coefficients applicable to each country, as specified by the GHG Protocol
3.Distribution	1) Boundary	Japanese domestic distribution, Chinese and Malaysian production distribution (from factory to port), and international distribution of office equipment, optical components, performance materials, and equipment for healthcare systems
	2) Standards	CO_2 emissions are calculated by multiplying transport distance by cargo weight, and then multiplying that value by the CO_2 emissions coefficient of each means of transportation.[*1] Chinese and Malaysian production distribution and international distribution: Coefficients specified by the GHG Protocol Japanese domestic distribution: Coefficients stipulated in Japan's CO_2 Emissions Calculation Method for Logistics Operations—Joint Guidelines Ver.3.0
4.Sales and service	1) Boundary	All consolidated sales companies around the world
	2) Standards	Offices: CO_2 emissions are calculated by multiplying the amount of energy used at sites[*2] by the following coefficients. Fuel: Coefficients stipulated in Japan's Act on Promotion of Global Warming Countermeasures Electricity in Japan: 2005 average value of all electrical power sources, as specified by the Federation of Electric Power Companies of Japan Electricity outside Japan: 2005 emissions coefficients applicable to each country, as specified by the GHG Protocol Vehicles: CO_2 emissions are calculated by multiplying the amount of vehicle fuel used[*3] by the following coefficients Fuel: Coefficients stipulated in Japan's Act on Promotion of Global Warming Countermeasures

Stage		Methods of Calculation
5.Usage	1) Boundary	Office equipment and equipment for healthcare system * Optical components are excluded since they are used as parts of other companies' products
	2) Standards	CO_2 emissions are 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*4 for each model and the CO_2 coefficient equal to the fiscal 2005 world average value specified by the GHG Protocol.

*1 Estimated for optical components based on sales.

*2 The amount of energy used includes some estimated values.

*3 The amount of fuel used includes some estimated values.

*4 The annual amount of electricity consumption for office equipment is estimated based on the Typical Electricity Consumption (TEC) value set by the International Energy Star Program, and for equipment or healthcare systems it is estimated based on each product's specifications.

Standards for Calculating Environmental Data (Emissions Other Than CO_2)

Boundary and Standards for Calculation

Item		Methods of Calculation
1. Petroleum-based resource usage in products	1) Boundary	Office equipment and consumable supplies, performance materials, optical components, and equipment for healthcare systems produced and sold by Konica Minolta, Inc.
	2) Standards	Calculated by multiplying the raw material or part weight by content percentage of petroleum-based resources set for each material, based on the product specification
2. Packaging materials usage	1) Boundary	Raw material and parts used in packaging for office equipment and consumable supplies, performance materials, optical components, and equipment for healthcare systems
	2) Standards	Calculated by multiplying the weight of packaging material per single product (based on product specifications, etc.) by the number of units of the product sold, based on sales results
3. Waste discharged Externally from manufacturing	1) Boundary	All production and R&D sites around the world
	2) Standards	The total actual weight of waste discharged externally from production*1
4. Final disposal	1) Boundary	All production and R&D sites around the world
	2) Standards	The total weight of final disposal*2 (Weight of waste discharged externally from production × Percentage of final disposal*3)
5. Atmospheric emissions of VOCs	1) Boundary	Production sites around the world with ten or more environmental impact index*4 points, when points are added for every compound that is rated of one point or more.
	2) Standards	The sum of the environmental impact index for atmospheric emissions of VOCs*5
6. Water consumption	1) Boundary	All production and R&D sites around the world
	2) Standards	The total amount of water intake (city water, ground water, industrial water)

Notes

*1 Of the waste (refuse, etc.) generated at production and research and development sites for which Konica Minolta has responsibility as generator of waste, the amount discharged outside the Konica Minolta site. However, some wastes unrelated to production are excluded.

*2 Except for residues after recycling.

*3 Percentage of final disposal are calculated based on the value from industrial waste disposal companies.

*4 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 estate 5, inside the industrial estate 1

*5 The overall picture of environmental impact does not take into account the hazard coefficient and location coefficient, and the atmospheric emissions are shown as is.

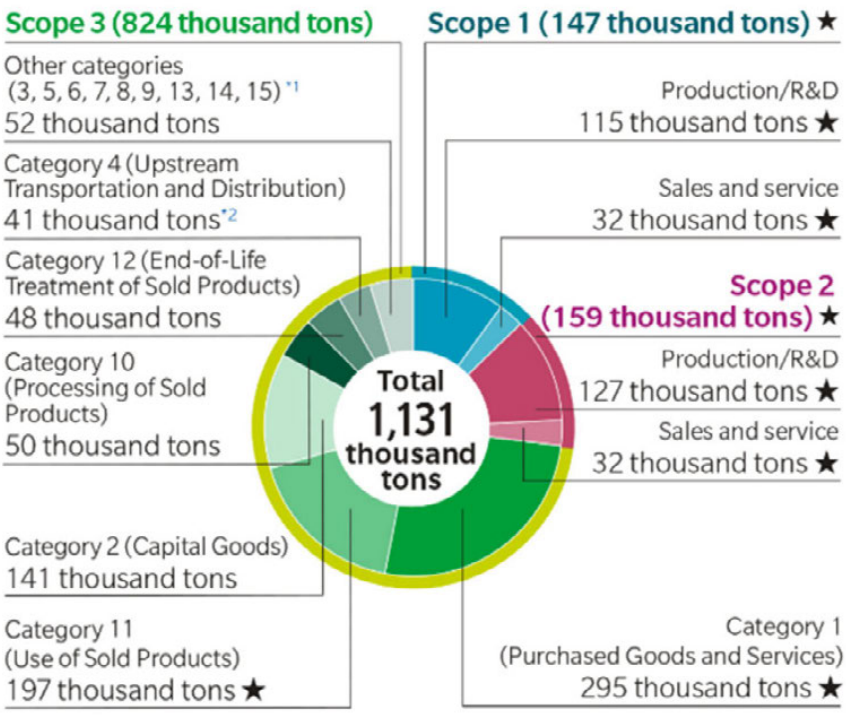
Environmental Data

CO_2 Emissions Across the Entire Supply Chain

Calculating CO_2 Emissions Across the Entire Supply Chain

Konica Minolta has calculated the CO_2 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 2020, the calculation showed that CO_2 emissions throughout the supply chain were approximately 1.13 million tons, which represents a decrease of approximately 18.8% from fiscal 2019. 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 27% of all emissions. Other indirect emissions (Scope 3) associated with the Group's activities totaled approximately 0.82 million tons, accounting for approximately 73% of all emissions. CO_2 emissions for "purchased goods and services" accounted for 26.1% 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, the overall CO_2 emissions resulted in a reduction. In terms of the "use of sold products," which accounted for 17.4% 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 CO_2 emissions management and reduction activities throughout the supply chain.

* GHG Protocol: Initiatives for developing an international standard for addressing greenhouse gas (GHG) emissions and climate change



*1 Categories3(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 CO_2emissions attributed to product distribution: 23 thousand tons★

Note:Figures do not necessarily add precisely to the total due rounding.

★: Indicators assured by KPMG AZSA Sustainability Co., Ltd.

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	All of Konica Minolta's product leasing is done through leasing companies. Konica Minolta does not enter into lease agreements directly with customers. Also, Konica Minolta did not lease out any large buildings or equipment. It was therefore judged that there were no emissions in this category.
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) value set by the International Energy Star Program, and for equipment for healthcare system it is estimated based on each product's specifications.

Standards for Calculating Environmental Data

Environmental Data

Soil and Groundwater

Energy / CO2 | Resources | Water | Atmosphere and Chemical Substances
Environmental Performance Data of Each Site | 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 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 2020
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 these substances 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, Fluorine	The Company carried out purification work for fluorine in fiscal 2018, and the results of two years of monitoring groundwater confirmed that amounts meet the standards and purification work was thus concluded. It has continued to periodically monitor groundwater for TCE, and has confirmed that amounts of this substance do not exceed standards.
Itami Site (Itami, Hyogo Prefecture)	Lead, Arsenic, Cadmium, Fluorine, Boron	The Company has confirmed that amounts of lead 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. With the closure of the site, regular monitoring and work to purify and prevent dispersion using pumped water has been taken over by the land owner from fiscal 2021.
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.

Operation Site	Substances	Progress in Fiscal 2020
Osaka Sayama Site (Osaka Sayama, Osaka)	TCE, PCE, c-DCE	The soil contamination newly discovered in surveys carried out as part of plans to dismantle old structures was excavated and removed together with the demolition work. The groundwater that was discovered to contain amounts that exceed standard levels is being addressed with work to prevent its dispersal and other ongoing remedial measures.
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 Mechatronics Co., Ltd. Fuefuki Plant (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)

Environment

Environmental Communication

Basic Concept

The entire Konica Minolta Group is working to carry out environmental conservation activities and to reduce the environmental impact associated with its business activities. The Group actively provides information on the planning and progress of these efforts. By developing close communication with various stakeholders, Konica Minolta intends to fulfill its responsibilities as a good corporate citizen.

The Group distributes information through its website. In order to inform customers of the environmental performance of its products, Konica Minolta seeks to provide this information through environmental labels. It is actively pursuing various social contribution activities while creating regular opportunities for direct dialogue with community members.

Provision of Product Environmental Information

- Issuing Environmental Reports
- Provision of product environmental information
- Konica Minolta sites report their environmental impact and conservation activities to local communities

Communication with Society

- A Global Message from Konica Minolta's President
- Environmental and Social Contribution Activities