TOKYO OHKA KOGYO CO., LTD.

Integrated Report 2021

Year Ended December 31, 2021

0.000000001 m
Deepens the World



Purpose:
The meaning of the existence of TOK

Contributing to a sustainable future through chemistry





Management Principles

Create a frank, open-minded business culture,
continue efforts to enhance technology,
raise the level of quality of products,
and contribute to society

Management Vision

"The e-Material Global Company®"
contributing to a sustainable future
through chemistry

CSR Policy

- Increases the sustainable corporate value as a whole group by improving employee engagement.
- Continues to provide high-value-added products that contribute to technological innovations in order to resolve social issues.
- Strives to grow together with society and remain as an attractive company that earns the trust of all stakeholders.



Sources of Value Creation 1

— World-leading microprocessing technology

TOK is the manufacturer with the largest global market share for semiconductor photoresists.*2

TOK's purpose of contributing to a sustainable future through chemistry is supported and practiced by the three core competences of microprocessing technology, high purification technology, and customer-oriented strategies.

TOK developed semiconductor photoresists for the first time in 1968, and since that time, the company has continuously upgraded its microprocessing technology, which contributes to the higher performance, lower power consumption, lower cost, and smaller size of semiconductors, thereby consistently satisfying social expectations with its final products.

TOK Photoresists

Semiconductors

Always satisfying social expectations with microprocessing technology

1970s

Social expectation: **More efficient economic activities**

Examples of final products: Calculators*3

Outputs: First semiconductor positive photoresist developed in Japan

1980s

Social expectation: **More advanced information processing**

Examples of final products: PC

Outputs: i-Line photoresists

1990s

Social expectation: **More advanced communication**

Examples of final products: Feature phones

Outputs: KrF excimer laser photoresists

Trends of aggregate market value of TOK*4 ▶

Trends of line width of semiconductors*5 ▶

1970s	1980s	1990s
Line width of semiconductors	Line width of semiconductors	Line width of semiconductors
10,000–1,500 nm	1,500–600 nm	600–130 nm

*2 Based on the sales quantity of EUV, ArF, KrF, g-Line, and i-Line photoresists in 2021 (calculated by TOK and based on *Fuji Keizai* "Current Status and Future Outlook of Semiconductor Material Markets 2022")

*3 The photos of examples of final products on this page are conceptual images.

*4 Calculated on the basis of the closing stock price at each term end and the number of shares issued (including treasury stock); The scale of the conceptual graph of aggregate market value does not strictly match the year indications of topics.

Value creation area = 1 nanometer*1

0.000000001 m

*1 Approx. 1/100,000 of the thickness of a hair

2021 Highlights

Aggregate market value

¥289.6 billion*4

Energy-saving effect through semiconductor miniaturization pursued by TOK over the past 50 years

Approx. 1/4,000,000*6

2000s

Social expectation

Social networking

Outputs
ArF excimer laser photoresists

Examples of final products
Smartphones

2010s

Social expectation

Promotion of decarbonization

Outputs
Full portfolio

Examples of final products
General electronic products

2020s

Social expectation

Achieving a new normal

Outputs
EUV photoresists

Examples of final products
High-performance PC

2000s

Line width of semiconductors

130–32 nm

2010s–

Line width of semiconductors

32–7 nm

Since the 2020s

Line width of semiconductors

5 nm

*5 Includes TOK's estimates for the decades shown

*6 A rough estimate for two-dimensional semiconductors (1970: 10,000 nm → 2022: 5 nm); Based on scaling laws where miniaturization in line width to approximately 1/2,000 of the original size leads to power consumption of approximately 1/2,000^2, or approximately 1/4,000,000.

Sources of Value Creation 2

— World-leading high purification technology

TOK's high-purity chemicals & photoresists

Semiconductors

The second core competence of TOK is its high purification technology, which has been continuously upgraded since its foundation with a longer history than microprocessing technology.

Our fine chemical products leveraged high purification technology, which satisfied many social expectations in the early post-war era of Japan. Following the subsequent global deployment, the technology provides customers around the world with high-purity chemicals and semiconductor photoresists that substantially contribute to higher productivity (yield) and the saving of resources in the semiconductor industry.

Always satisfying social expectations with high purification technology

Source

1940 **Original management principles presented by the founder Shigemasa Mukai**

— "Create a frank and open-minded business culture, continue efforts to enhance our technology, raise the quality levels of our products, and contribute to society"

Foundation

Source

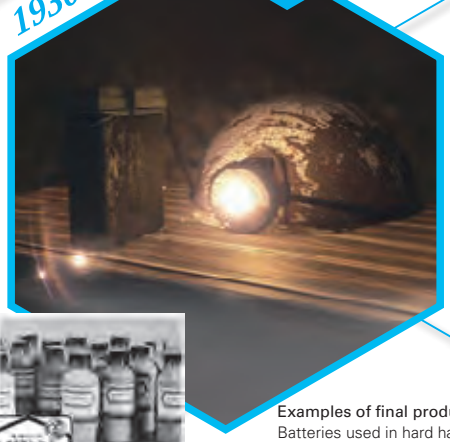
Frank and open-minded business culture

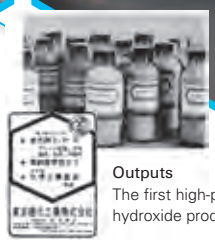
Shigemasa Mukai, TOK founder

1930–40s

Social expectations

Safety of workers





Outputs
The first high-purity potassium hydroxide produced in Japan

Examples of final products
Batteries used in hard hat lights for coal miners

1950s

Social expectations

Development of culture

Outputs
The first high-purity potassium silicate produced in Japan, Ohka Seal

Examples of final products
Black-and-white TVs

*2 Includes estimates by TOK for the decades shown.
The scale of the conceptual graph does not strictly match the year indications of topics.

Trend diagram of TOK's net sales ▶

Level of impurities in TOK's cutting-edge high-purity chemicals

Less than 1/1,000,000,000,000

2021 Highlights

Consolidated net sales

¥140.0 billion

Trends in level of high purification (impurities)*1

1970s	1980s	1990s	2000s	2010s	2020s
Level of impurities	Level of impurities	Level of impurities	Level of impurities	Level of impurities	Level of impurities
≤ 1 ppm	≤ 100 ppb	≤ 1 ppb	≤ 100 ppt	≤ 10 ppt	≤ 1 ppt

*1 1 ppm = 1/1,000,000; 1 ppb = 1/1,000,000,000; 1 ppt = 1/1,000,000,000,000

1970s*2

Social expectations: **Higher productivity**

Value provided
Higher yield in semiconductor production

Outputs
High-purity chemicals and semiconductor photoresists

2000s*2

Social expectations: **Resource saving and environmental contribution**

Value provided
Reduced material loss in semiconductor production

Outputs
High-purity chemicals and semiconductor photoresists

2020s

Customer expectations: **Higher purification**

Value provided
Pursuing defect-free semiconductor production by leveraging super cleanrooms

Outputs
High-purity chemicals and semiconductor photoresists

Sources of Value Creation 3

— Customer-oriented strategies

Customer-oriented strategies are the strengths that continuously advance the benefits of microprocessing technology and high purification technology, and TOK delivers them to all parts of the world.

TOK opened its first overseas site in 1987 and accelerated overseas expansion as the offshoring of the semiconductor industry proceeded. In 2012, the company established a customer-oriented site in South Korea with its trifecta of development, manufacturing, and marketing functions.

The company also promotes the same strategies in Taiwan and the United States and is engaged in long-term research and development activities based on a close relationship of trust with leaders in the global semiconductor industry.

Intel Corporation
EPIC Distinguished Supplier Award (2022)

Texas Instruments Inc.
Supplier Excellence Award (2018)

Continuously expanding social and relational capital to all parts of the world

1987 Overseas expansion **USA**

First overseas site
Ohka America, Inc.
(present TOK America)

1998 Overseas expansion **Taiwan**

First overseas site in Asia
TOK Taiwan Co., Ltd.
(Miaoli plant)

2004 Overseas expansion **China**

First manufacturing site in China
Chang Chun TOK (Changshu) Co., Ltd.
(Changshu plant)

Trend diagram of TOK employees* ▼

Contributing to a sustainable future through chemistry and long-run research and development under customer-oriented strategies

Long-run research and development (approx. 10 years)

Photoresists for image sensors

2003
Release and growth

EUV photoresists

* Employees since FY 1986/11 (unconsolidated until FY 2001/3 and consolidated since FY 2002/3); The scale of the conceptual graph does not strictly match the year indications of topics.

Overseas sales growth rate over the past 10 years (FY 2012/3 vs. FY 2021/12)

109% (2.1-fold)

2021 Highlights

Overseas sales ratio

78.8%

Number of employees (consolidated)

1,816

2012

Customer-oriented **South Korea**

The trifecta of development, manufacturing, and marketing
TOK Advanced Materials Co., Ltd.

2014

Customer-oriented **Taiwan**

Upgrading the customer-oriented strategies
TOK Taiwan Co., Ltd.
(Tongluo plant)

2016

Customer-oriented **Taiwan**

The trifecta of development, manufacturing, and marketing
TOK Taiwan Co., Ltd.
(Tongluo No. 2 plant)

Long-run research and development (approx. 10 years)

MEMS materials

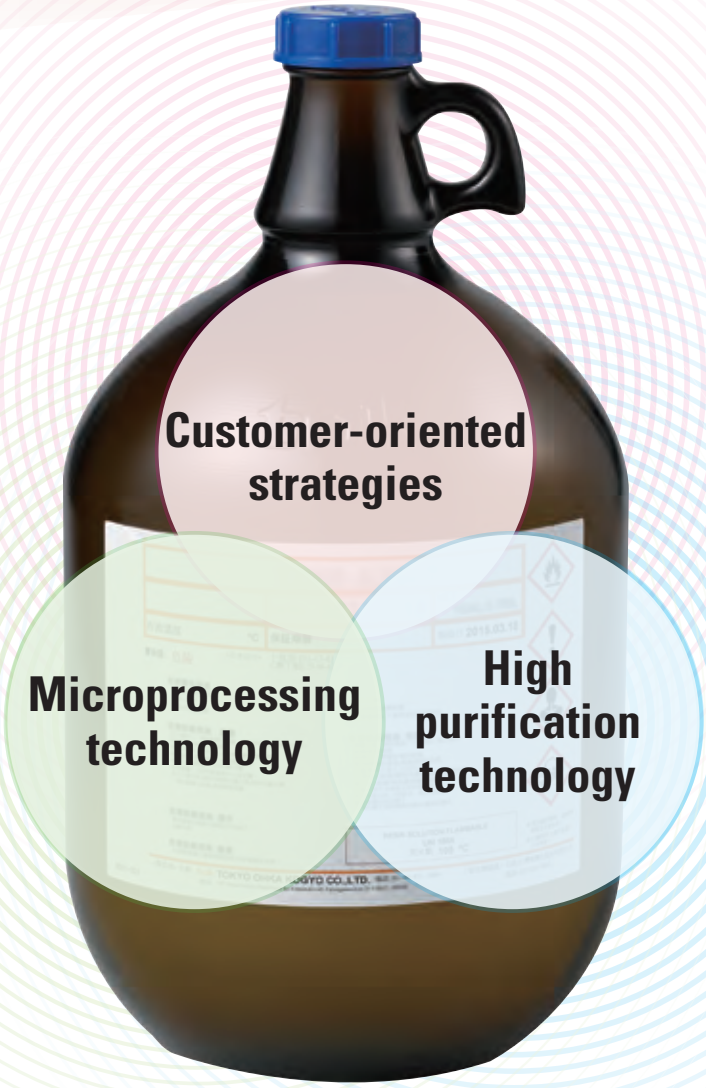
2019
Growth

Long-run research and development (approx. 20 years)

2019
Release and growth

Value Creation Drivers of TOK

— Photoresists



TOK's market share for semiconductor photoresists (based on sales volume in 2021*1)

EUV photoresists
42.7%
Global No. 1

ArF excimer laser photoresists
15.8%
Global No. 3

KrF excimer laser photoresists
31.7%
Global No. 1

g/i-Line photoresists
26.0%
Global No. 1

*1 Source: *Fuji Keizai* "Current Status and Future Outlook of Semiconductor Material Markets 2022"
*2 Calculated by TOK based on aggregation by SEMI

Global semiconductor photoresist market size
(based on sales amount in 2021*2)

US$2,420,373,000

Increased by 19.4% year-on-year

Social value creation with semiconductor photoresists — 2021 Highlights

— EUV photoresists

Contributed to the reduction in line width from 7 to 5 nm

Reduced semiconductor power consumption by 30%

→ Contributed to energy savings of cutting-edge smartphones

— KrF excimer laser photoresists

Contributed to increasing the number of layers in 3D-NAND from 96 to 112

Upgraded data server processing speed by 50% at maximum

→ Contributed to work-style reform and higher productivity

— i-Line photoresists

Substantial growth in sales for power semiconductors

→ Contributed to decarbonization

Contents

Editorial Policy

Scope and time frame of this report

· Time frame
Fiscal year ended December 31, 2021 (January 1, 2021, to December 31, 2021)
(Includes some information after January 2022)

· Organization
Tokyo Ohka Kogyo Co., Ltd., and its consolidated subsidiaries and equity method affiliates
(see pages 132–133 "Global Network," unless otherwise specified in the text**)**

· Publication on the website
Information on the various initiatives related to financial and nonfinancial information, including information not presented in this integrated report, can be found on the Company website.
https://www.tok.co.jp/eng

Reference guidelines

· International Integrated Reporting Framework published by the VRF
· Guidance for Integrated Corporate Disclosure and Company-Investor Dialog for Collaborative Value Creation published by the Ministry of Economy, Trade and Industry
· Environmental Reporting Guidelines 2018, published by the Ministry of the Environment
· ISO 26000: 2010 – Guidance on Social Responsibility, released by the Japanese Standards Association
· GRI Sustainability Reporting Standards

Guidance for Collaborative Value Creation

Forward-looking statements

This integrated report contains forward-looking statements that present the future prospects of Tokyo Ohka Kogyo Co., Ltd., (the Company) in terms of business planning, earnings, and management strategies.

Such statements are based on management judgments and are derived from information available at the time the information was prepared. Readers are cautioned not to rely solely on these forward-looking statements because actual results and strategies may differ substantially in the event of changes in the Company's business environment.

TOK Photoresists

Providing customers with inputs that contribute to innovation

TOK photoresists provide customers with inputs that serve as a starting point for the customer's value creation process and contribute to innovation by substantially affecting and developing the quality of customers' outputs in terms of semiconductor quality and yield. This section describes the functions, performance, and core value provided by TOK photoresists in the semiconductor manufacturing process.

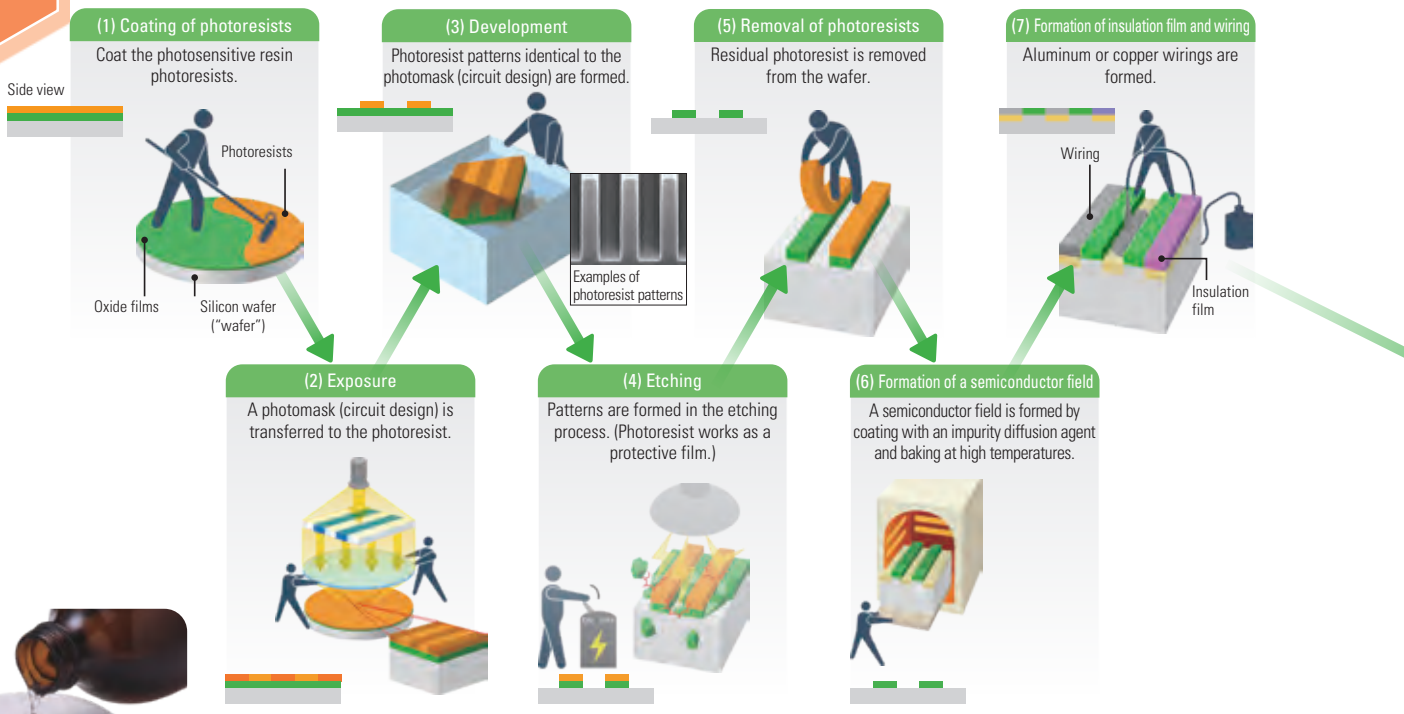
TOK's Semiconductor Photoresist Business

Also, see the informational video concerning TOK's contribution to innovation and other businesses.

Semiconductor manufacturing flow

Process of making integrated circuits on a silicon substrate and producing semiconductor chips. The process uses photoresists' resistance to etching.

Front-end processes of semiconductor manufacturing



Starting point for customer's value creation process

Factors Adding Value to Semiconductor Photoresists

Sensitivity	Resolution	Roughness* * Fluctuations in line width
Etching resistance	Substrate adhesiveness	Processing applicability
Purity	Substance safety	Cost

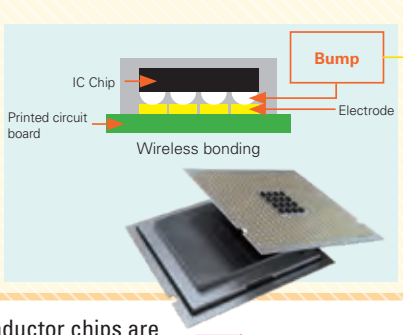
Our Strength

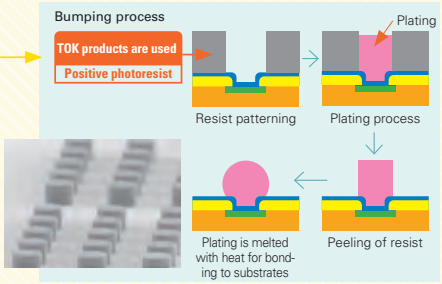
Providing photoresists as growth drivers in both the front-end and back-end processes of semiconductor manufacturing

Wireless bonding contributes to downsizing, weight reduction, and higher performance

In this method, the projected connection terminals called "bumps" are laid out at the bottom of the IC chip without using fine metal wire and come into direct contact with the printed circuit board for energization.

By saving space for wire connections, the IC chip is directly connected to the printed circuit board, which reduces the connection distance and contributes to downsizing, weight reduction, and the higher performance of semiconductor packages.





In this process, individual semiconductor chips are cut out and sealed into different packages. The process takes advantage of the thick file forming capacity of photoresists.

Back-end processes of semiconductor manufacturing

Semiconductor chips completed

Each diced wafer becomes an IC chip.

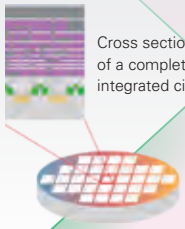
(10) Dicing of wafers

Wafer is diced into chip sizes.

(9) Completion of an integrated circuit

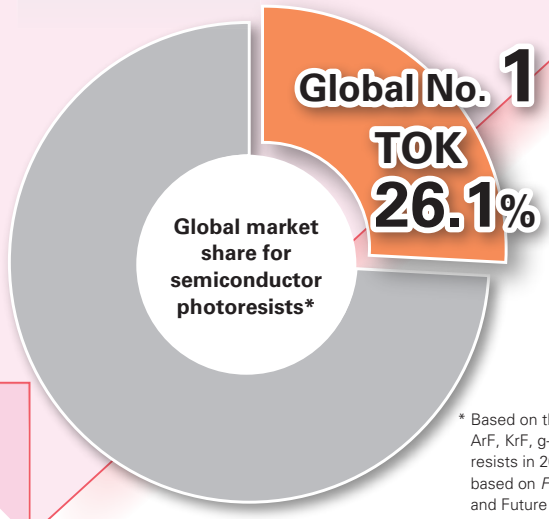
Multiple ICs are created on the wafer surface using microprocessing technology.

Cross section of a completed integrated circuit



(8) Formation of integrated circuits

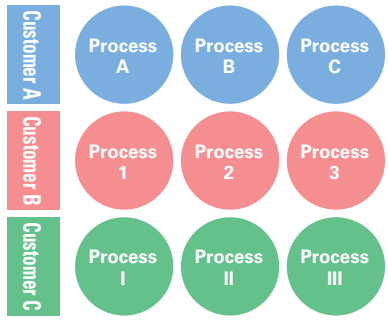
ICs are formed by repeating the processes (1) through (7).



* Based on the sales quantity of EUV, ArF, KrF, g-Line, and i-Line photoresists in 2021 (calculated by TOK based on *Fuji Keizai* "Current Status and Future Outlook of Semiconductor Material Markets 2022")

Core value of TOK

We can swiftly provide finely tuned tailor-made photoresists for the different needs and requirements of each customer or process



Output and Outcome

Outputs — Full Portfolio

TOK has developed strong niche domains in both the front-end processes and back-end processes of semiconductor production with strengths in both miniaturization and 3D packaging. As a long-established supplier of photoresists, TOK provides a full portfolio comprising both the legacy field and the cutting-edge field. The Company also provides cutting-edge value in high-purity chemicals as non-photosensitive materials and in equipment.

* Based on the share of sales volume in 2021 (source: *Fuji Keizai* "Current Status and Future Outlook of Semiconductor Material Markets 2022")

SDGs to which we contribute

Outcomes — Contribution to a Sustainable Earth and Human Society

Against the backdrop of increasing climate change risks and the COVID-19 pandemic, semiconductor demand has shifted to a substantially different phase. Semiconductor materials in all areas, including not only the cutting-edge field but also the legacy field, have become indispensable for achieving a sustainable Earth and human society. TOK provides a stable supply of these materials under its purpose to contribute to a sustainable future through chemistry.

OUTCOME

Portfolio

Business Portfolio — Proprietary Material and Equipment Strategies

The Company operates the material business, the current earnings driver, while realizing synergy with the equipment business, which specializes in niche business domains. TOK has flagship products in both the cutting-edge field that drives innovation and in the legacy field that contributes to decarbonization as it promotes the materials and equipment (M&E) strategy on a short-term, medium- to long-term, and super-long-term basis as a long-run R&D-driven company.

Material business

Develops high value-added products as an earnings driver

Risks and opportunities by segment
→ See pages 35 and 39

M&E
Materials and Equipment (M&E) Strategy

Strengthen value creation in all directions in the 2D and 3D semiconductor markets

Equipment business

Getting one step ahead of market needs in synergy with the Material Business

Electronic functional materials

Photoresists
Widely used materials indispensable for the **microprocessing** for devices, including semiconductors, LCD panels, and other electronic products

High-purity chemicals

High-purity chemicals
Clean solutions, thinners, developing solutions, and other chemicals with **world-leading high purity**

Materials

High-density integration materials
Packaging photoresists which are compatible with **multilayer stacking resulting** from the miniaturization of semiconductors/MEMS materials

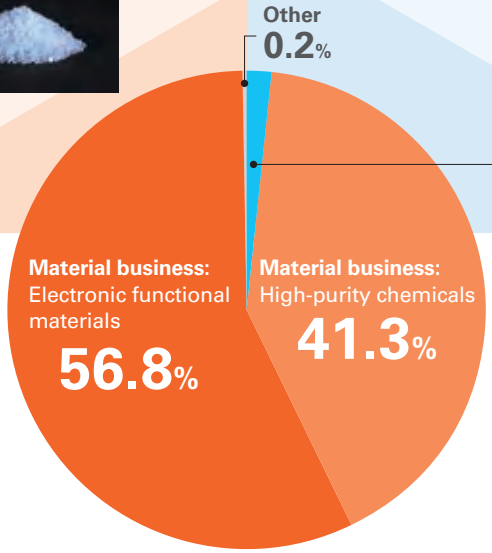
Inorganic and organic chemicals
Chemicals used in a wide range of industries

Process equipment

Semiconductor manufacturing equipment
Plasma ashing system **for power semiconductors**/Zero Newton® wafer-handling system enables significant increases in the efficiency of **the 3D packaging process** for semiconductors and **the thinning process for power semiconductors**

Equipment

LCD panel manufacturing equipment
UV curing machines used to manufacture **flexible organic EL panels**, coating machines that can achieve high-precision performance, and coating machines for R&D

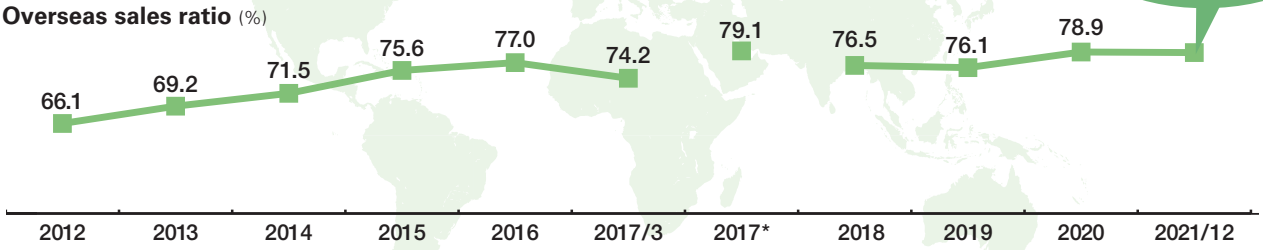


FY 2021/12
Consolidated net sales
¥140 billion

Regional Portfolio — Customer-Oriented and Risk Diversification

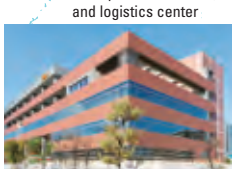
Our business has become increasingly globalized through the promotion of customer-oriented strategies focused on the semiconductor fields. Our overseas sales ratio has been nearly 80% over the past few years. Considering the recent surge in economic security risks and the accelerating multisite operations of overseas customers, we will promote thorough customer-oriented strategies and risk diversification through the agile enhancement, utilization, and collaboration of managerial resources among the five global hubs.

Overseas sales ratio (%)



* The Company changed its fiscal year-end from March 31 to December 31 effective fiscal year 2017.

Japan
- Headquarters (9 sites)
- Number of employees: 1,261



The United States
- 1 local subsidiary (2 sites)
- Number of employees: 136

Taiwan
- 1 local subsidiary (3 sites)
- Number of employees: 208

China
- 2 local subsidiaries (2 sites)
- Number of employees: 60

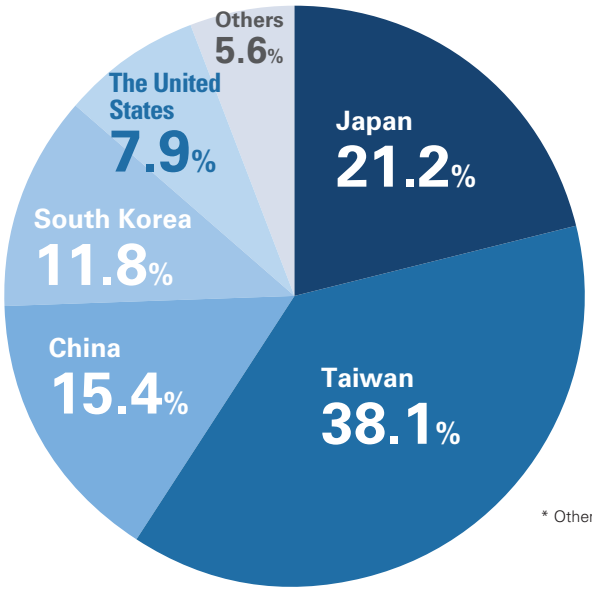
South Korea
- 1 local subsidiary (1 site)
- Number of employees: 137

* Number of employees: As of December 31, 2021

FY 2021/12

Consolidated net sales

¥140 billion



* Others: Europe, Singapore, and other countries

Capital

Strategically Enhancing Managerial Resources with Technology, Human Resources, and Human Connections at the Core

We will survive the intense competition for technological development in the cutting-edge field of semiconductors, while sustaining long-term value creation in decarbonization and other fields through substantial environmental contributions by strategically enhancing our technology (manufactured capital), human resources (human capital), and human connections (social and relational capital) based on robust financial capital.

Financial capital

- Financial capital policy for the super-long term
- Dividend policy based on net assets

■ Balance sheet management

Pursuing an optimal balance between investment, cash reserves, and shareholder returns

- Executing the niche top strategy in cutting-edge fields
- Aggressively taking risks as an R&D-driven company

■ Strategic policy on cash reserves

Established a policy on cash reserves consisting of working capital, investment reserves, and risk reserves

- Developing technologies with a super-long time frame, continuously tackling challenges over a super-long time frame, and responding to unexpected events such as major disasters, etc.
  · Representing top-class financial soundness in the chemicals sector (equity ratio 71.7%, D/E ratio 0.07 times*)

*Both as of December 31, 2021

■ Enhancement of dividends

A dividend policy targeting a DOE of 4.0%

- Steady and continuous shareholder returns

■ Pursuit of higher asset efficiency

Target ROE: Maintain 8.0% or more (FY 2024/12); 10% or more (FY 2030/12)

- Promote investment and business strategies using EBITDA, ROIC, IRR, etc. as monitoring indicators

Manufactured capital

- World-leading microprocessing technology
- World-leading high purification technologies

■ Microprocessing technology

Development and manufacture of materials to make semiconductor circuit line widths fine and materials used to make higher-density semiconductor packages
Development and manufacture of materials for stacking semiconductor devices in three dimensions

- Continue to satisfy the sophisticated customer needs of manufacturers for semiconductor and electronic components

■ High purification technology

Supply clean solutions, thinners, and developing solutions with the highest purity in the world by absolutely minimizing impurities in the product

- Realize shared value with customers by improving yield, productivity, and resource efficiency on the mass production lines for cutting-edge devices
- Make our strengths effective in highly challenging domains, such as controlling performance down to the molecule level

■ Niche top products

DNA of the founder, Shigemasa Mukai: "Create materials that are supported by advanced technologies and that cannot easily be imitated by other companies"

- Focus on niche business fields shaped by radical and rapid technological changes
- Promote a business model that continues to develop and bring to market new, high-end, high-value-added products

Intellectual capital

- Sustain high levels of R&D investment
- Corporate culture supports long-run development

■ High ratio of R&D costs to net sales

Maintain the ratio of R&D costs to net sales of around 8%

- Strengthen R&D functions in Japan, the United States, South Korea, and Taiwan
- Continue development for the further advancement of microprocessing and high purification technologies centered on research into functional polymer materials and the development of applied technologies
- Focus on the development of new high-functional materials, equipment, and production technologies; Also expand and accelerate open innovation

■ Marketing capabilities in R&D

Blue ocean strategy

- We achieved a more than 40-percentage-point increase in R&D efficiency* in the past five years as a result of setting development fields with a view to future blue oceans and further refining the marketing of technologies, and we aim to achieve and maintain 200% in the coming years.

  * R&D efficiency = Operating income over the past five years / R&D costs over the preceding five years

■ Long-run development

A willingness to accept challenges based on the management principle of creating a frank, open-minded business culture

- Foster a frank, open-minded business culture that can support the persistent pursuit of development over 10 years while R&D in cutting-edge fields becomes increasingly difficult

The TOK Medium-Term Plan 2024 was launched in 2022. The plan particularly focuses on investments in human capital by introducing an employee engagement indicator for the evaluation of the performance-linked share-based remuneration for directors. By promoting a personnel system reform, human resource development, and work-style reform in alignment with individual values of employees and their happiness, TOK will establish a base for becoming a 100-year company in 2040.

Human capital

- Personnel measures focused on happiness
- Diversity and inclusion

■ Policy on Leveraging Human Resources "Never forget that all business begins with people."
Increasing investment in human capital

- Average annual salary per person increased by ¥1.83 million over the past 10 years,*1 and the average tenure figure rose by 2.1 years.*1
- Ratio of paid leave taken stood at 73.8%, which is significantly higher than the national average of 56.6%.*2

*1 Unconsolidated basis
*2 Source: Ministry of Health, Labour and Welfare's Summary of General Survey of Working Conditions for fiscal 2020 or 2019

■ Endeavor to improve employee engagement as a key initiative in the medium-term plan
Pursue measures that align with the individual values of personnel and their happiness

- New personnel system based on the mission grade system
- Executive fellow system, incentive payment system, and technological recognition system
- Evaluation parameters for performance-linked share-based remuneration for directors consist of ROE and an employee engagement indicator

■ Advance international employees and female personnel
Merit-based hiring and promotions regardless of nationality or gender

- The consolidated ratio of international employees has increased, and locally hired personnel with a deep understanding of TOK management principles in the sales, development, and manufacturing divisions are making a significant contribution to cutting-edge value creation.
- The number and ratio of female employees increased. Further promote diversity and inclusion toward a new material issue of *contribution to innovation and the creation of social value.*

Social and relational capital

- Staying abreast of customers who are leading global cutting-edge technology
- Supplier engagement

■ Establish development and manufacturing sites in the United States, South Korea, and Taiwan, where many customers are located
Introduce prototype production lines equal to the ones of customers who are leaders in global cutting-edge technology

- Quickly commercialize R&D achievements and build a robust relationship of trust in the fast-changing semiconductor and electronics industries

■ Establish a robust customer base as a long-established supplier of photoresists
Provide customers in all areas with a full portfolio, including legacy products

- Engaged in long-term transactions for more than 20 to 30 years, especially in businesses related to decarbonization and power semiconductors

■ Build innovation ecosystems with diverse stakeholder
Collaborate with stakeholders and customers to drive innovation in the cutting-edge semiconductor fields where difficulty in development has been increasing each year

- Discover and support venture companies with technological advantages, engage in joint research with academics, and participate in a variety of consortiums

■ Create cutting-edge value with suppliers
Strengthen and improve supplier engagement

- Create cutting-edge semiconductor materials from the formulation of raw materials together with suppliers
- Cooperate closely with suppliers to manage chemical substance risks to protect the global environment

Natural capital

- Contribute to decarbonization through business
- Minimize environmental risks

■ Contribution to decarbonization both in materials and in equipment
Provide products that contribute to decarbonization

- Reduce power consumption through the miniaturization of semiconductors by supplying cutting-edge photoresists
- We have a top share* in the world market for g-Line and i-Line photoresists that are essential in the manufacture of power semiconductors used to conserve and control energy in renewable energy systems, electric vehicles, and hybrid cars, which stably account for nearly 10% of consolidated net sales.
- Develop multiple types of power semiconductor manufacturing equipment with repeat orders from many customers

* Based on market shares in sales quantity in 2021 (based on *Fuji Keizai* "Current Status and Future Outlook of Semiconductor Material Markets 2022")

■ Responsible care activities
Appropriate management as a manufacturer that handles chemical substances and uses large volumes of water in the production processes, combined with efforts to reduce greenhouse gases toward decarbonization

- Focus efforts on minimizing environmental risk in the production process and throughout our supply chain
- Promote responsible care activities* as a part of the Group Management System (GMS) that reinforces the group management structure globally

* Activities in which companies handle chemical substances voluntarily implement environmental, safety, and health measures in every process from chemical substance development through manufacturing, logistics, use, and final consumption to disposal and recycling, and announce the results of these activities while communicating with the public. (Defined by the Japan Chemical Industry Association)

Culture and Business Model

Backbone of Business Model — DNA and Corporate Culture

Apart from the six financial and nonfinancial capitals, TOK has a corporate culture as an additional managerial resource that takes root in all field employees and was developed from the DNA inherited since the era of Founder Shigemasa Mukai under the purpose of contributing to a sustainable future through chemistry. Celebrating the 82nd anniversary of the foundation in 2022, TOK will continue to inherit its DNA and corporate culture to promote a business model featuring customer-oriented strategies.

DNA

Shigemasa Mukai,
TOK founder

— Ideal at foundation —

Under his strong ideal of challenging ourselves to develop products, however hard it may be, that are useful to society and not offered by other companies

— Policy for restart in the post-war era —

Create high-purity chemicals and other materials based on advanced technologies that cannot be easily imitated by other companies without imitating other entities

— At the establishment of the Tokyo Ohka Foundation for the Promotion of Science and Technology —

As a resource-poor country, Japan needs to develop based on proprietary technologies accumulated through basic research and their application to the industry, thereby contributing to the peace and prosperity of humankind

Purpose to contribute to a sustainable future through chemistry as our purpose

Corporate culture

Purpose-driven

Make sure that all management resources and initiatives ultimately contribute to society

◆

Creating shared value with society (CSV)

◆

Contribution to SDGs

Pursuit for niche top

Blue ocean strategy

◆

Specialize in niche areas with high added value

◆

Global Niche Top Companies Selection 100

Long-run R&D

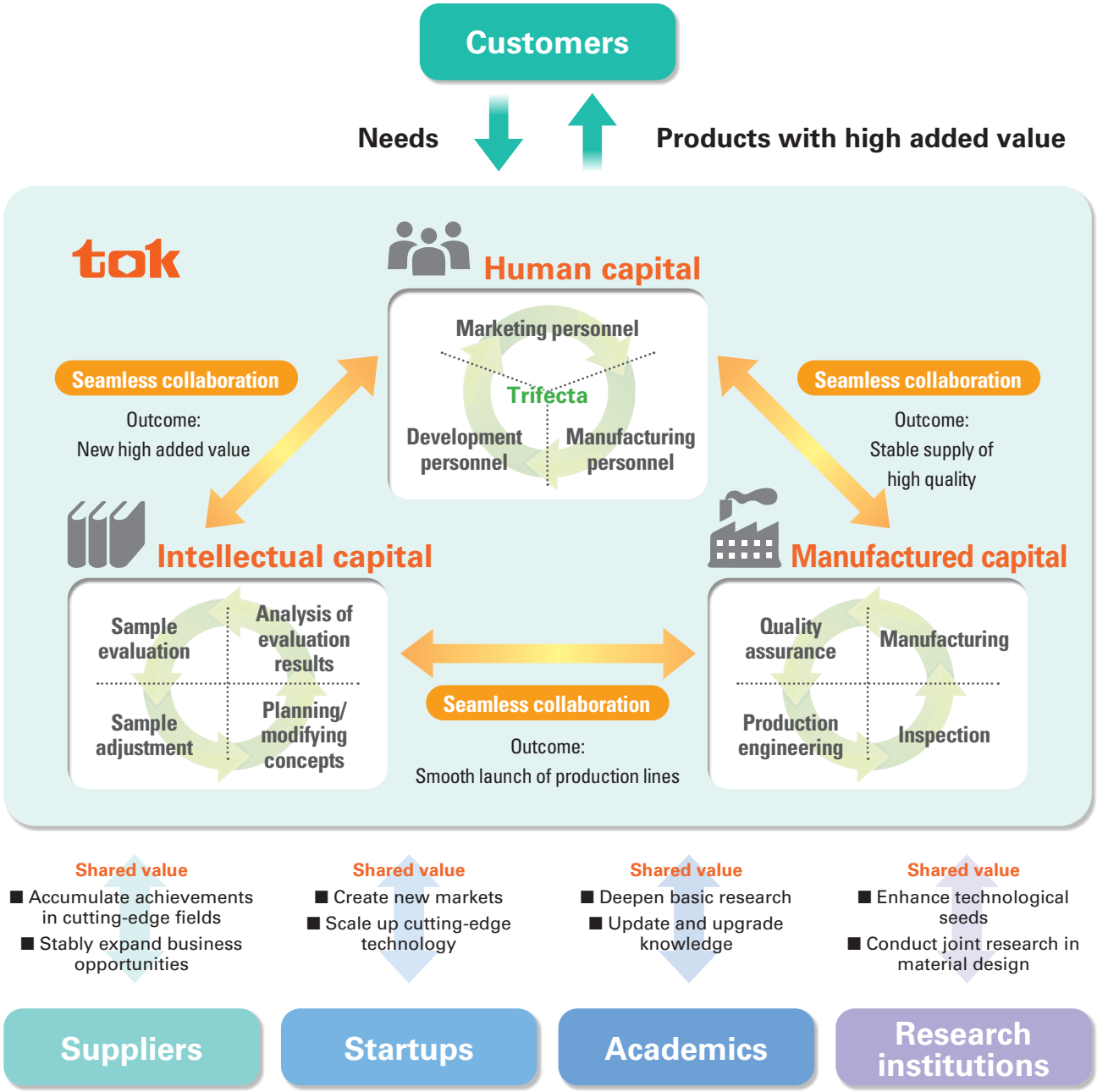
Persistently continue with R&D in pre-emerging fields for more than 10 years

◆

A frank and open-minded business culture that enables challenges in R&D and marketing, as well as unofficial research activities

Business Model — Customer-oriented Strategies Based on the Trifecta of Development, Manufacturing, and Marketing

In our customer-oriented strategies, human resources in the development department, manufacturing department, and marketing department serve customers in a trifecta through seamless collaboration with resources across the Company, thereby achieving the creation of new high added value, the smooth launch of products, and the stable supply at high quality. TOK also provides customers with diverse shared value obtained through collaboration with suppliers, startups, academics, and research institutions and the open innovation embedded in our products.



Value Creation Process

TOK's Sustainable Value Creation Process

As the VUCA tendencies continue to intensify, TOK formulated the management vision "The e-Material Global Company®" contributing to a sustainable future through chemistry and under which the Company boosts activities to achieve the TOK Vision 2030 based on the new TOK Medium-Term Plan 2024 launched in 2022. As a global niche top company, TOK contributes to the resolution of social issues based on the specified purpose by leveraging the robust customer base established in Japan and overseas.

Social Issues

Greater difficulty and longer spans in technological innovation

Reduction of climate change risks by accelerating decarbonization

Accelerated emergence of metaverse and dissemination of 5G, IoT, and AI

Escalated infectious disease risk

Shift to new mobility society

Low birthrate and aging population/ Decrease in the working population (in Japan)

Inputs (FY 2021/12)

Financial capital

Total assets: ¥217.2 billion

Equity ratio: 71.7%

Manufactured capital

Capital investment: ¥8.4 billion

Intellectual capital

Number of patents: 264

R&D cost: ¥9.8 billion

Human capital

Number of employees (consolidated): 1,816

Social and relationship capital

Selling products in 27 countries and regions

Natural capital

Sustainable natural resources

Material business

Equipment business

TOK Medium-Term Plan 2024

Increase global market shares of cutting-edge photoresists, acquire and create core technologies for electronic materials and new fields, secure stable supplies of high-quality products and establish an optimal production system for the Group, improve employee engagement and promote people-oriented management, and establish a sound and efficient management foundation

Upgraded customer-oriented strategies

Accelerate the integration of the Marketing Department and the Research and Development Department, thereby upgrading the trifecta of development, manufacturing, and marketing into a new phase

Initiatives for material issues

Contribution to innovation and the creation of social value, pursuit of happiness in employees, establishment of resilient organization, global environmental conservation considering future generations, and supply chain sustainability

Global niche top company

Maintain business model to continue to develop and launch high value-added products in niche fields

Purpose & management vision

Contributing to a sustainable future through chemistry
"The e-Material Global Company®"
* Purpose

Management principles

Create a frank, open-minded business culture, continue efforts to enhance technology, raise the quality levels of our products, and contribute to society

TOK Vision 2030: overarching aspiration

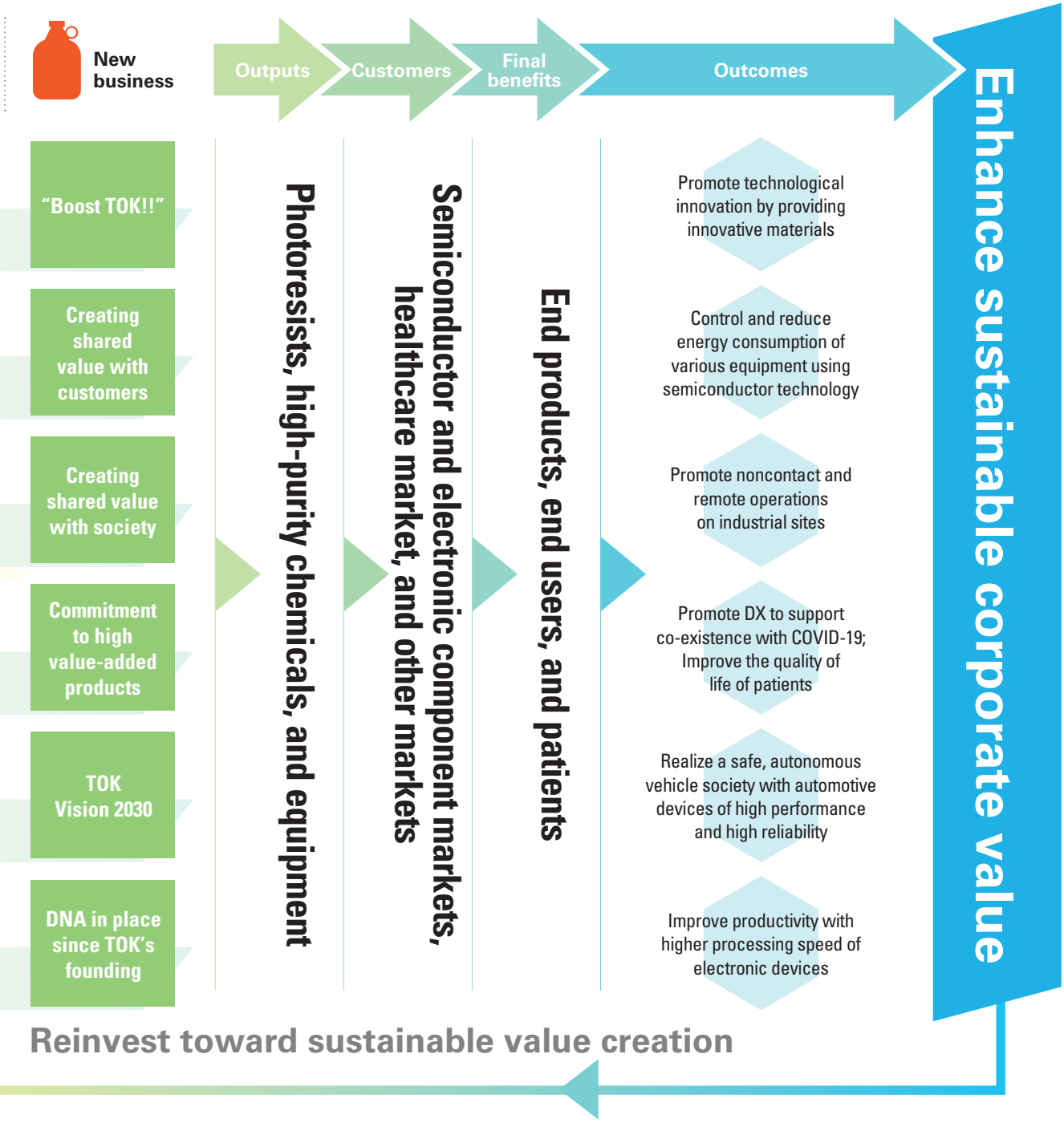
— Quantitative aspects —

Net sales	EBITDA	ROE
¥200.0 billion	¥45.0 billion	≥10%

— Qualitative aspects —

- Provide new added value to inspire customers
- Earn the trust from stakeholders worldwide
- Continue developing high technological capabilities and show international presence
- Enhance corporate value sustainably with an aim to contribute to SDGs Develop an awareness of contributing to the SDGs and enhance sustainable corporate value
- All employees can work lively with pride

Cutting-edge value creation in the semiconductor-related and electronics-related businesses, where technologies change at an extremely fast pace, is supported by investments in human capital, a financial base with a super-long-term view, world-leading technological capabilities based on continuous R&D, and initiatives for material issues. TOK will continue to flexibly upgrade the value creation process while closely monitoring global risks and opportunities and contribute to high-level social and scientific issues, thereby enhancing its sustainable corporate value.



Contributing to a Sustainable Future through Chemistry

Contribution to the improvement of the quality of life of humans under the TOK purpose

In 2020, TOK formulated the management vision "The e-Material Global Company®" for contributing to a sustainable future through chemistry, inclusive of its purpose of contributing to a sustainable future through chemistry, with the aim of achieving its long-term vision TOK Vision 2030 toward the year 2030. The Vision has been formulated with the aim of becoming a 100-year company by 2040 based on the diverse accomplishments of value creation to be made through initiatives over the ten years ending in 2030.

The purpose of contributing to a sustainable future through chemistry was defined when I took the position of president in 2019 through my comprehensive examination concerning why TOK exists and what a company is. The character "応" in the company name, 東京応化 (TOK), represents our attitude of responding to the expectations of society and customers as we explained in the *Integrated Report 2018*.

This purpose is supported and practiced by the three competences stated at the beginning: world-leading microprocessing technology, world-leading high-purity processing technology, and customer-oriented strategies. In particular, microprocessing technology is the very source of our value creation, which provides three benefits (higher performance, lower power consumption, and higher integration) to semiconductor devices that have become essential to human society as the "water of the industry."

For example, semiconductor devices have acquired higher processing speeds owing to the higher performance achieved through miniaturization and have made our economic and social activities more efficient and comfortable with faster PCs and servers, thereby contributing to reduced work hours, work-style reforms, and the development of remote work during the COVID-19 pandemic.

These days, we are able to use smartphones with performance equivalent to that of supercomputers in earlier times but with compact batteries because of the lower power consumption of semiconductors achieved by microprocessing technology. Needless to say, this contributes to decarbonization, which has become a common global social requirement. Through the course of miniaturization in which TOK has been engaged for more than 50 years, the power consumption of semiconductors has been reduced to 1/4,000,000* compared to 1970.

To Our Stakeholders —Message from the President

Advance purpose-oriented value creation as the semiconductor industry starts to grow at an unprecedented speed

Noriaki Taneichi

Representative Director, President & Chief Executive Officer

In the meantime, the higher integration of semiconductors, the third benefit of microprocessing technology, has achieved lower cost and smaller sizes for each transistor. This has enabled the broad delivery of higher performance and lower power consumption as the first two benefits to people around the world and has contributed to resource savings as an urgent sustainability requirement through terminals of smaller sizes. The data capacity of iPhones, which were first marketed in the United States in 2007, increased by 125-fold over the past 15 years. This was due to the efforts of TOK and other fine chemical manufacturers that continuously advanced photoresists and other materials in collaboration with global semiconductor and equipment manufacturers, thereby reducing the line width of semiconductors to less than one-fifth over the past 15 years.

In short, I believe that these three benefits of semiconductors achieved by microprocessing technology (higher performance, lower power consumption, and higher integration) contribute to improvements in the quality of life of humans. Under the purpose of contributing to a sustainable future through chemistry, TOK will continue to upgrade its world-leading microprocessing technology and other core competences, thereby contributing to improvements in the quality of life of humans.

* A rough estimate for two-dimensional semiconductors (1970: 10,000 nm ➞ 2022: 5 nm); Based on scaling laws where a miniaturization in line width to approximately 1/2,000 of its original size leads to power consumption of approximately $1/2{,}000^2$, or approximately 1/4,000,000.

DNA & corporate culture

Value creation based on this purpose can only be achieved and further developed because it has been established as the TOK corporate culture under the management principles and DNA inherited more than 80 years ago in the era of Shigemasa Mukai, founder of the TOK Group. As the original management principles presented by Founder Mukai (“Create a frank and open-minded business culture, continue efforts to enhance technology, raise the quality levels of our products, and contribute to society”) indicate, the management vision and purpose of the TOK Group has its roots in integrated thinking that aims to make sure that all management resources and initiatives ultimately contribute to society. TOK will continue practicing the proprietary business model based on this robust corporate culture while pursuing the sustainable improvement of corporate value.

TOK Medium-Term Plan 2021: Summary

Return to a growth trajectory owing to the semiconductor demand that started to increase at unprecedented speeds and the advancement of customer-oriented strategies

To achieve the overarching aspiration for 2020 as the former long-term vision, "Be a globally trusted corporate group by inspiring customers with high value-added products" (2010 to 2020), the Company has implemented the TOK Medium-Term Plan 2021 (2019 to 2021) to promote four company-wide strategies toward the qualitative objective of cultivating niche markets that the TOK Group should develop and has endeavored to strengthen business portfolio reforms to return to a growth trajectory and to strengthen balance sheet management and introduce a new dividend policy.

Although revenue slightly decreased because of the U.S.-China trade friction in the first fiscal year, TOK steadily acquired increasing semiconductor demand over the next two years due to the dissemination of 5G and IoT combined with increased work-from-home and stay-at-home demand, and the use of cloud services. In addition, TOK further strengthened the customer-oriented strategies that had been promoted under the TOK Medium-Term Plan 2015, thereby achieving record-high performance for two consecutive years. In this way, the Company earned net sales of a higher part of the targeted range in the medium plan. Sales of high value-added products increased because of the advancement of microprocessing technology and high-purity processing technology, thereby achieving operating income and ROE beyond the objectives. I would say that our initial goal to return to a growth trajectory has been attained.

On the other hand, the objective concerning LCD materials was not attained because of the strategic avoidance of price competition in the Chinese market. Many other problems remain unresolved in the equipment business, such as objectives left unattained because of travel restrictions, postponed equipment start-up, and delayed part procurement due to the COVID-19 pandemic, despite the many business inquiries received in cutting-edge fields and decarbonization.

Steady advancement of purpose-driven value creation and initiatives for material issues

Under these circumstances, TOK introduced the new long-term vision, "The e-Material Global Company®" to contribute to a sustainable future through chemistry and purpose-related initiatives at the turnaround point of the TOK Medium-Term Plan 2021. Under the vision and initiatives, the Company provided high value-added products in the cutting-edge fields that contributed to the achievement of the new normal during the COVID-19 pandemic as described earlier, thus responding to social expectations to guarantee the health and safety of people around the world and to improve productivity.

In the medical field, TOK supported the rapid production increase of medical devices during the COVID-19 pandemic with power semiconductor resists and devices essential for their production. In addition, the photoresists that TOK developed and provided for cutting-edge semiconductor devices used in supercomputers have contributed to advances in medical research. In the life science field, where I sowed seeds while working in the New Business Development Department, sales of materials for biochip production for next-generation DNA sequencers based on the MEMS technology increased during the COVID-19 pandemic. Sales of cell sequencing chips that contribute to advances in pathological diagnosis also increased.

In terms of the contribution to decarbonization and carbon neutrality, which are increasingly required in Japan and overseas, sales of resists and devices for power semiconductors essential for renewable energy systems (such as wind power and solar power generation), EVs, and

various energy-saving devices also increased. In this way, I would say that our purpose-driven business activities are creating substantial social value.

Therefore, I believe that we have made favorable achievements in the former material issues, such as the creation of new added value that contributes to innovation and the conservation of the global environment, except for several KPIs that remained unattained.

Recognition of External Environment

The semiconductor industry has started growing at an unprecedented speed and our business opportunities

The semiconductor industry in 2021 grew by 26.2% year-on-year to a record-high scale of US$555,893 million*1 because of the partial lifting of lockdowns during the COVID-19 pandemic, the restart of economic activities based on the progress of vaccinations, and recovery of demand for automobiles and industries as well as the background already mentioned.

Formerly, the semiconductor industry repeated a cycle of six or seven years consisting of substantial growth by more than 20% year-on-year followed by diminishing returns. The key factor in this cycle was the alternation of technological generations. After the substantial growth of products of a new generation (in cutting-edge fields) driven by state-of-the-art information terminals, prices declined because of the oversupply once demand slowed that formed a cyclic increase and decrease of the overall market, which has been referred to as a "silicon cycle." However, I am now paying attention to the present semiconductor market, which has shifted to a substantially different phase. The growth of the semiconductor market was formerly driven by miniaturization and lamination, but products of former generations (in a legacy field) have been added as the third driver. In 2021, while the markets for the cutting-edge fields of EUV and ArF photoresists steadily expanded for state-of-the-art smartphones and automotives (increase by 7.7% year-on-year*2), the markets for the legacy fields of g/i-Line photoresists started to grow again for decarbonization and IoT sensors (increase by 15.5% year-on-year*2). This had an extremely large impact, and I believe that the growth scenario of the semiconductor industry was fundamentally changed by this shift. Growth equivalent to or exceeding that of cutting-edge fields is expected in the legacy fields of autonomous vehicles and the metaverse that will be practicalized and disseminated in the coming years. As a long-established supplier of photoresists, we promoted a full-portfolio strategy featuring many products with the largest global market shares, such as EUV photoresists and ArF/KrF excimer laser photoresists in the cutting-edge field and g/i-Line photoresists in the legacy field. We will continue to fully employ our technologies (manufacturing capital), personnel (human resources), and human connections (social and relational capital) that we accumulated in both fields and enhance the structures for continuously supporting the semiconductor industry that has started growing at an unprecedented speed. In addition, as i-Line photoresists in the legacy field substantially grew for decarbonization in 2021 described above, we will continue accelerating our proprietary value creation by pursuing inter-generation technological synergies.

*1 Source: World Semiconductor Trade Statistics
*2 Source: SEMI

Coping with higher material prices and tight supply-demand conditions as largest risk factors

Many of our key materials derive from crude oil. Crude oil prices have increased and remain at high levels because of reduced investments in fossil fuels resulting from the recent global acceleration of decarbonization, and the tight supply-demand conditions due to the recovery of the global economy from the COVID-19 pandemic. Such higher material prices and tight supply-demand conditions particularly impact on high-purity chemicals. Therefore, TOK is persistently negotiating with customers by placing priority on the acquisition of necessary quantities and the maintenance of the supply chain while passing material price rises onto selling prices and introducing price formulas. We will continue to implement the risk measures described above to powerfully support the semiconductor industry that has started growing at an unprecedented speed as the manufacturer with the largest global market share of photoresists. As part of these efforts, the Company integrated the Supply Chain Management (SCM) Promotion Department and the Procurement Department as the SCM Procurement Department in January 2022.

Increasing economic security risks

At present, economic security risks that surround the semiconductor industry continue to surge, including U.S.-China trade friction and the Ukraine crisis. The supply-demand conditions are increasingly tight in the industries. Under these circumstances, the review of the concentration of semiconductor production in Asia and the reshoring of production are in progress. While carefully monitoring economic security risks, the TOK Group will minimize the impact of the risks by developing business in five regions (Japan, U.S., China, South Korea, and Taiwan) for risk diversification and enhancing business portfolio reform that has been promoted

since the TOK Medium-Term Plan 2015. The multisite deployment promoted by customers as risk measures also offers business opportunities to us. We will steadily acquire these opportunities through customer-oriented strategies.

Even in this era of VUCA*, the power of semiconductors to contribute to the improvement of the quality of life of humans combined with the market growth at an unprecedented speed will disseminate to all parts of the world across borders. My personal wish and presumably social expectations are that the spread of more information terminals will reduce the discontinuity of information observed in many parts of the world and that the painful situations of the ongoing war will be gradually resolved toward peace.

Based on the TOK Group's recognition of risks and opportunities as described above, we formulated the TOK Medium-Term Plan 2024 as the basis for development into a 100-year company in 2040 by further boosting our value creation to achieve the long-term TOK Vision 2030.

* VUCA stands for Volatility, Uncertainty, Complexity, and Ambiguity.

TOK Medium-Term Plan 2024

Contribute to the attainment of SDGs through five strategies

The TOK Medium-Term Plan 2024 was launched in 2022. This is the first medium-term plan formulated with my full commitment as the president, back-cast from the TOK Vision 2030, and presents the strategic milestones to be accomplished. This medium-term plan comprises the five strategies below in order to contribute to the attainment of SDGs through purpose-driven value creation.

Strategy 1: Increase the global market shares of cutting-edge photoresists

To increase the global market share of cutting-edge photoresists that drive the growth of the TOK Group, we will cope with requirements through a completely customer-oriented approach. In particular, we will drive the advancement of microprocessing technology and 3D packaging technology for semiconductors from the viewpoint of a material manufacturer and will pursue the latest technologies for packaging, light control, and surface control ahead of other companies, thereby satisfying diverse needs. In this way, we will provide new added value that contributes to the value creation process of customers in the aspects of technologies, quality, and the environment.

Strategy 2: Acquire and create core technologies for electronic materials and new fields

Through our proprietary long-run research and development courses, we will pursue development toward 2030 and toward 2040 as a 100-year company by creating a new business that will parallel photoresists and high-purity chemicals as our present mainstays from the super-long-term perspective. By creating new themes together with stakeholders not only in the existing semiconductor markets but also in the surrounding areas, different industries, and academia, we will accumulate a technological portfolio that will lead to the reform of the product and business portfolios.

Strategy 3: Secure stable supplies of high-quality products and establish an optimal production system for the Group

We will adapt to the rapid changes in the external environment and leverage global sites seamlessly to the maximum while optimizing and strengthening the supply chain. The Company will pursue the optimal combination of the local production and local consumption model with the concentrated production model, depending on the product field and customer requests, thereby rapidly and appropriately respond to the rapidly growing needs of the semiconductor industry. TOK will also realize rational equipment and production systems, as well as high production efficiency, through RPA* and DX, in consideration of humans and the environment for the future. At the same time, the Company will pursue the further establishment of high-purity processing technology and the reduction of environmental impact through decarbonization and other measures.

* Robotic Process Automation: Software robot technology for automating clerical operations that are manually performed by humans using computers

Strategy 4: Improve employee engagement and promote people-oriented management

I believe that the growth power of the Company has returned to a growth trajectory and will become more sustainable by further strengthening human resources (human capital) among the four earning powers that form the core of the TOK Group's business model: technologies (manufacturing capital), human resources (human capital), human connections (social and relational capital), and financial power (financial capital). In the TOK Medium-Term Plan 2024, we are establishing a base that will enable each individual to maximize their abilities so that the Company can progress together with its employees as partners in business management. For specific measures, we will enhance supportive measures and systems that lead to rewards and enjoyment of work based on the pursuit of happiness by each employee while establishing an environment that increases productivity. As full operation continues at our plants in Japan and overseas, many employees have extremely busy schedules. By establishing systems that enable them to accept the challenge of new themes and high-level issues and to feel the joy of accomplishment and self-actualization, we will improve overall engagement in the TOK Group and enhance the sustainable corporate value. In the formulation of this medium-term plan, a system was introduced to engage many employees in the formulation process so that they can personalize and practice each measure.

Strategy 5: Establish a sound and efficient management foundation

TOK will conduct the four strategies described above with maximum performance and enhance the sustainable corporate value of the TOK Group by further establishing the management foundation. As specific measures, the Company will further improve the levels of compliance, information and risk management, and group governance, while strengthening DX for responding to rapid changes in the external environment.

TOK will also promote group-wide measures for improving ROIC and further improve capital efficiency, thereby maximizing our cash generation capability. In this way, the Company will achieve both the sustainable growth of the TOK Group and stable benefit return to shareholders, thereby enhancing sustainable corporate value.

Flexibly examine the reset of performance objectives, considering the rapidly changing business environment

The quantitative objectives of the TOK Medium-Term Plan 2024 were set at net sales of ¥180 billion or more, operating income of ¥27 billion or more, and EBITDA of ¥35 billion or more, back-cast from the quantitative objectives set in TOK Vision 2030 (sales of ¥200 billion or more, EBITDA of ¥45 billion or more, and ROE of 10% or more). The ROE objective is to stably maintain 8.0% or more. Note, however, that the preconditions are continuously changing, partly due to the growth of the semiconductor industry at an unprecedented speed, such that new plant construction plans have emerged at customers after the formulation of this medium-term plan until the present. The Company's key measures and numerical objectives are likely to change because of such changes. TOK will continue to disclose information in a timely and appropriate manner.

Business strategy 1: Semiconductor photoresists

Under the five strategies and quantitative objectives described above, we will continue to expand the marketing of semiconductor photoresists in a full portfolio. TOK promptly provide cutting-edge products that drive miniaturization for ArF/EUV photoresists, as well as a broad product line covering from cutting-edge logics/memories to general-purpose devices for KrF excimer laser photoresists. For g/i-Line photoresists, the Company will satisfy the demand for legacy semiconductors that are increasing for all purposes including decarbonization and automotives.

Business strategy 2: High-density integration materials

While miniaturization in the front-end processes of semiconductors has substantially advanced as described above, technological difficulty has exponentially increased in its course. Therefore, packaging technologies and MEMS technologies in the back-end processes will hold the key to the future advancement of semiconductors. The Company will leverage its strengths in both fields accumulated through the long-run research and development in order to increase orders for bump photoresists and rewiring photoresists that will drive the cutting-edge technologies for 2.5D and 3D semiconductors in packaging materials. In MEMS materials, the Company will endeavor to increase sales for high-frequency devices, respond to next-generation needs, and increase orders from major customers.

Business strategy 3: High-purity chemicals

High-purity processing technology is the core competence and the source of its value creation since the foundation of the Company. It supports the advancement of semiconductors closely linked to microprocessing technology. Demand for high-purity chemicals as the fruit of high-purity processing technology has been increasing just as in photoresists. TOK will continue to cope with the upgrading of cutting-edge processes for semiconductors, endeavor to increase sales in Asia and North America, and promote the development of next-generation clean solutions and thinners in cooperation with major customers.

Business strategy 4: Equipment business

The equipment business as a part of our proprietary material and equipment (M&E) strategies has remained unprofitable and has been cautiously monitored by the Board of Directors.

However, this business has made qualitative contributions to the material business by enabling the early detection of the cutting-edge technological trends in semiconductors. In addition, orders are increasing at present related to 2.5D and 3D packaging, and plasma ashing systems for power semiconductors that contribute to decarbonization have also remained stable. Therefore, the Company will continue to develop this business from the long-term perspective while improving profitability, thereby strengthening the overall technological portfolio of the TOK Group.

Business strategy 5: New businesses

Regarding new businesses, the Company is promoting strategic initiatives aiming to establish a new key business to be included in our business portfolio to become a 100-year company in 2040. The TOK Medium-Term Plan 2024 is the first step in this course, where the Company will promote the commercialization of optical materials, functional materials, and life science-related materials, which TOK has continuously developed, while developing other new business areas. In this process, TOK will proactively collaborate with many stakeholders, including startups, academics, and research institutions.

Making record-high capital investments to continue supporting supply chain in the semiconductor industry that has made unprecedented advancements

As capital investments for the practice of the strategies described above, management plans the largest-scale cumulative investments of ¥45 billion over the three years. To continue supporting supply chain in the semiconductor industry that has made unprecedented advancements and continues to further expand, we will promote proactive capital investments in Japanese sites as the core of the Company, thereby strengthening production, further improving the quality of cutting-edge materials, and achieving smart plants. We anticipate the cumulative depreciation and amortization of ¥22 billion over the three years, which will be offset by sales increase.

Prioritized input of the created EBITDA into capital investments and the raise of standard value for DOE

In the balance sheet management at the core of financial capital policies, we will practice the prioritized input of the EBITDA to be created through three-year business operations into capital investments and make proactive growth investments as a long-run R&D-driven company, while promptly distributing returns to shareholders. As a part of this plan, the Company will raise the standard value from the former DOE 3.5% policy, starting with the year-end dividend for FY 2021/12, to approximately 4.0%. Based on this change, the year-end dividend per share for FY 2021/12 stood at 94 yen, the annual dividend at 156 yen with an increase of 2 yen year-on-year, and the cumulative dividend over the three years of the medium-term plan at 430 yen (compared to 224 yen under the TOK Medium-Term Plan 2018). We will continue to satisfy your expectations by implementing proactive measures for shareholder returns.

Initiatives for Material Issues

Further enhancing linkage with the medium-term plan and strengthening employees' perspective

We introduced initiatives for material issues in 2018, along with the TOK Medium-Term Plan 2021. We made minor changes in these initiatives in 2021 at the start of the TOK Vision 2030 and renewed them timed to the new start of the TOK Medium-Term Plan 2024.

The new material issues consist of five items: contribution to innovation and the creation of social value, pursuit of happiness by personnel, establishment of resilient organization, global environmental conservation considering future generations, and supply chain sustainability. The effectiveness is enhanced by promoting a PDCA cycle through the close linkage of key initiatives and KPI in each material issue with the TOK Medium-Term Plan 2024.

Measures have been implemented to help each employee personalize the TOK Medium-Term Plan 2024 as described above. Measures have also been implemented to help more employees personalize material issues and gain a sense of ownership, more plain and universal terms are used, and more KPIs are introduced.

KPIs for remuneration for directors were revised with ROE and an employee engagement indicator

Among the five key initiatives for the new material issues linked to the strategies under the medium-term plan, I will especially endeavor to improve employee engagement and promote people-oriented management in the three years. An outline of the initiative is as described above. In the semiconductor industry, which continues to grow at an unprecedented scale, competition for human resources is becoming fiercer among material manufacturers, including TOK. Therefore, improving employee engagement is an urgent sustainability requirement for the TOK Group. This is why the Board of Directors decided to make a strong commitment to this requirement and introduced an employee engagement indicator as an evaluation parameter for performance-linked share-based remuneration for directors as an initiative to be fully promoted throughout the TOK Group. I conceptualized this scheme and had it examined by the Nomination and Compensation Advisory Committee chaired by an outside director. Its introduction was determined through repeated discussions. In the coming years, remuneration for directors will be determined by two indicators: ROE (financial) and the employee engagement indicator (nonfinancial). A PDCA cycle for the improvement of employee engagement will be continuously monitored by the Board of Directors and the Nomination and Compensation Advisory Committee.

Top-down approach for decarbonization initiatives

Under our management vision, "The e-Material Global Company®" for contributing to a sustainable future through chemistry, we regard decarbonization and carbon neutrality, which are increasingly necessary in Japan and overseas, as important aspects of a sustainable future. We declared the endorsement of TCFD recommendations in January 2022 and announced the plan to realize carbon neutrality by 2050 in February 2022.

I specialized in chemistry at university led by my interest in environmental issues and am very interested in environment-friendly products, as well as in decarbonization and carbon neutrality. I will take a top-down approach to drive initiatives toward carbon neutrality toward global environmental conservation considering future generations as one of the material issues.

For specific measures, the Company will continue promoting its contribution to lower power consumption through the miniaturization of semiconductors as the mainstay business. Concerning environment-friendly products, TOK will increase the sales of g/i-Line photoresists for power semiconductors, plasma ashing systems, and wafer handling systems as mentioned earlier. Regarding long-run development activities for new businesses, the Company will develop materials for next-generation power semiconductors, such as SiC (silicon carbide), GaN (gallium nitride), and Ga_2O_3 (gallium oxide), as well as a chemical looping energy recycling system. TOK is also promoting the development of Energy Harvest, a system that generates power utilizing the vibration of electronic devices. The entire electric power purchased at the headquarters building has been generated by renewable energy sources since 2019, thereby achieving reduction in Scope 2 at non-consolidated TOK. In addition, more than 70% of electric power purchased at key Japanese sites has been generated by renewable energy sources since September 2021. Through these measures, the Company anticipates an annual reduction in CO_2 emissions of approx. 14,000 tons.

Exercising leadership at the center of CSR and sustainability governance

The TOK Group will reduce short-term, medium-term, and long-term growth inhibitors through these initiatives for material issues, thereby reducing capital costs and enhancing sustainable corporate value. The Company is also establishing new CSR and sustainability governance systems in order to further strengthen the engagement of the Board of Directors in the CSR and sustainability activities that have been promoted through collaboration between our management executives and field employees. In concurrence with these initiatives, TOK will continue CSR and sustainability activities for the time being, featuring the material issues through collaboration between management executives and field employees. I will exercise strong leadership to achieve strong CSR and sustainability governance, just as in the improvement of employee engagement and in initiatives for carbon neutrality.

We request your continued expectations for purpose-driven value creation by TOK.

Medium-Term Plan
— Review of the Past Two Medium-Term Plans

TOK Medium-Term Plan 2018 —From FY 2017/3 to FY 2018/12—

By achieving record-high profits under the TOK Medium-Term Plan 2015, the Company gained momentum for the overarching aspiration for 2020 (operating income of ¥20 billion), and TOK began proactive investments with a focus on strengthening the management foundation and the reform of the business portfolios.

Positioning/Management Objectives/Features

Three key years for achieving the overarching aspiration

Continued efforts to deepen existing business domains and swiftly launch new business

- Continue proactive investments for the overarching aspiration
- Aim for record-high profits during the final year
- Aim for ROE of over 7% and enhance returns to shareholders

Company-Wide Strategies

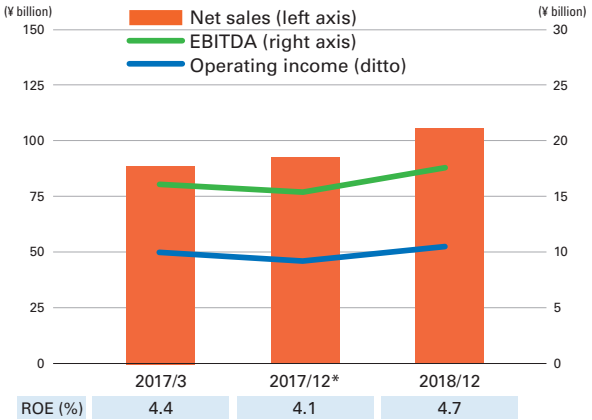
[Reform the business portfolios]
- Renew mainstay products
- Create new businesses and new materials
- Recover earnings in the equipment business and develop versatile applications for TSV technology

[Evolve the customer-oriented strategies]
- Strengthen the development of ArF excimer laser photoresists (on the scale of 10 nm onward)
- Further increase market shares of KrF excimer laser photoresists (Thick-film photoresists for 3D-NAND)
- Strengthen customer support structure in the Chinese market

[Develop global personnel]
- Promote the development of core human resources from a Group-wide perspective and recruit and promote diverse personnel appropriate for global business

[Strengthen management foundation]
- Build a governance system to reduce the risks accompanying globalization and raise the corporate value

TOK Medium-Term Plan 2018



	2017/3	2017/12*	2018/12
ROE (%)	4.4	4.1	4.7

* Because of the change in the fiscal year-end, the fiscal year that ended December 31, 2017, was an irregular nine-month period in Japan and a 12-month period overseas.

Results/Issues

Strengthened R&D and production bases

Made capital investment of ¥21.7 billion


TOK Taiwan Co., Ltd.


Sagami Operation Center/New R&D Building

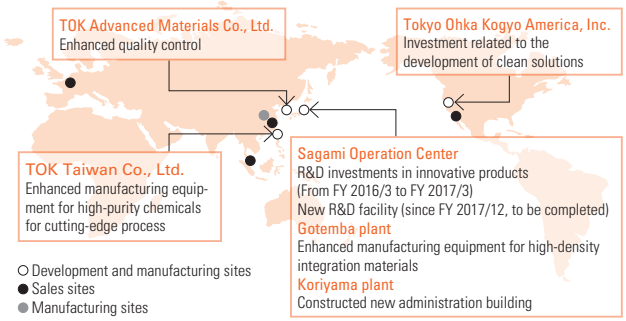
Leveraged strengths in the innovative semiconductor segment

EUV photoresists: Highly rated by major customers
KrF excimer laser photoresists: Adoption for 3D-NAND (Japan and Asia)/ Increasing demand accompanying expansion of 3D-NAND mass production (Japan, Asia)
High-density integration materials: Adoption for FOWLP (semiconductor field) by a major customer/Adoption by customers in Japan and overseas resulting in expanded adoption and application (electronic components field)
High-purity chemicals: Expanded adoption for next-generation process by a major customer (Asia)/Adoption of and increased demand for new clean solution (Asia and North America)

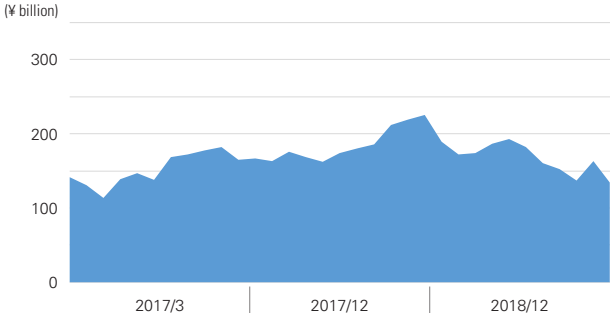
Midway through reform of the business portfolios

ArF excimer laser photoresists: A major customer did not adopt (Asia) and delays in the production plans of major customers (Asia and North America)
Equipment business: Delayed expansion of 3D packaging process market
New Business: Delay in commercializing focused themes (high-functional films and nanoimprints)

Main Capital Investments under the TOK Medium-Term Plan 2018



Aggregate Market Value (including treasury stock)



TOK Medium-Term Plan 2021 —From FY 2019/12 to FY 2021/12—

The TOK Medium-Term Plan 2021 was started in 2019. Although revenue decreased because of U.S.-China trade friction in FY 2019/12, TOK achieved record-high performance for two consecutive years, supported by strong semiconductor demand in FY 2020/12 and FY 2021/12.

Management vision: Aim to be a globally trusted corporate group by inspiring customers with high value-added products that offer satisfying features, low prices, and superior quality.

Company-wide targets (qualitative objective): Cultivate niche markets that the TOK Group should develop.

Features

Strengthen business portfolio reforms

- Ambitiously develop the technologies required for 5G, IoT, and Innovation

Return to a growth trajectory

- Operating income target (FY 2021/12): ¥15.0–20.5 billion

Strengthen balance sheet management and introduce a new dividend policy

- A new dividend policy targeting a DOE of 3.5%
- Flexibly conduct share buyback as a means of returning profits to shareholders

Results

Achieved record-high performance for two consecutive years

Returned to a growth trajectory

Leveraged strengths in the innovative semiconductor segment

ArF/EUV photoresists: Expanded adoption by major customers, increased production, and acquired higher market shares with major customers

KrF excimer laser photoresists: Increased demand for thick-film photoresists for 3D-NAND and increased demand in Asia

i-Line photoresists: Achieved growth for power semiconductors and automotive semiconductors supported by decarbonization and EV shift

High-density integration materials: Adopted resists for cutting-edge packages, increased demand in OSAT, and expanded adoption of MEMS materials by customers in Japan and overseas

High-purity chemicals: Increased demand based on strong semiconductor production in Asia and increased demand for new clean solutions in North America

Strengthened R&D and production bases especially overseas

Made capital investment of ¥28.3 billion

Sagami Operation Center/ New R&D Facility

TOK Taiwan Co., Ltd.

TOK Advanced Materials Co., Ltd. (South Korea)

Company-Wide Strategies

[Accurately identify and rapidly address customers' opinions to build an even larger and stronger pipeline to customers]

■ Rapidly and steadily work to develop a support structure rigorously focused on customer satisfaction along with R&D.

[Strengthen marketing, increase understanding of the customers' value creation processes, and translate these efforts into new value creation]

■ Through rigorous marketing, TOK will carefully identify solutions that lead to the creation of new value for customers, and intensively and proactively address them.

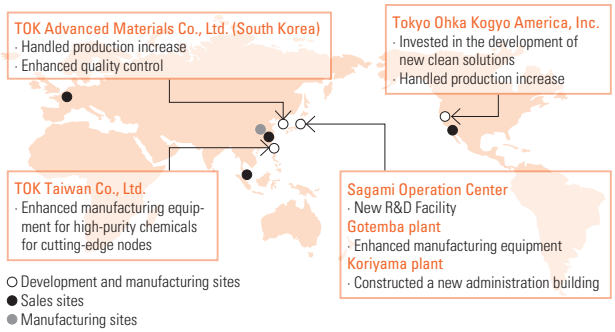
[Strengthen human resources who can perform research, make decisions, and take the initiative]

■ Strengthen human resources who pursue the possibility of business with diverse customers and continue acting on challenges until they succeed.

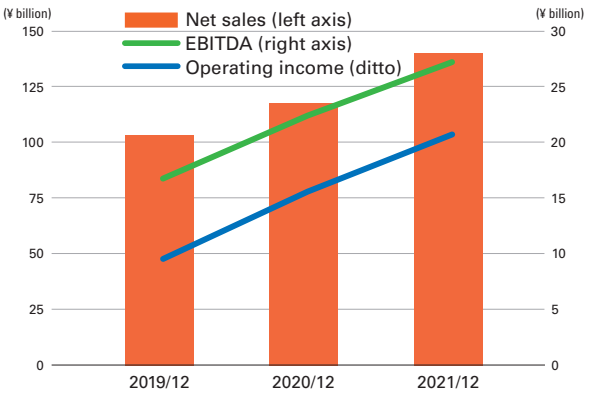
[Strengthen the TOK management foundation]

■ Promote balance sheet management aimed at the further advancement of group management, enhance corporate governance, and make more efficient use of management resources.

Main Capital Investments under the TOK Medium-Term Plan 2021

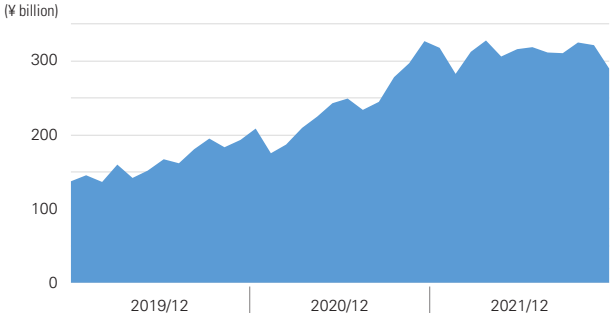


TOK Medium-Term Plan 2021



	2019/12	2020/12	2021/12
ROE (%)	3.7	6.7	11.5

Aggregate Market Value (including treasury stock)



TOK Vision 2030 & TOK Medium-Term Plan 2024

TOK Medium-Term Plan 2024 —From FY 2022/12 to FY 2024/12—

The TOK Medium-Term Plan 2024 is the first medium-term plan formulated back-cast from the TOK Vision 2030 and presents milestones to be accomplished.

TOK will establish a solid basis to attain the overarching aspiration through five strategies, leading to the next medium-term plan.

Features

- Medium-term plan for attaining TOK Vision 2030
- Boosting up TOK toward 2030!

Performance Targets (FY 2024/12)

- Consolidated net sales ¥180 billion or more
- Consolidated operating income ¥27 billion or more
- EBITDA ¥35 billion or more
- ROE Maintain 8.0% or more

Medium-Term Plan Strategies

[1] Increase the global market share of cutting-edge photoresists

■ In order to increase the market share of cutting-edge photoresists as the growth driver of the group, TOK will establish a robust position as "The e-Material Global Company®" and provide technologies, quality, environment, and added value that contribute to the value creation process of customers.

[2] Acquire and create core technologies for electronic materials and new fields

■ In the effort to become a 100-year company, TOK will create a new business that will parallel photoresists and high-purity chemicals as the present mainstay businesses.

[3] Secure stable supplies of high-quality products and establish an optimal production system for the Group

■ In order to respond to a changing external environment and to rapidly and appropriately satisfy the increasingly advanced and complex requests from customers, TOK will establish an optimal production system.

[4] Improve employee engagement and promote people-oriented management

■ In addition to creating an environment for the improvement of the happiness and productivity of each employee, TOK will implement measures that support the motivation and enjoyment of work by employees while developing a system to exercise their capabilities.

[5] Build sound and efficient management foundation

■ The Company will execute the four strategies above with maximum performance and build a management foundation to further develop the TOK Group.

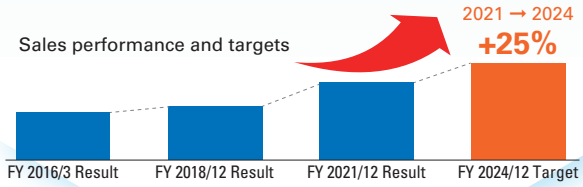
■ TOK will attain environment-friendly production, information and risk management, and compliance at high levels to strengthen governance throughout the entire TOK Group.

■ At the same time, the Company will work to establish an in-house digital environment for smart factories and data utilization in response to constantly changing external environments **(see page 42)**.

Business Strategies

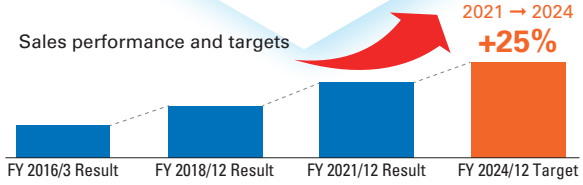
[1] Semiconductor photoresists

■ Expand marketing in a full portfolio in response to the increasing semiconductor demand



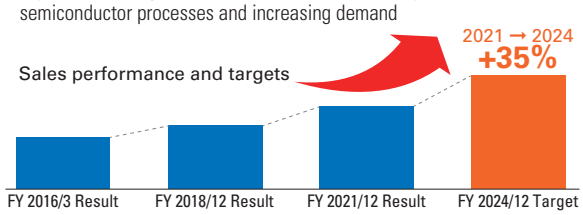
[2] High-density integration materials

■ Market products that rapidly respond to cutting-edge packaging technologies



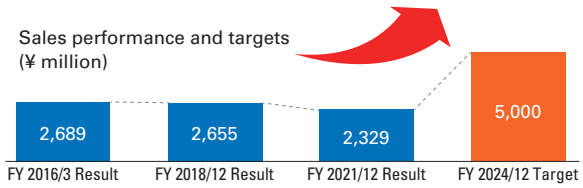
[3] High-purity chemicals

■ Expand marketing in Asia and North America in response to advanced semiconductor processes and increasing demand



[4] Equipment business

■ Rapidly respond to market needs and aim to expand marketing



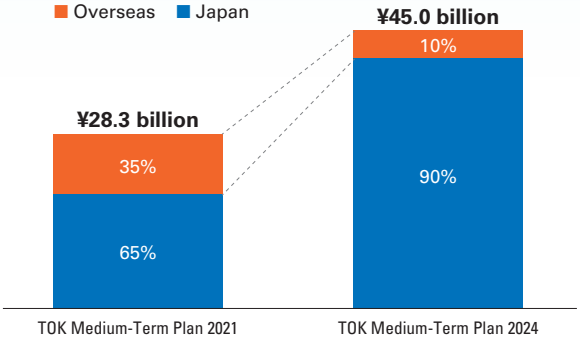
[5] New businesses

■ Create new businesses by envisioning a 100-year company
Optical materials, functional materials, and life science-related materials
(See page 43)

Capital Investment Plan

[Record-high capital investment plan]

■ In order to strengthen supply chain, make proactive capital investments in Japan

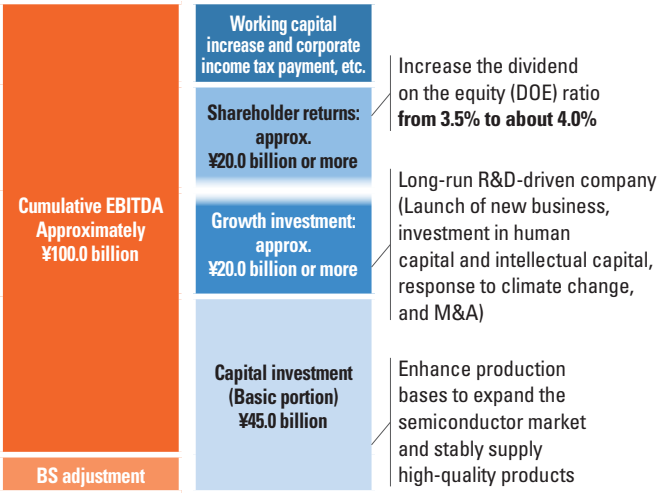


Promote Balance Sheet Management

[Pursue an optimal balance among investment, cash reserves, and shareholder returns]

■ EBITDA generated through the growth of semiconductor materials will be agilely distributed as shareholder returns after making prioritized growth investments

Three-year cash flow plan (conceptual graph)



TOK Vision 2030

Management vision

Contribute to a sustainable future through chemistry The e-Material Global Company®

Overarching aspiration (quantitative aspects)

Net sales	**¥200.0 billion**
EBITDA	**¥45.0 billion**
ROE	**10% or higher**

Overarching aspiration (qualitative aspects)

- Provide new added value to inspire customers
- Earn trust from stakeholders worldwide
- Continue developing high technological capabilities and show international presence
- Enhance corporate value sustainably with an aim to contribute to SDGs
- All employees can work lively with pride

Seven strategies toward 2030

Inherited toward a 100-year company

Review of Operations

Material Business

Manufacturing and sales of electronic functional materials and high-purity chemicals

Kosuke Doi
Director, Executive Officer
Department Manager, Marketing Dept. and
Department Manager, Research and Development Dept.

TOK Taiwan Co., Ltd.

TOK Advanced Materials Co., Ltd. (South Korea)

Value creation flow of material business — Develop high value-added products as an earnings driver —

Social Issues	Inputs (FY 2021/12)	Strategies/principles	Outputs (FY 2021/12)	Outcomes
Greater difficulty in technological innovation Escalated climate change risks Escalated infectious disease risks Shift to a new mobility society Low birthrate and aging population (Japan) etc.	Segment assets ¥135,794 million Capital investment ¥8,186 million R&D costs ¥9,390 million Employees 1,585	TOK Vision 2030 TOK Medium-Term Plan 2024 New material issues Customer-oriented strategies Purpose & management vision Management principles	Net sales ¥137,725 millions Key products • Photoresists • High-density integration materials • High-purity chemicals • Inorganic and organic chemicals	Promote technological innovation Reduce the energy consumption of equipment Promote noncontact and remote operations Promote DX to support co-existence with COVID-19 Pursue a society with autonomous vehicles Improve productivity with higher processing speed of electronic equipment

Risks and opportunities — Materials Business —

Risks

- Rising cost of development due to increasing technological difficulties
- Unfavorable market environment due to the escalating geopolitical risks that include U.S.-China trade friction
- Interruption or confusion in the supply chain due to increased climate change risks and infectious disease risks
- Increased investment outlays for inspection and production equipment in connection with ultrahigh purification
- Impact of higher costs of equipment following advances in exposure equipment and miniaturization
- Impact of decrease in customers but the same number of photoresist manufacturers
- Impact of over-concentration of the main business domains in the electronics industry

Opportunities

- Increases in the need for ultra-miniaturization (EUV and ArF photoresists)
- Growing need for cutting-edge packaging technologies (2.5D and 3D semiconductor packaging)
- Further increase in data volume and semiconductor needs due to 5G, IoT, and AI
- Increase in power semiconductor needs due to accelerated global initiatives for decarbonization
- Expansion of business opportunities through the global structure of close relationships with customers (in Japan, the U.S., South Korea, and Taiwan), and multi-site systems at major customers
- Capture growth opportunities through strengths in both the front-end process and back-end process of semiconductor manufacturing
- Increase in proposal opportunities for semiconductor manufacturing processes due to further diversified needs in both materials and equipment (synergies with Equipment Business)

Issues for society and customers and TOK outcomes

Contribute to the resolution of social issues common to all of humankind as the manufacturer of semiconductor photoresists with the largest global market share

The materials segment of TOK creates value both in the cutting-edge field and in the legacy field of the semiconductor domain and will continue to lead in generating the revenue of the TOK Group as a value creation driver toward attainment of the TOK Medium-Term Plan 2024 and the TOK Vision 2030 by contributing to the resolution of social issues common to all of humankind by providing high-quality, high-value-added photoresists, high-density integration materials, and high-purity chemicals.

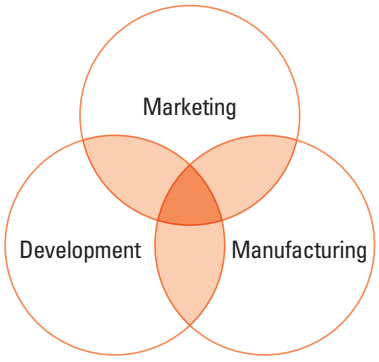
As the manufacturer of semiconductor photoresists with the largest global market share, the Company will fully exercise its technological development capabilities and production capabilities through customer-oriented strategies based on the trifecta of development, manufacturing, and marketing with the intention of supporting further advancement, market growth, and the stable supply of semiconductors as core materials that not only continue to function as the heart of electronic equipment but also promote the resolution and innovation of increasingly advanced and complicated social issues that face humankind, such as climate change risks and infectious disease risks, while contributing to the attainment of the SDGs.

In the midst of continued disruption of the supply chain, the Company will concentrate resources to stably supply semiconductors in response to market growth at an unprecedented speed

The semiconductor industry continues to grow at an unprecedented scale, combined with recent global risks, resulting in the persistent confusion and tightness of supply chain represented by the semiconductor shortage and high material prices. Moreover, the global decarbonization movement has been accelerating, which provides one of the largest business opportunities to the TOK Group, while concerns emerge about the new potential risks of future difficulty in material procurement due to decreasing investments in fossil fuels.

The TOK Group will adequately identify these risks and opportunities and support the supply chain of the semiconductor industry, which is indispensable for humankind, through the seamless cooperation of the Research and Development Department, Manufacturing Department, and Marketing Department in the advancement of customer-oriented strategies based on the trifecta of development, manufacturing, and marketing.

As specific measures, a new development method incorporating the idea of computational chemistry has been introduced into product development. In manufacturing, TOK has promoted the continuous advancement of production engineering and supplier engagement in order to stably realize the outcomes of marketing activities by the sales force and the new added value created by R&D in mass production lines.



Sagami Operation Center leads value creation based on the trifecta of development, manufacturing, and marketing

The Cutting Edge

Satoru Oishi
General Manager, Quality Assurance Div.

tok's Human Resource

Continue to accept challenges for the further improvement and stabilization of quality

In response to quality requirements from customers that continue to upgrade, it is essential to continue efforts to upgrade quality improvement technologies and to pursue customer satisfaction so that customers can use TOK products for a long time with peace of mind. To this end, the Company regards customer voices not as one-off requests, but as reflective of market needs, and rapidly responds to them with a one-team structure by engaging the related departments while analyzing the essence of the needs that then lead to quality stabilization.

In the coming years, TOK will further upgrade quality at a mass production level by making capital investments based on the medium-term plan and thereby respond to customer requirements that continue to upgrade through a more robust structure. By carefully satisfying each high-level and challenging customer requirement, TOK will create added value that enhances the brand value, which leads to a stronger earning power.

TOK Medium-Term Plan 2024, new material issues, and initiatives toward TOK Vision 2030

Provide technologies, quality, environment, and added value that contribute to the value creation process of customers

The TOK Medium-Term Plan 2024 was formulated by back-casting from the TOK Vision 2030 and aims to provide the technologies, quality, environment, and added value that contribute to the value creation process of customers by increasing the global market share of cutting-edge photoresists under the new material issue of a contribution to innovation and the creation of social value.

While the construction and launch of many semiconductor plants are progressing around the world, the Company will continue to stably supply the materials for the front-end processes of semiconductor manufacturing based on a production increase structure and thereby satisfy the strong demand for EUV photoresists and high-purity chemicals (thinners and clean solutions) for cutting-edge nodes in miniaturization, ArF/KrF excimer laser photoresists, and other products. TOK supports advances in semiconductors by striving to provide the proprietary added value of the TOK Group through the expansion of the solutions business, which caters to more detailed requirements with cooperation among the development, manufacturing, and marketing teams based on customer-oriented strategies.

In the back-end processes, the development of packaging materials for high-end and next-generation devices, such as 2.5D and 3D semiconductors, is in progress for OSAT manufacturers*1 and foundries.*2 TOK fully exercises the strengths of its customer-oriented structure to support consistent and agile customer processes from development to mass production and thereby increases market share and acquires strong demand just as in the front-end processes.

In response to the increasing need for support by the local sites of major global customers, the Company pursues long-term, sustainable growth by promoting and developing cross-border human resources who will undertake value creation activities and enhance group-wide servicing capabilities, in addition to human resource development in R&D and manufacturing.

At the new manufacturing site of high-purity chemicals to be constructed in Kikuchi, Kumamoto, TOK aims to improve product quality and transportation efficiency and thereby provide added value that will contribute to the value creation process of customers.

*1 Outsource Assembly and Test: A business model for undertaking only production of semiconductors that specializes in the back-end processes
*2 Foundry: A business model for undertaking only contract production from semiconductor manufacturers and fabless companies

Pursue technologies, quality, environment, and added value as the starting point of the value creation process of customers

Materials Business Performance

(¥ million)

	2019/12 Results	2020/12 Results	2021/12 Results		
				Change	%
Net sales	98,986	114,773	137,725	+22,952	+20.0%
Electronic functional materials	58,249	65,878	79,491	+13,613	+20.7%
High-purity chemicals	40,674	48,732	57,804	+9,072	+18.6%
Others	63	161	430	+269	+165.7%
Operating income	13,462	20,395	26,438	+6,043	+29.6%
Operating margin	13.6%	17.8%	19.2%	—	—
Segment assets	113,079	119,695	135,794	+16,099	+13.5%
Depreciation and amortization	7,009	6,518	6,158	(360)	(5.5%)
R&D costs	8,370	9,093	9,390	+297	+3.3%

The Cutting Edge

Strengthen initiatives for the materials in power semiconductors that contribute to decarbonization and carbon neutrality

In the initiatives for decarbonization and carbon neutrality as part of the latest and largest social issues, Countries plan investments of nearly ¥500 trillion over the next ten years.*1 In addition, GFANZ*2 plans investments and loans of approximately ¥11 quadrillion (US$100 trillion) through a coalition of voluntary financial Institutions from Japan and overseas. These represent major expectations in the resolution of issues by firms and businesses around the world. Under these circumstances, the market scale of power semiconductors is expected to further expand as the heart of EV/HEV and energy-saving home appliances while supporting the renewable energy systems of wind power and solar power generation, as well as efficient power transmission and supply based on smart grids.

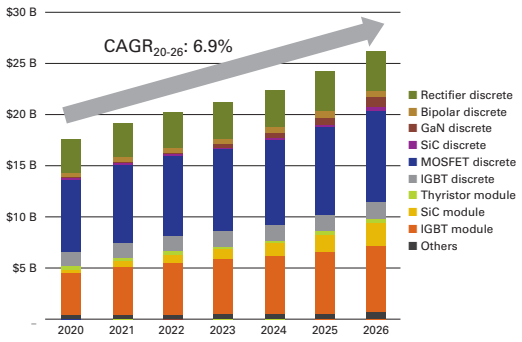
*1 Source: JEITA Semiconductor Subcommittee, "Semiconductor Strategies for Achieving Increased International Competitiveness"
*2 Glasgow Financial Alliance for Net Zero (GFANZ): a global coalition of more than 450 leading financial institutions that officially took effect at COP26 in Glasgow, UK, in 2021

One of the triggers leading the unprecedented growth of the semiconductor industry — Power semiconductors

Growth in the power semiconductor market has started to accelerate and has now become one of the triggers leading the unprecedented growth of the semiconductor industry **(see page 25, Message from the President)**.

TOK has the largest global market share of g/i-Line photoresists, which are essential for the manufacture of power semiconductors, and consistently account for 7% to nearly 10% of consolidated net sales. At present, TOK continues mass production at full capacity in response to the market growth of power semiconductors. Under the TOK Medium-Term Plan 2024, the Company promotes large-scale capital investments to increase equipment and efficiency in manufacturing plants (automation and mechanization) and to renew the manufacturing, inspection, and warehouse equipment.

Steady growth is expected in the power semiconductor market



g/i-Line photoresists are essential for the manufacturing of power semiconductors

* Source: Status of the Power Electronics Industry 2021 report, Yole Development, 2021

Developing high-value-added/next-generation materials

In order to steadily advance initiatives for decarbonization and carbon neutrality and thus limit global warming to 1.5°C, the further upgrading and performance increase of power semiconductors are required. To this end, TOK is committed to providing and developing new high-value-added and next-generation materials. TOK developed proprietary i-Line thick-film photoresists of the chemically amplified type for the growing demand for high-performance power devices. The Company is also striving to develop materials for next-generation SiC (silicon carbide), GaN (gallium nitride), and Ga_2O_3 (gallium oxide) power semiconductors.

Long-run creation of shared value

The market for g/i-Line photoresists and other power semiconductor materials consists of many customers involving long-term transactions. TOK pursues long-term sustainable growth by maintaining relationships of trust on a long-term basis. Moreover, the amount and thickness of g/i-Line photoresists vary by customer, in addition to substantial differences in the amounts used. By continuously providing detailed service under the proprietary customer-oriented strategies, the Company will create long-run shared value toward decarbonization and carbon neutrality.

Equipment Business

Manufacturing, sales, and maintenance of semiconductor manufacturing equipment and panel manufacturing equipment

Tsukasa Honkawa *Officer, Department Manager, Process Equipment Manufacturing Department*

Shonan Operation Center

Value creation flow of equipment business
— Getting one step ahead of market needs in synergy with the Materials Business —

Social Issues	Inputs (FY 2021/12)	Strategies/principles	Outputs (FY 2021/12)	Outcomes
Greater difficulty in technological innovation Escalated climate change risks Escalated infectious disease risks Shift to a new mobility society Low birthrate and aging population (Japan) etc.	Segment assets ¥3,016 million Capital investment ¥40 million R&D costs ¥409 million Employees 82	TOK Vision 2030 TOK Medium-Term Plan 2024 New material issues Customer-oriented strategies Purpose & management vision Management principles	Net sales ¥2,329 million Key products • 3D packaging machine • Plasma ashing machine • UV curing machine • Coating machine	Promote technological innovation Reduce the energy consumption of equipment Promote noncontact and remote operations Promote DX to support co-existence with COVID-19 Pursue a society with autonomous vehicles Improve productivity with higher processing speed of electronic equipment

Risks and opportunities — Equipment Business —

Risks

- Impact of intensifying competition with full-scale entry by major companies and competitors catching up
- Unfavorable market environment from further escalating geopolitical risks
- Introduction of high integration processes aside from 3D packaging

Opportunities

- Expansion of growth opportunities in the 3D packaging market following diversification of high integration technologies
- Increase in semiconductor needs due to accelerated global initiatives for decarbonization
- Expansion of business opportunities in the next-generation display market
- Opportunities for adoption that are relatively equally attainable as the market is new
- Increased opportunities to emphasize the track record of 3D packaging system Zero Newton® and the advantage in technology and technological improvement
- Expansion of business opportunities through the supply of high-performance equipment for coating and stripping using the knowledge of materials developed in the Materials Business
- Securing of earning opportunities leveraging lower break-even point thanks to the fabless production method

Issues for society and customers and TOK outcomes

Exercising strengths in both the cutting-edge field and in the decarbonization field based on a proprietary business model

The Equipment Business segment focuses on niche fields in semiconductor manufacturing equipment and deploys a proprietary business model that leverages synergy with the Materials Business. TOK moves one step ahead of market needs in the cutting-edge field while continuously creating long-term value in the decarbonization field and thereby supports the semiconductor industry that started growing at an unprecedented speed.

The Company released the 3D packaging system Zero Newton® in 2008, which has been highly rated for its thinned wafer processing capability, with increasing orders as a cutting-edge high-density integration system. Cutting-edge devices produced by this system, such as 2.5D/3D semiconductors and SoIC, have been growing for a variety of sensors and automotive devices that support IoT & 5G, as well as for home appliances and image processing, thereby contributing to the achievement of more convenient, safer, and more secure lives. The plasma ashing system for power semiconductors, which was released in the mid-1980s, has been highly evaluated for its high photoresist removal capability with repeat orders from many customers over many years. TOK has also responded to the shift to larger wafers (300 mm) and next-generation power semiconductor materials (SiC wafers), thus continuously contributing to decarbonization through consistent advances.

Disruption of the supply chain and support for the long-term development of semiconductor technologies

Semiconductors have achieved higher performance, lower power consumption, and higher integration through miniaturization over the last approximately 50 years. Recently, initiatives have been promoted to pursue higher performance, lower power consumption, and higher integration by means other than miniaturization from the slowdown of miniaturization, increasing technological difficulty, cost increase, and other factors. In particular, 2.5D/3D packaging technology to vertically stack semiconductors is expected to support the long-term development of semiconductor technologies. The market has started to expand in response to an increase in demand in all fields of the semiconductor industry.

In FY 2021/12, the equipment business was also affected by semiconductor shortages with extended delivery times to customers resulting from delayed deliveries of materials. However, TOK managed to increase order receipts by steadily catering to the market expansion described above. In FY 2022/12, TOK will steadily achieve earnings from these orders while further increasing order receipts and thereby pursue continued business growth in the cutting-edge field and in the decarbonization field.

TOK's 3D packaging system Zero Newton® and plasma ashing system

Zero Newton® bonding system

Zero Newton® debonding system

Plasma ashing system

The Cutting Edge

tok's Human Resource

Ma Shengju

Team Leader, BONDING/DE BONDING TECHNOLOGY BUSINESS UNIT BUSINESS DEVELOPMENT TEAM TOK Taiwan Co., Ltd.

As a sales representative, I always value internal and external communication

Human behavior changed because of the COVID-19 pandemic during the past two years, which emphasized the importance of the semiconductor industry more than ever. On the other hand, our operating efficiency occasionally decreased because of the lack of customer information and internal information caused by the rapid travel restrictions. Under these circumstances, as a sales representative, I always try to keep in mind the importance of communication in the sharing of progress with customers, in the formulation and implementation of strategies in the company, and all other activities.

To reconstruct the *unspoken understanding* for communication in a new era of co-existence with COVID-19, it becomes even more important than ever to respect customers, colleagues, and other persons, in addition to performing our own operations. We will continue to integrate the direction in which our team is headed through efficient information sharing and strengthen cooperation in the face of unanticipated incidents, thereby hedging difficulties in the era of confusion.

TOK Medium-Term Plan 2024, new material issues, and initiatives toward TOK Vision 2030

Rapidly respond to market needs based on achievements in the previous medium-term plan

Under the TOK Medium-Term Plan 2021, which was recently completed, TOK responded to the increase in power semiconductor-related demand aimed at decarbonization and carbon neutrality with the plasma ashing system and other products, as well as the demand for 2.5D/3D semiconductors and high-density integration with the wafer handling system Zero Newton®, and then achieved growth in related materials and remodeled the system, although target values remain unattained because of the prolonged launch of equipment and delayed parts procurement in certain projects from travel restrictions resulting from the COVID-19 pandemic.

Moreover, the Company acquired orders for a system for Fan-Out Panel Level Packaging (FOPLP) **(see page 41, "The Cutting Edge")**, and achieved growth in related materials by thoroughly implementing the materials and equipment (M&E) strategy. TOK also completed the development of energy-saving and high-functional manufacturing equipment for flexible displays, among many other accomplishments that contribute to future growth.

The Company has steadily improved its earnings structure, resulting from the high-cost structure due to the delivery of tailor-made customized equipment, compared to the start of the medium-term plan, owing to progress in the marketing of related materials based on the M&E strategy described above and in order receipts for remodeling and overhaul, coupled with the merger of a related subsidiary in April 2019.

The TOK Medium-Term Plan 2024 was formulated by back-casting from the TOK Vision 2030, and the Company aims to become profitable by rapidly responding to market needs based on the accomplishments above, featuring the sales promotion of Zero Newton®, plasma ashing system, and flexible display manufacturing system.

Regarding Zero Newton®, TOK will continue to steadily acquire demand for 2.5D/3D packaging, next-generation power semiconductors, and FOPLP, which are expected to further expand **(see page 41, "The Cutting Edge")**.

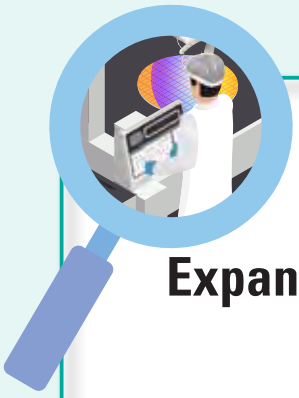
Regarding plasma ashing system, the Company will continue to acquire demand for decarbonization and carbon neutrality and will strengthen initiatives for next-generation power semiconductors including 300 mm wafers and SiC wafers.

Regarding flexible display manufacturing system, the targeted medium- to compact-sized organic EL market will expand for smartphones, while a launch is also expected for medium-sized displays (tablets and laptop PCs) and foldable OLED. By proactively acquiring demand for these devices, TOK will pursue the new material issue of the contribution to innovation and the creation of social value.

Equipment Business Performance

(¥ million)

	2019/12 Results	2020/12 Results	2021/12 Results		
				Change	%
Net sales	3,833	2,811	2,329	(482)	(17.1%)
Segment income (loss)	(286)	(310)	(290)	+20	—
Operating margin	—	—	—	—	—
Segment assets	3,612	2,015	3,016	+1,001	+49.7%
Depreciation and amortization	36	32	34	+2	+6.3%
R&D costs	509	452	409	(43)	(9.5%)



The Cutting Edge

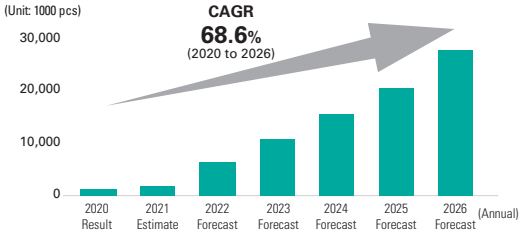
Expand value creation in the cutting-edge domain in the back-end processes of semiconductor manufacturing

The semiconductor industry has entered a new growth phase triggered by the COVID-19 pandemic and accelerated decarbonization movement. Consequently, TOK had steady overall growth in all domains, in both front-end processes for g/i-Line photoresists in the legacy field and ArF/EUV photoresists in the cutting-edge field, as well as the back-end processes of BGA and other general-purpose processes in high-density integration and high-end uses for 2.5D/3D packaging. Under these circumstances, the market for the cutting-edge field in the back-end processes of semiconductor manufacturing has gradually expanded, and TOK has committed to that since the release of the wafer handling system Zero Newton® in 2008.

Growth in orders for 2.5D/3D packaging

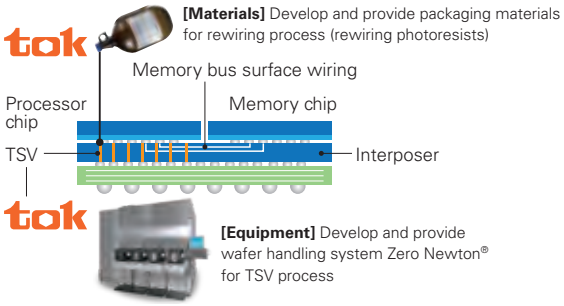
Zero Newton® uses the Through Silicon Via (TSV) technology as its core, which energizes with the TSVs (through electrodes) between the layers of semiconductor wafers stacked three dimensionally. This technology achieves the many benefits of downsizing, higher density, lower power consumption, and higher speed of semiconductors and is expected to become one of the main next-generation technologies to follow miniaturization. At present, orders for cutting-edge packaging are growing. In addition to the various sensors, the technology is used for the manufacture of 2.5D/3D semiconductors and SoIC for automotives, home appliances, and image processing. As indicated in the figure below, average annual growth of 68.6% is expected in the 2.5D packaging market alone. Under the continued customer-oriented strategies for customers who pursue advanced and cutting-edge packaging technologies, TOK will satisfy their expectations in both equipment and materials while continuously upgrading equipment and thereby acquiring growth of the market.

2.5D packaging market with major growth expected (shipment quantity)



Source: Fuji Chimera Research Institute, "Current Status and Future Outlook of Cutting-edge/Noticeable Semiconductor-related Markets 2021")

Examples of practice of Materials & Equipment (M&E) strategy in 2.5D packaging



Orders for decarbonization and carbon neutrality are also steady

In the development of cutting-edge power semiconductors within the accelerating initiatives for decarbonization and carbon neutrality, it is necessary to minimize wafer thickness to achieve power semiconductors with higher efficiency and higher performance. Owing to its strength in this technology, Zero Newton® is selected by device manufacturers in Japan and overseas. In FY 2021/12, TOK not only maintained existing market share but also expanded the market by steadily receiving orders from new customers.

Started receiving orders for FOPLP equipment

The Company worked to develop Zero Newton® as FOPLP equipment over the past several years. As mentioned above, TOK acquired orders from new customers in FY 2021/12 as applicable devices gradually expanded from the middle-end to low-end markets. FOPLP is capable of producing about five times as many packaged chips as FOWLP. As the practical applications and cost reductions of FOPLP proceed, innovation will be accelerated in 5G & IoT, which require compact, high-performance semiconductor devices in large quantities, thereby contributing to more convenient and comfortable lives. TOK will continue to promote the development of FOPLP equipment as the purpose of the TOK contribution to a sustainable future through chemistry.

Message from the DX Officer

Strengthening management foundation and creating new value through DX envisioning 2030.

Hirotaka Yamamoto *Officer, Department Manager, Corporate Planning Dept.*

Promote DX on long-term, medium-term, and short-term bases

Promote DX from the viewpoint of the supply chain

Because Promote DX is one of the seven strategies under the TOK Vision 2030, TOK promotes DX from the viewpoint of the supply chain under the TOK Medium-Term Plan 2024 as the first step in the promotion. First, we will promote DX in R&D as our lifeline, while proactively promoting the shift to smart factories through plant optimization. Through fundamental DX aimed at a structure that can promptly use and provide the necessary information, we will lead to the creation of new value. As specific measures, we will expand material development using materials informatics (MI) to expedite product development and then share information related to product development and quality with customers and suppliers by digital means, thereby further upgrading the performance, quality, process stability, and the safety of our group products.

We will also agilely grasp social needs for microprocessing technology as one of our core competences and contribute to social expectations through chemistry while appropriately investing management resources.

Focusing on MI, data warehouse, and data science

In the utilization of MI above, we will rapidly transform tacit knowledge (skills and know-how) that has been accumulated through the honest practice of the management principle of continuous efforts to enhance technology into explicit knowledge. We are also reviewing our operating flows in order to grasp the overall tacit knowledge. We have also started the group-wide data design required for data linkage among systems, which will lead to the introduction of a new IT infrastructure and transformation into explicit knowledge.

To establish the data warehouse (information library) required for the acceleration of DX and MI, we are locating and classifying existing information to be shared, defining valid data, and visualizing information flows. We have also started the selection of technologies and architectures toward the establishment of an IT base capable of seamless interconnection. In the coming years, we will implement a data warehouse through the formulation of a security policy pertaining to shared information, establishment of a new IT infrastructure, data definition, index design, and other processes.

To strengthen DX human resources, we will improve specialties, especially in data science, and proactively undertake collaboration and joint research with external research institutions and academic institutions, thereby developing human resources who will accelerate the cutting-edge data use required for our contribution to the provision of customer value. As the first step, we are establishing a core organization to undertake research and the introduction of cutting-edge technologies for data use while strengthening cooperation with related departments. We will lead these initiatives to the establishment of a structure capable of enhanced collaboration with external research institutions and of continuous benchmarking of the latest technological information.

Road map for DX promotion until 2030

Supply chain
- Increase product development speed
- Enhance product performance, stabilize quality, improve safety, and reduce costs

Society
- Capture and meet social demand for microprocessing technology
- Appropriately invest management resources and disclose non-financial information in a transparent and accurate manner

Overarching aspiration for 2030

Third Step
■ Realize TOK's version of DX

TOK Medium-Term Plan 2024
■ Promote material development utilizing materials informatics
■ Smart factory project

Second Step
■ Promote smart manufacturing
· Realize detection, prediction, and automation

SDGs to which we contribute

Message from the Director in Charge of Research and Development of New Businesses

We aim to establish businesses that will become new mainstays toward the 100-year company.

Yusuke Narumi *Director, Officer, Department Manager, New Business Development Department*

Develop unknown fields from a long-term perspective

Develop and commercialize new products while developing core technology

Create new businesses is the longest-range initiative among the seven strategies under the TOK Vision 2030, which aims to establish businesses that will become new mainstays toward the achievement of becoming a 100-year company.

As specific measures, we will develop and acquire new technologies based on accumulated technologies for life science-related materials and devices, optical materials, functional materials, and the contribution to decarbonization, as well as based on technologies introduced through external cooperation. By combining such technologies with our internal technologies, we will pursue new development themes aimed at the resolution of social issues.

Life science field

We started the marketing of biochip production materials in 2011, applying products that leverage the microprocessing technology and MEMS material technology accumulated in the semiconductor field to next-generation DNA sequencers, which contributed to the genetic analysis of COVID-19 variants and subspecies.

In the coming years, we will approach potential customers by exercising our strengths in structure patterning, adhesion, low autofluorescence, and low cytotoxicity.

We released the cell array chip SIEVEWELL™ in 2019, internally undertaking lithography, design, and the manufacturing process. In addition to its use in basic research by universities and laboratories, we are developing its use for clinical testing and drug discovery screening for pharmaceutical development.

Optical materials

Initiatives for the metaverse are promoted at full scale in Japan and overseas with the increasing need for AR/VR terminals (such as smart glasses) as indispensable tools for the realization of the metaverse. TOK developed nanoimprint materials and high-/low-refraction materials for the manufacturing processes of such terminals. Exercising the high reliability and quality control technology accumulated in the semiconductor field, the Company aims to deploy products by establishing a de facto standard through deepened cooperation with customers and equipment manufacturers.

Functional materials

TOK released functional films that achieved a uniform fine porous structure, continuous pore structure, high heat resistance, high chemical resistance, and low dielectric constant in 2017 and then started mass production for filter media and battery separators in 2022. The Company commercialized hydrophilic coating materials (antifogging, antifouling, and low cytotoxicity) and aims to promote them for building materials, optical equipment, and medical devices.

Technologies contributing to decarbonization

TOK endorsed the TCFD recommendations in January 2022 and announced a plan to realize carbon neutrality by 2050 in February 2022. The Company is contributing to a decarbonized society by supporting the miniaturization of semiconductors in the existing business and by developing materials and equipment for power semiconductors.

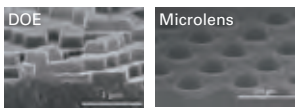
TOK will also promote the development of a system for the separation and recovery of CO_2 based on chemical looping, in cooperation with a university and other external stakeholders.

Create new businesses envisioning a 100-year company

SDGs to which we contribute

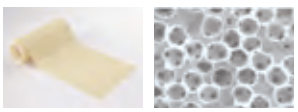
Optical materials

■ Nanoimprint materials and high-refractive materials for AR/VR and 3D sensors



Functional materials

■ High-functional films
■ Surface modification materials



Life science-related materials

■ Materials for bio-chip manufacturing
■ Cell sequencing chip SIEVEWELL™

New themes

■ Chemical looping

Message from the CFO

We will advance value creation based on the implementation of our purpose through dialogs from a long-term perspective.

Okikuni Takase *Officer, Department Manager, Accounting and Finance Department*

Contribute to sustainability and improvement of the quality of life of humans through businesses with high social value

Support the implementation of our purpose based on nonfinancial capital and management principles with financial power

I am Okikuni Takase, Department Manager, Accounting and Finance Department. I will support TOK's initiatives to continue contributing to a sustainable future through chemistry as its purpose with financial power. I sincerely request that all stakeholders provide generous support and guidance.

TOK has honestly pursued and practiced its management principles since its foundation: "Create a frank and open-minded business culture," "Continue efforts to enhance technology, raise the level of quality of products, and contribute to society" over more than 80 years. Consequently, TOK has established robust nonfinancial capital consisting of technology (manufactured capital), human resources (human capital), and human connections (social and relational capital). TOK has become the manufacturer of photoresists with the largest global market share and is indispensable in semiconductor manufacturing. We are especially proud that our semiconductor-related businesses and life science business have extremely high social value that contribute to sustainability, including decarbonization, and to the improvement of the quality of life of humans. As the original management principles (create a frank and open-minded business culture, continue efforts to enhance our technology, raise the quality levels of our products, and contribute to society) indicate, we have endeavored to make sure that all management resources and initiatives ultimately contribute to society. We will continue to place that specified purpose at the root of all our activities.

In the process of value creation based on nonfinancial capital and management principles, financial capital and financial power play an extremely important role. As the CFO, I will maintain keen sensitivity to structural changes and trends in the electronics market and capital market and will comprehensively implement the provision of high added value to all stakeholders in the aspects of accounting, finance, and tax affairs. In this way, I would like to steadily contribute to the creation of shared value with all stakeholders and the resolution of future social issues through our business.

TOK Medium-Term Plan 2021: Summary

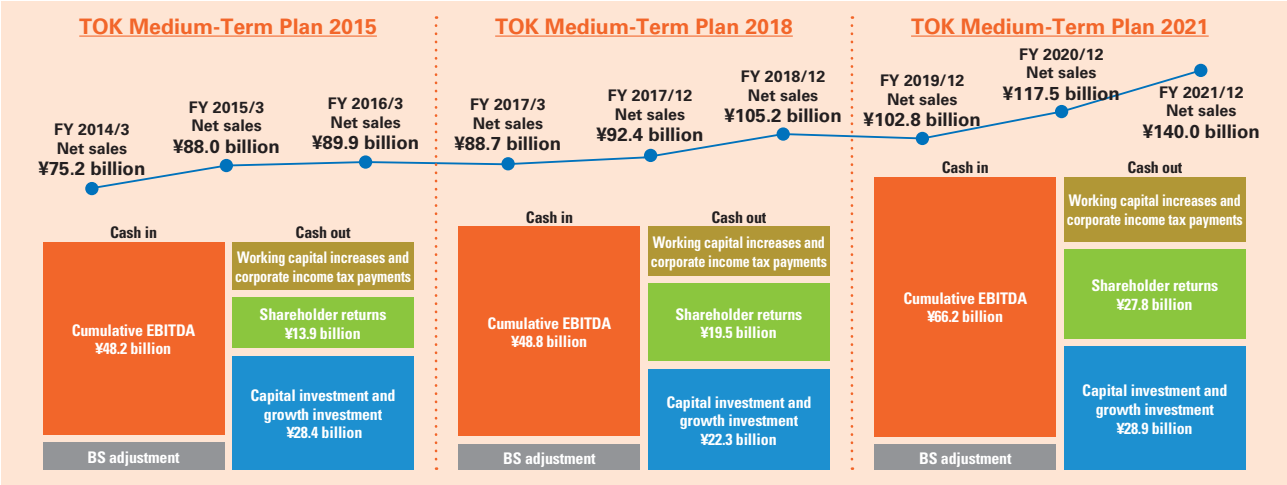
Keen awareness of cash allocation

In the TOK Medium-Term Plan 2021, which was recently completed, a cash reserve policy was introduced as part of BS management. This policy made it possible to effectively implement the necessary investments while retaining sufficient and necessary cash and to implement shareholder return measures, including substantial dividend increase.

TOK had already promoted BS management before it disclosed the cash reserve policy in the TOK Medium-Term Plan 2021 and had accumulated considerable discussions internally and externally concerning cash usage. Consequently, TOK effectively spent the cash that it earned under the past three medium-term plans (TOK Medium-Term Plan 2015, 2018, and 2021), and raised the top line accordingly **(see page 45, "Review of cash allocation during the past three medium-term plan periods")**.

For TOK to continue to be a long-term, R&D-driven company focusing on niche business fields shaped by radical and rapid technological changes, it is necessary to maintain appropriate levels of cash reserves and implement agile investments. By retaining investment reserves and risk reserves based on the policy above, I will formulate and implement proactive growth strategies in the rapidly changing global market.

Review of cash allocation during the past three medium-term plan periods



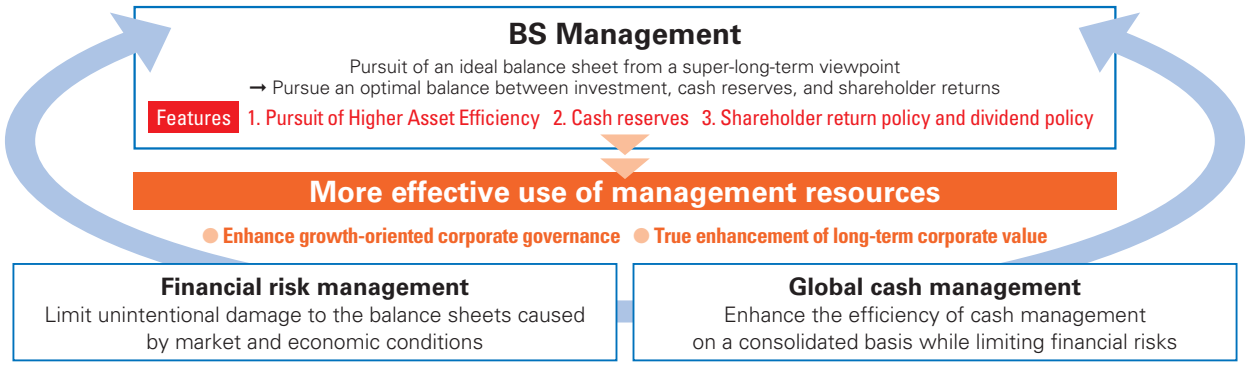
Cash reserve policy

As a long-running R&D-driven company, TOK will calculate cash reserves from the standpoint of securing the necessary funds

- Develop technologies in anticipation of a super-long time frame
- Continuously tackle challenges over a super-long time frame
- Respond rapidly when the unexpected happens (restoration and rebuilding from major disasters)

Amount of cash reserves = Working capital + Investment reserves + Risk reserves

Continue promoting the trinity of BS management, financial risk management, and global cash management



Upgrade BS management from a long-term perspective

Financial capital policy under the TOK Vision 2030

Started in August 2020, the TOK Vision 2030 aims to *maximize cash generation, effectively use management resources, and create resilient balance sheets* in order to upgrade the financial capital policy based on BS management from a long-term perspective through the monitoring of business strategies by introducing EBITDA, introducing and disseminating ROIC and the ROIC tree, maintaining appropriate levels of cash reserves, and enhancing and diversifying fundraising capabilities.

ROIC activities in the rapidly changing era

The initiatives of ROIC and the ROIC tree have been steadily disseminating to on-site personnel. Both the identification of optimal cash reserves from a long-term perspective and the ROIC activities to measure the strengths of businesses are simultaneously in progress. As specific measures, TOK is promoting both the macro approach and the bottom-up approach to attain an optimal balance between the maximization of earning power and the quality of assets in business activities.

In the macro approach, the Company will expand ROIC training that has been implemented for officers to group-wide tier-based training so that all managers and employees will fulfill their tasks from the medium-term and long-term BS perspective and not only focus on short-term PL. TOK is especially pursuing an optimal balance between financial capital and nonfinancial capital, which consists of technology (intellectual capital), human resources (human capital) and human connections (social and relational capital) as the source of the group's earning powers from a more medium- to long-term perspective.

In the bottom-up approach, TOK promoted the effective use of assets and the on-site improvement of the respective components and KPIs, featuring the initiative for the ROIC reverse tree at ROIC model plants. Consequently, the Company effectively used the noncurrent assets of plants and improved the linked cash conversion cycle (CCC) among the plants and marketing departments. TOK will advance the ROIC activities while continuously reviewing the components and KPIs in consideration of the ongoing rapid environmental changes and the goals of each of the business segments.

Setting an optimal level of financial leverage while identifying the risks

Regarding the optimization of financial leverage in the tree below, TOK will continue to redefine the optimal equity range and further pursue the effective use of liabilities. Moreover, the Company will sophisticate its strategies from two viewpoints: what business model to formulate in the coming years and what risks to anticipate for the coming years in order to take action without missing opportunities. As part of these initiatives, TOK acquired the A credit rating (with a positive outlook) by R&I in February 2022 toward the diversification of funding means to satisfy strong cash demand in the coming years.

While the present explosive growth in semiconductor demand provides significant business opportunities for the TOK Group, there are potential risks in the sustainability of the supply chain coupled with the diverse expanding risks of resource and material price increases resulting from the COVID-19 pandemic and Ukraine crisis, global inflation, interest rate raises. TOK will continue to identify these risks and opportunities to optimize financial leverage.

BS management in the TOK Medium-Term Plan 2024

Pursuing the improvement of cash allocation

In the TOK Medium-Term Plan 2024, back-cast from the TOK Vision 2030, the financial capital policy continues to aim at allocating the EBITDA generated from the growth of semiconductor materials into growth investments with priority followed by flexible allocation to shareholder returns.

In the ¥100 billion of EBITDA to be generated over the next three years, the Company plans to allocate more than ¥20 billion to growth investments (launch of new business, investment of human capital and intellectual capital, response to climate change, and M&A) to enable the Company to continue advancing as a long-run R&D-driven company. TOK also plans the record-high capital investment of ¥45 billion to enhance its production bases and expand the semiconductor market for the stably supply high-quality products.

In addition to the above, TOK will raise the DOE 3.5% policy, which was introduced in the previous medium-term plan, to a dividend policy aimed at DOE 4.0%, planning shareholder returns of more than ¥20 billion over the next three years.

By doing so, the Company hopes to undertake a dividend policy that will provide long-term returns to shareholders who support long-run value creation from a long-term perspective, in addition to the achievement of a virtuous circle based on efforts for BS management over the past years, consisting of the retention of adequate equity and the re-investment of acquired cash, leading to further business growth, cash creation, and ROE increase.

DOE is an indicator that combines ROE with the payout ratio. By raising the lower limit target of DOE, it will become possible to provide more detailed, stable, and higher-level shareholder returns. This target is also based on the assessment that TOK will continue to powerfully develop its business, while retaining adequate net cash, even after satisfying cash demand and the purchase of treasury stock in coming years.

Paid the highest dividend ever

Prior to the start of the new medium-term plan, TOK applied this new dividend policy to the year-end dividend for FY 2021/12. Moreover, considering the substantial decrease in the dividend yield for long-term shareholders due to the recent increase of TOK shares, the Company paid the highest annual dividend ever for FY 2021/12 with an increase to ¥156 by ¥2 per share from the previous term. TOK will continue to implement its purpose and long-run value creation in cooperation with long-run shareholders and investors.

Improving ROIC for better ROE to utilize management resources efficiently

ROE = ROA × Financial leverage

Improve the numerator of ROA based on the ROIC tree while dividing the denominator into invested business assets and cash reserves and pursuing the medium- to long-term efficiency of each

Invested business assets

Achieve efficient business operations based on the ROIC tree perspective

ROIC

Maximize cash generation capability

- Pursue EBITDA and EBITDA margin

Improve invested capital turnover ratio

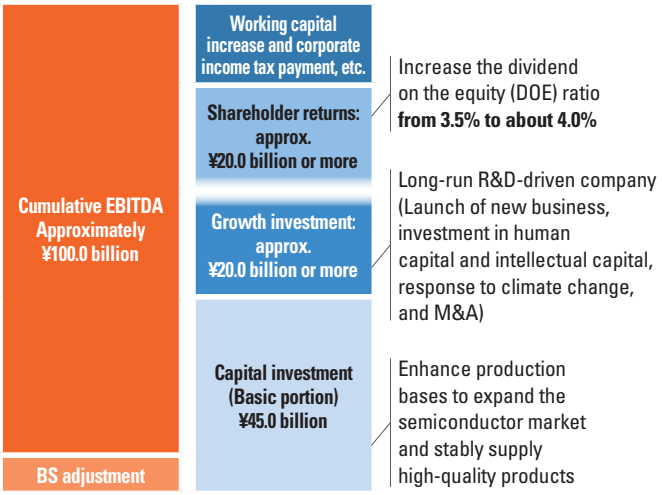
- Effective use of assets
- Redefine assessment criteria for capital investment and enhance monitoring

Cash reserves

Retain cash reserve as a management objective (moving target)

Cash reserves = Working capital + Investment reserves + Risk reserves

Three-year cash flow plan (conceptual graph)



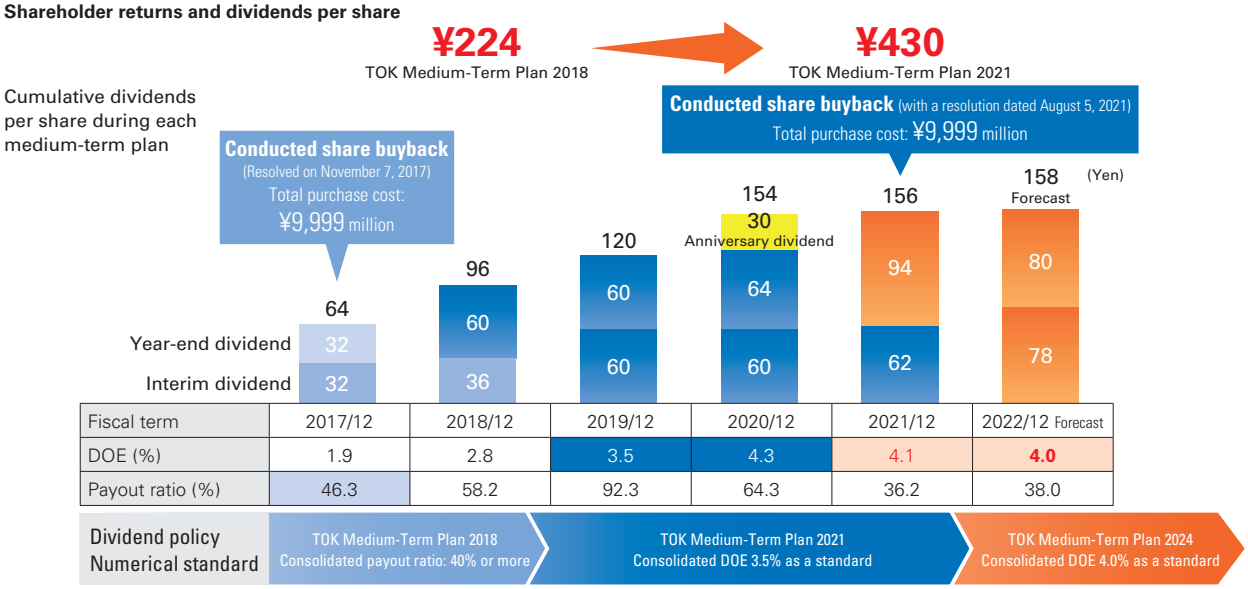
Initiatives for IR and SR, and tax governance

Set and use optimal financial and nonfinancial KPIs, leading to the enhancement of economic & social value

As the VUCA tendencies continue to intensify in the business environment with new geopolitical risks becoming evident from 2022, the electronics market and the capital market are changing even faster. Under these circumstances, I will steadily promote the financial capital strategies under the TOK Medium-Term Plan 2024, leading to the sustainable growth and corporate value enhancement of TOK.

As specific measures, we will maximize cash generation, effectively use management resources, and create resilient balance sheets in order to effectively support value creation rooted in our unique corporate culture to be an eternal startup and long-run R&D-driven company. We will also set and utilize optimal financial and nonfinancial KPIs, leading to the enhancement of economic & social value. I am determined not only to provide support from a financial perspective but also to contribute to the resolution of social issues through business and corporate activities, considering response to climate change risks and diversity requirements, which are having increasing importance, as well as initiatives related to sustainability requirements including investments in human capital and intellectual property.

Shareholder returns and dividends per share



TOK will enhance engagement with stakeholders through dialogs from a long-term perspective

In dialogs with ESG investors and other stakeholders in the capital market, the Company will communicate its characteristics, combined with long-term business strategies and investment strategies as described above, while continuously upgrading the optimal balance among investments, cash reserves, and shareholder returns.

To further reduce capital costs toward the enhancement of corporate value, TOK will continue the optimization of the capital structure, the rigorous management of financial risks, and ESG initiatives with the new material issues at the core, all as basic policies. In the meantime, the Company will emphasize dialogs with stakeholders through a long-term perspective without assuming the reduction of capital costs through leverage only. To attain the TOK Vision 2030 and to inherit it toward a 100-year company in 2040, the Company will enhance dialogs concerning the businesses and time frames for the coming years, as well as the involved risks and suitable means of funding, thereby establishing engagement with stakeholders.

Strengthen tax affairs governance on a worldwide basis in cooperation with many stakeholders in Japan and overseas

The TOK Group will continue to grasp taxation and tax customs, as well as product market conditions, in all regions where it does business while maintaining an overview of tax affairs and identifying requirements at each entity and on a consolidated basis. At the same time, TOK will continue to formulate a transfer pricing policy based on the information above, incorporate the policy into the transfer pricing documents for Base Erosion and Profit Shifting (BEPS), and enhance training for group tax personnel in each country. In addition to these measures, the Company will strengthen tax affairs governance on a worldwide basis in cooperation with many stakeholders in Japan and overseas.

TOK clears even the highest hurdles using outstanding adjusting power meticulously and reliably.

The role of the Production Engineering Department is to adjust.
To stably produce new products that offer excellent performance, the Company will make adjustments with the Development Division and the Manufacturing Division, and occasionally with raw material manufacturers, and establish optimal manufacturing processes through countless trials and errors.
The source of energy is the sense of mission is to always deliver products that exceed the expectations of customers.
TOK backs its product manufacturing with this belief.

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Our Material Issues

Initiatives to Address Material Issues to Enhance Corporate Value

Stakeholder Engagement

To Establish Win-Win Relationship with All Stakeholders

TOK will create and achieve long-term sustainable value by generating new solutions and breakthroughs through collaboration with stakeholders in response to increasingly complicated social issues and advanced technological requirements.

TOK aims to establish win-win relationships with all stakeholders as stated below.

Our Stakeholders

TOK will contribute to the resolution of new social issues and unanticipated risks by creating shared value through close communication with stakeholders in Japan and overseas.

Customers

■ **Shared value**
- Provide new added value that inspires customers (overarching aspiration under TOK Vision 2030)
- Build relationships of trust that create continued value in cutting-edge fields
- Establish a production structure that guarantees stable supply to society

■ **Policies and basic initiatives**
- Focus on Strategy 3 under TOK Medium-Term Plan 2024 **(see page 32)**
- Make record-high capital investments to support stable production in the semiconductor industry that grows at an unprecedented speed
- Execute customer-oriented strategies (trifecta of development, manufacture, and marketing) to be further deepened and advanced
- Provide a flexible response to multi-site operations of customers
- Execute risk distribution by having production sites in five regions across the world

■ **Communication channels**
- Customer-oriented sites established in Japan, the United States, China, South Korea, and Taiwan, and face-to-face meetings at customer sites (partially replaced with online meetings)

■ **Specific examples and latest achievements**
- Received supplier awards from many customers

Intel Corporation
EPIC Distinguished Supplier Award (2022)

Shareholders and investors

■ **Shared value**
- Established long-term sustainable growth and corporate value enhancement
- Increased capital efficiency
- Reduced capital costs
- Strengthened engagement through constructive dialog

■ **Policies and basic initiatives**
- Communicate with enhanced transparency of business management through timely and fair disclosure of information on finance and business activities
- Director, Executive Officer, and Department Manager of General Affairs Department undertake management and oversight as IR Officer
- Records of opinions and requests received through dialogs are collected and regularly reported to all directors for information dissemination and sharing
- In accordance with the Disclosure Policy, TOK endeavors to provide consistent information to ensure fair, timely, and appropriate disclosure
- TOK established rules for the management of insider information and strives to ensure stringent observance

■ **Communication channels**
- Business results meetings for institutional analysts/investors (two sessions*)
- Individual meetings with institutional analysts/investors (277 sessions*)
- Financial results briefings for individual investors (eight sessions*)
- The integrated reports, business reports to shareholders, and the notice of the convocation of the ordinary general meeting of shareholders are published on our website.

■ **Specific examples and latest achievements**
- Individual meetings with institutional analysts/investors containing ESG topics (12 sessions*)

* Achievements in FY 2021/12

Business results meeting was held online (FY 2021/12)

Employees and future generations

■ **Shared value**
- Frank, open-minded business culture as one of the management principles
- New personnel system and measures that respect the values of each individual
- An environment that enables a longer working life (e.g., enhancement of re-employment system)

■ **Policies and basic initiatives**
- The philosophy of the TOK Group Policy on Leveraging Human Resources is incorporated into the respective human resource measures
- Focus on Strategy 4 under the TOK Medium-Term Plan 2024 **(see page 32)**
- Focus on enabling all employees to work with enthusiasm and pride as an overarching aspiration under TOK Vision 2030; Also feature the leveraging of global human resources as one of the Seven Management Strategies under the Vision

■ **Communication channels**
- Employee engagement survey
- Dialog sessions between young employees and the president
- Group reports issued in multiple languages (Japanese, English, Korean, and Chinese)
- The internal reporting system to identify and improve or prevent compliance risks at an early stage
(Reports received: three times*)

■ **Specific examples and latest achievements**
- Strengthened communication to foster unity on a global basis (by issuing the group reports and the president's video message in multiple languages, etc.)
- Implemented CSR training for all employees, directors, and officers in Japan: participation rate 100%*

* Achievements in FY 2021/12

Sponsored dialog sessions between young employees and the president

Suppliers/startups

■ **Shared value**
- Solid partnership to create high added value
- Supply chain guarantees a stable supply to society while respecting the environment and human rights
- Based on the Occupational Health and Safety Policy, the utmost priority is placed on the maintenance of the health and safety of all internal and external persons (workers) who provide service in the work environment of the TOK Group
- Open innovation through corporate ventures

■ **Policies and basic initiatives**
- Chemical substance regulations, customer requirement standards, and TOK procurement policy are shared through the TOK Group Standards on Chemical Substances Management
- Business is transacted with impartiality, fairness, and transparency based on the CSR Policy, while respecting human rights, and considering society and the global environment
- Information management complies with the TOK Group Information Management Policy

■ **Communication channels**
- Inspection and verification of manufacturing systems through periodic audits (on-site and online)
- Joint research and development in the new R&D building

■ **Specific examples and latest achievements**
- Started open innovation in the new R&D building

tok pixelligent THE CLEAR SOLUTION™

Developed high-refractive materials through open innovation with Pixelligent Technologies, LLC (USA)

Academics, research institutions, and consortium

■ **Shared value**
- Implemented initiatives toward technological breakthrough through industry-academia collaboration
- Enhanced and streamlined basic research through industry-academia collaboration
- Expedited R&D process through collaboration with international research institutions
- Acquired business opportunities through participation in the industrial consortium

■ **Policies and basic initiatives**
- Accumulated technological seeds that will lead to future blue oceans and new concepts
- Acquired a broad range of technological seeds through open innovation in order to input internal resources at full scale as soon as the market takes off

■ **Communication channels**
- Sent TOK human resources to universities and research institutions in Japan and overseas
- Initiated joint research and development
- Provided grants for research and development through the Tokyo Ohka Foundation for the promotion of science and technology

■ **Specific examples and latest achievements**
- Established a joint laboratory with Yokohama City University (July 2019)
- Provided grants through the Tokyo Ohka Foundation for the promotion of science and technology in 2021: 99 projects, ¥43.21 million

Implemented joint research with universities in the development of cutting-edge photoresists

Participated in JOINT2, a consortium for the development of next-generation semiconductor packaging technology

National/ local governments and local communities

■ **Shared value**
- Sustainable development of society
- Response to global risks, including climate change, infectious diseases, and geopolitical risks
- Response to unanticipated risks that will emerge

■ **Policies and basic initiatives**
- Contribute to a sustainable future through chemistry as our purpose
- Ensure close collaboration with national and local governments and communities toward the overarching aspiration under TOK Vision 2030
- Proactively promote social contribution activities in the areas around TOK business sites, emphasize cooperation and collaboration with local communities, and establish a relationship of trust

■ **Communication channels**
- Negotiations with competent authorities in Japan, the United States, South Korea, and Taiwan related to environmental regulations and applicable laws
- Activities in accordance with the local policies and objectives in response to climate change risks and infectious disease risks, as well as decarbonization initiatives
- Emphasize the local communication at normal times as the basis of stable value provision to society

■ **Specific examples and latest achievements**
- Dialogs about the environment and society: 579 participating employees*
- Dialogs with local communities (suspended in 2021 considering the risk of COVID-19)
- Donations to local governments and organizations, including relief money for preventing the spread of COVID-19 infection: ¥104.08 million*

* Achievements in FY 2021/12

Participated in the afforestation activities with residents of Kanagawa Prefecture through the Kanagawa Trust Midori Foundation

Our Material Issues

Initiatives to Address Material Issues for Enhancing Sustainable Corporate Value

TOK defines material issues as the starting point for its long-term initiatives with the goal of attaining the TOK Vision 2030, a 100-year company by 2040, and carbon neutrality in 2050, and the Company has recently formulated new material issues closely linked to the TOK Medium-Term Plan 2024.

— Toward Achieving a Sustainable Future —

TOK aims to become "The e-Material Global Company®" by contributing to a sustainable future through chemistry under the TOK Vision 2030, and the Company contributes to a sustainable future where diverse benefits will be realized through semiconductor technologies employed in autonomous vehicles, AR/VR, remote medical care, remote agriculture, and remote construction work with the communication revolution (Beyond 5G) at the core.

The TOK Medium-Term Plan 2024 was formulated by backcasting from the Vision in order to acquire abundant business opportunities pertaining to a sustainable future, while implementing countermeasures against a variety of risks that include the increasing severity of climate change, the spread of infectious diseases, and the surge in issues with economic security.

TOK has defined five new material issues aimed at the enhancement of sustainable corporate value by handling risks and opportunities as above. The Company increase the effectiveness of key initiatives and KPI for each material issue by promoting a PDCA cycle in close linkage with the TOK Medium-Term Plan 2024.

Process of defining new material issues

Step 1

TOK selected the issues it needs to address to create sustainable value by considering the applicable guidelines in Japan and overseas, and the Responsible Care Code of the Japan Chemical Industry Association.

Step 2

TOK evaluated the selected and then prioritized the issues from the two axes of the importance for society and stakeholders, which took into account day-to-day dialogs with ESG investors and other stakeholders, and the importance to TOK management, which considered strategies under the TOK Vision 2030 and the TOK Medium-Term Plan 2024, and then the Company identified the five most important items.

Step 3

TOK defined the identified items as new material issues, along with key initiatives and risks and opportunities in a PDCA cycle for each issue, through discussions and approval at meetings of the Board of Directors.

New material issues

- Contribution to innovation and the creation of social value
- Pursuit of happiness in personnel
- Establishment of resilient organization
- Global environmental conservation considering future generations
- Supply chain sustainability

TOK Vision 2030
Contribution to the achievement of a sustainable future

Backcasting

Accumulated achievements

TOK Medium-Term Plan 2024

Close linkage

New material issues

Material issues	SDGs to which we contribute	ESG fields	Risks and opportunities
Contribution to innovation and the creation of social value	3, 9, 11, 12, 13, 17	Society (S)	■ Intensifying global competition in the semiconductor industry and increased geopolitical risks ■ Expansion of the role of cutting-edge semiconductors in innovation and the resolution of social issues ■ Technological advancements and market expansion in both the miniaturization and 3D packaging of semiconductors
			■ Expansion of applications and social needs of semiconductor technologies (such as life science-related materials, functional materials, and optical materials) ■ Risk reduction and long-term stable growth through the diversification of the business portfolio and the multiplication of target markets
			■ Supply shortage due to the tight supply-demand condition of semiconductors ■ More difficult and complex customer requests ■ Increase in needs for ultrahigh purification in semiconductor materials
Pursuit of happiness in personnel	3, 4, 5, 8, 10		■ Intensifying competition for recruitment in semiconductor-related industries ■ Global personnel development in conjunction with the increase in overseas sales ratio ■ Increasing the importance of happiness in society (wellbeing)
			■ Creating innovation and increasing competitiveness through the leveraging of diverse human resources ■ Aging of employees and the utilization of "know-why" of senior human resources
			■ Borderless expansion of supply chain ■ Escalating geopolitical risks
Establishment of resilient organization	16, 17	Governance (G)	■ Increase in the potential risks involved in business growth and the increase of stakeholders ■ Rapid changes in the business environment
			■ Increase in the sustainability requirements ■ Upgrading of supervisory and control functions to directly link business growth to the enhancement of corporate value
			■ More stringent laws and regulations based on global initiatives for sustainability and decarbonization ■ Maintenance and enhancement of social trust and brand power in local communities overseas
			■ Increasing tail risks that include pandemics and extremely severe natural disasters ■ Acquisition of risk resilience to continuously fulfill supplier's responsibility
Global environmental conservation considering future generations	6, 7, 11, 12, 13, 14, 15	Environment (E)	■ Increasing climate change risks and accelerated initiatives for global decarbonization ■ Cost increases due to the introduction and spread of carbon pricing ■ Cost increases due to more precise temperature control for cutting-edge products ■ Expansion of energy-saving effects through advancement in the miniaturization of semiconductors ■ Expansion of power semiconductor material and equipment markets
			■ Increase in water stress due to global warming ■ Increasing interest in the marine plastics issue ■ Expansion of a circular economy
			■ Tighter emissions regulations in major developed countries ■ Further risk reduction by satisfying standards stricter than regulatory requirements
			■ Increased risk of global biodiversity loss ■ Risk reduction through initiatives addressing biodiversity and water resources as a single issue
Supply chain sustainability	12, 17		■ Tighter chemical substance control regulations in major developed countries ■ Increased product value by taking thorough action prior to legislation from before and during the early stages of material development
	3, 12	Society (S)	■ Increased risks of accidents due to the increase of production sites, production volume, and operating hours ■ Further risk reduction through RBA audits and ISO 45001 certification

Material Issues, 2021 Results, and 2022 Issues, Qualitative Objectives, and KPI Objectives

Material issues	SDGs to which the Company contributes	ESG fields	Key initiatives	Issues and objectives for FY 2021/12
Contribution to innovation and the creation of social value		Society (S)	Increase the global market shares of cutting-edge photoresists	■ Rapidly and steadily work to develop a support structure rigorously focused on customer satisfaction along with R&D ■ Through rigorous marketing, TOK will carefully identify solutions that lead to the creation of new value for customers and intensively and proactively address issues ■ Ambitiously develop technologies required for 5G, IoT and other innovations
			Acquire and create core technologies for electronic materials and new fields	■ Expand the development of cutting-edge materials at the new R&D building ■ Expand collaborative projects with other companies and groups ■ Continue to develop and strengthen the commercial viability of high-functional films, life science-related materials, and optical materials
			Secure stable supplies of high-quality products and establish an optimal production system for the Group	■ Improve detection sensitivity for metal impurities in compliance with customer development roadmaps
Pursuit of happiness in personnel			Improve employee engagement and promote people-oriented management	■ Continue to promote a good work-life balance ■ Expanded flex time to more departments and introduced work from home as an official system ■ Introduced an hourly paid holiday system ■ Formulated a new personnel system in detail toward introduction in 2022 ■ Implemented training for new managers and transferred employees
			Diversity and inclusion	■ Continue to promote corporate activities that leverage diversity ■ Promote personnel exchanges within the Group
				■ Continue to promote women in the workplace ■ Continue to promote career training featuring life stages
			Respect for human rights and fair working conditions	■ Continue efforts to prevent harassment ■ Implement human rights education
Establishment of a resilient organization		Governance (G)	Establish a sound and efficient management foundation	■ Promote effective utilization of information ■ Review all cybersecurity measures ■ Maintain and entrench information management standards
			Strengthen the effectiveness of governance	■ Establish a new remuneration system and formulate performance indicators concerning the next medium-term plan ■ Formulate skill matrix of directors ■ Continue to thoroughly operate the PDCA cycle to improve the effectiveness of the Board of Directors (assess its effectiveness once a year) ■ Enhance internal control functions ■ Confirm the operating status after the revision of authorities
				■ Review the committee structure and the operation of the Group Management System (GMS) ■ Visualize operations to achieve standardized and globally optimized operations in the Group
			Compliance	■ Continue activities to instill compliance ■ Formulate and disseminate the list of applicable laws and the legal management procedures
				■ Continue appropriate operation of the internal reporting system ■ Further enhance and disseminate the internal reporting system
			Risk management	■ Work to reduce risks previously and newly identified through risk assessments ■ Create a unified BCP for the Group to begin implementation in 2022 ■ Continue to hold drills to increase awareness and aim to maintain a high response rate

[Self-assessment of goal achievement]
○ Implemented with accomplishments
△ Implemented with room for further accomplishments
× Yet to be implemented or accomplished

Main achievements, progress, and KPI in FY 2021/12	Evaluation	Issues, qualitative objectives, and KPI objectives for FY 2022/12	Pages
■ Consolidated net sales: Increased by 19.1% year on year	○	■ Provide technologies, quality, environment, and added value that contribute to the value creation process of customers ■ Continue development and improvement from a thoroughly customer-oriented perspective ■ Ambitiously develop technologies required for 5G, IoT and other innovations ■ R&D efficiency: Aim to achieve and maintain 200%	P58–61 P34–41
■ Number of collaborative projects promoted with other companies and groups: Increased by approx. 2% year on year	○	■ Continue to develop and strengthen commercial viability in new business fields (high-functional films, life science-related materials, and optical materials) ■ Expand collaborative projects with other companies and groups	P43 P51
■ Improve detection sensitivity for metal impurities that comply with customer development roadmaps	○	■ Improve detection sensitivity for metal impurities that comply with customer development roadmaps ■ Create new value through DX (material development utilizing materials informatics/shift to smart factories)	P4–5 P42 P61 P74
■ Ratio of paid leave taken: 73.8%* ■ Increased childcare leave taken (male employees: 5 in 2020 to 11 in 2021 with the user rate increasing to 41%)* ■ Introduced the hourly paid holiday system ■ Formulated the new personnel system in detail toward introduction in 2022; reported the system details to employees ■ Introduced training for department heads	○	■ Employee engagement: Promote initiatives toward the objective for 2024: Improve by 3 points (vs. 2021) ■ Employee-friendly environment: Promote initiatives toward the objective for 2024: Improve by 7 points (vs. 2021) ■ Continue to promote a good work-life balance ■ Childcare leave user rate among male employees: Maintain at 30% or more ■ Expanded flex time to more departments and introduced work from home as an official system ■ Introduce new personnel system and appropriately operate the system to set it in place ■ Continue to implement training for department and division heads ■ Promote health & productivity management	P62–71
■ Limited personnel exchange within the Group due to the impact of COVID-19 ■ Ratio of non-Japanese employees: 26.2% ■ Ratio of local hires in overseas management positions (consolidated basis): 54.5%	△	■ Continue to promote corporate activities that leverage diversity ■ Promote personnel exchanges within the Group	P62–71 P81
■ Implemented a female career planning seminar for young female employees ■ Ratio of women in senior and middle management: 3.8%* ■ Ratio of female new graduates hired: 17.0%*	○	■ Continue to promote women in the workplace ■ Implement training for female employees pursuing management positions ■ Ratio of women in senior and middle management: Aim to increase to twice the level by 2030 (vs. 2020)	P62–71 P81
■ Implement antiharassment and human rights education ■ Implement antiharassment education for department heads	○	■ Continue efforts to prevent harassment ■ Implement human rights education	P62–71
■ Awareness building activities through the group-wide sharing of the examples of effective information utilization ■ Reviewed cybersecurity structures and strengthened countermeasures against cyberattacks at group companies ■ Conducted information management training	○	■ Streamline the operation of Information Management Committee ■ Strengthen cybersecurity measures	P96–97
■ Formulate and disclose the skill matrix of directors ■ Evaluate the Board of Directors in the previous fiscal year and make improvements to identified issues ■ Revise the content of the questionnaire for the Board of Directors evaluation ■ Check and correct the approval request operation and implement approval request training	○	■ Continue to thoroughly operate the PDCA cycle to improve the effectiveness of the Board of Directors (assess its effectiveness once a year) ■ Enhance internal control functions ■ Continue to check the approval authority and approval request operations ■ Establish new CSR and sustainability governance structures	P78–93
■ Discontinued the GMS Committee structure ■ Reviewed the product development process ■ Established a governance structure pertaining to the shutdown and establishment of subsidiaries	○	■ Reviewed the manufacturing transfer process and the OEM process ■ Established a risk transfer analysis process	P94
■ Conducted compliance training ■ Revised compliance rules ■ Started the operation of periodic checks on laws and regulations (four times annually) ■ Issued the Explanatory Guidance on CSR Policy ■ Formulated the list of applicable laws and the legal management procedures and notified the related departments	○	■ Continue activities to instill compliance ■ Continue periodic checks on laws and regulations (four times annually), and review the list of applicable laws and legal management procedures	P94–95
■ Three reports were received, for which solutions and recurrence prevention measures were promptly explored through consultation with an expert (legal advisor) ■ Examined the review of the internal reporting system in response to legal amendments ■ Explained and reported on the internal reporting system through compliance training	△	■ Continue appropriate operation of the internal reporting system ■ Further enhance and disseminate the internal reporting system	P94–95
■ Continued the activities to reduce risks assessed as highly impacting business continuity, such as the risk of spread of COVID-19 infection and the risk in the supply of raw materials ■ Formulated BCP scenarios and restoration principles at the production sites of overseas subsidiaries ■ Continued the creation of a unified BCP for the Group for the following fiscal years ■ Conducted drills to improve awareness of the safety confirmation system in the event of major natural disasters Held four company-wide drills with a high response rate maintained in all sessions	△	■ Reduce risks previously and newly identified through risk assessments ■ Continue to hold drills to increase awareness and aim to maintain a high response rate ■ Conduct desktop drills anticipating actual damage	P95–96

* Unconsolidated

Material Issues, 2021 Results, and 2022 Issues, Qualitative Objectives, and KPI Objectives

Material issues	SDGs to which we contribute	ESG fields	Key initiatives	Issues and objectives for FY 2021/12	
Global environmental conservation considering future generations		Environment (E)	Initiatives toward realization of carbon neutrality	Develop, manufacture, and market environment-friendly products	■ Stably supply i-Line photoresists for power semiconductors ■ Increase sales of equipment for power semiconductors
				Proactive response to new environmental regulations	■ Introduce a comprehensive management system for environment-related data
				Proactive disclosure of environmental information	■ Proactive information disclosure Publish the *Integrated Report* and disclose environmental information on the website
				Create environmental management structures	■ Examine methods for the effective implementation of company-wide environmental management activities
				Improve energy-related CO_2 emissions per base unit* [Medium-term target] Reduce energy-related CO_2 emissions (per base unit) by 15 points by 2030 compared with 2019 (Scopes 1 and 2)	■ Reduce energy-related CO_2 emissions (per base unit) by 15 points by 2030 compared with 2019
					■ Reduce energy-related CO_2 emissions (per base unit) by 1 point compared with the previous year
				Improve energy consumption per base unit* [Medium-term target] Reduce energy consumption (per base unit) by 15 points by 2030 compared with 2019	■ Reduce energy consumption (per base unit) by 15 points by 2030 compared with 2019
					■ Reduce energy consumption (per base unit) by 1 point compared with the previous year
				Improve energy consumption per base unit in distribution*	■ Reduce energy consumption (per base unit) by at least 1 point compared with the previous year
				Measures to prevent global warming at overseas manufacturing sites	■ Promote production activities considering energy conservation
			Promote resource recycling	Initiatives to address water risk*	■ Propose and implement plans at each site
					■ Reduce domestic water consumption by 15% by 2030 compared with 2019 ■ Continue measures against flooding risks
				Initiatives to address the marine plastics issue	—
				Reduce industrial waste* [Medium-term target] Reduce (per base unit) by 15 points by 2030 compared with 2019	■ Reduce (per base unit) by 15 points by 2030 compared with 2019
					■ Industrial waste disposed in landfills → less than 1% Achieve zero emissions
			Conserve air, water, and soil environments	Prevent air, water, and soil pollution	■ Excess of operational thresholds: None
				Countermeasures against ozone-depleting substances	■ Manage CFC leakage volume through the proper management of equipment ■ Examine the introduction of non-CFC equipment when renewing facilities
				Eradicate environmental accidents that affect external parties	■ Environmental accidents: No major accidents
			Preserve biodiversity	Improve awareness of biodiversity based on the TOK Biodiversity Protection Declaration and encourage participation in related activities	■ Continue ongoing employee training ■ Continue activities to preserve forests
Supply chain sustainability			Precisely address laws and regulations	Carry out appropriate and reliable management of chemical substances	■ Establish chemical substance information management system ■ Continue to strengthen and operate chemical substance management system
				Properly comply with the PCB Special Measures Act	■ Formulate and promote an equipment renewal plan based on the road map toward the deadline of disposal of PCB waste (low concentration) in 2027
		Society (S)	Occupational health and safety/ Reduction of risks posed by chemical substances	Foster a safety culture	■ Establish and improve occupational health and safety management systems ■ Prepare to acquire ISO 45001 certification and extend the scope of certification (Complete acquisition at all sites in Japan by 2023)
				Promote safety education and training, and disaster drills	
				Promote risk assessment activities in chemical substance handling work	■ Strengthen risk assessment and hazard prediction activities for infrequent operations ■ Establish Lockout/Tagout (LOTO) rules
				No major accidents	■ Achieved no major accidents

[Self-assessment of goal achievement]
○ Implemented with accomplishments
△ Implemented with room for further accomplishments
× Yet to be implemented or accomplished

Main achievements, progress, and KPI in FY 2021/12	Evaluation	Issues, qualitative objectives, and KPI objectives for FY 2022/12	Pages
■ Stably supply and increase sales of i-Line photoresists for power semiconductors ■ Increase sales of equipment for power semiconductors	○	■ Stably supply and increase sales of i-Line resists for power semiconductors ■ Increase sales of plasma ashing systems for power semiconductors	P24–29 P37 P38–41
■ Introduce a comprehensive management system for environment-related data	○	■ Introduce a comprehensive management system for environment-related data and prepare to start operation in 2023	P102–109
■ Proactive information disclosure Publish the *Integrated Report* and disclose environmental information on the website ■ Disclosure of the *ESG Data Book*	○	■ Proactive information disclosure through the *Integrated Report* and on the website	P50–51
■ Identify risks and opportunities at each department in Japan to set company-wide objectives	○	■ Create environmental management structures throughout the TOK Group	P72–75
■ Reduce energy-related CO_2 emissions (per base unit) by at least 35 points compared with 2019	○	■ Reduce energy-related CO_2 emissions (per base unit) by 15 points by 2030 compared with 2019	P102–103
■ Reduce energy-related CO_2 emissions (per base unit) by at least 27 points compared with 2020	○	■ Reduce energy-related CO_2 emissions (per base unit) by 1 point compared with the previous year	P102–103
■ Reduce energy consumption (per base unit) by 19 points compared with 2019	○	■ Reduce energy consumption (per base unit) by 15 points by 2030 compared with 2019	P102–103
■ Reduce energy consumption (per base unit) by 11 points compared with 2020	○	■ Reduce energy consumption (per base unit) by 1 point compared with the previous year ■ Measures against the aging of equipment and the introduction of new energy conservation systems	P102–103
■ Reduce energy consumption (per base unit) by 1 point compared with 2020	○	■ Reduce energy consumption (per base unit) by 1 point or more compared with the previous year ■ Achieve efficient transportation by improving the loading rates of vehicles	P102–103
■ Promote production activities for energy conservation	○	■ Promote production activities for energy conservation	P103
■ Propose and implement plans at each site Examples: Cyclic use of blowing water for air conditioners and cooling water for equipment	○	■ Reduce water consumption by renewing equipment ■ Promote the cyclic use of water	P104–105
■ Domestic water consumption: Increased by 0.4% compared with 2019 ■ Continue measures against flooding risks	△	■ Reduce domestic water consumption by 15% by 2030 compared with 2019 ■ Continue measures against flooding risks	P104–105
—	—	■ Introduce product packaging materials derived from bioplastics	P75, 109
■ Industrial waste generation (per base unit): Increased by 9.5 points compared with 2019	△	■ Reduce (per base unit) by 15 points by 2030 compared with 2019	P106–107
■ Industrial waste disposed of in landfills: Less than 1%, achieving zero emissions	○	■ Industrial waste disposed of in landfills: Less than 1%, achieving zero emissions	
■ Excess of operational thresholds: None	○	■ Excess of operational thresholds: None	
■ Manage CFC leakage volume through the proper management of equipment ■ Examine the introduction of non-CFC equipment when renewing facilities	○	■ Manage CFC leakage volume through the proper management of equipment ■ Examine the introduction of non-CFC equipment when renewing facilities	P109
■ Environmental accidents: No major accidents	○	■ Environmental accidents: No major accidents	P108–109
■ Implement CSR training for employees, as well as all directors and officers: 100% participation rate ■ Dispatch employees to participate in activities at the Kanagawa Trust Midori Foundation	○	■ Implement ongoing employee training ■ Continue activities to preserve forests	
■ Establish a chemical substance information management system ■ Continue to strengthen and operate a chemical substance management system	○	■ Establish a chemical substance information management system ■ Continue to strengthen and operate a chemical substance management system	P110–112
■ Formulate and promote an equipment renewal plan based on the road map toward the deadline for the disposal of PCB waste (low concentration) in 2027	○	■ Formulate and promote an equipment renewal plan based on the road map toward the deadline for the disposal of PCB waste (low concentration) in 2027	
■ Strengthen risk assessment for occupational health and safety ■ Acquire ISO 45001 certification at four domestic sites	○	■ Prepare to acquire ISO 45001 certification and extend the scope of certification (Complete acquisition at all sites in Japan by 2023)	P113–114
■ Issue the Guidelines for Risk Assessment and Hazard Prediction for infrequent operations and strengthen the activities ■ Set the LOTO rules in place through the horizontal expansion of findings in the RBA audit	○	■ Foster safety culture by reestablishing the 5S	
■ Workplace accidents: 8 ■ Achieved zero accidents resulting in lost workdays	○	■ Achieved no major accidents	P113–114

* Unconsolidated basis and consolidated subsidiaries in Japan

Message from the Director in Charge of Marketing and Development

Accelerating initiatives for the material issue *contribution to innovation and the creation of social value* as one of the strategies for the medium-term plan

Kosuke Doi *Director, Executive Officer, Department Manager, Marketing Dept. and Research and Development Dept.*

Upgraded customer-oriented strategies

To a new value creation stage through the advanced collaboration of development and marketing

The TOK Group achieved sustainable growth by globally promoting its customer-oriented strategies based on the trifecta of development, manufacturing, and marketing as its core competences. To further advance this structure, we introduced a new structure for the further collaboration of development and marketing in April 2022. In the new structure, I serve as the department manager of both the Marketing Department and Research and Development Department. The respective deputy department managers supervise both departments. The new organizational structure consists of product groups without a division between marketing and development, and personnel appraisals are also conducted in an integrated manner for both departments. In this way, we are accelerating one-team value creation based on the seamless collaboration of marketing and development.

Megatrends/risks and opportunities

Semiconductor industry continues growing

The global semiconductor market substantially grew by 26.2% year-over-year in 2021, the second highest growth rate after 28.0% in 2004. The market size became the largest ever at US$555,893 million.*1

In 2022, the growth rate of the semiconductor market decreased because of the partial slowdown of demand at home during the COVID-19 pandemic. However, positive growth by 16.3% year-over-year is expected because the shift to electronic equipment offering higher functions and higher efficiency proceeded through the expanded utilization of AI, the further dissemination of 5G & IoT, and initiatives for decarbonization and renewable energy sources combined with the substantial increase in the prices of semiconductors used in individual devices.*1

On a medium- to long-term basis, the forecast is that the semiconductor market will grow to US$1 trillion in 2030, almost double the present size, owing to the spread of autonomous vehicles, the further acceleration of decarbonization and green innovation, the expansion of the metaverse market, and technological development aimed at the next-generation communication standard (6G), causing the further increase of data use and semiconductor use.*2

*1 Source: World Semiconductor Trade Statistics
*2 Source: SEMI

Reduction of potential risks in supply chain

In the meantime, transportation costs have remained high because of the tight distribution conditions, while suppliers have suspended the supply of some products because of the impact of high crude oil prices, which further increased the procurement risks in supply chain. TOK strengthened the procurement structure with the SCM Procurement Department, which started operation in January 2022, at its core. In the development of new materials, the Company is proactively accelerating new risk hedge measures that include the procurement of raw materials from more than one supplier.

While semiconductor demand will continue to steadily increase, overlapped orders and over-procurement by users are being observed. Therefore, the Company will prevent excess inventory by anticipating and monitoring possible repercussion risks in the event of weaker supply-demand condition in the future.

While photoresists are the growth driver at present, the shift to domestic production is expanding in China, South Korea, and other Asian countries, suggesting the possibility of intensified price competition mainly in general-purpose products. The TOK Group will maintain and strengthen its advantage by sustaining its business model since foundation to continuously specialize in high-value-added fields of high technological difficulty.

Reducing R&D risks on a medium- to long-term basis

In research and development, the Group will strengthen countermeasures against potential risks on a medium- to long-term basis, so that TOK can continue maximizing its strengths in long-run R&D as our unique corporate culture.

For example, if the era of optical semiconductors and quantum computers arrives, which are anticipated to play the main role in the next generations to follow the 3D packaging of semiconductors, there is a risk that the material technologies that the Company has accumulated may become obsolete. To reduce such R&D risks on a medium- to long-term basis, the Sales Strategy Division and the Strategic Alliance Division are engaged in research and marketing looking more than ten years ahead in close collaboration with the Research and Development Department.

The Sales Strategy Division drives initiatives to counter the latest environmental risks and issues

In addition to the activities above, the Sales Strategy Division drives initiatives to counter the latest environmental risks and issues related to semiconductor materials in cooperation with the EHS Division as part of the initiatives for a new material issue, "supply chain sustainability."

The TOK Group has continuously ensured compliance with environmental regulations applicable to the products and is sincerely responding to new environmental regulations. As the Group receives requests from many customers to further reduce the environmental impact of existing products and influence on human health, TOK will seize new business opportunities with the Sales Strategy Division acquiring such needs and undertaking related marketing activities.

As activities to strengthen the regulation of PFAS* are promoted in full scale in the United States and Europe, TOK is striving to develop materials that will achieve both the substitution of PFAS and the further improvement of performance based on the achievements of marketing and information collection by the Sales Strategy Division and the EHS Division.

* Per- and polyfluoroalkyl substances

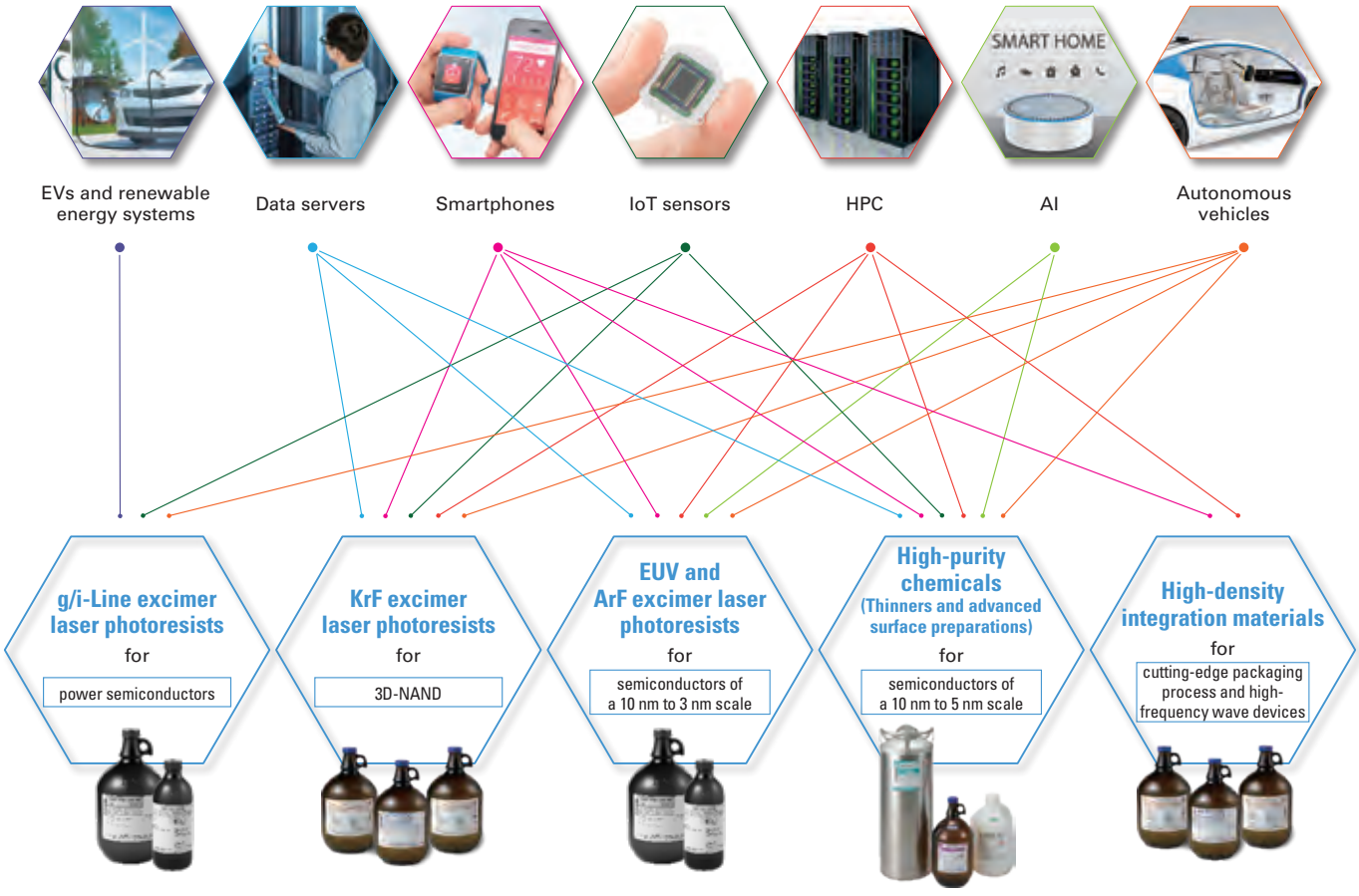
TOK Medium-Term Plan 2024, new material issues, and initiatives toward TOK Vision 2030

Seizing abundant business opportunities through a full-portfolio strategy

As indicated on page 52, the TOK Group will pursue the enhancement of sustainable corporate value by promoting a PDCA cycle in close linkage with new material issues and the TOK Medium-Term Plan 2024 backcasting from the TOK Vision 2030.

As specific measures, the Group will first promote the full-portfolio strategy toward customers in all aspects in Japan and overseas based on the recognition of risks and opportunities described above. TOK will steadily acquire increased demand in all fields, including photoresists for various light sources (EUV, ArF, KrF, and g/i-Line), high-purity chemicals, high-density integration materials, and power semiconductor systems, thereby powerfully undertaking initiatives for a

Promote the full-portfolio strategy toward customers in all aspects



material issue *contribution to innovation and the creation of social value*.

Moreover, the TOK Group aims to increase the global market share of cutting-edge photoresists as a key initiative for the said material issue and as a strategy under the TOK Medium-Term Plan 2024 by fully leveraging the knowledge, in leading fields, of positive photoresists and thick-film photoresists accumulated over about 50 years as a pioneering photoresist manufacturer in Japan, coupled with the microprocessing technology and high-purity processing technology as the core competences of the Group and with customer-oriented strategies.

TOK contributed to the pursuit of higher performance, lower power consumption, and higher integration of devices through miniaturization, multilayer stacking, and high-density integration in semiconductor manufacturing. As the Group operates increasing businesses in collaborative projects with other firms and organizations in the development of protective film materials for assembly in the semiconductor dicing process, and of materials for substrate packaging, miniature wiring, insulation film formation, TOK will continue to enhance these projects to create new value in more fields.

Proper competitive environment promotes the creation of social value

TOK is the manufacturer of semiconductor photoresists with the largest global market share at nearly 30%*. We will continue to practice the proprietary business model in order to keep winning in the competition with competitors that are larger and that have a cash generation structure or business portfolio differing from that of TOK **(see pages 18 and 19, CULTURE & BUSINESS MODEL)**.

In the semiconductor-related industries, the TOK Group may well say that the vigorous competition in the various fields, including the material and equipment markets, has contributed to the advancement of technology and the growth of the industries, as well as to the improvement of the quality of life of humans and the sustainable development of society. TOK recognizes that a proper competitive environment is present from a medium- to long-term perspective for the Company, which practices its purpose of contributing to a sustainable future through chemistry. Therefore, the Group is determined to continue competing with and learning from competitors, thereby creating high added value, while pursuing the growth of semiconductor-related industries, the sustainable development of society, and the enhancement of sustainable corporate value.

* Based on the sales quantity of EUV, ArF, KrF, g-Line and i-Line photoresists in 2021 (calculated by TOK based on the *Fuji Keizai*, "Current Status and Future Outlook of Semiconductor Material Markets 2022")

To increase the market shares of ArF/EUV photoresists

ArF/EUV photoresists support miniaturization and lower power consumption in semiconductors with a line width smaller than the 10 nm scale. Based on the expected roles in the satisfaction of advanced and complex social and scientific requirements using supercomputers and other HPCs in a society 2030 envisioned by TOK entailing autonomous vehicles, the metaverse, remote medical care, remote agriculture, and remote construction work, the Company positioned ArF/EUV photoresists as key products toward the accomplishment of the material issue of the *contribution to innovation and the creation of social value* and aim to increase the global market shares of cutting-edge photoresists focusing on these two products under the TOK Medium-Term Plan 2024.

First, for ArF excimer laser photoresists, market share took an upturn after bottoming out in 2019, featuring increased orders for the lower 10 nm scale to be used for DRAM and for the Chinese market, and net sales increased to more than twice over the past ten years. However, there remains large room for further growth in the market, while global market share is only the third largest at 15.8%.*1 TOK will strive to increase orders through the seamless collaboration of marketing and development and by grasping next-generation needs and market trends at an early stage based on the customer-oriented strategies in the memory and other fields.

Regarding EUV photoresists, TOK has the largest global market share at 42.7% down to the 5 nm scale.*1 However, competition for market share is intensifying for the 3 nm scale. TOK will proactively introduce new materials, further utilize super clean rooms and MI, and accelerate investments to extend mass production equipment for scaling up. In the ultra-miniaturization process of the 2 nm and smaller scales, several promising technological seeds have emerged increasing high NA,*2 metal-containing photoresists, dry photoresists, and directed self-assembly materials (DSA). TOK will promote more profound R&D by Executive Fellows and control resource inputs based on strengthened customer-oriented strategies and marketing activities thereby pursuing an increase in market share.

*1 Based on the share of sales quantity in 2021 (source: *Fuji Keizai*, "Current Status and Future Outlook of Semiconductor Material Markets 2022")
*2 NA stands for "Numerical Aperture," referring to the number of lens apertures in an exposure equipment. High NA is a method for pursuing the further miniaturization of line widths by increasing apertures.

Staying a long-run R&D-driven company by achieving and maintaining R&D efficiency at 200%

In the TOK Medium-Term Plan 2024, the Company plans to invest ¥33 billion in R&D over three years, mainly comprising organic synthesis equipment to present more ideas, and the enhanced capacity for scaling up toward the agile mass production of cutting-edge products. TOK has set R&D efficiency (operating income over the past five years divided by R&D costs over the preceding five years) as a KPI in research and development. By setting a target of R&D efficiency at 200%, the Company will ensure the attainment of the operating income target and the EBITDA target under the TOK Medium-Term Plan 2024 and the TOK Vision 2030.

KPI

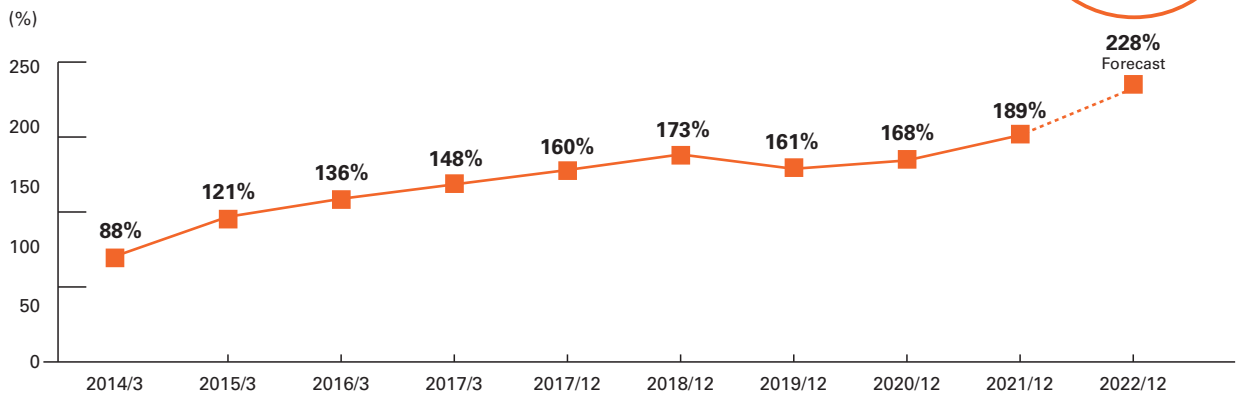
Achieve and maintain R&D efficiency at

200%

This KPI stood at 189% for FY 2021/12 and is estimated at 228% for FY 2022/12; TOK is likely to attain said target (200%) within this fiscal year. After attaining the target, the Company

Aim to achieve and maintain R&D efficiency at 200%

Changes and target of R&D efficiency as KPI



will not pursue a higher percentage but will invest the excess in R&D themes of a longer term envisioning ten years ahead so that the TOK Group will continue growing in the future. By doing so, TOK will not only search for knowledge concerning the development of new materials and new businesses but also deepen knowledge in the existing fields, thereby pursuing further advancement as a long-run R&D-driven company.

Further enhancement of compound library and compounding techniques based on materials informatics

To improve technological development and R&D efficiency in the cutting-edge fields, the size of compound library listing candidate substances for new materials holds the key. The TOK Group has undertaken initiatives of materials informatics (MI) since 2018 while promoting the registration, sharing, and utilization of a compound library as the database of knowledge accumulated since the foundation of the Company.

The TOK Group will maintain and strengthen its advantage by further enhancing compounding techniques to leverage the functions and properties of materials. At the same time, the Company will develop a calculation formula for the prediction and assessment of the performance of products provided by compounding individual compounds, or of high-polymer compounds, to which application has been difficult due to the large molecular weight. R&D efficiency is likely to substantially increase by utilizing this formula. TOK aims to start its utilization by 2025 toward the attainment of the TOK Vision 2030.

Expand contact points with potential customers through online marketing

To acquire and create core technologies for electronic materials and new fields, as the other initiative for the material issue of the *contribution to innovation and the creation of social value*, it is likely that needs are generated from the domains that differ from the customer bases and human connections (social and relational capital) that the TOK Group has accumulated, especially in metaverse and other large-scale innovations. Therefore, the Group is promoting online marketing to increase contact points with such potential customers. Many visitors are accessing the platform website, leading to actual collaborative projects in certain cases. TOK will acquire new technological seeds by continuously enhancing these activities.

As the COVID-19 pandemic repeatedly slows and spreads again, it is considered difficult to return to an in-person marketing style as in the pre-COVID-19 era. The TOK Group will establish a new marketing style and business model for co-existence with COVID-19, triggered by the successful cases of online marketing mentioned above.

TOK product pages as the platform of online marketing

Message from the Director in Charge of General Affairs and Human Resources

We will increase investment in human capital to achieve a greater value creation through the practice of our purpose of contributing to a sustainable future through chemistry.

Kunio Mizuki *Director, Executive Officer, Department Manager, General Affairs Department*

Endeavor to improve employee engagement as the most important medium-term and long-term initiative

Start of a new personnel system

Based on the results of the engagement survey conducted in 2019, the TOK Group has promoted personnel system reform to become a company where employees can experience both personal growth and contributions to business performance under the TOK Medium-Term Plan 2021 and the former material issue of the enhancement of personnel measures on a global basis. A new personnel system was introduced in January 2022 by shifting to a role grade system focused on the levels of expected roles to be fulfilled and proportionate achievements from a former hybrid system that combined a remaining part of conventional objective management (job function and qualification system) with a focus on the merit system. Fair and impartial treatment and promotion systems have been realized with such featured points as the promotion standards for eligible employees based on the cumulative evaluation score during appointment in the relevant grade. We also established specialist systems for each job type in order to leverage the specialty of individual human resources. In addition to the executive fellow system that treats specialists in higher positions equivalent to officers, we also established a fellow position as the highest specialist position for employees, thereby further diversifying duty courses. Based on these new personnel systems, the TOK Group will achieve the invigoration and development of human resources, and the growth of both the company and its employees, thereby strengthening its human resource base to support development into a 100-year company toward 2040.

Striving to improve employee engagement through top-down approach and sustainability governance

These new personnel systems are positioned as core measures in the strategy to improve employee engagement and promote people-oriented management, coupled with the pursuit of happiness as a new material issue under the TOK Medium-Term Plan 2024 that started in January 2022. The systems will be continuously improved through a PDCA cycle while monitoring the operational status. The improvement of employee engagement is driven by the strong intentions of the president. TOK added an employee engagement indicator to the KPIs for the remuneration system for directors linked to medium-term and long-term performance, thereby further strengthening the engagement of the Board of Directors and monitoring in employee measures and enhancing sustainability governance. The president and other management executives recognize employee engagement and employee-friendly environment as the two key factors in employee engagement in a broad sense and intend to pursue the improvement of these two factors. At present, the values representing the former factor indicate the TOK Group's global competitiveness while there remains relative room for improvement in the latter factor for which clear quantitative objectives were specified in the TOK Medium-Term Plan 2024. Compared to the survey in 2021, we aim to improve employee engagement by 3 points, and employee-friendly environment by 7 points through proactive investments in human resources. As sound motivation for directors, these values have been included into the KPIs for the performance share unit (PSU) of the medium-term and long-term incentive remuneration.

KPI

Employee engagement indicator* positive response rate

Employee engagement

Objective for 2024: Improve by 3 points (vs. 2021)

Employee-friendly environment

Objective for 2024: Improve by 7 points (vs. 2021)

* Based on responses in the employee engagement survey that is periodically conducted with employees of the TOK Group

The Company is promoting the establishment of new CSR and sustainability governance systems. At present, the Board of Directors includes highly independent outside directors and Audit & Supervisory Board Members in good balance. TOK aims to further strengthen management supervision and further optimize the decision-making process by selecting one non-operating director from the TOK Group familiarized in its core competences, starting in March 2022. Under these governance systems, the Board of Directors functions as a mechanism for appropriately monitoring initiatives undertaken by the executives to cope with sustainability requirements that include employee engagement, carbon neutrality, and risk management.

Policy on Utilizing Human Resources

Since its founding, employees have been the greatest asset of the TOK Group. The Company's human resource policy is based on the following five principles derived from its long-held philosophy that human resources are a company asset.

- Never forget that business always starts with people.
- Any discrimination within the Company and among employees is strictly prohibited.
- Ensure full compliance with applicable laws and regulations, as well as fair and equal compensation.
- Educate personnel and promote creativity to become a company that develops innovative technologies.
- Ensure that personnel systems are based upon performance, emphasizing and ensuring transparency.

Megatrends

Intensifying competition for recruitment

Because the semiconductor industry continues to grow on an unprecedented scale, combined with the new geopolitical risks added to the U.S.-China trade friction continued from the pre-COVID-19 pandemic period, it has become clearer that semiconductors are strategic supplies that affect the economic security of countries and regions. Therefore, risk diversification is accelerated across the world by strengthening domestic production and expanding into multiple sites, resulting in intensified competition for recruitment in related industries.

In Japan with the persistent trends of low birthrate and an aging population, there is an increasing shift from the conventional systems that feature the simultaneous recruitment of new graduates, seniority, and lifetime employment to more job-oriented employment systems considering the mobility of talented human resources and specialized human resources. However, the effectiveness and successfulness of this trend remain unknown with concerns expressed about the severity of adverse reactions.

Under these circumstances, the Company will implement measures to guarantee organizational power as its conventional strength while focusing on job-oriented employment in the new personnel systems described above. TOK will also implement measures in sequence by focusing on appropriate workforce size, happiness, employee-friendly working environment, reward of work, health, safety, and hygiene from the perspective of the entire group, thereby increasing employee engagement and pursuing an ideal to become a company that is favorable, selected, and respected. We will strengthen our human capital both qualitatively and quantitatively in order to achieve a greater value creation through the practice of our purpose of contributing to a sustainable future through chemistry.

TOK Medium-Term Plan 2024, new material issues, and initiatives toward TOK Vision 2030

Linking investments in human capital to the enhancement of corporate value under the medium-term plan

To increase investment in human capital under the TOK Medium-Term Plan 2024, the first measure is to increase recruitment considering short-term operational expansion and future growth. Cross-border recruitment and personnel development regardless of nationality, which TOK promoted for several years as part of the approach above, could not be implemented as scheduled because of the COVID-19 pandemic in FY 2021/12. However, the Company plans to accept long-term internship from overseas, input globally hired engineers into cutting-edge projects and training programs in Japan, and increase global employments, expecting improved circumstances through the progress of vaccination worldwide in FY 2022/12. In addition, TOK will appoint appropriate human resources in appropriate positions based on the talent management systems in Japan and overseas, while enhancing human resource exchange and support for career planning based on the introduction of a self-career dock system in order to guarantee the retention of recruited employees.

For the further improvement of the working environment, which is a key factor in the improvement of employee engagement and in the successful expansion of recruitment, the Company will implement physical measures that include increased efficiency based on smart plants and the introduction of state-of-the-art equipment, while also enhancing related systems as exemplified by the acquisition of RBA recognition rated in the highest class (Platinum Recognition) in 2021, the expanded acquisition of the ISO 45001 certification, and the promotion of health and productivity management, thereby accelerating the establishment of a human-friendly working environment.

In human resource training, the Company aims to help individual employees recognize their personal growth coupled with the company's growth. While continuously improving the conventional tier-based training program, TOK will implement strategic management training for department heads to acquire the skills to provide plain explanations and disseminate company-wide strategies to field employees, thereby helping department heads upgrade their skills to see a bigger picture and to invigorate the organizations. In the development of young field personnel, TOK will continue to emphasize tough assignments entailing direct negotiations with local customers in the U.S., South Korea, Taiwan, China, and other regions that continue to lead the semiconductor industry. On the other hand, the Company also improve the domestic training program considering the continued COVID-19 pandemic just as was done in the past two years, thereby enhancing cross-departmental training programs to acquire multi-faceted broad perspectives. TOK will particularly enhance business simulation training for sales departments as part of tough assignments, while, in FY 2022/12, implementing cross-departmental training for the medium-to-long-term career models.

For work-style reform, management has re-analyzed the benefits and disadvantages of work from home, flextime, and staggered commuting that have been expanded to ensure the safety of employees and infection prevention in the COVID-19 pandemic, and promoted vigorous discussion toward the introduction of these styles as permanent measures.

For the further promotion of female personnel and the further appointment of international employees

As the VUCA tendencies continue to intensify in the present business environment, innovations and risk management are indispensable leveraging diverse insights, values, and specialties, so that the TOK Group can continue practicing its purpose of contributing to a sustainable future through chemistry. Therefore, the Company will adhere to the diversity and inclusion policies and proactively pursue the further promotion of female personnel and the further appointment of international employees.

KPI

Ratio of women in senior and middle management

Objective for 2030: Increase by twofold (vs. 2020)

KPI

Childcare leave user rate among male employees

Objective: Maintain 30% or more

TOK achieved a record-high ratio of women in senior and middle management and a record-high ratio of women among the overall employees in FY 2021/12 due to the effects of the continued efforts to recruit and retain female employees and to promote them to senior and middle management. TOK also achieved a record-low difference in average tenure figures for men and women. In FY 2021/12, management held a discussion session with senior female human resources who could serve as role models so that young female employees could consider and pursue careers from their perspectives. In the discussion session, participants had vigorous dialogs and shared the necessary know-how and mindset to continue leveraging their skills, such as the concept of work-life balance, medium- to long-term career vision and milestone setting, and how to find out personal strengths. TOK will enhance an environment for the further promotion of female employees by improving the awareness not only of individual female employees but also of their departments and supervisors. The lower childcare leave user rate among male employees has been a problem, compared to 100% user rate among female employees. However, male users are increasing as measured in the past few years. In FY 2021/12, 11 male employees used childcare leave, which was an increase of 2.2-fold from the previous year, and the user rate increased to 41%. The Company will aim to maintain the childcare leave user rate among male employees at 30% or more.

For the further appointment of international employees, the Company promoted customer-oriented strategies in full scale at overseas sites since the 2010s, endeavoring to expand local development/production sites and promote merit-based recruitment. As a result, both the number and percentage of international employees have consistently increased, achieving record-high values for all these indicators in FY 2021/12. The ratio of local hires in overseas management positions as one of the KPIs for material issues also stood at the record-high 54.5%. These tendencies will continue as overseas sales increase. TOK also continued intra-group human resource exchange for international synergies in insights and values, though on a limited scale due to the prolonged COVID-19 pandemic. TOK will also continue to enhance the online exchange implemented in FY 2021/12.

Indices related to female employee participation*1

	2017	2018	2019	2020	2021/12
Ratio of women among new hires (%)	29.2	43.3	39.4	38.5	17.0
Ratio of women among the overall employees (%)	11.7	12.3	13.0	13.7	14.0
Difference in average tenure figures for men and women (years)	8.9	9.2	9.3	9.1	8.4
Ratio of women in senior and middle management (%)	2.0	2.4	3.3	3.2	3.8
Ratio of women on the Board of Directors (%)	8.3	8.3	7.7	7.7	7.1*2

*1 Unconsolidated (employees exclude those seconded from TOK to other companies and contract workers, but include people seconded from other companies to TOK)

*2 The ratio of women on the Board of Directors is as of 2022. The ratio decreased in over the past three years because one independent director was added in 2020 and another in 2022.

Number of users of childcare-related systems

	2017	2018	2019	2020	2021/12
Childcare leave system (number of users)	4	12	16	19	27
Shorter working hours (number of users)	2	6	13	12	18
Childcare time (number of users)	12	13	16	16	10
Childcare leave system (number of male users)	1	1	1	5	11

Number of non-Japanese employees

	2017	2018	2019	2020	2021/12
Number of non-Japanese employees (unconsolidated)	11	11	16	18	18
Number of non-Japanese employees (consolidated)	323	378	412	424	476
Ratio of non-Japanese employees (consolidated, %)	20.0	22.6	23.9	24.2	26.2

Respect for human rights

Established the Human Rights Policy

The TOK Group formulated the CSR Policy in October 2020. As its subordinate policies, the Company also formulated the Human Rights Policy referring to the Universal Declaration of Human Rights, the Guiding Principles on Business and Human Rights, ISO 26000, the Responsible Business Alliance (RBA) Code of Conduct, and other guidelines. In FY 2021/12, the Company implemented CSR training for all directors/officers and employees at Japanese sites, as well as suppliers for some operation centers, aiming to disseminate the Policy throughout the Company. TOK will continue to improve awareness and promote understanding in the Group.

Prohibition of child labor and forced labor

The human rights policy clearly states that the TOK Group prohibits child labor, forced labor, bonded labor, and human trafficking, regardless of employment status. TOK has also promoted initiatives covering the entire supply chain, including the statement of procurement considering human rights, occupational safety and health, and other social requirements in the CSR Procurement Policy.

Prevention of harassment

The Human Rights Policy states that the TOK Group prohibits all activities that may be regarded as harassment. The Company also codified the Detailed Rules concerning Harassment, which aim to prevent harassment and facilitate responsive improvement measures through the three whistleblowing channels (respectively reporting to the legal advisor, the standing Audit & Supervisory Board Member, and the Legal Affairs Department), self-declaration, direct reporting to the Human Resources Division, and the establishment of a miscellaneous counseling service. TOK implemented training concerning harassment in

TOK also aims to achieve happiness in external stakeholders

TOK practices its purpose of contributing to a sustainable future through chemistry and endeavors to improve employee engagement to pursue the happiness of individual employees. TOK hopes that these measures will result in a ripple effect to improve the happiness of external stakeholders and broadly in society. Employees who feel a high level of happiness usually produce high performance. Customers who use materials of high added value produced by such human resources will also achieve high performance, leading to an increased sense of happiness. When many consumers can improve the quality of life by using excellent end products produced by such customers, happiness will also be achieved broadly throughout society. TOK will continue practicing this purpose aiming to pursue the happiness of individual employees.

Motoko Samezawa
General Manager, Human Resources Division

Human Rights Policy

The TOK Group respects the basic human rights and diverse values of individuals and acts in accordance with the laws of countries/regions and the social norms related to human rights* as a good member of the international community.

* The Universal Declaration of Human Rights, the Guiding Principles on Business and Human Rights, ISO 26000, the Responsible Business Alliance Code of Conduct, and other guidelines

- The TOK Group never conducts nor accepts any kind of discriminatory treatment based on birth, nationality, race, ethnicity, religion, gender, sexual orientation, marital status, pregnancy, illness, age, disabilities, or any other causes prohibited by law in recruitment, employment, placement, training, remuneration, promotion, or otherwise.
- The TOK Group prohibits child labor, forced labor, bonded labor, and human trafficking, regardless of employment status.
- The TOK Group prohibits all kinds of activities that may be regarded as harassment.
- The TOK Group pursues the development and fair treatment of human resources.
- The TOK Group ensures sound employment and labor to maintain work environment that is comfortable both physically and mentally.
- The TOK Group respects and guarantees the basic rights of workers stipulated by the International Labor Standards, as well as the constitutions and labor acts of countries/regions.
- The TOK Group appropriately protects and manages personal information.

FY 2021/12 as part of the CSR training described above, as well as a new separate seminar concerning harassment for all directors/officers and department heads, aiming to enhance careful listening in communication and improve the effectiveness of guidance. In FY 2022/12, the Company will further improve information sensitivity to detect the slightest signs and ensure the prevention, identification, and rapid handling of harassment, while promoting further training for directors/officers, executives, and employees.

Ensuring the health and safety of human resources

Continued initiatives for health & productivity management

Since 2015, TOK has implemented Data Health Plans in collaboration with the Tokyo Ohka Kogyo Health Insurance Associations, which uses the PDCA cycle for preventing and discovering diseases while encouraging officers and employees to take better care of their health. Since 2017, the Company has focused efforts on preventing illnesses from becoming worse through the early detection and treatment of diseases, including offering to pay the full cost of group influenza vaccinations for employees. In 2018, the Company launched My Health Web as a portal for health-related information and began offering convenient information for improving knowledge and awareness of health. The Company also sponsors a walking rallyvia My Health Web with the participation of the president, as well as many officers and employees. TOK has also made efforts to improve the awareness of presymptomatic medicine (to lead healthier lives) in each director and employee, such as daily radio calisthenics and stretching, and the encouragement of activities on internal athletic clubs. Since 2019, the Company has sponsored quit-smoking seminars, introduced humidifiers, and powered suits to counter aging.

As a result of these ongoing initiatives, TOK was recognized in the 2022 Certified Health & Productivity Management Outstanding Organizations Recognition Program by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi in March 2022 for the fourth time. For FY 2022/12, the Company issued the Declaration of Health and Productivity Management in June based on the resolution of the Board of Directors after considering that the mental and physical health of employees leads to improved happiness in employees and higher productivity of the TOK Group.

Discussing personnel system and work-style reform at the labor-management review panel

The Tokyo Ohka Kogyo Labor Union was formed in 1976 and belongs to the Japanese Federation of Textile, Chemical, Food, Commercial, Service and General Workers' Unions ("UA Zensen"). The Tokyo Ohka Kogyo Labor Union has a union shop agreement with the Company. As of December 31, 2021, 1,095 labor union members are affiliated with the Company, and 79.8% of all employees are members of the labor union. Since the labor union was first formed, labor and management have maintained good, cooperative relations. Once every two months, the central labor-management meeting is held to exchange opinions on the operating environment and other labor-management issues. As a part of this process, the Company concluded labor agreements that include provisions on occupational safety and health for maintaining good labor and workplace conditions. When changes in working patterns are made for business purposes, they are always discussed in advance with the labor union. In FY 2020/12, the Company established the labor-management review panel as a forum for labor-management negotiation concerning new personnel systems, re-employment systems, and other systems. In FY 2021/12, TOK repeated discussions toward the introduction of a new personnel system. Discussions will be continued including the handling of the age for mandatory retirement as one of the themes.

— Three-way Discussion —

Initiatives for Improving Employee Engagement and Future Corporate Culture

A three-way discussion was held by the president, an outside director, and the division manager of the Human Resources Division, concerning employee engagement as one of TOK's most important present requirements and future corporate culture.

Motoko Samezawa
General Manager, Human Resources Division

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Noriaki Taneichi
Representative Director,
President & Chief Executive Officer
Nomination and Compensation Advisory Committee Member

×

Hiroshi Kurimoto
Outside Director
Nomination and Compensation Advisory Committee Chairman

What is the background of TOK's ongoing efforts to improve employee engagement?

Taneichi: Human capital is an important management resource that plays an important role in TOK's four earning powers: technology, human resources, human connections, and financial power. The key to the next stage of growth is how to help human resources exercise their capabilities and achieve their potential. We recognize that TOK is an eternal startup since the old days. I also believe that TOK should aim to be an eternal startup. Persons who have a strong will to succeed in business gather at TOK and obtain reasonable returns when successful. Taking on new challenges one after another, TOK and its employees continue to grow as if they were one organism. TOK has always operated in this culture since its foundation, continues to do so, and will further strengthen this culture. This is one of the reasons why I suggested the improvement of employee engagement as one of the key requirements in the TOK Medium-Term Plan 2024. Moreover, we are not unrelated to the recruiting competition that is intensifying especially overseas because of the continuous strength of the global semiconductor industry. I consider that another key is not only to increase compensation but also to improve engagement so that employees can continue working at TOK for many years, thereby establishing systems and culture that help us grow together.

Samezawa: TOK has conducted employee engagement surveys several times. It was the employee satisfaction survey conducted in 2017 that indicated the necessity for personnel system reform. The survey revealed that the seniority-based wage system deterred young employees from becoming more motivated, whereas they were highly satisfied with their salaries and benefits at TOK and wanted to work for many years. Personnel system reform started after this survey. A subsequent survey conducted in 2019 showed a lower level of employee loyalty to the company and a higher percentage of employees who felt that the company lacked appropriate fields for them to exercise their capabilities as they wanted compared to the average scores in Japan. Based on these results, TOK accelerated personnel system reform under the key phrase "improvement of employee engagement." In the latest survey conducted in 2021, the loyalty score improved from two years ago. On the other hand, many points were observed that lagged behind global players of the highest class. I shared the will to effectively strengthen these points over the ten years toward 2030 with management executives and have continuously promoted reform that features the introduction of a new personnel system.

Kurimoto: President Taneichi himself suggested and featured the improvement of employee engagement in the formulation process of the TOK Medium-Term Plan 2024. When I browsed the draft of this medium-term plan for the first time, it mainly consisted of financial objectives and did not adequately incorporate nonfinancial objectives. When I advised the Board of Directors that ESG and other nonfinancial objectives should be included, President Taneichi immediately requested the inclusion of employee engagement. Even though the definition of employee engagement may be difficult, it is extremely timely and wonderful that the president suggested this idea. TOK's performance has continuously improved over the past several years and now stands in a robust position. We may say that TOK has entered an important phase to equally strengthen employee measures and other nonfinancial strategies, in addition to business growth.

Taneichi: Director Kurimoto provided substantial input concerning nonfinancial strategies, including the advice that specific measures should be indicated in the medium-term plan, based on our basic policy announced last year to pursue the achievement of carbon neutrality. The first theme that I internally announced prior to the formulation of the TOK Medium-Term Plan 2024 was the purpose of earning cash. After formulating the TOK Vision 2030 in 2020, we endeavored to maximize cash generation capabilities with EBITDA as KPI. The TOK Medium-Term Plan 2024 summarizes how we should use the maximized cash generation capabilities. I believe that it would be very successful if employees recognized that maximization of cash generation capabilities has contributed to shareholder returns and company growth and benefited them, when the medium-term plan is completed in 2024.

Samezawa: I notice every day that especially young employees are highly interested in nonfinancial initiatives and social contribution objectives that are highlighted in the TOK Medium-Term Plan 2024. Recently, I have had many interviews with students who are job hunting. Students these days are not only digital natives but also SDG natives and select a company with the hope of contributing to society through their work.

How did you adjust a mission grade system as suitable for TOK when it was introduced as the core of measures for improving employee engagement?

Samezawa: The largest purpose of introducing a mission grade system was to relieve the frustration among young employees toward the seniority system. The mission grade system was introduced to eliminate the seniority elements so that high-performing persons and persons who are exercising their capabilities and effectively fulfilling their missions can access opportunities for enhanced activities. The system has been adjusted under the concepts of fairness and impartiality, contrasts, and diversity. With regard to diversity, the system aims to help increase the employees who specialize in various fields to exercise their capabilities and upgrade their careers to specialist positions equivalent to the management executives, including directors and officers.

A system has also been introduced so that human resources who are able to achieve and fulfill their missions regardless of their age can be promoted earlier than in the former system, adding to the motivation of young employees. Moreover, the former system was designed without promotion to managerial positions in Course B, resulting in stagnant motivation. To improve this, paths to managerial positions have been established in this course.

Taneichi: The seniority elements were substantially eliminated while we took precautions so that the reform would cause no disadvantage to any employee.

Kurimoto: Considering that many Japanese firms introduced an objective management system, which did not turn out very successful in most cases, the mission grade system that TOK recently introduced seems to be a favorable system that contributes to a comfortable workplace and the improvement of engagement because the respective missions are clarified and employees can select various career paths. Continued improvement will be necessary, but I am glad that the system has taken effect, though one year later than was originally scheduled due to the COVID-19 pandemic.
Although TOK is a R&D-driven company specializing in niche cutting-edge fields, plant employees account for the largest part of human capital. In my experience, a manufacturer must value the manufacturing sites, and the management executives must continuously convey messages that they care about the plant employees. From this perspective, it is wonderful that a career upgrade path to section managers has been established in Course B for plant employees. In the meantime, certain measures should be implemented to prevent the excessive delineation of missions from compromising diversity due to uniformity.

Samezawa: As was stated, I also believe that initiatives to create new objectives for continuous growth are accelerated by the combination of diversity and inclusion with specialties. Diverse ideas and conflicts of opinions are essential to creating better objectives. Moreover, innovative ideas off the beaten track are created when diverse peculiar human resources join their strengths. Heterogeneity and diversity are extremely important elements for the TOK Group.

Taneichi: On the other hand, we internally discussed the response to the Corporate Governance Code, which was revised last year, and determined only to provide an explanation, rather than focusing on compliance, regarding the setting and disclosure of objectives concerning the promotion of female managers and international managers based on our conclusion that we should implement the relevant measures through the pursuit of a true merit system, instead of setting fixed targets. We would like to focus on helping truly capable human resources assume the appropriate positions and function as the core of TOK, rather than merely following the fashion of promoting female or international managers. One of our measures is a program to support female employees who have not fully exercised their skills despite their talent because they are females, resulting from the larger percentage of male employees at TOK.

Samezawa: The female career planning seminar was conducted last year for this program. I asked young female employees to contemplate their individual value and career vision and to subsequently consider what they wanted to become and how their goals could be attained. When I asked about their true feelings, the most common response was that they did not want to become section managers (management positions). They need not become one if they truly disliked those positions. However, I noticed that they responded in that

way because they thought it would be difficult for them due to the lack of skills. I encouraged them to take on the challenge without hesitating and emphasized that I would cooperate with them. This led to positive reactions, and I am looking forward to the outcomes.

* In TOK's personnel system, Course A comprises a course for developing individuals who have a broad perspective and experience as management executives who can manage employees and lead the organization toward the creation of added value, and a course for developing individuals who have advanced expertise or unique skills as employees who will contribute to the attainment of the organizational goals and to the development of the corporate business. In comparison, Course B is for developing employees who will make stable contributions to the organization for creating added value.

About six months have passed since the start of the new personnel system. How is it going and what are the reactions from on-site personnel?

Samezawa: Voices of concern were heard before the introduction due to the extreme difference from the former system. However, the operation has started without major problems. We have only set objectives and started activities under the new system. We will continue monitoring the system and resolve any issues that may arise to move ahead.

Taneichi: We have only proceeded to the D step of a PDCA cycle, so we are not yet ready to say how it is going. I suppose young employees, especially those in nonmanagement positions, are expecting how the company will reward their achievements. We will bolster the system so as not to betray their expectations and continue reforms while making necessary improvements when problems arise.

Samezawa: As a favorable change, several employees are accepting the challenge of taking the new promotional exams for management positions in Course B this year with others also positively considering the challenge of taking the exams in the coming years. I suppose that a virtuous circle will be formed once changes start.

Kurimoto: I also consider that an evaluation one year after the system start will be the key. We introduced a new remuneration system for directors and officers based on ROE and other KPIs in 2020. The system has operated without a problem over the two years since its introduction. About six months have passed since a scheme based on an employee engagement indicator as KPI was introduced this year. Similarly, an evaluation one year after the introduction will be the key. As the chair of the Nomination and Compensation Advisory Committee, I will efficiently operate this scheme as indirect support for the new personnel system and the mission grade system.

What discussions did you have at the Nomination and Compensation Advisory Committee meeting and the Board of Directors meeting prior to the inclusion of an employee engagement indicator into KPIs for the remuneration system for directors?

Kurimoto: At the Nomination and Compensation Advisory Committee, based on the suggestion from President Taneichi, we had heated discussions on the justification of using an employee engagement indicator as a KPI, and formed a consensus toward its introduction **(see page 80, "Message from Outside Directors and Audit & Supervisory Board Members")**.

Taneichi: We had discussions both by the Committee of Officers and by the Board of Directors during the formulation of the TOK Medium-Term Plan 2024 and formed a consensus to introduce an employee engagement indicator as a KPI. All directors accepted and introduced a plan to introduce an employee engagement indicator, in addition to the conventional ROE, into KPIs for the performance-linked share-based remuneration system as an incentive for continuously enhancing corporate value.

Kurimoto: The new remuneration system for directors introduced two years ago was a highly aggressive system with performance-linked remuneration taking up 45% of the entire remuneration. Therefore, we had concerns about possible objections from directors who were not members of the Nomination and Compensation Advisory Committee, but we actually received no objections at all. The case was the same with the introduction of an employee engagement indicator as a KPI.

Taneichi: The performance evaluation period for TOK's performance-linked share-based remuneration system is the three years subject to the TOK Medium-Term Plan 2024. Therefore, the evaluation provides a strong incentive for improving ROE and employee engagement indicator from a

medium- and long-term perspective. Another reason why I devised this scheme was that an employee engagement indicator represents the future potential for value creation, whereas ROE evaluates the outcome of a completed term.
I believe that the high added value generated through the combination of a robust financial foundation with the nonfinancial earning powers of technology (manufactured capital), human resources (human capital), and human connections (social and relational capital) will be the very source of our corporate value. To further enhance this corporate value, it is important to continuously refine, accumulate, and leverage these non-financial capitals. To this end, I am repeatedly expressing my aspiration at internal meetings to formulate a balance sheet of human resources, a balance sheet of technology, and a balance sheet of human connections. I actually want to visualize how invested cash is accumulated and leveraged in the company because it just becomes invisible on PL. Among technology, human resources, and human connections, human resources provide the driving force to generate technology and human connections. This is why I suggested an employee engagement indicator that represents the level of leveraging of human resources as a KPI. Because the interpretation of engagement substantially varies from country to country and considerably changes depending on the economic environment of the time, Director Kurimoto expressed earnest concerns about using such an indicator. Over the three years subject to the medium-term plan, I aim to improve the score of employee engagement by 3 points and that of employee-friendly environment by 7 points.

Kurimoto: A company has different departments with different missions, such as marketing, manufacturing, development, general affairs, planning, and finance. We must recognize that there is slight difference among departments concerning the interpretation of the engagement indicator. To improve engagement, steady efforts are required. Subsection chiefs, section managers, and division managers must respectively undertake continuous communication with subordinates and effectively motivate them. According to my experience, many managers in technological and manufacturing companies are not strong at these missions. This is why I failed to effectively operate an objective management system at my previous job. The management executives at TOK will also need to strengthen continuous communication with subordinates and motivate them. It may be more effective that the Human Resources Division provides indirect support depending on situation.

Samezawa: Actually, we received the same advice from an external lecturer who gave a seminar for department heads last year. The urgent requirement is for department heads at TOK to further upgrade their skills to motivate subordinates, to develop a big picture of situations, to formulate visions and strategies, and to share them with subordinates. Therefore, we are examining measures to strengthen these skills.

Taneichi: I also consider that department heads, especially section managers, hold the key to the improvement of employee engagement. In particular, it will be important what positive influence specialists in positions equivalent to section manager can make.

Samezawa: To improve employee engagement, it is necessary to introduce new initiatives. In the present environment at TOK, management executives take the initiative to share messages and set examples. This is extremely efficient and helpful for my work as the on-site head of personnel management.

Employee engagement and the new personnel system are based on a concept the "Pursuit of happiness."
How will TOK take care of happiness, which is defined differential by individual human resources?

Samezawa: Regarding the question what happiness is, I consider that it is a sense of reward, rather than remuneration or benefits. Human resources do not stay in unrewarding or uninteresting workplaces. Therefore, it will be the next requirement to continuously produce organizational culture that makes human resources feel the sense of reward. I analyzed my personal experience to know when people find something interesting. It was when I experienced success, when somebody had expectations of me, and when I succeeded in satisfying those expectations. I hope that managers pave the way to help subordinates experience success, have expectations by believing in their subordinates, support them when they face difficulties,

and explicitly praise them if they achieve positive results. After receiving expectations and achieving results, subordinates will be attracted by their work and will make achievements in the next challenge as well. We hope that employees grow through their work. Therefore, managers are expected to set an example that their growth will contribute to the growth and performance of the company, which will in turn contribute to society.

Taneichi: I believe that happiness is self-actualization, which is synonymous to what Samezawa said. When individual employees achieve self-actualization, they feel happiness. This is the very experience of success, and they feel happiness through self-actualization. The company provides an environment for this. As a result of employees feeling happiness, the entire company will feel happy, and can pursue the next happiness. It is ideal that this cycle efficiently proceeds. This actually signifies that section managers should face each employee, which requires strenuous work. I served as the head of new business development and recognized that it was extremely difficult to develop new businesses and new materials. It is far from easy to experience success. The company provides a variety of resources, and each employee sets objectives to take one difficult step after another. When one business or material is eventually launched through these efforts, the employee feels irreplaceable happiness, which also makes the company happy. I hope that employees will definitely have this experience.

Kurimoto: Of course, happiness varies from person to person. It is not that engagement equals happiness, but that happiness is one of the elements that form engagement. There will also be cases where employees recognize that they have been happy several years after the experience, even though they do not think they are happy at present. There are cases where we look back at a hard time and recognize that we grew at that time. I started my career as an engineer but was appointed heads of various departments, including the Human Resources Division, Legal Division, Management Information Systems Division, and Corporate Planning Office. This made me feel rootless, but these experiences turned out extremely helpful and helped me grow.

In conclusion, what corporate culture should TOK achieve or maintain through the improvement of employee engagement?

Samezawa: I think that it should be a frank and open-minded business culture, which is one of the management principles. I used to visit external sites as an engineer in my earlier days and had occasions to experience the atmosphere at competitors. This made me recognize that TOK has established an atmosphere and culture that can encourage employees take on challenges, which I consider the essence of a frank and open-minded business culture. At the various work sites, development, manufacturing, and marketing form a small agile team based on the trifecta, which continues to pursue solutions day after day. I hope that we will continue to value this frank and open-minded business culture so that employees will always be encouraged to take on challenges.

Taneichi: In addition to creating a frank and open-minded business culture, which Samezawa just mentioned, TOK's management principles also feature continuing efforts to enhance technology, raising the level of quality of products, and contributing to society. The original management principles presented by Founder Mukai ("Create a frank and open-minded business culture, continue efforts to enhance our technology, raise the quality levels of our products, and contribute to society") indicate that all management resources should ultimately contribute to society. I hope that employees will keenly refresh their recognition that our business definitely contributes to society. We do not spend even a single day without using a smartphone or digital information. TOK's business is deeply engaged in these technologies. To make further contributions to society, I hope that employees will leverage TOK's culture that encourages making challenges regardless of setbacks. TOK has sound financial foundation with abundant technological portfolio and is in a robust market position. Having this knowledge, all employees are encouraged to take on more challenges in their fields and pursue self-actualization. I believe that the entire atmosphere that encourages such challenges is the frank and open-minded business culture. I hope that this atmosphere will pervade the entire TOK Group in Japan, the United States, South Korea, Taiwan, and China, setting root as a cross-border corporate culture.

Kurimoto: "Culture eats strategy for breakfast" is one of the quotes by Peter Drucker. I believe that this quote holds true. Corporate culture is fostered as the outcome of implementing strategies. While it is important to create a frank and open-minded business culture and to contribute to society, it is necessary to interpret them on various occasions so that employees can understand. For example, I think it is necessary that managers re-interpret and show their subordinates how to create a frank and open-minded business culture and to contribute to society, not only in the technological development department, but also from a viewpoint of the indirect department. These efforts will further refine and strengthen our corporate culture.

Message from the Director in Charge of the Environment

While adequately recognizing and handling risks, we will continue to contribute to a sustainable future through chemistry.

Yuichi Murakami *Director, Officer, Department Manager, Manufacturing Department*

Toward realization of carbon neutrality by 2050

Accelerate top-down approach for the 2030 targets

To reduce energy-related CO_2 emissions (per base unit) by 15 points from the fiscal year 2019 level by fiscal year 2030, as its first step toward realization of carbon neutrality by fiscal year 2050, the TOK Group is accelerating the introduction of renewable energy and energy-efficient equipment through a top-down approach by led by the president and chief executive officer. For example, when new equipment is introduced or existing equipment is replaced, expenses for carbon neutrality measures and the expected reduction in energy consumption or GHG emissions must be indicated on an internal approval request form, along with the quantitative indication of environmental value of energy efficiency and decarbonization effect.

Moreover, systems are being established for the collection and analysis of a variety of data for more appropriate monitoring in order to more precisely measure the actual effects of such investments in decarbonization and carbon neutrality. In the TOK Medium-Term Plan 2024, measures for attaining the 2030 targets are steadily promoted, while such monitoring systems are being strengthened, and discussions are envisioning the subsequent introduction of internal carbon pricing and emission rights trading. As part of these measures, we are participating in GX League activities led by the Ministry of the Economy, Trade and Industry,*1 while preparing responses to CDP.*2 We are also examining plans to set targets for measures in Scope 3 as well.

We are proactively promoting carbon neutrality measures at company sites in the United States, South Korea, Taiwan, and China in consideration of the local decarbonization targets and energy conditions. At some sites, we are also preparing for verification based on ISO 14064. By setting more precise targets at each site, the TOK Group will promote more specific measures toward group-wide carbon neutrality by 2050.

*1 GX League is a forum where firms that proactively promote green transformation (GX) have discussions for the reform of economic and social systems and create new markets along with players from the administration, academia, and finance.
*2 The Carbon Disclosure Project (CDP) is an NGO that originated in the U.K. and that operates an information disclosure system for investors, firms, national governments, local governments, and municipalities to manage their respective environmental impact.

KPI

Energy-related CO_2 emissions per base unit
(Scopes 1 and 2)

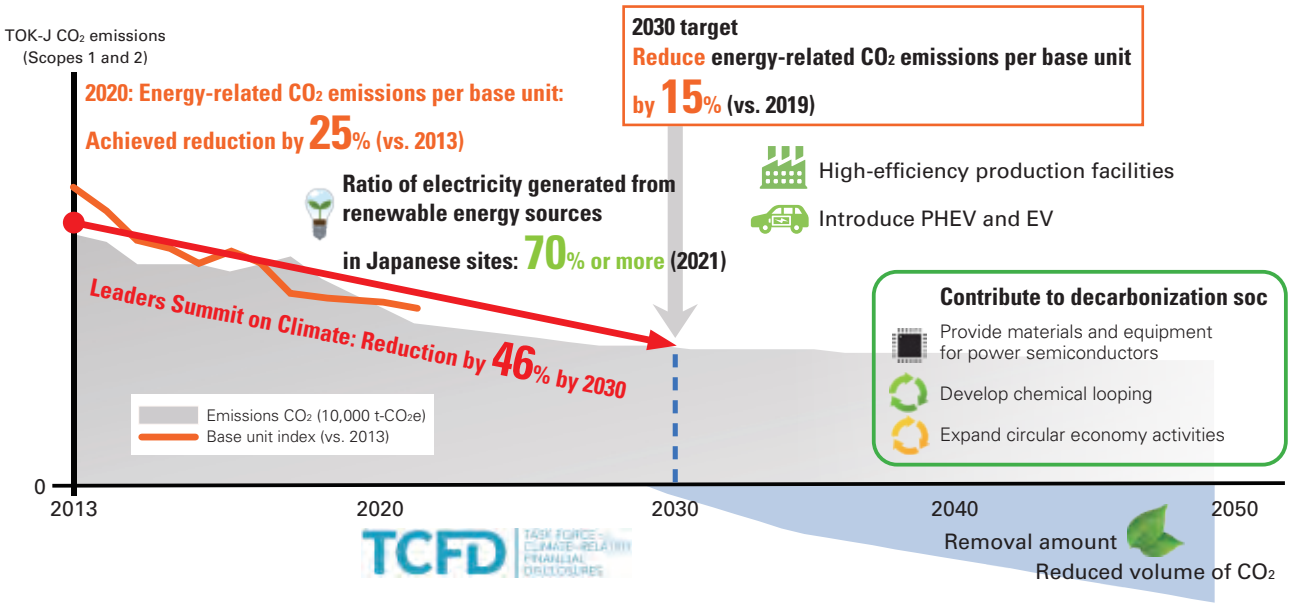
2030 target: Reduce by 15 points
(vs. 2019)

Toward carbon offset in 2030 onward

As measures for carbon offsets in 2030 onward, we will continue to contribute to lower power consumption through the miniaturization and multilayer stacking of semiconductors, as well as by advancing materials and equipment for the power semiconductors that we provide. We also aim to contribute through the Chemical Looping and Energy Harvest, which we are developing as new businesses **(see page 43)**.

As measures for the circular economy, which is closely correlated with carbon neutrality, we will continue to focus on the 3Rs of Reduce, Reuse, and Recycle, including the enhanced recycling of general industrial waste through strengthened sorting, and the recovery and reuse of specially controlled industrial waste as items of value. In particular, the absolute volume of specially controlled industrial waste is on the increase in line with the production increase of photoresists. We will reduce the waste per base unit by increasing recovery and reuse as items of value by leveraging the proprietary technology of the company as a fine chemical manufacturer.

Toward realization of carbon neutrality



Megatrends

Strengthening of chemical substance regulations

The semiconductor-related industries, including TOK, use diverse old and new chemical substances to attain new added value, stable performance, and quality in the development and production of semiconductors. The chemical substance management regulations and laws applicable to the environment and safety become increasingly more stringent as global interest in sustainability surges. The TOK Group has endeavored to comply with the EU REACH regulation*1 and other applicable laws and regulations, as well as to support customer products in the acquisition of CE Marking*2 and other certifications. The Group has steadily removed persistent substances, bioaccumulative substances, and toxic substances from the list of candidate substances and have completely eliminated the use of PFOS*3 and PFOA*4 as of March 2021.

Movements to strengthen regulations are also accelerating in Europe and the United States concerning PFAS,*5 which are broadly used in photoresists and other semiconductor materials and semiconductor manufacturing equipment, and play a key role in the cutting-edge semiconductor fields as well. At present, movements toward the discontinuation of use of PFAS have been observed in the food industry (used for food packaging materials) and in the clothing industry (used for water repellent agents). In the semiconductor industry, which includes TOK, a report has been summarized concerning the future scope and schedule of regulation, and discussions are underway. The TOK Group participates in these movements as a member of the semiconductor supply chain and will strengthen voluntary information collection, monitor the situation, and nimbly respond to changes.

*1 This is an EU regulation that manages the registration, evaluation, and accreditation of chemical substances through an integrated system with the aim of ensuring complete fulfillment of responsibility on the producers' part, as well as thorough compliance with preventive principles.
*2 Marking that certifies product conformance to the essential EU requirements
*3 Perfluorooctane sulfonate
*4 Perfluorooctanoic acid
*5 Per- and polyfluoroalkyl substances

Tighter Environmental and Safety-Related Laws and Regulations across the World and Regions

- Japan
  - Partial revision of the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture (Chemical Substances Evaluation Act) (effective October 2021)
  - Revision of governmental and ministerial ordinances related to the Industrial Safety and Health Act (February to April 2022)
- USA
  - Revision of the Toxic Substances Control Act (TSCA) (January 2021)
  - Disclosure of the PFAS Strategic Roadmap (October 2021)
- Europe
  - The European Chemicals Agency (ECHA) list of chemical substances of very high concern
  - Regulation of per- and polyfluoroalkyl substances (PFAS) (slated for 2025)
- South Korea
  - Partial revision of the Chemical Substances Control Act (August 2021)
  - Partial revision of the Occupational Safety and Health Act (April 2022)
- Taiwan
  - Revision of the Toxic and Concerned Chemical Substances Control Act (August 2021)

Strengthen supply chain based on a global standard

To comprehensively advance the supply chain of the TOK Group from the perspectives of the environment and occupational health and safety, as well as in the aspects of human rights, ethics, and management, the Group is promoting measures in accordance with the RBA Code of Conduct as a global standard, based on its Human Rights Policy, Ethics and Anticorruption Policy, Environmental Policy, Occupational Health and Safety Policy, and CSR Procurement Policy, which were formulated as part of the CSR Policy in 2020. In 2021, the Koriyama plant as the flagship factory was rated in the highest class (Platinum Recognition) in the RBA-VAP audit.* At present, measures are being promoted to share the know-how and findings of the plant to other existing sites and to new sites that will be established.

External Evaluation

RBA-VAP audit (Koriyama plant, 2021)
Rated in the highest class (Platinum Recognition)

TOK also performs RBA-oriented assessments of the raw material suppliers as part of the supply chain from the perspectives of the environment and occupational safety, as well as the aspects of human rights. Moving forward, the company will lead this experience and know-how to the group-wide human rights due diligence.

* RBA-VAP audit: Validated Audit Program conducted by Responsible Business Alliance

TOK Medium-Term Plan 2024, new material issues, and initiatives toward TOK Vision 2030

Linking environmental and occupational health and safety activities to the enhancement of corporate value under the medium-term plan

To support the semiconductor industry that has started growing at an unprecedented speed, TOK will perform the record-high capital investment of ¥45.0 billion under the TOK Medium-Term Plan 2024, thereby enhancing the domestic production facilities to strengthen the supply chain. As a manufacturer of photoresists and other fine chemicals, the basic policy of manufacturing features the establishment of a safe, comfortable work environment and the stable supply of quality needed by customers at all sites in Japan and overseas. Therefore, the cardinal rule of the company is to keep the plants operating and to keep the customers' production lines operating by placing the first priority on the safety and efficiency of all stakeholders (workers) who provide service in the work environment of the TOK Group. The company will continue to properly advance activities based on the Environmental Policy and the Occupational Health and Safety Policy, thereby minimizing the risks of the interruption of operations and the environmental risks. In this way, TOK will reduce short-term, medium-term, and long-term growth inhibitors, thereby reducing capital costs and enhancing its sustainable corporate value.

Link safety and human-friendly smart factories to the improvement of employee engagement

Regarding the *contribution to innovation and the creation of social value* as a revised new material issue, TOK will secure stable supplies of high-quality products and establish an optimal production system for the Group as one of the key strategies under the TOK Medium-Term Plan 2024 by seamlessly networking sites and departments to establish optimal production and supply systems that nimbly and accurately respond to customer requests, while promoting a shift to smart factories. TOK will also ensure QCDS, adding Safety (S) to QCD (Quality, Cost, and Delivery time) based on the conventional Quality Policy, while upgrading equipment to more human-friendly systems. As specific measures, the company is implementing measures to re-emphasize the 5Ss of Sort, Set, Shine, Standardize, and Sustain in order to guarantee continuous safety at domestic production sites that are in full operation. Regarding the shift to smart factories, TOK provides a high-efficiency, human-friendly work environment through enhanced automation and Robotic Process Automation (RPA) in order to support the small quantity, large variety production as the characteristic business model and major strength of the TOK Group, which aims to stay a top niche company. As part of these efforts, the company automated the photoresist packaging line at the Gotemba plant in 2021, and TOK is expanding this initiative to other sites in 2022. TOK plans to link these measures for safety and human-friendly smart factories to the improvement of employee engagement, which is one of the most important strategies under the TOK Medium-Term Plan 2024.

Environmental Policy

TOK Group strives to do businesses by achieving a sustainable society through investing appropriate management resources and ensuring health, safety and an appropriate environment through the Responsible Care Initiatives.*

- Complies with all environmental laws and regulations in each country and region in which we operate.
- Strengthens the safe-and-environmentally-friendly handling and management of chemical substances.
- Promotes efficient use, reduce, reuse, and recycling of resources.
- Improves energy-saving and global warming prevention activities.
- Promotes environmental pollution prevention activities.
- Promotes a healthy biodiversity.

* Responsible Care Initiatives: to ensure the environment, health, and safety related to all processes of chemical substances from development, manufacturing, distribution, use, final consumption, and final disposition.

Occupational Health and Safety Policy

TOK Group, as prioritizing workers'* health and safety, fosters safety cultures by preventing accidents, disasters, and illnesses in the workplace.

- Complies with all laws related to occupational health and safety in each country and region.
- Reduces risks by completing job hazards analysis.
- Provides comprehensive education and training for employees.
- Strives to strengthen our safety and disaster prevention systems for the purpose of minimizing and mitigating damage for accidents, disasters, or any other unforeseen event.
- Makes effective and continuous improvements by investing appropriate resources.

* workers: any and all labor providers to TOK.

Quality Policy

Aim to be a globally trusted corporate group by inspiring customers with high value-added products that offer satisfying features, low prices, and superior quality.
Deepen and expand existing business domains and swiftly launch new business domains.
Al personnel clearly understand the current situation and accept the challenges with a sense of crisis.

1. Strengthen marketing ability, set goals earnestly, be motivated by a keen sense of urgency, prepare well, and take immediate action.
2. Promote human resource development for global operation.
3. Establish a system to accurately capture the user's voice and respond immediately.

Acquire ISO 45001 certification at all domestic sites by 2023

The Group acquired ISO 45001 certification in accordance with the roadmap with the goal of upgrading the entire occupational health and safety process based on a global standard. The certification will be acquired at all domestic sites by 2023. TOK will also increase acquisition at overseas sites with the certification already acquired at the Taiwanese site in 2019 and the certification slated for 2023 at the South Korean site.

Roadmap toward ISO 45001 certification

2019	2020	2021	2022	2023
In Japan	<Acquired certification> Gotemba plant	<Acquired certification> Koriyama plant Utsunomiya plant Aso plant Shonan Operation Center	<Review in progress> Sagami Operation Center Headquarters Kumagaya plant	<Review in progress> Logistics Center **2023** **Complete acquisition at all domestic sites**
Overseas <Acquired certification> TOK Taiwan Co., Ltd.				<Review in progress> TOK Advanced Materials Co., Ltd. (South Korea)

Response to the ocean plastics pollution

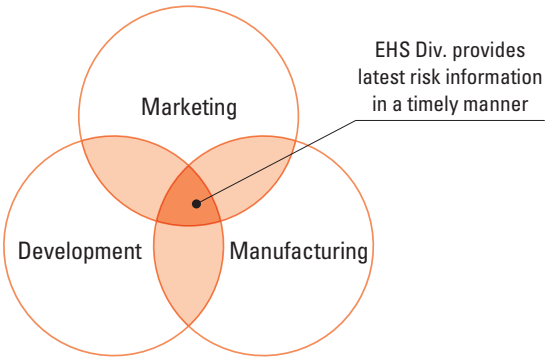
The ocean plastics pollution has become a common global social issue; therefore, global environment-friendly non-petroleum plastics are needed, and the Group considers this issue as highly correlated with carbon neutrality. To promote resource recycling as a key initiative for global environmental conservation in consideration of future generations as a new material issue, the TOK Group has included initiatives to address the ocean plastics pollution into its medium- to long-term requirements. As part of the key initiatives under the TOK Medium-Term Plan 2024, the Group is implementing measures to substitute petroleum plastic materials that are used for packing gallon bottles for the filling of photoresists with bioplastic materials.

Continue seamlessly supporting cutting-edge value creation

With the purpose of contributing to a sustainable future through chemistry, the TOK Group will continue to take advantage of opportunities in the semiconductor industry, which has penetrated into all parts of daily life. In the meantime, we also keenly recognize that increased opportunities signify increase in risks and social responsibility. Because social interest is surging in PFAS and other SVHC* as mentioned earlier, our EHS Division collects the latest information concerning SVHC and endeavors to share the information throughout the Group in a seamless and timely manner. In particular, information of SVHC and other risks is shared in the core parts that form the overlap of the trifecta of development, manufacturing, and marketing as the core competences of the customer-oriented strategies. This formed a group-wide culture where the necessary actions are rapidly discussed and formulated and where TOK acts to contribute to a sustainable future through chemistry based on the adequate recognition and handling of risks. TOK will further upgrade this culture by enhancing information collection capability particularly overseas.

* SVHC stands for Substances of Very High Concern.

Trifecta-based customer-oriented strategies are closely linked with EHS Div.



Promote online stakeholder engagement

To achieve higher quality and reduce the environmental impact through the collaborative activities of customers, TOK, and suppliers, as well as to collaborate with EHS activities at overseas sites in the United States, South Korea, and Taiwan, TOK has leveraged online meetings, remote audits, paper audits, and other means in the COVID-19 pandemic since fiscal year 2020. These measures are maintained as the pandemic has continued in 2021 and to date. The importance of these online activities will further increase because rapid actions are required in not a few cases in the rapidly changing electronic material industry. By further strengthening cooperation among EHS, Development, Production Engineering, and other departments, TOK will promote online stakeholder engagement.

Kimitoshi Kato
General Manager, EHS Div.

TCFD-based Information Disclosure concerning Climate Change

We endorsed the Task Force on Climate-Related Financial Disclosures (TCFD) recommendations in January 2022 and announced a plan to realize carbon neutrality 2050 in February 2022. We are also promoting initiatives toward realization of carbon neutrality aimed at the global environmental conservation considering future generations as a new material issue. In 2022, when the TOK Medium-Term Plan 2024 started, we promoted scenario analysis considering the adoption of 1.5-degree goal at the 26th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 26) in November 2021 and have disclosed information concerning the impact of climate change on our business activities.

Governance

Under the top-down approach led by the president and chief executive officer, coupled with control by the director in charge of the environment, we promote measures to realize carbon neutrality by 2050 **(see pages 72 and 73)**. The officers are engaged in and lead initiatives for CSR and sustainability requirements, including decarbonization. The Board of Directors monitors these activities and updates its strategies considering immediate social issues and changes in risks and opportunities.

Risk management

Under the risk management structure centered around the Risk Management Committee, which comprises the president and department managers **(see pages 95–96)**, we ensure the PDCA cycle of each activity and maintain continuous risk management with the president and chief executive officer as the chief risk management officer.

Strategies (scenario analysis)

TOK has promoted scenario analyses on average temperature increases by the end of the 21st century by referring to the 1.5-degree scenario and the 4-degree scenario presented by the Intergovernmental Panel on Climate Change (IPCC) and has identified the risks and opportunities for the entire group businesses both in the materials segment and in the equipment segment **(see the next page)**. Both in the 1.5-degree scenario and in the 4-degree scenario, we again recognized through the process above that it would be reasonably possible to enhance corporate value on a medium- to long-term basis by contributing to decarbonization and climate change, while taking advantage of the abundant business opportunities in the miniaturization and multilayer stacking of semiconductors and in the demand for power semiconductors, and by adequately responding to the anticipated physical risks and strengthening resilience.

Indicators and targets

TOK formulated the long-term environmental targets in 2020 to reduce energy-related CO_2 emissions (per base unit) by 15 points from the 2019 level by 2030. Calculation is in progress for the CO_2 emissions in 2030 (sum of Scopes 1 and 2) on the condition of attaining both the target above and the consolidated net sales target of ¥200.0 billion in 2030 as announced in TOK Vision 2030. Calculations are in progress for the financial impact (cost increase) resulting from the increase in CO_2 emissions in the event a carbon tax is introduced in Japan, the United States, China, South Korea, and Taiwan, where TOK has its manufacturing sites, by 2030. We will examine flexible strategies in pursuit of a reduction of this possible cost increase, including the attainment of the long-term environmental targets ahead of schedule.

Response to climate-related risks and opportunities (scenario analysis)

Risk type	Category	Risks on TOK business	Time period*	Key initiatives (countermeasures against risks)
Transition risks Mainly assuming the 1.5-degree scenario	Policy and regulatory risks	● Increase in costs from carbon pricing (introduction of carbon tax and expansion of emission rights trading)	Medium term to long term	● Curb cost increases by accelerating the reduction of CO_2 emissions per base unit through shifts to more energy-efficient manufacturing equipment and increased use of renewable energy **→ See pages 102–103**
		● Increase in costs for responding to more stringent policies and regulations to reduce CO_2 emissions in Japan and other countries where TOK has manufacturing sites	Short term to long term	● Take the necessary action without delay through careful information collection and negotiations with governmental agencies in each country, thereby coping with climate change as a member of local communities **→ See pages 72–75, 102–103, and 110–112**
Physical risks Mainly assuming the 4-degree scenario	Acute risks	● Damage to facilities from the increase in natural disasters	Short term to long term	● Take continuous precautions for short-term flooding risks that became apparent in the inundation of the Sagami Operation Center as the R&D hub by a typhoon in 2019 **→ See pages 96 and 104–105** ● Emphasize BCP and resilience to natural disasters in the capital investment plan under the TOK Medium-Term Plan 2024 toward TOK Vision 2030 **→ See pages 26–28 and 74**
	Chronic risks	● Increase in costs for process temperature control and product temperature control due to global warming	Short term to long term	● Develop more efficient and cost-effective means and methods for the control of process temperatures and product temperatures **→ See pages 102–103**
		● Increase in water stress due to global warming and difficulty in acquiring water resources	Medium term to long term	● Implement continuous measures to minimize water consumption in production activities and to maintain and improve effluent quality **→ See pages 104–105**

Opportunities	Time period*	Key initiatives (how to grasp opportunities)
Expansion of the power semiconductor market Assuming both 1.5-degree scenario and 4-degree scenario	Short term to long term	● Stably supply and increase sales of g-Line and i-Line photoresists for power semiconductors **→ See page 37** ● Stably supply and increase sales of plasma ashing systems for power semiconductors **→ See pages 39–41** ● Develop and increase sales of wafer handling systems for innovative power semiconductors **→ See pages 39–41**
Increase in the need for the development of next-generation power semiconductors with lower power consumption Assuming both 1.5-degree scenario and 4-degree scenario	Medium term to long term	● Gear up development and sales of materials for next-generation power semiconductors, including SiC (silicon carbide)/ GaN (gallium nitride)/Ga_2O_3 (gallium oxide) power semiconductors **→ See page 37**
Increase in demand for energy recycling systems Assuming both 1.5-degree scenario and 4-degree scenario	Medium term to long term	● Accelerate measures for development and sales of chemical looping energy recycling system **→ See page 43**

* "Short term" is defined as until fiscal year 2023, "medium term" as until fiscal year 2030, and "long term" as until fiscal year 2050.

Board of Directors/ Audit and Supervisory Board Members and Officers

Directors

Noriaki Taneichi

❶ Representative Director, President and Chief Executive Officer

Nomination and Compensation Advisory Committee Member

1986 Joined the Company
2009 Dept. Manager, Marketing Development Business Development Div.
2011 Dept. Manager, New Business Development Dept.
2015 Officer; Deputy Dept. Manager, New Business Development Dept.
2017 Director; Officer; Dept. Manager, New Business Development Dept.
2019 Representative Director, President and Chief Executive Officer (to the present)

Harutoshi Sato

❷ Director

1984 Joined the Company
2004 General Manager, Quality Assurance Div.
2007 General Manager, Advanced Material Development Div. 2
2008 General Manager, Advanced Material Development Div. 1
2009 Officer; Deputy Dept. Manager, Research and Development Dept. and General Manager, Advanced Material Development Div. 3
2011 Officer; Deputy Dept. Manager, Research and Development Dept. and General Manager, Advanced Material Development Div. 1
2012 Director; Officer; Dept. Manager, Research and Development Dept.
2017 Director; Executive Officer; Dept. Manager, Research and Development Dept.
2019 Director; Senior Executive Officer; Dept. Manager, Research and Development Dept.
2022 Director of the Company (to the present)

Kunio Mizuki

❸ Director, Executive Officer
Dept. Manager, General Affairs Dept.

Nomination and Compensation Advisory Committee Member

1985 Joined the Company
2005 General Manager, General Affairs Division
2009 Officer; Deputy Dept. Manager, Administration Dept. and General Manager, General Affairs Division
2012 Officer; Dept. Manager, General Affairs Dept.
2013 Director; Officer; Dept. Manager, General Affairs Dept.
2017 Director; Executive Officer; Dept. Manager, General Affairs Dept. (to the present)

Yuichi Murakami

❹ Director, Officer
Dept. Manager, Manufacturing Dept.

1985 Joined the Company
2009 General Manager, Accounting Division
2014 Deputy Dept. Manager, Manufacturing Dept.
2015 Officer; Deputy Dept. Manager, Manufacturing Dept.
2020 Director; Officer; Dept. Manager, Manufacturing Dept. (to the present)

Yusuke Narumi

❺ Director, Officer
Dept. Manager, New Business Development Dept.

1988 Joined the Company
2012 Div. Manager, Market Development Div.
2019 Div. Manager, Panel Material Marketing Div.
2019 Div. Manager, Imaging Material Marketing Div.
2020 Officer; Dept. Manager, New Business Development Dept.
2021 Director; Officer; Dept. Manager, New Business Development Dept. (to the present)

Kosuke Doi

❻ Director, Executive Officer
Dept. Manager, Marketing Dept. and Dept. Manager, Research and Development Dept.

1986 Joined the Company
2009 General Manager, Advanced Material Development Div. 1
2011 President and Director of TOKYO OHKA KOGYO AMERICA, INC.
2016 Officer (President and Director of TOKYO OHKA KOGYO AMERICA, INC.)
2019 Officer; Dept. Manager, New Business Development Dept.
2020 Executive Officer; Dept. Manager, Marketing Dept.
2022 Director, Executive Officer; Dept. Manager, Marketing Dept. and Dept. Manager, Research and Development Dept.

Hiroshi Kurimoto

❼ Outside Director

Nomination and Compensation Advisory Committee Chairman

1970 Joined OILES CORPORATION ("OILES")
1999 Director of OILES
2003 Director; Managing Operating Officer of OILES
2006 Representative Director, President and Chief Operating Officer of OILES
2011 Representative Director and Chairman of OILES
2014 Director (Outside Director) of the Company (to the present)
Director and Senior Advisor of OILES
2015 Senior Advisor of OILES
2016 Executive Advisor of OILES

Noriko Sekiguchi

❽ Outside Director
(Representative of Sekiguchi Noriko CPA Office)

Nomination and Compensation Advisory Committee Member

1986 Joined Manufacturers Hanover Bank (present JPMorgan Chase Bank, N.A.)
1991 Joined Asahi-Shinwa Kaikeisha audit corporation (present KPMG AZSA LLC)
1994 Registered as certified public accountant
1998 Joined Japan Broadcasting Corporation
2001 Joined Triumph International (Japan) Ltd.
2002 Reregistered as certified public accountant
2004 Joined Ernst & Young ShinNihon (present Ernst & Young ShinNihon LLC)
2010 Representative of Sekiguchi CPA Office (present Sekiguchi Noriko CPA Office) (to the present)
2011 Contract Monitoring Committee Member of Japan International Cooperation Agency ("JICA")
2011 External Assessment Committee Member of JICA
2012 Registered as certified tax accountant
2015 Director (Outside Director) of the Company (to the present)
2019 Executive Officer of Chifure Holdings
2021 Independent Outside Audit & Supervisory Board Member of Oji Holdings Corporation (to the present)
2022 Auditor (Outside Auditor), Ryoden Corporation (to the present)
Auditor, Japan International Corporation Agency (to the present)

Kazuo Ichiyanagi

❾ Outside Director

Nomination and Compensation Advisory Committee Member

1977 Joined Teikoku Tsushin Kogyo Co., Ltd.
2005 Executive Officer in charge of Development Dept.; General Manager, Development Dept. of Teikoku Tsushin Kogyo Co., Ltd.
2008 Executive Officer supervising Development Technology and in charge of Development Dept. of Teikoku Tsushin Kogyo Co., Ltd.
2008 Executive Officer supervising Development Technology of Teikoku Tsushin Kogyo Co., Ltd.
2009 Director; Executive Officer supervising Development Technology of Teikoku Tsushin Kogyo Co., Ltd.
2009 Director; Executive Officer supervising Development Division of Teikoku Tsushin Kogyo Co., Ltd.
2010 President of Teikoku Tsushin Kogyo Co., Ltd.
2019 Director and Advisor of Teikoku Tsushin Kogyo Co., Ltd.
2020 Director (Outside Director) of the Company (to the present)

Hisashi Ando

❿ Outside Director

Nomination and Compensation Advisory Committee Member

1979 Joined Sony Chemicals Corporation (currently Dexerials Corporation)
2006 Corporate Executive; Kanuma Plant Manager of Sony Chemical & Information Device Corporation (currently Dexerials Corporation)
2007 Executive Officer; Kanuma Plant Manager of Sony Chemical & Information Device Corporation
2010 Director; Kanuma Plant Manager of Sony Chemical & Information Device Corporation
2012 Director and Executive Officer; Senior General Manager, Research & Development Division; Kanuma Plant Manager of Dexerials Corporation
2014 Director and Senior Executive Officer; Senior General Manager, Research & Development Division; Procurement, New Business Planning & Promotion of Dexerials Corporation
2016 Director and Managing Executive Officer; Officer in charge of Manufacturing & Technology; Corporate R&D Division Head of Dexerials Corporation
2016 Representative Director and Senior Managing Executive Officer; Corporate R&D Division Head of Dexerials Corporation
2019 Representative Director and Senior Managing Executive Officer of Dexerials Corporation
2019 Director and Managing Executive Officer; Lieutenant President of Dexerials Corporation
2020 Director and Managing Executive Officer; Lieutenant President of Dexerials Corporation; President of Dexerials America Corporation
2020 Technical Advisor of Dexerials Corporation
2022 Director (Outside Director) of the Company (to the present)

Skills and experience required for directors of TOK

Name	Position	Outside	Nomination and Compensation Advisory Committee	Skills and experience						
				Outside management experience	R&D/ engineering/ production	Sales/ marketing	Legal affairs/ compliance/ risk management	Finance/ accounting	Global experience	Personnel/ labor
Noriaki Taneichi	Representative Director President and Chief Executive Officer		●		●	●			●	
Harutoshi Sato	Director				●				●	
Kunio Mizuki	Director		●				●			●
Yuichi Murakami	Director				●			●	●	
Yusuke Narumi	Director				●	●			●	
Kosuke Doi	Director				●	●			●	
Hiroshi Kurimoto	Director	●	●	●	●	●	●		●	●
Noriko Sekiguchi	Director	●	●	●				●		
Kazuo Ichiyanagi	Director	●	●	●	●	●			●	
Hisashi Ando	Director	●	●	●	●	●				

Audit and Supervisory Board Members

Nobuo Tokutake
⓫ Standing Audit and Supervisory Board Member

1984 Joined the Company
2003 Chairman and President of TOK TAIWAN CO., LTD.
2007 General Manager, Quality Assurance Div.
2009 Senior General Manager, Production Control Div. and General Manager, Quality Assurance Div.
2013 Officer; Deputy Dept. Manager, Manufacturing Dept.
2015 Director; Officer; Dept. Manager, Manufacturing Dept.
2020 Standing Audit and Supervisory Board Member (to the present)

Nobuyuki Takeuchi
⓬ Outside Audit and Supervisory Board Member

1981 Joined Mitsubishi Trust and Banking Corporation ("MTB") (present Mitsubishi UFJ Trust and Banking Corporation)
2005 Manager, Real Estate Planning Division of MTB
2005 Manager, Sales Division 9 of Mitsubishi UFJ Trust and Banking Corporation ("MUTB")
2007 Manager, Sales Division 3 of MUTB
2009 Officer; Manager of Kyoto Branch and Central Kyoto Branch of MUTB
2011 Managing Executive Officer of MUTB
2013 Senior Managing Director of MUTB
2015 President and CEO of Mitsubishi UFJ Real Estate Services Co., Ltd.
2016 Corporate Auditor (Outside Corporate Auditor) of Maruzen Showa Unyu Co., Ltd.
2019 Outside Audit and Supervisory Board Member of the Company (to the present)
2019 Representative Director and Chairman of Mitsubishi UFJ Real Estate Services Co., Ltd.
2019 Advisor of Mitsubishi UFJ Real Estate Services Co., Ltd.

Tadaharu Uehara
⓭ Outside Audit and Supervisory Board Member

1979 Joined Tokio Marine and Fire Insurance Company, Limited ("TMFI") (present Tokio Marine & Nichido Fire Insurance Co., Ltd.)
2004 Division Manager, Management Planning Division of Millea Holdings, Inc. (present Tokio Marine Holdings, Inc.)
2007 Division Manager, Overseas Business Planning Division of Millea Holdings, Inc.
2008 Division Manager, Europe, Asia, and Middle East Division of TMFI
2011 Officer, Tokio Marine & Nichido Fire Insurance
2012 Executive Officer of TMFI
2015 Director, Nippon Export and Investment Insurance (present Nippon Export and Investment Insurance)
2017 Corporate Advisor of TMFI
2017 Joined the Ministry of Foreign Affairs of Japan
2017 Ambassador Extraordinary and Plenipotentiary to Georgia
2020 Corporate Advisor of TMFI
2021 Outside Audit and Supervisory Board Member of the Company (to the present)

Teruki Umezaki
⓮ Outside Audit and Supervisory Board Member

1985 Joined Meiji Life Insurance Company ("MLI") (present Meiji Yasuda Life Insurance Company)
2010 Division Manager, Investigation Division of MLI
2014 Officer and Division Manager, Personnel Division of MLI
2016 Executive Officer of MLI
2020 Senior Executive Officer of MLI
2021 Outside Audit and Supervisory Board Member of the Company (to the present)

Officers

Koichi Irino
Senior Executive Officer
Chairman and President,
TOK Taiwan Co., Ltd.

Tsukasa Honkawa
Officer
Dept. Manager, Process Equipment Manufacturing Dept.

Hirotaka Yamamoto
Officer
Dept. Manager, Corporate Planning Dept.

Okikuni Takase
Officer
Dept. Manager, Accounting and Finance Dept.

Naoki Watanabe
Officer
Chairman,
TOK China Co., Ltd.

Shoji Otaka
Officer
President and Chief Executive Officer,
Tokyo Ohka Kogyo America, Inc.

Gitae Kim
Officer
Vice President,
TOK Advanced Materials Co., Ltd.

Katsumi Ohmori
Officer
Deputy Dept. Manager, Research and Development Dept.

Naoki Tatsuno
Officer
Deputy Dept. Manager, Marketing Dept.

Kazuyuki Shiotani
Officer
Deputy Dept. Manager, Manufacturing Dept.

Message from Outside Directors and Audit & Supervisory Board Members

Focused on the strengthening of sustainability governance and the establishment of resilient organization.

Hiroshi Kurimoto

Outside Director, Chairman of the Nomination and Compensation Advisory Committee

Governance systems suitable for the practice of the purpose "Contribute to a sustainable future through chemistry"

Through the governance reforms over the past several years, TOK has improved the effectiveness of governance by establishing the Nomination and Compensation Advisory Committee, introducing a new executive fellow system, formulating the Corporate Governance Guidelines, adding an outside director, implementing a new remuneration system for directors, and discontinuing anti-takeover measures, among other initiatives. Director Ando is experienced in corporate management and was added in March 2022, making the ratio of outside directors 40% and the ratio of outside officers in the Board of Directors 50%. These reforms were not only conducted in accordance with the revised Corporate Governance Code but also incorporated a balance of directors experienced in corporate management with a sense of the risks of directors who worked at financial institutions into the Company's management structure, which tends to mainly consist of technological specialists. Through these reforms, the TOK governance systems have become suitable for practicing its purpose of contributing to a sustainable future through chemistry. The Company recognizes that the requirements toward further advancement include the participation of outside directors in meetings with institutional investors and the promotion of female/international human resources to inside directors.

Introducing ESG indicators into the evaluation of the remuneration system for directors in order to strengthen sustainability governance

As described above, TOK has promoted governance reforms and achieved robust finance and performance. Therefore, the Company has entered the phase to fully strengthen sustainability governance. The Company is promoting the establishment of new CSR and sustainability governance systems. Prior to these efforts, the Company revised the remuneration system for officers in January 2022 and introduced an employee engagement indicator for the evaluation of the performance-linked share-based remuneration, which are regarded as a major advancement in sustainability governance. As the chair of the Nomination and Compensation Advisory Committee, I welcomed the strengthening of sustainability governance at TOK, but I also pointed out several precautions, such that an employee engagement indicator is qualitative by nature even though it is numerically represented, and that excessive burden should not be imposed on employees or managers due to the evaluation tasks, in addition to the full operation of plants in Japan and overseas. The indicator was finally introduced through repeated discussions with other members. This new scheme is deeply linked to the Company's growth strategies and is expected to have substantial effects. In the meantime, there is no end to governance reforms that include remuneration systems, and we will continue discussions for further upgrading.

TOK Medium-Term Plan 2024 as a new medium-term plan and the establishment of resilient organization as one of the new material issues

I was deeply engaged in the formulation of the TOK Medium-Term Plan 2024, which started in 2022. I recommended the incorporation of nonfinancial items, including carbon neutrality initiatives, into the strategies and KPIs. While it was decided not to disclose some KPIs, an internal PDCA cycle is promoted toward the attainment of the nonfinancial KPIs. The improvement of employee engagement as described above is positioned as the most important strategy under the TOK Medium-Term Plan 2024, with the strong intention of the president. I am confident that these nonfinancial initiatives will contribute to the further enhancement of the Company's corporate value in coming years.

Regarding the establishment of resilient organization as one of the new material issues, preparedness is important for the efficient implementation of strategies as the VUCA tendencies continue to intensify. At meetings of the Board of Directors, I have proposed simulations anticipating major risks as far as possible. I will upgrade the risk sensitivity of all members of the Company through deeper discussions concerning measures against the suspension of production, disruption of supply chain, threat to lives, and all other risks.

Message from Outside Directors and Audit & Supervisory Board Members

Further strengthening crisis management capabilities and promoting diversity and inclusion.

Noriko Sekiguchi
Outside Director, Member of the Nomination and Compensation Advisory Committee

I will propose the further strengthening of crisis management capabilities

To establish a resilient organization as one of the new material issues in this rapidly changing era, I will propose the further strengthening of crisis management capabilities. For specific measures, the Board of Directors will present a clear vision and strategies for further strengthening and continuously update risks and opportunities in each business, while further strengthening the governance of crisis management and handling capabilities through the formulation and analysis of risk scenarios and rapid recovery based on monitoring, thereby pursuing the enhancement of sustainable corporate value by TOK.

For the further upgrading of the Board of Directors

Compared to 2015, when I was appointed outside director, there are clearly increased occasions where outside officers encourage inside directors, slow them down, or slightly change their direction at meeting of the Board of Directors. I recognize that the viewpoints of outside officers are effectively incorporated into the corporate governance of TOK, combined with the effects of governance reforms including the establishment of the Nomination and Compensation Advisory Committee and the addition of outside directors. The ratio of outside officers on the Board of Directors increased to 50% in March 2022, and I expect the exchange of more insightful discussions.

I was slightly taken aback when President Taneichi presented an idea to include an employee engagement indicator into the KPIs for the remuneration system for officers, which quantifies and visualizes the relationship between employees and the Company. I then highly evaluated and agreed to his idea. As one of the Nomination and Compensation Advisory Committee Members, I will monitor the earnest commitment of each director to the processes of the implementation of measures to enable all employees to work with vigor and pride as an overarching aspiration mentioned in the TOK Vision 2030, as well as for improving employee engagement and promoting people-oriented management as one of the strategies under the TOK Medium-Term Plan 2024.

Governance reforms are not immediately reflected in the improvement of corporate value but require steady and persistent efforts. I will contribute to the enhancement of the Company's corporate value from the viewpoint of an Outside Director by adhering to transparency, fairness, and continuity as stated in the Corporate Governance Guidelines so that we will satisfy the expectations of stakeholders that support TOK.

Having more insightful discussions on diversity both at the Board of Directors and among field employees

The Company's Corporate Governance Guidelines require management to guarantee diversity, including gender and internationality of the members on the Board of Directors. I believe that the necessary human resources at the time should be promoted in the rapidly changing business environment inside and outside the Company. As one of the Nomination and Compensation Advisory Committee Members, I will have insightful discussions concerning diversity and the skill matrix at meetings of the Board of Directors.

The Company's measures for diversity and inclusion are considered favorable in terms of official systems operated by the Company. In the coming years, I will recommend improvement while monitoring the operating status through employee engagement surveys. Other recommended measures include the implementation of events, awareness improvement through the group magazine and the intranet, and continued seminars for mindset reform and understanding (especially for managers). Female human resources (especially managers) and international employees remain a small population at the Company. Because new colleagues to share the same aspirations and concerns will be favorable, it may be appropriate if the Company provides several opportunities for them to link to new colleagues (such as an exchange session for international employees and persons with experience of working at overseas sites). I will also make proactive proposals at meetings of the Board of Directors from these perspectives.

Message from Outside Directors and Audit & Supervisory Board Members

I will make proposal as a Nomination and Compensation Advisory Committee Member valuing the honest voice of employees.

Kazuo Ichiyanagi

Outside Director, Member of the Nomination and Compensation Advisory Committee

Including approach to the honest voice of employees into evaluation

I participate in and look forward to all sessions of the monthly technological report meeting held by TOK because I can recognize at these sessions that customer-oriented strategies have been disseminated to all field employees in response to customer expectations through the trinity of development, manufacturing, and sales, through the understandable explanation provided by presenters on the achievements of technological development, and on technological requirements from customers to be shared with the audience, as well as inputs from the audience based on knowledge and experience aiming to further upgrade the technologies. I expect that the quantitative objectives specified in the TOK Medium-Term Plan 2024 and the TOK Vision 2030 will certainly be attained as long as the Company continues to develop employees who continuously upgrade skills under the customer-oriented strategies.

To improve employee engagement as one of the most important strategies in the TOK Medium-Term Plan 2024, I hope that the honest voice of individual human resources will be heard through the employee engagement surveys. When I reconstructed a nonprofitable department in my previous job, it became a turning point toward reconstruction when I listened to the honest voice of each employee. I will also propose as a Nomination and Compensation Advisory Committee Member to value the qualitative evaluation of the approach to the honest voice of employees, in addition to the KPIs in the operation of the new remuneration system for officers, including an employee engagement indicator.

Establishment of a resilient organization as a new material issue and development into a 100-year company in 2040

The improvement of employee engagement will also be placed at the core of strategies toward the establishment of a resilient organization as a new material issue and development into a 100-year company in 2040. I hope that TOK will continue taking on challenges without fear of failure by enhancing connections with internal and external human resources and stakeholders.

By leveraging ideas produced by individuals and organizations and based on the vigorous capabilities of individuals achieved through the improvement of employee engagement, the Company can respond to unanticipated risks represented by VUCA through collaboration with stakeholders. TOK can also enhance sustainable corporate value in the semiconductor and electronic material fields where technologies change at an extremely fast pace.

A diversified skill set of the Board of Directors boosts value creation by field employees

For its contribution to innovation and the creation of social value as one of TOK's material issues, I hope that a diversified skill set of the Board of Directors will boost value creation by field employees. For example, Director Ando was added to the outside officers in March 2022, making three outside directors in total experienced in corporate management. Furthermore, opinion exchange concerning important points at meetings of the Board of Directors has become even more vigorous, because he formerly worked for an electronic material manufacturer just as TOK. I also have experience in corporate management in the electronics industry, though not in the semiconductor field, and would like to leverage this experience in offering suggestions for TOK's material business and equipment business.

There has been specific improvement in the diversity of inside directors, management executives, and managers, such as the appointment of a female General Manager of the Human Resources Division. As a Nomination and Compensation Advisory Committee Member, I will make proactive proposals to focus on the further promotion of international employees.

Message from Outside Directors and Audit & Supervisory Board Members

I will make best possible efforts to provide appropriate proposals for the enhancement of sustainable corporate value.

Hisashi Ando

Outside Director, Member of the Nomination and Compensation Advisory Committee

I am Hisashi Ando, appointed outside director in March of this year. I served as a representative director of an electronic material manufacturer for three years and have been engaged in the management of its U.S. subsidiary as the president and as a technological advisor. Leveraging this experience, I would like to contribute to the enhancement of the sustainable corporate value of TOK.

Recognition of frank and open-minded business culture and the continuous efforts to enhance technology as TOK's management principles

It is worth admiring that TOK entered the photoresist business ahead of other Japanese companies and has established a robust position in the semiconductor field supported by its technological capabilities. TOK has been a leader in this field for many years because of the painstaking efforts of its employees. I clearly recognize the frank and open-minded business culture as one of its management principles through conversations with the Company's management executives. This culture provides substantial contributions to the development of the Company coupled with the other management principle, the continuous efforts to enhance technology.

To establish a new mainstay business

It would be ideal if the Company could develop another mainstay business based on its accumulated material technology outside the photoresist field. I recognize this as a long-term requirement of TOK, which is consistent with creating new businesses envisioning business portfolio by 2040 as a key initiative under the TOK Vision 2030 and with the strategy of acquiring and creating core technologies for electronic materials and new area under the TOK Medium-Term Plan 2024.

The company for which I formerly worked had a strong mindset since its foundation to continue growing by presenting new products to society. I deeply understand that the development of a new business takes enormous time and labor compared to existing businesses because the comprehensive capabilities of the entire company, not only of the development department, are tested. Shortly after I entered the company, I was in charge of the development of a new material for LCD modules. Although the development was successful, it took many years until commercialization. We needed to complete not only the relevant product but also all the peripheral technologies before it was finally commercialized. Through these processes, I learned through experience that thorough adjustments with diverse market requirements, as well as cooperation among the many internal and external related persons, were as important as the development of a product in a new business. This learning has become a valuable property for me to date. Leveraging these experiences, I will offer proposals toward the establishment of a new mainstay business for TOK. In the process of establishment, I would like to engage in insightful discussions with President Taneichi, who has promoted the development of new businesses, and with members of the New Business Development Department.

As an outside director, I will make best possible efforts for the enhancement of corporate value

The Company values dialogs with the capital market and has nearly 300 individual meetings with institutional investors every year. I will leverage my experience in IPOs at my previous job and the insight accumulated through dialogs with many investors in Japan and overseas, aiming to provide advice to the management executives from the objective viewpoint of an external stakeholder. The Company decided to discontinue anti-takeover measures last year, and some institutional investors have expressed concerns about the risk of a merger. Currently, the possibility of the merger of Japanese companies by overseas firms increases because of the weak yen and other factors. In principle, we should earnestly discuss and determine the best options for the development of the Company and its stakeholders by considering possible mergers and corporate reorganization, as well as scenarios in which the Company should take the leadership. In any case, it is the most important for a company to continuously enhance its corporate value. I will provide my best efforts to enhance the sustainable corporate value of the Company as an outside director.

Message from Outside Directors and Audit & Supervisory Board Members

Continuously responding to the expectations of customers and society in collaboration with employees

In the face of the prolonged impact of COVID-19 and emerging geopolitical risks, TOK fulfills its responsibility as the manufacturer of semiconductor photoresists with the largest global market share and aims to further enhance its corporate value by appropriately satisfying customer needs in cutting-edge photoresist areas, acquiring and creating core technologies for new fields, and stably supplying high-quality products based on the optimized functions of individual sites, under the TOK Medium-Term Plan 2024.

Toward these goals, it is necessary to execute operational reform again for optimization and streamlining of all sites and departments in Japan and overseas, while implementing thorough governance to practice timely and appropriate risk management, including the detection of signs.

These measures for value creation and risk management should be based on a frank and open-minded business culture, a comfortable workplace environment, and appropriate personnel systems for which the enhancement of human capital through the improvement of employee engagement is indispensable.

I will effectively fulfill my responsibilities as an outside Audit & Supervisory Board Member so that TOK will continue to be a company that contributes to a sustainable future through chemistry.

Nobuyuki Takeuchi
Outside Audit & Supervisory Board Member

Tadaharu Uehara
Outside Audit & Supervisory Board Member

Contributing to supply chain management in a new era

TOK has achieved record-high earnings for two consecutive years and is steadily growing. However, the Company is at an important crossroads in order to attain sustainable growth while contributing to the SDGs in the coming years, considering the substantial economic fluctuation and horizontal division of labors around the world in the semiconductor industry. Now that it has become impossible for the Company to control the global supply chain by itself due to the emergence of new geopolitical risks, it is critical that the Company further increases its information capability and incessantly reviews its businesses with foresight.

The role of the Company based on the comprehensive risk management of supply chain, including the handling of geopolitical risks, is extremely important in order to stabilize global semiconductor manufacturing and provide the Company with a golden opportunity to take a further leap. From this viewpoint, I will fulfill my mission as an outside Audit & Supervisory Board Member so that TOK will become a company trusted not only by its partners in supply chain but also by all stakeholders around the world by continuously creating new added value that inspires customers as stated in the TOK Vision 2030.

Supporting the self-actualization of employees through the creation of social value

The Company aims to create not only economic value but also sustainable social value by establishing a win-win relationship with all stakeholders as stated in the TOK Vision 2030. The principal role in this process is played by each employee, who is also a stakeholder.

Therefore, the TOK Medium-Term Plan 2024 states that improving employee engagement and promoting people-oriented management are the key initiatives for the pursuit of the happiness of personnel as a new material issue and adds an employee engagement indicator to the evaluation parameters of remuneration for officers.

The Company's sustainability governance is considered to have substantially advanced through these measures, but the goal is not the establishment of systems. It is the most important that more employees can self-actualize and work vigorously through the creation of social value, thereby accelerating technological innovation and customer development, leading to the further enhancement of corporate value in a virtuous circle.

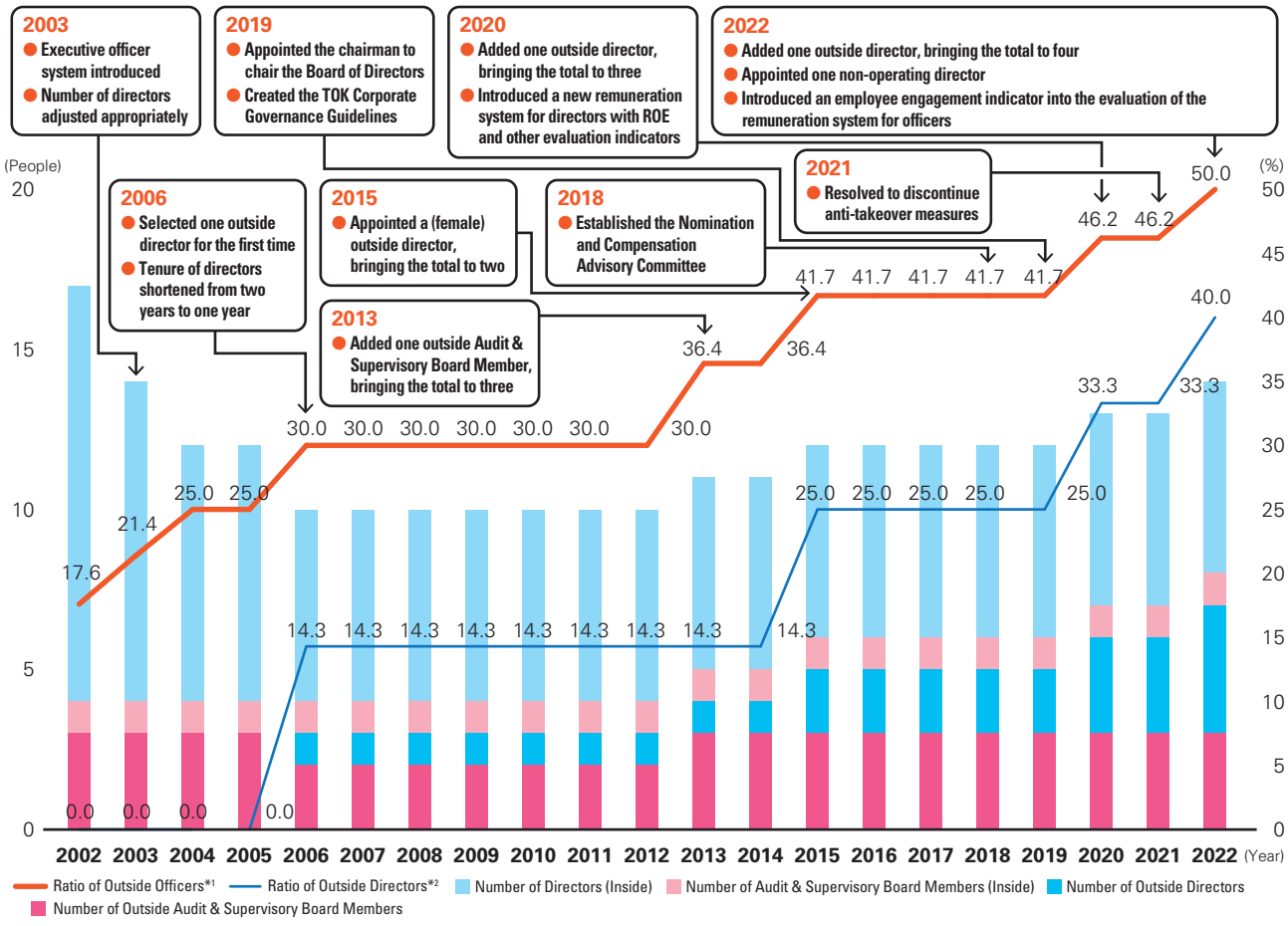
From this viewpoint, I will contribute to the upgrading of the Company's corporate governance as an outside officer.

Teruki Umezaki
Outside Audit & Supervisory Board Member

Corporate Governance

We will further strengthen corporate governance, looking to sustainably enhance our corporate value.

TOK's Path to Stronger Corporate Governance



*1 Ratio of Outside Officers = (Number of Outside Directors + Number of Outside Audit & Supervisory Board Members) / (Number of Directors + Number of Audit & Supervisory Board Members)
*2 Ratio of Outside Directors = Number of Outside Directors / Number of Directors

Basic Concept

We have had a management vision of aiming to become "The e-Material Global Company®" to contribute to a sustainable future through chemistry under our management principles since the foundation ("Create a frank and open-minded business culture, continue efforts to enhance our technology, raise the quality levels of our products, and contribute to society"). We believe that realizing this will lead to benefits shared by shareholders and all other stakeholders and improve corporate value.

We strive to realize the management vision by placing enhancement of corporate governance as one of the most important issues. That is to ensure transparency and solidness of the management and efficiency by expediting decision-making process.

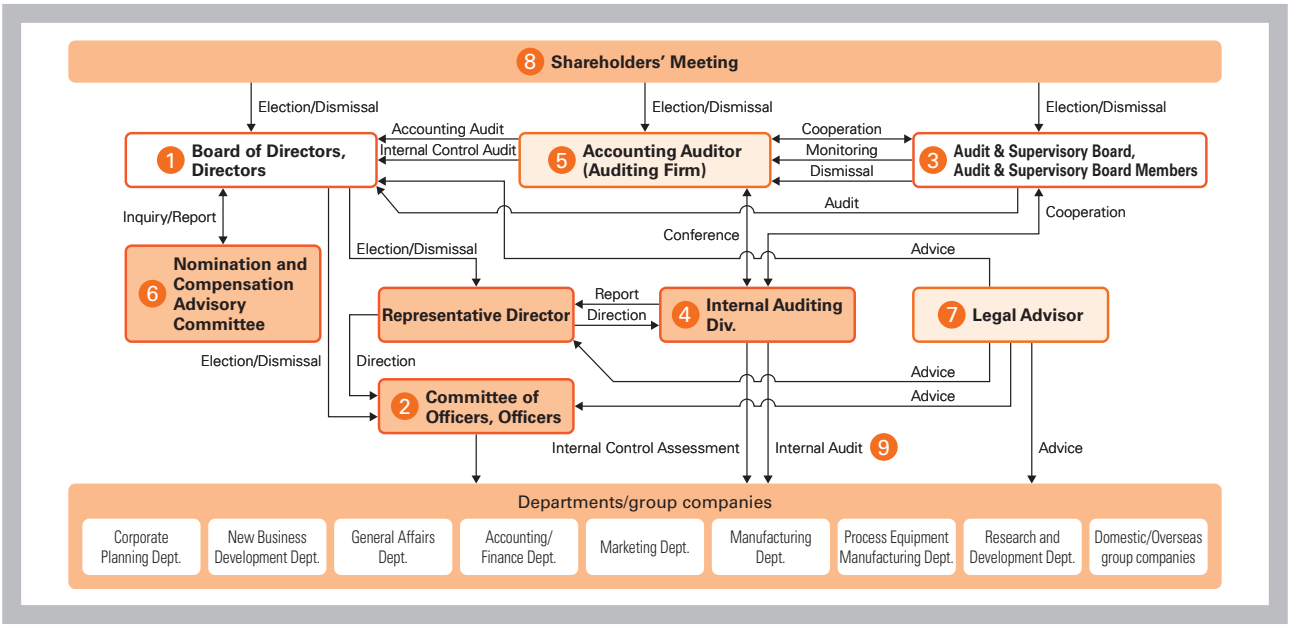
TOK promotes the enhancement of corporate governance toward the establishment of resilient organization as a new material issue, and as part of the strategies under the new TOK Medium-Term Plan 2024 (5 "Establish a sound and efficient management foundation"). The Company promotes activities in accordance with the TOK Corporate Governance Guidelines that indicate its basic policies and approaches to continuously improve corporate governance.

→ TOK Corporate Governance Guidelines
https://www.tok.co.jp/content/download/4719/77678/file/gov_guidline0403.pdf (in Japanese)

Type of System

As a company with Audit & Supervisory Board Members, TOK employs the Audit & Supervisory Board Member system. We are taking action to strengthen audits performed by the Audit & Supervisory Board Members with the greater authority stipulated by the Companies Act of Japan. In addition, TOK is taking advantage of the benefits of reforms to its Board of Directors, establishment of the executive officer system, and the election of an independent outside director to fortify the management decision-making and supervisory function and the business execution function while clarifying responsibility for performing these functions. We are convinced that these measures are the most effective means of strengthening management and upgrading our corporate governance.

Diagram of Corporate Governance System (As of March 30, 2022)



Directors/Board of Directors Diagram 1

To rapidly respond to changes in the operating environment and to clarify the management responsibility of directors in each accounting period, the Company shortened the tenure of directors from two years to one year in June 2006. To increase the transparency of the Board of Directors and to strengthen its oversight function, the decision was made to appoint one non-operating director in March 2022 and one independent outside director in June 2006. The number of outside directors was increased by one in June 2015, one in March 2020, and one in March 2022, respectively, leading to four independent outside directors at present.

In principle, the director system has two simplified flat layers: representative director and directors. This creates a framework that allows the Board of Directors to fulfill its primary responsibilities by effectively reaching management decisions and supervising the Company's management.

As of March 30, 2022, the Board of Directors is chaired by Director and President Noriaki Taneichi and consists of ten directors (four of whom are outside directors). In principle, the Board of Directors meets once a month on a regular basis and holds extraordinary meetings as required. The meetings are held to decide important matters of business execution with the goal of supervising the business duties executed by the representative director and directors.

The number of directors on the Board of Directors is set to not exceed 10 directors as stated in the Articles of Incorporation of the Company. The articles also stipulate that resolutions for the election of directors must be approved by a non-cumulative majority vote at a General Meeting of Shareholders with a third or more of the shareholders in attendance.

Assessment of the Effectiveness of the Board of Directors

Our directors and Audit & Supervisory Board Members conduct assessments and discussions at meetings of the Board of Directors using an anonymous self-evaluation questionnaire for the composition of the Board of Directors, the effectiveness of the Board of Directors, information related to the Board of Directors, the decision-making process, and external communications. This offers an analysis and assessment of the effectiveness of the Board of Directors as a whole.

[Conducted evaluation of the Board of Directors for the fiscal year ended December 31, 2020, and made improvements on identified issues]

Operating standards were established, and improvements were made to promote discussions regarding the problems identified in the evaluation of the Board of Directors in the previous fiscal year: 1) prior explanation for outside officers concerning important agenda items, 2) more insightful discussions concerning company-wide management requirements, 3) enhanced communication among officers, and 4) preparation of understandable materials and continued streamlining.

[Revised the questionnaire for the evaluation of the Board of Directors for the fiscal year ended December 31, 2021]

In the seventh self-evaluation, questions were added concerning the level of satisfaction with the operation of the Board of Directors in order to identify overall problems on the Board of Directors that could not be grasped through specific questions.

Continued descriptive questions were also included concerning company-wide managerial requirements, as part of the review of the questionnaire.

Time of evaluation	December 2021 (questionnaire survey)
Evaluation item	◆ Composition of Board of Directors ◆ Effectiveness of Board of Directors ◆ Information related to Board of Directors ◆ Decision-making process ◆ External communication
Evaluation results ○: Favorable/ appropriate ▲: Requiring improvement	○ Have an impartial composition offering inside directors with a thorough understanding of each field, and a good balance between experience and actual performance ○ Maintain diversity by incorporating outside directors with differing backgrounds, knowledge, and expertise ○ The share of independent outside directors has been increased to more than one-third ○ The size of the Board of Directors, frequency of meetings, matters discussed, and time spent on discussions are all appropriate ○ In an atmosphere of frank and open discussions, rapid and highly transparent decision-making has been done well and continued with outside directors and outside Audit & Supervisory Board Members ○ Self-improvement and in-house check-and-balance functions are mostly favorable ▲ More insightful discussions are required to resolve problems in business strategies, risk management, employee engagement, and DX ▲ Reporting systems to the Board of Directors should be further improved
Measures to be implemented and matters to be examined based on the evaluation results	❶ Deepen discussions on company-wide managerial requirements ❷ Further enhancement of communication among directors and Audit & Supervisory Board Members ❸ Progress of management of determined matters ❹ Review of agenda items and time consumed ❺ Analysis of management risks To improve the points above, the Company reviews the operation of meetings and streamline materials for agenda items, thereby enhancing discussions. Also, the Company examines systems for enhancing discussions and achieving more efficient operation.

Review of Decision-Making Authority of the Board of Directors

Within the context of strengthening the functions of the Board of Directors and changes in the business environment, the decision-making authority of the Board of Directors was reviewed in April 2019 by delegating decision-making authority to the Committee of Officers. We also revised the regulations of the Board of Directors, the regulations of the Committee of Officers, the Specific Authority by Position, and the Duty and Authority regulations. The decision-making authority of subsidiaries in Japan and overseas was also revised in FY 2020/12.

Holding of Meetings of Outside Directors and Audit & Supervisory Board Members

TOK has established meetings of outside officers with the participation of all outside directors and all outside Audit & Supervisory Board Members to provide a forum for discussion. The standing Audit & Supervisory Board Member also attends the meetings.

- Complementary explanation regarding the agenda for the Committee of Officers that was not brought up at the meeting of the Board of Directors
- Exchange of opinions on the agenda for the next meeting of the Board of Directors, as well as on the operation and proceedings of the meetings of the Board of Directors
- Commentary on cutting-edge technological matters

and other measures, as well as reporting circumstances inside and outside the Company in a timely manner. In this way, the meetings aim to strengthen the effectiveness and add vigor to discussions by the Board of Directors.

Officers and Committee of Officers Diagram 2

While taking steps to strengthen the functions of the Board of Directors in management decision-making and supervision, TOK has the Committee of Officers made up of all officers to reinforce its business execution capabilities. The committee members include the chief executive officer, the chief operating officer, senior executive officers, executive officers, and officers, allowing for their business responsibilities, capabilities, and other considerations.

As of March 30, 2022, the Committee of Officers was chaired by President Noriaki Taneichi and consisted of 15 officers, including five officers also serving as directors. In principle, the Committee of Officers meets once a month on a regular basis and holds extraordinary meetings as required. The meetings are held to share instructions and orders resolved by the Board of Directors and information among the officers, and with the goal of planning management strategies and then deliberating and approving certain important decisions that are not subject to a Board of Directors resolution.

Audit & Supervisory Board Members and Audit & Supervisory Board Diagram 3

As of March 30, 2022, TOK has four Audit & Supervisory Board Members, including three outside Audit & Supervisory Board Members. To receive reports from Audit & Supervisory Board Members regarding important audit-related matters, to discuss the matters, and/or to make resolutions, the Audit & Supervisory Board meet once a month on a regular basis and holds extraordinary meetings as required. Audit & Supervisory Board Members comply with the Audit Standards (Audit Regulations for Audit & Supervisory Board Members) established by the Audit & Supervisory Board and participate in meetings of the Board of Directors in accordance with the audit policy and the division of duties. Audit & Supervisory Board Members also receive reports from directors and others on the execution of duties and require explanations, when necessary, thereby auditing the execution of duties by the directors. The Audit & Supervisory Board Members receive reports from the accounting auditor (auditing firm) on the execution of duties concerning accounting matters and require explanations, when necessary, thereby verifying the validity of audit methods and results.

To improve the effectiveness of corporate audits and to ensure smooth execution of audit duties, one person is assigned to assist the duties of the Audit & Supervisory Board Members while serving in other positions.

Internal Auditing Division Diagram 4

The Internal Auditing Division is under the direct control of the president. In addition to internal audits, this division offers suggestions, proposals, and advice for continuous improvement through evaluations of the effectiveness of internal controls in financial reporting.

Accounting Auditor Diagram 5

The accounting auditor undertakes accounting audit of TOK from a fair and independent standpoint. The accounting audit of TOK for FY 2022/12 was executed by two certified public accountants: Mr. Hiroki Kitagata, a designated limited liability partner and executive member of Deloitte Touche Tohmatsu LLC., and Mr. Daijiro Furutani, also a designated limited liability partner and executive member of Deloitte Touche Tohmatsu LLC. There were six other certified public accountants, three persons who passed the certified public accountant examination, and 17 other people who assisted in conducting the accounting audit of TOK. The details of the remuneration paid from TOK to the accounting auditor (Deloitte Touche Tohmatsu LLC) regarding accounting audit for FY 2021/12 was as follows:

- Remuneration in relation to the services set forth in Article 2, Paragraph 1, of the Certified Public Accountants Act (Act No. 103 of 1948): ¥58 million

Nomination and Compensation Advisory Committee Diagram 6

TOK established the Nomination and Compensation Advisory Committee, chaired by an outside director with more than half of its members consisting of outside directors, to enhance corporate governance by strengthening the fairness, transparency, and objectivity of procedures related to the nomination, dismissal, and remuneration of directors. **→ See pages 89–90**

In the process of determining remuneration amounts for directors in FY 2021/12, the Nomination and Compensation Advisory Committee formulated the remuneration table for relevant directors, proposed remuneration amounts for each director, and proposed remuneration amounts for each outside director by referring to the performance of the TOK Group, contribution by the relevant directors to the medium-term plan and the budget for the previous fiscal year, and comparison with companies of the same scale. These proposed remuneration amounts for directors were deliberated and resolved at a meeting of the Board of Directors.

For remuneration starting in 2022, several sessions were held to determine new indicators, and a draft was formulated to apply EBITDA margin and consolidated net sales to annual bonus, and ROE and an employee engagement indicator to the performance-linked share-based remuneration (performance share unit).

As of March 30, 2022, the majority of the members of the Nomination and Compensation Advisory Committee consists of outside directors, and the Committee is chaired by an outside director. The chair is Hiroshi Kurimoto, an outside director, and the members are Noriaki Taneichi, the president, Kunio Mizuki, a director, and Noriko Sekiguchi, Kazuo Ichiyanagi, and Hisashi Ando, who are outside directors.

Legal Advisers Diagram 7

The Company concluded advisory contracts with a number of law firms and receives appropriate advice from legal advisors in situations requiring legal assessment.

Efforts to Invigorate the Shareholders' Meeting and Facilitate Smooth Exercise of Voting Rights Diagram 8

To facilitate the exercise of voting rights by shareholders, we convene the General Meeting of Shareholders in March when most other Japanese companies' shareholder meetings are not held, set the period for reviewing the resolutions for approval by the meeting that is longer than the number of days required by law, and publish the Notice of Convocation of the General Meeting of Shareholders on our website ahead of time or 28 days (four weeks) before the day of the meeting. It is also sent out early 21 days (three weeks) before the day of the meeting. Shareholders who cannot attend the General Meeting of Shareholders are able to exercise voting rights in writing and by electromagnetic means (including the use of a voting rights exercise platform for institutional investors). In addition, the notice of convocation is also prepared in English to help institutional investors overseas better understand the proceedings. We also describe the reported matters using video and narration to promote understanding by shareholders who attended the General Meeting of Shareholders and upload the Notice of Convocation, Notice of Resolution, and Results of the Exercise of Voting Rights to the General Meeting of Shareholders for disclosure, each of which is in Japanese and English, on the Company website. Starting with the ordinary general meeting of shareholders convened in 2022, a participative virtual meeting style is applied to increase the opportunity of participation as audience for distant shareholders and to improve the transparency of the meeting.

Cooperation between the Audit & Supervisory Board Members, Internal Auditing Division and Accounting Auditor

Internal Audit and Corporate Audit Diagram 9

[Cooperation between the Audit & Supervisory Board Members and accounting auditor]

The Audit & Supervisory Board Members receive reports on the result of accounting audits and other work from the accounting auditor (auditing firm) four times a year. Audit & Supervisory Board Members also receive an explanation of the auditing plan from the accounting auditor once a year. In addition, the Audit & Supervisory Board Members accompany the accounting auditor to the factory audits the accounting auditor if necessary, as well as examine the auditing method of the accounting auditor. Apart from this, the Audit & Supervisory Board Members regularly exchange information and opinions with the accounting auditor.

[Mutual coordination among audits by outside Audit & Supervisory Board Members, internal audits, Audit & Supervisory Board Members' audits, and accounting audits, and their relationship with the internal control department]

To enable outside Audit & Supervisory Board Members to audit the directors' performance of duties, they attend meetings of the Board of Directors. They also receive internal audit reports from the Internal Auditing Division, reports on the results of audits conducted by the standing Audit & Supervisory Board Member after attending important meetings (such as the executive officers meeting and the sales meeting), and audits performed by viewing and surveying important decision-making documents (such as requests for approval), as well as audit reports from the accounting auditor. Moreover, information and opinions are exchanged with the Internal Auditing Division, the standing Audit & Supervisory Board Member, and the accounting auditor on a periodic basis. In addition, the outside Audit & Supervisory Board Members receive reports as appropriate from the Internal Auditing Division regarding its evaluation of the effectiveness of internal controls over financial reporting and from the accounting auditor regarding its opinion on the internal control audit.

Election of Outside Directors and Outside Audit & Supervisory Board Members

The Company has ten directors, four of whom are outside directors. Similarly, the Company has four Audit & Supervisory Board Members of whom three are outside Audit & Supervisory Board Members. The Company established the following criteria and policies regarding the independence of outside directors and outside Audit & Supervisory Board Members with regard to their election.

Independence Standards for Outside Officers

Independent outside officers under these criteria are defined as those who fulfill the legal requirements of an outside officer and to whom any one of the following does not apply.

a. A person who executes the business of the Company or its consolidated subsidiaries (the "Group") or who did so for a period of 10 years before being appointed
b. A person or entity for which the Group is a major client (Note 1) or who executes the business of such a person or entity
c. A major customer of the Group (Note 2) or a person who executes the business of such a customer
d. A major lender of the Group (Note 3) or a person who executes the business of such a lender
e. A person who, apart from receiving officer compensation from the Group, belongs to a consulting, accounting, or legal firm (corporate entity, cooperative, or other such group) receiving large amounts of cash or other assets (Note 4) from the Group
f. A person to whom the above b through e applied in the previous three years
g. A person who in the past three years has received donations from the Group averaging more than ¥3 million per year
h. Major shareholders of the Group (Note 5) or a person who executes the business of such shareholders
i. A person who executes the business of a company with a mutual relationship between outside officers (Note 6)
j. A person whose spouse or a relative within the second degree of kinship comes under any one of above items a through i.
k. Regardless of the above provisions, a person for whom it is deemed likely that conflicts of interest will arise with the Company

Notes:
1. A person or entity for which the Group is a major client means a supplier that provides the Group with products or services where the amount of transactions averaged more than ¥10.0 million per year over the past three years and represented more than 2% of the supplier's consolidated annual revenue in the most recent fiscal year.
2. A major customer of the Group means a customer to which the Group provides products and services where the amount of transactions averaged more than ¥10.0 million per year over the past three years and represented more than 2% of the Group's consolidated annual revenue in the most recent fiscal year.
3. A major lender of the Group means a financial institution that has lent an amount equivalent to more than 2% of the Group's consolidated total assets.
4. A large sum of cash or other assets means assets that averaged more than ¥10.0 million per year over the past three years and that in the most recent fiscal year had an economic value in excess of 2% of the said consultant or accounting or legal expert's consolidated annual revenue. (In the event the beneficiary of the said assets is a corporation, association, or other organization, then assets that averaged more than ¥10.0 million per year over the past three years and that in the most recent fiscal year had an economic value in excess of 2% of the said organization's consolidated annual revenue).
5. Major shareholder means a shareholder with a ratio of voting rights of more than 10%.
6. A mutual relationship between outside officers means a relationship in which a person who executes the business of the Group is also an outside officer at another company and where a person who executes the business of the said outside company is an outside officer of the Company.

Reasons for the Election of Inside Directors

Name	Reasons for election
Noriaki Taneichi Representative Director President and Chief Executive Officer Nomination and Compensation Advisory Committee Member	Since assuming the position of representative director, president, and chief executive officer, Taneichi has led the management of the Group as its top executive and contributed to the Group's development through measures set forth in the medium- and long-term plans. Thus, Taneichi can be expected to continue contributing to the management of the Company.
Harutoshi Sato Director	Sato has held important positions in the Group serving in such roles as representative at the U.S. subsidiary, person responsible for quality assurance, and person responsible for product development before assuming the position of department manager of the Research and Development Department. Owing to this experience, he is well acquainted with the Company's business characteristics and customers and consequently possesses the necessary and sufficient knowledge of important decision-making by the Board of Directors and supervision of duties executed by other directors. Thus, Sato can be expected to continue contributing to the strengthening of the oversight function of the Board of Directors by providing beneficial advice to the management of the Company.
Kunio Mizuki Director Nomination and Compensation Advisory Committee Member	Mizuki, since assuming the position of department manager of the General Affairs Department after serving as the general manager of the General Affairs Division, has been working to strengthen corporate governance, including development of the risk management system and the compliance system, as well as improvement of personnel systems and investor relations. Furthermore, through his experience with the business operations for which he is responsible, he possesses the necessary and sufficient knowledge of important decision-making by the Board of Directors and supervision of duties executed by other directors. Thus, Mizuki can be expected to continue contributing to the management of the Company.
Yuichi Murakami Director	Murakami has held important positions in the Group, serving in such roles as representative at the U.S. subsidiary, representative director and president of the South Korean subsidiary, and department manager of the Manufacturing Department. Owing to this experience, he is well acquainted with the Company's business characteristics and possesses the necessary and sufficient knowledge of important decision-making by the Board of Directors and supervision of duties executed by other directors. Thus, Murakami can be expected to continue contributing to the management of the Company.
Yusuke Narumi Director	Narumi has held important positions in the Group, serving in such roles as representative at the China office, person responsible for the sales and marketing of key products, before assuming the position of department manager, New Business Development Department. Owing to this experience, he is well acquainted with the Company's existing and new business fields and consequently possesses the necessary and sufficient knowledge of important decision-making by the Board of Directors and the supervision of duties executed by other directors. Thus, Narumi can be expected to continue contributing to the management of the Company.
Kosuke Doi Director	Doi has held important positions in the Group, serving in such roles as the president of the U.S. subsidiary, the department manager of the New Business Development Department, and the department manager of the Marketing Department. Owing to this experience, he is well acquainted with the Company's existing business fields and new business fields, as well as the Company's business characteristics and customers, combined with the necessary and sufficient knowledge of important decision-making by the Board of Directors and supervision of duties executed by other directors. Thus, Doi can be expected to contribute to the management of the Company.

Reasons for the Election of Outside Directors

Name	Reasons for election
Hiroshi Kurimoto Nomination and Compensation Advisory Committee Chairman	Kurimoto is expected to supervise the Company's management from an objective and neutral point of view based on abundant experience and considerable insight as an executive of a listed company, and to contribute to strengthening corporate governance with advice on the general management of the Company. As the chair of the Nomination and Compensation Advisory Committee, he is also expected to fulfill the oversight function in the selection of executive candidates and the determination of officer compensation from an objective and neutral standpoint.
Noriko Sekiguchi Nomination and Compensation Advisory Committee Member	Sekiguchi is expected to supervise the Company's management from an objective and neutral point of view based on her sophisticated expertise in accounting as a certified public accountant, abundant experience in several companies, and thorough understanding of internal control in her capacity as an external committee member with regard to fraudulent accounting at multiple listed companies. Thus, Sekiguchi can be expected to contribute to strengthening corporate governance with her advice on the general management of the Company. As a member of the Nomination and Compensation Advisory Committee, she is also expected to fulfill the oversight function in the selection of executive candidates and the determination of officer compensation from an objective and neutral standpoint.
Kazuo Ichiyanagi Nomination and Compensation Advisory Committee Member	Ichiyanagi is expected to supervise the Company's management from an objective and neutral point of view based on abundant experience and considerable insight as an executive of a listed company and to contribute to strengthening corporate governance with advice on the general management of the Company. As a member of the Nomination and Compensation Advisory Committee, he is also expected to fulfill the oversight function in the selection of executive candidates and the determination of officer compensation from an objective and neutral standpoint.
Hisashi Ando Nomination and Compensation Advisory Committee Member	Ando is expected to supervise the Company's management from an objective and neutral point of view based on abundant experience and considerable insight as an executive of a listed company and to contribute to strengthening corporate governance with advice on the general management of the Company. As a member of the Nomination and Compensation Advisory Committee, he is also expected to fulfill the oversight function in the selection of executive candidates and the determination of officer compensation from an objective and neutral standpoint.

Reasons for the Election of Outside Audit & Supervisory Board Members

Name	Reasons for election and Independence
Nobuyuki Takeuchi	Takeuchi was elected to contribute to auditing TOK's management from an objective and neutral point of view based on experience as Audit & Supervisory Board Member of another company, as well as abundant experience and considerable insight mainly as an executive of financial institutions. He formerly worked for Mitsubishi UFJ Trust and Banking Corporation, which owns stock in TOK and conducts transactions with the Company pertaining to cash deposits and stock affairs under routine and standard business conditions. However, these capital and business relationships were deemed not to affect his independence as an outside Audit & Supervisory Board Member of TOK.
Tadaharu Uehara	Uehara was elected to contribute to auditing TOK's management from a globally objective and neutral point of view based on abundant experience at financial institutions, the Ministry of Foreign Affairs, and other organizations, as well as considerable insight mainly as a management executive. He was once a business executive with Tokio Marine & Nichido Fire Insurance Co., Ltd., which owns stock in TOK and conducts insurance transactions with the Company under routine and standard business conditions. However, these capital and business relationships were deemed not to affect his independence as an outside Audit & Supervisory Board Member of TOK.
Teruki Umezaki	Umezaki was elected to contribute to auditing TOK's management from an objective and neutral point of view based on abundant experience and considerable insight mainly as an executive of financial institutions. He serves as a senior executive officer at Meiji Yasuda Life Insurance Company, which owns stock in TOK and conducts transactions with the Company pertaining to insurance and cash loans under routine and standard business conditions. However, these capital and business relationships were deemed not to affect his independence as an outside Audit & Supervisory Board Member of TOK.

The Main Activities of Outside Directors and Outside Audit & Supervisory Board Members

Name	Attendance record and activities at Board of Directors and Audit & Supervisory Board meetings
Hiroshi Kurimoto Outside Director	Kurimoto attended all 14 of the 14 meetings of the Board of Directors (attendance rate 100%) held during the fiscal year ended December 2021. He voiced timely opinions as required when discussing resolutions based on broad experience and abundant expertise as a management executive of listed companies. He attended all of the five Nomination and Compensation Advisory Committee meetings (attendance rate 100%), mainly discussing the formulation of skill matrix, the operation check of the remuneration system for directors, changing and selection of management personnel, and the selection of new director candidates. He appropriately fulfilled the responsibilities as chair of the Nomination and Compensation Advisory Committee, moderating the agenda, and reporting to the Board of Directors.
Noriko Sekiguchi Outside Director	Sekiguchi attended 14 out of the 14 meetings of the Board of Directors (attendance rate 100%) held during the fiscal year ended December 2021. She voiced timely opinions as required when discussing resolutions based on her professional expertise in accounting and abundant hands-on business experience with several companies as a certified public accountant. She also attended all of the five Nomination and Compensation Advisory Committee meetings (attendance rate 100%), mainly discussing the formulation of skill matrix, the operation check of the remuneration system for directors, changing and selection of management personnel, and the selection of new director candidates. She appropriately fulfilled her responsibilities as a member of the Nomination and Compensation Advisory Committee, making appropriate suggestions.
Kazuo Ichiyanagi Outside Director	Ichiyanagi attended all 14 of the 14 meetings of the Board of Directors (attendance rate 100%) held during the fiscal year ended December 2021. He voiced timely opinions as required when discussing resolutions based on broad experience and abundant expertise as a management executive of listed companies. He also attended all of the five Nomination and Compensation Advisory Committee meetings (attendance rate 100%), mainly discussing the formulation of skill matrix, the operation check of the remuneration system for directors, changing and selection of management personnel, and the selection of new director candidates. He appropriately fulfilled his responsibilities as a member of the Nomination and Compensation Advisory Committee, making appropriate suggestions.
Nobuyuki Takeuchi Outside Audit & Supervisory Board Member	Takeuchi attended all of the 14 meetings of the Board of Directors (attendance rate 100%) and all of the 16 meetings of the Audit & Supervisory Board (attendance rate 100%) held during the fiscal year ended December 2021. He voiced and raised timely opinions and questions as required at the meetings of the Board of Directors and the Audit & Supervisory Board based on experience as an Audit & Supervisory Board Member of another company, as well as abundant experience and considerable insight as a business executive, including at financial institutions.
Tadaharu Uehara Outside Audit & Supervisory Board Member	Uehara attended all of the 11 meetings of the Board of Directors (attendance rate 100%) and all of the 12 meetings of the Audit & Supervisory Board (attendance rate 100%) held after his appointment on March 30, 2021. He voiced and raised timely opinions and questions as required at the meetings of the Board of Directors and the Audit & Supervisory Board based on abundant experience mainly at financial institutions and the Ministry of Foreign Affairs, combined with considerable insight as a business executive.
Teruki Umezaki Outside Audit & Supervisory Board Member	Umezaki attended all of the 11 meetings of the Board of Directors (attendance rate 100%) and all of the 12 meetings of the Audit & Supervisory Board (attendance rate 100%) held after his appointment on March 30, 2021. He voiced and raised timely opinions and questions as required at the meetings of the Board of Directors and the Audit & Supervisory Board based on abundant experience and considerable insight mainly as a business executive of financial institutions.

The Major Decisions and Agenda of Board of Director Meetings in the Fiscal Year Ended December 2021

- ◆ Formulated the TOK Medium-Term Plan 2024
- ◆ Revised the important requirements (material issues) for enhancing corporate value
- ◆ Proposed initiatives toward carbon neutrality
- ◆ Had discussion concerning balance sheet management
- ◆ Continued to possess or sold cross-shareholdings
- ◆ Selected the prime market in the new market divisions at Tokyo Stock Exchange
- ◆ Updated the Report concerning Corporate Governance and revised the Corporate Governance Guidelines
- ◆ Revised the Basic Policy on the Establishment of Internal Control System
- ◆ Implemented measures against COVID-19 and related support (donation)
- ◆ Acquired land for the Kikuchi Techno Park in Kumamoto Prefecture
- ◆ Established Europe Branch, and transferred, disbanded, and liquidated the businesses of Tokyo Ohka Kogyo Europe B.V.

Remuneration for Directors and Audit & Supervisory Board Members

[Basic Policy on Determination of Remuneration for Directors (Excluding Outside Directors and Non-operating Directors)]

The Company has established a Nomination and Compensation Advisory Committee, chaired by an outside director, to serve as an advisory function to the Board of Directors. The committee held deliberations to examine the preferred remuneration system for the Company, considering the outlook for business environment and the approach to corporate governance in Japan based on which the Company's remuneration policy for directors (excluding outside directors and non-operating directors; hereinafter referred to as "eligible directors") has been determined as follows.

[Basic Principle of Remuneration]

Aim to support the Company's sustainable value creation

- · Set the composition and level of remuneration to provide healthy motivation to generate sustainable growth and corporate value in the medium to long term
- · Clarify responsibility for each fiscal year's results by fairly and impartially reflecting quantitative evaluations based on financial performance and evaluation of efforts to address issues taking into consideration medium- to long-term strategy in annual bonuses
- · Strive to create sustainable corporate value by continuously providing long-term incentives linked to the Company's medium- to long-term performance
- · Promote the long-term holding of shares while serving in management and share interests with shareholders

Ensure objectivity and transparency in remuneration decisions

- · Determine the remuneration decision policy and the individual amount of payment upon deliberation by the Nomination and Compensation Advisory Committee, which is composed primarily of outside directors
- · Employ an independent remuneration advisor and set an appropriate remuneration level taking into consideration the Company's business characteristics, based on verification through comparisons with corporate groups of the same size using objective data from outside while taking into account recent public opinion
- · Proactively disclose information necessary for stakeholders including shareholders, in order to monitor the relations between remuneration and corporate value

[Remuneration Structure]

The Company's remuneration structure for eligible directors consists of basic remuneration, which is a fixed salary, and performance-linked remuneration. Performance-linked remuneration consists of an annual bonus that is linked to company-wide performance for each fiscal year, a performance-linked share-based remuneration system (performance share units) that is linked to the sustainable creation of corporate value, and a restricted share-based remuneration system that is provided to continually share value with shareholders through the continued holding of stock. An outline of each remuneration component is presented on the next page.

Tokyo Ohka Kogyo Co., Ltd., Headquarters

Outline of Remuneration Components

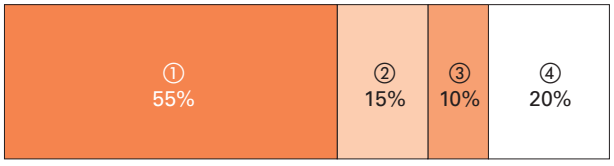
Type of remuneration	Objective/summary
Basic remuneration	Fixed cash salary based on position
Annual bonus	Performance-linked cash remuneration to evaluate steady achievement of targets for each fiscal year · To clarify responsibility for results in each fiscal year, the payment rate is determined in a range from 0% to 200% of the standard amount, in proportion to the degree of achievement of the targets for EBITDA margin and consolidated net sales for each fiscal year, which are key performance indicators · In some cases, the payment rate determined above may be multiplied by any of 0.95, 1.00, or 1.05 depending on discretionary evaluation by the Nomination and Compensation Advisory Committee or by the president · Paid in a lump sum after the end of each fiscal year
Performance-linked share-based remuneration (performance share unit)	Performance-linked share-based remuneration to provide an incentive to sustainably increase corporate value · The number of shares to grant is decided within the range of 0% to 200% of the standard amount (the "payment rate") calculated as designated by the Board of Directors of the Company, according to the achievement rate for numerical targets such as earnings during the performance evaluation period · The Board of Directors of the Company determines indicators required for the calculation of numerical targets, performance-linked coefficients, and specific shares granted*1 · The method for calculating the number of the Company's shares granted and amount of cash paid is as follows. First, the number of the Company's shares to be granted to each eligible director is calculated in accordance with formula (i) below (fractions of less than 100 shares being rounded down); then the amount of cash paid to each eligible director (cash for payment of taxes) is calculated in accordance with formula (ii) below (i) Number of the Company's shares granted to each eligible director Standard share unit number*2 × Payment rate × 50% (ii) Amount of cash to be paid to each eligible director (Standard share unit number × Payment rate − Number of the Company's shares calculated in (i) above) × Stock price at the time of grant · Grant shares in a lump sum after the end of a performance evaluation period
Restricted share-based remuneration system	Share-based remuneration to further facilitate the alignment of interests with shareholders by promoting long-term holding of stock · Grant restricted shares in the number determined by the Company's Board of Directors each fiscal year in accordance with the rank of each eligible director · Restrictions on transfers are lifted when conditions are met, such as when the restriction period expires or when an eligible director retires or resigns from their position before the restriction period expires by reason of expiration of their term of office, death, or some other reason the Company's Board of Directors deems justifiable and ceases to serve as a director, officer, Audit & Supervisory Board Member, employee, or any other equivalent position stipulated in advance by the Board of Directors of the Company

*1 The performance evaluation period for the performance-linked share-based remuneration system as of March 30, 2022, is the three-year period from the fiscal year ending December 31, 2022, through the fiscal year ending December 31, 2024. Aiming to create sustainable corporate value, the Company will use the ROE target, which is a strategic indicator in the Medium-Term Plan, and an employee engagement indicator as a nonfinancial indicator, for evaluation during this evaluation period.
*2 Determined by the Board of Directors in accordance with the rank of each eligible director.

[Payment Rate of Basic Remuneration and Performance-Linked Remuneration]

As for the weight of each remuneration component, the ratio of basic remuneration as a fixed salary to performance-linked remuneration was set at 55:45 in order to provide a healthy incentive to generate sustainable growth and corporate value in the medium to long term. The ratio of basic remuneration to the annual bonus (standard amount) to performance-linked share-based remuneration (standard amount) to restricted share-based remuneration (standard amount) is set at roughly 1 (55%) to 0.27 (15%) to 0.18 (10%) to 0.36% (20%). The composition of remuneration is indicated in the figure below.

Composition of remuneration



① Basic remuneration
② Annual bonus (standard amount)
③ Performance-linked share-based remuneration (standard amount)
④ Restricted share-based remuneration (standard amount)

[Level of Remuneration]

The level of remuneration for the eligible directors is appropriately set according to each position in order to provide healthy incentives to excellent personnel who generate sustainable growth and corporate value in the medium to long term. The level is specified by setting benchmarks upon a selection of comparable corporate groups and considering the Company's business characteristics using the officer remuneration survey data managed by an external remuneration advisor and other data.

[Remuneration Decision Process]

To guarantee the objectivity and transparency in the process of determination of the remuneration amounts for eligible directors, the Nomination and Compensation Advisory Committee formulates standard amounts for the respective remuneration components ("remuneration table") and the proposed remuneration amount for each eligible director, and the Company's Board of Directors deliberates and resolves whether the president and chief executive officer may determine the remuneration table and the remuneration amount for each eligible director based on the propositions above. The president and chief executive officer then determines the remuneration table and the remuneration amount for each eligible director within the range approved at the General Meeting of Shareholders.

[Remuneration Amounts for Eligible Directors]

The remuneration amounts for eligible directors are determined by the process described above within the range approved at the General Meeting of Shareholders. The remuneration range includes the portion paid as salary and bonuses for officer duties undertaken by directors who also serve as officers. The ranges for remunerations are as follows.

Type of remuneration	Remuneration range
Basic remuneration	Within ¥370 million per year
Annual bonus	Within ¥220 million per year
Performance-linked share-based remuneration (performance share unit)	The total amount of monetary remuneration claims and cash for tax payment provided to eligible directors as remuneration related to the new performance-linked, share-based remuneration system is within an amount per fiscal year equivalent to 58,000 shares multiplied by the stock price at the time of grant.
Restricted share-based remuneration system	The total amount of monetary remuneration claims provided as remuneration related to the restricted share-based remuneration system is within ¥150 million per year.

[Basic Policy on Determination of Remuneration for Outside Directors]

Remuneration for outside directors, who serve in the oversight function from an independent standpoint from business execution, consists only of basic remuneration of a set amount, which is determined taking into consideration the result of comparison with corporate groups of the same size. The Nomination and Compensation Advisory Committee formulates the proposed remuneration amount for each outside director, and the Company's Board of Directors deliberates and resolves whether the president and chief executive officer may determine the remuneration amount for each outside director based on the propositions above. The president and chief executive officer then determines the remuneration amount for each outside director within the range (up to ¥80 million per year) approved at the General Meeting of Shareholders.

[Basic Policy on Determination of Remuneration for Non-operating Directors]

Remuneration for non-operating directors, who serve in the oversight function from an independent standpoint from business execution, consists only of basic remuneration of a set amount, which is determined taking into consideration the result of comparison with corporate groups of the same size. The Nomination and Compensation Advisory Committee formulates the proposed remuneration amount for each non-operating director, and the Company's Board of Directors deliberates and resolves whether the president and chief executive officer may determine the remuneration amount for each non-operating director based on the propositions above. The president and chief executive officer then determines the remuneration amount for each non-operating director within the range (up to ¥450 million per year, inclusive of up to ¥80 million per year for outside directors) approved at the General Meeting of Shareholders.

[Basic Policy on Determination of Remuneration for Audit & Supervisory Board Members]

Audit & Supervisory Board Members are responsible for supervising and auditing business duties executed by the directors in a position that is independent of the Board of Directors. They receive only a basic remuneration in the form of a basic salary, which is decided on and paid out following discussions among the Audit & Supervisory Board Members, within a remuneration framework (of within ¥72 million per year) approved by the Shareholders' Meeting.

Total Remuneration Paid to Directors and Audit & Supervisory Board Members (Fiscal Year Ended December 31, 2021)

Position	Total remuneration (Millions of yen)	Total of various types of remuneration (Millions of yen)				Number of eligible officers
		Basic remuneration	Annual bonus	Performance-linked share-based remuneration system	Restricted share-based remuneration system	
Directors (Excluding outside directors)	565	236	102	133	93	7
Audit & Supervisory Board Members (Excluding outside Audit & Supervisory Board Members)	24	24	—	—	—	1
Outside directors and Audit & Supervisory Board Members	71	71	—	—	—	8

Notes: 1. The total remuneration for directors includes the portion paid as salary for officer duties undertaken by directors who also serve as officers.
2. As performance indicators pertaining to performance-linked remuneration, the consolidated operating margin and consolidated net sales as key managerial indicators are applied to annual bonus, in order to clarify responsibility for results in each fiscal year, and ROE as a strategic indicator in the medium-term plan is applied to performance-linked share-based remuneration, in order to pursue the creation of sustainable corporate value. In the current business year, they show as follows; the consolidated operating margin stood at 14.8%, the consolidated net sales at ¥140,055 million, and ROE at 11.5%.

Remuneration Amounts for Individual Officers (Fiscal Year Ended December 31, 2021)

Name	Total remuneration (Millions of yen)	Position	Company	Total of various types of remuneration (Millions of yen)			
				Basic remuneration	Annual bonus	Performance-linked share-based remuneration system	Restricted share-based remuneration system
Noriaki Taneichi	155	Director	Submitting company	62	28	38	26

Note: The table only includes officers who receive remuneration of ¥100 million or more in total.

Internal Control System

Initiatives are taken to bolster the group internal control system, including the strengthening of business management at overseas subsidiaries with increasing presence, and the establishment of compliance systems. In this section, an overview is provided on activities related to group management system, compliance system, risk management system, and the improvement of information management.

→ For further details on internal control, please see the Corporate Governance Report at https://www.tok.co.jp/content/download/6608/98796/file/220401-1.pdf (in Japanese)

Group Management System (GMS)

To establish and maintain the global business management systems, the TOK Group defined 15 fields for group-wide consistent initiatives as management functions, established group-wide common rules, and promoted the operation and maintenance of the Group Management System (GMS) as the basis of continuous improvement. Through these initiatives, we will steadily reduce the group risks and enhance its corporate value.

[Organization Structure for Promoting GMS]

The Company organized a GMS Committee in 2017 to establish GMS. After the GMS-related measures have attained a certain standard and took root, the GMS Committee was disbanded at the end of 2021.

After disbanding the Committee, the department manager of the Corporate Planning Department in charge of supervising subsidiaries was appointed as the chief officer for GMS, in order to maintain GMS as an important mechanism in the TOK Group. The Planning Division under the Corporate Planning Department was determined to function as a secretariat for GMS. In this way, we will maintain group-wide activities while enhancing dialog with subsidiaries and strengthening the headquarters function to supervise them.

[GMS Initiatives]

To achieve enhancement of sustainable corporate value, the entire Group needs to be optimized. Therefore, the Company will implement self-inspection to check management functions and identify problems in subsidiaries, provide support for improvement, and perform post-improvement monitoring.

In 2021, TOK conducted a self-evaluation of the development and operation of GMS for one GMS management function and two subsidiaries. TOK also revised our rules and processes, creating and revising over 230 new documents. The Company also made progress with a 97% resolution rate on key issues.

15 GMS Management Functions

Business management	Sales management	Accounting/ Financial management	Purchase/ Procurement management
Risk management	Human resource management	Production management	EHS management
Compliance	Information management	Safe export management	SCM
Research and development	Import management	GMS (as the basis)	

Compliance

The TOK Group makes concerted efforts to enhance its compliance system from the basic understanding that maintaining relationships of trust with all its stakeholders is a prerequisite for sustainable development as a corporation that coexists with society. The Group strives to improve awareness of compliance among all officers and employees to ensure strict compliance with laws and regulations, the articles of incorporation, Company rules and social norms.

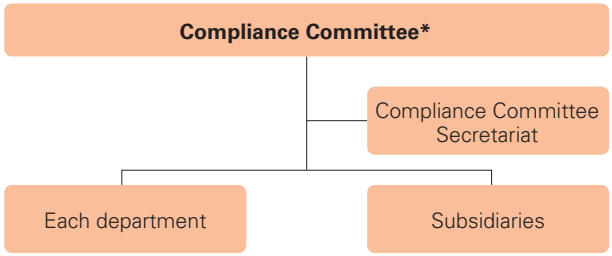
[Compliance Promotion System and Standards of Conduct]

Compliance promotion activities are being promoted with the participation of all employees, led by the Compliance Committee, which consists of TOK officers and undertakes awareness raising and dissemination activities at Group companies with the support of the Legal Division (Compliance Committee Secretariat). To prevent any violations of compliance, the Compliance Committee collects information about potential problems and compliance issues from each site, along with corrective actions and the planned time of correction, and monitors progress on a periodic basis. The standing Audit & Supervisory Board Member and the Internal Auditing Division as the internal audit department attend the Compliance Committee to share key points in audit, thereby improving the quality and effectiveness of audit.

In addition, the Ethics and Anticorruption Policy has been

established as a subordinate policy under the CSR Policy, aiming to improve compliance awareness in each officer and employee, and to clarify the values and code of conduct to be shared. This policy is also applicable to subsidiaries in Japan and overseas and is translated into the local language of each group company to be distributed to all its officers and employees.

Compliance Committee Diagram



* Chaired by the President and Chief Executive Officer

Initiatives for ensuring compliance with laws and regulations

To prevent compliance-related risks from emerging, it is essential that all officers and employees absorb compliance into business practices. To achieve this, the Company is working to construct a system that can respond rapidly to revisions to laws and regulations in each country. The Company also conducts its own unique compliance training that considers conditions at each department and site within the Group and goes through a PDCA cycle to prevent risks from materializing. In FY 2021/12, based on the activities in the previous fiscal year (updating of laws and regulations applicable to our business and the revision of Group Compliance Rules), the Company revised the Group Compliance Rules (requiring the establishment of management systems for laws and regulations at sites in Japan and overseas, and increasing the frequency of check on laws and regulations from twice annually to four times annually, as the major revised points), followed by the preparation and dissemination of the list of applicable laws and regulations and the procedures for the management of laws and regulations, and the start of operation of the check on laws and regulations (four times annually). These changes have led to the establishment of a process for timely information collection on changing laws and incorporating the information into practice. To help better understanding of compliance, CSR training was implemented for all employees in Japan, through which the changing concepts of compliance were shared, and the importance of compliance was re-emphasized.

Internal reporting system

To identify and improve or prevent compliance risks in business activities at an early stage, the Company has an internal reporting system based on the Whistleblower Protection Act. A whistleblower may select one of the three channels that respectively report to the Compliance Committee Secretariat (internal), the standing Audit & Supervisory Board Member (internal), and the legal advisor (external). Whistleblowing and consultation may be made by email, by phone, in writing, in person, or by other means, and an anonymous whistleblowing is acceptable. It is clearly stated that a whistleblower is protected from dismissal or any other disadvantageous treatment because of whistleblowing unless it is conducted for an illegitimate purpose. In FY 2021/12, three reports were received concerning labor and workplace environment. After identifying the specific facts and assessing the objective status, instructions and training for correction were provided to the relevant individuals. To establish a more reassuring environment for whistleblowing, the Company will further enhance the system and continue disseminating it to all officers and employees.

Risk management

The Group's perpetual development depends on being able to precisely deal with various risks that have major impacts on business. Through communications with stakeholders, the Company strives to identify and prevent a variety of potential risks. If a risk emerges, we will take the necessary measures to minimize the negative impacts of the risk. In these and other ways, TOK maintains and improves its global risk management system.

[Risk Management System]

The Risk Management Committee plays a central role in reviewing the risk management system and formulating risk management policy. To appropriately handle various risks, the Company established the Risk Management Rules and the Risk Management Manual. Based on the Manual, the Company implements preventive measures at normal times by identifying risks that may cause serious outcomes, analyzing such risks, and determining, implementing and evaluating actions required, among other risk management activities, in the categories of management risks, social risks, and disaster/accident risks.

Risk Management Committee Diagram

* Chaired by the President and Chief Executive Officer

Initiatives to strengthen risk management system

Reaffirming the importance of contingency management after the Great East Japan Earthquake, the Group has taken steps to address various risks, including disasters and other accidents and environmental risks, with the establishment of the Contingency Management Committee (present Risk Management Committee). In 2016, the TOK Group Risk Management Committee was established to deal with a broader range of risks in accordance with the Company's global expansion.

In FY 2021/12, efforts were made to reduce risks that were considered to have high impact on business continuity based on risk assessment in the previous fiscal year (such as risks in material supply and continuous production). The COVID-19 Response Center, headed by the president, led activities to continue the production and supply of products while assuring the safety of employees. Starting in FY 2022/12, the Company will promote risk reduction activities toward the long-term development of the TOK Group, including the strengthened measures for chemical substance management risks and global warming risks.

Strengthened crisis management

The Group believes business continuity plan (BCP) begins with the safety of our employees. In Japan, TOK operates a safety confirmation system for confirming whether Group employees are safe in the event of natural disasters, including major earthquakes. Safety confirmation drills are conducted every year to ensure the smooth operation of this system and to raise awareness among employees. In the fiscal year ended December 31, 2021, four drills were implemented, and the response rate was maintained at a high level in all sessions.

Large-scale natural disaster preparedness

Based on lessons learned from the Great East Japan Earthquake and the Kumamoto Earthquake, TOK has put in place a BCP that envisions damage simultaneously striking the Headquarters and multiple sites from earthquakes directly beneath the greater Tokyo area. TOK reviews its BCP every year so it is grounded in reality by running desktop drills that simulate real-world damage that may interrupt order taking and placement, product shipment, and essential utilities. In 2021, measures against material supply risks were strengthened. Measures were continued from the previous term to formulate flood prevention plans for sites with the high risk of flooding and to introduce preventive measures at some sites, including the lifting of outdoor equipment **(see page 104)**. In FY 2022/12, the Company will continue to enhance flood prevention equipment, while formulating BCP scenarios at group companies.

Improving Information Management

Leaks of information assets could substantially compromise the competitive advantages of the TOK Group and threaten its survival as a business entity. The environment surrounding business entities is drastically changing. Cybersecurity risks may impose a significant threat not only on TOK as a single company, but also on its entire supply chain. Reinforcing the information management system is a priority issue in terms of preserving corporate value and fulfilling our social responsibility. From this standpoint, the Company is redoubling its efforts in ensuring information security by maintaining a PDCA cycle.

[TOK Group Information Management Policy]

The TOK Group (comprising Tokyo Ohka Kogyo Co., Ltd., and its subsidiaries, hereinafter collectively referred to as the "TOK Group") is implementing measures in line with the following policies, having positioned risk management related to information assets as a priority management issue to fulfill its corporate social responsibility.

Definition, protection, and effective utilization of information assets

With respect to all information assets held by the TOK Group, including managerial, client, marketing, personal, and technical information, the Group will comply with laws and regulations related to information security, other social norms, in-house rules and other guidelines, and protect the information appropriately. The Group shall only use the information to efficiently execute the operations of the Group, within the stipulated scope of authority, and for the prescribed purpose.

Update and maintain tools and security platforms

The TOK Group updates and maintains reasonable communications tools and security platforms to effectively utilize its information assets.

Organizational structure and organized activities

The TOK Group has established an Information Management Committee and will continue to build, maintain, and promote management structure to properly govern an information asset for the overall Group.

Completeness, confidentiality, and availability

The TOK Group will identify and assess risks and continue to implement countermeasures and improvements, as well as appropriately reduce information management risks through a range of human, physical, organizational, and IT-based measures to prevent leakage, falsification, theft, destruction, and other damage to the information assets held by the TOK Group.

Education

The TOK Group will implement in-house education regularly and continuously and work to raise awareness and keep everyone well informed of the in-house rules and other regulations.

Incident response

The TOK Group will endeavor to minimize the damage when an information security incident occurs and implement measures to prevent its recurrence.

Audits and continuous improvements

The TOK Group will implement regular audits and make continuous improvements as a part of its management of information assets.

[Information Management Structure]

The TOK Group created the TOK Information Management Committee headed by the Department Manager of the Corporate Planning Department, as the chair. The Committee determines policies and measures related to information security and cybersecurity.

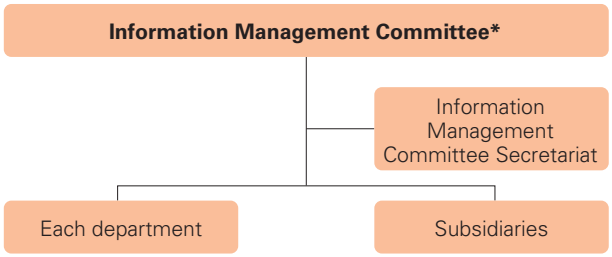
The overseas subsidiaries established their information management organizations, which develop systems and rules to collaborate under the guidance of the TOK Information Management Committee, thereby strengthening information management systems across the Group.

In addition, the Internal Auditing Division regularly audits compliance with rules and other matters on information management as part of its internal audits. The division aims to improve the information management system by giving guidance, proposals, and advice to relevant departments.

[Initiatives for Information Management]

In FY 2021/12, TOK clarified the cybersecurity systems of the TOK Group, promoted measures against cyberattacks, and changed information management rules into more understandable rules for employees, thereby further improving understanding and dissemination. The Group also improved the information management standard by ensuring the observance of outbound email rules and implementing employee training concerning emails containing Emotet and other malware.

Information Management Committee Diagram



* Chaired by the Department Manager of the Corporate Planning Department

Risk management

— To maintain stable supply in the era of co-existence with COVID-19

While the TOK Group continues to expand its activities in Japan and overseas, supported by the strong semiconductor demand, the COVID-19 pandemic has prolonged with the spread of variants. The Group will continue to implement thorough measures to prevent both getting infected and infecting others inside and outside the Company, thereby protecting the safety of employees, customers, and business partners, and playing our role in the supply chain.

Measures and purposes

1 Safety of employees

- Implementing thorough infection prevention measures at each business site
- Implementing work from home
- Travel restriction in Japan and overseas

2 Safety of external stakeholders

- Use of online operations whenever possible (business negotiations, coordination, audits, etc.)
- On-site collaboration through non-contact operations

Temperature taking and hand antisepsis are implemented for all employees and visitors

Web conferencing system is introduced throughout the group

Main Business Risks, Countermeasures, and Opportunities

The TOK Group conducts business activities in every region of the world in a diverse range of fields. When carrying out these business activities, it encounters a variety of risk factors that may have a detrimental impact on its financial conditions and management performance. The risks described below are solely those that the Group assesses as most significant as of December 31, 2021, and are not exhaustive of all risks associated with the TOK Group.

Theme	Risk	Countermeasure	Opportunities
Industrial and economic change	● The electronics market is subject to major cyclical changes in demand; in particular, materials and devices for semiconductors and displays are extremely affected by such demand trends ● The Group may also be affected by market changes and price fluctuations driven by the rapid speed of technological innovation and the complexity and diversity of user needs	● The Group will conduct rapid flexible sales and marketing strategies based on a deep understanding of the characteristics of each market in the semiconductor industry that include the memory field with large fluctuations in demand and price, the logic field with relatively small fluctuations, and the power device field that has a broad base **→ See pages 22–29 and 58–61** ● The Group will mitigate the impact of demand and price fluctuations for old products and fluctuations in economic conditions by constantly acquiring business in cutting-edge fields ● The Group will expand new business in fields such as life science, which has a different demand fluctuation cycle from semiconductors **→ See page 43**	● The Group will realize long-term stable growth and stable increase in corporate value through its business portfolio, which is highly resilient to economic fluctuations and centered on high value-added products ● The Group will use marketing and development to create opportunities from structural changes in its target markets and contribute to innovation
Exchange rate fluctuation	● The Group has production and marketing sites in North America, Asia, and Europe, where the markets are expected to further expand, and a part of its overseas transactions are calculated in yen, combined with risk hedge through forward exchange contracts. However, the Group may be affected by exchange rate fluctuation exceeding the anticipated level	● As a part of balance sheet management, the Group is evolving global cash management, including adjusting the balance of cash positions between overseas sites. Through these measures, the Group will enhance financial risk controls for exchange rate fluctuations and liquidity **→ See pages 44–47**	● By minimizing exchange rate fluctuation risk, the Group will minimize the risk of fluctuations in its business performance due to the business centered on the highly volatile semiconductor industry
Research and development	● The Group carries out R&D to provide products that precisely reflect user needs to maintain its competitiveness in the electronics industry, where technological innovation occurs at a rapid pace. However, since it is difficult to realize technological innovation and anticipate changes to user needs, the Group may be unable to produce the intended results due to unforeseeable reasons, regardless of how much management resources it invests into R&D	● The Group will continue to deepen the customer relationships it has cultivated at customer-oriented sites in Japan and overseas. Meanwhile, the Group will work in many fields and flexibly set its focus themes, while strengthening proactive marketing in R&D **→ See pages 22–29 and 58–61** ● The Group will go beyond simply responding to its customers' technology needs, expanding technological seeds through venture capital investment, open innovation, and collaboration with industry and academia and continue development in major themes until it succeeds **→ See pages 58–61**	● The Group will form development communities with stakeholders in Japan and overseas in the cutting-edge fields of electronics materials, such as semiconductor materials ● The Group will use open innovation to acquire a wide range of technological seeds to enable a response to any market that may launch in the future, making a full-scale investment in its resources in line with the launch of new markets
Intellectual property	● The Group has a diverse portfolio of intellectual properties, for which it grants licenses to third parties, also acquiring licenses from third parties when they are necessary or useful. If the Group is unable to safeguard and maintain or acquire these rights as anticipated, the Company may become a party and incur cost payment in a dispute or lawsuit relating to these rights	● Management of intellectual property, such as granting and acquiring licenses, is conducted without delay by a dedicated department. The Group also conducts awareness raising and training about intellectual property rights for relevant divisions such as development, sales, and manufacturing	● The Group will conduct stable management of intellectual property, while building an intellectual property portfolio that supports corporate value enhancement more effectively by discerning whether to employ open or closed strategy on a case-by-case basis in terms of patent acquisition
Raw material procurement	● The Group aims to stably procure materials by maintaining a network of multiple suppliers. However, its production activities may be affected by a delay or suspension in the supply of raw materials due to accidents at the manufacturers ● An increase in the price of raw materials may also impact the Group	● By strengthening supplier engagement, the Group continuously tracks potential risks for each supplier ● While continuing internal efforts such as reducing costs, streamlining operations, and switching to alternative materials, the Group passes on price changes for products to customers where this can be rationally justified	● The Group will reduce factors that could impede future growth by strengthening its BCP on the assumption of emergent risks at suppliers ● The Group will increase capital efficiency by securing appropriate profits from its high value-added products

Theme	Risk	Countermeasure	Opportunities
Product liability	● Within the process where customers use the Group's products, faults may occur that originate in a product defect. The Group has insurance to cover product liability compensation payments, but because insurance may not be able to cover the entire amount that has to be paid, there could be an impact on the Group's business results	● The Group provides in-line support and reduces defects through the trinity of development, manufacturing, and sales, while reducing the risk of faults through thorough understanding of customers' manufacturing lines **→ See pages 19–29 and 35**	● The Group will further improve customer satisfaction and increase its brand capabilities by increasing customers' manufacturing yields ● Profitability and capital efficiency will be increased by adding higher value to products
Natural disaster and accident	● In the event of a natural disaster, such as an earthquake, or an unforeseen accident, such as a fire or an explosion, the Group may have to suspend its production activities at its manufacturing plants in Japan and overseas with a resulting delay in product shipments. The Group may also have to pay repair or replacement costs at the damaged plant ● If COVID-19, influenza, or other infectious diseases spread among its employees, the Group may be forced to temporarily suspend its operations	● The Group has created a unified BCP **→ See pages 95–96** ● The Risk Management Committee plays a central role in reviewing the risk management system and formulating risk management policy **→ See pages 95–96** ● The phrase "disaster/accident risks" was added to the major risks of the TOK Group identified through risk assessment specified in the Risk Management Rules. The Company identifies risks that may cause serious outcomes, analyzes such risks, and determines, implements, and evaluates actions required, among other activities **→ See pages 95–96** ● The Group has established appropriate management systems for preventing infection and the spread of infection **→ See pages 95–97**	● By limiting the impact of natural disasters and accidents as far as possible, the Group will minimize its downside risk and maintain its upside potential ● The Group will acquire trust from stakeholders, such as customers, employees, and local communities, over the medium- to long term and increase its brand capabilities
Environment	● The Group uses different types of chemical substances within its production activities and has strict rules to ensure that they are handled safely. However, in the event of an accident involving the discharge of chemical substances into the external environment from Company premises, the Group's reputation within society may be affected, it may have to pay costs as compensation or in order to carry out countermeasures, and it may have to suspend production activities ● If environment-related laws and regulations in each country where the Group conducts its business activities are made stricter, the Group may face additional costs or limits on its business activities	● The Group has reassessed its production lines and work procedures based on lessons learned from accidents caused by highly corrosive chemical substances **→ See page 113** ● The Group had a third-party institution (such as ISO and RBA) conduct a health and safety audit to further improve the level of occupational health and safety by identifying potential sources of danger **→ See pages 73–75 and 113–114** ● The Group coordinates closely with local subsidiaries overseas to obtain the latest information on revisions to laws and regulations **→ See pages 110–112** ● The Group will automate its processes and develop systems to lighten the workload from registrations and filing	● By preventing accidents, the Group will maximize its upside potential ● The Group will foster greater loyalty among employees by ensuring safety on its manufacturing sites ● The Group will maintain and increase social trust in local communities overseas
Laws and regulations	● When conducting its business activities throughout the world, the Group must acquire approval for business and investment activities and observe each government's regulations relating to restrictions on imports and exports. In addition, it must observe laws and regulations related to trade, monopolies, international taxation, the environment, and recycling. If there are major revisions to any of these laws and regulations, if the Group fails to precisely understand their requirements, or if for any reason it is unable to observe them, then this may have an impact on the Group's business results	● The Group has accelerated the process of registering and receiving approval for chemical substances by having local non-Japanese employees interpret the laws and regulations and negotiating with local government institutions **→ See pages 110–112**	● Developing products that use alternatives to prohibited substances may give rise to new product characteristics and added value ● The Company will differentiate itself from competitors through its compliance with local laws and regulations
Overseas business activity	● The Group's overseas business activities may be obstructed by the emergence of such risks as unexpected revisions to laws and regulations, weakening of the industrial base, difficulties in securing personnel, terrorist attacks, wars, and natural disasters	● The Group uses its strength of having production sites in five regions around the world: Japan, China, the U.S., South Korea, and Taiwan to minimize emergent risks by coordinating between them **→ See pages 15 and 132–133**	● Reducing the Group's overall environmental risk and natural disaster and accident risk will enable it to continue fulfilling its responsibilities as a supplier
Information leakage	● The Group implements thorough measures to ensure the security of confidential business information, information relating to various other companies, and personal information. However, if such information leaks outside of the Group due to unforeseen circumstances, this may damage its reputation within society, and it may have to pay liability payments for the damage caused to a company or individual whose information was leaked, which could have an impact on the Group's business results	● Reinforcing the information management system is a priority issue in terms of preserving corporate value and fulfilling our social responsibility. From this standpoint, the Group is redoubling its efforts to ensure information security by establishing and running the PDCA cycle **→ See pages 96–97**	● A solid information management system will increase customer trust, helping to expand business opportunities ● The Group's brand capabilities will increase in Japan, the U.S., South Korea, Taiwan, China, and other regions in and outside of Japan where the Group operates

Global Environmental Conservation Considering Future Generations

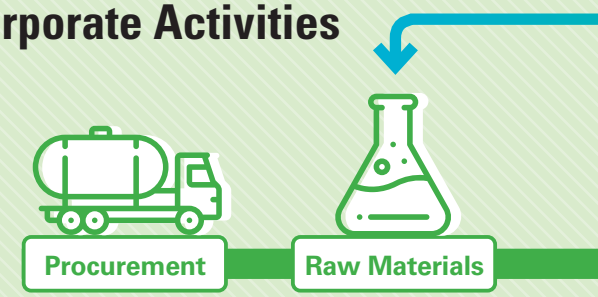
* The scope of reporting on the global environmental conservation considering future generations (pages 100–109) is on an unconsolidated basis and consolidated subsidiaries in Japan. In other cases, the scope of coverage is listed on each page.

Reduction in Environmental Impact from Corporate Activities

Environmental Performance*

Aiming at the global environmental conservation considering future generations as a new material issue, TOK conducts daily quantitative and qualitative evaluations of the effects of its corporate activities on the global environment and implements a variety of different initiatives to minimize the impact.

* Environmental performance: Environmental performance evaluations are a method of evaluating, in qualitative and quantitative terms, environmental activities and the results achieved by an organization in accordance with its environmental policy, objectives, and goals.



INPUT	
Total energy consumed	16,341 kl crude oil equivalent
Electric power	11,151 kl crude oil equivalent
Petroleum (heavy oil)	503 kl crude oil equivalent
City gas	4,597 kl crude oil equivalent
Used water	367,000 m^3
Chemical substances (Class 1 Designated Chemical Substances under the PRTR Act)	1,286 t

* January 2021 to December 2021 (Chemical substances: April 2021 to March 2022)

OUTPUT		
CO_2		25,000 ton-CO_2e
SOx*1		0.6 t
BOD*2		0.2 t
General administrative waste		40 t (Recycling rate: 50%)
Industrial waste	General industrial waste	2,035 t (Recycling rate: 44%)
	Specially controlled industrial waste	2,860 t (Recycling rate: 95%)

* January 2021 to December 2021

*1 SOx: Abbreviation for sulfur oxides; produced from the combustion of fossil fuels containing sulfur and are considered the substances that cause acid rain.
*2 BOD: Abbreviation for biochemical oxygen demand. Refers to the volume of oxygen required when pollutants in the water (organic substances) are turned into inorganic substances or gases through the action of microorganisms. BOD is a major indicator used when evaluating the degree of contamination of rivers and other bodies of water. A higher value for BOD means that the water is more contaminated.

Please follow the URL below for more detailed information on the environmental impact by site.

Information on environmental impact by site https://www.tok.co.jp/eng/csr/env-activity/s_management.html#e-data

Emissions of Greenhouse Gases — Scopes 1, 2, and 3

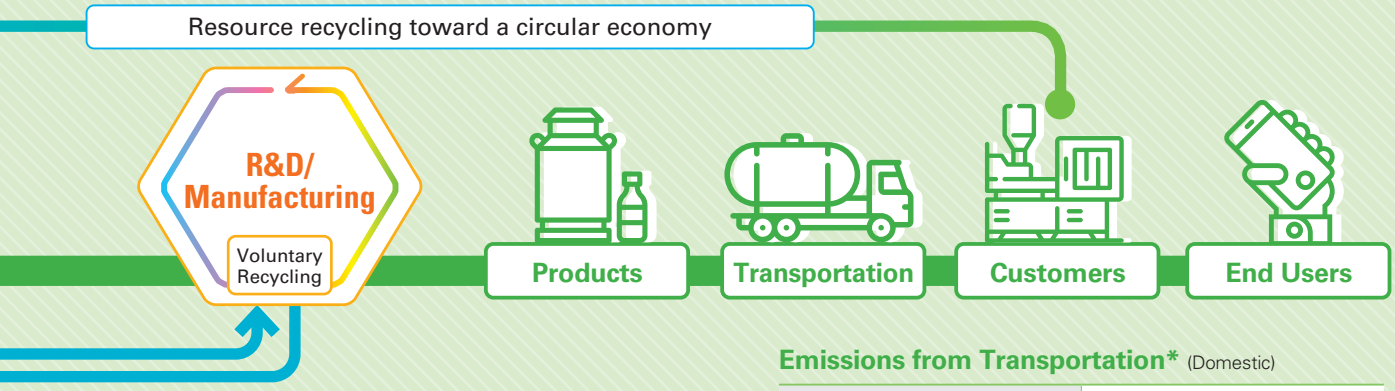
Because climate change has become more serious in recent years, companies are expected to measure greenhouse gas emissions from their own properties and across the entire value chain. The TOK Group measures and calculates greenhouse gas emissions based on the Ministry of the Environment's Basic Guidelines on Accounting for Greenhouse Gas Emissions throughout the supply chain within the context of emissions from business activities (Scope 1 and Scope 2) and indirect emissions from nonbusiness activities (Scope 3). In 2021, we also started to calculate Scopes 1 and 2 at overseas sites. TOK will advance the initiatives for the realization of a sustainable society by identifying issues throughout the value chain where corporate activities can have an impact.

Scope 1	10,462 t-CO_2e	Scope 2	14,317 t-CO_2e
Scope 1 (overseas total)	2,159 t-CO_2e	Scope 2 (overseas total)	17,128 t-CO_2e

Scope 3 Emissions by Category

Purchased goods and services	330,411 t-CO_2e	Upstream leased assets	Not applicable
Capital goods	18,391 t-CO_2e	Downstream transportation and distribution	—
Fuels excluded from Scopes 1 and 2	2,272 t-CO_2e	Processing of sold products	—
Upstream transportation and distribution	Domestic: 4,138 t-CO_2e Overseas: 6,752 t-CO_2e	Use of sold products	Not applicable
Waste generated in operations	5,205 t-CO_2e	End-of-life treatment of sold products	Not applicable
Business travel	1,821 t-CO_2e	Downstream leased assets	—
Employee commuting	2,268 t-CO_2e	Franchises	—
		Investments	Not applicable

* January 2021 to December 2021 (Waste generated in operations: April 2021 to March 2022)
* Business trips and employee commuting exclude people seconded to other companies.
* The calculation method for Scope 3 was reviewed in 2021.



Emissions from Transportation* (Domestic)

Transportation volume	24.28 million ton-kilometers
Energy consumption	1,080 kL crude oil equivalent
CO_2 emissions (domestic)	2,871 t-CO_2e

* January 2021 to December 2021
* Emissions from domestic transportation are based on *METI Fiscal 2021 Specified Shippers Periodic Report*.

Environmental Accounting*

TOK has been using environmental accounting since 2000. In 2021, environmental conservation expenses totaled ¥1,589 million, mainly for the prevention of pollution and the recycling of resources.

* Environmental accounting: A system for understanding environmental conservation related investments made by and expenses incurred by businesses and other organizations, as well as the effects of such investments in quantitative terms (currency or physical quantity) and communicating such information to stakeholders.

(Millions of yen)

Category of the cost		Key initiatives	Investment	Cost
Business area cost	Pollution prevention cost	Air, water, and other pollution prevention equipment and the renewal, operation, maintenance, and management of equipment	687	105
	Global environmental conservation cost	Energy conservation activities	382	8
	Resource circulation cost	Installation of melting equipment	14	199
Upstream/Downstream cost		Green purchasing, collection of used products	75	10
Administration cost		Approach to environmental management system	0	44
R&D cost		Research and development related to environmental conservation (costs for chemical substance screening)	0	21
Social activity cost		Cleanup activities around the production plants	0	2
Environmental remediation cost		Treatment of soil pollution by the construction of a new building	42	0
Total			1,200	389

* January 2021 to December 2021

Environmental Conservation Cost

Investments refer to the accounting for equipment associated with environmental conservation and improvement. Expenses are the sum of depreciation, personnel, and other operating expenses associated with environmental conservation. Computation of personnel expenses are based on the basic unit cost.

Economic Benefits Associated with Environmental Conservation Measures

Figures are calculated on the basis of internally realized benefits from the sale of materials with value and from the reduction of costs.

(Millions of yen)

Effects		Amount
Revenue	Gain on the sale of recycled products	31
Cost savings	Reduction in disposal costs through a reduction in the volume of waste	87
Total		118

* January 2021 to December 2021
* Scope of environmental accounting covers all production facilities and the distribution centers in Japan, excluding the headquarters and marketing offices. The reference used is the *Environmental Accounting Guidelines* 2005 published by the Ministry of the Environment.
* Amounts of less than ¥1 million have been rounded off.

Initiatives toward Realization of Carbon Neutrality

Key initiatives/Results in 2021

KPI **Energy-related CO_2 emissions per base unit (Scopes 1 and 2)**

2021 result
Reduced by more than 35 points
(vs. 2019)

2030 targets
Reduce by 15 points
(vs. 2019)

Basic Concept

Toward carbon neutrality in 2050 for global environmental conservation considering future generations as a material issue, the TOK Group quantitatively measures the environmental impact throughout the value chain and works to reduce the environmental load including CO_2 with a full understanding of the impact that production activities have on the environment. TOK aims to achieve sustainable development alongside society through the development of photoresists, systems, and new products that further conserve resources and energy.

Improve Energy Consumption per Base Unit and CO_2 Emissions

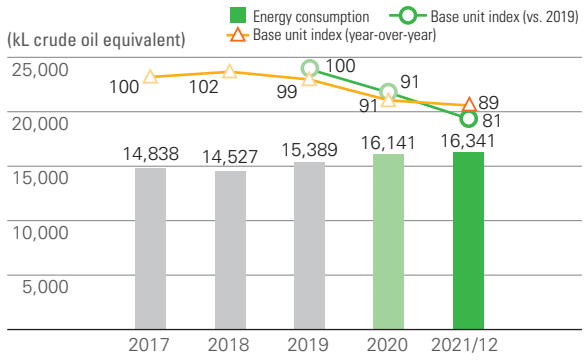
When the company replaces equipment, TOK selects equipment with smaller energy loss and pursues more energy-efficient and less CO_2-emitting operation of existing equipment.

In 2021, the company continued efforts to curb the increase of energy consumption by shifting to LED lights, renewing with more efficient air-conditioning systems, reducing energy consumption by renewing insulation materials to reduce heat dissipation from steam piping, reviewing the rules to prevent forgetting to turn off lights, turning off a certain percentage of lamps, and reviewing the operating method of the co-generation system at Sagami Operation Center. Nevertheless, energy consumption increased by 2% year-over-year (in 2020, energy consumption increased by 5% year-over-year) because of the completion of a new building at the Sagami Operation Center and other factors.

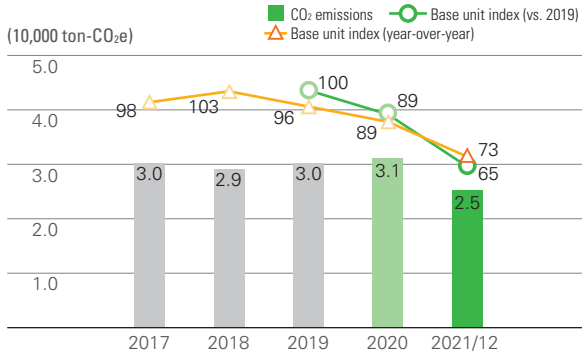
Energy consumption per base unit decreased by 11 points year-over-year, and by 19 points from 2019, owing to the increase of net sales, the increased floor area at the Sagami Operation Center.

Energy-related CO_2 emissions per base unit continued to decrease in 2021 owing to increased net sales. The figure decreased by more than 27 points year-over-year and by more than 35 points from 2019, owing to the shift in September of more than 70% of purchased electricity at all key domestic sites to renewal energy. The TOK Group will continue efforts first toward reduction by 15 points in 2030 (vs. 2019), envisioning carbon neutrality in 2050.

Energy consumption



CO_2 emissions (converted from energy consumption)



* Indicated for Scopes 1 and 2; for the latest figures for Scope 3, see page 100.

Improve Energy Consumption per Base Unit in Distribution

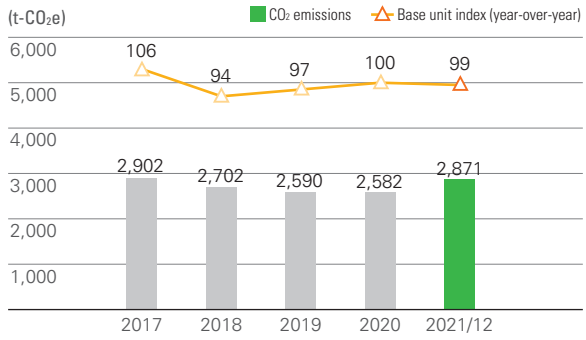
TOK products include many hazardous materials and products that require refrigerated transportation. The company takes the utmost care in storage and transportation management to maintain quality. Because the shipment volume has increased over the past several years, it is necessary to secure storage spaces and optimize transportation routes.

In 2021, TOK examined how to reorganize distribution sites and optimize transportation routes and prepared for implementation.

The company has also made consistent efforts to reduce CO_2 emissions by improving power efficiency in line with the relocation of the Hiroshima SP* to a new warehouse and the construction of a new refrigerating warehouse, by developing products of a larger capacity (transportation in larger units), and by shifting part of forklifts from diesel to electric vehicles. Aiming to further enhance transportation efficiency, the company is planning initiatives to improve energy consumption per base unit.

* Stands for constant-temperature constant-humidity stock point

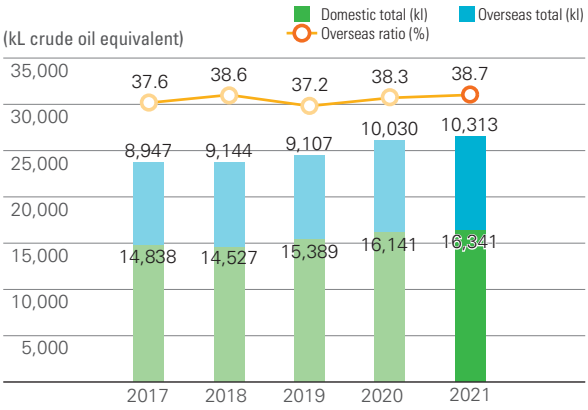
CO_2 emissions in distribution



Measures to Prevent Global Warming at Overseas Manufacturing Sites

The overseas ratio of energy consumption continued to increase in2021 just as in 2020. The main causes are the extended production equipment and increased production volume at production sites in the United States and South Korea. Going forward, TOK will continue its production activities with a focus on energy conservation through a PDCA cycle for environmental management systems.

Energy consumption at sites in Japan and overseas



* Errors in the *Integrated Report 2020* regarding the overseas ratio in 2018 and the overseas total in 2017 and 2018 have been corrected.

Future Issues and Initiatives

Over the past several years, climate change has been evident in large typhoons and torrential rainfall causing major damage to society. Climate change is thought to be caused by fluctuations in the oceans and changes in solar activity, as well as global warming caused by the build-up of greenhouse gases and the warming of the oceans due to hot water discharged from electric power stations and other factors. Toward its latest target to realize carbon neutrality in Scopes 1 and 2 in 2050, the TOK Group steadily implements a variety of CO_2 emissions reduction measures and energy conservation activities.

TOK Human Resources

Hiromasa Nakayama
General Affairs Section, General Affairs Div.

We attained renewable energy ratio of more than 70%

Interest of stakeholders is rapidly surging in corporate environmental initiatives. TOK has been considering the introduction of renewable energy for many years as a company that aims to realize carbon neutrality as contribution to a decarbonized society.

Although there were cost difficulties in the introduction, we managed to shift more than 70% of purchased electricity at domestic sites to renewable energy in September 2021 through power-saving measures and negotiation for electricity charge discount. We plan to further increase the ratio of renewable energy in the future. We will continue to realize carbon neutrality by promoting measures for global environmental conservation considering future generations as a material issue, in cooperation with all stakeholders related to the TOK Group.

Promotion of Resource Recycling: Initiatives to Address Water Risk

Key initiatives/Results in 2021

KPI **Water use volume in Japan**

2021 result
Increase by 0.4%
(vs. 2019)

2030 targets
Reduce by 15%
(vs. 2019)

Basic Concept

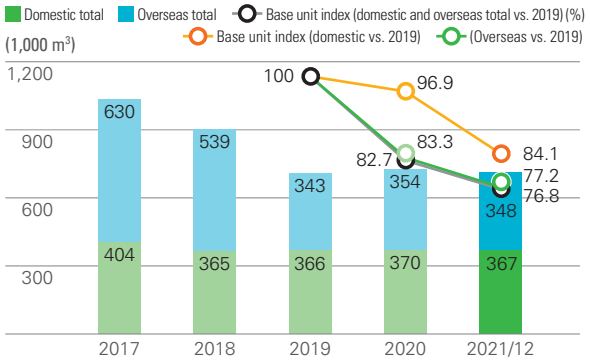
Amid increasing public attention for water resources as a global sustainability requirement, the Group's products and manufacturing processes use water as an essential resource. Therefore, TOK strives to minimize the volume of water consumed in production activities and to maintain and improve the quality of wastewater. The Group will continue to make environmental contributions through its business activities while monitoring water risks for global environmental conservation considering future generations as a material issue.

Changes in Water Consumption

Water use volume changes when manufacturing processes and output change. TOK works to reduce its use by constantly monitoring the state of industrial water and city water use and reviewing related equipment.

In 2021, water use volume in Japan increased slightly year-over-year to 367,000 m³, which was an increase of 0.4% from 2019. Water use volume at overseas sites decreased by 6,000 m³ year-over-year to 348,000 m³. Because TOK managed to curb water use volume despite production increases, the base unit index (sum of domestic and overseas) decreased by 6 points year-over-year.

Changes in water use volume at domestic and overseas sites



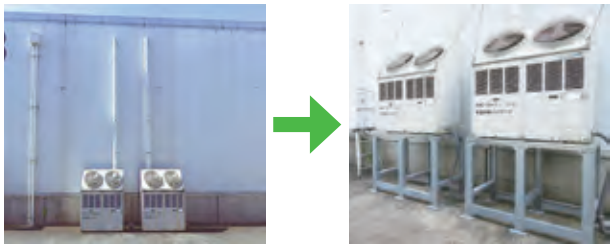
* Errors in *Integrated Report 2020* regarding base unit index for 2020 have been corrected.

Water Risk Management

Water risks and other natural resource risks are ranked among the ten greatest risks over the next ten years in the *Global Risks Report 2022* published by the World Economic Forum. To better understand water use volume at all sites around the world, the TOK Group clarified the respective risks in the stages of water supply, raw materials supply, manufacturing processes, and wastewater emissions from plants. TOK then examined the measures to implement for water risks in the supply chain, including water intake restrictions and flooding risks due to natural disasters, as well as the risk of business interruption resulting from water contamination.

Set a Medium- to Long-Term Target

TOK implemented proactive measures to reduce water risk in 2018 and has worked toward group-wide targets since 2019. In 2021, TOK examined reduction measures for the risk of contamination of piping and equipment at each site, reviewed water use operations, and assessed the measures to reduce natural disaster risks and then performed the relevant activities based on the plans. The company will continue to implement risk reduction measures to attain the medium- to long-term target of reducing domestic water use by 15% from the 2019 level by 2030.



Raised air-conditioning systems to reduce the flooding risks (Distribution Control Center)

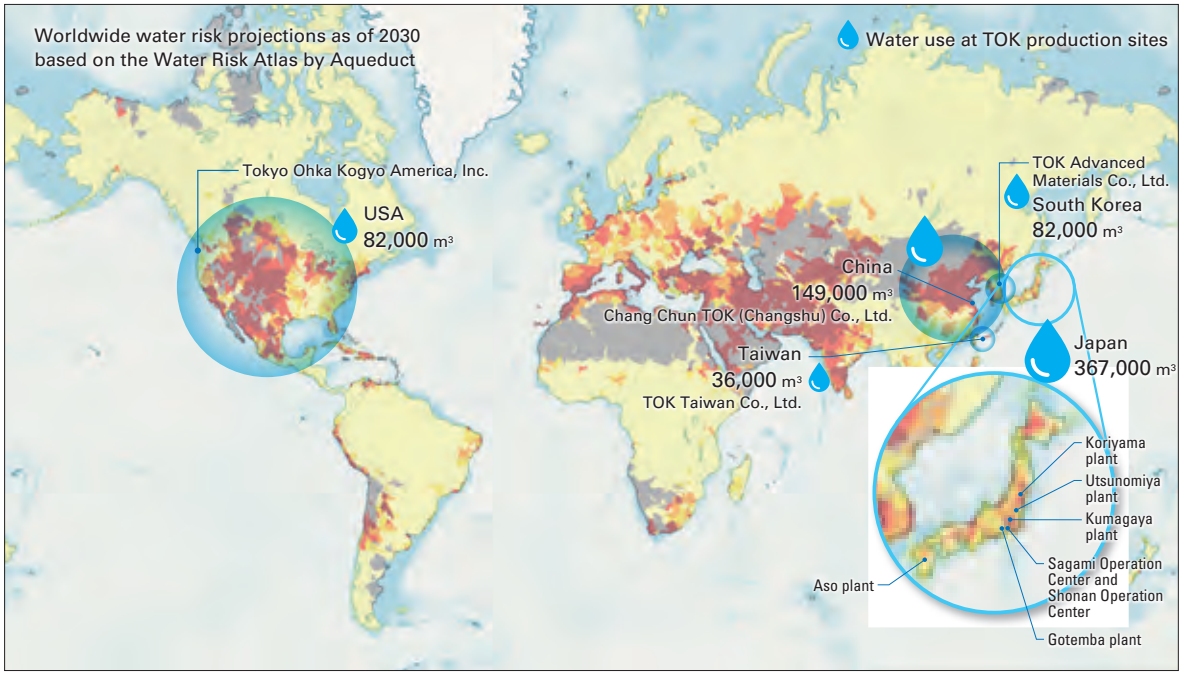
Worldwide Water Risk (0–100%) Projections for 2030

In a business-as-usual (BAU) scenario, the map shows water use as a percentage of the water supply in each region, assuming both economic growth and higher CO_2 emissions.

The higher the percentage, the more severe the competition for water as more people fight over fewer water resources.

- Low risk (under 10%)
- Low to medium risk (10% to 20%)
- Medium to high risk (20% to 40%)
- High risk (40% to 80%)
- Extremely high risk (over 80%)
- Water shortage

Business-as-usual (BAU) scenario (RCP8.5)
One of the four scenarios for representative concentration pathways outlined in the *Fifth Assessment Report* by the Intergovernmental Panel on Climate Change (IPCC). This scenario assumes no further efforts being made to suppress emissions after already introduced or currently planned reduction measures. This scenario assumes the largest emission volume among the projected greenhouse gas emissions as of the year 2100.



Aqueduct Water Risk Atlas
Aqueduct is an interactive website tool for mapping water risk provided free of charge by the World Resources Institute (WRI), a think tank in the United States that researches water and other natural resource problems. Aqueduct provides interactive data on water risk at the production sites of companies. The website also offers detailed information about natural resource problems in different regions of the world.

Future Issues and Initiatives

There are concerns about the impact of water stress caused by climate change on water resources. Difficulties may increase in the environment surrounding product manufacturing due to water intake restrictions and discharge limitations imposed by more stringent regulations. To protect equipment from floods, flood control measures are in progress as part of BCP at the Sagami Operation Center as our R&D hub and at the Distribution Control Center for handling product storage and transportation, and standards of conduct in the event of a flood are being formulated at each site. TOK will continue working to minimize water stress and water risk by reducing water use, reducing pollution risks, and examining the impact of natural disasters.

TOK Human Resources

Masato Mukai
Inspection Section, Gotemba Plant

We reduce water use volume with new ideas and wisdom

As global interest surges in water risks, we anticipate that various regulations will be tightened in Japan and overseas. Against this backdrop, TOK has collected various inputs from inspectors at the Gotemba plant for attaining the medium- to long-term targets indicated above and has promoted water use reduction activities featuring cooling water (amount of wastewater: 22L/min) for product evaluation equipment with large heat sources. Unlike the conventional system that did not reuse wastewater after cooling, we introduced a new idea to circulate cooling water using a chiller, and successfully reduced water use volume of the entire Gotemba plant by approximately 20%.

We will continue to find out points for improvement from various perspectives to further reduce water use volume.

Promotion of Resource Recycling: Reducing Industrial Waste Emissions and Landfill Disposal

Key initiatives/Results in 2021

KPI **Volume of industrial waste per base unit**

2021 result
Up 9.5 points
(vs. 2019)

2030 targets
Reduce by 15 points
(vs. 2019)

Basic Concept

As measures toward circular economy, the company promotes the 3R (Reduce, Reuse, and Recycle) activities. By restricting the volume of generated waste, thoroughly sorting all waste by type, and increasing the volume that is recycled, TOK is working to make more effective use of resources. The TOK Group strives to maintain zero emissions*by reducing the landfill disposal volume by processing waste products through combustion or crushing, which is called intermediate treatment, and through stabilization and volume reduction initiatives.

* Zero emissions: Landfill disposal volume (direct or after intermediate treatment) of less than 1% of industrial waste discharged by production activities

Achieved Zero Emissions

In 2021, industrial waste for landfill disposal after intermediate treatment stood at less than 1% of total waste, and thus TOK achieved zero emissions for eight consecutive years since 2014.

Amount of industrial waste generation*

* The base unit index is calculated after adding general industrial waste and specially controlled industrial waste.

Reduce Industrial Waste Emissions

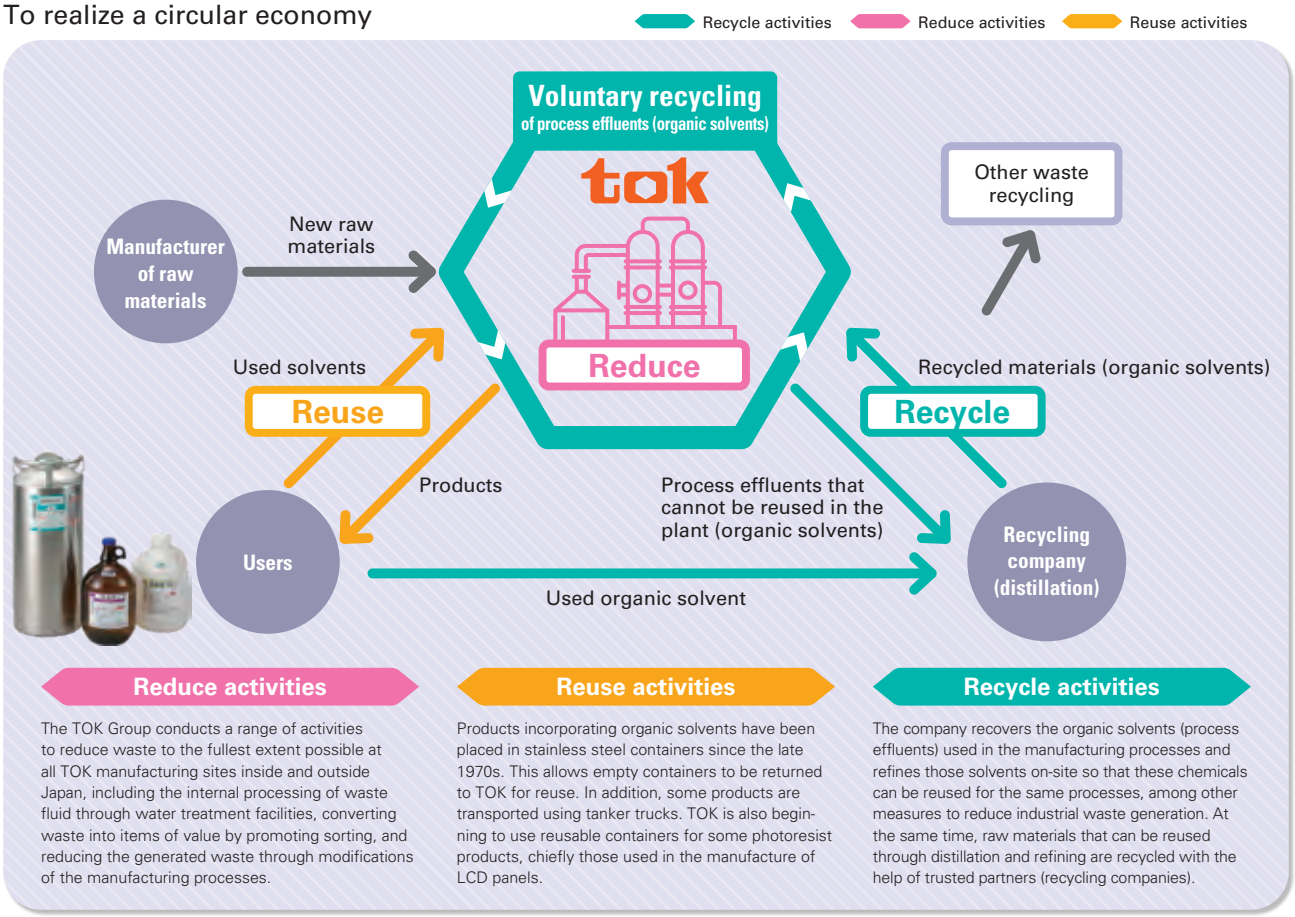
In 2020, TOK set a new medium-term target to reduce industrial waste generation (per base unit) by 15 points vs. 2019 by 2030 (reduction of approximately 1.4 points annually). With this target in mind, TOK has been working to reduce various types of waste by refining and reusing process effluents, internal effluent processing, internal recovery, and converting waste into items of value.

In 2021, TOK implemented efforts to reuse process effluents and proactively convert waste into items of value, which led to the reduction of industrial waste per base unit by 1.1 points year-over-year. However, the medium-term target was left unattained because the figure increased by 9.5 points vs. 2019 as the base year. TOK will continue to promote measures to attain the medium-term targets, including the increase of items of value.

Techniques for Recycling Organic Solvent Effluents

TOK strives to effectively use the waste generated by its plants. For example, waste oil is sorted by type of recyclable solvent, and ratings of impurities and purity are introduced with strengthened control applied. In this way, it is possible to reuse waste oil that was previously disposed of as industrial waste. It is now also possible to use waste oil with a mixture of organic solvents as combustion improvers by blending with other waste oil of different calories and water contents. Moreover, recycle activities are in progress at the Koriyama plant featuring the conversion of waste plastics, glass, and other solid waste into items of value. TOK will continue contributing to a circular economy through the effective use of resources as described above.

To realize a circular economy



Reduce activities

The TOK Group conducts a range of activities to reduce waste to the fullest extent possible at all TOK manufacturing sites inside and outside Japan, including the internal processing of waste fluid through water treatment facilities, converting waste into items of value by promoting sorting, and reducing the generated waste through modifications of the manufacturing processes.

Reuse activities

Products incorporating organic solvents have been placed in stainless steel containers since the late 1970s. This allows empty containers to be returned to TOK for reuse. In addition, some products are transported using tanker trucks. TOK is also beginning to use reusable containers for some photoresist products, chiefly those used in the manufacture of LCD panels.

Recycle activities

The company recovers the organic solvents (process effluents) used in the manufacturing processes and refines those solvents on-site so that these chemicals can be reused for the same processes, among other measures to reduce industrial waste generation. At the same time, raw materials that can be reused through distillation and refining are recycled with the help of trusted partners (recycling companies).

Reduce: This refers to reducing the volume of waste material generated. Reduction involves minimizing the volume of materials in products in order to minimize the volume of materials that is eventually discarded.
Reuse: This refers to the repeated use of manufactured goods, containers, and other products in order to reduce the volume of waste materials generated and to conserve resources.
Recycle: This refers to the use of waste materials as resources rather than incinerating these materials or sending them to a landfill, thereby conserving resources and preventing environmental pollution.

TOK Stakeholders

Mr. Yuhei Omokawa
General Manager of Marketing, Kamaya Corporation

We sell more than 95% of collected resources as highly refined raw materials

Our company collects, sorts, and processes diverse resources from industrial waste to home appliances and paper waste generated at general households, and delivers them to steel manufacturers and paper manufacturers. We have operated in resource collection and recycling for many years, and social needs for the circular use of resources are increasing every year. When doing business with TOK and other waste providing companies, we look for items of value in their waste, and also consultation service concerning the effective use of limited resources. We also promote measures to improve the refinement of recycling in order to satisfy the stringent quality demand of recycling manufacturers. Although it needs many processes, we sell more than 95% of collected resources as highly refined raw materials. We aim to continue contributing to the establishment of a circular society through recycling business.

TOK Human Resources

Takehiro Shigihara
Facilities Section, Koriyama Plant

We convert more than 70% of unnecessary items at key plants into items of value

The Koriyama plant is the largest production facility of the TOK Group in Japan and generates a wide range of waste products. Owing to the plant-wide sorting activities, more than 70% of unnecessary items at the plant are converted into items of value.

Thorough sorting is performed to effectively use limited resources and convert waste into items of value, through the reuse of collected solvents by partner companies, collection of containers, collection of metals, and other resource recycling measures. The conversion of waste into items of value is not the goal, but it is most important to nourish and inherit a natural sorting culture throughout our group. We endeavor to raise awareness through daily environmental training activities, induction training for recruits, and training at allocated sites.

We will continue making efforts toward further waste reduction.

Air, Water and Soil/Biodiversity

Key initiatives/Results in 2021

KPI

NOx emissions to the air
Increased by 0.8 t
(Year-over-year)

Estimated CFC leakage volume
Approx. 40 t-CO_2e

Employee training on CSR
Participation rate: 100%

Basic Concept

For global environmental conservation considering future generations as a material issue, the Group takes steps to lighten its environmental impact by reducing the emissions of greenhouse gases*and chemical substances and by upgrading equipment, switching fuels, and reviewing the manufacturing processes to preserve the air, water, and soil environments upon which the livelihood of employees depend.

* Greenhouse gas: Gas in the atmosphere that allows sunlight to pass through but absorbs infrared rays emitted from the ground and seas. These gases are believed to cause global warming.

Prevent Air, Water, and Soil Pollution

· Reducing the emissions of air-polluting substances

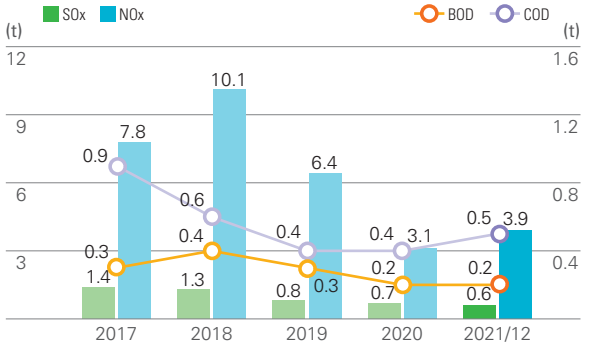
TOK endeavors to reduce the emissions of sulfur oxides (SOx) and nitrogen oxides (NOx) as key substances related to air pollution and uses natural gas-based boilers with low emissions at all plants except those that have no city gas supplies in the surrounding areas. In 2021, SOx emissions related to production activities decreased by 0.1 tons year-over-year. NOx emissions slightly increased by 0.8 tons year-over-year, despite efforts including the improvement of operating method of power generators at the Koriyama Plant.

· Monitoring soil pollution

The TOK Group manages the risk of soil and underground water pollution by recognizing the concerns that such pollution could threaten the safety and health of local residents and employees. In the event surveys discover soil or underground water pollution, the Company rapidly discloses information and takes remedial action to ensure the health and safety of residents.

In addition, the Sagami Operation Center of TOK is a member of the Koza River Purification Association, which comprises the plants, offices, and municipalities located along the rivers in the Koza District of Kanagawa Prefecture. As such, the Center endeavors to conserve water quality and maintain and improve the environment of the rivers in the neighborhood.

SOx/NOx/BOD/COD emissions



· Reducing emissions of water-polluting substances

TOK set its own management standards for treating the wastewater from its sites. The standards are stricter than the regulations, laws, and local ordinances for purifying wastewater, such as activated sludge processing, at its process wastewater treatment facilities. Only water that satisfies the standards for cleanliness is released into the public water system.

The company also periodically evaluates water quality for compliance with its voluntary standards and with laws and regulations. In 2021, the emissions were lower than the voluntary standards and lower than the values specified in laws and regulations. TOK will continue to reduce emissions by maintaining and managing its process wastewater treatment facilities so that water can be released after satisfying all applicable standards.

BOD emissions in the water discharged into public waters in 2021 were approximately 0.2 tons, while COD emissions were 0.5 tons.

Countermeasures against Ozone-Depleting Substances

The TOK Group uses the ozone-depleting chlorofluorocarbons CFC-11 and CFC-12 as coolants in refrigerators and freezers. The entire Group is working to reduce the equipment that uses these substances and to switch to alternative substances and green coolants (non-CFC). The revised Act on the Rational Use and Proper Management of Fluorocarbons mandates regular inspections and reporting of any leakage volume, and TOK is updating its environmental system for the proper management, filling, and disposal of CFCs. As a result of implementing the appropriate measures, TOK's estimated leakage of CFCs in 2021 was approximately 40 t-CO_2e based on the Act. TOK will continue to conduct group-wide inspections and periodically replace fire extinguishers that use ozone-depleting substances with the aim of further strengthening management to prevent any CFC leakage.

* Data collection period: April 2021 to March 2022

Comply with PRTR Act

Under the Japanese Pollutant Release and Transfer Register (PRTR) Act, companies must manage and report to the government the production, release, and transfer of designated chemical substances. To accurately calculate and report these figures, TOK relies on its chemicals and PRTR management system.

Of the Class I Designated Chemical Substances, a list of 462 substances defined by the PRTR Act, TOK handled 43 substances (a total of 1,286 tons) in 2021, including an estimated 3 tons released into the atmosphere and public water systems. TOK measures the emissions of VOCs and harmful air-polluting substances through PRTR surveys with the Japan Chemical Industry Association, of which it is a member.

* Data collection period: April 2021 to March 2022

Future Issues and Initiatives

The TOK Group has implemented a variety of activities and measures to prevent global warming and the pollution of the air, soil, and water and has worked to maintain biodiversity. In all these categories, the Group will continue to appropriately maintain and manage our facilities and equipment to ensure continuous normal operation, thereby fulfilling its social responsibility as a company handling chemical substances.

Preserve Biodiversity

The TOK Biodiversity Protection Declaration guides the TOK Group's activities to preserve biodiversity. In 2021, the Group implemented CSR training for all directors, officers, and employees at domestic sites, as well as employees of partner companies for some operation centers. TOK also dispatched five employees to the afforestation activities with residents of Kanagawa Prefecture through the Kanagawa Trust Midori Foundation. The company will continue to preserve biodiversity with the intention of starting a ripple effect inside and outside the company and spreading them throughout society.

Considering the impact of marine microplastics on the ecosystem, TOK is also considering the shift of petroleum product packaging materials to bioplastic materials. The Group started the selection of materials in 2022.

TOK Human Resources

Junichi Kira
Plant Administration Section, Aso Plant

We contribute to the attainment of SDGs through coexistence with abundant natural capital

The groundwater of Aso offers world-class quality as a precious resource for residents and for the local economy. Groundwater also takes up a large part of the industrial water used at the Aso plant. Therefore, we must always conserve and effectively use the groundwater as local public water.

One of these efforts is the use of a circulatory cleaning system remodeled from end-of-use filter housing, so that pond water can maintain quality for a long time. Through this measure, we actually succeeded in reducing the volume of incoming groundwater in 2021.

Our employees are highly aware of environmental conservation, probably because of the plant location inside the national park. In particular, they are endeavoring toward zero emissions of hazardous substances to outside the plant. A pH meter has been added to the final discharge sluice for the strengthened monitoring of the final gate of plant wastewater. An automatic emergency shutoff valve has been installed to prevent the release of wastewater outside the plant in case contaminated wastewater flows into the final discharge sluice.

Goal 6 of global Sustainable Development Goals (SDGs) pertains to water. Our efforts may be small, but we believe that the accumulation of small efforts will contribute to the attainment of the SDGs, and we will continue to undertake proactive environmental activities.

Supply Chain Sustainability

Strengthening Activities Related to Product Responsibility and Product Stewardship

Key initiatives

Establish chemical substance information management system

Continue to strengthen and operate chemical substance management system

Basic Concept

Management of chemical substances is one of the key priorities for TOK from the perspective of social responsibility. In addition to observing all laws and regulations, the group-wide efforts ensure the proper management of chemical substances in supply chain while TOK remains mindful of globally expanding environmental issues. The Group defined the responsibility to local and international communities as one of the TOK Group Creeds, which break down the management principles, and has been working to reduce the impact on the environment, including combating global warming, managing chemical substances, effectively utilizing resources, and reducing waste, thereby gearing up the product stewardship activities toward supply chain sustainability as a material issue.

Establish Chemical Substance Information Management System

In chemical substance management, it is necessary to collect information on the different substances and diverse laws and regulations and to make timely decisions. TOK handles the relevant information in extremely large volumes, and systematization is required to manage that information. TOK has been operating a chemical substances management system since 2005 in response to international environmental laws and regulations that keep changing.

In 2021, the chemical substance management system was revised to strengthen response to international environmental laws and regulations. As specific measures, substances were linked with law information, and a function was added to efficiently assess the applicability of laws. More efficient response to environmental laws and regulations will become possible by further promoting the registration of substance information. To further improve the provision of safety information, the Group has started to renew the SDS preparation system. The introduction of a new system will be completed by the end of 2022. Through the establishment of these systems, TOK will continue to ensure proper regulatory management and to provide safety information to customers.

Continue to Strengthen and Operate Chemical Substance Management System

TOK is working to maintain and strengthen a system for properly conveying information on chemical substances throughout the supply chain as part of its product stewardship activities, a key pillar of Responsible Care. To respond to international laws and regulations and customer requirements, TOK will clarify chemical substances to be managed in the TOK Group Chemical Management Standards and use them as a means for properly conveying information on chemical substances in the supply chain. It is impossible to permanently use these standards once established, but the Group needs to update them with the latest information of the time for proper operation.

In 2021, TOK added and replaced laws and regulations to be covered by the TOK Group Chemical Management Standards and then examined ways to improve the convenience of survey forms to be filled by suppliers. Based on the results of the above, TOK will be able to issue the revised TOK Group Chemical Management Standards (8th edition) with the latest trends of global environmental regulations in 2022. In addition to these activities to collect and manage the latest information on international chemical substance regulations, TOK will promptly update chemical substance information concerning raw materials received from suppliers and reflect the information into the SDS and labels of our products, thereby providing timely and accurate chemical substance information to customers.

Accurately Evaluated Chemical Substance Risks in a Timely Fashion and Properly Managed These Risks

The risk management of chemical substances can be interpreted as risk management in each part of the supply chain. To this end, it is necessary to provide information in accordance with the flow of materials. In each of the development, manufacturing, sales, and disposal stages, TOK creates and implements procedures for complying with all laws and regulations and managing risks.

Chemical substance risk management in each stage of supply chain

*1 REACH regulation: Registration, Evaluation, Authorization and Restriction of Chemicals; This is an EU regulation that manages the registration, evaluation, and accreditation of chemical substances through an integrated system with the aim of ensuring complete fulfillment of responsibility on the producers' part, as well as thorough compliance with preventive principles.

*2 Conflict minerals: Four minerals (tin, tantalum, tungsten, and gold) produced in the Democratic Republic of the Congo and surrounding conflict zones. These minerals are regulated under the U.S. Dodd-Frank Act (financial regulation reform act). From the perspective of responsible mineral procurement, the TOK Group includes cobalt and mica into the scope of investigations, in addition to the four minerals above.

*3 TOK Group Chemical Management Standards: Clarifies chemical substances to be managed in order to respond to international laws and regulations and customer requirements.

*4 Chemical Substances Control Act: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (Japan)

*5 PRTR Act: Act on Confirmation of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Japan)

*6 SDS: Safety Data Sheet

1 Obtaining information about revisions to laws, regulations, and treaties

For the chemical substances handled by the TOK Group, the company puts in place a system for complying with legal requirements and ascertaining the use of regulated substances under laws and regulations, such as the REACH regulation*1 and laws governing conflict minerals,*2 and determining whether or not such substances may be used. Moreover, for high-risk chemical substances whose use will be prohibited in the future due to tighter regulations, TOK proposed and is managing the progress of elimination plans for all products to ensure that the use of such substances is discontinued prior to the enforcement of the applicable laws and regulations.

2 Procurement stage

In addition to SDS*6 for raw materials, TOK asks suppliers to submit the Warranty of Nonuse of Prohibited Substances to guarantee that the prohibited substances in the TOK Group Chemical Management Standards*3 are not contained in raw materials. TOK shares chemical substance information with suppliers based on the obtainment of these forms and pursues the correct identification of chemical substances contained in raw materials.

3 Development stage

For newly developed raw materials, in addition to the legal and regulatory information, TOK checks whether they contain chemical substances subject to the TOK Group Chemical Management Standards. The company performs similar checks for customer requirements concerning newly developed products and formulates a substitution plan in the event of excess of a specified standard.

4 Production stage

All raw materials used to manufacture products are subject to occupational health and safety risk assessments. TOK identifies hazardous factors in the production environment, clarifies the hazard level, implements measures to mitigate and eliminate the hazardous factors based on the risk level, and then takes action to lower the risk. In this way, TOK maintains the proper work environment for all employees.

5 Marketing stage

By linking the ERP system for managing product shipment volumes and the chemical substance management system that contains product composition data, the company automatically calculates the transfer volume of chemical substances and reports the proper volumes and requests their applications in accordance with the Chemical Substances Control Act*4 and the PRTR Act*5 of Japan and with environmental laws and regulations of importing countries. TOK has also enabled the issuance of the SDS sheets in accordance with the current local laws and regulations using the SDS*6 preparation system, so that proper safety information will be provided to users.

6 Disposal stage

Waste from each site is thoroughly sorted by type and recycled, and properly disposed of when necessary. For industrial waste disposal service providers contracted to dispose of waste, TOK provides information about the type of waste and handling precautions through the Waste Data Sheets (WDS). The company periodically visits al service providers for on-site audits and to ensure that all waste is being properly disposed of in accordance with the contractual agreements.

TOPICS

Trends of PFAS Regulations

In the latest trends, environmental regulations focus not only on biotoxicity but also on properties, such as persistence and long-term persistence. PFAS are organic fluorine compounds that usually have a persistent structure, and the applicable regulations are being tightened especially in the United States and Europe. There are concerns about this trend, because PFAS are used in essential materials in living, such as semiconductors,*electric communications, transportation equipment, healthcare, construction, and other fields, and regulations on their use will have extremely large impact not only on TOK but also on the entire industry and on consumers.

TOK has taken the initiative in response to PFAS regulations. For example, the company completely eliminated PFOS and PFOA, which are among PFAS, several years prior to the enforcement of the revised governmental and ministerial ordinances concerning Chemical Substances Control Act, which prohibited their use. TOK also eliminated PFHxS, which are among PFAS but have yet to be regulated, considering the future risks of regulation.

The TOK Group has provided environment-friendly products through the efforts above, but the impending regulation on PFAS will have a substantially larger impact and involve an extremely intricate problem. This is because a proposal has been made to expand the scope of regulation from individual chemical substances as before to the entire PFAS, which comprise at least more than 4,700 substances, including those without clear toxicity.

The company has continuously collected information and submitted opinions through different channels regarding this problem. Because there is a limitation to negotiations with the regulatory authority by a single company, TOK will appropriately respond through industrial associations.

* It is likely that semiconductors will be certified as a socially essential use and that the start of regulation will be postponed accordingly. Because photoresists as key products are mainly used for semiconductor manufacturing, and the manufacturing and use thereof are performed in closed systems at TOK and at customers. Therefore, PFAS emissions to the environment by the semiconductor industry are considered minimal compared to the use in extinguishing agents, pesticides, etc. that are directly emitted into the environment.

Properly Comply with the PCB Special Measures Act

For low-concentration PCBs,* TOK has undertaken proper storage and management in accordance with the prescribed storage standards for waste containing PCBs at three sites (Sagami Operation Center, Shonan Operation Center, and Gotemba plant), while also filing the necessary reports with the government. In 2021, TOK formulated a road map to dispose of all electrical substation facilities and related waste used and stored at all sites by the legally mandated deadline of 2027. The company intends to dispose of this waste in stages by drawing up plans to update equipment in a way that does not interfere with the production activities at each site.

* Polychlorinated biphenyl (PCB): A kind of organic compound; PCBs were formerly used for thermal media, insulating oils, coatings, and other applications because the substance excels in terms of heat resistance and electrical insulation. However, because of its poor degradability and high toxicity, PCB production was discontinued in 1972. Nevertheless, little progress has been made with regard to disposal, and the managers responsible for storage are required to place it under strictly controlled conditions.

Future Issues and Initiatives

As described above, the movements for tightening environmental regulations have especially accelerated in these years. Because grasping the present status no longer suffices, it is now necessary to take proactive actions predicting future trends. Because environmental laws and regulations tend to be promoted in the United States and Europe ahead of other regions, it is critical to collect information from overseas. TOK has conventionally collected information from monthly journals, e-zines, and seminars, but these sources have a time lag, and it is increasingly necessary to collect information at an earlier stage. By the end of2022, the company plans to conclude a contract with a global firm that handles broad environmental regulation information. TOK will continue to implement measures for collecting information concerning regulatory trends at an earlier stage and in a broader range, and share it throughout the TOK Group.

TOK Human Resources

Toru Miyano
Section Manager, Chemical Substances Management Section, EHS Division

We implement group-wide measures in response to environmental regulations

We assume that Dept. in charge of environmental issues in the chemical industry are faced with noticeably increasing difficulties in response to environmental regulations that become more stringent every year. There are a wide range of environmental laws and regulations, and it takes time to acquire human resources who have the skills to interpret the relevant provisions. It is also difficult to hand over their skills.

We could say an infinite workforce will be required to understand environmental laws and regulations, manage hazardousness information, deepen the understanding of chemical substances, and establish an autonomous management system. This is where we need to think outside the box, and it becomes critical to improve the efficiency of information conveyance rather than depending on knowledge and experience. We are planning and preparing for different group-wide measures that include the establishment of necessary systems. In coming years, we will proceed toward the implementation of these measures.

Occupational Health and Safety/Reducing Risks Posed by Chemical Substances

Key initiatives

Acquired ISO 45001 Certification
(Koriyama Plant, Utsunomiya Plant, Shonan Operation Center, and Aso Plant)

Basic Concept

TOK recognizes that ensuring the safety and health of employees who support supply chain sustainability is the social responsibility of a company that operates business activities and is a requirement of all stakeholders. By providing a safe and comfortable workplace, TOK also intends to improve employee engagement as a key initiative in the TOK Medium-Term Plan 2024, while fostering and setting in place a safety culture.

Health and Safety System

In its initiatives for occupational health and safety, TOK works to prevent accidents based on the annual action plan of the Safety and Health Committee. Company-wide issues that a single site cannot address on its own are examined by the Safety and Health Liaison Unit, which is headed by the Dept. manager of the General Affairs Dept. The Safety and Health Liaison Unit shares information about the measures that must be horizontally developed across all sites. Based on this organizational structure, the Company promotes the prevention of injuries and fire accidents caused by chemical substances, as well as severe injuries caused by machinery or heavy objects. In the event of a workplace accident, TOK implements thorough countermeasures to improve safety and rolls them out horizontally across the organization.

Acquiring ISO 45001 Certification

Currently, the TOK Group receives an increasing number of questions and requests on CSR from stakeholders. The Group formulated the TOK CSR Policy and strengthened the management system for occupational health and safety as a component of the CSR Policy. Under these circumstances, the company is promoting the acquisition and expansion of ISO 45001 certification of the occupational health and safety management system. Through this activity, the Group also promotes measures to counter the aging of employees, measures for labor saving, and measures for mental health care.

ISO 45001 certification was acquired at the Koriyama plant, Utsunomiya plant, Shonan Operation Center, and Aso plant in 2021 after the Gotemba plant in 2020. In 2022, acquisition is planned at the Headquarters, Sagami Operation Center, and Kumagaya plant. In 2023, TOK aims to complete acquisition at all domestic sites, including the Distribution Control Center and SPs.

TOK has implemented measures in accordance with the RBA Code of Conduct. In 2021, the Koriyama plant was rated in the highest class (Platinum Recognition) in RBA audit. The company will continue to establish the necessary systems at domestic sites and will provide a safe and comfortable workplace to TOK employees at each site and to employees of affiliated companies, thereby achieving supply chain sustainability as a material issue and enhancing happiness of workers.

Initiatives for Workplace Accident Risk Reduction

· Improvement of risk assessment

In 2021, TOK promoted risk reduction activities on risks with high seriousness at each site by learning lessons from past accidents of being caught, chemical injuries, and the turnover of heavy objects. The company also strengthened risk assessment and hazard prediction activities for infrequent operations.

· Review the inspection standard for antistatic equipment and strengthen static risk reduction activities

TOK implements the inspection of antistatic equipment in accordance with the Procedure for Antistatic Measures. In 2021, a review of the inspection standard uncovered unclear points in the inspection methods and assessment criteria for the grounding and other antistatic equipment. In response, TOK investigated the inspection status at each site, reorganized the procedure, and further clarified the inspection methods.

· Established and started operation of internal standards for highly corrosive substances and poisonous/deleterious substances

In 2021, the company further strengthened management through the proper operation of the Internal Guidelines for the Handling of Highly Corrosive Chemical Substances, which were formulated in the previous year.

· Promoted improvement activities incorporating inputs from internal audit and third-party review

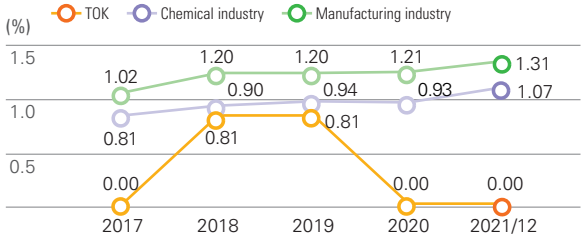
TOK conducts internal audits of the sites that plan the acquisition of ISO 45001 certification. By proactively appointing internal auditors from other sites that have already been certified and new internal auditors, TOK promotes skill upgrading of internal auditors, as well as information sharing concerning workplace accident control and environmental pollution control. The company also considers reviews by external institutions to be valuable opportunities to obtain third-party evaluations and inputs concerning the handling of chemical substances, antistatic measures, and workplace accident control, and leads them to improvement activities.

Prevention of Workplace Accidents

TOK established the Occupational Health and Safety Policy linked to the CSR Policy. In its production activities, the company places the utmost priority on the maintenance of the health and safety of workers and implements measures to prevent accidents, natural disasters, and diseases in the workplace, thereby fostering group safety. In particular, the Safety and Health Committees at each site have been working to prevent accidents, while aiming to maintain and improve all related factors. In addition, the company is working to improve the safety level of the entire Group through measures to prepare manuals for emergency action in the event of workplace or other accidents and by providing systematic training and drills for employees, as well as fostering employee safety awareness.

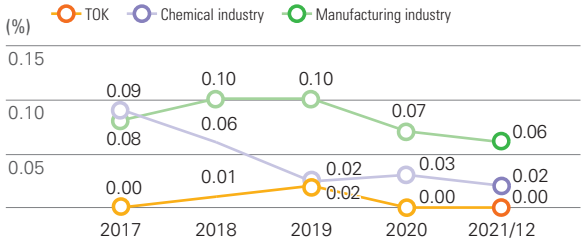
In 2021, there were eight workplace accidents (zero without and eight with lost workdays), but the company achieved 0% as the frequency rate of workplace accidents. Fortunately, no serious workplace accident occurred. Through the factor analysis of accidents without lost workdays, TOK reviewed the risks and took action for recurrence prevention. TOK will further raise the safety awareness of employees and promote risk reduction activities.

Frequency rate of workplace accidents (unconsolidated) (%)



* Frequency rate: shows the frequency of accident occurrences as the number of deaths and injuries due to workplace accidents per million work hours
Frequency rate = (number of deaths and injuries due to workplace accidents / number of work hours) × 1,000,000
(Number of deaths and injuries due to workplace accidents = number of deaths and injuries resulting 1 or more lost workdays)

Severity rate of workplace accidents (unconsolidated) (%)



* Severity rate: shows the severity of accidents as the number of lost workdays per thousand work hours
Severity rate = (number of lost workdays / number of work hours) × 1,000
(Number of lost workdays = number of lost workdays of dead and injured workers due to workplace accidents)
Source of data for chemical and manufacturing industries: Ministry of Health, Labour and Welfare's Survey on Industrial Accidents

Future Issues and Initiatives

Based on its Occupational Health and Safety Policy, TOK acquired ISO 45001 certification at an increasing number of sites and has deepened initiatives for occupational health and safety. In the meantime, it has become necessary to strengthen new risk management and develop the relevant human resources, and to bolster the organizational power to counter emerging issues. TOK will continue to comply with occupational health and safety laws in each country and region, while further strengthening risk assessment and formulating a 5S policy, based on which the company will reestablish safety-first culture.

TOK Human Resources

Hiroshi Hosoda
Labor Section,
Human Resources Div.

We will achieve supply chain sustainability by personalizing the awareness of safety and health

At the Headquarters, we are preparing for the acquisition of ISO 45001 certification in 2022. Whereas TOK is a manufacturing company, the personnel of the headquarters mainly undertake administrative affairs with a difference in the type of operation from other sites. Despite this difference in safety culture, we prepared for the acquisition of ISO 45001 certification with the understanding of on-site employees. I recognize that the awareness of safety and health has become broadly personalized in on-site personnel through the repeated explanation of ISO standards, the significance of risk assessment, and implementation methods through the Safety and Health Committee sessions and online briefing. We will continue to pursue supply chain sustainability as a material issue, aiming at the zero workplace accidents through group-wide efforts based on risk assessment.

Data Section

Data Section

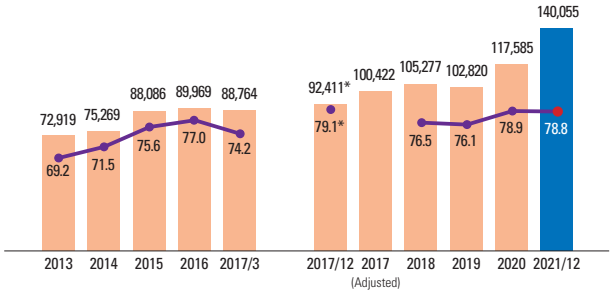
Trends of Key Data and Analysis

Ten-Year Financial Highlights

Net sales/Overseas sales ratio*

¥140,055 million **78.8%**

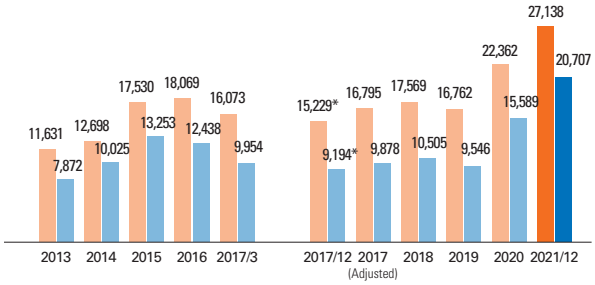
Net sales (millions of yen) — Overseas sales ratio (%)



EBITDA/Operating income*

¥27,138 million **¥20,707 million**

EBITDA (millions of yen) — Operating income (millions of yen)



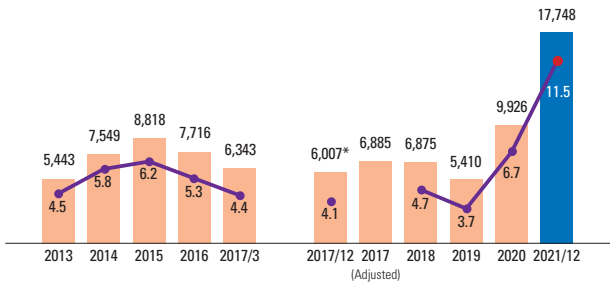
Net sales and cash generation capability (EBITDA) are on an upward trend owing to business management with a long-term vision on a 10-year scale. Toward the overarching aspiration for FY 2020 as a long-term vision formulated in FY 2010, TOK promoted long-run R&D while upgrading its world-leading microprocessing technology and high-purity processing technology based on customer-oriented strategies and marketing. It also made the largest capital investments during the TOK Medium-Term Plans for fiscal years 2015, 2018, and 2021, which led to record-high net sales and EBITDA for two consecutive years in FY 2021/12. In the TOK Vision 2030, which was formulated in 2020, the company aims to achieve EBITDA of ¥45 billion by FY 2030. In the TOK Medium-Term Plan 2024, which is backcast from the Vision, TOK will pursue net sales of ¥180 billion or more and EBITDA of ¥35 billion or more in FY 2024/12.

* Because of the change in the fiscal year-end, the fiscal year ended December 31, 2017, was an irregular nine-month period in Japan and 12 months overseas.

Profit attributable to owners of the parent*/ROE

¥17,748 million **11.5%**

Profit attributable to owners of the parent (millions of yen) — ROE (%)



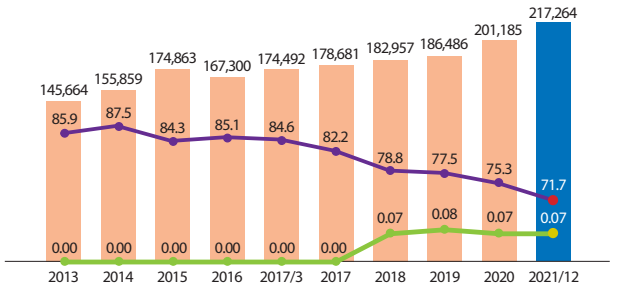
Because of the influence of increased depreciation and amortization resulting from large-scale capital investment, the volatility of operating income and of profit attributable to owners of parent was large relative to EBITDA. However, current net income for FY 2021/12 broke record highs for the second consecutive year, coupled with increased ROE. In the TOK Vision 2030, the company will promote measures to emphasize ROIC as a new KPI in the promotion of BS management, equivalent to ROE **(see pages 44–47, "Message from the CFO")**.

* Because of the change in the fiscal year-end, the fiscal year ended December 31, 2017, was an irregular nine-month period in Japan and 12 months overseas.

Total assets/Equity ratio/Debt-to-equity

¥217,264 million **71.7%** **0.07 time**

Total assets (millions of yen) — Equity ratio (%) — Debt-to-equity (times)

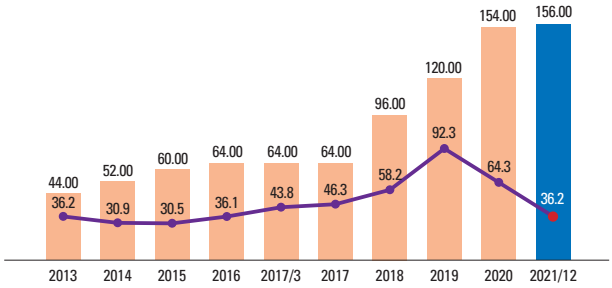


The company formulated a cash reserve policy aiming to develop technologies in anticipation of a super-long time frame, to continue to make challenges over a super-long time frame, and to respond rapidly when the unexpected happens and have promoted BS management that keenly recognizes cash allocation **(see pages 44–47, "Message from the CFO")**. The equity ratio has stayed at around 85% for many years but has been on a downward trend since the TOK Medium-Term Plan 2018 as a consequence of long-term debt financing, better shareholder returns, and large-scale share buybacks.

Dividends applicable to the year per share/Payout ratio

¥156.00 **36.2%**

Dividends applicable to the year per share (yen) — Payout ratio (%)

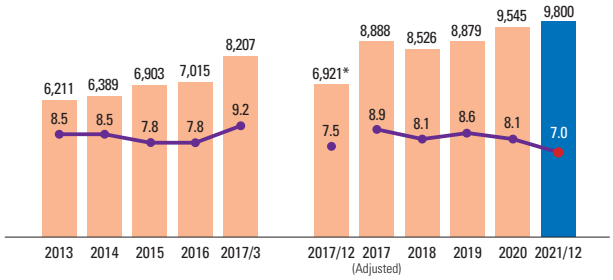


Departing from the basic policy to maintain the consolidated payout ratio of 30% or more until FY 2016/3, and of 40% or more until FY 2017/3, TOK introduced a new dividend policy targeted at DOE of 3.5%, starting with the year-end dividend in FY 2018/12, and of 4.0% starting with the year-end dividend in FY 2021/12, in order to more clearly respond to the expectations of long-run investors **(see pages 44–47, "Message from the CFO")**.

R&D costs*/Ratio of R&D costs to net sales

¥9,800 million **7.0%**

R&D costs (millions of yen) — Ratio of R&D costs to net sales (%)



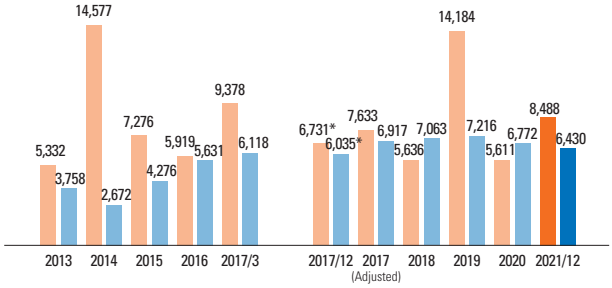
TOK continuously invests about 8% of net sales in R&D and promotes the use of materials informatics (MI) and computational chemistry toward achieving R&D efficiency of 200% **(see pages 58–61, "Message from the Director in Charge of Marketing and Development")**.

* Because of the change in the fiscal year-end, the fiscal year ended December 31, 2017, was an irregular nine-month period in Japan and 12 months overseas.

Capital investment/Depreciation and amortization

¥8,488 million **¥6,430 million**

Capital investment (millions of yen) — Depreciation and amortization (millions of yen)



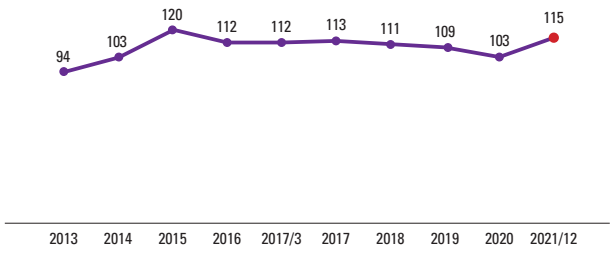
Depreciation and amortization increased as a result of large-scale capital investments during the TOK Medium-Term Plan 2015 and the TOK Medium-Term Plan 2018; however, under the TOK Medium-Term Plan 2021, the Company plans to mainly invest in production equipment with longer depreciation periods, so depreciation and amortization will increase at a more moderate pace. In the TOK Medium-Term Plan 2024, backcasting from the TOK Vision 2030 aimed at achieving net sales of ¥200.0 billion in 2030, the company also plans capital the largest capital investment featuring investment in production equipment.

* Because of the change in the fiscal year-end, the fiscal year ended December 31, 2017, was an irregular nine-month period in Japan and 12 months overseas.

Exchange rate

¥115

(yen/U.S. dollars, as of March 31)



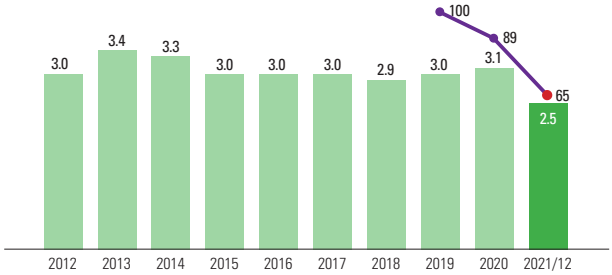
For the control of financial risks due to exchange rate changes and liquidity, the company implements risk hedge measures through forward exchange contracts while promoting BS management considering the increasing recent global risks. As part of these efforts, the company intends to advance global cash management that include the adjustment of balance of cash positions among overseas sites.

Ten-Year Nonfinancial Highlights

CO_2 emissions (converted from energy consumption)*

25,000 tons-CO_2e **65** base unit index

■■ CO_2 emissions (10,000 tons-CO_2e) — Base unit index (vs. 2019)



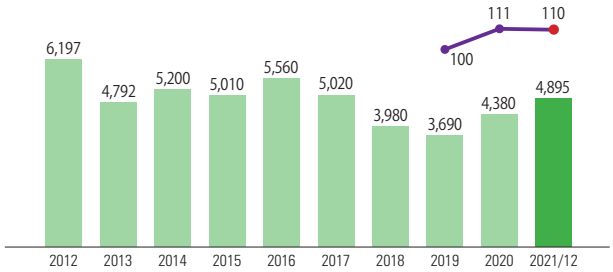
TOK is pursuing first the reduction of energy-related CO_2 emissions per base unit by 15 points by FY 2030 (vs. 2019), envisioning carbon neutrality by FY 2050. The figure in FY 2021 decreased by more than 27 points year-over-year owing to the shift in September of more than 70% of purchased electricity at all key domestic sites to renewal energy.

* Unconsolidated basis and consolidated domestic subsidiaries in Scopes 1 and 2; Because of the change in the fiscal year-end, totals for 2013 onward are from January through December, and those for 2012 are from April to March.

Volume of industrial waste*1

4,895 t **110** base unit index

■■ Volume of industrial waste (t) — Base unit index (vs. 2019)

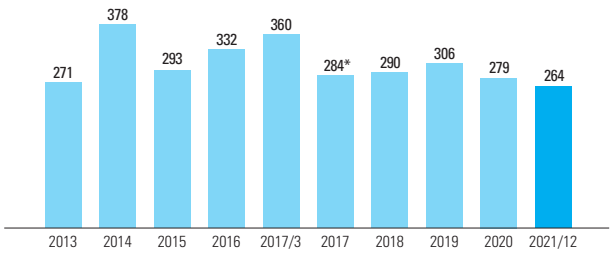


TOK achieved zero emissions*2 for eight consecutive years as the volume of its industrial waste headed to landfill disposal via intermediate treatment was kept below 1% of the total. TOK targets a reduction of 15 points in total industrial waste by FY 2030 from 2019 (per base unit). The figure increased by 9.5 points in FY 2021, despite efforts to refine and reuse process effluents, to internally process effluents, to internally collect waste, and to convert waste into items of value.

*1 Total sum of general industrial waste and specially controlled industrial waste; unconsolidated basis and consolidated subsidiaries in Japan. Because of the change in the fiscal year-end, totals for 2013 onward are from January through December, and those for 2012 are from April to March.
*2 Definition of zero emissions: Landfill disposal volume (direct or after intermediate treatment) of less than 1% of industrial waste discharged by business activities.

Number of patents registrations

264
(patents)



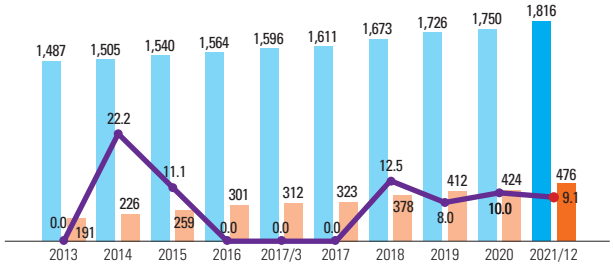
The number of patent registrations in the cutting-edge semiconductor fields is on a decreasing trend due to the increased development difficulty, but patent registrations have been rising for new businesses and new materials. Going forward, TOK will aim for the stable pursuit of business development through new and promising technologies, while building barriers to entry through patent acquisition for enhanced intellectual capital. The company will formulate a more effective patent portfolio by selecting open or closed strategies for each case thereby pursuing the further enhancement of competitiveness and corporate value.

* Because of the change in the fiscal year-end, results for the fiscal year ended December 31, 2017, are only for nine months.

Number of consolidated employees/Number of consolidated foreign employees/Graduate turnover within three years of joining the Company*

1,816 **476** **9.1**%

■■ Number of employees (consolidated) ■■ Number of foreign employees (consolidated) — Graduate turnover within three years of joining the Company (%)

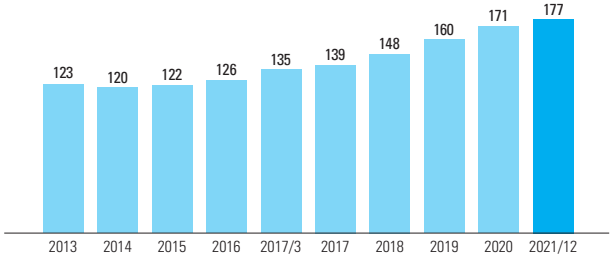


At TOK, the number of foreign employees has been increasing as a result of the expansion of local customer-oriented strategies at overseas sites, an increase in the number of overseas development and production sites, and the emphasis on merit-based hiring of new graduates. Based on a frank and open-minded business culture as the management principle, and the basic philosophy that human resources are a company asset, TOK expanded the different personnel systems and training programs. As a result, the ratio of new graduate hires who quit within three years of joining the company remained at a low rate. In March 2022, TOK was recognized for the 2022 Certified Health & Productivity Management Outstanding Organizations Recognition Program for the fourth consecutive year.

* Unconsolidated

Number of female employees*

177
(People)

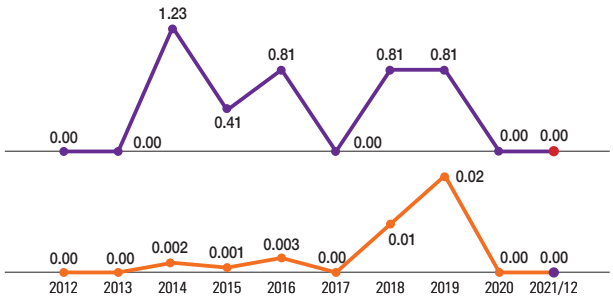


The number of female employees and the ratio of women in senior and middle management have been increasing as a result of proactive recruiting, coupled with enhanced supportive measures to retain and promote women in the company.
In recognition of the initiatives to offer flexible work styles, support for career formation plans, and support for childrearing, TOK was again selected as a constituent stock in 2022 for the MSCI Japan Empowering Women Index.

* Unconsolidated (employees exclude those seconded from other companies to TOK, and include people seconded from TOK to other companies and contract workers)

Frequency rate of workplace accidents/ Severity rate of workplace accidents*

0.00% Frequency rate of workplace accidents (%)
0.00% Severity rate of workplace accidents (%)

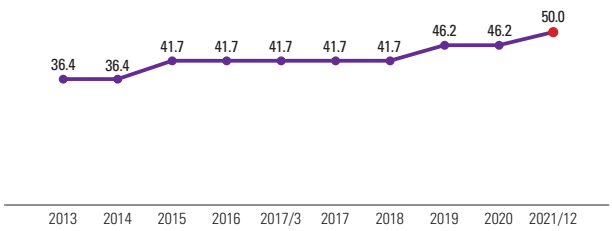


In FY 2021/12, TOK achieved zero workplace accidents both in frequency and in severity for two consecutive years. However, eight incidents without lost workdays occurred. Therefore, the company reviewed the risks through factor analysis and then formulated and implemented measures to prevent a recurrence. TOK will continue to make concerted company-wide efforts to prevent workplace accidents, including the horizontal expansion of the RBA audit results (with Platinum Recognition at a key plant) and the acquisition of ISO 45001 certification at increased sites.

* Unconsolidated

Ratio of outside officers in the Board of Directors

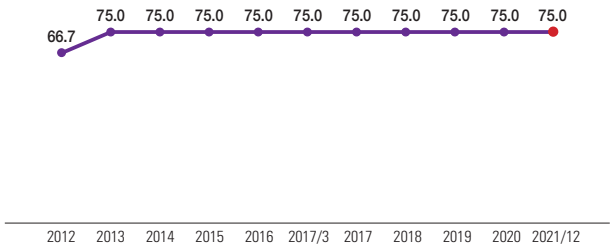
50.0%
(%)



TOK increased the number of outside Audit & Supervisory Board Members by one to three in 2013 and increased the number of outside directors by one in 2015, 2020, and 2022, respectively, to four. Therefore, the ratio of outside officers on the Board of Directors is now 50.0%.

Ratio of outside Audit & Supervisory Board Members among Audit & Supervisory Board Members

75.0%
(%)



The ratio of outside Audit & Supervisory Board Members on the Audit & Supervisory Board has been 75.0% ever since the number of outside Audit & Supervisory Board Members was increased by one to three in 2013.

Trends of Key Data and Analyses

Changes in Medium-Term Plans and Ten-Year Key Data

Rebirth of TOK

Direction:
- Enhance marketing capabilities on a global basis
- Further accelerate technology development
- Promptly launch new business
- Accelerate global strategy and expand worldwide market share

TOK Medium-Term Plan 2015

Objectives:
- Surpass record-high earnings
- Enhance business foundations that support sustainable growth

Strategies:
- Build close relationships with regional users
- Reform business portfolios
- Develop global human resources

Fiscal years ended March 31 until 2017 and the fiscal years ended December 31 after 2017	2013/3	2014/3	2015/3	2016/3
Results of operation:				
Net sales	72,919	75,269	88,086	89,969
Materials Segment	67,697	72,866	84,611	87,280
Equipment Segment	5,222	2,402	3,475	2,689
EBITDA	11,631	12,698	17,530	18,069
Operating income	7,872	10,025	13,253	12,438
Income before income taxes	8,031	11,666	14,301	11,777
Profit attributable to owners of the parent	5,443	7,549	8,818	7,716
Free cash flow	12,363	(2,610)	3,380	7,517
Capital investment	5,332	14,577	7,276	5,919
Depreciation and amortization	3,758	2,672	4,276	5,631
R&D costs	6,211	6,389	6,903	7,015
Per share data (Yen/US dollars):				
Per share basic profit	121.69	168.54	196.61	177.30
Per share cash dividends applicable to the year	44.00	52.00	60.00	64.00
Per share net assets	2,796.37	3,044.24	3,285.81	3,298.00
At year-end:				
Total assets	145,664	155,859	174,863	167,300
Total noncurrent liabilities	2,811	1,518	3,569	2,899
Interest-bearing debt	488	366	814	534
Net assets	127,838	139,962	151,999	147,270
Key performance indicators (%):				
Operating margin	10.8	13.3	15.0	13.8
ROE	4.5	5.8	6.2	5.3
Ratio of R&D costs to net sales	8.5	8.5	7.8	7.8
Equity ratio	85.9	87.5	84.3	85.1
Debt-to-equity (times)	0.00	0.00	0.00	0.00
Payout ratio	36.2	30.9	30.5	36.1
DOE	1.6	1.8	1.9	1.9
ESG-related data:				
Number of employees (consolidated)	1,487	1,505	1,540	1,564
CO_2 Emissions (converted from energy consumption) (10,000 t)*6	3.4	3.3	3.0	3.0
Industry trends:				
Worldwide semiconductor market (millions of US dollars)*1 (year)	305,584	335,843	335,168	338,931
Worldwide photoresists sales (thousands of US dollars)*2	1,152,306	1,288,713	1,230,022	1,358,009
Exchange rate (JPY/USD)*4	94	103	120	112

*1 Source: World Semiconductor Trade Statistics
*2 Source: Calculated by TOK based on data aggregated by SEMI (total sales of ArF and KrF excimer lasers and g- and i-Line photoresists)
Because of the change in the fiscal year-end, the same values are indicated for FY 2017/3 and for FY 2017/12.
*3 Forecast-based amount for 2022

TOK Medium-Term Plan 2018

Strategies:

- Reform business portfolios
- Upgrade the customer-oriented strategies
- Develop human resources capable of global operation
- Strengthen management foundation

TOK Medium-Term Plan 2021

Long-term vision up to FY 2020/12:

Aim to be a globally trusted corporate group by inspiring customers with high value-added products

Features:

- Strengthen business portfolio reforms
- Return to a growth trajectory
- Strengthen balance sheet management and introduce a new dividend policy

As semiconductor demand increased, TOK harvested the effect of long-run R&D activities and strategic investments, which led to record-high performance for two consecutive years.

					Millions of yen	Thousands of US dollars
2017/3	2017/12*5	2018/12	2019/12	2020/12	2021/12	2021/12
88,764	92,411	105,277	102,820	117,585	140,055	1,217,872
86,558	90,531	102,621	98,986	114,773	137,725	1,197,613
2,205	1,880	2,655	3,833	2,811	2,329	20,258
16,073	15,229	17,569	16,762	22,362	27,138	235,982
9,954	9,194	10,505	9,546	15,589	20,707	180,065
9,220	9,492	9,814	8,657	15,349	25,799	224,342
6,343	6,007	6,875	5,410	9,926	17,748	154,338
(926)	4,169	6,298	(4,543)	19,472	15,182	132,018
9,378	6,731	5,636	14,184	5,611	8,488	73,808
6,118	6,035	7,063	7,216	6,772	6,430	55,920
8,207	6,921	8,526	8,879	9,545	9,800	85,220
146.18	138.31	164.92	130.02	239.42	430.73	3.74
64.00	64.00	96.00	120.00	154.00	156.00	1.35
3,384.14	3,490.97	3,459.37	3,491.23	3,651.20	3,880.18	33.74
174,492	178,681	182,957	186,486	201,185	217,264	1,889,253
2,024	3,421	10,723	14,437	15,997	12,416	107,972
135	—	10,000	11,272	10,962	10,611	92,278
152,931	153,517	150,857	151,733	159,994	165,190	1,436,411
11.2	9.9	10.0	9.3	13.3	14.8	
4.4	4.1	4.7	3.7	6.7	11.5	
9.2	7.5	8.1	8.6	8.1	7.0	
84.6	82.2	78.8	77.5	75.3	71.7	
0.00	0.00	0.07	0.08	0.07	0.07	
43.8	46.3	58.2	92.3	64.3	36.2	
1.9	1.9	2.8	3.5	4.3	4.1	
1,596	1,611	1,673	1,726	1,750	1,816	
3.0	3.0	2.9	3.0	3.1	2.5	
412,221	468,778	412,307	440,389	555,893	646,456*3	
1,504,224	1,504,224	1,631,851	1,679,654	2,027,350	2,420,373	
112	113	111	109	103	115	

Equity ratio:
The equity ratio remained around 85% for a long time, but the company is continuing to pursue the optimal balance, which may be decreasing because of stronger balance sheet management.
(See pages 44–47 "Message from the CFO.")

CO_2 emissions:
The base unit index has steadily decreased through a variety of reduction measures, including the shift of 70% of electricity used at the Headquarters to renewable energy starting in September 2021.
(See pages 102–103, "Initiatives toward Achieving Carbon Neutrality")

*4 As of the end of each fiscal year
*5 Because of the change in the fiscal year-end, the fiscal year ended December 31, 2017, was an irregular nine-month period in Japan and 12 months overseas.
*6 Unconsolidated basis and consolidated subsidiaries in Japan. Because of the change in the fiscal year-end, totals for 2013 onward are from January through December, and those for 2012 are from April to March. Accordingly, the same values are indicated for FY 2017/3 and for FY 2017/12.

FY 2021/12 Market Trends, Results of Operations, Financial Position, and Performance Outlook in the Next Term

Business Environment

For the current term (FY 2021/12), the global and Japanese economies slowed down because economic activities were suppressed as a result of the global COVID-19 pandemic. Although there were recovering trends in some parts, full-scale recovery has yet to the achieved.

As for the U.S. dollar-yen exchange rate, the strong yen up to the previous year took a rapid downturn early this year. After struggles for an upward trend from March to September, the yen further weakened in October onward due to expected interest rate hikes to counter inflation in the United States combined with high crude oil prices.

Net Sales and Operating Income

In the fiscal year ended December 31, 2021, consolidated net sales increased by ¥22,470 million (19.1%) year-over-year to ¥140,055 million. Net sales in the first half increased by ¥7,604 million (13.3%) to ¥64,808 million. Net sales in the second half increased by ¥14,866 million (24.6%) to ¥75,247 million.

The main source of demand for the Company's products is the electronics market for semiconductors and displays. The semiconductor demand for PCs and data servers stayed favorable in the electronics market, owing to the dissemination of 5G and IoT combined with increased work-from-home time and the use of cloud services.

Cost of sales increased by ¥14,157 million (18.5%) year-over-year to ¥90,529 million. The cost of sales ratio dropped by 0.4 percentage point year-over-year to 64.6%. As a result, gross profit increased by ¥8,312 million (20.2%) to ¥49,525 million.

Selling, general, and administrative (SG&A) expenses increased by ¥3,194 million (12.5%) year-over-year to ¥28,817 million.

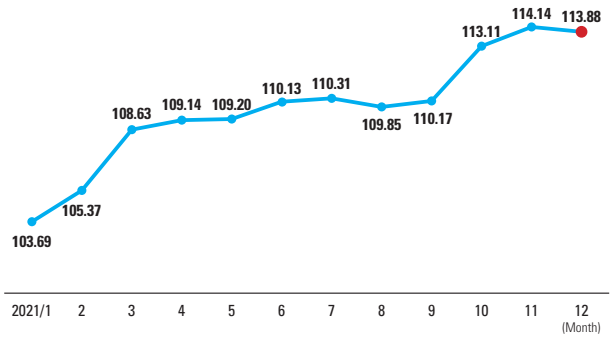
Operating income increased by ¥5,118 million (32.8%) year-over-year to ¥20,707 million owing to the effects of sales activities and the increased sales of high value-added products, despite the raised raw material prices.

Income before Income Taxes and Profit Attributable to Owners of the Parent

Income before income taxes increased by ¥10,449 million (68.1%) year-over-year to ¥25,799 million, owing to the increased gain on the sale of investment securities.

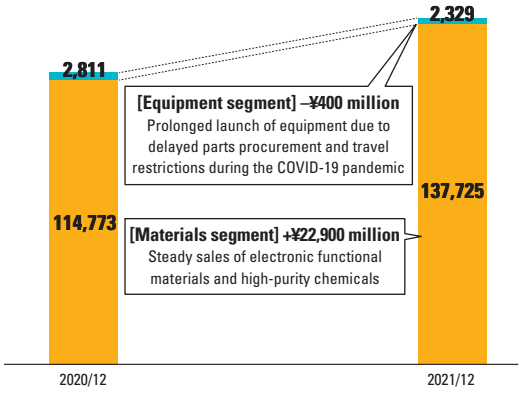
The profit attributable to owners of the parent increased by ¥7,822 million (78.8%) year-over-year to ¥17,748 million.

■ Exchange rate (yen/US dollars, monthly average)



Source: Mitsubishi UFJ Research and Consulting Co., Ltd.

■ Net sales by segment, year-over-year comparison (millions of yen)



Performance by Segment

Materials Segment:

Net sales of the segment, excluding internal transactions, increased by ¥22,951 million (20.0%) year-over-year to ¥137,725 million. Operating income increased by ¥6,042 million (29.6%) to ¥26,438 million. This was mainly because sales remained steady in the Electronic Functional Materials Division and the High-Purity Chemicals Division.

■ Electronic Functional Materials Division

In the electronic functional materials segment, net sales increased by ¥13,612 million (20.7%) year-over-year to ¥79,491 million. This was mainly due to the increased net sales because sales of semiconductor photoresists and high-density integration materials stayed steady, supported by the strong semiconductor demand for 5G, IoT, and data servers.

■ High-Purity Chemicals Division

Net sales in the High-Purity Chemicals Division increased by ¥9,072 million (18.6%) year-over-year to ¥57,804 million. This was mainly due to increased net sales because the sales of chemicals attached to semiconductor photoresists used in the cutting-edge semiconductor production process stayed steady.

Equipment Segment:

■ Process Equipment Division

Net sales in the Process Equipment Division, excluding internal transactions, decreased by ¥481 million (17.1%) year-over-year to ¥2,329 million. Operating loss decreased by ¥20 million year-over-year to ¥290 million. This mainly resulted from the prolonged launch of equipment due to delayed parts procurement and travel restrictions during the COVID-19 pandemic.

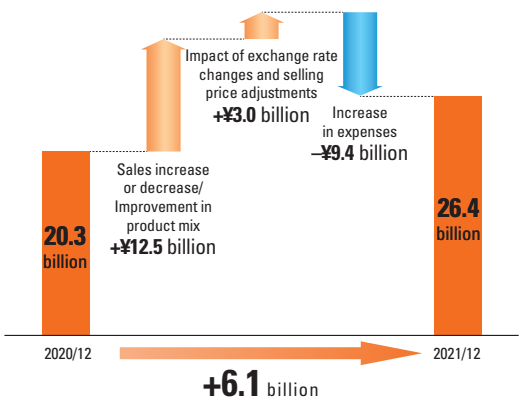
Financial Condition

Total assets at the current year-end (December 31, 2021) increased by ¥16,078 million from the previous year-end to ¥217,264 million.

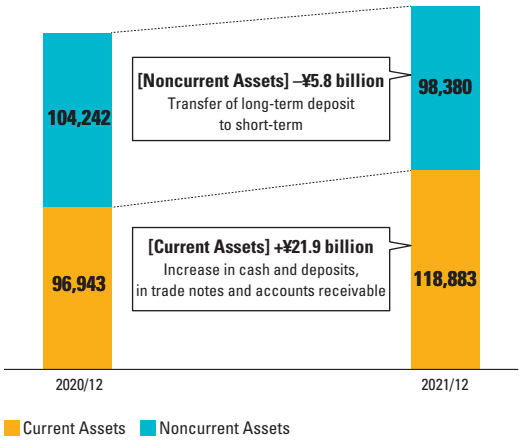
Total current assets increased by ¥21,939 million from the previous year-end to ¥118,883 million. This mainly reflected the respective increase of ¥9,013 million in cash and deposits and by ¥7,592 million in trade notes and accounts receivable.

Total noncurrent assets decreased by ¥5,861 million from the previous year-end to ¥98,380 million. This mainly resulted from the decrease of investments and other assets by ¥9,900 million due to the transfer of long-term deposit to short-term, whereas property, plant, and equipment increased by ¥3,820 million.

■ Breakdown of change in materials segment operating income



■ Total assets year-over-year comparison (millions of yen)



Total liabilities at the current year-end increased by ¥10,882 million from the previous year-end to ¥52,073 million. This mainly resulted from the increase in trade notes and accounts payable by ¥5,504 million, and the increase in short-term loans payable by ¥3,900 million due to the transfer of long-term loans payable to short-term.

Total equity at the current year-end increased by ¥5,196 million from the previous year-end to ¥165,190 million. This mainly reflected the increase in the foreign currency translation adjustment by ¥3,011 million.

As a result, the equity ratio stood at 71.7% at the end of the fiscal year.

Cash Flows

Net cash provided by operating activities during the current fiscal year decreased by ¥3,195 million year-over-year to ¥19,758 million. This mainly reflected the respective increase in income before income taxes by ¥10,449 million, the gain on the sale of investment securities by ¥4,818 million, and trade receivables by ¥3,696 million.

Net cash used in investment activities increased by ¥1,094 million year-over-year to ¥4,576 million. This mainly reflected the increase in expenses on the purchase of property, plant, and equipment by ¥1,952 million.

Net cash used in financial activities increased by ¥12,176 million year-over-year to ¥18,114 million. This mainly reflected the increase in expenses on share buyback by ¥10,050 million.

As a result, the balance of cash and cash equivalents decreased by ¥1,258 million to ¥41,469 million from ¥42,728 million at the previous year-end.

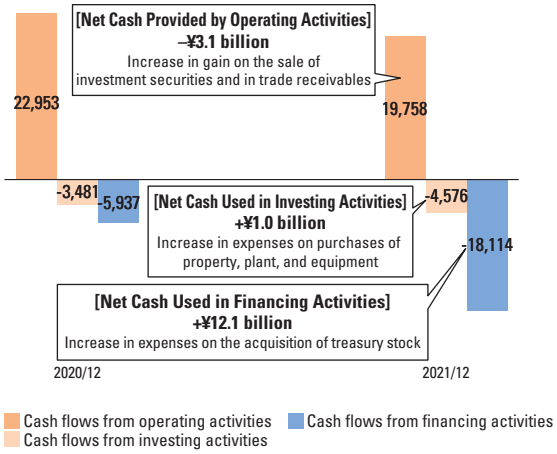
FY 2022/12 Performance Outlook*

Net sales in FY 2022/12 are estimated to increase by 15.7% vs. FY 2021/12 to ¥162.1 billion, considering the strong semiconductor market with high operating rates of customers continued from the previous year.

Operating income is estimated to increase by 18.8% to ¥24.6 billion considering the increased sales of photoresists and other high value-added products, combined with the selling price adjustments of high-purity chemicals. Profit attributable to owners of the parent is estimated to decrease by 5.9% to ¥16.7 billion due to backlash to the special profit in the previous year though operating income will increase.

* Figures announced on February 14, 2022

■ Cash flows year-over-year comparison (millions of yen)



■ Earnings forecasts*

(millions of yen, %)

	FY 2021/12	FY 2022/12 Forecast		
			Change	%
Net sales	140,055	162,100	+22,045	+15.7
Operating income	20,707	24,600	+3,893	+18.8
Profit attributable to owners of the parent	17,748	16,700	–1,048	–5.9
EBITDA	27,139	31,200	+4,061	+15.0
ROE	11.5%	10.4%	–1.1	—

* Figures announced on February 14, 2022

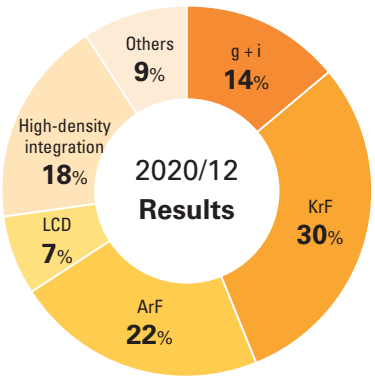
Reference: Information Related to Electronic Functional Materials and Semiconductor Photoresist

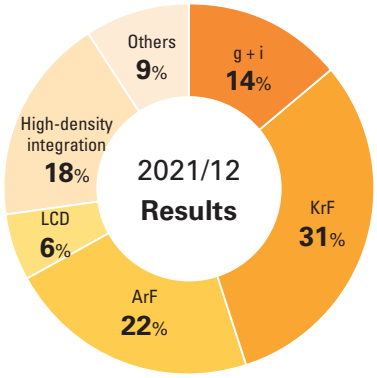
TOK's photoresists are compatible with a variety of line widths along the semiconductor miniaturization spectrum

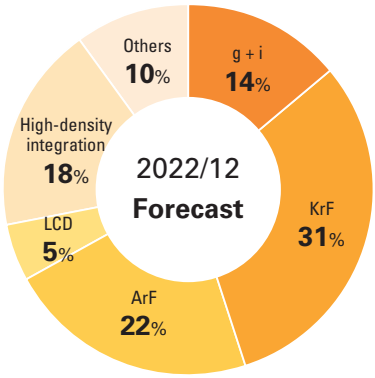
	i-Line photoresists	KrF excimer laser photoresists	ArF excimer laser photoresists	EUV photoresists
				
Light source for lithography	i-Line	KrF (krypton fluoride) Excimer laser	ArF (argon fluoride) Excimer laser	EUV (Extreme Ultraviolet)
Wavelength of light source	365 nm (i-Line)	248 nm	193 nm	13.5 nm
	Long			Short
Line width of semiconductors*	350 nm > – ≥ 250 nm	250 nm > – ≥ 130 nm	130 nm > – ≥ 10 nm	10 nm > –
	Wide			Narrow
Main applications and end products	Automotive power semiconductors Sensors LEDs	Mass-market smartphones High-performance servers Game consoles	Cutting-edge smartphones Wearable devices High-performance servers	Next-generation servers Next-generation supercomputers Next-generation communications systems

* Only rounded figures for primary ranges are shown.

Changes in sales composition of electronic functional materials by type







*1 EUV photoresists are classified under "Other"
*2 High-density integration: Packaging materials and MEMS materials

Consolidated Financial Statements

Consolidated Balance Sheets

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
December 31, 2021 and 2020

	Millions of yen		Thousands of U.S. dollars
ASSETS	2021	2020	2021
CURRENT ASSETS:			
Cash and deposits	¥ 40,469	¥ 41,728	$ 351,910
Time deposits	16,366	6,094	142,314
Receivables:			
Trade notes and accounts	33,895	26,302	294,741
Securities	3,999	2,999	34,782
Allowance for doubtful accounts	(120)	(96)	(1,045)
Inventories	21,350	17,659	185,659
Prepaid expenses and other current assets	2,921	2,255	25,404
Total current assets	118,883	96,943	1,033,767
PROPERTY, PLANT AND EQUIPMENT:			
Land	8,662	8,589	75,327
Buildings and structures	76,095	71,891	661,701
Machinery and equipment	64,907	60,264	564,413
Furniture and fixtures	23,429	21,757	203,735
Right-of-use assets	984	553	8,559
Construction in progress	3,896	4,566	33,886
Total	177,976	167,622	1,547,623
Accumulated depreciation	(121,043)	(114,510)	(1,052,555)
Net property, plant and equipment	56,932	53,112	495,068
INVESTMENTS AND OTHER ASSETS:			
Intangible assets	837	620	7,284
Investment securities	16,505	17,604	143,526
Investments in and advanced to an unconsolidated subsidiary and associated companies	7	7	65
Investment in capital	100	100	869
Net defined benefit asset	4,658	3,683	40,506
Deferred tax assets	504	346	4,389
Long-term time deposits	18,000	28,000	156,521
Other assets	834	768	7,253
Total investments and other assets	41,447	51,130	360,417
TOTAL	¥ 217,264	¥ 201,185	$ 1,889,253

LIABILITIES AND EQUITY	Millions of yen 2021	Millions of yen 2020	Thousands of U.S. dollars 2021
CURRENT LIABILITIES:			
Payables:			
Trade notes and accounts	¥ 19,250	¥ 13,745	$ 167,393
Short-term loans payable	3,900	—	33,913
Construction and other	5,227	3,520	45,460
Income taxes payable	4,278	2,219	37,202
Accrued expenses	2,488	2,002	21,635
Provisions	3,107	2,658	27,024
Other current liabilities	1,404	1,046	12,209
Total current liabilities	39,656	25,193	344,839
LONG-TERM LIABILITIES:			
Long-term loans payable	6,711	10,962	58,365
Deferred tax liabilities	1,614	2,046	14,035
Net defined benefit liability	609	484	5,299
Asset retirement obligations	81	81	708
Other long-term liabilities	3,399	2,423	29,564
Total long-term liabilities	12,416	15,997	107,972
EQUITY:			
Common stock—authorized, 197,000,000 shares in 2021 and 2020 issued, 42,600,000 and 45,100,000 shares in 2021 and 2020	14,640	14,640	127,308
Capital surplus	15,207	15,207	132,242
Retained earnings	124,806	125,795	1,085,270
Treasury stock—at cost, 2,439,651 shares in 2021 and 3,591,418 shares in 2020	(11,818)	(14,477)	(102,765)
Accumulated other comprehensive income:			
Unrealized gain on available-for-sale securities	6,851	7,669	59,578
Foreign currency translation adjustments	5,618	2,606	48,858
Remeasurements of defined benefit plans	522	113	4,546
Total	155,829	151,556	1,355,038
Stock acquisition rights	215	304	1,872
Non-controlling interests	9,146	8,133	79,530
Total equity	165,190	159,994	1,436,441
TOTAL	¥217,264	¥201,185	$1,889,253

Consolidated Statement of Income

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended December 31, 2021 and 2020

	Millions of yen		Thousands of U.S. dollars
	2021	2020	2021
NET SALES	¥140,055	¥117,585	$1,217,872
COST OF SALES	90,529	76,372	787,217
Gross profit	49,525	41,212	430,655
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES	28,817	25,623	250,589
Operating income	20,707	15,589	180,065
OTHER INCOME (EXPENSES):			
Interest and dividend income	530	474	4,614
Foreign exchange gain (loss)—net	477	27	4,152
Interest expense	(72)	(60)	(630)
Loss on valuation of derivatives	(162)	(52)	(1,416)
Treasury stock acquisition cost	(50)	—	(440)
Gain on sale of investment securities	4,820	2	41,919
Impairment loss on long-lived assets	(439)	(605)	(3,823)
Loss on retirement of non-current assets	(163)	(58)	(1,417)
Loss on valuation of investment securities	—	(269)	—
Environmental costs	(83)	—	(721)
Other—net	234	303	2,041
Other income (expenses)—net	5,091	(239)	44,276
INCOME BEFORE INCOME TAXES AND NON-CONTROLLING INTERESTS	25,799	15,349	224,342
INCOME TAXES:			
Current	6,464	3,123	56,216
Deferred	(191)	225	(1,668)
Total income taxes	6,273	3,349	54,548
NET INCOME BEFORE NON-CONTROLLING INTERESTS	19,526	12,000	169,793
NON-CONTROLLING INTERESTS IN NET INCOME	1,777	2,073	15,455
PROFIT ATTRIBUTABLE TO OWNERS OF THE PARENT	¥ 17,748	¥ 9,926	$ 154,338

	Yen		U.S. dollars
PER SHARE OF COMMON STOCK:	2021	2020	2021
Basic earnings per share	¥430.73	¥239.42	$3.74
Diluted earnings per share	429.91	238.78	3.73
Cash dividends attributable to the year	156.00	154.00	1.35

Consolidated Statement of Comprehensive Income

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended December 31, 2021 and 2020

	Millions of yen		Thousands of U.S. dollars
	2021	2020	2021
NET INCOME BEFORE NON-CONTROLLING INTERESTS	¥19,526	¥12,000	$169,793
OTHER COMPREHENSIVE INCOME:			
Unrealized gain on available-for-sale securities	(817)	1,973	(7,110)
Foreign currency translation adjustments	3,881	(174)	33,749
Remeasurements of defined benefit plans	409	(31)	3,557
Total other comprehensive income	3,472	1,767	30,196
COMPREHENSIVE INCOME	¥22,998	¥13,767	$199,989
(Breakdown)			
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:			
Owners of the parent	¥20,352	¥11,608	$176,976
Non-controlling interests	2,646	2,159	23,013

Consolidated Statement of Changes in Equity

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended December 31, 2021 and 2020

	Thousands	Millions of yen										
						Accumulated other comprehensive income (loss)						
	Number of shares of common stock outstanding	Common stock	Capital surplus	Retained earnings	Treasury stock	Unrealized gain on available-for-sale securities	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Total	Subscription rights to shares	Non-controlling interests	Total equity
BALANCE, JANUARY 1, 2020	41,388	¥14,640	¥15,207	¥120,908	¥(14,969)	¥5,695	¥2,866	¥145	¥144,495	¥379	¥6,858	¥151,733
Profit attributable to owners of the parent	—	—	—	9,926	—	—	—	—	9,926	—	—	9,926
Cash dividends paid:												
Final for prior year, ¥60.0 per share	—	—	—	(2,501)	—	—	—	—	(2,501)	—	—	(2,501)
Interim for current year, ¥60.0 per share	—	—	—	(2,505)	—	—	—	—	(2,505)	—	—	(2,505)
Purchase of treasury stock	(0)	—	—	—	(2)	—	—	—	(2)	—	—	(2)
Disposal of treasury stock	120	—	—	(32)	494	—	—	—	462	(96)	—	365
Net change in items other than shareholders' equity during the year	—	—	—	—	—	1,973	(259)	(31)	1,682	22	1,274	2,978
BALANCE, DECEMBER 31, 2020	41,508	14,640	15,207	125,795	(14,477)	7,669	2,606	113	151,556	304	8,133	159,994
Profit attributable to owners of the parent	–	–	–	17,748	–	–	–	–	17,748	–	–	17,748
Cash dividends paid:												
Final for prior year, ¥94.0 per share	–	–	–	(3,925)	–	–	–	–	(3,925)	–	–	(3,925)
Interim for current year, ¥62.0 per share	–	–	–	(2,592)	–	–	–	–	(2,592)	–	–	(2,592)
Purchase of treasury stock	(1,444)	–	–	–	(10,002)	–	–	–	(10,002)	–	–	(10,002)
Disposal of treasury stock	2,596	–	45	–	395	–	–	–	441	(89)	–	352
Retirement of treasury stock	(2,500)	–	(45)	(12,220)	12,266	–	–	–	–	–	–	–
Net change in items other than shareholders' equity during the year	–	–	–	–	–	(817)	3,011	409	2,603	–	1,012	3,615
BALANCE, DECEMBER 31, 2021	40,160	¥14,640	¥15,207	¥124,806	¥(11,818)	¥6,851	¥5,618	¥522	¥155,829	¥215	¥9,146	¥165,190

	Thousands of U.S. dollars										
					Accumulated other comprehensive income (loss)						
	Common stock	Capital surplus	Retained earnings	Treasury stock	Unrealized gain on available-for-sale securities	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Total	Subscription rights to shares	Non-controlling interests	Total equity
BALANCE, DECEMBER 31, 2020	$127,308	$132,242	$1,093,878	$(125,894)	$66,688	$22,667	$ 989	$1,317,879	$2,649	$70,726	$1,391,255
Profit attributable to owners of the parent	–	–	154,338	–	–	–	–	154,338	–	–	154,338
Cash dividends paid:											
Final for prior year, $0.82 per share	–	–	(34,134)	–	–	–	–	(34,134)	–	–	(34,134)
Interim for current year, $0.54 per share	–	–	(22,542)	–	–	–	–	(22,542)	–	–	(22,542)
Purchase of treasury stock	–	–	–	(86,979)	–	–	–	(86,979)	–	–	(86,979)
Disposal of treasury stock	–	399	–	3,439	–	–	–	3,839	(776)	–	3,062
Retirement of treasury stock	–	(399)	(106,269)	106,669	–	–	–	–	–	–	–
Net change in items other than shareholders' equity during the year	–	–	–	–	(7,110)	26,190	3,557	22,637	–	8,804	31,441
BALANCE, DECEMBER 31, 2021	$127,308	$132,242	$1,085,270	$(102,765)	$59,578	$48,858	$4,546	$1,355,038	$1,872	$79,530	$1,436,441

Consolidated Statement of Cash Flows

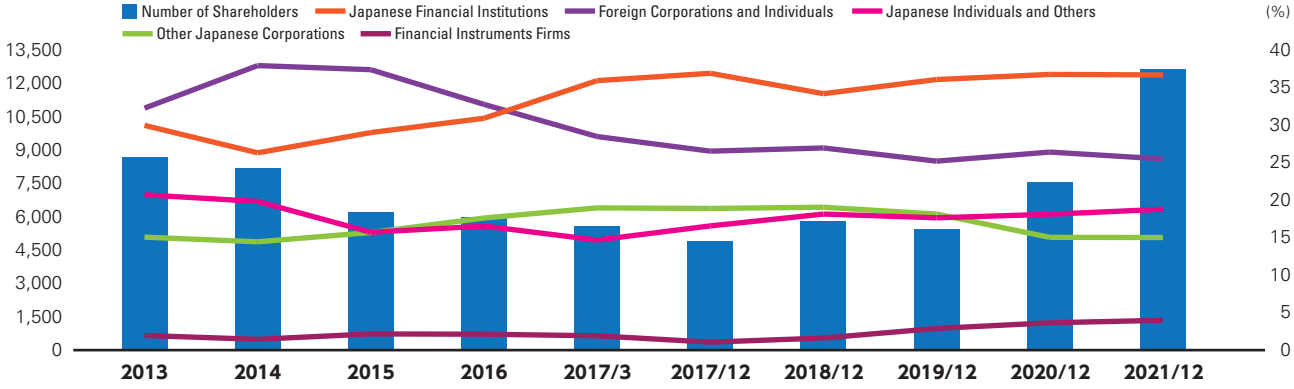
TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended December 31, 2021 and 2020

	Millions of yen		Thousands of U.S. dollars
	2021	2020	2021
OPERATING ACTIVITIES:			
Income before income taxes and non-controlling interests	¥ 25,799	¥ 15,349	$ 224,342
Adjustments for:			
Depreciation and amortization	6,430	6,772	55,920
Impairment loss on long-lived assets	439	605	3,823
Increase in provision for doubtful accounts	16	0	141
Increase in provision for bonuses	90	547	785
Increase in provision for officers' bonuses	343	249	2,988
Increase in net defined benefit asset	(273)	(469)	(2,379)
Decrease in net defined benefit liability	(11)	(22)	(96)
Interest and dividend income	(530)	(474)	(4,614)
Interest expenses	72	60	630
Foreign exchange (gain) loss—net	(918)	44	(7,985)
Loss on valuation of derivatives	162	52	1,416
Gain on sale of non-current assets	(0)	(150)	(0)
Loss on retirement of non-current assets	163	58	1,417
Gain on sale of investment securities	(4,820)	(2)	(41,919)
Loss on valuation of investment securities	—	269	—
Increase in trade notes and accounts receivable	(6,052)	(2,356)	(52,630)
Increase in inventories	(2,830)	(228)	(24,613)
Increase in trade notes and accounts payable	4,515	2,993	39,261
Increase (decrease) in advances received	16	(36)	143
Interest and dividend received	532	487	4,629
Interest paid	(72)	(60)	(630)
Income taxes paid	(4,650)	(1,637)	(40,438)
Other—net	1,335	899	11,616
Net cash provided by operating activities	19,758	22,953	171,809
INVESTING ACTIVITIES:			
Decrease in time deposits—net	—	2,108	—
Purchase of securities	(13,000)	(8,000)	(113,043)
Proceeds from redemption of securities	12,000	8,000	104,347
Purchases of property, plant and equipment	(7,833)	(5,881)	(68,121)
Proceeds from sale of property, plant and equipment	39	457	340
Purchases of intangible assets	(296)	(127)	(2,574)
Purchases of investment securities	(399)	(99)	(3,477)
Proceeds from sale of investment securities	5,008	2	43,549
Payments into long-term time deposits	(4,000)	(23,000)	(34,782)
Withdrawal of long-term time deposits	4,000	23,000	34,782
Other—net	(93)	59	(813)
Net cash used in investing activities	(4,576)	(3,481)	(39,791)
FINANCING ACTIVITIES:			
Repayments of long-term loans payable	(350)	(309)	(3,048)
Proceeds from issuance of stock	195	—	1,698
Proceeds from sale of treasury stock	469	310	4,083
Purchases of treasury stock	(10,053)	(2)	(87,419)
Dividends paid	(6,511)	(4,994)	(56,619)
Dividends paid to non-controlling interests	(1,829)	(884)	(15,908)
Other—net	(34)	(56)	(300)
Net cash used in financing activities	(18,114)	(5,937)	(157,514)
FOREIGN CURRENCY TRANSLATION ADJUSTMENTS ON CASH AND CASH EQUIVALENTS	1,673	(35)	14,549
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(1,258)	13,498	(10,946)
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	42,728	29,229	371,552
CASH AND CASH EQUIVALENTS, END OF YEAR	¥ 41,469	¥ 42,728	$ 360,606

Stock Information

Ten-year Trends of Shareholder Composition

Changes in number and composition (shareholding ratio) of shareholders



(Note) Treasury stock is included in "Japanese Individuals and Others."

Major Shareholders (10 top shareholders)

(As of December 31, 2021)

Shareholder	Numbers of shares held (Thousand)	Ratio of shareholding (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	4,668	11.57
Custody Bank of Japan, Ltd. (Trust Account)	2,308	5.72
Meiji Yasuda Life Insurance Company	1,826	4.52
National Financial Services LLC	1,446	3.58
MUFG Bank, Ltd.	1,207	2.99
The Bank of Yokohama, Ltd.	1,026	2.54
Tokyo Ohka Foundation for the Promotion of Science and Technology	984	2.44
Mitsubishi UFJ Trust and Banking Corporation	953	2.36
Mitsubishi UFJ Capital Co., Ltd.	860	2.13
Tokio Marine & Nichido Fire Insurance Co., Ltd.	857	2.12

(Notes)
1. The Company owns 2,232,000 shares of treasury stock which are excluded from the above major shareholders.
2. The ratio of shareholding is calculated from the number of shares (40,367,249 shares) obtained by subtracting the number of shares of treasury stock from the total number of shares issued.

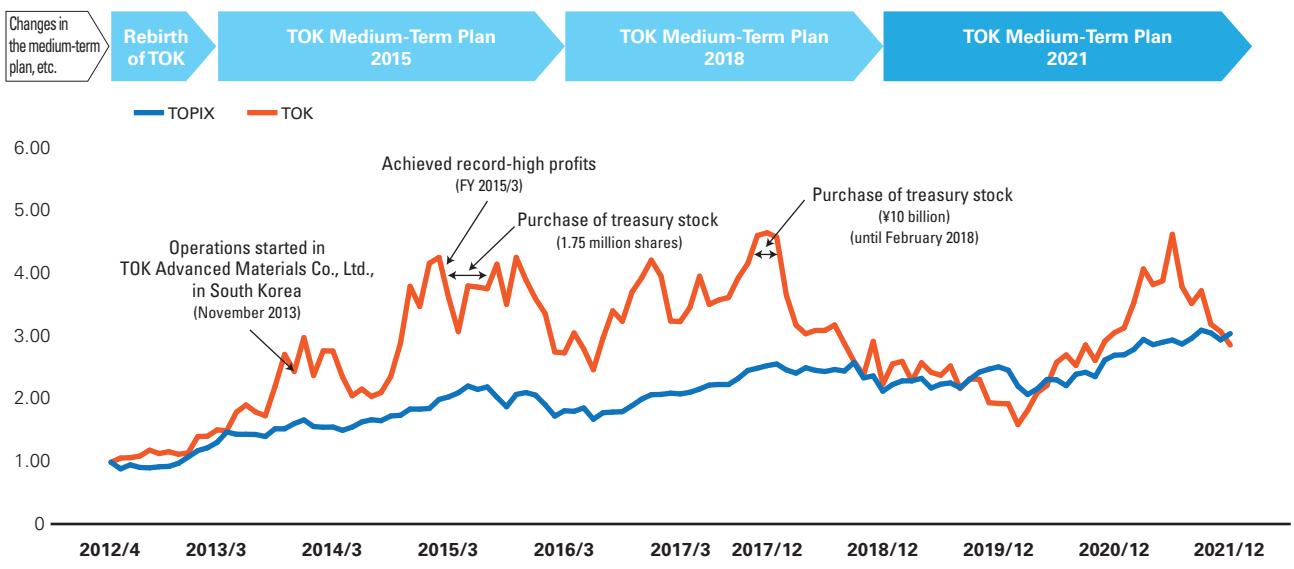
Basic Stock Information

Stock listing	Prime Market, Tokyo Stock Exchange, Inc.
Category of industry	Chemicals
Securities code	4186
Share unit number	100
Accounting period	January 1 to December 31*
Dividend record date (Year-end)	December 31
Dividend record date (Interim)	June 30
Total number of shares authorized	197,000,000 shares (As of December 31, 2021)
Number of shares issued	42,600,000 shares (As of December 31, 2021)

* The Company changed its fiscal year-end from March 31 to December 31 effective FY 2017.

10-year Trends of TOK's TSR

Relative comparison with April 2012 being 1 (monthly, closing price basis)



Global Network

Tokyo Ohka Kogyo Co., Ltd.

1 Headquarters
Sagami Operation Center
(including Sagami Plant)
Shonan Operation Center
Koriyama Plant
Utsunomiya Plant
Kumagaya Plant
Gotemba Plant
Aso Plant

2 Singapore Office

3 Europe Branch

Tokyo Ohka Kogyo America, Inc.

Established: April 1989

Business: Manufacture and sales of photoresists, and the development, manufacture, and sales of photoresist-related chemicals

4 Headquarters/Oregon Plant

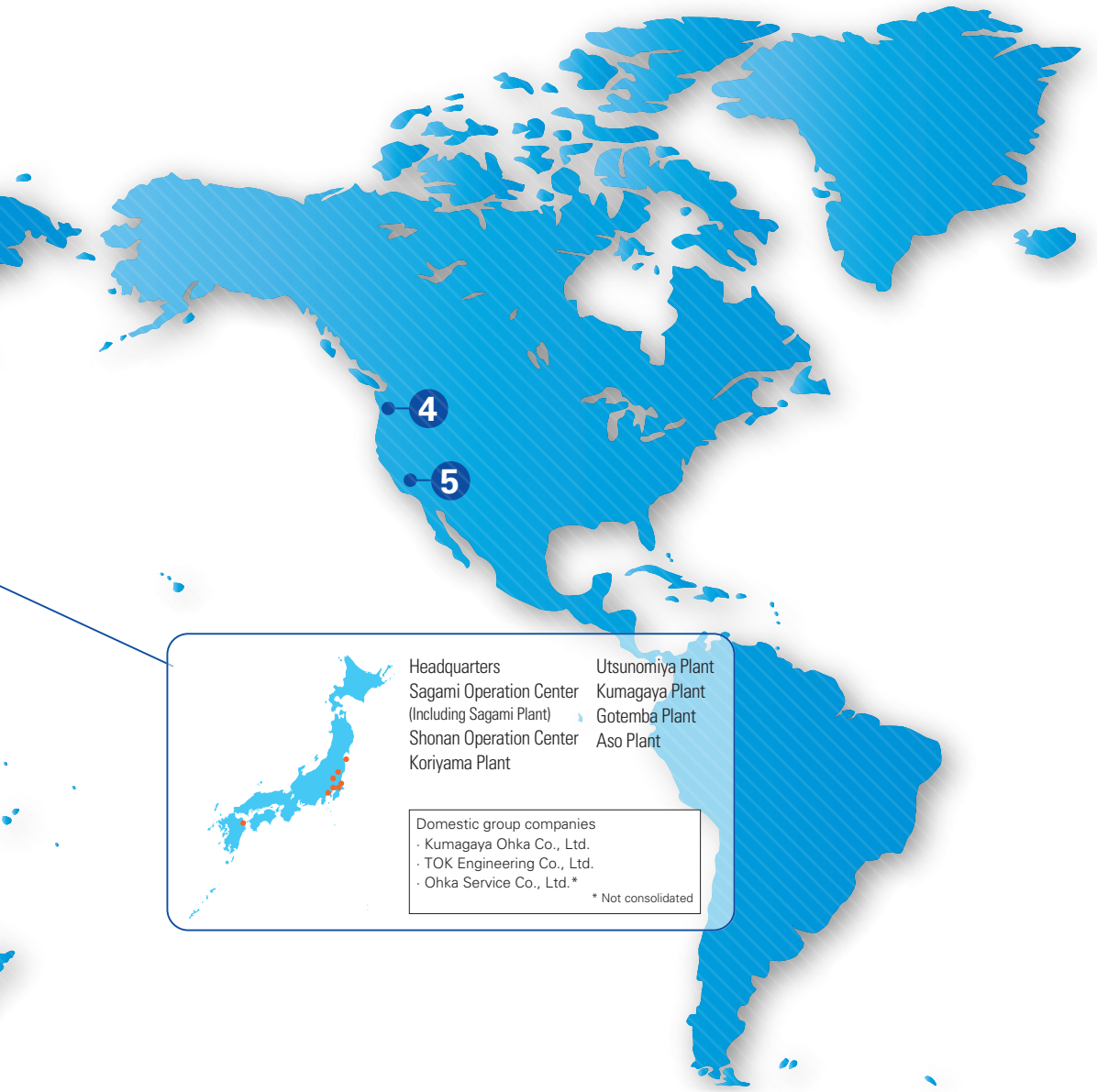
5 Sales Office (California)

TOK Taiwan Co., Ltd.

Established: January 1998

Business: Manufacture and sales of photoresists, and the development, manufacture, and sales of photoresist-related chemicals

6 Headquarters (Hsinchu City)
Miaoli Plant (Miaoli City)
Tongluo Plant (Miaoli County)



Chang Chun TOK (Changshu) Co., Ltd.

Established: October 2004

Business: Manufacture and sales of photoresists-related chemicals

7 Headquarters/Changshu Plant (China)

TOK Advanced Materials Co., Ltd.

Established: August 2012

Business: Development, manufacture, and sales of photoresists and related chemicals

8 Headquarters/Incheon Plant (South Korea)

TOK China Co., Ltd.

Established: January 2021

Business: Marketing of photoresists for semiconductor and display production and of related high-purity chemicals in China

9 Headquarters (China)

Corporate Information/External Evaluation

Corporate Information

(As of December 31, 2021)

Headquarters

Corporate Name	Tokyo Ohka Kogyo Co., Ltd.
Established	October 25, 1940
Headquarters	150 Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa 211-0012 JAPAN
Employees	1,816 (Consolidated)
Paid-In Capital	¥14,640,448,000
Website	https://www.tok.co.jp/eng
Stock listing	TSE Prime Market
Investor Relations Contact	Public Relations Section, Corporate Communication Division 150 Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa 211-0012 JAPAN TEL. +81-44-435-3000 FAX. +81-44-435-3020

External Evaluation

Selected or recognized for SRI indices

- Sompo Sustainability Index
  (Constituent stock in fiscal 2022, selected for 11 consecutive years)

- FTSE Blossom Japan Sector Relative Index
  (2022)

- S&P/JPX Carbon Efficient Index
  (As of March 23, 2022)

- Certified Health & Productivity Management Outstanding Organizations Recognition Program 2022
  (2018 to 2020 and 2022)

- MSCI ESG Rating
  (2018 to 2021)

  Tokyo Ohka Kogyo Co., Ltd., received an MSCI ESG Rating of A.

- MSCI Japan Empowering Women Index
  (2017 and 2019 to 2022)

- MSCI Japan ESG Select Leaders Index
  (Selected for four consecutive years in FY 2022)

(Note) The inclusion of Tokyo Ohka Kogyo Co., Ltd., In any MSCI Index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of Tokyo Ohka Kogyo Co., Ltd., By MSCI or any of its affiliates. The MSCI Indexes are the exclusive property of MSCI. MSCI and the MSCI Index names and logos are trademarks or service marks of MSCI or its affiliates.

Evaluations and commendations for various activities

- Intel Corporation
  Preferred Quality Supplier Award
  (2016, 2018, 2020, and 2021)

  EPIC Distinguished Supplier Award
  (2022)

- Texas Instruments Inc.
  Supplier Excellence Award
  (2018)

- Taiwan Semiconductor Manufacturing Company Limited
  2017 Excellent Performance in Lithography Material (2017)
  IMQR Award (2016)

- Global Niche Top Companies Selection 100
  (Ministry of Economy, Trade and Industry)
  (2014 and 2020)

- Nikkei Annual Report Awards
  Special Award
  (22nd session, 2020)
  Excellent Award
  (23rd session, 2021;
  20th session, 2018;
  and 18th session, 2016)

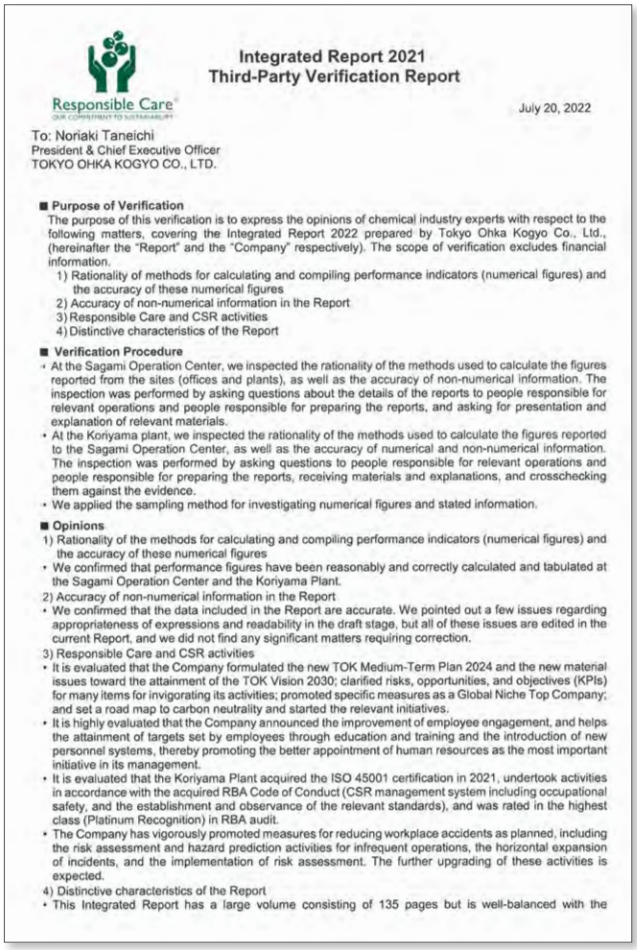
- WICI Japan Integrated Report Awards
  Bronze Award
  (2020 and 2021)

- Excellent Integrated Report and Report with Substantial Improvement
  (2020 and 2021)

  Selected by the contract operator of the domestic stocks of Government Pension Investment Fund (GPIF)

- Nikkei Science Advertising Awards
  Grand Prize (45th session, 2016)
  First Prize (44th session, 2015)

Third-Party Verification Report



Responsible Care

Integrated Report 2021
Third-Party Verification Report

July 20, 2022

To: Noriaki Taneichi
President & Chief Executive Officer
TOKYO OHKA KOGYO CO., LTD.

■ **Purpose of Verification**

The purpose of this verification is to express the opinions of chemical industry experts with respect to the following matters, covering the Integrated Report 2022 prepared by Tokyo Ohka Kogyo Co., Ltd., (hereinafter the "Report" and the "Company" respectively). The scope of verification excludes financial information.

1) Rationality of methods for calculating and compiling performance indicators (numerical figures) and the accuracy of these numerical figures
2) Accuracy of non-numerical information in the Report
3) Responsible Care and CSR activities
4) Distinctive characteristics of the Report

■ **Verification Procedure**

- At the Sagami Operation Center, we inspected the rationality of the methods used to calculate the figures reported from the sites (offices and plants), as well as the accuracy of non-numerical information. The inspection was performed by asking questions about the details of the reports to people responsible for relevant operations and people responsible for preparing the reports, and asking for presentation and explanation of relevant materials.
- At the Koriyama plant, we inspected the rationality of the methods used to calculate the figures reported to the Sagami Operation Center, as well as the accuracy of numerical and non-numerical information. The inspection was performed by asking questions to people responsible for relevant operations and people responsible for preparing the reports, receiving materials and explanations, and crosschecking them against the evidence.
- We applied the sampling method for investigating numerical figures and stated information.

■ **Opinions**

1) Rationality of the methods for calculating and compiling performance indicators (numerical figures) and the accuracy of these numerical figures
- We confirmed that performance figures have been reasonably and correctly calculated and tabulated at the Sagami Operation Center and the Koriyama Plant.

2) Accuracy of non-numerical information in the Report
- We confirmed that the data included in the Report are accurate. We pointed out a few issues regarding appropriateness of expressions and readability in the draft stage, but all of these issues are edited in the current Report, and we did not find any significant matters requiring correction.

3) Responsible Care and CSR activities
- It is evaluated that the Company formulated the new TOK Medium-Term Plan 2024 and the new material issues toward the attainment of the TOK Vision 2030; clarified risks, opportunities, and objectives (KPIs) for many items for invigorating its activities; promoted specific measures as a Global Niche Top Company; and set a road map to carbon neutrality and started the relevant initiatives.
- It is highly evaluated that the Company announced the improvement of employee engagement, and helps the attainment of targets set by employees through education and training and the introduction of new personnel systems, thereby promoting the better appointment of human resources as the most important initiative in its management.
- It is evaluated that the Koriyama Plant acquired the ISO 45001 certification in 2021, undertook activities in accordance with the acquired RBA Code of Conduct (CSR management system including occupational safety, and the establishment and observance of the relevant standards), and was rated in the highest class (Platinum Recognition) in RBA audit.
- The Company has vigorously promoted measures for reducing workplace accidents as planned, including the risk assessment and hazard prediction activities for infrequent operations, the horizontal expansion of incidents, and the implementation of risk assessment. The further upgrading of these activities is expected.

4) Distinctive characteristics of the Report
- This Integrated Report has a large volume consisting of 135 pages but is well-balanced with the understandable and quantitative description of the present status of the organization and the direction in which the Company is headed.
- The Report provides wide-ranging disclosure including negative topics (whistleblowing, environmental conservation, and workplace accidents).

Satoshi Ozaki

OZAKI Satoshi
Chief Director, Responsible Care Verification Center
Japan Chemical Industry Association

TOKYO OHKA KOGYO CO., LTD.
150 Nakamaruko, Nakahara-ku, Kawasaki-shi,
Kanagawa 211-0012, JAPAN
https://www.tok.co.jp/eng