# Part 3 Governance

- 60 List of Directors
- 62 List of Executive Officers
- 63 Corporate Governance
- 71 Risk Management

### List of Directors As of June 20, 2023

Name and title Career highlights		Image: Comparing the company of the company	Chikatomo Kenneth Hodo           Outside Director, Chairman of the Board Nominating Committee Member           September 1982 Joined Accenture Japan Ltd           September 2005 Representative Director of Accenture Japan Ltd           April 2006         Representative Director and President of Accenture Japan Ltd           September 2015 Director and Chairman of Accenture Japan Ltd           September 2017 Director and Senior Corporate Advisor of Accenture Japan Ltd           June 2018         Director of the Company July 2018           Senior Corporate Advisor of Accenture Japan Ltd           June 2021         Retired from Senior Corporate Advisor of Accenture Japan Ltd           July 2021         Representative Director of Bayhills Co., Ltd. (present position)           June 2022         Director, Chairman of the Board of the Company (present position)	Soichiro Sakuma           Outside Director           Chairperson of the Audit Committee           Compensation Committee Member           April 1978         Joined Nippon Steel Corporation           April 2009         Director (under the Executive Management System) of Nippon Steel Corporation           April 2012         Managing Director (under the Executive Management System) of Nippon Steel Corporation           June 2012         Managing Director (Member of the Board) of Nippon Steel Corporation           October 2012         Managing Director, Member of the Board of Nippon Steel Corporation           April 2014         Representative Director and Executive Vice President (in charge of General Administration, Legal, Internal Control & Audit, Business Process Inovation, Human Resources and Environment) of Nippon Steel & Sumitorno Metal Corporation           April 2018         Senior Advisor of Nippon Steel & Sumitorno Metal Corporation           April 2019         Senior Advisor of Nippon Steel & Sumitorno Metal Corporation           April 2019         Senior Advisor of Nippon Steel & Sumitorno Metal Corporation           April 2019         Senior Advisor of Nippon Steel & Sumitorno Metal Corporation           April 2019         Senior Advisor of Nippon Steel & Sumitorno Metal Corporation           June 2020         Director of the Company (present position)           July 2020         Adviser of Nippon Steel Corporation	Akira Ichikawa Outside Director Chairperson of the Nominating Committee Audit Committee Member April 1978 Joined Sumitomo Forestry Co., Ltd. June 2007 Executive Officer, General Manager of Corporate Planning Division of Sumitomo Forestry Co., Ltd June 2008 Director, Managing Executive Officer of Sumitomo Forestry Co., Ltd April 2010 President and Representative Director of Sumitomo Forestry Co., Ltd April 2020 Chairman of the Board and Representative Director of Sumitomo Forestry Co., Ltd (present position) June 2021 Director of the Company (present position)	Assumi Minegishi           Outside Director.           Chairperson of the Compensation Committee, Nominating Committee Member           April 1987         Joined Recruit Co., Ltd.           April 2003         Corporate Executive Officer of Recruit Co., Ltd.           April 2004         Managing Corporate Executive Officer of Recruit Co., Ltd.           June 2009         Managing Corporate Executive Officer, and Director of the Board of Recruit Co., Ltd.           April 2011         Senior Managing Corporate Executive Officer, and Director of the Board of Recruit Co., Ltd.           April 2012         President, CEO, and Representative Director of the Board of Recruit Co., Ltd.           October 2012         President, CEO, and Representative Director of the Board of Recruit Hodings Co., Ltd.           April 2021         Chairperson and Representative Director of the Board of Recruit Holdings Co., Ltd.           April 2021         Chairperson and Representative Director of the Board of Recruit Holdings Co., Ltd.           April 2021         Chairperson and Representative Director of the Board of Recruit Holdings Co., Ltd.           June 2022         Director of the Company (present position)
Number of shar	es of the Company held	50,631	0	9,700	3,700	0
Term of office (y		5	5	3	2	1
	ors meeting attendance (FY2022)	13/13	13/13	13/13	13/13	10/10
Committees	Nominating Committee	,	0	,	0	0
belonged to	Audit Committee				0	
(© denotes committees chairs)	Compensation Committee			0		0
	Corporate executive experience in listed company	•			•	•
	Global executive management experience*	•	•	•	•	•
	R&D and manufacturing					
Skills matrix	Sales and marketing Finance and accounting, and understanding of investor perspective	•	•			•
	HR management			•		•
	Governance, internal control, legal affairs			•		
	Business transformations and		-		1	1

\* "Global executive management experience" includes both actual experience at a global business and experience relating to overseas business operation.

#### **List of Directors**

Name and title			Hiroyuki Suzuki Director Nominating Committee Member, Audit Committee	Noriyasu Kuzuhara           Director, Executive Vice President and Executive Officer	Yoshihiro Hirai Director, Executive Vice President and Executive Officer
Career highlights		Member, Compensation Committee Member April 1977 Joined Shionogi & Co., Ltd. April 2007 Officer, Executive General Manager, Pharmaceutical Development Division of Shionogi & Co., Ltd. April 2010 Executive Officer, Executive General Manager, Pharmaceutical Development Division of Shionogi & Co., Ltd. April 2011 Senior Executive Officer, Executive General Manager, Global Development Office of Shionogi & Co., Ltd. June 2015 Director of the Board, Senior Executive Officer, Senior Vice President, Corporate Strategy Division of Shionogi & Co., Ltd. April 2017 Director of the Board, Senior Executive Officer, Senior Vice President, Corporate Strategy Division of Shionogi & Co., Ltd. April 2018 Director of the Board, Executive Vice President of Shionogi & Co., Ltd. July 2022 Director and Vice Chairperson of the Board of Shionogi & Co., Ltd. (present position) June 2023 Director of the Company (present position)	Member, Compensation Committee Member April 1979 Joined Minolta Camera Co., Ltd. July 1997 Senior Managing Director, Minolta MBK Digital Studio, Inc. April 2004 General Manager, China Sales Promotion Office, MFP Overseas Sales Department, Konica Minolta Business Technologies, Inc. June 2006 General Manager, Corporate Audit Committee Office of the Company June 2009 General Manager, Corporate Audit Division of the Company April 2012 Executive Officer, General Manager, Corporate Audit Division of the Company June 2019 Director of the Company (present position)	<ul> <li>April 1990 Joined Konica Corporation</li> <li>April 2009 General Manager, R&amp;D Department, Performance Materials Headquarters of KONICA MINOLTA OPTO, INC.</li> <li>April 2014 General Manager, Performance Materials Buisness Unit, Advanced Layers Company of the Company</li> <li>April 2015 Executive Officer, General Manager, Performance Materials Headquarters of the Company</li> <li>April 2015 Executive Vice President and Executive Officer, General Manager, Performance Materials Headquarters, responsible for OLED Business of the Company</li> <li>April 2017 Executive Vice President and Executive Officer, Division President, Material &amp; Component Business Headquarters of the Company</li> <li>April 2018 Executive Vice President and Executive Officer, Division President, Material &amp; Component Business Headquarters, General Manager, Corporate R&amp;D Headquarters of the Company</li> <li>April 2022 Executive Vice President and Executive Officer, Division President, Material &amp; Component Business Steadquarters, General Manager, Corporate R&amp;D Headquarters of the Company</li> <li>April 2022 Executive Vice President and Executive Officer, Presionsible for Corporate Planning, Lead Officer for Material &amp; Component Business of the Company</li> <li>April 2023 Executive Vice President and Executive Officer, General Manager, Corporate Planning Headquarters of the Company (present position)</li> </ul>	<ul> <li>April 1991 Joined the Mitsubishi Bank, Ltd.</li> <li>June 2019 Resigned the Bank of Tokyo-Mitsubishi UFJ, Ltd.</li> <li>July 2019 Joined the Company, General Manager, Corporate Finance Division of the Company</li> <li>April 2021 Corporate Senior Vice President, General Manager, Corporate Finance Division, responsible for managing Business Technologies Business of the Company</li> <li>April 2022 Corporate Senior Vice President, General Manager, Corporate Finance Division, responsible for Corporate Accounting of the Company</li> <li>April 2023 Executive Vice President and Executive Officer, responsible for Corporate Accounting, Corporate Finance and Risk Management of the Company (present position)</li> </ul>
Number of share	es of the Company held	0	61,289	37,408	7,300
Term of office (ye	ears)	0	4	0	0
Board of Director	rs meeting attendance (FY2022)	-	13/13	-	-
Committees	Nominating Committee	0	0		
pelonged to	Audit Committee	0	0		
⊘ denotes committees chairs)	Compensation Committee	0	0		
	Corporate executive experience in listed company				
	Global executive management experience*	•			•
	R&D and manufacturing				
Skills matrix	Sales and marketing Finance and accounting, and understanding of investor perspective	•	•	•	•
	HR management				
	Governance, internal control, legal affairs		•		
	Business transformations and new business development (DX)	•		•	

\* "Global executive management experience" includes both actual experience at a global business and experience relating to overseas business operation.

#### List of Executive Officers As of June 20, 2023



Toshimitsu Taiko

Director, President and CEO, Representative Executive Officer

Joined Minolta Camera Co., Ltd. in 1986. Worked in legal affairs and printer sales and later marketing and business planning operations at a printer sales company. Following the management integration of Konica and Minolta, involved in the Business Technologies Business, and worked in strategic business planning and served as president for a sales company in the U.S. Since 2020, became Director, Senior Executive Vice President and Executive Officer responsible for the Business Technologies Business, as well as Corporate Planning, Investor Relations, and Corporate Communications. Assumed the post of Director, President & CEO, Representative Executive Officer in April 2022 (present position).



#### Noriyasu Kuzuhara

Director, Executive Vice President and Executive Officer



Joined Konica Corporation in 1990, after involved in new business development projects such as the development of LCD films. Became Senior Executive Officer in 2016. Since 2017, served as the Division President of Material & Component Business Headquarters, and since 2018, doubled as General Manager of Corporate R&D Headquarters. Since 2022, led the formulation of corporate planning for the entirety of the Konica Minolta Group as the officer responsible for corporate planning and also continued to manage the Material & Component Business. Since 2023, became Director, Executive Vice President and Executive Officer and assumed the post of General Manager of Corporate Planning Headquarters (present position).



#### Hitoshi Kamezawa

Executive Vice President and Executive Officer

Responsible for Industry Business Development, Sensing Business, Optical Component Business, IJ Component Business and Performance Materials Business

Joined Minolta Camera Co., Ltd. in 1985 and ever since been involved in the sensing business. Became Development Manager of the Sensing Business Unit in 2011. Worked to strengthen the customer-oriented R&D system of the sensing business focusing on the display and object color measurement business. Appointed head of sensing business in 2015, and in this capacity, involved in the planning and execution of the acquisition and post-merger integration (PMI) of several foreign manufacturers and led the expansion of the business. Appointed Executive Vice President and Executive Officer in 2023 and took charge of businesses of Strengthening area for Industry Business and its business development across Industry Business (present position).



#### Kiyotaka Fujii

Senior Executive Vice President and Executive Officer

**Responsible for** Precision Medicine Business and Chairman of REALM IDx, Inc.

Joined McKinsey & Company, inc. in 1981, and worked in the M&A Advisory department at a U.S.-based investment bank. After acquiring extensive business management experience serving in CEO positions for several companies including SAP and the Louis Vuitton Group, joined the Company in 2016 as the Executive Officer in charge of the Healthcare business. And served as Senior Executive Vice President and Executive Officer since 2018 (present position).



#### Toshiya Eguchi Executive Vice President and Executive Officer

**Responsible for** Technologies, Imaging-IoT Solution Business and Visual Solutions Business

Joined Konica Corporation in 1989. Developed system LSIs for photo printing equipment and office equipment such as facsimiles and printers, and engaged in system design for digital cameras and medical devices. Served as General Manager of IoT Service Platform Development Operations before becoming Executive Vice President and Executive Officer in 2021 (present position).



Senior Executive Vice President and Executive Officer

Responsible for Strategic Project

Joined the Mitsubishi Bank, Ltd. in 1982, and involved in general global corporate financing services for major companies in a broad range of industries and also engaged in M&A, project financing, and treasury management. Joined the Company in 2011, became Director, Senior Executive Officer in 2014 and successively assumed the posts of lead officer for corporate planning, CSR, corporate communications, brand promotion, risk management, accounting and finance. Since April 2022, assumed the post of Director, Senior Executive Vice President and Executive Officer. Became Senior Executive Vice President and Executive Officer responsible for Strategic Project (present position).



## Shinichiro Oka

Executive Vice President and Executive Officer

Responsible for Corporate Human Resources, Corporate General Affairs, Corporate Secretary, Crisis Management and Diversity Enhancement

Joined Toshiba Corporation in 1991, and working in human resources. Then served as HR director for companies such as United Technologies and IBM Corporation, as well as an Executive Officer and Global CHRO for Macromill, Inc. before joining Konica Minolta in June 2020. Became an Executive Vice President and Executive Officer in 2021. In 2023 took care of Corporate General Affairs, Corporate Secretary, Crisis Management and in addition to Human Resources and Diversity Enhancement (present position).

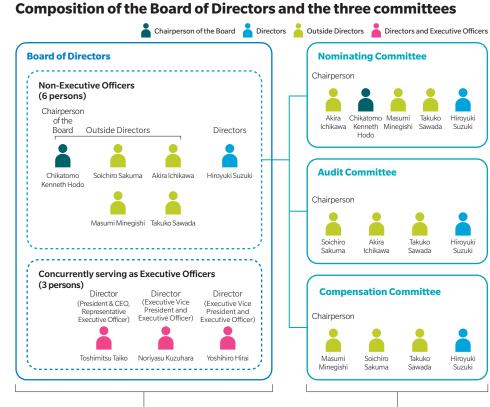
Yoshihiro Hirai Director, Executive Vice President and Executive Officer



Responsible for Corporate Accounting, Corporate

**Responsible for** Corporate Accounting, C Finance and Risk Management

Joined the Mitsubishi Bank, Ltd. in 1991, and worked in global finance for major electronics and telecommunications corporations for more than 20 years. Joined Konica Minolta in 2019, and as General Manager of the Corporate Finance Division, worked to strengthen cash management and promoted centralized management of foreign exchange risks at the head office by introducing global netting. Appointed Executive Vice President and Executive Officer in 2023 and currently in charge of accounting and finance and also involved in risk management (present position). **Overview of Corporate Governance** 



## Key characteristics of the Board of Directors

- All Outside Directors are Independent Directors
- Outside Directors comprise the majority
- Chairperson is an Outside Director
- At least one Inside Director does not concurrently serve as an Executive Officer

Composition of the Corporate Governance Committee (voluntary establishment)

Chairperson: Soichiro Sakuma\* Committee members: Chikatomo Kenneth Hodo\*, Akira Ichikawa\*, Hiroyuki Suzuki, Toshimitsu Taiko \* Outside Directors

**Key characteristics of** 

the three committees

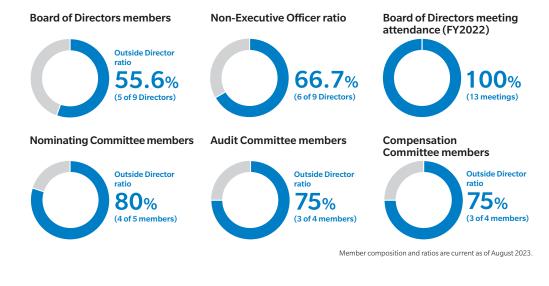
• Chairpersons are Outside

as a committee member

• Director who is concurrently

Executive Officer does not serve

Directors



#### Roles of the Board of Directors and three committees and meetings held in fiscal 2022

	Role	Times held	Participation by all Directors	Participation by Outside Directors
Board of Directors	Acting in accordance with laws and the Articles of Incorporation, the Board of Directors make decisions on the Company's business and supervises the execution of duties by the Directors and Executive Officers (including the execution of business by the Representative Executive Officer and Executive Officers).	13 times	100%	100%
Nominating Committee	The Nominating Committee makes decisions on agenda items that concern the election or dismissal of Directors, which are submitted to General Meetings of Shareholders. When appropriate, this committee also receives reports on and supervises succession plans (regarding personnel development and selection) provided by the President & CEO.	10 times	100%	100%
Audit Committee	The Audit Committee audits Directors and Executive Officers' execution of duties, prepares audit reports, and makes decisions on proposals that concern the election, dismissal, or non- reelection of External Accounting Auditors and that are submitted at General Meetings of Shareholders.	13 times	100%	100%
Compensation Committee	The Compensation Committee makes decisions about individual compensation, bonuses, and other financial benefits that Directors and Executive Officers receive from the Company as compensation for performing their duties.	8 times	97%	96%

#### **Toward a Higher Level of Corporate Governance**

We believe that corporate governance that contributes to the sustainable growth of the Company and the enhancement of its corporate value in the medium-to long-term requires the establishment and operation of a highly effective supervisory function for execution, while promoting appropriate risk taking in the execution of management, and has built a corporate governance mechanism from the perspective of the supervisory role. As an institutional design under the Companies Act, we have been pursuing Konica Minolta-style governance as a system that eliminates dependency on specific individuals, in addition to selecting a "Company with Committees" (currently a "Company with three committees") in 2003.

We will continue to evolve the effectiveness of our corporate governance through the efforts of the Corporate Governance Committee, which was established voluntarily in June 2023, in addition to the statutory three committees.

In addition, we have implemented all of the principles of the Corporate Governance Code (revised on June 11, 2021) based on the Basic Views set out in the Basic Policy on Corporate Governance<sup>1</sup>. Also, in the Corporate Governance Report<sup>1</sup>, we make a detailed disclosure related to all of the 14<sup>2</sup> basic principles, principles, and supplementary principles.

 The Basic Policy on Corporate Governance and the Governance Report are posted on our website. https://www.konicaminolta.com/global-en/investors/management/governance/index.html
 Disclosures related to Supplementary Principle 4-10 (1) are not applicable to companies with nominating committees. Therefore, the disclosure is actually related to 13 principles.

#### **Basic Policy on Corporate Governance: Basic Views**

- Ensuring business supervisory functions by separating the supervisory and execution functions in order to increase the corporate value;
- Election of Independent Outside Directors who can provide supervision from a shareholder perspective; and
- Improvement of the transparency, integrity and efficiency of management through the above-mentioned points

#### Chronology of measures to establish a corporate governance systems and improve its effectiveness

	FY2000- FY2010- FY2020-
Institutional Design	<ul> <li>Formation of Konica Minolta Holdings, Inc. due to a management integration. Became a company with committees (now a company with three committees)</li> </ul>
Board of Directors Directors	2000 • Reduced the number of Directors (started an Executive Officer system)       2022 • Selected an Independent Outside Director as the Chairperson of the Board         2002 • Elected two → 2003 • Number of Independent Outside Directors       > 2003 • Number of Independent → 2018 Outside Directors       • Increased the → 2022 • Decreased the number of Inside Directors from six to four and made the Independent         • Shortened the term of Directors to one year       2006 • First overseas field trip by two Outside Directors for a visit to a manufacturing subsidiary in China       • Increased the → 2022 • Decreased the number of Inside Directors from six to four and made the Independent         • Shortened the term of Directors       2006 • First overseas field trip by two Outside Directors for a visit to a manufacturing subsidiary in China       • Increased the → 2022 • Decreased the number of Inside Directors from six to four and made the Independent         • Shortened the term of Directors       • First overseas field trip by two Outside Directors for a visit to a manufacturing subsidiary in China       • Independent       • Chairperson of the Board
Rules and Policies	2003 • Established the →       2010 • Revised part of the →       2018 • Revised some of the Board of Directors Rules         Corporate       Board of Directors rules       Board of Directors rules         Organization Basic       2015 • Established the Basic Policy       →       2021 • Revised a portion of the Basic Policy         Regulations       on Corporate Governance       on Corporate Governance       on Corporate Governance
Effectiveness Assessments	2004 • Started self-assessments → 2014 • Started establishing a Fiscal (using questionnaires) Year Policy for the Board of of the effectiveness of Directors based on results the Board of Directors       2016/2022 • Started using an external organization to assess the effectiveness of the Board of Directors (implementation of guestionnaires) of self-assessments
Nominating Committee	<ul> <li>2006 • Chairperson of the Board started participating in the Nominating Committee started overseeing the succession plan (Committee started overseeing the succession plan (Committee started overseeing the succession plan (development and selection) of the President &amp; CEO</li> <li>2021 • Finished overseeing said succession plan (The Board of Directors selected a new President &amp; CEO, Representative Executive Officer)</li> <li>2021 • Disclosed the expertise and experience expected of Director candidates in the form of a "skill matrix" (Originally, the Committee would prepare and apply these expected attributes internally)</li> <li>2022 • Started overseeing the new succession plan (development and selection) of the President &amp; CEO, Representative Executive Officer</li> </ul>
Audit Committee	2006 • Changed External Accounting Auditors
Compensation Committee	2003 • Establishment of → 2009 • Revised part of the terms for performance-linked compensation in the compensation in the compensation determination policy       > 2020/2023 • Revised part of the terms for performance-linked compensation in the compensation in the compensation policy         2005 • Ended lump-sum retirement payments and started compensation-type stock options       > 2017 • The compensation policy was revised, replaced compensation-type stock options and introduced stock bonus linking with medium-term performance       > 2020 • Implemented a long-term stock bonus
Other	2006 • Ended the senior adviser position       2019 • Issued tablet devices to Outside Directors and commenced digital delivery of Board of Directors meeting materials

#### The Company's Basic Policy Pursuing a Highly Transparent Governance systems

As a company with three committees, to the extent legally allowed, Konica Minolta's Board of Directors entrusts business decisions to Executive Officers to a significant degree. The Board has adopted "basic management policies," "internal control systems," and "the election of Executive Officers" as the important matters that it should resolve.

At least one third of the total number of Directors must be Independent Outside Directors, and Directors not also serving as Executive Officers must compose the majority of Directors. The Chairperson of the Board, selected from among Directors not also serving as Executive Officers, ensures that supervision by the Board of Directors is effective. Outside Directors compose the majority of the Nominating Committee, Audit Committee, and Compensation Committee, and committee chairpersons are selected from among these Outside Directors. The Director who is concurrently Executive Officer is not elected to a committee.

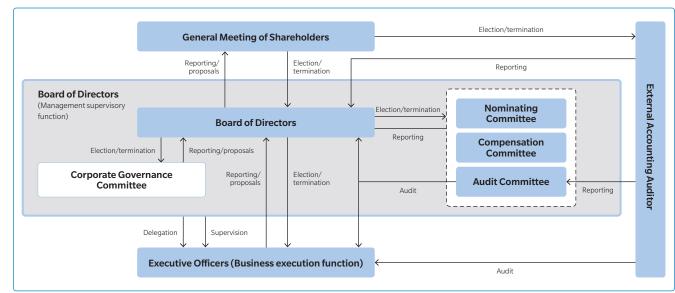
In principle, the Board of Directors meets once a month. Outside Directors receive materials in advance in order to familiarize them with the agenda and facilitate lively discussions at meetings of the Board of Directors.

In addition, regarding important management decisions, the Executive Officer in charge may use informal gatherings of Directors and other venues to provide advance explanations. In fiscal 2022, we set up regular meetings for the Outside Directors only (after the end of the Board of Directors in principle), so as to further enhance communication between Directors.

#### Establishment of the Corporate Governance Committee

We established the Corporate Governance Committee on June 20, 2023. Since the ordinary general meeting of shareholders held in lune 2022. Outside Directors have become the majority in the Board of Directors, and an Outside Director has assumed the chairpersonship of the Board of Directors. Accordingly, the establishment of the Corporate Governance Committee is aimed at reorganizing corporate governance and evolving it to a higher level. As a dedicated committee under the Board of Directors, the Corporate Governance Committee was established to comprehensively consider in a cross-cutting manner the overall design and operation of corporate governance, such as the formulation of operational rules that should be stipulated separately from the legal roles of each of the three statutory committees. The committee consists of about five members, with a majority of Outside Directors, and the chairperson is selected from among Outside Directors.

#### Structure of Corporate Governance Systems



## Primary agenda at meetings of the Board of Directors in fiscal 2022

- 2025 Medium-term Business Plan investigation progress report
- Outline of the fiscal 2023 management plan and the basic budget investigation progress report
- Report on the capital policy of the precision medicine Business
- Report on the status of the company-wide design review after business portfolio transformation
- Approval of the establishment of a Corporate Governance Committee
- Report on the Management Policy of the Board of Directors for fiscal 2022 based on the "Board of Directors effectiveness assessments"
- Report on the management policy of the ordinary general meeting of shareholders in fiscal 2022

#### Policies and procedures upon nominating Director candidates

#### **All Directors**

Based on reviews concerning the composition, standards for selection, etc. of the Board of Directors and committees by the Corporate Governance Committee, the Nominating Committee raises its policy to upgrade its selections of Director candidates by performing yearly examinations from the standpoints of balance of knowledge, experience and capabilities, and diversity, and makes selections. (With the establishment of the Corporate Governance Committee in June 2023, going forward the Committee will review the composition of the Board of Directors and committees and their standards for the selection.) The following items were also the main subject of careful discussion, exchange of opinions and confirmations of responses in fiscal 2022.

#### <Chairperson of the Board of Directors>

The Chairperson of the Board of Directors shall be appointed from among Directors who do not concurrently serve as Executive Officers as stipulated in the Articles of Incorporation of the Company. In the previous fiscal year, the Company has appointed an Outside Director as the Chairperson of the Board of Directors, who was deemed appropriate in terms of having a wealth of experience as an Outside Director of the Company, as well as that of other companies, a deep understanding of the Company's governance and appropriateness as a leader in managing the Board of Directors. For the same reason, we have again selected an Outside Director to be the Chairperson of the Board of Directors.

#### <Total number of Directors and ratio of number of Directors>

In accordance with the following provisions of the Company's Basic Policy on Corporate Governance, and after being confirmed by the Nominating Committee, it was decided to continue the same composition as that of the previous year (9 members total: 5 external and 4 internal, 6 non-executive and 3 concurrently serving as Executive Officers). The Company considers five to six Outside Directors to be appropriate for ensuring both diversity of discussion and speed of decision-making.

#### <Number of Internal Directors not concurrently serving as Executive Officers>

Similarly, in order to comply with the following provisions of the

Company's Basic Policy on Corporate Governance and to ensure consistent audit quality as a full-time Audit Committee member, we have decided to continue the same format (one member) as that of the previous year.

#### **Outside Directors**

- To select Outside Director candidates, after the Nominating Committee confirms the selection process, the members of this committee determine the knowledge, experience and capabilities that will be required of new Outside Directors in order to enable them to be a good match with Outside Directors to be reelected. The purpose is to receive beneficial oversight and advice concerning management issues at the Company.
- 2. The Nominating Committee chairperson asks for a broad range of recommendations for candidates, based on information from Nominating Committee members, other Outside Directors and the President & CEO. To provide reference information, the Board of Directors Office distributes to Nominating Committee members etc. a candidate database, centered on "chairpersons" of global companies, that includes information about independence, age, concurrent positions and other characteristics of candidates.
- 3. The Nominating Committee takes into consideration the items listed above in order to narrow down the number of candidates.
- 4. The Chairperson of the Nominating Committee and, if necessary, a member appointed by the Chairperson, will interview the candidates in order of candidacy, and approach them about assuming the position of Outside Director. On the basis of the above, this year we have selected a new candidate who is expected to offer useful supervision and advice on the Company's management issues on the basis of their abundant, global-level knowledge of R&D, management strategy formulation, new business development and DX promotion.

#### **Inside Directors**

- Candidates for "Internal Directors" shall be discussed between the President & CEO and the Internal Nominating Committee on the basis of the following points; proposed candidates for Directors who shall not concurrently serve as Executive Officers, and proposed candidates for Directors who shall concurrently serve as Executive Officers, once the President & CEO has shared with the Internal Nominating Committee his/her concept for the executive structure for the next fiscal year.
- 2. The Nominating Committee uses the draft proposals to examine the candidates. This fiscal year, we have selected a candidate for the position of Director who will not concurrently serve as an Executive Officer, who has extensive experience in internal audit and is expected to enhance the effectiveness of the Audit Committee as a full-time Audit Committee member. In addition to the President & CEO, two candidates were selected for the position of Director concurrently serving as Executive Officer: Executive Officer in charge of Corporate Planning and Strategy, and Executive Officer in charge of Accounting and Finance.

\* Specific details regarding the policies and procedures for selecting Director candidates are on our website. https://www.konicaminolta.com/us-en/investors/management/governance/01-01.html#anc-02

#### Message from the Newly-Selected Outside Director



#### Takuko Sawada Outside Director

I have recently assumed the position of Outside Director of the Company. Up to now, I have experienced positions such as working in the development department and management strategy at Shionogi & Co., Ltd. and have made efforts to expand cross-cutting functions, something that is unusual for a Japanese company. It may be said that I have put a lot of effort into industry-academia cooperation, global functions within the Company, and establishing governance. Currently, I am also the only director in Asia of the Antimicrobial Resistance (AMR) Action Fund, the chairperson of Biocommunity Kansai, the chairperson of the Kansai Economic Federation Startup Ecosystem Committee, and the Executive Vice-President for Industry-Government-Academia Collaboration at Kyoto University. When I was asked to serve as a Konica Minolta Outside Director, I decided to accept because I thought I could learn about the execution and governance of Konica Minolta, a pioneer who has been working on corporate governance from the earliest stage among Japanese companies, and use my experience in R&D, management strategy formulation, new business development, and DX promotion in the health care field to help the Company. After that, I received an explanation on the Medium-term Business Plan and current issues, and as well as being keenly aware of how important this year is for the Company, I think I can help to improve and clarify internal decision-making and business processes. Things are never going to go in a straight line when you work toward big goals, but I would like to discuss whether the direction and decision-making are in line with the main goals.

Introduction

#### **President Succession Plan**

In advancing the succession plan for the President, we have clarified the functions and roles of the Board of Directors, the Nominating Committee, and the President.

In addition, the members of the Nominating Committee (4 Outside Directors and 1 Inside Director) self-check the explanations and responses of candidates for succession to President at meetings of the Board of Directors and other meetings or site visits.

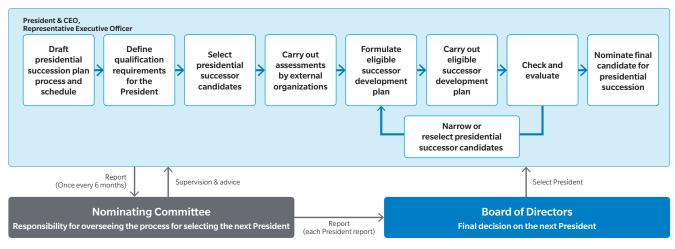
Further, the President objectively assesses the strengths and challenges of the candidates for succession to President through external assessments in the succession planning process. We are continuously addressing the selection of candidates for succession to the next President through the following process of developing candidates for executive management (Executive Officers and Corporate Vice Presidents, etc.).

#### Top executive candidate (Executive Officers, Corporate Vice Presidents, etc.) development plan

In order to systematically deploy and develop the next generation of leaders responsible for Company management, we have set up a place where the CEO and department heads can visualize potential human capital through individual dialogue, clarify human capital who can immediately assume the leadership of business and functions, or successors who may be able to do so in three to five years from now, and to give them roles in which they can grow as candidates. In particular, we believe that diversity of management is essential to make high-quality decisions in times of rapid change, and female candidates are discussed as an individual theme. In addition, the young potential group and overseas human capital are also discussed as candidates for succession.

In fiscal 2022, 18 department heads and the President held one-on-one sessions, which led to interdepartmental rotation of about 20 people and the expansion of the roles of about 30 people. In addition, we have selected about 20 people and dispatched them to an external executive development program tailored to each individual.

#### Functions and roles of the President & CEO, Representative Executive Officer in the succession plan



#### **Effectiveness Assessments for the Board of Directors**

In 2003, the Company became a company with committees (now a company with three committees). To determine if the corporate governance system is functioning as intended, the Company started performing self-assessments in 2004 concerning the Board of Directors' effectiveness.

Since then, self-assessments are conducted on the effectiveness of the Board of Directors and the three committees each year, looking back over the activities of the past year to confirm whether or not the construction and operation of the Company's corporate governance system is contributing to the realization of sustainable growth and enhancement of mediumto long-term corporate value of the Company that the system is designed to facilitate. The results of these self-assessments are used to identify items that the Board of Directors should work on in the following fiscal year in order to further improve effectiveness.

In fiscal 2022, the first year in which the chairperson of the Board of Directors was replaced by an Outside Director, we conducted a second third-party evaluation following fiscal 2016. We commissioned an external agency to conduct a questionnaire and interview with the intention of increasing objectivity by incorporating the perspectives of third parties, as well as incorporating new perspectives.

In addition, we added gap analysis between the importance of the agenda item and the quality and quantity of the actual discussions as a new perspective in order to set effective agenda items at the Board of Directors meeting.

#### Process for Third Party Evaluation of Effectiveness in Fiscal 2022

FebMar. 2023	Distribution of self-evaluation questionnaires to Directors and their return
April	Conduct individual interviews, analyze and evaluate results
May	Informal gatherings of Directors (Reporting and Discussion)
June	Explanation of Board of Directors Operations Policy for Fiscal 2023 by the Chairperson of the Board, Q&A session and opinion exchange (Board of Directors meeting immediately after the ordinary general meeting of shareholders)

#### Details of Board of Directors effectiveness assessments for fiscal 2022

In the questionnaire to the directors, in addition to the standard questions from the external agency, we set up questions that aimed to draw out the unique problems of the company. In the interviews with each director, we aimed to extract the problems through more in-depth dialogue and at the same time lead to awareness through self-evaluation. We will further evolve our corporate governance by applying the results of the assessments to the activities of the Corporate Governance Committee in fiscal 2023.

#### **Summary of results**

As a result of our efforts to improve the effectiveness of the Board of Directors under the Board of Directors chairperson, we were able to confirm certain improvements. On the other hand, from the perspective of promoting the improvement of corporate value in the medium-to long-term, our governance is in the process of improvement, and the issues to be addressed have also been highlighted.

#### **Improvements in fiscal 2022**

Appointed Outside Director as Chairperson of the Board of Directors	The Outside Director assumes the chairpersonship of the Board of Directors and is responsible for setting the agenda and advancing the proceedings from the viewpoint of exercising effective supervisory functions.
Enhancement of discussions within and outside the Board of Directors	In addition to the Board of Directors, the Company also takes advantage of the opportunity for informal gatherings of Directors and actively provided opportunities to discuss important topics.
Enhanced communication between Directors	In addition to introducing meetings between Outside Directors, opportunities were provided to share awareness about the role of the Board of Directors by increasing communication opportunities such as one-on-one meetings between the President and the Chairperson.

#### **Issues going forward**

ssues going forward	
Redefining the role of the Board of Directors	<ul> <li>Creating a shared understanding of the direction to be taken at Corporate Governance Committee meetings through discussions on the roles to be fulfilled by Directors, leading to a system that facilitates strong supervisory functions to be exercised without becoming personal.</li> <li>Foster a common understanding of the ideal distance between supervision and execution as a space to encourage executive management decisions.</li> </ul>
Shared recognition of the composition of the Board of Directors	<ul> <li>The composition of the Board of Directors that contributes to improving corporate is discussed based on a common understanding of the role of the Board of Directors, and the direction forward is confirmed.</li> </ul>
Further advancement of strategic discussions	<ul> <li>Utilize Directors' Roundtable Meetings, etc., to deepen discussion of strategies to achieve the Medium-term Business Plan and ensure a cycle of monitoring ongoing management issues.</li> <li>Devise means to provide information to Outside Directors to facilitate substantive discussions</li> </ul>
Improving the operational efficiency of the Board of Directors and its committees	<ul> <li>Improve the distribution of materials in advance and implementation of preliminary explanations of items on board meeting agendas.</li> <li>Within the framework of the Board of Directors, each committee, as well as the Directors' Roundtable Meetings, the Board of Directors will consider the scope for streamlining the number and format of meetings.</li> </ul>

## Outline of Board of Directors management policies for fiscal 2023

Based on the evaluation of the effectiveness of the Board of Directors and the current situation of the Company, at the Board of Directors meeting immediately following the ordinary general meeting of shareholders, the Chairperson of the Board of Directors presented a management policy based on the following.

## <Key points to focus on in the management of the Board of Directors in fiscal 2023>

- 1. Focus on monitoring the progress of business selection and concentration, cost structure reform, and the strengthening of the financial base and cash flow to achieve the fiscal 2023 plan.
- 2. Improve the medium- to long-term plans and deepen focus areas in anticipation of business selection and concentration and the vision for focus.
- 3. Identify and take measures for management systems that should be strengthened, rebuild the human capital portfolio, revitalize the corporate culture, evaluate innovation capabilities, and monitor strategic suitability confirmation to further improve executive power.
- 4. Further enhance corporate governance by utilizing the Corporate Governance Committee established in June 2023, focusing on a new sense of distance, role recognition, and mechanisms for execution and supervision to deepen discussions on the nature of management issues.
- 5. Further refine the agenda, devise ways to provide information to directors, and strengthen the secretariat structure to improve the operational efficiency of the Board of Directors and committees.
- 6. Enhance the executive sessions of Outside Directors, including further communication between execution and supervision.

#### A Compensation System for Directors and Executive Officers That Motivates Them to Achieve Their Goals

The Company's Directors and Executive Officers compensation system is intended to incentivize Directors and Executive Officers to strive for the continuous medium- to long-term improvement of the Group's performance in line with management policies in order to meet shareholder expectations, and to contribute to optimizing Group value. The Company aims for a level of compensation that enables it to attract and retain human capital that will take responsibility for the Company's development.

The Compensation Committee determines the amount of compensation, etc. per individual received by Directors and Executive Officers in accordance with the Officer Compensation Determination Policy established in accordance with this purpose.

At the start of the new Medium-term Business plan from fiscal 2023, we reviewed the Directors and Executive Officers compensation system to promote strategic priority measures and motivate Directors and Executive Officers to achieve the goals<sup>1</sup>. Also, in order to improve corporate value in the medium-to long-term, we have introduced non-financial indicators<sup>2</sup> as evaluation items for the medium-term stock bonus. <sup>1</sup> Shift of compensation structure from base salary to annual performance-linked cash bonus by 5%, review of evaluation indicators, etc.

2 CO<sub>2</sub> emission reduction rate and employee engagement

#### **Directors and Executive Officers compensation system**

Compensation packages for Non-executive Inside Directors exclude a short-term performance-linked cash bonus, and consist of a "base salary" component in the form of a base salary and "stock bonus." The "stock bonus" consists of the "medium-term stock bonus" (non-performance-linked) and "long-term stock bonus." Also, Outside Directors only receive "base salary," inclusive of bonus according to their roles.

Compensation packages for Executive Officers consist of "base salary," "annual performance-linked cash bonus," and "stock bonus." Stock bonus consists of "medium-term stock bonus" (performance-linked) and "long-term stock bonus."

The amount of the "annual performance-linked cash bonus" is determined based on the level of performance result for the fiscal year (consolidated operating income), the degree of attainment of annual performance targets, and the progress in each Executive Officer's key strategic measures.



#### Composition of Directors and Executive Officers compensation

#### Evaluation indicators for annual performance-linked cash bonuses

Item	Portion according to performance level	Portion acco	Portion according to personal appraisal		
Assessment index and others	Operating profit	Profit for the period 40%	Total asset turnover ratio 30%	KMCC-ROIC 30%	Reflects progress of each
	Linked with Group consolidated performance result level	Linked with annual performance target achievement rate		Executive Officer's key strategic measures	

(Note) KMCC-ROIC is ROIC for calculating the current annual performance-linked cash bonus, and invested capital consists of assets capable of individual management and improvement by each business division.

#### Indicators for determining medium-term stock bonus (performance -linked)

Item	Medium-term stock bonus (performance-linked)				
	Financial indicator (Consolidated)	Non-financi	ial indicator		
Assessment index*	ROE	CO <sub>2</sub> emission reduction rate	Employee engagement score		
Assessment index	80%	10%	10%		
	Linked to the targe	t achievement rate in the final year of the Medium-	term Business Plan		

\* All items on a consolidated basis

#### **Corporate Governance**

For "medium-term stock bonus" (non-performance-linked), the number of the Company's shares distributed is determined based on role and the number of years of service. For "medium-term stock bonus" (performance-linked), that number is determined in accordance with the degree of attainment of targets adopted in the Medium-term Business plan. For "long-term stock bonus," the number of the Company's shares distributed is determined based on title or role and the number of years of service.

#### Total amount of compensation, etc. by director or executive officer

Category				Executive		
	Categor	Outside	Inside	Total	Officers	
	Total (million yen)		79	74	153	338
	Page colory	Persons	6	3	9	7
Cor	Base salary	Amount (million yen)	79	55	134	291
Compensation	Performance- based cash bonus	Persons	-	-	-	7
tion		Amount (million yen)	-	-	-	35
	Staal hanva	Persons	-	3	3	7
	Stock bonus	Amount (million yen)	-	18	18	11

- Note 1 The number above includes one Outside Director and two Inside Directors who resigned on the date of the 118th Ordinary General Meeting of Shareholders held on June 17, 2022. As of March 31, 2023, the Company has five Outside Directors, one Inside Directors (not concurrently holding Executive Officer posts) and seven Executive Officers.
- Note 2 In addition to the three Inside Directors shown above, the Company has another three Inside Directors who concurrently hold Executive Officer posts, and the compensation to these Directors is included in compensation to Executive Officers.
- Note 3 Regarding the performance-linked cash bonus, the amounts which were recorded as expense in fiscal 2022 are stated.
- Note 4 Regarding the stock bonus, the amounts which were recorded as expense in fiscal 2022 are stated, based on a calculation of estimated amount of stock bonus issuance by the Company in the future according to estimated points to be allotted to Directors (excluding Outside Directors) and Executive Officers as part of their compensation. The amount includes medium-term stock bonus (performance-linked) to be distributed according to the target attainment rate in the period of the Medium-term Business Plan.
- Note 5 In addition to the above compensation, the following compensation was paid in fiscal 2022 based on the resolution of the Compensation Committee at the time, based on the former retirement compensation, which was abolished in June 2005.
   Director (1 person) 1 million yen (resigned on June 17, 2022)

#### Determining Cross-Shareholdings Based on Their Significance or Justification

In principle, the Company will not hold listed stocks as crossshareholdings except in cases where it recognizes there is significance or justification for ownership. Significance or justification for ownership will be judged from the results of yearly examinations conducted on each based on whether there are expectations of collaboration with the issuers and business synergies, as well as on whether the benefit and risk of holding said stock are appropriate to its capital cost. Consequently, stock where there is little significance or justification for ownership will be sold while taking into account the proper stock price, market conditions, and other factors. Two stocks judged to be lacking in significance were sold (excluding deemed holding shares) in fiscal 2022 (proceeds were ¥923 million).

The execution of voting rights is an important means of communicating with investees, and the Company exercises its voting rights related to all cross-shareholdings. In exercising these rights, the Company checks each proposal and, rather than making a uniform judgement on whether to approve or reject it based on formulaic or short-term standards, makes a judgement from the perspective of whether the proposal will lead to continuous growth and a medium- to long-term increase in corporate value for the Company and the investee, based on sufficient consideration of said investee's management policy, strategies, and the like. Judgement on whether to approve or disapprove a proposal includes careful consideration of the following items that may have a significant impact on shareholder return in particular.

- Transfer of important assets
- Shareholdings structure change due to mergers or acquisition of 100% ownership
- Third-party allotments through favorable issuances
- Introduction of measures to defend against hostile takeovers

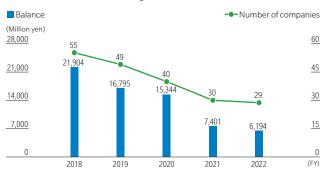
#### Breakdown of cross-shareholdings

	Stocks (name)	Total carrying amount (million yen)
Unlisted shares	20	633
Shares other than unlisted shares	9	5,560

\* The ratio of the above total to consolidated net assets (total equity attributable to owners of the Company) is 1.3%.

\* The above does not include deemed holdings shares.

#### Trend in cross-shareholdings



#### **Major Risks Identified by Frequency and Potential Degree of Impact**

We consider risk to be any situation that presents "uncertainty" about a potential impact on the earnings or losses of our organization. In that sense, risk management encompasses not just the negative side of risk but also the positive side for our sources of earnings. It is therefore essential for mitigating potential negative impact as well as for pursuing the maximum return from opportunities.

In line with this philosophy, we have established the Risk Management Committee, which comprehensively and systematically manages various risks concerning the Group's business activities. The committee is in charge of facilitating the building and strengthening of Group companies' risk management systems, and its members are appointed by the committee's chairperson. Konica Minolta's Executive Officers and Corporate Vice Presidents are required to perform risk management for their respective areas of responsibility. Risk Management Committee members consist of individuals of Executive Officer or Corporate Vice President class.

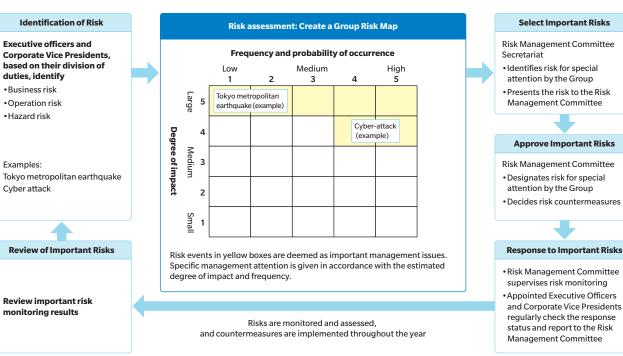
#### Risk management process

The Risk Management Committee reviews management risk items in 17 categories, including items classified as small and medium risks. It applies the PDCA process to improve risk measures, in which the committee reviews the status of countermeasures by conducting monthly and guarterly monitoring. The Risk Management Committee also annually identifies significant risks to the Group that are considered especially critical to management and need to be monitored from a companywide perspective. Significant risks are primarily managed by the committee members, who also spearhead the monitoring of the monthly progress of the Group's countermeasures.

All risks extracted by Executive Officers and Corporate Vice Presidents are plotted into a comprehensive Group Risk Map based on guantitative assessments of the degree of impact and the frequency and probability of occurrence. These maps are updated and pertinent countermeasures are discussed twice a year.

When required due to some unforeseeable situation that occurs, the extraordinary meeting is convened at the discretion of

#### Process of Identifying Important Risk for the Group



the committee's chairperson. For risks deemed to be of high

importance by the committee, progress made in addressing

whole, with efforts led primarily by Executive Officers and

Corporate Vice Presidents appointed by the committee chair.

#### Main Risks and Countermeasures

Risk	Probability	Timing with Potential Occurrence	Potential Impact	Countermeasures
Forex fluctuations	High	Any time	Medium	To reduce the effects of forex fluctuation, hedges are made using mainly forward exchange contracts in major currencies such as the U.S. dollar and the euro. In addition, netting systems provided by financial institutions are used for global settlements denominated in multiple currencies, and forex risk concentration management and effective hedges are implemented by concentrating subsidiaries' foreign currency risks at the Company.
Digital Workplace Business Risk related to changes in the print environment	High	Within 1 year	Large	To address the risk of declining output opportunities in offices in developed countries, we are working towards expanding our scanning services and document management services that make use of MFPs. We also continue to expand deployment of color MFPs in countries and regions where output opportunities still have room to grow, including China and India.
National or regional regulations	High	Within 1 year	Medium	We always pay close attention to and gather information about trends concerning laws and regulations in the countries and regions where we operate and changes in geopolitical risks. We coordinate with legal affairs personnel in each area, ascertain the situation in overseas regions, and take action when necessary with help from specialized organizations that include outside lawyers and consultants.
Changes due to technological development	Medium	Within 3 years	Medium	Through taking "technologies to make the invisible visible" that result from fusing core technologies in four fields, namely materials, optics, nano-fabrication, and imaging, with digital technologies as represented by IoT and AI technologies, and materializing those technologies in product form, we are carrying out initiatives to supply them to customers through each of our Industry, Healthcare, Professional Print and Digital Workplace Businesses and to deal with the risks engendered by changes in next-generation technologies.
Shift to new products	Medium	Within 3 years	Large	From the initial stage of development through to mass production, at every step along the way in transitioning to new products and services, we perform thorough testing and gate management focused on product specifications, quality needs, production costs, and compliance with various regulations (including those for safety, the environment and security) for every prototype, pre-production sample, and mass-produced product that we handle.
Collaborations, company acquisitions	Medium	Any time	Medium	In our collaboration with other companies and corporate acquisitions, we assess the viability of an investment after conducting investment assessments that look at compatibility with our corporate strategies, planning probability, appropriateness of the investment size, and risk management.
Procurement, production, etc.	Medium	Within 1 year	Medium	We have specialized divisions in our core procurement regions of Japan, China, Vietnam, and Malaysia, and we accelerate our action-taking by gathering information on such things as regulations, restrictions, and changes that concern procurement in each region. We have also sought to practice production-related risk management and improve our flexibility in responding to changes in the business environment by building production assembly sites in Japan, China, and Malaysia. With these sites, we are increasing the proportion of products we make outside of China, mainly for major flagship products with large production volume. We do this to hedge against country risk in China, which has increased in various respects in recent years.
Global supply chain	Medium	Within 1 year	Large	In our mainstay Digital Workplace and Professional Print Businesses, we carry out inventory projection simulations at sales sites tailored to the actual state of logistics there as appropriate, distribute supply quantities across various regions in accordance with future inventory projections, make flexible modifications to logistics routes, and circumvent any impact on sales.
Product liability and quality assurance	Low	Any time	Medium	As a means of preventing serious quality problems, we have created the "Quality Assurance Managers Committee," which is chaired by an Executive Officer or Corporate Vice President who has quality-related responsibilities and authority, and which oversees quality management throughout the Group so that we can minimize risks related to quality and increase customer satisfaction.
Human rights	Medium	Any time	Medium	As a corporation with global businesses, in the Konica Minolta Group Charter of Corporate Behavior, the Konica Minolta Group Human Rights Policy, and the Konica Minolta Supply Chain Code of Conduct, we have set forth respect for human rights as one of the most basic requirements for our business activities. In addition, we conduct human rights due diligence based on this policy, and in our efforts toward respect for human rights, we are also pursuing respect for human rights by our business partners and other parties connected with our Group's businesses.
Major earthquake, disaster, epidemic, etc.	Medium	Any time	Large	The officer in charge of crisis management centrally manages information in the event of such things as disasters, infectious disease outbreaks, wars, acts of terrorism, and cyber-attacks, and we have built a system for taking appropriate action with top priority given to employee safety. For large earthquakes and other natural disasters, we are working in accordance with the Medium-term Disaster Readiness Plan and making improvements to our response capabilities both in terms of tangible and intangible asset, with measures aimed at prevention, mitigation, emergency response, initial response, recovery, and reconstruction.
Environmental regulations, climate change	Medium	Any time	Medium	The Konica Minolta Group is constantly pursuing efforts to make our production processes more efficient, advancing the development and improvement of production technology, and promoting the Sustainable Factory initiative that will simultaneously reduce both CO <sub>2</sub> emissions and costs. In response to situations where climate change has a tangible material impact, we are tracing the supply routes for raw materials back to their origins, and for raw materials with a high risk involved in obtaining a stable supply, we are securing multiple suppliers or considering alternative materials.
Intellectual property rights	Low	Any time	Small	In countries and regions where it is difficult to properly acquire and enforce intellectual property rights that protect things such as technologies, we employ a number of methods to stop the circulation of counterfeit products. These include collaborating with governmental agencies to confiscate and ban the import of such goods in order to conform with trademark rights, and stopping the sale of counterfeit products from e-commerce sites by coordinating with business operators.
Human resource availability	Medium	Within 3 years	Large	We see the development and acquisition of IoT personnel as an important strategy and are focusing on implementing related measures. Based on the certification system for IT personnel that we have put in place and the hurdles each of those personnel members should overcome that we clarified, we have prepared programs for teaching skills that will be required of those personnel and are endeavoring to reinforce their development. In our efforts to recruit personnel, we are stepping up efforts towards long-term internships and collaboration with universities on attracting talented students in the IoT field to the Company.
Information security	High	Any time	Large	Regarding information security, we are engaged in network monitoring and are working on early detection of service outages due to attacks of various kinds. We also conduct periodic testing for network intrusions and are implementing responses in the event of early verification of weaknesses that can be exploited. In addition, for employees who continue to work from home after the convergence of the COVID-19 pandemic, we are putting in place restrictions on connecting to the corporate network with computers that are not company-owned and are creating a secure network environment that uses encrypted communications to prevent unauthorized access by external parties, so as to provide these employees with a physical work environment that takes security into consideration.