TOKYO OHKA KOGYO CO., LTD.

# Integrated Report 2020

Year Ended December 31, 2020

SHINKA 80th

# Our Philosophy

# The e-Material Global Company

## Management Principles

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

## Management Vision

The Global e-Material 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.

## Source of Value Creation

TOK delivers value in a wide variety of fields, including the manufacture of semiconductors, by rolling out microprocessing and applied technologies for the nanoscale* domain, along with implementing the strategy of building close relationships with customers using technological marketing and experience and developing high value-added technologies from new perspectives.

* Nanometer (1 nm) = one millionth of a millimeter; one hundred-thousandth the thickness of a human hair

# Publication of the Integrated Report 2020

TOK marked the 80th anniversary since its establishment in October 2020 and achieved record-high performance in FY 2020/12. These achievements were possible because TOK has continuously provided both economic value and social value with the support and cooperation of many stakeholders. I extend my sincere and deep gratitude.

I consider the long-term sustainable growth of TOK has just started. Under the new management vision, Global e-Material Company contributing to a sustainable future through chemistry, we will attain the long-term TOK Vision 2030 through the joint efforts of the group. The Vision has been formulated to become a 100-year company in 20 years based on accomplishments, economic value, and social value to be achieved through initiatives over the next ten years. In the course of attainment, we intend to consistently contribute to the sustainable development of society by overcoming the unexpected risks that will emerge in cooperation with stakeholders, thereby creating shared value.

The *Integrated Report 2020* explains how TOK will actually contribute to a sustainable future through chemistry as its purpose (meaning of existence), incorporating the viewpoints of marketing, EHS (environment, health and safety), and collaboration with stakeholders, while a variety of global risks emerge, including infectious diseases, climate change, and geopolitical risks.

In writing this report, TOK referred to the International Integrated Reporting Framework (revised 2021) promoted by the International Integrated Reporting Council (IIRC) and Guidance for Integrated Corporate Disclosure and Company-Investor Dialog for Collaborative Value Creation issued by the Ministry of Economy, Trade and Industry. We considered the feedback received in dialogs with shareholders, investors, and other stakeholders, as well as the opinions received regarding *Integrated Report 2019*. This report represents our best efforts to bring together a variety of information related to long-term value creation at TOK through commitment of the management executives and company-wide collaboration among divisions.

August 2021

**Noriaki Taneichi**

*Representative Director, President and Chief Executive Officer*

# Technologies for Sustainable Development

## TOK's photoresists contribute to the sustainable development of society

Innovative semiconductor and other technologies play a major role in finding solutions to the global risks and social issues that have emerged one after another, such as rapid and far-reaching climate change and new infectious diseases. TOK is enhancing its economic and social value by continuously developing and providing high value-added materials for semiconductors to help solve the social and scientific issues in each era.

TOK's photoresists and high-purity chemicals

Semiconductors

### Economic value

Contributing to the evolution of all types of industry and technological innovation

**TOK's semiconductor material business**

### Social value

Accelerating solutions to high-level social and scientific issues

Contributing to the reduction of climate change risks and decarbonization

# Contents

FY 2020/12

## Achieved the record-high performance

SDGs to which we contribute


Since FY 2021/12

## To further enhance economic value and social value

TOK Vision 2030

**The Global e-Material Company contributes to a sustainable future through chemistry**

## Our Foundation



## Data Section



### Editorial Policy

**Scope and time frame of this report**

- Fiscal year ended December 31, 2020 (January 1, 2020, to December 31, 2020) (Includes content after January 2021)
- Organization: Tokyo Ohka Kogyo Co., Ltd., and its consolidated subsidiaries and equity method affiliates (see pages 124–125 "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's website.
  https://www.tok.co.jp/eng

**Reference guidelines**

- *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*
- *International Integrated Reporting Framework* published by the IIRC (revised 2021)
- *Guidance for Integrated Corporate Disclosure and Company-Investor Dialog for Collaborative Value Creation* published by the Ministry of Economy, Trade and Industry

**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 judgment 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.

# Our Flagship

## The top share of the world market for semiconductor photoresists

By honestly continuing efforts to enhance technology and raising the quality levels of products as our management principles since the foundation, TOK has become the world's number one manufacturer of photoresists, which are photosensitive materials indispensable for the manufacture of semiconductors. This section describes the functions, performance, and core value provided by TOK's photoresists in the semiconductor manufacturing process.

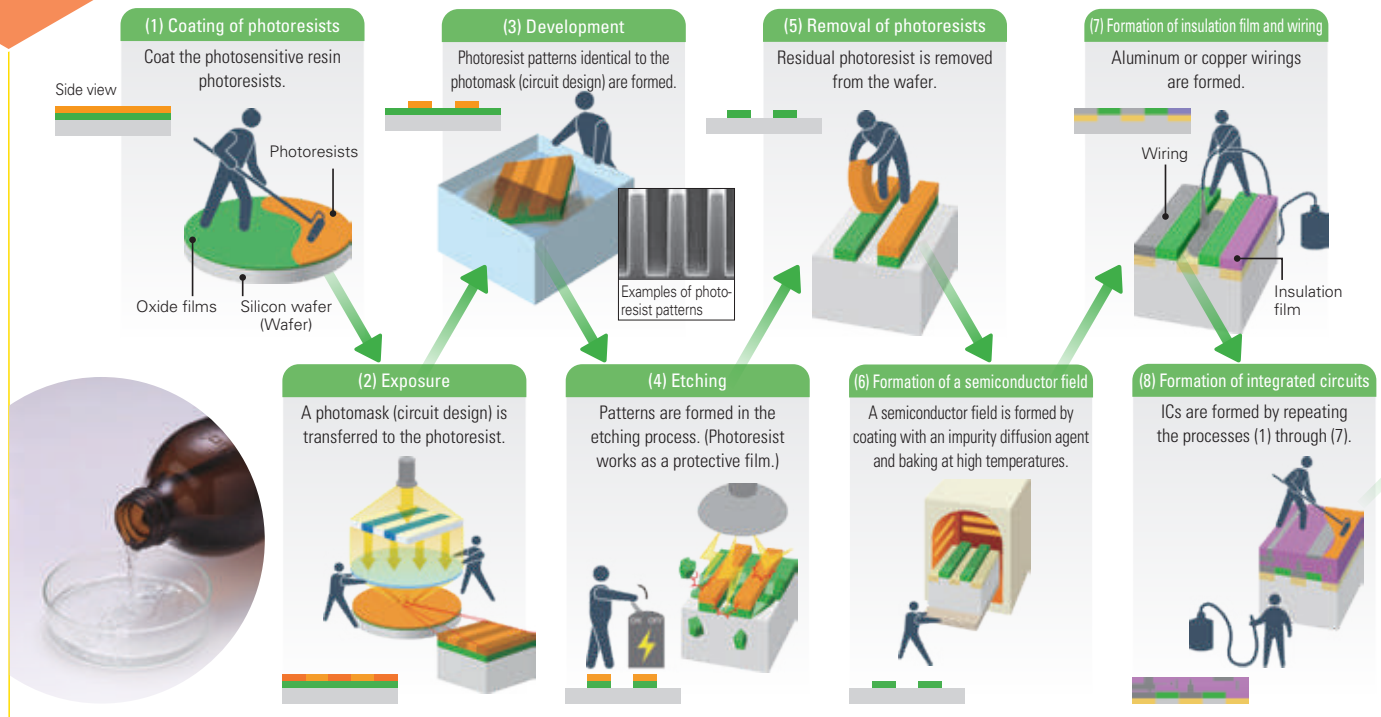
## TOK's Semiconductor Photoresist Business

Semiconductor manufacturing flow

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

For more details about the use of our products in the semiconductor manufacturing process, please see our website.

**Front-end processes of semiconductor manufacturing**




### Starting point for customer's value creation process

TOK's photoresists create value for customers in their manufacturing process and have a special influence on the quality of customers' output in terms of product quality and yields.

### Factors adding value to semiconductor photoresists

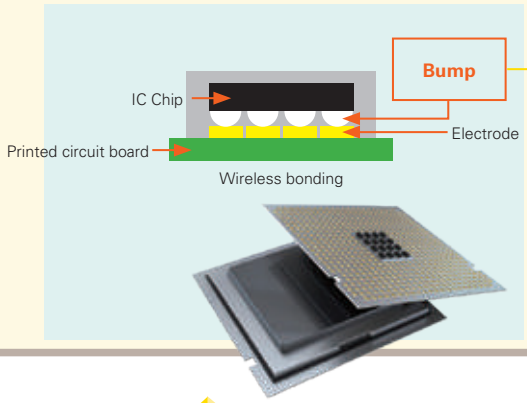
| | | |
|---|---|---|
| Sensitivity | Resolution | Roughness* * Fluctuations in line width |
| Etching resistance | Substrate adhesiveness | Processing applicability |
| Purity | Substance safety | Cost |

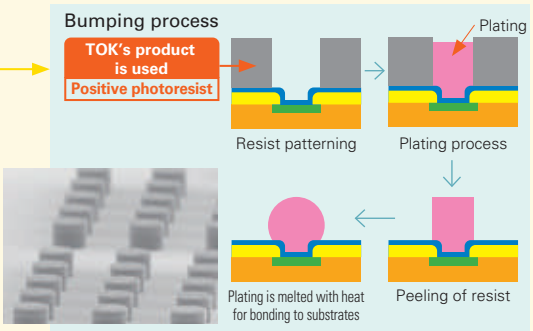
# Our Strength

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, 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 the 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 higher performance of semiconductor packages.



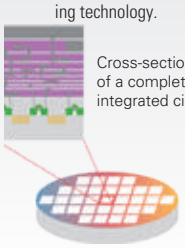




In this process, individual semiconductor chips are cut out to be sealed into different packages.
The process takes advantage of the photoresists' thick file forming capacity.

**Back-end processes of semiconductor manufacturing**

**(9) Completion of an integrated circuit**

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



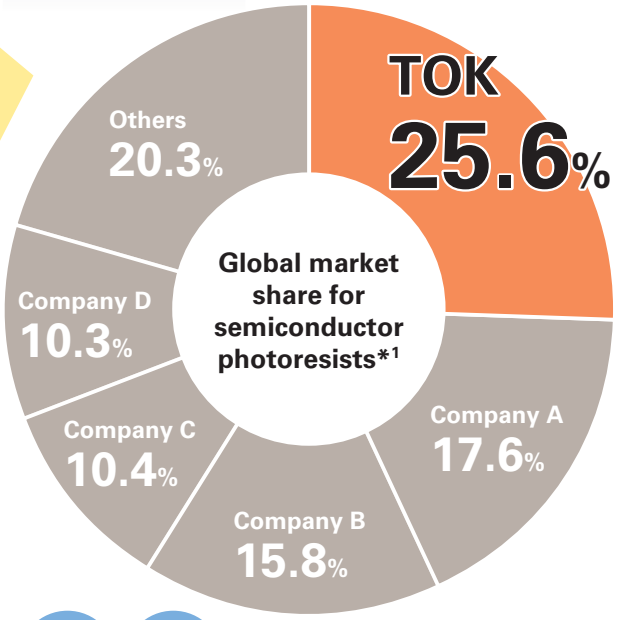

**(10) Dicing of wafers**

Wafer is diced into chip sizes.

**Semiconductor chips completed**

Each diced wafer becomes an IC chip.

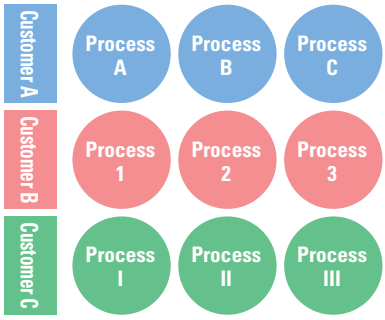
## Global No. 1




*1 Based on the projected shipment volume of EUV, ArF, KrF, g-Line and i-Line photoresists in 2020 (calculated based on Fuji Chimera Research Institute, "Current Status and Future Outlook of Cutting-edge/Noticeable Semiconductor-related Markets 2020")

## Core value of TOK

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



# Our History

## Contributing to a sustainable future through chemistry

TOK ensures that all management resources and initiatives ultimately contribute to society under the four 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). In the coming years, TOK will contribute to a sustainable future through chemistry, thereby supporting the sustainable development of an affluent society.

### *1940*
### *Origin*

Shigemasa Mukai, TOK founder

Batteries used in the lights on coal miners' caps (image)

**DNA in place since TOK's founding**

Under his strong ideal of challenging ourselves to develop products, however hard it may be, useful to society, and not offered by other companies, the founder, Shigemasa Mukai, developed the batteries used in the lights on coal miners' caps in 1934 after more than six years of trial and error, thereby enhancing safety in the coal industry in the early Showa era.

### *1970th*
### *Pioneering*


Eco-friendly synthetic rubber resists

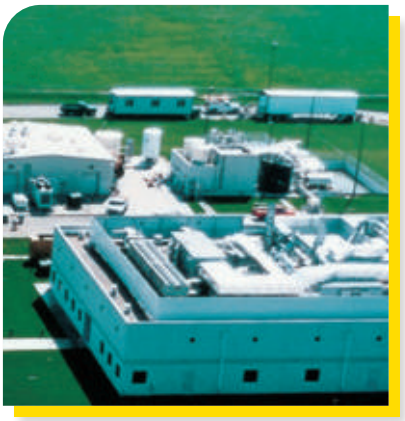
First semiconductor positive photoresist developed in Japan

Example of final product: pocket calculator*2

**Acquiring TOK's reputation as a supplier of photoresists and responding to environmental requirements**

TOK started the full-scale photoresist business in 1968, developed an eco-friendly synthetic rubber resist in 1971, and then created the first semiconductor positive photoresist in Japan in 1972 by leveraging its high purification technology and microprocessing technology. The Company has acquired a reputation as a supplier of photoresists indispensable for semiconductor production and has supported increasing efficiency in business by contributing to the higher performance of pocket calculators and the emergence of word processors and PCs.

### *1980th*
### *Resilience*



Established Ohka America, Inc., (current Tokyo Ohka Kogyo America, Inc.) as the first overseas site

i-Line photoresists

Example of final product: PC

**Strengthening management foundation and taking steps toward further growth**

TOK achieved growth by increasing its market share for g-Line photoresists and promoting the equipment business. Although the Company faced difficulties in the semiconductor recession that started in 1985, TOK took bold action by listing in 1986 and marketing i-Line photoresists in 1987, as well as establishing Ohka America, Inc., as its first overseas site. These actions led to further growth from the 1990s.

Global Semiconductor Market
1986
**US$26,355 million**

Trends of line width of semiconductors*3 ▶

*1970th*
Line width of semiconductors
**10,000–1,500nm**

*1980th*
Line width of semiconductors
**1,500–600nm**

Trend diagram of TOK's net sales*1 ▼

## 1990th
# Global No.1

Koriyama Plant

KrF excimer laser photoresists

Example of final product: mobile phone

### Toward a global niche top company

TOK went on a growth trajectory again and strengthened its structure for increased production by opening the Koriyama plant in 1994. The KrF excimer laser photoresist, which TOK developed in 1997, has been used by many semiconductor manufacturers as the global standard. TOK continued to strengthen its development and production systems in Japan and overseas, thereby solidifying its position as the top global manufacturer of photoresists in the high-added value niche field.

## 2000th
# Opportunity Expansion

ArF excimer laser photoresists

Zero Newton bonding machine

Example of final product: smartphone

### Pioneering new blue oceans

TOK has also expanded its technological horizons by pioneering future blue oceans, including increasing the overseas sales ratio that exceeded 50% in 2004, the development of high-density integration material in 2003, and the development of 3D packaging equipment in 2008. TOK has continued long-run development via a frank and open-minded business culture, which led to a major leap in high-density integration materials from the 2010s, in addition to the key role played by the 3D packaging equipment in power semiconductors, which contribute to decarbonization.

## Since 2010s
# Innovation Driven

TOK Taiwan Co., Ltd.

TOK Advanced Materials Co., Ltd.

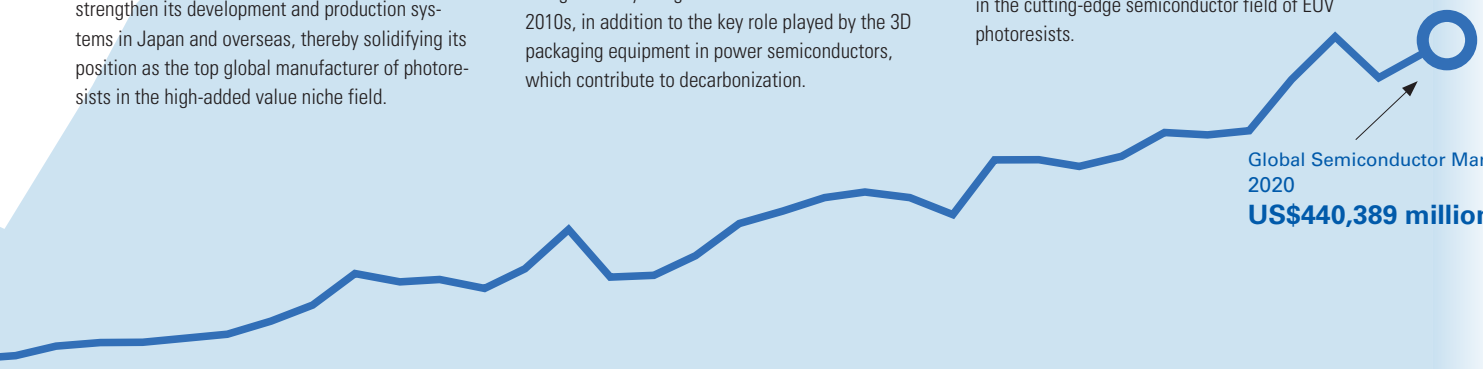
2020
**Achieved the record-high performance**

EUV photoresists


Target markets: 5G&IoT and AI

### Pursuing innovative business by deepening customer-oriented strategies and marketing

To strengthen customer-oriented strategies in Asia with remarkable growth in the semiconductor industry, TOK Advanced Materials Co., Ltd., (South Korea) was established in 2012, and the Tongluo Plant of TOK Taiwan Co., Ltd., was established in 2014. A similar structure was also bolstered in the United States and Japan in response to the raw voice of customers through the trinity of development, manufacturing, and sales, while enhancing its marketing force, thereby establishing strengths in the cutting-edge semiconductor field of EUV photoresists.



Global Semiconductor Market
2020
**US$440,389 million**

*1990th*
Line width of semiconductors
**600–130nm**

*2000th*
Line width of semiconductors
**130–32nm**

*2010th–*
Line width of semiconductors
**32–5nm**

*1 The accounts were closed on November 30 until 1987, on March 31 from 1988 to 2017, and on December 31 since 2018 (excluding irregular periods caused by changes in the fiscal year-end).
*2 The photos of examples of final products on this page are conceptual images.
*3 Includes TOK's estimates for the decades shown

# Our Resources

## Management resources to enable continued enhancement of economic value and social value

TOK has never stopped refining its core value in the semiconductor-related business, addressing customer needs and social issues in each era, and accumulating robust financial capital and unique nonfinancial 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 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
  · Representing top-class financial soundness in the chemicals sector (equity ratio 75.3%, D/E ratio 0.07 times*)

* Both as of December 31, 2020

**■ Enhancement of Dividends**

A dividend policy targeting a DOE of 3.5%

- Steady and continuous shareholder returns

**■ Pursuit of Higher Asset Efficiency**

Target ROE: 7% (FY 2021/12*) /
10% or higher (FY 2030/12)

- Promoting investment and business strategies using ROIC and IRR as monitoring indicators

* The targets for FY 2021/12 are based on figures announced on February 15, 2021.

### 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 high-density semiconductor packages
Development and manufacture of materials for stacking semiconductor devices in three dimensions

- Continuing to satisfy the sophisticated needs of the manufacturers of semiconductor and electronic components

**■ High Purification Technologies**

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

- Realizing shared value with customers by improving yields on mass production lines for cutting-edge devices
- Making our strengths effective in highly challenging domains, such as controlling performance down to the molecule

**■ 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"

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

### Intellectual capital

- Sustaining high levels of R&D investment
- Corporate culture supporting long-run development

**■ High Ratio of R&D Costs to Net Sales**

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

- Strengthening R&D functions in Japan, the United States, South Korea, and Taiwan
- Continuing development for the further evolution of microprocessing and high purification technologies centered on research into functional polymer materials and the development of applied technologies
- Focusing on the development of new high-functional materials, equipment, and production technologies; Also expanding and accelerating open innovation

**■ Marketing Capabilities in R&D**

Blue ocean strategy

- Thirty 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

* 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

- Fostering a frank, open-minded business culture that can support the persistent pursuit of development over 10 years development in cutting-edge fields becomes more difficult each year

TOK will further increase its capital to enhance both economic value and social value, while various global risks continue to emerge.

## Human capital

- Personnel measures that emphasize happiness
- Diversity and inclusion

**■ Policy on Utilizing Human Resources "Never forget that business all begins with people"**

Increasing investment in human capital

- Average annual salary per person increased by ¥1.59 million over the past 10 years*1, and average tenure figure rose by 3.4 years*1.
- Ratio of paid leave taken stood at 72.0%, significantly higher than the national average of 56.3%*2.

*1 Tokyo Ohka Kogyo Co., Ltd. only

*2 Source: Ministry of Health, Labour and Welfare's 2020 Summary of General Survey of Working Conditions for 2019 or fiscal 2018

**■ Pursuit of Happiness in Personnel**

Pursuing measures that align with individual values of personnel and their happiness

- Introduction of new personnel system (planned for 2022)
- Establishment of the Executive Fellow system (implemented in 2019)
- Revision of remuneration system for directors (implemented in 2020)

**■ Advancing Promotion of Non-Japanese Employees and Female Personnel**

Merit-based hiring and promotions regardless of nationality or gender

- The consolidated ratio of non-Japanese employees has increased, and local personnel with a deep understanding of the 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, and a female general manager of the Human Resources Division was appointed in 2020. Advancing diversity and inclusion into the next stage

## Social and relationship capital

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

**■ Establishing Development and Manufacturing Sites in the United States, South Korea, and Taiwan, Where Many Customers Are Located**

Introducing prototype production lines equal to the ones of customers who are leading global cutting-edge technology

- Quickly commercialize the results of development and build a robust customer base with solid trust relationships in the fast-changing semiconductor and electronics industry

**■ Building Innovation Ecosystems with Various Stakeholders**

Collaborating with stakeholders and customers to drive innovation in the cutting-edge semiconductor fields where difficulty in development has been increasing each year

- Discovering and supporting venture companies with technological advantages, engaging in joint research with academics, and participating in a variety of consortiums

**■ Creating Cutting-edge Value with Suppliers**

Strengthening and improving supplier engagement

- Creating cutting-edge semiconductor materials for semiconductors from the formulation of raw materials together with suppliers
- Cooperating closely with suppliers to manage chemical substance risks to protect the global environment

## Natural capital

- Creating environmental value through business activities
- Minimizing environmental risks

**■ Creation of Environmental Value in Both Materials and Equipment**

Provision of environmentally beneficial products

- Reducing energy consumption through miniaturization of semiconductors by supplying cutting-edge photoresists
- Having a top share* of the world market for g-Line and i-Line photoresists is essential in the manufacture of power semiconductors used to conserve and control energy in renewable energy systems, electric vehicles, and hybrid cars. Sales of g-Line and i-Line photoresists have reliably accounted for almost 10% of consolidated net sales.
- Developing multiple types of power semiconductor manufacturing equipment with repeat orders from many customers

* Based on the projected shipment volume in 2020 (calculated based on Fuji Chimera Research Institute, "Current Status and Future Outlook of Cutting-edge/Noticeable Semiconductor-related Markets 2020")

**■ 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

- Focusing efforts on minimizing environmental risk in the production process and throughout our supply chain
- Focusing on Responsible Care activities* as a part of our GMS (Group Management System) 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 Japan Chemical Industry Association)

# Our Value Creation Process

## TOK's long-term sustainable value creation process

Toward 2030, TOK pursues the management vision of becoming the Global e-Material Company by contributing to a sustainable future through chemistry. As a top global niche company, TOK is helping to resolve social issues by developing products that are useful to society that are not offered by other companies based on a solid customer foundation within and outside of Japan. Cutting-edge value creation in the semiconductor-related and electronics-related businesses, where technologies change at an extremely fast pace, is supported by a financial foundation with a super-long-term view,

**Social Issues**

Greater difficulty and longer spans in technological innovation

Escalated infectious disease risk

Emergence of new IT infrastructure such as 5G, IoT, and AI

Increasing severity of climate change risks and decarbonization requirement

Shift to new mobility society

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

**Main Invested Capital**
(FY 2020/12)

**Financial capital**
Total assets: 201.1 billion yen
Equity ratio: 75.3%

**Manufactured capital**
Investment in plant and equipment: 5.6 billion yen

**Intellectual capital**
Number of patents: 279
R&D costs: 9.5 billion yen

**Human capital**
Number of employees (consolidated): 1,750

**Social and relationship capital**
Selling products in 29 countries/regions

**Natural capital**
Sustainable natural resources

**Material Business**

**Equipment Business**

### Global Niche Top Company
Maintain business model to continue to develop and launch high value-added products in niche fields

### Evolving Customer-Oriented Sites
Evolve "the trinity" strategy of development, manufacturing, and sales to a new phase

### TOK Medium-Term Plan 2021
Point 1. Strengthen business portfolio reforms
Point 2. Return to a growth trajectory
Point 3. Strengthen balance sheet management and introduce a new dividend policy

### Initiatives for Material Issues
Creation of new added value contributes to innovation, enhancement of personnel measures on a global basis, advancement of corporate governance, global environmental conservation, chemical substance management, occupational health and safety/security and disaster prevention

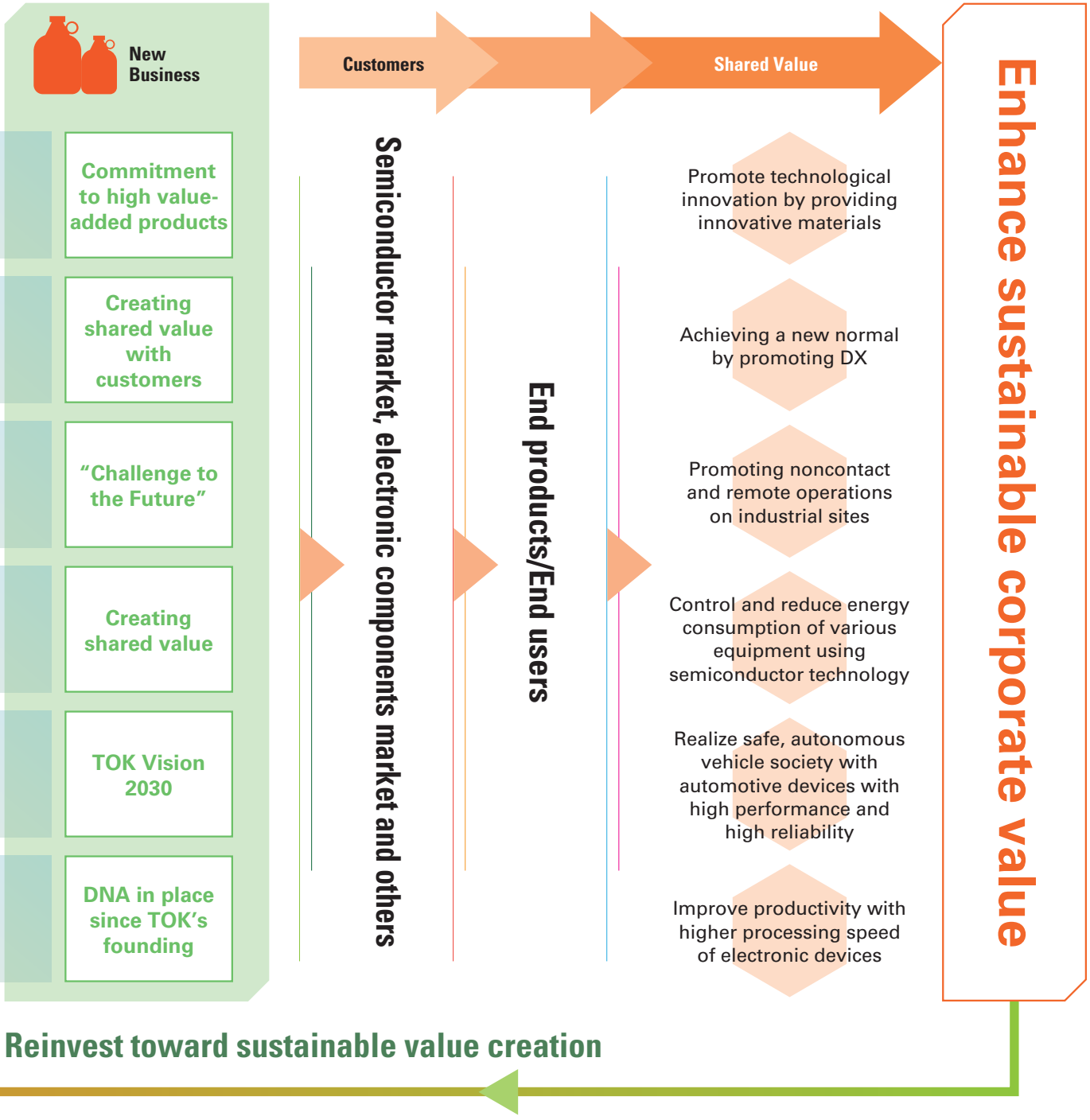
### Management Vision
"The e-Material Global Company" contributes to a sustainable future through chemistry

### 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

**TOK Vision 2030: overarching aspiration (quantitative aspects)**

| Net sales | EBITDA | ROE |
|---|---|---|
| ¥200.0 billion | ¥45.0 billion | Over 10% |

world-leading technological capabilities, constant R&D, investment in human capital, and initiatives for material issues. TOK will continue to flexibly implement and evolve the value creation process while closely monitoring global risk trends. By continuing to contribute to high-level social and scientific issues in this way, TOK will sustainably increase corporate value.



# Stakeholder Engagement

## To establish win-win relationship with all stakeholders

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

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

### Our Stakeholders


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

### Customers

■ **Shared value**
- Inspiring customers with high value-added products (satisfactory features, low cost and superior quality)
- Relationship of trust that enables continued value creation in the cutting-edge fields
- Production structure that guarantees stable supply to society

■ **Policies and basic initiatives**
- Devised company-wide strategies for the TOK Medium-Term Plan 2021
  Focusing on (1) and (2) **(see page 39)**
- Aiming to provide new added value that inspires customers as the overarching aspiration under TOK Vision 2030
- Customer-oriented strategies
  (The trinity of sales, R&D, and manufacturing) to be further deepened and advanced
- Risk distribution by having production sites in five regions across the world

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

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


Intel Corporation Preferred Quality Supplier Award (2021)

### Shareholders/investors

■ **Shared value**
- Long-term sustainable growth and corporate value enhancement
- Increased capital efficiency
- Strengthened engagement through constructive dialog

■ **Policies and basic initiatives**
- Communicating 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 undertakes management and oversight as IR Officer.
- Records of opinions and requests received through dialogs are collected and regularly reported to all directors for information sharing.
- In accordance with the Disclosure Policy, TOK endeavors to provide consistent information and ensure fair, timely, and appropriate disclosure.
- TOK has also established rules for the management of insider information and strives to ensure stringent observance.

■ **Communication channels**
- Business results meetings for institutional analysts/investors (2 sessions*)
- Individual meetings with institutional analysts/investors (281 sessions*)
- Financial results briefings for individual investors (4 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 (22 sessions*)

* Achievements in FY 2020/12


Business results meeting was held online (FY 2020/12)

## Employees

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

Group newsletters that facilitates mutual understanding among group human resources

■ **Policies and basic initiatives**
- The philosophy of the TOK Group Policy on Utilizing Human Resources is incorporated into respective human resource measures
- Focusing on the company-wide strategy (3) under TOK Medium-Term Plan 2021 **(see page 39)**
- Focusing on enabling all employees to work lively with pride as an overarching aspiration under TOK Vision 2030; Also featuring the utilizing global personnel as one of the Seven Management Strategies under the Vision

■ **Communication channels**
- Employee engagement survey
- Dialog sessions between young employees and the President
- Group newsletters issued in multiple languages (Japanese, English, Korean, and Chinese)
- Whistleblowing 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 newsletters and the president's video message on TOK Vision 2030 in multiple languages, etc.)
- Implemented CSR training for employees, as well as all directors, audit & supervisory board members, and officers: 185 participants*

* Achievements in FY 2020/12

## Suppliers/startups

■ **Shared value**
- Solid partnership to create high added value
- Supply chain that guarantees a stable supply to society while respecting the environment and human rights
- Open innovation through corporate venturing

The new R&D building started operation as a site for open innovation

■ **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 transactions with impartiality, fairness, and transparency based on the CSR Policy, while respecting human rights, society and the global environment
- Management of supplier information in accordance 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

## Academics and research institutions

■ **Shared value**
- Initiatives toward technological breakthrough through industry-academia collaboration
- Enhancing and streamlining basic research through industry-academia collaboration
- Expediting R&D process through collaboration with international research institutions

Established a joint laboratory with Yokohama City University aiming at the establishment of the next-generation high-purity processing technology (July 2019)

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

■ **Communication channels**
- Sending TOK human resources to universities and research institutions in Japan and overseas
- Joint research and development
- Providing grants 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 2020: 99 projects, 40.45 million yen

## National/local governments and local communities

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

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

■ **Policies and basic initiatives**
- Contribute to a sustainable future through chemistry as our purpose
- Close collaboration with national and local governments and communities to earn trust from stakeholders worldwide as an overarching aspiration under TOK Vision 2030
- Proactively promoting social contribution activities in the areas around TOK business sites, emphasizing cooperation and collaboration with local communities and establishing a relationship of trust

■ **Communication channels**
- Negotiation 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 infectious disease risks and climate change risks, as well as decarbonization initiatives
- Emphasize local communication at normal times as the basis of stable value provision to society

■ **Specific examples and latest achievements**
- Dialog about the environment and society: 550 participating employees (result 2020)
- Dialog with local communities (suspended in 2020 considering the risk of COVID-19)
- Donation to local governments and organizations, including relief money for preventing the spread of COVID-19 infection: 112.69 million yen (result 2020)

# Our Material Issues

## Initiatives to Address Material Issues for Enhancing Corporate Value

By focusing on the initiatives to address the material issues for enhancing corporate value, we aim to evolve further in both the financial and nonfinancial fields.

### —Continuing Contributions to Society—

TOK has its root in integrated thinking, which aims to make sure that all management resources and initiatives ultimately contribute to society. This is evident in the original management principles presented by the founder, Shigemasa Mukai, that we should contribute to society by raising the quality of our products and supplying goods with added value, while continuing efforts to enhance technology in a frank and open-minded business culture.

Based on this corporate DNA, we are working to develop and provide high value-added products that contribute to innovation, which we have identified as one of TOK's material issues, aiming to achieve the maximum potential of sustainable value creation capabilities.

In addition, to create sustainable value in the innovative field of fine chemicals, we need to minimize risks in the areas of the environment, laws and regulations (chemical substance management), and human resources through governance. We therefore identified these themes as part of our material issues and continue to work through a PDCA cycle to lower capital costs.

**Material Issues Identification/ Revision Process**

**Step 1**

TOK selected the issues it needs to address to create sustainable value by taking into account the global frameworks of ISO 26000, GRI Standards, the International Integrated Reporting Framework, SDGs, and the Responsible Care Code of the Japan Chemical Industry Association.

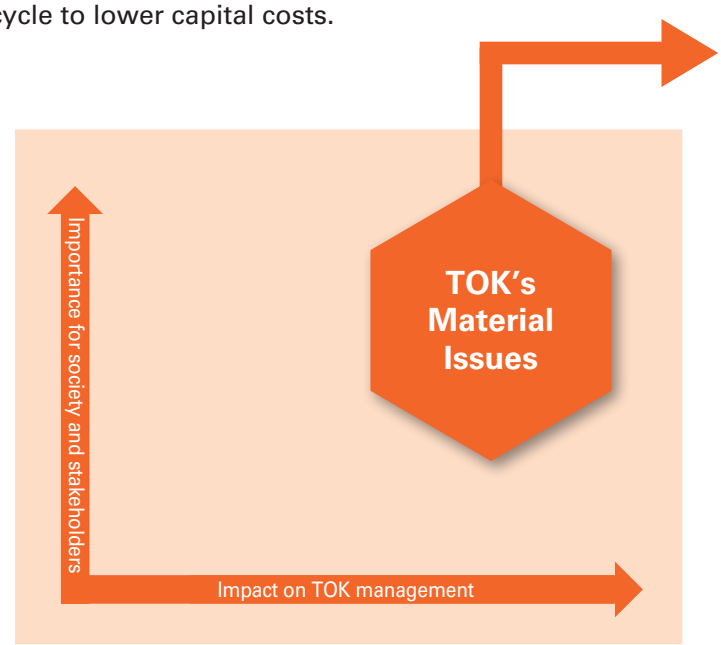
**Step 2**

TOK evaluated selected issues to prioritize them from the two axes of *importance for society and stakeholders*, which took into account evaluation items by ESG survey organizations and day-to-day dialogs with stakeholders, and *importance to TOK management*, which considered the overall strategy of the medium-term plan and the strategies of each division, and identified the six most important items as proposed material issues.

**Step 3**

The main initiative was also set to go through the PDCA cycle for each material issue, approved by management, and identified as TOK's material issues.

Then, in 2020, the material issues and the key initiatives were partially revised in accordance with the revised TOK Vision 2030.



# Sustainable enhancement of corporate value through shared value creation

## Material issues for enhancing corporate value

| Material issues | ESG fields | Key initiatives | Risks and opportunities | SDGs to which we contribute |
|---|---|---|---|---|
| Creation of new added value that contributes to innovation | Social (S) | Further improve customer satisfaction | ■ Expand markets in all fields of innovative fields, legacy fields, front-end processes, and back-end processes of semiconductors<br>■ Increase in needs for ultrahigh purification in semiconductor materials<br>■ Intensifying global competition in the semiconductor industry and increased geopolitical risks | 3, 9, 11, 12, 13, 17 |
| | | Contribute to innovation and solving social issues | ■ Expanding role of the semiconductor industry in solving social issues<br>■ Expanding semiconductor market driven by development of the data economy, accompanied by growing geopolitical risks concerning conflict over data hegemony | |
| Enhancement of personnel measures on a global basis | | Strengthen personnel capabilities | ■ Global personnel development in conjunction with the increase in overseas sales ratio<br>■ Intensifying competition for recruitment in semiconductor-related industries<br>■ Pursuit for the level of happiness aligned with individual values | 3, 4, 5, 8, 10 |
| | | Diversity and inclusion | ■ Increasing competitiveness through active participation by diverse personnel<br>■ A growing number of ageing employees and using their "know-why" | |
| | | Respect for human rights and fair working conditions | ■ Creation of workplaces that follow the management principle of a frank and open-minded business culture to accommodate diverse work styles | |
| Advancement of corporate governance | Governance (G) | Strengthen the effectiveness of governance | ■ Strengthening the oversight function of the Board of Directors, aimed at maintaining and improving the transparency and solidness of business management | 16, 17 |
| | | Compliance | ■ Building a system to respond to revisions to laws and regulations in each country | |
| | | Risk management | ■ Flexible implementation of risk management system directly controlled by the president | |
| Global environmental conservation | Environment (E) | Promote environmental management | ■ Expansion of energy-saving effects from advances in miniaturization of semiconductors<br>■ Tighter global environmental regulations | 6, 7, 11, 12, 13, 14, 15 |
| | | Address climate change issues toward decarbonization | ■ Expansion of power semiconductor materials and equipment markets<br>■ Cost increase due to spread of carbon pricing<br>■ Cost increase due to greater sophistication of temperature management for cutting-edge products | |
| | | Promote resource recycling | ■ Initiatives toward to realize a circular economy<br>■ Increase in water stress due to global warming<br>■ Increased interest in the marine plastics issue | |
| | | Preserve air, water, and soil environments | ■ Further risk reduction due to clearing standards stricter than regulations | |
| | | Preserve biodiversity | ■ Risk reduction through initiatives addressing biodiversity and water resources as a single issue<br>■ Increased risk of global biodiversity loss | |
| Chemical substance management | | Precisely address laws and regulations | ■ Increased product value by taking thorough action prior to legislation from before and during the early stages of material development<br>■ Tighter chemical substance control regulations in major developed countries | 12, 17 |
| Occupational health and safety/ Security and disaster prevention | Social (S) | Occupational health and safety/Reduction of risks posed by chemical substances | ■ Further risk reduction through RBA audits and ISO 45001 certification | 3, 12 |

# Material Issues/2020 Results & 2021 Issues and Goals

| Material issues | ESG fields | Key initiatives | Issues and goals of FY 2020/12 |
|---|---|---|---|
| Creation of new added value that contributes to innovation | Social (S) | Further improve customer satisfaction | ■ Rapidly and steadily work to develop a support structure rigorously focused on customer satisfaction along with R&D<br>■ Through rigorous marketing, TOK will carefully identify and intensively and proactively address solutions that lead to the creation of new value for customers. |
| | | | ■ Improve detection sensitivity for metal impurities that comply with customer development roadmaps |
| | | Contribute to innovation and resolutions to social issues | ■ Ambitiously develop the technologies required by 5G, IoT and other innovations |
| | | | ■ Continue to develop and strengthen commercial viability of high-functional films, life science-related materials, and optical materials |
| | | | ■ Expand cutting-edge materials development at the new R&D building<br>■ Expand collaborative projects with other companies and groups |
| Enhancement of personnel measures on a global basis | | Strengthen personnel capabilities | ■ Strengthen human resource development by introducing new training |
| | | | ■ Continue promoting a good work-life balance |
| | | Diversity and inclusion | ■ Continue promotion of corporate activities that leverage diversity<br>■ Promote personnel exchanges within the Group |
| | | | ■ Continue to promote women in the workplace |
| | | Respect for human rights and fair working conditions | ■ Further develop details of the system<br>■ Raise awareness and conduct training in preparation for introduction of new personnel system |
| | | | ■ Implement training based on new themes<br>■ Continue efforts to prevent harassment |
| Advancement of corporate governance | Governance (G) | Strengthen the effectiveness of governance | ■ Confirm implementation status of new remuneration system<br>■ Further enhance the nomination system and related issues<br>■ Increase transparency of the Nomination and Compensation Advisory Committee<br>■ Introduce a new remuneration system for directors<br>■ Continue to thoroughly operate the PDCA cycle to improve the effectiveness of the Board of Directors (assess its effectiveness once a year)<br>■ Set out authority for subsidiaries inside and outside Japan<br>■ Enhance internal control functions |
| | | | ■ Continue to improve business processes<br>■ Promote sharing of business operations through the Group and review organization roles<br>■ Create systems for CSR entrenchment and RBA Code of Conduct compliance |
| | | Compliance | ■ Continue activities to instill compliance |
| | | | ■ Minimize legal risks<br>■ Establish and implement legal and regulatory management systems |
| | | | ■ Continue appropriate operation of internal reporting system<br>■ Further enhance internal reporting system |
| | | Risk management | ■ Work to reduce risks previously and newly identified in risk assessments |
| | | | ■ Create a unified BCP for the Group to begin implementation in 2021 |
| | | | ■ Continue to hold drills to increase awareness and aim to keep response rate high<br>■ Conducted desktop drills |
| | | | ■ Revised information security countermeasures and information management rules to align with work-style reforms and open innovation<br>■ Promote effective utilization of information through digitalization<br>■ Maintain and entrench information management standards |

[Self-assessment of goal achievement]
○ Undertook, achieved results
△ Undertook, but need to do more
× Did not undertake or achieve yet

| Main achievements and progress in FY 2020/12 | Evaluation | Issues and goals of FY 2021/12 | Pages | SDGs to which we contribute |
|---|---|---|---|---|
| ■ Consolidated net sales: Increased by 14.4% year-on-year | ○ | ■ Rapidly and steadily work to develop a support structure rigorously focused on customer satisfaction along with R&D<br>■ Through rigorous marketing, TOK will carefully identify and intensively and proactively address solutions that lead to the creation of new value for customers. | P56–59<br>P64–71 | |
| ■ Improve detection sensitivity for metal impurities that comply with customer development roadmaps | ○ | ■ Improve detection sensitivity for metal impurities that comply with customer development roadmaps | P8<br>P65<br>P67 | |
| ■ Increased total net sales of cutting-edge photoresists by 19.2% year-on-year | ○ | ■ Ambitiously develop the technologies required by 5G, IoT and other innovations | P40–41<br>P56–59 | |
| ■ Promoted development and commercialization of high-functional films for use in separators for lithium-ion storage batteries, optical materials for use in UV nanoimprint materials, and life science-related materials for use in biochip manufacturing materials and cell sequencing chips | ○ | ■ Continue development and strengthen commercial viability of high-functional films, life science-related materials, and optical materials | P44–45 | |
| ■ Commenced operations of new R&D building<br>■ Number of collaborative projects promoted with other companies and groups: Increased by approx. 2% year on year | ○ | ■ Expand cutting-edge materials development at the new R&D building<br>■ Expand collaborative projects with other companies and groups | P58–59<br>P65–67 | |
| ■ Implementing teaching and coaching training for section managers | ○ | ■ Implementing training for new managers and transferred employees | P60–63 | |
| ■ Ratio of paid leave taken: 72.0%*<br>■ Expanded the range of eligibility for childcare support systems (shorter working hours, childcare time, occupational rehabilitation system) (Previously: up to the child's fourth year of elementary school; now: up to the child's sixth year)<br>■ Increased childcare leave taken (male employees: 1 in 2019 to 5 in 2020)* | ○ | ■ Continue promoting a good work-life balance<br>■ Flex time expanded to more departments and work from home was introduced as an official system<br>■ Hourly paid holiday system was introduced | P60–63 | |
| ■ Ratio of non-Japanese employees: 24.2%<br>■ Ratio of local hires in overseas management positions (consolidated basis): 53.8%<br>■ Personnel exchange within the Group was limited due to the impact of COVID-19 | △ | ■ Continue promotion of corporate activities that leverage diversity<br>■ Promote personnel exchanges within the Group | P60–63<br>P78 | |
| ■ Ratio of women in senior and middle management: 3.2%*<br>■ Ratio of female new graduates hired: 38.5%* | △ | ■ Continue to promote women in the workplace<br>■ Career training featuring life stages was introduced | P60–63<br>P78 | |
| ■ Further develop details of the system<br>■ Introduction of the new system was postponed from 2021 to 2022 due to the impact of COVID-19 | △ | ■ New system was formulated in detail toward introduction in 2022 | P60–63 | |
| ■ Conducted dialogs between managers and executives based on TOK Vision 2030<br>■ Efforts to implement human rights education including harassment prevention | ○ | ■ Continue efforts to prevent harassment<br>■ Implement human rights education | P60–63 | |
| ■ Implemented and confirmed status of implementation of new remuneration system<br>■ Management successor planning<br>■ Conducted evaluation of the Board of Directors for the previous fiscal year and made improvements on identified issues<br>■ Revised the content of the questionnaire for the Board of Directors evaluation<br>■ Revised authority for subsidiaries inside and outside Japan | ○ | ■ Establish new remuneration system and formulate performance indicators concerning next medium-term plan<br>■ Formulate skill matrix of directors<br>■ Continue to thoroughly operate the PDCA cycle to improve the effectiveness of the Board of Directors (assess its effectiveness once a year)<br>■ Enhance internal control functions<br>■ Confirm the operating status after the revision of authorities | P74–93 | |
| ■ Established new import management function in GMS (Group Management System)<br>■ Established monitoring system for amendments to laws<br>■ Progress rate on issue resolution in operating processes: 98%<br>■ Streamlined operations of the division in charge of CSR and received RBA audit at the Koriyama Plant | ○ | ■ Review the structure and operation of GMS Committee<br>■ Visualize operations to achieve standardized and globally optimized operations in the Group | P50–52<br>P78<br>P90–91 | |
| ■ Conducted compliance training<br>■ Prepared the *Guide to Overseas Laws for Secondees*<br>■ Incorporated the Compliance Standards of Conduct into the CSR Policy | ○ | ■ Continue activities to instill compliance | P90–91 | |
| ■ Listed laws applicable to group businesses<br>■ Revised group compliance rules<br>■ Started formulating the list of applicable laws and the legal management procedures | △ | ■ Formulate and disseminate the list of applicable laws and the legal management procedures | P51<br>P90–91<br>P95 | |
| ■ Three reports were received, for which solutions and recurrence prevention measures were explored and implemented consulting an expert (legal advisor) | △ | ■ Continue appropriate operation of internal reporting system<br>■ Further enhance and disseminate whistleblowing system | P91 | |
| ■ Continued activities to reduce risks assessed as highly impacting on business continuity, such as the risk of flooding caused by torrential downpour or the risk of spread of COVID-19 infection | ○ | ■ Work to reduce risks previously and newly identified in risk assessments | P91–96 | |
| ■ Formulated BCP scenarios and restoration principles at the production sites of overseas subsidiaries | △ | ■ Create a unified BCP for the Group to begin implementation in 2022 | P91–93 | |
| ■ Conducted drills to improve awareness of the safety confirmation system in the event of major natural disasters. Three company-wide drills held with high response rate maintained in all | △ | ■ Continue to hold drills to increase awareness and aim to maintain a high response rate | P91–93 | |
| ■ Reviewed information security measures and information management rules for improvement<br>■ Promoted shift to paperless practice and prepared the *Files and Folders Classification Guidebook* for the use of information<br>■ Conducted information management training | ○ | ■ Promote effective utilization of information<br>■ Review of cyber security measures<br>■ Maintain and entrench information management standards | P92–93 | |

* Tokyo Ohka Kogyo Co., Ltd. only

# Material Issues/2020 Results & 2021 Issues and Goals

| Material issues | ESG fields | Key initiatives | Issues and goals of FY 2020/12 | |
|---|---|---|---|---|
| Global environmental conservation | Environment (E) | Promote environmental management | Develop and produce environmentally friendly products | ■ Stably supply i-Line photoresists for power semiconductors<br>■ Expand sales of equipment for power semiconductors |
| | | | Eradicate environmental accidents that affect external parties | ■ Number of environmental accidents: Severe accidents: Zero |
| | | | Proactive response to new environmental regulations | ■ Introduce electronic manifests at sites where they have not been introduced<br>■ Examine the introduction of an integrated waste management system |
| | | | Proactive disclosure of environmental information | ■ Proactively disclosed information by publishing the *Integrated Report* and disclosed environmental information on website |
| | | | Create an environmental ISO organization and systems | ■ Examine methods for effective implementation of company-wide environmental management activities |
| | | Address climate change issues toward decarbonization | Improve energy-related $CO_2$ emissions per base unit*<br>[Medium-term target]<br>Reduce energy-related $CO_2$ emissions (per base unit) by 11 points by 2030 compared with 2019 (reduction of 1 point annually) | [New medium-term targets] FY 2020 only<br>■ Reduce by 11 points compared with 2019 by 2030<br>* Reduction target values changed from FY 2020<br>■ Reduce energy-related $CO_2$ emissions (per base unit) by 1 point compared with 2019 in 2020 |
| | | | Improve energy consumption per base unit*<br>[Medium-term target]<br>Reduce energy consumption (per base unit) by 11 points by 2030 compared with 2019 (reduction of 1 point annually) | [New medium-term targets] FY 2020 only<br>■ Reduce by 11 points compared with 2019 by 2030<br>* Reduction target values changed from FY 2020<br>■ Reduce energy consumption (per base unit) by 1 point compared with 2019 in 2020 |
| | | | Improve energy consumption per base unit in distribution* | ■ Reduce energy consumption (per base unit) by at least 1 point year-on-year |
| | | | Measures to prevent global warming at overseas manufacturing sites | ■ Developed production activities from standpoint of energy conservation |
| | | Promote resource recycling | Initiatives to address water risk* | ■ Propose and execute plans at each site<br>■ Reduce by 13% compared with 2017 by 2030<br>■ Reduce by 3% compared with 2017 in 2020 |
| | | | Reduce industrial waste*<br>[Medium-term target]<br>Reduce industrial waste (per base unit) by 5 points by 2020 compared with 2015 (reduction of 1 point annually) | ■ Reduce industrial waste (per base unit) by 5 points compared with 2015 and by 1 point year-on-year<br>■ Industrial waste disposed in landfills => less than 1%<br>Achieve zero emissions |
| | | Preserve air, water, and soil environments | Prevent Air, Water, and Soil Pollution | ■ Incidents where operational thresholds are exceeded: None |
| | | | Countermeasures against ozone-depleting substances | ■ Manage CFC leakage volume through proper management of equipment<br>■ Examine introduction of non-CFC equipment when renewing facilities |
| | | | Comply with PRTR Law | ■ Review factors for PRTR-regulated substance emissions and transportation volume |
| | | Preserve biodiversity | Improve awareness of biodiversity based on TOK Biodiversity Protection Declaration and encourage participation in related activities | ■ Implement ongoing employee training<br>■ Continue activities to preserve forests |
| Chemical substance management | | Precisely address laws and regulations | Carry out appropriate and reliable management of chemical substances | ■ Maintain upstream management system<br>■ Continue to strengthen and operate chemical substance management system |
| | | | Properly Comply with PCB Special Measures Act | ■ Examine creating a roadmap for disposing PCB waste (low concentration) by 2027 deadline |
| Occupational health and safety/ Security and disaster prevention | Social (S) | Occupational health and safety/Reduction of risks posed by chemical substances | Foster a safety culture | ■ Established and improved occupational health and safety management systems<br>■ Prepare to acquire ISO 45001 certification and to extend the scope of certification |
| | | | Promotion of safety education and training, and disaster drills | |
| | | | Promotion of risk assessment activities in chemical substance handling work | ■ Improve risk assessments (take action to clarify high-risk, high-severity operations and equipment and reduce the risks at each site)<br>■ Continue implementation of internal guidelines for handling of highly corrosive chemical substances<br>■ Confirm and improve handling status of chemical substances through internal and external audits |
| | | | Zero workplace accidents* | ■ Achieve zero workplace accidents |

[Self-assessment of goal achievement]
○ Undertook, achieved results
△ Undertook, but need to do more
× Did not undertake or achieve yet

| | Achievements in FY 2020/12 | Evaluation | Issues and goals of FY 2021/12 | Pages | SDGs to which we contribute |
|---|---|---|---|---|---|
| | ■ Stably supply i-Line photoresists for power semiconductors<br>■ Expand sales of equipment for power semiconductors | ○ | ■ Stably supply i-Line photoresists for power semiconductors<br>■ Expand sales of equipment for power semiconductors | P42–43<br>P66<br>P69–70 | |
| | ■ Number of environmental accidents: Severe accidents: Zero | ○ | ■ Number of environmental accidents: Severe accidents: Zero | P104–105 | |
| | ■ Continue to prepare for introducing electronic manifests<br>■ Examine introduction of an integrated waste management system | △ | ■ Introduce a comprehensive management system for environment-related data | P102–103 | |
| | ■ Proactively disclosed information by publishing the *Integrated Report* and disclosed environmental information on website | ○ | ■ Proactively disclosed information by publishing the *Integrated Report* and disclosed environmental information on website | P12–13 | |
| | ■ Identified risks and opportunities at each department to set company-wide targets | ○ | ■ Examine methods for effective implementation of company-wide environmental management activities | – | |
| | ■ Reduce energy-related $CO_2$ emissions (per base unit) by 11 point compared with 2019 in 2020 | ○ | [New medium-term targets] FY 2021 and after<br>■ Reduce energy-related $CO_2$ emissions (per base unit) by 15 points compared with 2019 by 2030 | P98–99 | |
| | | ○ | [New medium-term targets] FY 2021 and after<br>■ Reduce energy-related $CO_2$ emissions (per base unit) by 1 point compared with the previous year | P98–99 | |
| | ■ Reduce energy consumption (per base unit) by 9 points compared with 2019 in 2020 | ○ | [New medium-term targets] FY 2021 and after<br>■ Reduce energy consumption (per base unit) by 15 points compared with 2019 by 2030 | P98–99 | |
| | | ○ | [New medium-term targets] FY 2021 and after<br>■ Reduce energy consumption (per base unit) by 1 point compared with the previous year | P98–99 | |
| | ■ No change in energy consumption (per base unit) compared with 2019 in 2020 | △ | ■ Reduce energy consumption (per base unit) by at least 1 point year-on-year | P98–99 | |
| | ■ Developed production activities from standpoint of energy conservation | ○ | ■ Developed production activities from standpoint of energy conservation | P99 | |
| | ■ Propose and execute plans at each site | ○ | ■ Propose and execute plans at each site | P100–101 | |
| | ■ Attained the target by reducing 8.3% vs. 2017*<br>* Starting with the FY 2021 target, the base year was shifted from 2017 to 2019 for new activities<br><Reference> Increased by 1.2% vs. 2019<br>■ Installed water bars at the Sagami Operation Center to reduce flooding risks | ○ | ■ Reduce by 15% compared with 2019 by 2030<br>■ Continue measures against flooding risks | | |
| | ■ Attained the target by reducing 11 points vs. 2015<br>The target left unattained because of increase by 15 points vs. previous year | △ | ■ Reduce base unit by 15 points vs. 2019 by 2030 | P102–103 | |
| | ■ Industrial waste disposed in landfills => less than 1%<br>Achieved zero emissions for a seventh consecutive year | ○ | ■ Industrial waste disposed in landfills => less than 1%<br>Achieve zero emissions | | |
| | ■ Operational thresholds were exceeded for a specified substance in groundwater at Sagami Operation Center | × | ■ Incidents where operational thresholds are exceeded: None | P104–105 | |
| | ■ Manage CFC leakage volume through proper management of equipment<br>■ Examine introduction of CFC-free equipment when renewing facilities | ○ | ■ Manage CFC leakage volume through proper management of equipment<br>■ Examine introduction of non-CFC equipment when renewing facilities | | |
| | ■ Review factors for PRTR-regulated substance emissions and transportation volume | ○ | ■ Maintain compliance with PRTR Act | | |
| | ■ Implemented CSR training for employees, as well as all directors, audit & supervisory board members, and officers (185 participants)<br>■ Dispatched employees to participate in activities at the Kanagawa Trust Midori Foundation | ○ | ■ Implement ongoing employee training<br>■ Continue activities to preserve forests | P105 | |
| | ■ Maintain upstream management system<br>· Supplier survey system has yet to be introduced<br>■ Continue to strengthen and operate chemical substance management system<br>· Proceeded with the listing of legal requirements included in chemical substance import laws and customer requirements | △ | ■ Establish chemical substance information management system<br>■ Continue to strengthen and operate chemical substance management system | P106–110 | |
| | ■ Formulated a road map toward the completion of disposal | ○ | ■ Formulate and promote equipment renewal plan based on the road map toward the deadline of disposal of PCB waste (low concentration) in 2027 | | |
| | ■ Acquired ISO 45001 certification at the Gotemba plant in June 2020<br>■ Conducted internal audit at sites where ISO 45001 certification is scheduled to be expanded in 2021, and established occupational health and safety management system | ○ | ■ Established and improved occupational health and safety management systems<br>■ Prepare to acquire ISO 45001 certification and to extend the scope of certification (to complete acquisition at sites in Japan by 2023) | P52<br>P109–110 | |
| | ■ Continued reduction activities for risks with high severity at each site. Also promoted risk assessment and hazard prediction activities for infrequent operations<br>■ Established and started operation of internal standards for highly corrosive substances and poisonous/deleterious substances<br>■ Improved the handling of chemical substances and antistatic measures and so on through ISO 45001 internal audit and external review | ○ | ■ Strengthen risk assessment and hazard prediction activities for infrequent operations<br>■ Establish Lockout/Tagout (LOTO) rules | | |
| | ■ Workplace accidents: 7<br>■ Achieved zero accidents resulting in lost workdays | × | ■ Achieve zero workplace accidents | | |

* Tokyo Ohka Kogyo Co., Ltd., and consolidated subsidiaries in Japan

# TOK at a Glance

## Business Portfolio

We are leveraging the Material Business, our current earnings driver centering on cutting-edge domains, and realizing synergy with our Equipment Business, which is cultivating new niche business domains.

### Materials Segment

**Develops high value-added products as an earnings driver**

Electronic functional materials

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

**High-density integration materials**
Packaging photoresists and MEMS materials and so on, which are compatible with **multi-layer stacking** accompanying advances made in semiconductor microprocessors

High-purity chemicals

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

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

### Equipment Segment

**Getting one step ahead of market needs in synergy with the Materials Segment**

Process equipment

**Semiconductor manufacturing equipment**
TOK's Zero Newton wafer handling system enables significant increases in efficiency of **the 3D packaging process** of semiconductors and **the thinning process for power semiconductors**

**LCD panels manufacturing equipment**
Various types of process equipment, including UV curing machines used to manufacture **flexible displays**, coating machines that can achieve high-precision performance, and coating machines for R&D

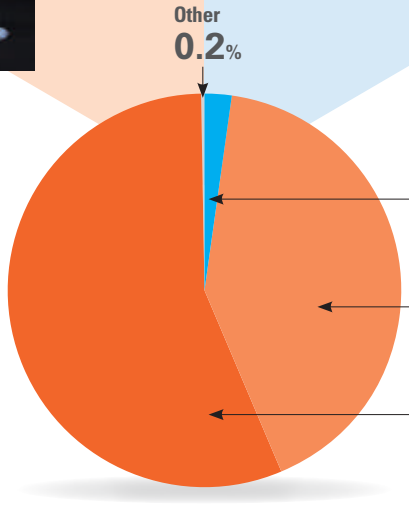
### Risks and opportunities by segment

→ See pages 65 and 69

**M&E (Materials & Equipment) strategy**

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

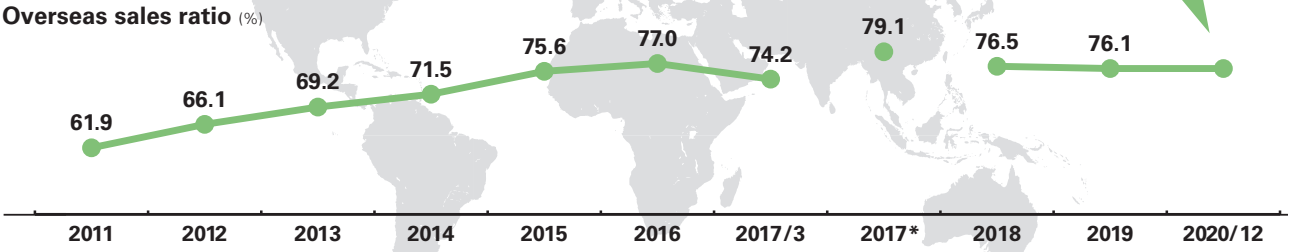
FY 2020/12
Consolidated net sales
**¥117.5 billion**



# Global Expansion

As a result of our focus on the semiconductor field and strategy of building close relationships with customers, the overseas sales ratio has increased significantly compare to the past 10 years to around 75% in recent years.

**Overseas sales ratio** (%)

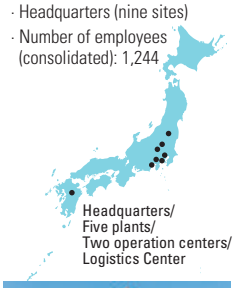


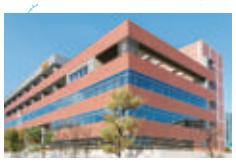

Overseas sales ratio **78.9%**

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

### Japan

- Headquarters (nine sites)
- Number of employees (consolidated): 1,244



### The U.S.

- One local subsidiary (two sites)
- Number of employees (consolidated): 124

Tokyo Ohka Kogyo America, Inc.

### Taiwan

- One local subsidiary (three sites)
- Number of employees (consolidated): 196

TOK Taiwan Co., Ltd.

### China

- Two local subsidiary (two sites)
- Number of employees (consolidated): 40

Chang Chun TOK (Changshu) Co., Ltd.

TOK China Co., Ltd.

### South Korea

- One local subsidiary (one site)
- Number of employees (consolidated): 127

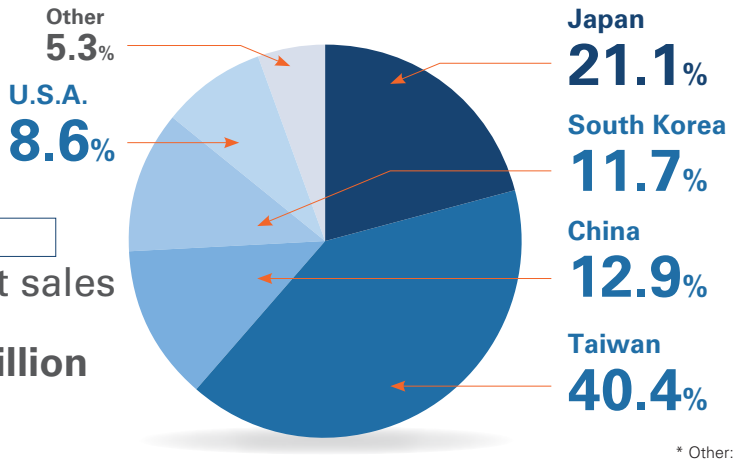
TOK Advanced Materials Co., Ltd.

* Number of employees: As of December 31, 2020

FY 2020/12

Consolidated net sales

**¥117.5 billion**




* Other: Europe and Singapore and so on

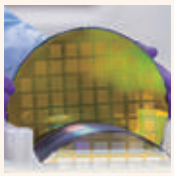
# TOK at a Glance

## Product Portfolio

TOK has strong niche domains both in the front-end processes and back-end processes of semiconductor production with strengths in both miniaturization and 3D packaging. It also provides cutting-edge value in high-purity chemicals as non-photosensitive materials and in equipment.

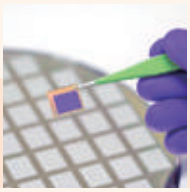
### Semiconductor manufacturing field

- EUV photoresists — Global No.1*
- KrF excimer laser photoresists — Global No.1*
- g-Line and i-Line photoresists — Global No.1*
- ArF excimer laser photoresists
- Electronic beam (EB) photoresists
- Interlayer insulation films
- Diffusion agents
- Materials for cover coat
- Directed Self-Assembly (DSA) materials
- Plasma ashing system



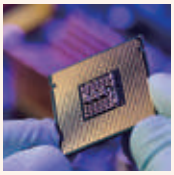
### Semiconductor packaging manufacturing field

- Bump photoresists
- Resists for Wafer-level CSP



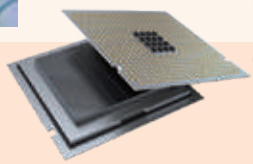
### Image sensor/ MEMS manufacturing field

- Materials for Photosensitive permanent
- Resists for Microlens
- Lift-off resists



### 3D packaging field

- Zero Newton® 3D packaging Equipment
- Adhesive materials



### High-purity chemicals

- Clean Solutions
- Thinners
- Developing solutions
- Organic chemicals
- Stripping solutions
- Inorganic chemicals
- Surface modifiers

### Panel manufacturing field

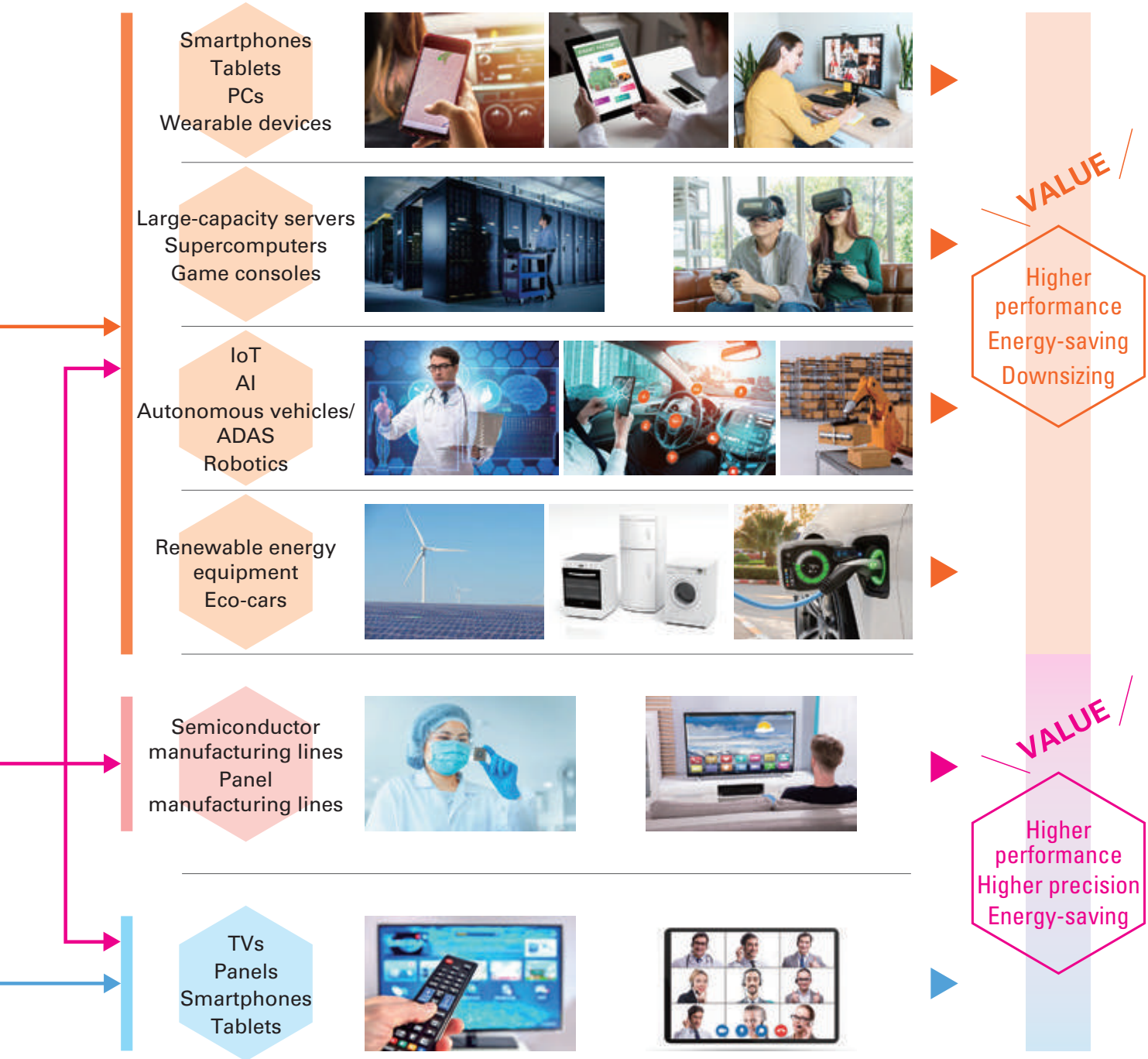
- TFT resists
- Resists for color filter
- UV curing machines
- Resists for Organic EL
- High-reliability transparent materials

* Based on the share of projected shipment volume in 2020 (calculated based on Fuji Chimera Research Institute, "Current Status and Future Outlook of Cutting-edge/Noticeable Semiconductor-related Markets 2020")

SDGs to which we contribute


# Main Targeted Markets, Applications, and End Products

All TOK products pertain to the B2B businesses, and people usually do not see its products in their daily lives. However, they are indispensable materials for upgrading end products that contribute to diverse innovations and the resolution of social issues.

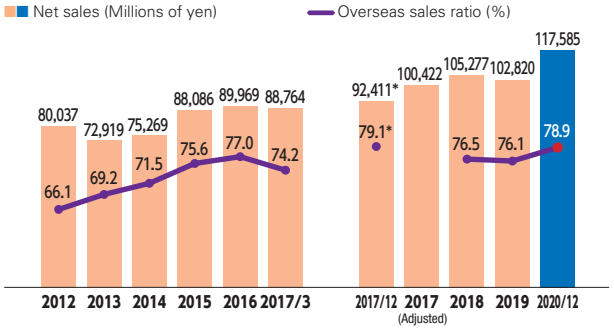


# Trends of Key Ten-Year Data and Analysis

## Ten-Year Financial Highlights

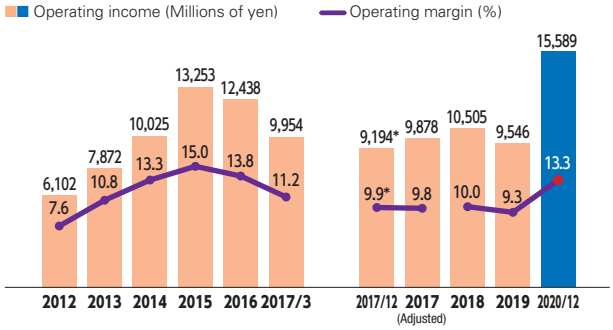
### Net sales/Overseas sales ratio*

**¥117,585 million** **78.9%**




### Operating income*/Operating margin

**¥15,589 million** **13.3%**

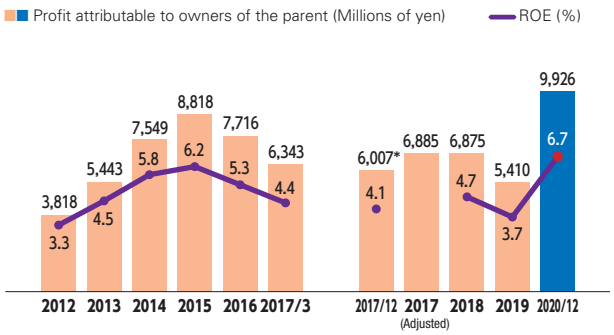



With the aim to be a globally trusted corporate group by inspiring customers with high value-added products and to achieve a consolidated operating income of 20.0 billion yen, as overarching aspirations for 2020 under the long-term vision formulated in 2010, TOK has promoted long-run R&D while upgrading its world-leading microprocessor technology and high-purity processing technology based on customer-oriented strategies and marketing. It also made largest-scale investments ever during the TOK Medium-Term Plan 2015 and the TOK Medium-Term Plan 2018. In FY 2020/12, TOK harvested the effect of these measures owing to the increased semiconductor demand that resulted from stay-home needs in the COVID-19 pandemic, leading to record-high net sales and operating income. In addition, its operating margin also improved owing to the growth of high-added value products in the cutting-edge semiconductor field, such as EUV/ArF/KrF photoresists, combined with the reduced depreciation and amortization.

* 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.

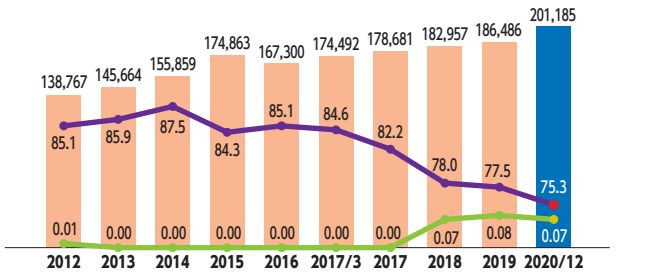
### Profit attributable to owners of the parent*/ROE

**¥9,926 million** **6.7%**




### Total assets/Equity ratio/Debt-to-equity

**¥201,185 million** **75.3%** **0.07 times**



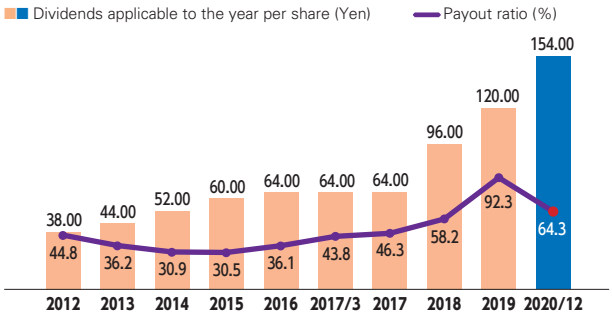

In FY 2020/12, TOK renewed its record-high profit attributable to owners of the parent with increased ROE. In coming years, TOK will aim for ROE ≥8% targeted in the TOK Medium-Term Plan 2021, and ROE ≥10% targeted in the TOK Vision 2030, emphasizing ROIC at the same level as ROE, while agilely responding to the uncertain business environment, investment environment, and changes in the financial situation **(see pages 46–49, "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.

As a long-run R&D-driven company that continues to target the top niche markets, TOK's basic policy is to maintain sufficient cash reserves to compete in development with larger rivals and facilitate agile investments. The equity ratio has stayed at around 85% for many years, but should gradually start to decline as a consequence of long-term debt financing, better shareholder returns, and one of the largest share buybacks the Company has ever undertaken under balance sheet management since the TOK Medium-Term Plan 2018.

### Dividends applicable to the year per share/Payout ratio

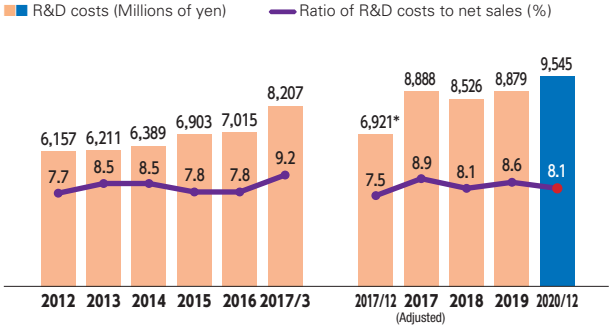
**¥154.00** **64.3%**




Until the fiscal year ended March 31, 2016, our basic policy targeted a consolidated dividend payout ratio of at least 30%. In the fiscal year ended March 31, 2017, we changed to a policy that targets a sustained dividend at a consolidated payout ratio of at least 40% while taking current levels into account. TOK has introduced a new dividend policy that targets DOE of 3.5%, beginning with year-end dividends in the fiscal year ended December 31, 2018, in order to respond to the expectations of long-run investors **(see pages 46–49 "Message from the CFO")**.

### R&D costs*/Ratio of R&D costs to net sales

**¥9,545 million** **8.1%**

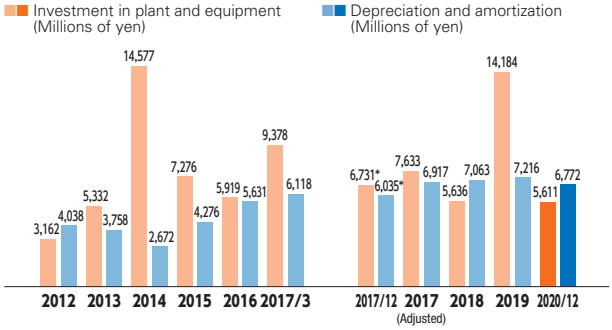



TOK's spending on R&D is equivalent to roughly 8% of net sales. By utilizing R&D costs that increase in proportion to sales increase, TOK will strengthen proposals before receiving requests from customers and will also endeavor to improve development efficiency by employing enhanced knowledge productivity, materials informatics (MI), and computational chemistry **(see pages 58-59, "Message from the Director in Charge of Research 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.

### Investment in plant and equipment/ Depreciation and amortization

**¥5,611 million** **¥6,772 million**



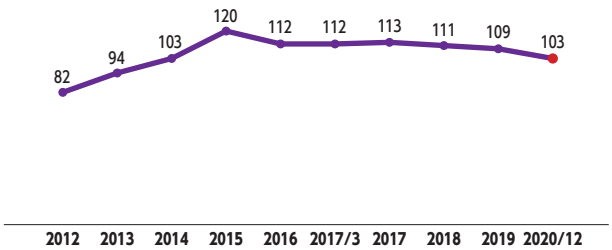

Depreciation and amortization increased as a result of large-scale investments during the TOK Medium-Term Plan 2015 and the TOK Medium-Term Plan 2018, but under the TOK Medium-Term Plan 2021, the Company plans to invest in production equipment with long depreciation periods, so depreciation and amortization should increase at a more moderate pace. Under TOK Vision 2030, TOK will make strategic investments while maximizing cash generation, aiming to achieve net sales of 200.0 billion yen in FY 2030/12.

* 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.

### Exchange rate

**¥103**

(Yen/U.S. dollars, As of March 31)

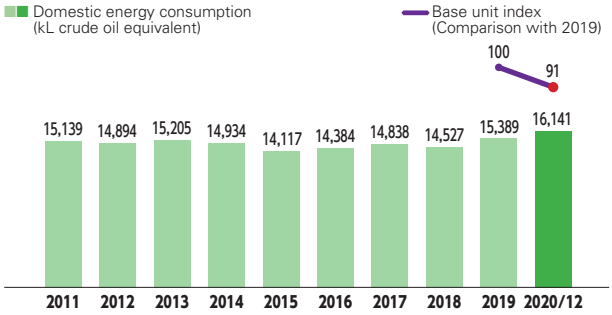



As global risks continue to increase, the Company intends to advance global cash management by including adjusting the balance of cash positions among overseas sites as a part of balance sheet management. We are thus enhancing financial risk controls for fluctuations in exchange rates and market liquidity.

# Ten-Year Non-Financial Highlights

### Domestic energy consumption*

**16,141** kL crude oil equivalent **91** Base unit index

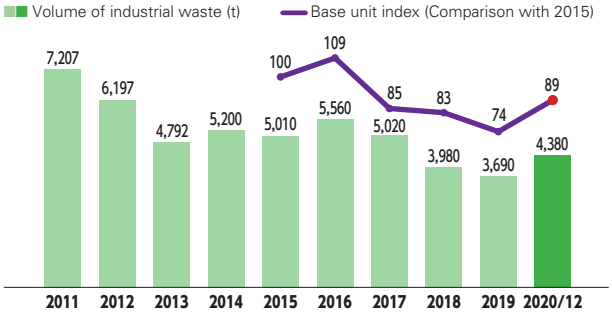



Toward the new 10-year target to reduce energy consumption (per base unit) by 15 points compared with 2019 by 2030, TOK achieved a reduction of 9 points year-on-year owing to increased production efficiency at several sites. The Company will carry on with efforts to reduce its environmental impact by improving production processes, increasing work efficiency, and reviewing equipment and operational methods.

* Tokyo Ohka Kogyo Co., Ltd., and consolidated subsidiaries in Japan
Because of the change in the fiscal year-end, totals for 2013 onward are from January through December. Totals for 2011 and 2012 are from April to March.

### Volume of industrial waste*1

**4,380** t **89** Base unit index



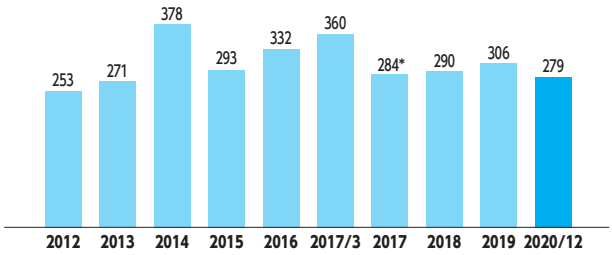

TOK has achieved zero emissions*2 for seven consecutive years as the volume of its industrial waste headed to landfill disposal via intermediate treatment remained below 1% of the total. TOK targets a reduction of 5 points in total industrial waste by 2020 compared with the base unit indexed to 2015. The Company has achieved a reduction of 11 points through continuous activities to refine and reuse process effluents, and to internally process and recover effluents while turning them into items of value. In 2021, TOK will set new targets indexed to 2019 and further continue reduction efforts.

*1 Total sum of general industrial waste and specially controlled industrial waste.
Because of the change in the fiscal year-end on Tokyo Ohka Kogyo Co., Ltd., and consolidated subsidiaries in Japan, totals for 2013 onward are from January through December. Totals for 2011 and 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

**279**

(patents)

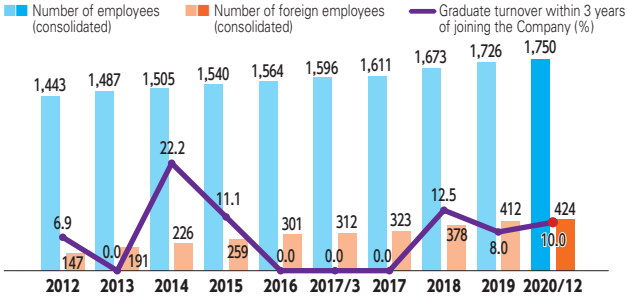



The number of patent registrations in the cutting-edge semiconductor fields is on a decreasing trend due to the increased development difficulty, but patent registrations have been rising for new businesses and new materials. Going forward, we will aim for the stable pursuit of business development through new and promising technologies, while building barriers to entry through patent acquisition. We will form a patent portfolio that supports corporate value enhancement more effectively by discerning whether to employ open or closed strategies on a case-by-case basis.

* 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 3 years of joining the Company*

**1,750** **424** **10.0%**



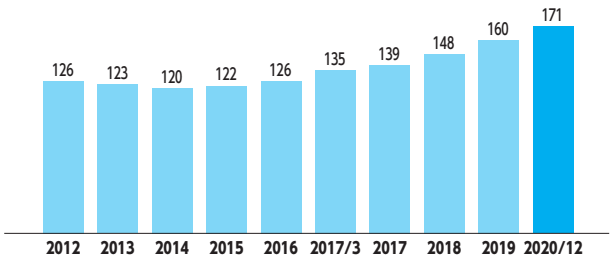

At TOK, the number of foreign employees has been increasing as a result of an increase in the number of overseas development and production sites and the emphasis on merit-based hiring of new graduates regardless of nationality. Based on the spirit of a frank and open-minded business culture, one of our management principles, and the basic philosophy that human resources are a company asset, we have expanded various personnel systems and training programs. As a result, the ratio of new graduate hires who quit within three years of joining the Company has remained at a low rate. In February 2020, TOK was recognized in 2020 Certified Health & Productivity Management Outstanding Organizations Recognition Program for a third consecutive year.

* Tokyo Ohka Kogyo Co., Ltd. only

## Number of female employees*

**171**

(People)

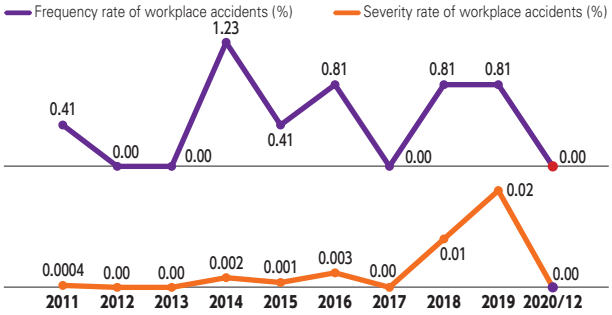



The ratio of female new graduate hires has held steady at about 40%, and the number of female employees has been increasing as a result of better supportive measures to retain and promote women in our company. In recognition of our initiatives to offer flexible work styles, support for career formation plans, and support for childrearing, TOK was again selected as a constituent stock in 2021 for the MSCI Japan Empowering Women Index. Although the ratio of women in management positions remains at a same level, many management candidates have been developed.

* Tokyo Ohka Kogyo Co., Ltd. only (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%** **0.00%**



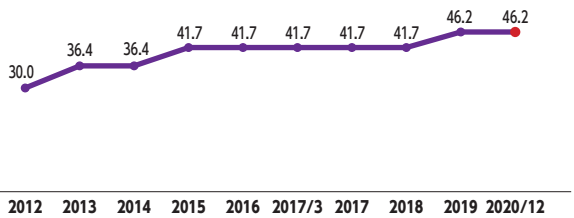

In FY 2020/12, TOK achieved zero both in the frequency of workplace accidents and in the severity of workplace accidents. However, seven incidents without lost workdays occurred; therefore, the Company reviewed the risks and implemented measures to prevent a recurrence. TOK will continue to make concerted company-wide efforts to prevent workplace accidents, including the utilization of the RBA audit results and effort to acquire the ISO 45001 certification at increased sites.

* Tokyo Ohka Kogyo Co., Ltd. only

## Ratio of outside officers in the Board of Directors

**46.2%**

(%)

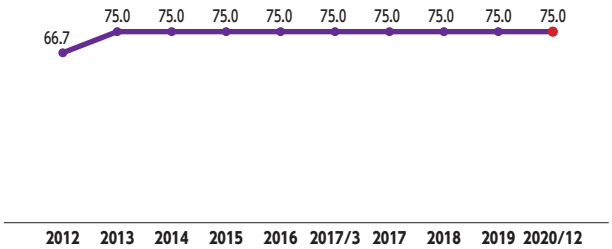



TOK increased the number of outside audit & supervisory board members by one to three in 2013, and increased the number of outside directors by one in 2015 and 2020, respectively, to three. Therefore, the ratio of outside officers on the Board of Directors is now 46.2%.

## Ratio of outside members among audit & supervisory board members

**75.0%**

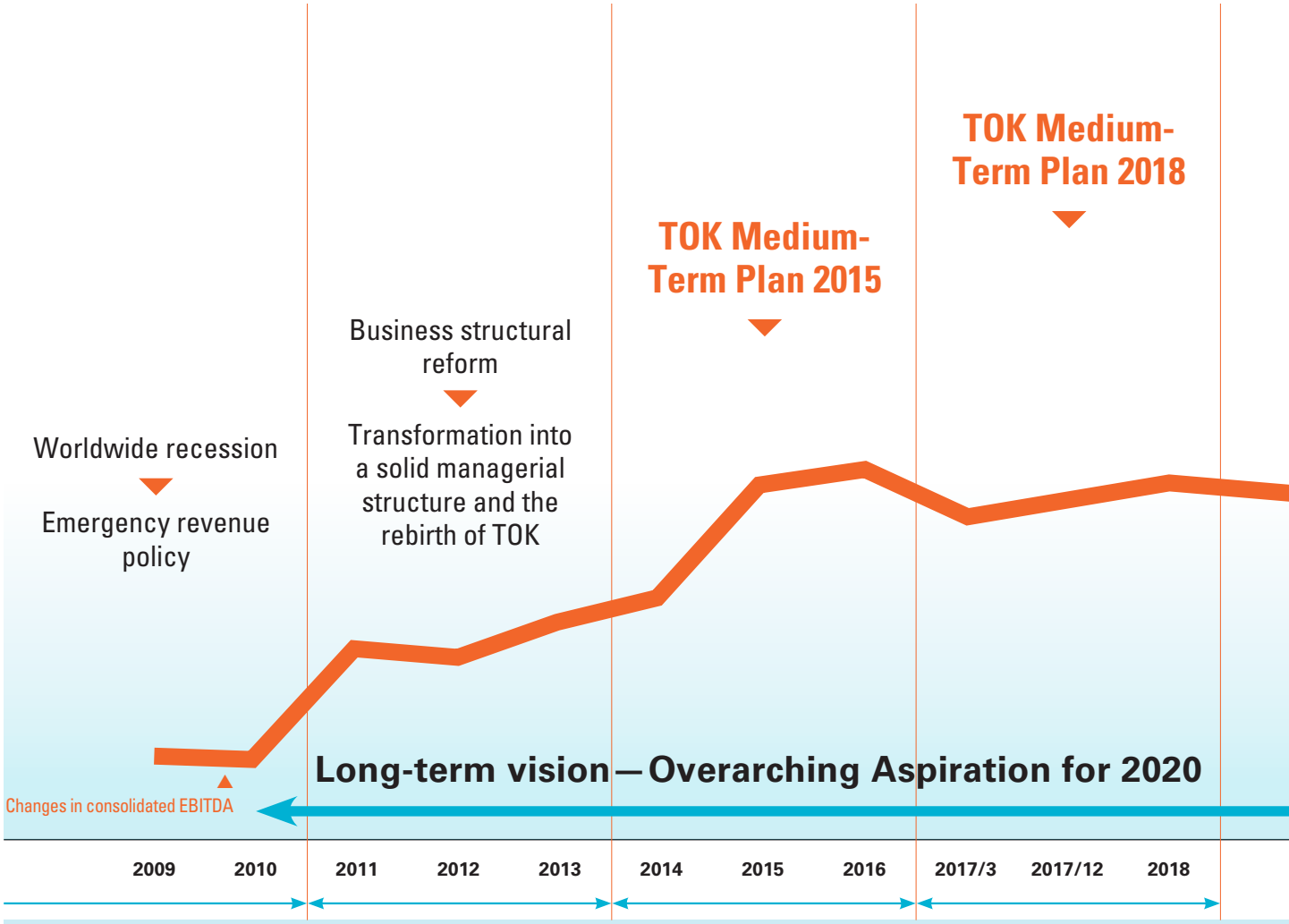
(%)




The ratio of outside members on the audit & supervisory board has been 75.0% ever since the number of outside members was increased by one to three in 2013.

# Achieve TOK Vision 2030 and Become

**TOK will continue to operate in the innovative semiconductor and electronic component segments as its primary business domain despite rapid technological changes and intense competition. In addition, the company will improve its sustainable corporate value from the long-term perspective, envision the outcome of the next 10 and 20 years, and contribute to the sustainable development of society.**




### Emergency revenue policy

**Adapt to the new business environment**

- Implement cost reduction
- Achieve a low-cost structure

### Business structural reform

**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

**Targets**

- Surpass record-high earnings
- Enhance business foundations that support sustainable growth
- Expand business domains to include the renewable energy segment

**Strategy**

- Build close relationships with regional users
- Reform business portfolios
- Develop global personnel

### TOK Medium-Term Plan 2018

**Strategy**

- Reform business portfolios
- Evolve the customer-oriented strategies
- Develop global personnel
- Strengthen management foundation

# a 100-Year Company in 2040

**Become a 100-year company in FY 2040/12**

**Overarching aspiration (quantitative aspects)**

Net sales **200.0 billion yen**
EBITDA **45.0 billion yen**
ROE **over 10%**

## TOK Medium-Term Plan 2021

**FY 2020/12**
**Achieved record-high profits**

**FY 2021/12 TARGETS:**

Net sales
**¥122.6 billion**
Operating income
**¥16.5 billion**
ROE
**7.0%**

* Forecast-based amounts for FY 2021/12 are figures announced on February 15, 2021.

**90th anniversary**
**FY 2030/12**
**TOK Vision 2030**

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


**Seven strategies toward 2030**

**Pass on to a 100-year company**

**Long-term vision—TOK Vision 2030**

2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030/12

### TOK Medium-Term Plan 2021

**Features**

- Strengthen business portfolio reforms
- Return to a growth trajectory
- Strengthen balance sheet management and introduce a new dividend policy

### Overarching aspiration (qualitative aspects)

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

# To Our Stakeholders—A Message from the President—

TOK further advances to become a 100-year company in 2040, increasing both its economic value and social value by contributing to a sustainable future through chemistry.

**Noriaki Taneichi** *President and Chief Executive Officer*

# Record-High Performance

## Supporting semiconductor supply with meticulous supply chain management amidst global confusion caused by the COVID-19 pandemic

The spread of the novel coronavirus disease started in late 2019 (COVID-19) and has yet to subside with the resurgence of variants while vaccination proceeds. We extend our sincere sympathy to the infected persons, and our deepest condolences to those who lost loved ones. We are also profoundly grateful to all persons engaged in preventing the spread of the infection and maintaining social functions.

Our group achieved record-high performance all in sales, operating income, and current net income attributable to owners of the parent in FY 2020/12 as the second year of the TOK Medium-Term Plan 2021. Despite the current global confusion caused by the COVID-19, the demand for semiconductor photoresists and high-purity chemicals has grown resulting from the dissemination of 5G and IoT, combined with the increased demand for remote working and staying home, and enhanced cloud services. This is because the semiconductor industry was positioned as an essential business in each country even under the COVID-19 pandemic, and because we have continuously responded to the demand by implementing thorough measures to prevent both getting infected and infecting others in cooperation with internal and external stakeholders so that semiconductor production would never be interrupted. On the other hand, since many photoresists and raw materials are tailored and have short shelf lives, excess inventory may result in a substantial loss. Therefore, we have carefully examined at all times the supply-demand balance and order receiving/placing time through close communication with customers, our sites, and suppliers. These efforts have also led to the record-high performance. I would like to once again extend my gratitude to all employees and suppliers who have committed to meticulous supply chain management (SCM) despite the restrictions and inconveniences that affected our sales activities, research and development, and many other aspects.

Regarding the term-end dividend for FY 2020/12, we maintained the DOE 3.5% policy, considering long-term shareholders who have supported TOK as a long-run R&D-based company. In addition, we have also determined to pay dividends commemorating the 80th anniversary at 94 yen per share (annual dividend was 154 yen).

Semiconductor demand seems to further increase in society. The TOK Group will continue contributing to the sustainable development of society by finding opportunities and responding to global risks that include the infectious disease and climate change, as well as unexpected risks that will emerge, in cooperation with stakeholders.

## Enhancing economic value and social value as the global No. 1 manufacturer of semiconductor photoresists with the largest global market share

TOK celebrated its 80th anniversary last year. Under the management philosophy stated by the founder Shigemasa Mukai since the establishment of the company, we at TOK have achieved continuous growth by increasing both its economic value and social value through the inherited integrated thinking for making sure that all management resources and initiatives ultimately lead to contributing to society. The global risk over the past year has refreshed our recognition of the social value that we provide, and the significance of our social responsibility as a global No. 1 manufacturer of semiconductor photoresists.*1

For example, in the digital transformation (DX) that proceeded in the COVID-19 pandemic, we are proud of contributing to the health and safety of people across the world, improvement of productivity, and shift to the new normal by providing our high value-added cutting-edge products such as EUV/ArF/KrF photoresists, high-density integration materials, and high-purity chemicals. DX particularly advanced in the U.S., and a research reports that automation proceeded at worksites under the COVID-19 pandemic, leading to the productivity improvement by 2.6% in 2020, the highest increase in 10 years.*2 Our photoresists were also used in cutting-edge semiconductor devices for supercomputers that supported the development of COVID-19 drugs and the research of preventive measures. We also supplied resists and devices for power semiconductors that were indispensable for extracorporeal membrane oxygenation (ECMO) to treat COVID-19 patients, thereby supporting the rapid production increase of the machines.

As the response to the climate change risks and efforts for decarbonization are accelerated in Japan and overseas, we have also supplied resists and devices for power semiconductors that are critical for renewable energy systems (such as wind power and solar power generation), EVs, and various energy-saving machines. The immediate supply-demand conditions for i-Line and KrF photoresists used in power semiconductors are tight for the automobile industry and for other uses. We have also endeavored to fulfill our supplier responsibility as the manufacturer with the largest global market share by pursuing stable supply based on several sites from the viewpoint of risk diversification.

In the development of new businesses envisioning

future business portfolio, materials for biochip production for next-generation DNA sequencers were introduced into COVID-19 virus analysis sites and elsewhere, and the sales of cell sequencing chips that contribute to the advancement of pathological diagnosis also increased thereby providing social value in the life science field, in addition to the semiconductor and electronic material fields.

In FY 2021/12 as the final year of the medium-term plan, we will leverage the value created as above in responding to new risks and opportunities and will aim to further increase our economic value and social value.

*1 Based on the projected shipment volume of photoresist for EUV, ArF, KrF, g-Line, i-Line in 2020 (calculated based on Fuji Chimera Research Institute, "Current Status and Future Outlook of Cutting-edge/Noticeable Semiconductor-related Markets 2020")
*2 Source: *Nihon Keizai Shimbun*, February 23, 2021

# TOK Medium-Term Plan 2021 and Initiatives for Material Issues

## Aiming to supply high value-added products that contribute to society to the extent that they outweigh geopolitical risks

At present, the high operating rates continue in the semiconductor industry based on the high demand related to 5G, IoT, and AI, as well as the ongoing shift to a data-driven society. The advancement and demand increase are also in progress for cutting-edge photoresists that promote the performance improvement of semiconductors. In addition, the advancement and demand increase will also proceed in full scale for the cutting-edge packaging domain, including the laminating technology for semiconductors, while the demand for power semiconductors will also be increased by the acceleration of decarbonization in Japan and overseas. Therefore, our business opportunities will continue to increase in the front-end and back-end processes, cutting-edge domains, and general-purpose domains.

On the other hand, the semiconductor industry faces geopolitical risks such as U.S.-China trade friction and tension between Japan and South Korea; and they are tending upwards. The supply-demand conditions are also increasingly tight in the automobile industry and other industries. Under these circumstances, the review of the concentration of semiconductor production in Asia and the reshoring of production are in progress.

Furthermore, the increasing climate change risks are beginning to have a direct impact on the semiconductor industry. The cold wave that occurred in Texas, USA, resulted in the interruption of operations at chemical plants and semiconductor plants, causing concerns about our raw material cost and supply chain.

While carefully monitoring these global risks, the TOK Group will minimize their impact by developing business in five regions (Japan, U.S., China, South Korea, and Taiwan) for risk diversification, and by gearing up the business portfolio reform that has been promoted since the TOK Medium-Term Plan 2015. We will also continue to thoroughly comply with the laws and regulations in each country, and to pursue the creation of products supported by advanced technologies inherited since foundation, thereby aiming to supply high value-added products that contribute to society to the extent that they outweigh geopolitical risks.

## Key measures in the final year of the medium-term plan and initiatives for material issues

**The Company-wide Strategy (1)** "Accurately identify and rapidly address the customers' voice to build an even larger and stronger pipeline to customers": The customer-oriented sites in the U.S., South Korea, and Taiwan extremely effectively functioned as a communication hub in FY 2020/12. Therefore, we will continue this initiative and consider the deployment of customer-oriented sites in new growing markets.

**The Company-wide Strategy (2)** "Strengthen marketing, increase understanding of the customers' value creation processes and translate these efforts into new value creation": We have reviewed our sales force and started to practice the marketing approach of seeing the forest while nurturing the trees. We have also focused on technical mar-

keting for each product.

**The Company-wide Strategy (3)** "Strengthen human resources who can perform research, make decisions, and take actions on their own initiative" and the material issue "Enhancement of personnel measures on a global basis": We will start the introduction of a new personnel system in 2022, being postponed due to the COVID-19 pandemic, focused on enabling human resources to maintain high motivation and the pursuit of happiness in personnel leading to enhanced corporate value based on a mission grade system. We have further improved the reemployment system, deepened the discussion toward higher employee engagement, and decided to conduct a company-wide engagement survey this year. In the development department, a performance-based reward system and an executive fellow system was introduced respectively in 2018 and in 2019. In 2020, the scope of the technological award system was expanded, adding the manufacturing process to the scope in addition to the conventional product development fields, thereby fostering an enhanced sense of unity. In coming years, we will develop human resources who can take action with the awareness of the global environment and with a broad perspective toward the resolution of new social issues and the creation of innovations, including decarbonization initiatives.

Regarding the material issue "Creation of new added value that contributes to innovation" based on the initiatives under **the Company-wide Strategies (1) to (3)**, progress has been made in the development of EUV photoresists for the cutting-edge 3 to 2 nm processes for the miniaturization of semiconductors in FY 2020/12.

**The Company-wide Strategy (4)** "Strengthen management foundation": We upgraded balance sheet management following the formulation of TOK Vision 2030, thereby starting initiatives for maximizing cash generation capability by setting EBITDA target, and for improving asset efficiency using ROIC as a monitoring indicator. We have also started the operation of a new remuneration system for directors and audit & supervisory board members with an increased rate of performance-linked payment (45%), applying ROE and other evaluation indicators, and promoting the long-term holding of shares while serving in management. We recognize that these measures have steadily improved the management executives' awareness of performance indicators and capital efficiency and positive attitude for sharing interests with shareholders. In coming years, we will consider to formulate a system setting an ambitious target to help maintaining motivation, even in the downward swing of the market environment and performance.

The TOK Group aims to update the record-high performance in FY 2021/12, through the medium-term plan as above and the initiatives for material issues. These strategies aimed at sustainable growth and corporate value enhancement are defined from a long-term perspective in TOK Vision 2030.

# TOK Vision 2030

## Aiming to become a 100-year company in 20 years based on the accomplishments achieved over the next 10 years

The TOK Group has inherited since foundation the business model to develop and input high value-added products in niche markets with rapid technological changes. In the meantime, we have introduced a long-term perspective into management after operating deficit was recorded in 2009 for the first time since listing, immediately following the global financial crisis in 2008. Since 2010, we have pursued our management vision "Aim to be a globally trusted corporate group by inspiring customers with high value-added products," as the overarching aspiration for 2020, while endeavoring to achieve the consolidated operating income of 20.0 billion yen. As a result, these efforts led to the record-high performance in 2020, though the quantitative targets were left unattained. We are also proud of obtaining worthwhile trust in the global market by continuously providing high value-added products.

To further maintain and strengthen management from the long-term perspective as above, we formulated and disclosed TOK Vision 2030 in August 2020, aiming to become "The e-Material Global Company" contributing to a sustainable future through chemistry as a new management vision for 10 years ahead, and specifying the overarching aspiration and the seven strategies that substantially enhance the quantitative and qualitative aspects. Under this vision, we aim to become a 100-year company in 20 years based on the accomplishments achieved over the next 10 years by continuously increasing cash generation capability in the electronic material field as "The e-Material Global Company" until 2030, while promoting preparations to expand the future blue oceans. From 2030 to 2040, we will advance toward a 100-year company both in the new business fields developed as above and in the e-material field.

## Recognition of the external environment—overcoming unexpected risks in cooperation with stakeholders and contributing to the achievement of a smart society

Through the advancement of electronics technology achieved by semiconductors and the progress of communication revolution led by 5G, society in 2030 is expected to be closer to a Super Smart Society (Society 5.0), where autonomous vehicles and AR/VR, remote medicine, agriculture and construction, and smart homes and flying vehicles will become common. The TOK Group will steadily grasp the business opportunities that will continuously emerge on the path toward that goal.

On the other hand, climate change risks, infectious disease risks, and geopolitical risks like U.S.-China trade friction will remain. We also need to prepare for system failure and cyberattacks as the negative side of DX, in addition to a water crisis and food crisis. Furthermore, as TOK is headquartered in Japan, we will have to cope with a decreasing working population. We at the TOK Group will cope with these risks by leveraging our unique managerial resources and strengths that we have accumulated through experience in handling and overcoming numerous risks since foundation. We will also get over unexpected risks that will emerge by joining wisdom with stakeholders.

## What we hope by aiming to become "The e-Material Global Company" contributing to a sustainable future through chemistry

The new management vision incorporates our hopes toward the future enhancement of economic value and social value. First, we use the English phrase "The e-Material Global Company" to express our resolution to grow as a global company featuring e-materials over the next 10 years. Second, the phrase "through chemistry" indicates our strong will to persistently explore chemistry, continuing to specialize in fine chemical, our conventional domain maintained since foundation. The letter "応" in our company name, 東京応化 (TOK), presents our attitude to respond to the expectations of customers and society as we explained in the *Integrated Report* 2018. Third, "contributing to a sustainable future" announces our determination to continue exploring chemistry from a customer-oriented viewpoint, while carefully marketing and grasping the expectations of society, markets, and customers and to contribute to the SDGs toward 2030 as the final year. Particularly in this management vision, contributing to a sustainable future through chemistry is the core part and defined as a purpose that expresses our meaning of existence. Under this management vision that incorporates our purpose, we will continue to create new added value that contributes to innovation.

## Overarching aspiration (qualitative aspects and quantitative aspects)

The qualitative aspects of the overarching aspiration for 2030 have been defined in five items as "provide new added value that inspires 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," and "all employees can work lively with pride."

We have set qualitative targets in such a specific manner, because it is the most important that employees as our largest internal stakeholders share and personalize the vision, while establishing win-win relationships with all stakeholders, so that we can cope with various global risks, including unexpected risks, and continue contributing to the resolution of new social issues. With these in mind, I explained this vision in a video message, which has been distributed to employees at all sites in Japan and overseas in four languages.

As quantitative aspects, we have set a target to achieve the net sales of 200.0 billion yen, twice the amount in FY 2020/12, as the source of growth. In addition, we have defined EBITDA as a key indicator, and have set a target of achieving 45.0 billion yen as EBITDA in FY 2030/12, because cash generation capability holds the key to continued long-run R&D and proactive investment in the future. We will also continue endeavoring to improve capital efficiency, and aim to achieve ROE ≥10% assuming EBITDA of 45.0 billion yen.

### ● Our Stakeholders

● **Overarching Aspiration (Quantitative Aspects)**

| | FY 2020/12 Results | Forecast in FY 2021/12 | FY 2030/12 |
|---|---|---|---|
| Net sales | ¥117.5 billion | ¥122.6 billion | ¥200.0 billion |
| EBITDA | ¥22.3 billion | ¥23.0 billion | ¥45.0 billion |
| ROE | 6.7% | 7.0% | ≥10% |

* Forecast-based amounts for FY 2021/12 are figures announced on February 15, 2021.

## The four earning powers kept upgrading through relationships with stakeholders

At internal meetings aimed at achieving the management vision and the overarching aspiration (both qualitative and quantitative), I often emphasize the importance of continuously upgrading the four earning powers through relationships with stakeholders: technology (manufactured capital), human resources (human capital), human connections (social and relationship capital), and cash (financial capital). Specifically, technology is upgraded through collaboration with customers, academics/research institutions, and suppliers/startups, while human resources and human connections are upgraded through relationships with all stakeholders. While human resources at the TOK Group have been developed through strategy of close relationships with customers, collaboration with noncustomer stakeholders will hold the key to a further leap of TOK. We consider that the high added value generated through the combination of robust financial foundation with these nonfinancial earning powers based on technology, human resources, and human connections, will be the very source of our corporate value in coming years **(see pages 40–45 "Special Feature")**.

The TOK Group will be able to renew the record-high performance again in FY 2021/12, driven by the strong semiconductor demand. The "Seven Management Strategies" have been formulated for the group to maintain and strengthen the growth trajectory toward the achievement of the management vision and the overarching aspiration.

## Seven Management Strategies

**(1) Deepening and developing the e-material field**

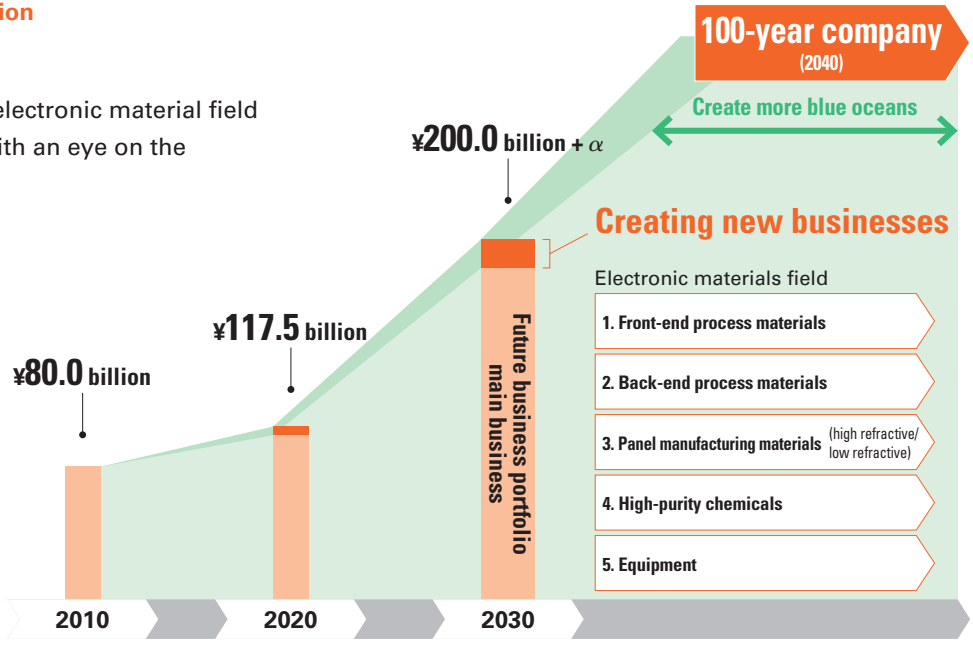
"Deepen and develop the e-material field" is the most important among the seven strategies, and TOK will continue to grasp business opportunities in the ongoing technological advancement in the front-end processes, back-end processes, and peripheral materials related to semiconductor manufacturing. Specifically, opportunities will increase

● **Seven Management Strategies for TOK Vision 2030**


for developing and providing our cutting-edge resists and devices as miniaturization toward the 1 nm scale in logic semiconductors will further progress in the front-end processes, and technological advancement will proceed for high-density integration represented by 2.5D and 3D packaging. In addition, TOK will have increased opportunities for the development and provision of new clean solutions among other peripheral materials, because metals used in metal wiring and insulation film will be changed to improve wiring resistance and capacitance. There is fierce competition in the e-material field with a large number of players, it is a growing industry and therefore earnings can be steadily increased by acquiring certain market shares. The TOK Group will win the competition and steadily increase earnings by leveraging its world-leading microprocessing technology and high-purity processing technology that it has accumulated as core competence, and also strengthening its production engineering and marketing.

## ● Future Business Composition

- Deepening and cultivating electronic material field
- Creating new businesses with an eye on the business portfolio in 2040




Our net sales target for FY 2030/12 to achieve 200.0 billion yen may seem ambitious relative to our past performance. However, we consider that this is an achievable target by deepening and expanding our present key businesses in the e-material field, considering the expected business opportunities in the shift to a Super Smart Society and the related technological advancement as mentioned above. We will also promote business expansion into the blue ocean domains by grasping niche but promising needs and catering to such needs with chemistry, leveraging our strengths in the established systems that enable development, production, and supply near customer sites based on the customer-oriented strategy. TOK has continued growing by expanding numerous blue ocean domains through efforts for long-run development, listening to customer voice in development themes where marketability and future prospects were uncertain. Some examples are the black matrix materials for LCD, clean solutions for cutting-edge processes, MEMS materials, packaging resists, and KrF excimer laser photoresists for 3D-NAND. We will continue to expand the blue ocean domains by cherishing communication with customers.

### (2) Creating new businesses

On the other hand, the net sales target for FY 2030/12 was set at only several billion yen level for new businesses other than the e-material field. This is because I have learned, through my own 13-year experience in the development of new businesses, that dynamic ideas are difficult to emerge in new businesses when restricted by numerical targets. We will encourage various trials first, and then gradually increase the sales target in the future medium-term plans while monitoring the progress of commercialization. At present, I would like to emphasize that the creation of new businesses is a strategic initiative aiming to establish a new key business to be included in our business portfolio toward a 100-year company in 2040 (20 years ahead). In this process, we will proactively collaborate with many stakeholders, including startups, academics, and research institutions. We will aim at a significant portfolio reform so that a new business will replace e-materials in the long-term vision that will be formulated 10 years from now.

### (3) Establishing and utilizing financial foundation

In the e-material field related to semiconductors with rapid technological changes, thinking from customer standpoint at all times and having the same viewpoint as customers, are the essential requirements for success. Therefore, the TOK Group has continued growing by proactively investing in the same costly equipment as at customers in the semiconductor industry in order to establish the same internal environment as at customers, thereby deepening the customer-oriented strategies from customers' viewpoint. In the TOK Vision 2030, EBITDA is introduced as a new KPI to maximize cash generation capability in order to maintain these initiatives, and ROIC is also used as a monitoring indicator, so that management resources can be utilized more efficiently.

In the meantime, TOK aims at creating a frank and open-minded business culture as its primary principle and must avoid diminishing equilibrium that may be caused by excess focus on ROIC. In coming years, we will acquire the capability to make proposals while taking risks for customer expectations that have yet to be clarified by maintaining the R&D cost ratio of approx. 8% and fully utilizing the R&D cost that increases in proportion to sales increase. In this way, we will pursue cash generation to enable risk taking because the advancement of these customer-oriented strategies enables our next leap.

**(4) Leveraging global human resources/(5) Renovating production sites to create new value/(6) Promoting DX**

Regarding the leveraging of global human resources, we will achieve solutions that will lead to new value creation for customers, through continued efforts for human resource development, organizational development, and diversity and inclusion because human resources form the basis of value creation at TOK as mentioned above. We will also promote health and productivity management that will support the health of each employee at the basis of these initiatives. Regarding renovating production sites to create new value, we will endeavor to establish a high-quality production structure. As part of this initiative, we will achieve more efficient high-purity processing technology by upgrading chemical engineering. We consider that the enhancement of environment/occupational health and safety systems is also synonymous with earning power. Regarding promoting DX, we will promote the construction of data warehouses and the development of DX human resources, and lead them to smart factories, etc., utilizing findings in MI (Materials Informatics) that is being leveraged in R&D activities.

**(7) Sustainable initiatives for key social issues**

I am describing this strategy at the end, because it is rooted in integrated thinking, which aims to make sure that all management resources and initiatives ultimately lead to contributing to society. This is evident in the original form of management principles presented by the founder Shigemasa Mukai that we should contribute to society by raising the quality levels of our products and supplying them with added value, while continuing efforts to enhance our technology in a frank and open-minded business culture, which we shared in the *Integrated Report* last year. We will continue contributing to a sustainable future by pursuing our purpose through chemistry under this inherited principle.

We consider that carbon neutrality, which has become a major trend in Japan and overseas, is another aspect of sustainable future. As a decarbonization initiative at a Japanese company, we will endeavor toward the goal set by the Japanese government to achieve a carbon neutral society by 2050. The detail and timeline of this initiative will be disclosed in the next medium-term plan that will be announced in February next year. In the present report, I will share a part of the decarbonization initiatives that TOK has taken, and its ongoing activities.

As part of contribution to decarbonization through business, TOK has provided cutting-edge photoresists in each period since it started the photoresist business in full scale in 1968. The miniaturization of semiconductors facilitated by TOK over the approximately 50 years up to 2020 has provided the value of reducing power consumption to approximately 1/2,040,000.*

* A rough estimate for two-dimensional semiconductors (1970: 10,000 nm → 2020: 7 nm); Based on scaling laws where a miniaturization in line width to approximately 1/1,429 of its original size leads to power consumption of approximately $1/1{,}429^2$, or approximately 1/2,040,000.

TOK has the largest global market share in i-Line photoresists mainly used for power semiconductors, as earlier mentioned. We also develop and provide KrF excimer laser photoresists for 3D-NAND, which is indispensable to produce SSD (Solid State Drive) with substantially smaller power consumption than HDD (Hard Disk Drives), thereby contributing to energy-saving data servers and devices.

In coming years, TOK will also endeavor to develop next-generation power semiconductor materials that will reduce the power consumption of power semiconductors by half, as well as materials to be used in 6G (next-generation communication standard), which is considered to consume only 1/100 power of 5G.

In addition to decarbonization initiatives through products, we are also promoting steady decarbonizing activities at each business site. The entire power demand at the headquarters building is supplied by renewable energy. We have also decided to switch our commercial vehicles to PHV. In logistics, we strive to reduce $CO_2$ emissions by seamlessly connecting product distribution channels and raw material procurement channels in their transportation by trucks.

To promote these decarbonization initiatives in full scale starting in the next medium-term plan, human resources again hold the key. Fortunately, today's young generations are highly aware of environmental issues and social contribution. We will continue to enhance both economic value and social value while providing many occasions for these youths to exercise their abilities.

We request your continued expectations for new value creation by TOK.

# Medium-Term Plan

## Review of the Past Two Medium-Term Plans / Overview of TOK Medium-Term Plan 2021

## TOK Medium-Term Plan 2015

—From FY 2014/3 to FY 2016/3—

In 2012, TOK established customer-oriented sites using an integration of the trinity platform that covers development, manufacturing, and sales in South Korea, where the semiconductor industry was showing remarkable growth, and accelerated its customer-oriented strategies overseas, especially in the United States, South Korea, and Taiwan, under the TOK Medium-Term Plan 2015.

### Management Objectives/Features

- **Deepen and expand existing business domains**
- **Swiftly launch new business domains**
  - Surpass record-high profits
  - Carry out large-scale investment to enhance business foundations in support of sustainable growth
  - Expand business domains to include the renewable energy field

### Results

- **Achieved record-high profits**
  FY 2015/3 Operating income: ¥13.2 billion
- **Customer-oriented strategies made significant progress**
- **Diversified earnings drivers**
  - **ArF excimer laser photoresists:** Growth in sales in North America
  - **KrF excimer laser photoresists:** Two-digit annual growth in sales in Asia
  - **g-Line and i-Line photoresists:** Secured positive growth
  - **High-density integration materials:** Expanded to major OSAT manufacturers and made progress in acquiring new customers
  - **High-purity chemicals:** Succeeded in development and sales expansion of high-grade products

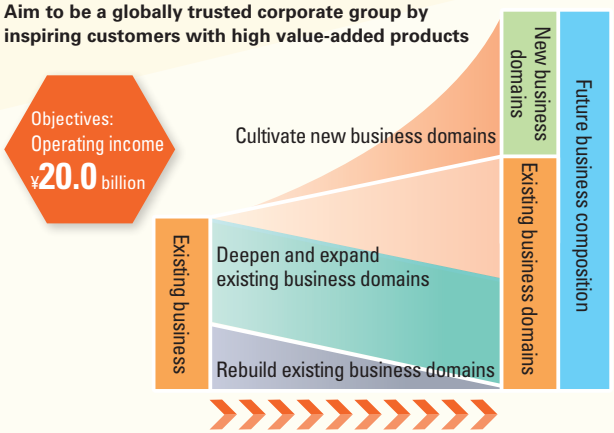
### Strategy

- **Company-wide strategies**
  Build close relationships with regional users/
  Reform business portfolios/Develop global personnel
- **Important strategies**
  [Earnings Drivers]
  Continue the growth of semiconductor photoresists/Capture business for advanced packaging materials/Expand LCD materials by capturing demand related to high resolution LCD panels for tablet devices and smartphones/Continue multi-faceted development of existing technologies to contribute to sales/Recover earnings in the equipment segment and fully commercialize TSV equipment
  [Strengthen Business Potential]
  Strengthen development of ArF excimer laser photoresists (at the 10 nm level) to secure market share/Develop next-generation clean solutions/Develop new materials in the renewable energy field/Enter the optoelectronics field

## Long-term vision (formulated in 2010)

## —Overarching aspiration for 2020

**Aim to be a globally trusted corporate group by inspiring customers with high value-added products**




## 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 focusing on strengthening the management foundation and reforming the business portfolios.

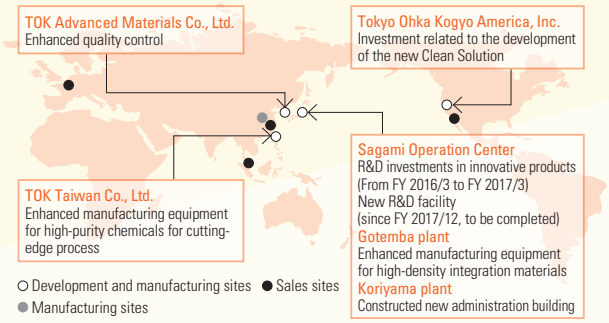
### Positioning/Management Objectives/Features

- **Key three years for achieving the overarching aspiration**
- **Strive to deepen existing business domains and swiftly launch new business**
  - Continue proactive investments for the overarching aspiration
  - Aim for record-high profits in the final year
  - Aim for ROE of over 7% and enhance returns to shareholders

### Results/Issues

- **Strengthened R&D and production bases**
  Invested capital of ¥21.7 billion
- **Leveraged strengths in the innovative semiconductor segment**
  - **EUV photoresists:** Highly rated by major customers
  - **KrF excimer laser photoresists:** Adoption for 3D-NAND (Japan, 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 reforming business portfolios**
  - **ArF excimer laser photoresists:** A major customer did not adopt (Asia), and major customers' production plans delayed (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




### Strategy

- **Company-wide strategies**
  [Reform business portfolios]
  Renew mainstay products/Create new businesses and new materials/Recover earnings in the equipment segment and develop versatile applications for TSV technology
  [Evolve the customer-oriented strategies]
  Strengthen development of ArF excimer laser photoresists (for the 10 nm and higher levels)/Further increase market share 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 with a Group-wide perspective, as well as recruit and promote diverse personnel appropriate for global business
  [Strengthen management foundation]
  Build a governance system to reduce the risks accompanying globalization and to raise corporate value

# Overview of the TOK Medium-Term Plan 2021

—From FY 2019/12 to FY 2021/12—

2019–2021

## Management Vision

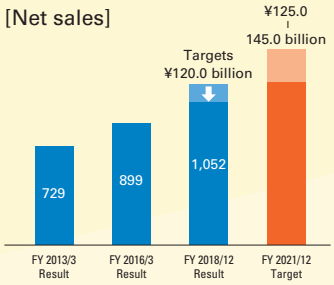
**Aim to be a globally trusted corporate group by inspiring customers with high value-added products that have satisfying features, low prices, and superior quality.**

[Performance/Targets]

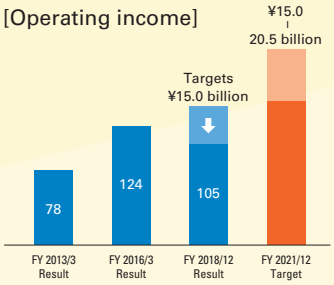
| | FY 2018/12 Result | MTP targets FY 2021/12 | FY 2020/12 Result | 2021/12 Forecast* |
|---|---|---|---|---|
| Net sales | ¥105.2 billion | ¥125.0–145.0 billion | ¥117.5 billion | ¥122.6 billion |
| Operating income | ¥10.5 billion | ¥15.0–20.5 billion | ¥15.5 billion | ¥16.5 billion |
| ROE | 4.7% | Over 8.0% | 6.7% | 7.0% |

* Figures announced on February 15, 2021.

[Net sales]




[Operating income]




## Features of the TOK Medium-Term Plan 2021

**Point (i) Strengthen business portfolio reforms** => Ambitiously develop the technologies required by 5G, IoT, and Innovation
**Point (ii) Return to a growth trajectory** => Targeted operating margin (FY 2021/12): ¥15.0–¥20.5 billion
**Point (iii) 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

## Background and Aims behind Formulation

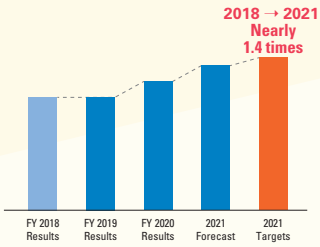
**5G/IoT and Innovation**

## Sales Results and Target of Each Growth Driver

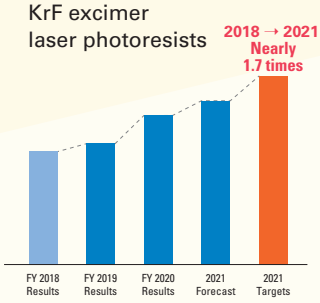
**TOK's Drivers**

- EUV/ArF photoresists
- KrF excimer laser photoresists
- High-density integration materials
- High-purity chemicals
- Equipment segment

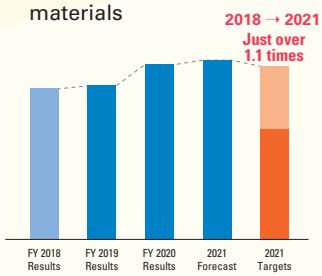
Cutting-edge resists (EUV/ArF photoresists)



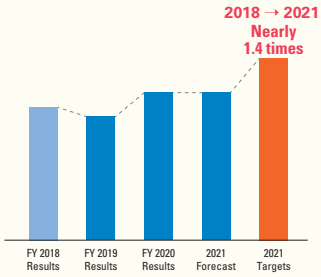

KrF excimer laser photoresists




High-density integration materials




High-purity chemicals




## Company-Wide Goals (Qualitative goals)

**Cultivate niche markets that the TOK Group should develop.**

## Company-Wide Strategies

1. **Accurately identify and rapidly address customers' opinions to build an even larger and stronger pipeline to customers**
2. **Strengthen marketing, increase understanding of the customers' value creation processes, and translate these efforts into new value creation**
3. **Strengthen human resources who can perform research, make decisions, and take the initiative**
4. **Strengthen the TOK management foundation**

## Strategy for New Business

High-functional films | Optical materials | Life science-related materials | Collaboration/support

## Financial Capital Policy

[Balance sheet management] As a long-running R&D-driven company, TOK will pursue the optimal balance between **investment**, **cash reserves**, and **shareholder returns**.

1 Pursuit of higher asset efficiency 2 Cash reserves 3 Shareholder return policy and dividend policy

Feature Special Feature

# Technologies for Sustainable

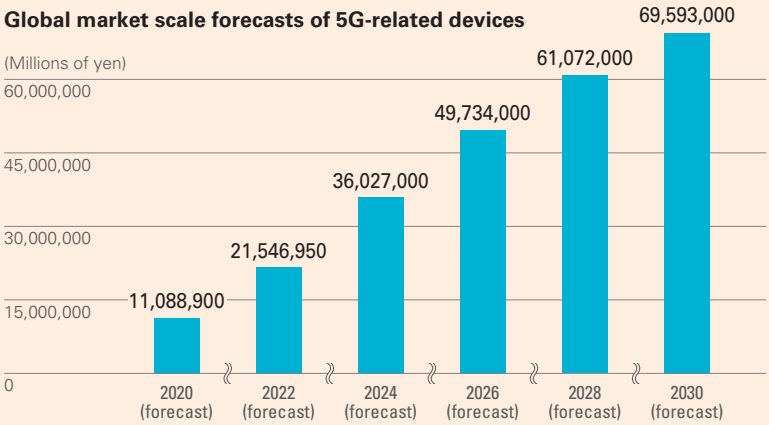
## —Creating Shared Value with Stakeholders—

Sustainable Value

# Contributing to the achievement of a new normal

### with state-of-the-art photoresists

**Global market scale forecasts of 5G-related devices**




Note 1: Manufacturer shipment amount basis
Note 2: All figures are forecast-based
Note 3: Included circuits and substrates (RF circuits, substrates, etc.), key components and devices (active components, LCD, antennas, passive components, memories, and other devices), materials and evaluation systems (materials, evaluation systems, etc.)

Source: Yano Research Institute Ltd. *Global 5G Related Devices Market* (2020) (released on July 31, 2020)

## ● Megatrends

The spread of the COVID-19 infection started in 2020 and has substantially transformed lifestyles with noncontact behavioral patterns becoming the *new normal* in order to protect human health and safety.

DX has accelerated around the world in support of the new normal from the technological aspect. In particular, 5G communications, which achieves high speed and large capacity combined with low latency, are expanding as indispensable technology for the sustainable development of society, as well as in all categories of circuits, substrates, components, devices, materials, and evaluation systems.

## ● TOK technologies

### —Upgrading world-leading technologies in cooperation with stakeholders—

In the 5G communications market, which has experienced continuous growth as the social infrastructure linked to IoT and AI, the TOK Group will steadily take advantage of business opportunities in the further acceleration of data processing speed, downsizing of electronic components, increases in the need for high-frequency materials, and enhancement of the functionality of sensing devices. While upgrading its world-leading microprocessing technology and high-purification technology in cooperation with stakeholders, TOK will develop and provide EUV/ArF/KrF photoresists, create diverse shared values, and thereby contribute to the achievement of a more convenient and comfortable new normal.

SDGs to which we contribute


EUV/ArF/KrF photoresists and high-purity chemicals

# Development


## Value for stakeholders—Creating shared value

**For customers** (Semiconductor manufacturers)
**Improve yield of innovative semiconductors**

**For end users**
**Secure health and safety and improve convenience in the COVID-19 pandemic**

**For employees** (TOK)
**Acquire state-of-the-art technologies and findings**

**For suppliers**
**Accumulate achievements in cutting-age realm**

## Collaboration with stakeholders—For continuous improvement of technologies

### With academics and research institutions

- Joint research in the early stage of material design
- Further upgrading basic technologies

### With suppliers

- Negotiation in the pursuit of the highest standards
- Appropriate management of chemical substances

# Technologies for Sustainable

## —Creating Shared Value with Stakeholders—


### Social Issues

Decarbonization initiatives have accelerated around the world. In Japan, the revised Act on Promotion of Global Warming Countermeasures was enacted in May 2021, which stated the achievement of virtually zero GHG emissions by 2050. To attain this goal in combination with the target of reducing GHG emissions by 46% versus the FY 2013 level by FY 2030, it is necessary to lead new technological innovations through public-private funding and other means, in addition to enhancing ongoing renewable energy systems and accumulating energy-saving measures.

i-Line photoresists for power semiconductors / plasma ashing systems

# Development

Sustainable Value

# Supporting decarbonization on a long-running basis

## with i-Line photoresists, plasma ashing systems, and WHS*

*Wafer handling system

## ● Value for stakeholders—Creating shared value

**For customers** (Semiconductor manufacturers)
**Development of next-generation power semiconductors**

**For end users**
**Acceleration of energy saving for decarbonization**

**For employees** (TOK)
**Personalization of social value**

**For suppliers**
**Stable expansion of business opportunities**

## ● Collaboration with stakeholders—For innovation and stable supply

### With customers

- Development of more efficient materials for next-generation power semiconductors

### With suppliers

- Negotiations for the stable supply of high-quality materials

SDGs to which we contribute

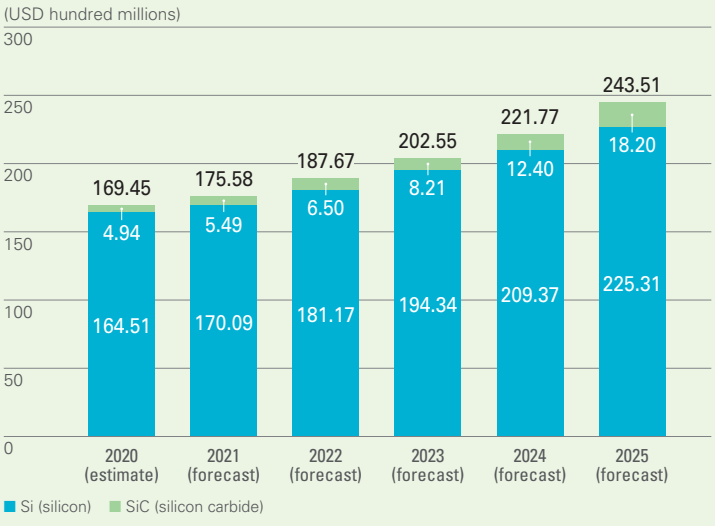
## ● TOK technologies —Contribute to a sustainable future through chemistry

To contribute to decarbonization through business, TOK focuses on the development and stable supply of EUV/ArF photoresists to achieve further miniaturization and power consumption reductions for semiconductors, as well as KrF excimer laser photoresists for 3D-NAND, and i-Line photoresists for power semiconductors, plasma ashing systems, and wafer handling systems.

To lead technological innovation, TOK accelerated the development of materials for next-generation $Ga_2O_3$ (gallium oxide) / SiC (silicon carbide) / GaN (gallium nitride) power semiconductors that substantially improve power efficiency, as well as materials for 6G (next-generation communication standard), which will consume only 1/100 power of 5G systems.

In particular, TOK will create shared value for decarbonization on a long-running basis by further developing the relationship of trust built over more than 20 to 30 years with many customers, particularly in the power semiconductors-related industry.

**Outlook for global power semiconductor market**




Note 1: Manufacturer shipment basis
Note 2: Figures for 2020 are estimates, and those for 2021 onward are forecasts

Source: Yano Research Institute Ltd. *Global Power Semiconductor Market* (2020) (released on July 27, 2020)

# Technologies for Sustainable

## —Creating Shared Value with Stakeholders—

Sustainable Value

### i-Line photoresists and biochip materials

# Contributing to improvement of patient QOL

## ● Social Issues

In the medical setting, it has been necessary to improve the patient QOL and outcomes (with reduced patient burden and improved therapeutic efficiency) by upgrading diagnoses and drug discovery. These needs have substantially increased during the COVID-19 infection that started in 2020.

In response to the healthcare systems overwhelmed during the COVID-19 pandemic, TOK contributes to improvements in diagnoses and viral analysis efficiency and expediting of drug discovery and vaccine development through the stable supply of i-Line photoresists for power semiconductors, which are indispensable for Extracorporeal Membrane Oxygenation (ECMO), and the development and provision of biochip materials and cell sequencing chips.

i-Line photoresists

Extracorporeal Membrane Oxygenation (ECMO)
* The photos are conceptual images.

## ● TOK technologies
## —Applying semiconductor-related technologies to the life science field—

SDGs to which we contribute


Biochip for a next-generation DNA sequencer
* The photos are conceptual images.

TOK started full-scale marketing of biochip production materials in 2015 and has achieved high performance by leveraging the microprocessor technology and MEMS material technology as accumulated in the semiconductor segment. This material is used for next-generation biochips (in DNA sequencers) to reduce the time required for sequencing and to improve sequencing accuracy.

Sales have increased through strategies focused on negotiations with customers in selected markets combined with the emerging need for biochips resulting from the spread of the COVID-19 infection. We will further develop and promote this material because the need for expediting diagnoses, viral analyses, and drug discoveries will continue to increase under escalating infectious disease risks.

## —Develop new markets by strengthening online marketing—

The SIEVEWELL™ cell sequencing chip was marketed as a TOK brand in 2019 from the internalized production processes comprising design and lithography. This product has been evaluated for sequencing and archiving many cells, thereby facilitating and quantifying the difficult process of analysis and has contributed to research and development aimed at pathological diagnoses with a reduced physical burden on patients from infectious diseases to oncology. In FY 2020/12, there was progress in its application to a variety of different purposes in the Japanese and overseas markets, and in the development of new products, owing to strengthened online marketing.

# Development

## Value for stakeholders

**For customers**
(medical institutions, pharmaceutical companies, diagnostic device manufacturers, and research institutions)
**Expedited diagnoses and drug discovery**

**For end users**
(patients)
**Reduced physical burden**

**For employees**
(TOK)
**Own brand contributing to enhanced motivation**

## Collaboration with stakeholders

### With customers

- Long-term product development and application development

### With academics and research institutions

- Improve sample levels by accumulating specialized knowledge through academic conferences

# Message from the CFO

## Focusing on Growth-Oriented Corporate Governance and Pursuing New Management Vision and Purposes

Yoichi Shibamura

*Director, Senior Executive Officer,*
*Department Manager,*
*Accounting and Finance Department*

### Focusing on growth-oriented corporate governance based on management principles and DNA in place since the founding of TOK

**Pursuit of both economic value and social value toward the achievement of sustainability**

The recently formulated new management vision—The e-Material Global Company—contributing to the purpose of a sustainable future through chemistry, which expresses the strong intention of the TOK Group to pursue both economic and social value toward the achievement of sustainability. Naturally, this new management vision and purpose are rooted in integrated thinking, which aims to ensure that all management resources and initiatives ultimately *contribute to society* as stated in the management principles of the founder, Shigemasa Mukai, on page 14 of this report.

Therefore, I will share our resolve above with all stakeholders by focusing on growth-oriented corporate governance in order to powerfully promote the *development and effectively use of financial position* as one of the seven strategies in TOK Vision 2030 as formulated under the new management vision.

For more than 80 years, the TOK Group has embodied its inherited corporate spirit and expressed as an *eternal startup*, as well as its corporate characteristic of a *long-running R&D-driven, top global niche company* as a result of this spirit. This is the unchanging DNA of the TOK Group under the 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. With this DNA in place, I believe that the thorough pursuit of a business model to persistently develop and market fine innovative chemical products is the correct means of pursuing economic and social value toward the e-Material Global Company contributing to a sustainable future through chemistry.

### The large step taken in 2020 toward more long-term financial capital policy

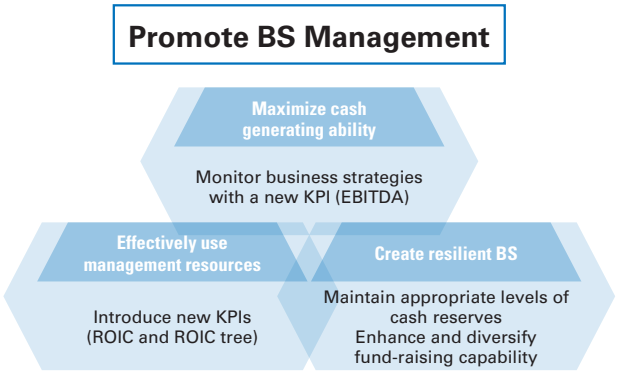
**Company-wide full-scale initiatives started toward the advancement of BS management**

The greatest achievement made concerning the financial capital policy in 2020 was the clarification of *development and effectively use of financial position* as one of the strategies under TOK Vision 2030. In other words, we aligned the directions of the long-term financial capital policy and the long-term business strategies and investment strategies, while aiming to maximize cash generating abilities, effectively use management resources, and create resilient BS for a more advanced implementation of BS management measures. As a result of this alignment of the direction, we announced specific long-term targets, including EBITDA of 45.0 billion yen and ROE ≥10% in 2030. We also established a structure for pursuing the optimal balance between investment, cash reserves, and shareholder returns as a specific financial capital policy to be thoroughly promoted.

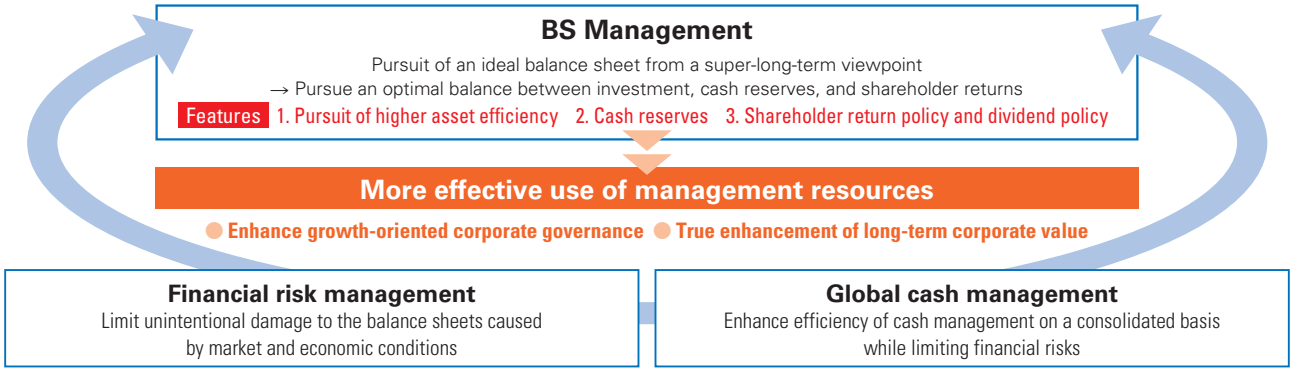
Another achievement was the company-wide implementation of BS management based on TOK Vision 2030, which was started steadily both at the management level and at the on-site level of each group company. For example, EBITDA was specified as a new KPI under the Vision and is taking root as an indicator measuring cash generating ability. ROIC and IRR as parameters for asset efficiency are being used as multifaceted tools for forecasting and for the relevant PDCA, at the committee of officers, at the management strategy meeting to discuss large-scale investments, as well as in requests for investment approval. In the ROIC reverse tree management of production sites, each plant started to use the *new plant balance*, which has been revised to measure real capacity. In-house communication and education are in progress with regard to the concepts of capital cost and the investment hurdle rate. In this way, initiatives under topics that had only been announced as principles and ideals and discussed at the officer level are being rapidly and steadily specified and implemented on a group-consolidated basis, both at the management level and on-site.

On the other hand, two new key requirements have emerged. One is the necessity for further strengthening of growth-oriented corporate governance for future growth in the financial capital measures focused on BS management. As specific measures, on-site proficiency in the use of new KPIs (e.g., EBITDA, ROIC, IRR) will be further enhanced, until all members from management executives to on-site employees have a complete command of these KPIs. The second requirement is to reset the key BS items in accordance with the next medium-term plan, such as debit balance that includes target cash reserves, target equity range, and the credit balance, including liability utilization measures.

**Develope and effectively use financial position as one of the seven strategies under TOK Vision 2030**




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




## In 2021, finish the current medium-term plan while forming the basis for the new medium-term plan

### Toward the formulation of the new medium-term plan backcast from TOK Vision 2030

In 2021, based on the recognition of the requirements above, we will complete the current TOK Medium-Term Plan 2021, while formulating the new medium-term plan backcast from TOK Vision 2030. While forming the basis above, we will focus on the following four points to further strengthen growth-oriented corporate governance.

First, we will further upgrade the *eternal startup spirit* to attain the new management vision and provide thorough support for long-term business activities in order to achieve sustainable growth as a *long-run R&D-driven company*.

Second, in addition to financial value, we will endeavor to maximize our social value by placing decarbonization initiatives and contributing to the SDGs in front of us.

Third, for the two measures above, we will repeat thorough cash flow simulations and BS simulations for the implementation of BS management that can actually maximize cash generating ability, effectively use management resources, and create resilient BS.

Fourth, we will further enhance the dialog with the capital market (IR and SR) to help in the understanding of the relationship between our corporate characteristics as a long-run R&D-driven top global niche company and the purpose. Based on this dialog, we will continue to pursue an optimal balance between investment, cash reserves, and shareholder returns.

### Strengthening ROIC improvement measures both through a macro approach and through a bottom-up approach

We will further infiltrate ROIC improvement measures to effectively use management resources both through a macro approach and through a bottom-up approach.

For the macro approach, company-wide training on the effective use of assets is being implemented as part of BS-oriented thinking training and CF-based management training. The changes in ROIC by business and by entity are analyzed. These results are combined with IRR as PDCA tools for business and investment strategies by business and by entity, as well as tools for in-house discussions among management executives.

In the bottom-up approach, certain plants have been designated ROIC model plants to further expand the idea from Japanese sites. The formulation of the ROIC reverse tree, and the activities based on the tree, have been started for on-site improvement and effective use of assets. On-site employees reacted very favorably. Progress has been felt in the activities for the effective use of plant fixed assets and those for the improvement of cash conversion cycle (CCC) linked to the plants and sales departments.

We will continue to strengthen ROIC tree-based initiatives to improve the ROA numerator, while degrading the denominator into invested business assets and cash reserves, while pursuing the respective medium- to long-term efficiency and thereby maintaining robust BS and attaining ROE ≥10% by FY 2030/12.

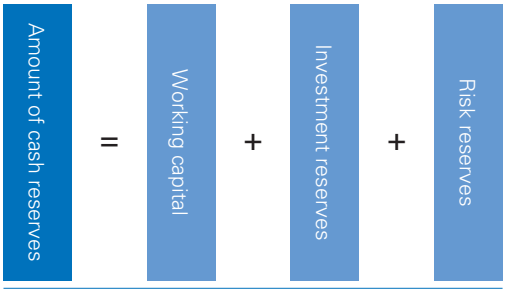
### Upgrade cash reserves and financial leverage by introducing new concepts

For cash reserves in the tree below, the concepts will be partially reviewed, and the moving targets will be reset in order to achieve higher efficiency. As specific measures, a new concept of net cash will be introduced. The related policy will be adapted according to the operated situation so that net cash can be used for risk reserves and for investments in major challenges coupled with risks. The review of financial leveraging will also be considered from the aspects resetting the optimal equity range and the more effective use of liabilities.

**Policies on cash reserves**

As a long-run 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 an d rebuilding from major disasters)




### Paid the highest dividend ever to extend gratitude to long-term shareholders

TOK introduced a new dividend policy targeted at DOE 3.5%, starting with the year-end dividend for FY 2018/12, as one of the key revised financial capital policies. Under this policy, TOK increased the annual dividend by 32 yen year-on-year in FY 2018/12, and by 24 yen year-on-year in FY 2019/12. TOK paid the highest dividend ever in FY 2020/12 at 154 yen, while adding a normal dividend increase (by 4 yen) and the 80th anniversary dividend (30 yen) to the BOY estimate, substantially exceeding the DOE 3.5% level. We paid 30 yen as the 80th anniversary dividend partly because we achieved income that substantially exceeded the BOY estimate and partly for the purpose of

**Improving ROIC for better ROE to utilize management resources effectively**

## 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 generating ability**
- Pursue EBITDA and EBITDA margin

**Improve invested capital turnover ratio**
- Effective use of assets
- Redefine capital investment judgment criteria and enhance monitoring

### Cash reserves

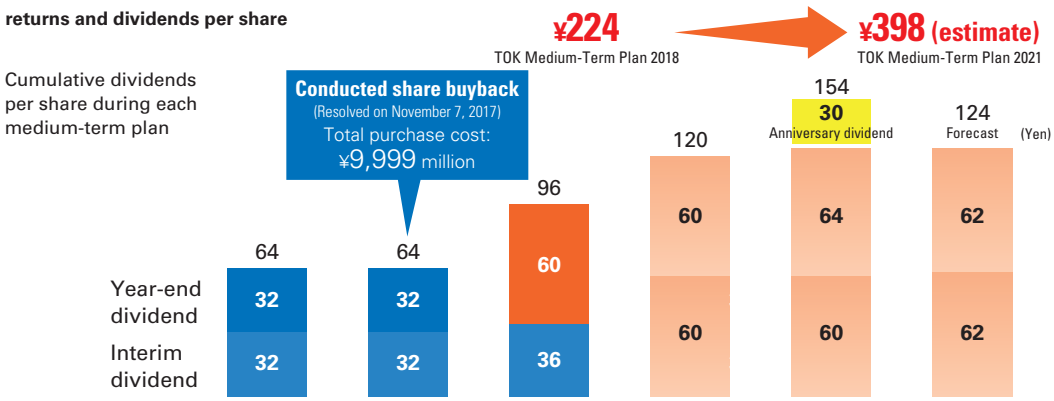
Retain cash reserve as a management objective (moving target)

**Cash reserves = Working capital + Investment reserves + Risk reserves**

extending our gratitude for support by shareholders that enabled us to celebrate the 80th anniversary and asking for their continued long-running support for our group. This dividend was based on our assessment that net cash and equity would be adjustable within a certain range, though long-term investment increases in human and material resources were expected under TOK Vision 2030, considering the strong uncertainty of business environment and the escalating communication reform.

Our future dividend policy will be clarified in the next medium-term planning stage. We will stick to the DOE-based dividend policy because we shifted from the consolidated payout ratio-based standard to the DOE-based standard in 2019 for the primary purpose of rewarding long-term shareholders who provide long-running support for TOK as a long-running R&D-driven company. We will also consider better shareholder returns linked to the advancement of cash reserves and the review of finance leverages as mentioned above.

**Shareholder returns and dividends per share**




| Fiscal Term | 2017/3 | 2017/12 | 2018/12 | 2019/12 | 2020/12 | 2021/12 Forecast |
|---|---|---|---|---|---|---|
| DOE (%) | 1.9 | 1.9 | 2.8 | 3.5 | 4.3 | **3.5** |
| Payout ratio (%) | 43.8 | 46.3 | 58.2 | 92.3 | 64.3 | 47.7 |

| Guidelines on dividend policy | TOK Medium-Term Plan 2018 Consolidated payout ratio of over 40% | TOK Medium-Term Plan 2021 Consolidated DOE 3.5% |
|---|---|---|

## Initiatives for IR and SR, and tax governance

### Further reduce capital cost and improve corporate value, enhance dialogs with shareholders and investors

To reduce capital cost leading to improved corporate value, TOK has pursued the optimal capital mix (review of DE ratio) and thorough financial risk management as key financial means. In addition, the company considers it critical to minimize the long-term perception gap by gaining adequate understanding from shareholders and investors, primarily through detailed explanations of business strategies, investment strategies, and financial strategies aimed at the sustainable, stable, and efficient increase of group cash generating ability.

Under this policy, TOK had 281 individual meeting sessions with analysts and institutional investors, in addition to the periodic IR meetings in 2020. I also had individual dialogs with more than ten institutional shareholders. We have been encouraged by the many requests for continued and enhanced individual dialogs in 2021 onward, based on the extremely vigorous discussion on business strategies, investment strategies, and financial strategies under TOK Vision 2030. We will continue to enhance IR and SR activities.

### Further strengthen global tax governance as part of survival-oriented governance

The TOK Group has achieved the overseas sales ratio of approximately 80% and aims to become an e-Material Global Company. The key for survival-oriented governance will be to maintain and strengthen global tax governance that can ensure appropriate tax affairs and compliance. We recognize this is a prerequisite for establishing a win-win relationship with all stakeholders.

We are creating an appropriate tax governance system with the parent company as the control tower that gathers expertise on taxation on a consolidated basis and for each entity, with the intention of addressing issues in international taxation including problems associated with transfer price taxation and strengthening base erosion and profit shifting (BEPS) measures by local authorities in each country.

Specifically, we have researched taxation and tax customs, as well as product market conditions, in all regions where we do business, while maintaining an overview of tax affairs and identifying requirements at each entity and on a consolidated basis. At the same time, we formulated a transfer pricing policy based on the information above, incorporated the policy into the transfer pricing documents in BEPS, and enhanced training for group tax personnel in each country. In this way, we will expedite transfer pricing measures within the group and improve effectiveness, while continuing to strengthen tax governance on a worldwide basis.

# Message from the Director in Charge of the Environment

## We will focus on the Environment, Health, and Safety (EHS) activities to enhance corporate value toward 2030 and 2050.

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

### Risks and opportunities

**Recognizing risks coupled with opportunities and our social responsibility**

In FY 2020/12, TOK achieved record-high performance by steadily grasping growth in the semiconductor market that resulted from the global acceleration of DX during the COVID-19 infection and the dissemination of 5G and IoT, combined with the increased demand for remote working and staying at home, as well as enhanced cloud services. Semiconductor demand is still increasing, and our business opportunities are continuously expanding both for semiconductor materials and for devices in cutting-edge segments, legacy segments, front-end processes, and back-end processes.

On the other hand, the production of some semiconductor manufacturers was interrupted by several accidents and natural disasters, and it caused production delays in various industries. Because semiconductor-related industries now affect all parts of our daily lives, we are keenly aware that increased opportunities signify increased risks and social responsibility at the same time. The TOK Group will retain its unspoken rule of never interrupting our plant operation and never interrupting the customer production line as basic manufacturing policies. As prerequisites for these policies, we will establish a safe and comfortable work environment and ensure a stable supply at the quality levels required by customers at all sites in Japan and overseas, thereby fulfilling our supplier responsibility as the manufacturer with the largest global market share of semiconductor photoresists.

**Reinforce earning powers under the new environmental policy and occupational health and safety policy**

To put into practice the basic policies above, we will continue to appropriately upgrade the EHS activities, thereby minimizing operating interruption risks, environmental risks, and infectious disease risks under the environmental policy and the occupational health and safety policy that have been revised in accordance with the new CSR policy. In this way, we will reinforce our earning power while reducing short-term and medium- to long-term growth inhibitors, thereby leading to sustainable improvement of corporate value.

**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.
- Promote efficient use, reuse, and recycling of resources.
- Improves energy-saving and global warming prevention activities.
- Promote environmental pollution prevention activities.
- Promotes a healthy biodiversity.

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

### Support innovative value creation with EHS

**Strengthen information provision concerning chemical substances**

The driving force of TOK growth is contributing to the resolution of social issues in each era through state-of-the-art fine chemicals. We will advance this business model by reinforcing our EHS activities. For example, EUV photoresists that support the cutting-edge miniaturization of semiconductors usually contain new chemical substances as the raw materials. Therefore, we take utmost care in providing adequate information to customers, including information on safe use, disposal method, toxicology, and applicable laws. We also closely share the raw material information with all suppliers and ensure safety training for employees, as well as work environment maintenance, thereby reducing risks for all stakeholders in the supply chain.

### 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.

* Any and all labor providers to TOK.

### Tighter Environmental and Safety-Related Laws and Regulations, etc. around the World

- Japan
  - · Revisions to the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (Chemical Substances Control Law) (June 2017)
- U.S.A.
  - · Revision to the Toxic Substances Control Act (TSCA) (June 2016)
- Europe
  - · The European Chemicals Agency (ECHA) list of chemical substances of very high concern
- South Korea
  - · Revisions to the Chemicals Control Act (proposed revisions published in January 2019)
  - · Revisions to the Occupational Safety and Health Act (January 2019)
- Taiwan
  - · Revisions to the New and Existing Chemical Substances Registration Act (March 2019)
  - · Revisions to the Toxic Chemical Substances Control Act (January 2019)

Because the pursuit of global environmental sustainability has accelerated and expanded around the world, increasingly stringent environment and safety laws, as well as chemical substance management regulations, are being applied. The TOK Group complies with all applicable laws and regulations, including the EU REACH regulation*1 and provides enhanced support for regulatory compliance by all customers. As specific measures, TOK issues a warranty for the non-use of prohibited/controlled substances to help in the acquisition of CE marking*2 and other certifications for customer products. Our EHS Division provides detailed information, thereby establishing a stronger relationship of trust with customers.

*1 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

**Responding to laws and regulations in advance is as important as developing cutting-edge technologies**

The primary domain of TOK is the semiconductor and electronic component fields with rapid technological change and intense competition. Therefore, understanding the information on new laws and regulations in advance for proactive action is as important as developing cutting-edge technologies. For example, we have steadily removed persistent, bioaccumulative, and toxic substances from the list of candidate materials for our products. PFOS*1 and PFOA*2 were completely abolished as of March 2021. There is a new ongoing trend toward more stringent PFAS*3 regulations, and we are collecting information in preparation. In 2021, we increased the update monitoring frequency on laws and regulations to quarterly. To support the measures above through DX, we have continuously strengthened the in-house linkage of the chemical substance database from the development stage.

*1 Perfluorooctane sulfonate
*2 Perfluorooctanoic acid
*3 Per- and polyfluoroalkyl substances

## TOK Medium-Term Plan 2021, material issues, and initiatives toward TOK Vision 2030

**Restructuring EHS activities in the COVID-19 pandemic**

TOK regards the integrated management of chemicals, reduction of environmental impacts, and occupational health and safety for employees as important management requirements, and the company has promoted responsible care activities, while minimizing the influence of apparent risks in Japan and overseas, while operating the Group Management System (GMS) since 2015 to prevent potential risks from becoming apparent. Because the structures have been established to a certain level in Japan, we aim to disseminate robust risk management into all sites, including overseas subsidiaries, under the TOK Medium-Term Plan 2021, which was started in 2019, thereby reinforcing the chemicals and environmental risk management both for human resources and for organizations. In FY 2020/12, we strengthened the EHS structure in Taiwan. Because travel was restricted due to the COVID-19 pandemic, we restructured the EHS activities leveraging online meetings, remote audits, and paper audits. In the coming years, we will promote more effective use of online measures to share honest opinions and subtle implications, which were conventionally exchanged face to face.

**Continuously strengthen BCP**

To cope with the risks coupled with the increasing business opportunities, we continuously strengthen BCP.

Regarding the direct impact of the climate change risk, we are enhancing resilience on a short-term, medium-term, and long-term basis through risk analyses based on the Task Force on Climate-Related Financial Disclosures (TCFD) **(see pages 54–55)**. We strengthened risk distribution through a multi-site system after learning lessons from the Great East Japan Earthquake in 2011. We will maintain and strengthen this system because its effectiveness was verified during the Kumamoto Earthquake in 2016. We also have a rule to maintain the row material stock equivalent to three months, assuming an emergency at the suppliers. We will continue to fulfill our supplier responsibility by continuously upgrading the BCP as above, led by the Risk Management Committee chaired by the president and chief executive officer.

### Enhance earning powers by achieving higher product quality and reducing environmental impact

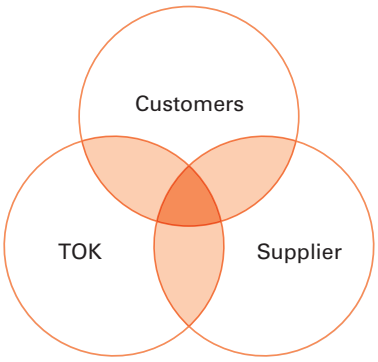
Regarding creating new value through renovation of the production sites as one of the management strategies under TOK Vision 2030, we will renew equipment with models of higher energy efficiency. Future renovation plans will be crystallized in the next medium-term plan. To establish a high-quality production system as a key measure for the strategy above, we will pursue company-wide strategies for the medium-term plan and initiatives for material issues under the quality policy, while continuously advancing production technology to ensure a stable supply at the quality levels required by customers, thereby further enhancing earning power. To this end, we will further upgrade customer-oriented strategies based on the trinity of sales, development, and manufacturing, and we will achieve higher product quality and reduce environmental impact through collaboration with customers, TOK, and suppliers.

**Quality Policy**

Aim to be a globally trusted corporate group by inspiring customers with high value-added products that have satisfying features, low prices, and superior quality. Deepen and expand existing business domains and swiftly launch new business domains.
Each one of us clearly understands the current situation and challenge ourselves with a sense of crisis.

1. Strengthen marketing ability, set goals seriously, be motivated by a strong sense of crisis, prepare well, and take immediate action.
2. Promote human resource development for global operation.
3. Establish a system to capture customer's voice accurately and to respond them immediately.

**Linked activities by customers, TOK, and suppliers**




Common goals: achieving higher product quality and reducing environmental impact

**Road map toward ISO 45001 certification**

| 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|
| <Acquired certification><br>Gotemba Plant | <Review in progress><br>Koriyama Plant<br>Utsunomiya Plant<br>Aso Plant<br>Shonan Operation Center | <Review in progress><br>Sagami Operation Center<br>Headquarters<br>Kumagaya Plant | <Review in progress><br>Logistics Center<br>**2023**<br>**Complete acquisition at all sites in Japan** |

### Incorporating third-party perspectives to further disseminate an occupational safety culture

Regarding the reinforcement of environment and health and safety systems, as another key measure for renovation of the production sites to create new value, we achieved zero accidents with lost workdays in FY 2020/12 and reduced workplace accidents by 46% compared with the previous year. However, there is room for further improvement. We will apply the results of the RBA-VAP audit* conducted on Koriyama Plant in 2020 for improvement at other sites and promote measures toward ISO 45001 certification at each site, thereby further disseminating our occupational safety culture.

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

### Focus on decarbonization toward a sustainable future

Decarbonization has become a major trend in Japan and overseas. We recognize it as a means of achieving the sustainable future stated in the new management vision, and we will powerfully advance toward the goal set by the Japanese government to achieve carbon neutrality by 2050. As a preliminary step, we have slightly raised the $CO_2$ emissions reduction target by 2030, which was set in 2020 **(see page 98)**. The TOK Group specializes in fine chemicals, and the company will strengthen its earning power by advancing decarbonization initiatives, while progressing toward the target in collaboration with internal and external stakeholders. We ask for your continued expectations for value creation by the TOK Group.

Kimitoshi Kato
*General Manager, EHS Div.*

## We will also pursue the achievement of a circular economy and the risk assessment of infrequent operations

Since its founding, TOK has been based on *integrated thinking* to ensure that all management resources and initiatives ultimately lead to *contributions to society*. TOK will continue to contribute to the resolution of social issues through fine chemical products, while strengthening its earning power through initiatives for the environment and for occupational health and safety. As environmental initiatives, we will pursue the achievement of a circular economy and decarbonization. Regarding occupational health and safety, we will incorporate third-party perspectives while enhancing the risk assessment of infrequent operations.

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

## We will contribute to decarbonization through persistent long-running development activities.

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

### Develop new technology that contributes to decarbonization

**Develop in-house recycling ecosystem based on "chemical looping"**

The TOK Group achieves decarbonization through business by providing semiconductor miniaturization materials, 3D-NAND materials, and power semiconductor materials. As a new initiative, we strive to develop an in-house recycling ecosystem based on chemical looping.

**Collect super-high-concentration $CO_2$ without using air for reaction**

TOK discharges organic solvent effluents generated in the manufacturing process after partial recycling, combustion, and detoxification. Usually, the separation and recovery of $CO_2$ through the normal combustion of effluents in the air takes considerable energy because the $CO_2$ in the exhaust gas is only approximately 13%* due to the large shares of atmospheric $O_2$ and $N_2$ that are not used for combustion. In addition, atmospheric $N_2$ is oxidized through combustion. In general, a thermal power plant is considered to emit 30 to 100 ppm of thermal NOx after denitration treatment.

In contrast, TOK is developing a system based on chemical looping, where atmospheric oxygen is not used in the reaction, and high-concentration $CO_2$ can be selectively collected by controlling and optimizing reactive conditions. This system can also minimize thermal NOx because the reaction temperature is lower than for normal combustion. Investigations using present experimental equipment have indicated a $CO_2$ conversion efficiency of 95% or higher and a NOx level of approximately 1 to 10 ppm (lower measurement limit at present), demonstrating the superiority of this system. Currently, joint research with universities and other research institutions is in progress toward in-house practical application of this system. Subsequently, we will also pursue energy recycling and $CO_2$ conversion linked to this system.

The system still has many problems to clarify, we will persistently continue with long-running development as our characteristic as part of our contribution to decarbonization.

* Calculated values

Hiroshi Kumazawa
*New Business Development Div. 1*

### Visualize benefit to enhance motivation for development toward decarbonization

The general policy speech by Prime Minister Suga in October 2020 signaled the start of initiatives to achieve carbon neutrality by 2050. At the Intergovernmental Panel on Climate Change (IPCC) 2013, it was clarified that zero emissions were the only means to stop climate change. After the Paris Agreement took effect in 2016, decarbonization has become the global policy target instead of low carbon. We believe that this is a social requirement that affects the survival of humankind.

TOK is developing a system based on chemical looping as its new business, which can convert waste into items of value by using effluents as fuels, in addition to the collection of $CO_2$. We recognized that the visualization of benefits from environmental initiatives enhance motivation for development. Because the handling of high-concentration $CO_2$ involves hazards, we will promote development with due safety considerations as a player in the carbon neutral society.

# TCFD-based Information Disclosure concerning Climate Change

TOK is striving for decarbonization to resolve climate change within the scope of its material issue of global environmental protection. In 2020, we analyzed the risks and opportunities on our business involved in climate change with the aim of disclosing information based on the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. In 2021, we will analyze scenarios in accordance with the TCFD recommendations and promote information disclosure on the impact of climate change on our business.

## Governance

TOK is coping with climate change issues by promoting environmental management and decarbonization measures within the scope of its material issue of global environmental protection. Our management executives discuss agenda items regarding EHS and the development and manufacturing of eco-friendly products, monitor the activities listed above, and formulate strategies in reference to current social issues and changes in the business environment.

## Risk management

Under the risk management structure centering around the Risk Management Committee, which comprises the president and the general managers **(see pages 91–92)**, 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 two-degree scenario presented by the International Energy Agency (IEA) and the four-degree scenario presented by the Intergovernmental Panel on Climate Change (IPCC). TOK sorted out the risks and opportunities for the entire group businesses both in the material business segment and in the device business segment **(see next page)**. Both in the two-degree scenario and in the four-degree scenario, we re-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 while grasping abundant business opportunities in power semiconductors and by adequately responding to the expected 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 condition of attaining both this target and the consolidated net sales target of 200.0 billion yen **(see pages 35–36)** in 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 bases, by 2030*1. 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.

*1 Estimation assuming USD 1 = JPY 100, and carbon tax unit price at USD 30 to 100 per ton, referring to the CDP *Carbon Pricing Corridors: The Market View 2018*.

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

| Risk type | Category | Risks on TOK business | Expected apparent time range*2 | Key initiatives (countermeasures against risks) |
|---|---|---|---|---|
| **Transition risks**<br>**Mainly assuming the two-degree scenario** | Policy and regulatory risks | ● Increase in costs due to 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<br>**See pages 98–99** |
| | | ● 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 related communities<br>**See pages 51, 98–99 and 104–108** |
| **Physical risks**<br>**Mainly assuming four-degree scenario** | Acute risks | ● Damage to facilities due to increase in natural disasters | Short term to long term | ● Take continuous precautions for short-term flooding risks that have become apparent in the inundation of the Sagami Operation Center as our R&D hub by a typhoon in 2019<br>**See pages 91–92, 100–101**<br>● Emphasize BCP and resilience against natural disasters in the equipment renovation project under the next medium-term plan toward TOK Vision 2030<br>**See pages 37 and 52** |
| | 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<br>**See pages 98–99** |
| | | ● 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<br>**See pages 100–101** |

| Opportunities | Expected apparent time range*2 | Key initiatives (how to grasp opportunities) |
|---|---|---|
| **Expansion of the power semiconductor market**<br>**Assuming both two-degree scenario and four-degree scenario** | Short term to long term | ● Stably supply and increase sales of g-Line and i-Line photoresists for power semiconductors<br>**See pages 42–43**<br>● Stably supply and increase sales of plasma ashing systems for power semiconductors<br>**See pages 42–43 and 69–70**<br>● Develop and increase sales of wafer handling systems for innovative power semiconductors<br>**See pages 42–43 and 69–70** |
| **Increase in needs for the development of next-generation power semiconductors with lower power consumption**<br>**Assuming both two-degree scenario and four-degree scenario** | Medium term to long term | ● Gear up development and sales of materials for next-generation power semiconductors, including $Ga_2O_3$ (gallium oxide) / SiC (silicon carbide) / GaN (gallium nitride) power semiconductors<br>**See pages 42–43** |
| **Increase in demand for energy recycling systems**<br>**Assuming both two-degree scenario and four-degree scenario** | Medium term to long term | ● Accelerate measures for development and sales of chemical looping energy recycling system<br>**See pages 53** |

*2 "Short term" is defined as until 2021, "medium term" as until 2030, and "long term" as until 2050.

# Message from the Director in Charge of Marketing

## We will promote sales and marketing activities on a short-term, medium-term to long-term, and super-long-term perspective in order to attain the overarching aspiration for 2030 to be inherited to becoming a 100-year company.

Kosuke Doi *Executive Officer, Department Manager, Marketing Department*

### Risks and opportunities

**Further advance and upgrade e-materials and identify risks and opportunities on a short-term, medium-term to long-term, and super-long-term basis**

The global semiconductor market in 2020 stood at USD 440,389 million, up 6.8% from the previous year, with increased demand for PCs and tablets due to longer hours spent at home, expanded share of 5G smartphones, substantially greater data traffic on the Internet, and higher demand for infrastructural capital investment in cloud services, while the global economy was stagnant because of the COVID-19 infection*.

The semiconductor market in 2021 is expected to show positive growth by 19.7% from the previous year with most of the favorable factors above continued, as well as increased applications in automobiles, in addition to the gradual return to normal of global economic activities*. Furthermore, the transition to a phase that differs substantially from the past ten years is expected in the next ten years because of the dissemination of 5G communications, increased sensor demand, and expansion of autonomous vehicles, combined with the further increase in data use and semiconductor use in technological development toward the 6G next-generation communication standard. (There is an estimate that semiconductor wafer input will increase threefold from 2020 to 2030.) To fully understand these growth opportunities on a short-term, medium-term to long-term, and super-long-term basis, we will attain the overarching aspiration (qualitative aspects and quantitative aspects) under TOK Vision 2030 by further advancing and upgrading e-materials that are indispensable for the production of electronic components and semiconductors.

While the semiconductor supply chain has become a technological key in support of the advancement of society and human lives, there is an ongoing shift from global production to regional production of materials due to the escalating geopolitical risks of the U.S.-China trade friction. We recognize the protectionist policies across the world as future risks. Additional short-term risks are becoming apparent, and those risks include delayed mass production starts and capital investments at customers caused by the increasing technological difficulty in the innovative semiconductor segment, decreased profitability due to the increases in the price of raw materials, and price competition for panel materials. There are also medium- to long-term risks of changing resist demand due to the silicon cycle, and the consequences of eating up semiconductor demand ahead of time. On a super-long-term basis, we will have to carefully identify the future areas of strengths in order to steadily and fully take advantage of business opportunities in optical semiconductors and quantum computer materials, which will play the leading role in the upcoming generations following 3D semiconductors.

* Source: World Semiconductor Trade Statistics (June 8, 2021)

### Initiatives toward TOK Vision 2030

**Establish win-win relationships and promote strategic marketing toward the overarching aspiration (qualitative aspects and quantitative aspects)**

Based on the recognition of risks and the potential opportunities as categorized above, the TOK Group will continue to implement customer-oriented strategies, aiming to *provide new added value that inspires customers* as the overarching aspiration (qualitative aspect) under TOK Vision 2030. The specific activities will include sales, marketing, and promotion in the state-of-the-art segments of EUV/ArF photoresists and high-purity chemicals for the miniaturization of semiconductors, as well as KrF excimer laser photoresists for 3D-NAND and high-density integration materials for 2.5D and 3D packaging. We will also gear up for the sales of materials for memory devices, image sensors, power semiconductors, and in-vehicle semiconductors as these markets expand driven by the fields above. We will further advance the customer-oriented strategies to establish win-win relationships with customers for any market and technological trends.

Our objective is to deepen and cultivate electronic material field as the most important strategy toward achieving net sales 200.0 billion yen, EBITDA 45.0 billion yen, and ROE ≥10% as

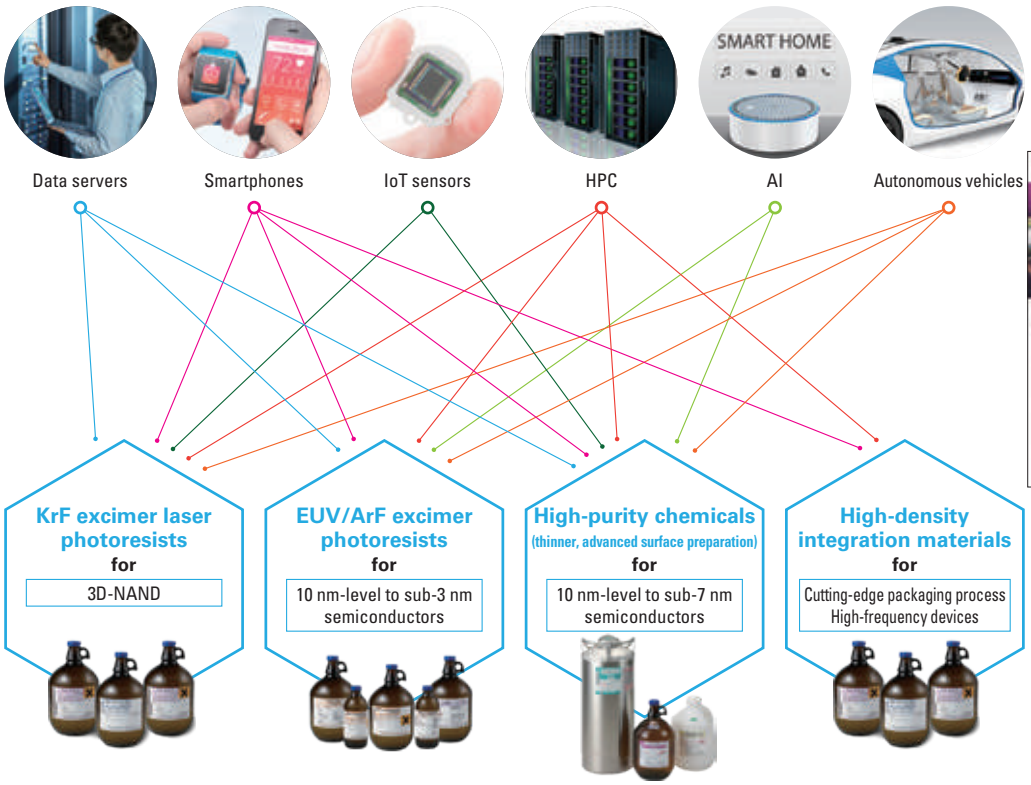
the overarching aspiration (quantitative aspects) for FY 2030/12. Under this strategy, we pursue sustainable development by gearing up the growth-oriented approach, while breaking through the present difficulties, regarding upcoming market changes and unexpected risks as opportunities based on the thoroughly customer-oriented scenarios. As specific measures, we will strengthen initiatives to introduce cutting-edge, state-of-the-art technologies ahead of others, while reinforcing technical marketing for each product to grow trees while seeing the wood (i.e., having a big picture) through collaboration between the Strategic Alliance Division, which was established in 2020, and the Sales Strategy Division, which was organized in April 2021. Regarding miniaturization of semiconductors on a short-term basis, we will pursue growth in line with the ongoing customer-oriented strategies. In the meantime, we will also deepen the business areas and promote horizontal expansion by envisioning the upcoming next-generation semiconductor production technologies, grasping new needs that will provide a blue ocean ahead of others through technical marketing. To this end, we will explore future business styles and identify themes to pursue and core technologies to develop in order to expand semiconductor-related business areas, have future forecasts and resolve problems related to our products in advance, and upgrade and set in place TOK brands.

Regarding the deployment of new businesses from a super-long-term perspective to be inherited to become a 100-year company in 2040, we will gear up marketing of the present new business products, such as life science-related materials, optical materials, and functional films, in collaboration with the New Business Development Department. At the same time, we will also promote marketing activities by envisioning the development of new businesses in the decarbonization, environment, and AI fields based on new collaboration with stakeholders and the exhaustive analysis of social trends, thereby crystallizing a new business portfolio.

**Enhance global brand power through the development of locally hired non-Japanese sales personnel and the promotion of diversity measures**

The overseas sales ratio of the TOK Group has remained at around 80%. Therefore, we formulate and upgrade local-specific strategies based on the conditions of each customer-oriented site overseas in the implementation of sales and marketing strategies as described above. At the same time, we will strengthen collaboration with sites in Japan while continuously developing locally hired non-Japanese sales personnel and promoting diversity measures, so that all group employees can share the Purpose of TOK and provide higher value to customers and society, thereby enhancing our global brand power.

**Value creation by TOK in innovative fields**




Establish a product PR website for strengthening online marketing

Purpose

Enhance the TOK brands by globally practicing

**"contributing to a sustainable future through chemistry"**

# Message from the Director in Charge of Research and Development

## We pursue long-term sustainable growth coupled with higher capital efficiency by further upgrading R&D efficiency and strengthening human resource development.

Harutoshi Sato *Director, Senior Executive Officer, Department Manager, Research and Development Department*

### Risks and opportunities

**Achieve both consecutive growth and nonconsecutive growth to be inherited toward a 100-year company in 2040**

TOK has developed as a long-running R&D-driven company that continues to target niche top markets. To achieve net sales 200.0 billion yen, EBITDA 45.0 billion yen, and ROE ≥10% as the overarching aspiration (quantitative aspects) under TOK Vision 2030, we will steadily grasp business opportunities in the e-material field as the key battle ground for the next ten years, by continuously upgrading our world-leading high-purity processing technology and microprocessor technology as our core competences, under the management principle "Continue efforts to enhance our technology." In the cutting-edge areas with incessant fierce competition, we will win the competition and achieve consecutive growth by updating customer-oriented strategies.

In the e-material field, there are risks of technological obsolescence and commoditization in many product areas. We will expand future blue oceans by continuously acquiring and introducing new technological seeds through open innovation and cooperation with external stakeholders, thereby launching new R&D themes one after another.

Through these initiatives, the TOK Group will continue to create new added value and achieve both consecutive growth and nonconsecutive growth to be inherited toward becoming a 100-year company.

The diverse risks over the past ten years, such as the Great East Japan Earthquake, U.S.-China trade friction, and the COVID-19 infection, will definitely occur in the next ten years as well. We will overcome these risks by individual human resources thinking and acting autonomously toward the purpose of contributing to a sustainable future through chemistry and by leveraging the accomplishments of Company-wide Strategy 3: Strengthen human resources who can perform research, make decisions, and take the initiative under TOK Medium-Term Plan 2021.

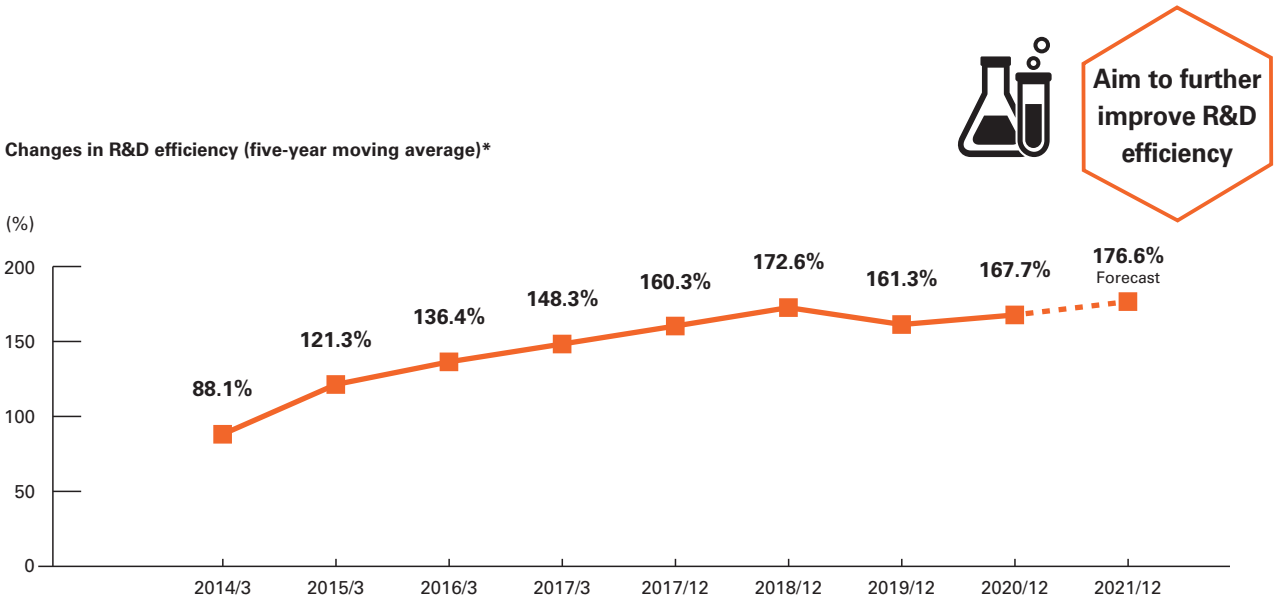
### Develop a keen awareness of R&D efficiency to improve capital efficiency and corporate value

**Always set an R&D efficiency target higher than the present level**

TOK is a top global niche company specializing in high-added value fields, and research and development are critical factors. We have continuously invested approximately 8% of net sales in R&D since 2010, including in the business structural reform period that followed the financial crisis in 2008. In this way, we have continuously reinforced our value creation basis in cutting-edge fields on a long-term perspective. In the product portfolio, the respective net sales of ArF and KrF photoresists increased more than twice over the past ten years. We also achieved high growth in the high-density integration materials segment, which was introduced as a blue ocean, making up for the decline in panel materials. We will continue to increase R&D investment in strategic segments in line with the increase in net sales, and we will further improve R&D efficiency so that the achievements of development will directly lead to improvement in capital efficiency and corporate value.

As specific measures, marketing will be emphasized by the R&D Department, just as in the Marketing Department, so that products with higher added value can be developed. We will also set, and aim at, a R&D efficiency target higher than the present level in each R&D project. Bearing this in mind, we will particularly focus on the following initiatives in FY 2021/12 as the final year of TOK Medium-Term Plan 2021 and toward TOK Vision 2030.

**Changes in R&D efficiency (five-year moving average)***




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

## Initiatives toward TOK Vision 2030 in the R&D department

### Further reinforce the R&D approach by exploring the essence

To improve R&D efficiency, we will reinforce the R&D approach to a higher level. Rather than depending on existing patterns and formulas that have been acquired through trial and error in the material design and synthesis processes or in product development, we will continuously return to the materials to examine their chemical structures and reaction mechanisms, exploring the essence of the mechanisms through questions as to why a certain phenomenon occurs and how a certain property can be improved. By doing so, we will infiltrate autonomous thinking to explore why certain factors are favorable, while others are unfavorable. In this way, we will promote the development of next-generation products in the same product areas, while strengthening capabilities for new R&D themes.

### Strategic use of computational chemistry, data science, and AI/MI

We will strategically use computational chemistry and data science to enhance knowledge productivity (efficiency of outputs gained through information inputs) through expedited PDCA cycle in the R&D approach. In the hypothesizing process to attain the requested product performance (functional definition), the analysis of historical data can be streamlined with data science, AI, and materials informatics (MI). The hypothetical forecasting efficiency will be increased with computational chemistry by using specified parameters and surrogate indexes. Efficiency will be improved in the processes from material design and synthesis and sample formulation to discussions and transition to the next process by leveraging data science and AI/MI. Computational chemistry will be effectively used for the testing of hypothesis in the processes above by improving the precision of computational chemistry through feedback from the analyses of parameter/surrogate indexes and the evaluation of sample performance.

### Develop R&D human resources and hand down individualistic knowledge and know-how

TOK will continue to use AI/MI in the pursuit of higher R&D efficiency. The quality of outputs from AI/MI substantially depends on the initial data setting based on the individualistic knowledge and expertise of R&D human resources. Our business model is based on the customer-oriented strategies inherited since our founding and is rooted in interpersonal communications. We will continue to develop human resources with a strong faith and passion who are capable of persistently exploring the essence of things, taking proactive action and accepting challenges, establishing partnerships through communication with others, and continuously learning, changing, and growing under the policy of the Research and Development Department to develop human resources who can perform research, make decisions, and take the initiative. At present, the two executive fellows appointed in 2020 are leading the respective development teams focused on human resource development and sharing individualistic expertise. To steadily grasp business opportunities in the semiconductor industry that will expand to horizons substantially differing from the past ten years, we will also increase non-Japanese employees and mid-career recruits toward the overarching aspiration under TOK Vision 2030.

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

## We pursue happiness in personnel and strengthen their engagement, considering social changes and emerging global risks.

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

### Risks and Opportunities

**Coping with present risks while strengthening personnel measures from the medium- to long-term viewpoints**

The source of our competitiveness is in the microprocessor technology and high-purity processing technology as our core competence, and the production engineering power that stably achieves high quality. While these technologies are naturally supported by human resources, the decreasing working population has emerged as a risk in Japan where TOK is headquartered, and it has become an urgent requirement to implement personnel measures that will invigorate incumbent employees and senior employees. Therefore, we have endeavored to introduce a new personnel system in 2021, envisioning the medium- to long-term growth of human resources and the Company under the concepts of diversity, fairness, and accent. The implementation of the overall system was postponed by one year to 2022 because we prioritized the introduction of new work styles amidst the spread of COVID-19 in 2020 in order to prevent both getting infected and infecting others, putting the safety of stakeholders such as employees, customers, and business partners first. The re-employment system will also be introduced in concurrence with the new personnel system, performing revision to further motivate and leverage senior human resources. We regret the delay in these systems, but ideas have been presented to further enhance them during this delay. We are also relieved to have avoided the confusion of supply chain caused by the interruption of the supply of our products, and have also minimized COVID-19 infections in TOK. We will continue to implement infection control measures and fulfill our social responsibility without becoming complacent **(see page 93)**.

**To establish global personnel management**

The U.S.-China trade friction and the global competition for data sovereignty have continued from the pre-COVID-19 era into the present. In addition, the risk of depending on specific regions, such as Asia for semiconductor production emerged in 2020, due to the tight supply-demand conditions for automotive semiconductors and the confusion of supply chain caused by devastating natural disasters. Consequently, semiconductors were positioned as strategic supplies in countries and regions, and the shift to domestic production is proceeding in full scale, while the competition for recruitment is intensified in related industries.

"Cross-border recruitment and personnel development regardless of nationality" as our global personnel strategy could not be implemented as scheduled due to the COVID-19 pandemic in FY 2020/12. However, we plan to accept long-term internship from overseas, to input globally hired engineers into cutting-edge projects and training programs in Japan, and to increase global employments, expecting improved circumstances through the progress of vaccination worldwide in FY 2021/12.

**Ideas for personnel development in the COVID-19 pandemic**

In the development of domestic human resources, we emphasize the provision of occasions for direct exchange with customers in the U.S., South Korea, Taiwan, and China, the leading regions of the semiconductor industry, to many domestic employees who seek opportunities for growth. In FY 2020/12, these occasions were partly replaced with modified domestic training programs, because overseas traveling was restricted. Specifically, a cross-departmental training was added to acquire multi-faceted and broad perspectives. In particular, contact with customers at the sales department as the training site was introduced as a part of tough assignments, thereby promoting the growth of personnel. We will continue to implement such ideas, and will further increase opportunities for growth at overseas sites after the COVID-19 pandemic subsides.

### 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 personnel systems are based upon performance, emphasizing and ensuring transparency.

## History of Overseas Subsidiary Development

■ The U.S.
1987 Established Ohka America, Inc. (current Tokyo Ohka Kogyo America, Inc.)

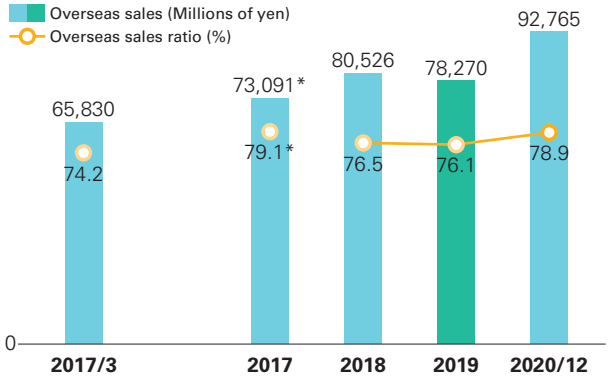
■ Europe
1987 Established Ohka (UK) Ltd.

■ Taiwan
1998 Established TOK Taiwan Co., Ltd.
2014 Established the Tongluo plant
2016 Established the Tongluo No. 2 plant

■ China
2004 Established Chang Chun TOK (Changshu) Co., Ltd.
2012 Established TOK Advanced Materials Co., Ltd.

■ South Korea
2012 Established TOK Advanced Materials Co., Ltd.

**Overseas sales/overseas sales ratio**




* The fiscal year ended December 31, 2017 was an irregular nine-month period in Japan and 12 months overseas due to a change in the fiscal year-end.

**Graduate turnover within three years of joining the Company**


## Key Measures in the TOK Medium-Term Plan 2021

### Toward the introduction of a new personnel system

Under the TOK Medium-Term Plan 2021, which emphasizes the enhancement of personnel measures more than any medium-term plans in the past, we have striven to formulate a new personnel system in order to strengthen human resources who can perform research, make decisions, and take actions on their own initiative as one of the company-wide strategies. The system was formulated considering the results of the employee engagement survey conducted in 2019, and aims at shifting to a mission grade system, which clarifies the roles and responsibilities required in each course, rank, and job type, and provides treatment and remuneration proportionate to the achievement level. The system also features treatment focused on the specialty of each employee in the R&D department and elsewhere by enhancing a specialist system, reviewing criteria for managerial appointments, and introducing a fellow and executive fellow system.

Since FY 2020/12, we have focused on upgrading systems, including the reform of human resource development methods, and work-style reform for each employee to maximize their individual abilities. Specifically, we have introduced 360-degree feedback on the heads of departments and implemented awareness improvement and coaching seminars to develop them as the core of human resource development and the invigoration of organization. For work-style reform, we have analyzed the benefits and disadvantages of work from home, flextime, and staggered commuting in order 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. As the results of various measures, not only female employees, but also increasing male employees are taking childcare leave in recent years. We will continue endeavoring to establish a comfortable work environment.

**Main features of the mission grade system (to be introduced in 2022)**

## Structures/Systems

■ Course and rank system
· Shift to mission grade system for both management and general courses
· Renew rank definitions by clarifying the expected roles according to rank and job type, making them well understood
· Review criteria for managerial appointments

■ Remuneration system
· Shift to a mission grade system

■ Evaluation and promotion system
· Daily work evaluation changed to "Behavior evaluation"
New rank definition set up as an item and standard for "Behavior evaluation"
· Introduction of a demotion system for management

■ Education system
· Establish a new level-based education system for management level employees
· Expand the education at each level

### To increase the ratio of female managers and to promote the appointment of non-Japanese human resources

To contribute to a sustainable future and to achieve decarbonization as stated in the management vision, it is essential to lead innovation utilizing diverse values and specialties. Therefore, the TOK Group continues to maintain the diversity and inclusion* policy, and proactively promote women in the workplace and the appointment of non-Japanese employees.

The ratio of female managers remained at the same level in FY 2020/12, but a woman was appointed as General Manager of the Human Resources Division, and there was also an increase in the candidates for female managers. In addition, the ratio of female employees in recruitment has been around 40% over the past several years, compared to our target of 20% or higher. This also seems to demonstrate the steady advancement of initiatives to increase the ratio of female managers. In FY 2021/12 as the final year of the medium-term plan, we will practice ideas for motivating female employees to challenge management positions, considering and pursuing their careers from their perspectives, such as providing occasions for exchange with female human resources who can play a role model.

The number of non-Japanese employees increased again in FY 2020/12. In FY 2021/12, we will promote the appointment of non-Japanese human resources and the advancement of diversity through new ideas, such as more invigorated human resource exchange among the group companies by utilizing overseas subsidiaries.

* Inclusion: Acknowledging and taking advantage of the skills and opinions of diverse human resources

**Indices related to female employee participation*1**

| | 2017/3 | 2017 | 2018 | 2019 | 2020/12 |
|---|---|---|---|---|---|
| Ratio of women among new hires (%) | 45.8 | 29.2 | 43.3 | 39.4 | 38.5 |
| Ratio of women among the overall employees (%) | 11.4 | 11.7 | 12.3 | 13.0 | 13.7 |
| Difference in average tenure figures for men and women (years) | 8.7 | 8.9 | 9.2 | 9.3 | 9.1 |
| Ratio of women in senior and middle management (%) | 1.5 | 2.0 | 2.4 | 3.3 | 3.2 |
| Ratio of women on the Board of Directors (%) | 8.3 | 8.3 | 8.3 | 7.7 | 7.7*2 |

*1 Tokyo Ohka Kogyo Co., Ltd. only (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 2021. The ratio decreased in 2019 and after because one independent director was added.

**Number of users of childcare-related systems***

| | 2017/3 | 2017 | 2018 | 2019 | 2020/12 |
|---|---|---|---|---|---|
| Childcare leave system (number of users) | 4 | 4 | 12 | 16 | 19 |
| Shorter working hours (number of users) | 2 | 2 | 6 | 13 | 12 |
| Childcare time (number of users) | 12 | 12 | 13 | 16 | 16 |

* Tokyo Ohka Kogyo Co., Ltd. only

**Number of non-Japanese employees**

| | 2017/3 | 2017 | 2018 | 2019 | 2020/12 |
|---|---|---|---|---|---|
| Number of non-Japanese employees (Tokyo Ohka Kogyo Co., Ltd. only) | 11 | 11 | 11 | 16 | 18 |
| Number of non-Japanese employees (consolidated) | 312 | 323 | 378 | 412 | 424 |
| Ratio of non-Japanese employees (consolidated, %) | 19.5 | 20.0 | 22.6 | 23.9 | 24.2 |

## Initiatives toward TOK Vision 2030

### Toward the provision of solutions that lead to the creation of new value for customers

TOK Vision 2030 presents "Utilizing global personnel" as one of the seven strategies in 2030 with a view to a 100-year company in 2040. We define global human resources as those who can make accomplishments under any circumstances, and enhance solutions that lead to the new value creation for customers by developing human resources and organizations envisioning 10 years ahead, and promoting diversity and inclusion to form the basis for leveraging the developed human resources and organizations.

In the development of human resources and organizations, we will establish organizations utilizing a human resource databank and talent management system that visualizes the skills and abilities of employees under the new personnel system, and pursue career development through dialogs based on human resource development sheets, while utilizing development tools that focus on the strengths of each individual.

For diversity and inclusion, relationships with overseas sites will be further enhanced, and the development of locally hired staff will be strengthened through training and transfers.

### Producing leeway for creation by improving both happiness and productivity

In addition to the personnel measures above, the Seven Management Strategies stated in TOK Vision 2030 require higher employee engagement for their practices. Therefore, we will continue to pursue the enhancement of happiness, while improving productivity at the same time. By promoting these two factors in tandem, we will make each individual produce leeway for creation, thereby further advancing a frank and open-minded business culture as one of the management principles since the foundation. The specific focuses are placed on fostering sympathy with the Vision, generating the sense of fulfillment, establishing a comfortable work environment, and supporting growth. In fostering sympathy with the Vision, the management executives communicate the details of TOK Vision 2030 in their own words through dialog with employees. In generating the sense of fulfillment, we will motivate capable employees by providing stages for further empowerment.

Dialog sessions between young employees and the President

Motoko Samezawa
*General Manager,*
*Human Resources Div.*

### Higher engagement will be the common language

The new personnel system places the pursuit of happiness in personnel at its basis, and emphasizes that individual employees can feel the sense of fulfillment and pleasure in their work. To achieve higher engagement as an important element of happiness, the management executives have led the analysis and discussion on the results of the employee engagement survey and have formulated and implemented improvement measures in each department. In FY 2020/12, we also promoted the company-wide sharing of initiatives in each department. In the coming years, we will continue fixed-point observation of all global employees by the survey method used in 2019, thereby pursuing increased happiness for all employees in Japan and overseas, with higher engagement as the common language throughout the group.

## Respect for Human Rights

### Established the Human Rights Policy

The TOK Group has announced that it would never violate any human rights in the TOK Group Human Resources Management Regulations and the TOK Group Compliance Standards of Conduct. In October 2020, we formulated the CSR Policy, which is applicable to the entire TOK Group, by reorganizing the existing policies, Compliance Standards of Conduct, and other policies. As its subordinate policies, we also formulated the Human Rights Policy based on 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 2020/12, we implemented study sessions and e-learning related to human rights. In FY 2021/12, we will educate and promote understanding in order to instill the CSR Policy including human rights policy throughout 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. We have also promoted initiatives covering the entire supply chain, including the statement of procurement considering human rights, occupational health and safety, and other social requirements in the CSR Procurement Policy.

### Prevention of harassment

The human rights policy states that the TOK Group prohibits all kinds of activities that may be regarded as harassment. Furthermore, we codified the detailed rules concerning harassment, which specified contact information and procedures for handling harassment incidents. We strive to prevent all kinds of harassment by improving employee awareness through continued harassment prevention education for all employees as part of human rights training. In coming years, we also plan to implement study sessions on harassment for directors and other executive officers so that they can embody the frank and open-minded business culture stated in the management principles, and set an example of appropriate behavior.

We have also made rules for preventing maternity and paternity harassment as an example of initiatives to promote the prevention of new types of harassment in line with social trends. In addition, we will implement measures to help external stakeholders deepen their understanding of the TOK Group CSR Policy, including the human rights policy.

## 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 maintaining and improving health in order for officers and employees to prevent and discover diseases. We have implemented various insurance measures, including offering to pay the full cost of group influenza vaccinations for employees since 2017. We have also focused efforts on preventing illnesses from becoming worse through the early detection and treatment of diseases. In 2018, the Company launched My Health Web as a convenient portal for improving knowledge and awareness about health. We also hold the walking rally via My Health Web with the participation of the president, as well as many officers and employees. We have also made efforts to maintain presymptomatic state to lead healthier lives by encouraging each director and employee to do daily radio calisthenics, stretching, and activities on internal athletic clubs. Since 2019, we have been holding quit-smoking seminars, introduced humidifiers, and power assist suits for elderly workers.

As a result of these ongoing initiatives, TOK was recognized in the 2020 Certified Health & Productivity Management Outstanding Organizations Recognition Program by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi in February 2020 for a third consecutive year. We have introduced new initiatives toward future certification, thereby promoting further health and productivity management. In December 2020, TOK was designated a "Sports Yell Company" by the Japan Sports Agency for a second consecutive year.

### Human Rights Policy

**TOK Group respects the basic human rights and diversity, and acts as a good member of the global community in accordance with national and local laws and social norms* related to human rights.**

* Universal Declaration of Human Rights, Guiding Principles on Business and Human Rights, ISO26000, RBA Code of Conduct, etc.

- Does not discriminate against anyone in recruiting, hiring, assignment, training, reward, promotion, etc., on the basis of birth, nationality, race, ethnicity, religion, gender, sexual orientation, marital status, pregnancy, medical condition, age, disability, or any other basis prohibited by law.
- Prohibits child labor, forced labor, debt bondage, and human trafficking regardless of the form of employment.
- Prohibits any and all acts that may be considered harassment.
- Endeavours to foster and implement fair and impartial treatment of our human resources.
- Maintains a physically and mentally comfortable working environment by ensuring the fairness in employment and the safety at work.
- Respects and guarantee the basic rights of workers stipulated in international labor standards and the constitutions and labor laws of each country and region.
- Properly protects and manages personal information.

### 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, 2020, there are 1,072 labor union members affiliated with the Company, and 80.1% 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, we have concluded various labor agreements that include provisions on occupational health and safety 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.

We have also established the labor-management review panel as a forum for labor-management discussion on the new personnel system and re-employment system to be introduced in 2022, among other topics. We have traditionally discussed proposals from the labor side and the management side at the respective specialized committees. In contrast, the labor-management review panel is operated as a consultative body that not only discusses the systems above but also shares requirements toward work-style reform, as well as the awareness of problems toward workplace environment where motivated senior human resources can fully exercise their abilities, and examines solutions thereto.

# Review of Operations

# Material Business

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

**Kosuke Doi**

*Executive Officer, Department Manager, Marketing Department*


TOK Taiwan Co., Ltd.

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

**Material Business Performance**

(Millions of yen)

| | FY 2018/12 Result | FY 2019/12 Result | FY 2020/12 Result | | |
|---|---|---|---|---|---|
| | | | | Change | % |
| Net sales | 102,621 | 98,986 | 114,773 | +15,787 | +15.9% |
| Electronic functional materials | 58,793 | 58,249 | 65,878 | +7,629 | +13.1% |
| High-purity chemicals | 43,733 | 40,674 | 48,732 | +8,058 | +19.8% |
| Other | 95 | 63 | 161 | +98 | +154.7% |
| Operating income | 14,765 | 13,462 | 20,395 | +6,933 | +51.5% |
| Operating margin | 14.4% | 13.6% | 17.8% | — | — |
| Segment assets | 104,125 | 113,079 | 119,695 | +6,616 | +5.9% |
| Depreciation and amortization | 6,852 | 7,009 | 6,518 | (491) | (7.0%) |
| R&D costs | 7,856 | 8,370 | 9,093 | +723 | +8.6% |

## Risks and opportunities—Material Business—

**Risk**

- Rising cost of development due to increasing technological difficulties
- Unfavorable market environment due to the escalating geopolitical risks that include the U.S.-China trade friction
- Interruption or confusion of supply chain due to the 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, with the same number of photoresist manufacturers
- Impact of over-concentration of main business domains in the electronics industry

**Opportunities**

- Increasing needs for ultra-miniaturization (EUV and ArF photoresists)
- Growing needs for cutting-edge packaging technologies (2.5D, 3D semiconductor packaging)
- Further increase in data volume and semiconductor needs due to 5G, IoT, and AI
- Increase in semiconductor needs due to the accelerated global initiatives for decarbonization
- Expansion in 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's Solutions

**Contribute to innovation by achieving the combination of high performance, high quality, and stable supply**

In addition to conventional functionality as the heart of electronic equipment, semiconductors have become essential supplies for leading innovation and for resolving highly complex social issues that face humankind, such as the climate change risks and infectious disease risks that have recently become apparent.

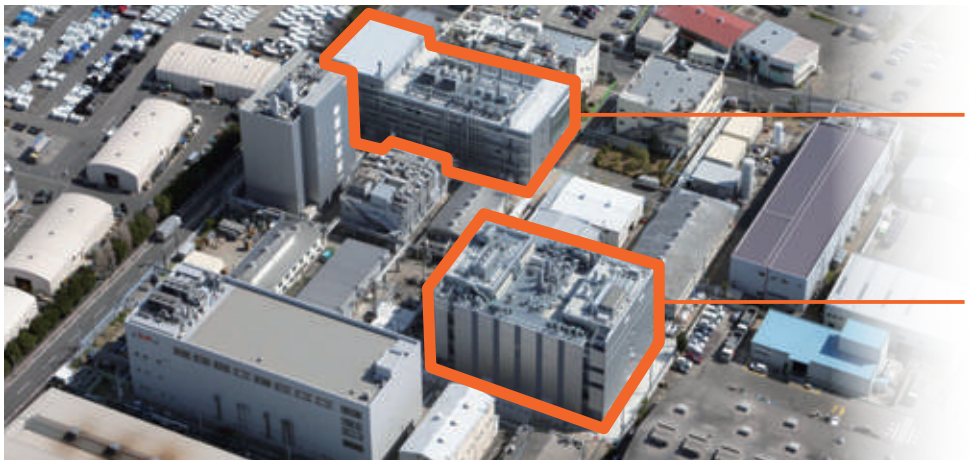
We consider this the mission of the semiconductor-related industries, including TOK, to contribute to achieving the higher performance, downsizing, lower power consumption, and cost reduction of electronic equipment by continuously upgrading microprocessor technology and laminating technology to achieve the increased processing speed and lower power consumption of semiconductors.

High performance, high quality, and a stable supply must be achieved in combination, particularly for semiconductor materials like photoresists and high-purity chemicals. We make continuous efforts to improve performance and develop new applications for all key products including EUV/ArF/KrF/i-Line photoresists. At the same time, we will strive to ensure a stable supply by developing production technologies that achieve high quality in the mass production process, and taking BCP measures, among other efforts.

**Key to high product quality—defect reduction by reducing invisible impurities**

Major factors in the selection of EUV photoresists and other materials used in innovative semiconductor segments are high quality with minimized impurities, combined with high performance sensitivity and resolution. In the super clean room that started operation in the New R&D Building at the Sagami Operation Center in 2019, the entry of foreign matter from outside is minimized to handle hazardous substances with the world highest-level cleanliness, thereby enabling the identification of the source of impurities in shorter hours than before. In the cutting-edge miniaturization process, even fine impurities that cannot be observed with inspection instruments lead to compromised yields. Therefore, we implement diverse measures to detect and reduce such impurities. These measures to reduce defects are promoted while establishing logical processes through the collaboration of the Manufacturing Department, Marketing Department, and Research and Development Department in accordance with the long-term road map toward zero defects.

**(see page 67, "The Cutting Edge")**




The new C-1 Building of the Sagami Operation Center, where the super clean room to handle hazardous substances has started operations, and the new B-6 Building for open innovation

The Cutting Edge

TOK Human Resources

Jung WonKyu

*Manufacturing Team*
*TOK Advanced Materials Co., Ltd.*

## The personnel in South Korea are also continuously upgrading quality in response to ever-escalating customer requests.

We make everyday efforts to ensure high-quality and stable production because the mass production of EUV photoresists has begun in full scale to support the cutting-edge process of semiconductor miniaturization.

While the product quality and technological difficulty required by customers are extremely high, we impartially introduce findings from both South Korea and Japan and establish a production environment under the optimal conditions through the repeated cycle for quality improvement, proceeding from risk identification to testing and then to improvement, thereby achieving customer satisfaction and high evaluation. We doubled our production capacity by abundantly introducing state-of-the-art equipment, fully preparing ourselves for the next leap.

We will continuously upgrade quality in response to ever-escalating customer requests.

## Initiatives for Material Issues: Creation of New Added Value that Contributes to Innovation and Global Environmental Conservation

**Provision of solutions that lead to the creation of new value for customers**

We have specified the *creation of new added value that contributes to innovation* as one of our material issues. Through rigorous marketing, TOK will carefully identify and intensively and proactively address solutions that lead to the creation of new value for customers as a requirement and objective for this material issue. Many achievements were made in FY 2020/12. One of them was the development of a photoresist for sensor devices.

TOK developed and provided photoresists for CMOS image sensors used in smartphone cameras. Last year, we developed and marketed a photoresist for the ToF (Time of Flight) sensor, which applies the CMOS image sensor.

The ToF sensor measures distance based on the time between the emission of a signal and its return after reflecting off an object. The market will expand while substantially improving face recognition accuracy on smartphones and contributing to the realization of a camera that can photograph objects in low light.

**Expected increase in businesses that combine further improvement of customer satisfaction and promotion of environmental management**

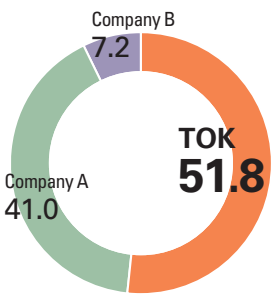
In FY 2020/12, the awareness of social sustainability rose through the aggravation of climate change risks and the impact of the COVID-19 pandemic. Among the components of product added value in B2B business, low environmental and health impact was considered as important as, or even more important than, high product performance and characteristics.

TOK promotes environmental management as one of the key initiatives for the material issue of global environmental conservation. We have ensured strict compliance with environmental regulations applicable to our products and have proactively responded to new environmental regulations. In FY 2020/12, we received requests from many customers to shift from existing products to models with reduced environmental and health impact. We developed and provided new products that satisfied required standards, and had them introduced by the customers.

We will continue to promote businesses that combine the further improvement of customer satisfaction and the promotion of environmental management, thereby contributing to the sustainable development of society.

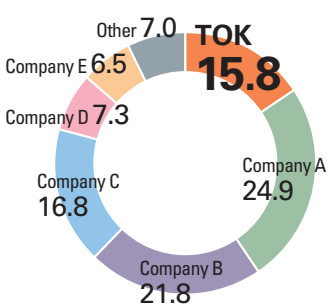
**Global market share for semiconductor photoresists** (projected shipment volume share in 2020)

■ EUV photoresists



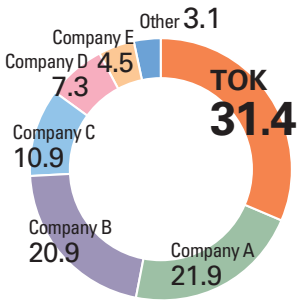

Global No. 1

■ ArF excimer laser photoresists



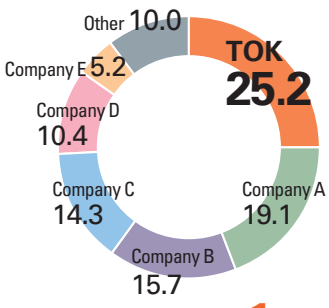

Global No. 4

■ KrF excimer laser photoresists




Global No. 1

■ g-Line and i-Line photoresists




Global No. 1

Source: Fuji Chimera Research Institute, "Current Status and Future Outlook of Cutting-edge/Noticeable Semiconductor-related Markets 2020")

# The Cutting Edge

## Development of cutting-edge materials leveraging super clean room

The high-purity processing technology is one of our core competences that contributed to the resolution of social issues in each era since the founder, Shigemasa Mukai, developed high-purity potassium hydroxide in 1934 and broadly distributed it as an essential material for batteries used in cap lights to protect the safety of coal miners. To continue upgrading this strength under the management principle "Continue efforts to enhance our technology," we started the operation of the super clean room in 2019 to handle hazardous substances with the world highest-level cleanliness, striving to reduce impurities to the ppq* level in the cutting-edge areas of semiconductor photoresists and high-purity chemicals.

* ppq = parts per quadrillion

### Pursuing material quality from three perspectives

In the pursuit of the quality of cutting-edge materials using high-purity processing technology, we emphasize an approach from three perspectives: fluctuations in raw materials (e.g. impurities, metals), fluctuations in the production process (e.g. refinement, mixing, filtration, filling, containers, equipment), and fluctuations in analysis and evaluation (e.g. analysis containers, implementation methods). Among these, the super clean room plays an important role in the factor analysis and improvement of fluctuations in the production process.

New C-1 Building of the Sagami Operation Center, where R&D is promoted in cutting-edge areas centering around the super clean room to handle hazardous substances

### Company-wide promotion of the *trinity* of manufacturing, development, and sales as one of the most important managerial requirements

TOK considers the further advancement of high-purity processing technology as one of its most important managerial requirements. The relevant strategies and policies are continuously discussed at the *trinity* meeting comprising the president and the directors in charge of manufacturing, development, and sales. Frontline staff also closely collaborate, rapidly sharing the development condition, customer condition, industrial condition, etc. The Production Technology Development Division functions as the core of the manufacturing process. The department aims to develop production technology required for next-generation products, logically verify the technology, and launch mass production, in addition to identifying the quality requirements for next-generation products in advance and incorporating them in the prototyping stage and leads company-wide efforts to attain these goals.

### Started to provide next-generation cutting-edge resists leveraging super clean room

Our customer-oriented strategies have been further upgraded through the initiatives above, enabling the rapid sharing of customer condition and industrial conditions among the development, sales, and manufacturing departments in Japan and overseas. In this way, it has become possible to undertake proactive and systematic R&D activities forecasting customer requirements, and we have started to provide the next-generation cutting-edge resists of higher quality.

Akiyoshi Yamazaki
*Deputy Department Manager, Manufacturing Department*

### Aiming at the next stage through DX and advanced collaboration with stakeholders

A subtle difference in raw materials or production process has a substantial impact on quality in the development and manufacturing of next-generation materials for innovative semiconductor segments. We will not only analyze our internal data but also establish advanced collaboration with suppliers, customers, and other stakeholders, while aiming to realize quality forecast based on AI and statistics in the future. To this end, we will promote the analysis of process parameters that substantially affect product quality, utilizing the super clean room. At the same time, we will establish an R&D structure for next-generation production technology through a continued DX shift.

# Review of Operations

# 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


**Equipment Business Performance**

(Millions of yen)

| | FY 2018/12 Result | FY 2019/12 Result | FY 2020/12 Result | | |
|---|---|---|---|---|---|
| | | | | Change | % |
| Net sales | 2,655 | 3,833 | 2,811 | (1,022) | (26.7%) |
| Segment income (loss) | (883) | (286) | (310) | (24) | — |
| Operating margin | — | — | — | — | — |
| Segment assets | 4,245 | 3,612 | 2,015 | (1,597) | (44.2%) |
| Depreciation and amortization | 63 | 36 | 32 | (4) | (11.1%) |
| R&D costs | 497 | 509 | 452 | (57) | (11.2%) |

# Risks and opportunities—Equipment Business—

**Risk**

- Impact of intensifying competition with full-scale entry by major companies as competitors catching up
- Unfavorable market environment due to the escalating geopolitical risks including the U.S.-China trade friction
- 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 the accelerated global initiatives for decarbonization
- Expansion of business opportunities in the next-generation display market
- Opportunities for adoption are relatively equally obtained as the market is new
- Increase in opportunities to appeal track record in TSV equipment adoption and advantage in technology and technological improvement
- Expansion of business opportunities through the supply of high-performance equipment for coating and stripping using knowledge of materials developed in the Material Business
- Securing of earning opportunities leveraging lower break-even point thanks to the fabless production method

## Issues for Society and Customers and TOK's Solutions

**Support for the long-term development of semiconductor technologies**

Semiconductors have contributed to the realization of convenient and comfortable lifestyles around the world, as well as to the resolution of diverse social issues. Over approximately 50 years, they have achieved higher speed and larger capacity through performance upgrading based on miniaturization. Now that miniaturization is slowing, initiatives are expanding to achieve higher performance through other methods. In particular, the 3D packaging technology to vertically stack semiconductors is expected to support the long-term development of semiconductor technologies.

The TOK Group marketed the 3D packaging system called Zero Newton® in 2008 and has increased sales and acquired market share particularly among the OSAT* manufacturers in Asia. We have also accumulated profound knowledge in this field based on the Materials & Equipment (M&E) strategy unique to TOK, which operates both the material business and the equipment business. Owing to the continued promotion of customer-oriented strategies, we are receiving increased inquiries based on lamination needs in the cutting-edge packaging area. We will therefore continue to strengthen businesses in this segment and promote the M&E strategy.

* Outsource Assembly and Test: A business model for undertaking only production of semiconductors that specializes in the back-end processes

**Steadily grasp the increasing needs related to decarbonization**

The 3D packaging system Zero Newton® has been highly rated for its core technology to attach and separate the wafer and the carrier substrate and has been introduced by the manufacturers of high-efficiency high-performance power semiconductors that contribute to decarbonization. In particular, innovative power semiconductor wafers are thinned to below 100 um, making them very difficult to attach and separate. Moreover, there is also a need to increase yield by widening the wafer diameters. Since Zero Newton® offers superior performance for both of these objectives, we will focus on expanding sales of the product going forward.

Another flagship product for power semiconductors that has been used by customers and has maintained steady sales for many years is the plasma ashing system. We will endeavor to acquire replacement needs by proposing a lower-cost version and to increase orders by responding to the need for larger-size wafers, while emphasizing the appeal of the high resist-removal capacity unique to TOK.

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

Zero Newton® bonding machine

Zero Newton® debonding machine

Plasma ashing system

The Cutting Edge

TOK Human Resources

Hirohiko Tamiya

*Section Manager, Marketing Section, Equipment Marketing Div.*

## Acquiring repeat orders through global collaboration and M&E strategy

Because the 3D packaging market for semiconductors is slow to expand due to its cutting-edge nature, it is no exaggeration to say that the acquisition of repeat orders determines business profitability. We are receiving increased repeat orders for the 3D packaging system Zero Newton®. In the case of Taiwan, our local engineers carefully analyzed the initial customer assessment and identified the requirements, and the Shonan Operation Center in Japan examined how to optimize the process conditions. We acquire repeat orders by finally identifying conditions that satisfy customers, using the M&E (Materials & Equipment) strategy as our strength and making optimization proposals modifying materials and equipment conditions.

## Key Measures for the Final Year of the TOK Medium-Term Plan 2021

**Pursue further profitability improvement as a starting point for medium- to long-term growth**

We will pursue further profitability improvements in FY 2021/12 as the starting point for medium- to long-term growth by carrying on the measures that address the segment's high cost structure that results from the provision of individually customized units as original solutions for the customer.

Regarding the provision of relevant materials, consumables, and components for each unit and the proposal for the modification and overhaul of services to ensure stable earnings, we integrated the relevant subsidiaries in April 2019 to bolster our workforce in the Maintenance Division, leading to improved operating efficiency. Through these measures, we established the above operations as tasks for sales engineers, and expect to achieve a further enhancement of customer satisfaction and increased earnings in FY 2021/12. In particular, we expect further increase in the sales of relevant materials in line with the ongoing sales promotion of equipment in the Chinese market.

**Sales promotion of 3D packaging system and plasma ashing system**

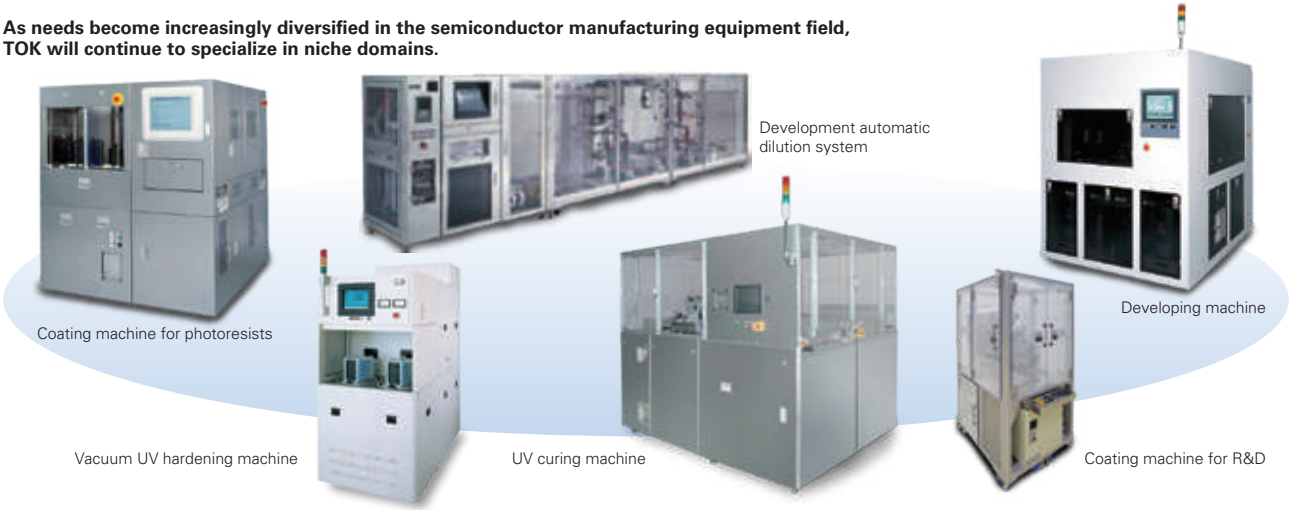
As described above, the demand for the 3D packaging system Zero Newton® is increasing in line with the expansion of SoIC in the semiconductor market, and we are receiving inquiries for prospective repeat orders and the relevant negotiations will take place. As miniaturization is approaching its limit, SoIC is expected as a means to reduce the rising cost to achieve medium- to long-term market growth. We will promote the sales of the system in Asia with its high demand and in other regions, while establishing an environment for the expedited local evaluation of demonstration units. The scope of application is gradually expanding not only for SoIC but also for 2.5D and 3D semiconductors. We will endeavor to acquire repeat orders in Asia, where we fully understand market share, while pursuing orders in new markets.

As mentioned above, we will also promote the sales of the 3D packaging system and the plasma ashing system for power semiconductors related to decarbonization. At the same time, we will make continuous efforts in cutting-edge fields to develop equipment for fan-out panel level packages, as well as flexible display manufacturing equipment, to lay stepping stones for medium- to long-term growth. **(see page 71, "The Cutting Edge")**

**Always considering energy-saving, reduced material consumption, and higher functionality toward the achievement of sustainability**

The awareness of sustainability is being infiltrated into the B2B business through the aggravation of climate change risks and the impact of the COVID-19 pandemic. TOK will continue to promote the sales of the systems for power semiconductors (3D packaging system Zero Newton® and plasma ashing system), as part of its key initiative to *promote environmental management* for the material issue of global environmental conservation. At the same time, TOK also pursues energy saving, reduced material consumption, and higher functionality in the development of the equipment to be provided. We also develop and provide tailor-made systems in response to similar requests from individual customers.

**As needs become increasingly diversified in the semiconductor manufacturing equipment field, TOK will continue to specialize in niche domains.**



# The Cutting Edge

## Initiatives in the cutting-edge areas lead to medium- to long-term growth

The TOK Group positions the equipment business as another key business under the most important strategy of deepening and developing the e-material field in the TOK Vision 2030. The medium- to long-term growth strategies are implemented in the equipment segment as well, focusing on the semiconductor and display segments.

### Semiconductor field: Developed equipment for the fan-out panel level packages as a state-of-the-art area

As described earlier, we strive to increase short-term earnings from the 3D packaging system and the plasma ashing system. At the same time, we will promote the development of equipment for fan-out panel level packages (FOPLP) as state-of-the-art technology, thereby pursuing medium- to long-term growth toward 2030 and 2040.

FOPLP is technology to assemble a large number of semiconductor packages at one time using large panels. TOK developed proprietary FOPLP equipment by applying its 3D packaging system Zero Newton® and marketed the initial model in FY 2018/12. FOPLP will grow for 5G communications and autonomous vehicles that require a large number of compact and high-performance semiconductor devices. TOK will continue to promote the development of FOPLP equipment.

**FOPLP equipment and final application concepts**

FOPLP equipment

5G communication

Autonomous vehicles

**Flexible display manufacturing equipment and final application image**

Flexible display manufacturing equipment

Flexible display

### Display field: Developed manufacturing equipment for flexible displays as the state-of-the-art area

The microprocessor technology and the high-purity processing technology as our core competences can be broadly used not only for semiconductors but also for display production. TOK also has knowledge and know-how accumulated in the era when TV and display materials/systems were its earnings driver. Therefore, TOK will continue to reinforce its business portfolio by focusing on the state-of-the-art and high-added value segments, not only in the semiconductor field but also in the display field.

### Toward 2030: increase equipment sales under the M&E strategy

To attain TOK Vision 2030, we will specialize in the niche areas of the equipment segment and promote the M&E (Materials & Equipment) strategy to propose processes for maximizing material characteristics based on profound knowledge of semiconductor materials. Under this basic principle, we will establish service sites in the central regions with high demand in the semiconductor segment and realize the equipment while identifying and promoting customer demand. In the display segment, we will promote the local supply of flexible display manufacturing equipment, and develop customers while enhancing cost competitiveness.


# We clear even the highest hurdles using outstanding adjusting power. Meticulously and reliably.

The role of the Production Technology Development Division is to adjust.
To stably produce new products that offer excellent performance, we 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.
Our 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 Foundation

# Foundation for Sustainable Development

# Board of Directors/ Audit & 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, Senior Executive Officer
Dept. Manager, Research and Development Dept.

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. (to the present)

### Yoichi Shibamura
❸ Director, Senior Executive Officer
Dept. Manager, Accounting and Finance Dept.

1980 Joined The Mitsubishi Bank, Limited (present MUFG Bank, Ltd.)
2006 General Manager, Corporate Human Resources Dept. of The Bank of Tokyo-Mitsubishi UFJ, Ltd. (present MUFG Bank, Ltd.)
2007 General Manager, Kyobashi Branch of The Bank of Tokyo-Mitsubishi UFJ, Ltd.
2009 General Manager, Finance Division of the Company
2010 Officer; Deputy Dept. Manager, Administration Dept. and General Manager, Finance Division
2012 Officer; Dept. Manager, Accounting Dept.
2013 Executive Officer; Dept. Manager, Accounting Dept.
2017 Senior Executive Officer; Dept. Manager, Accounting Dept.
2020 Director; Senior Executive Officer; Dept. Manager, Accounting and Finance Dept. (to the present)

### Kunio Mizuki
❹ Director, Executive Officer
Dept. Manager, General Affairs Dept.
Nomination and Compensation Advisory Committee Member

1985 Joined the Company
2005 General Manager, General Affairs Div.
2009 Officer; Deputy Dept. Manager, Administration Dept. and General Manager, General Affairs Div.
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
❺ Director, Officer
Dept. Manager, Manufacturing Dept
President, TOK Advanced Materials Co., Ltd.

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
❻ 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)

### 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 (to the present)
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)

### 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 Department 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)

## 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 | | | | ● | | | | ● | |
| Yoichi Shibamura | Director | | | | | | | ● | | ● |
| Kunio Mizuki | Director | | ● | | | | ● | | | ● |
| Yuichi Murakami | Director | | | | ● | | | ● | ● | |
| Yusuke Narumi | Director | | | | ● | ● | | | ● | |
| Hiroshi Kurimoto | Director | ● | ● | ● | ● | ● | ● | | ● | ● |
| Noriko Sekiguchi | Director | ● | ● | ● | | | | ● | | |
| Kazuo Ichiyanagi | Director | ● | ● | ● | ● | ● | | | ● | |

# Audit & Supervisory Board Members

### Nobuo Tokutake
❿ 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
⓫ 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
⓬ 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
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
⓭ 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
2019 Executive Officer and Group Compliance Director of MLI
2020 Senior Executive Officer and Group Compliance Director of MLI
2021 Outside Audit and Supervisory Board Member of the Company (to the present)
2021 Senior Executive Officer of MLI (to the present)

# Officers

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

### Kosuke Doi
Executive Officer,
Dept. Manager, Marketing Dept.

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

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

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

### Hirotaka Yamamoto
Officer
Dept. Manager, Corporate Planning Dept.

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

# Message from a Retired Director

## TOK will continue governance reform and support the attainment of TOK Vision 2030.


**Ikuo Akutsu**

*Advisor, Former Representative Director, Chairman*


### Achievements and problems of long-term vision

I retired as representative director in March this year, the position in which I was appointed in 2011. I express sincere gratitude to shareholders, investors, customers, and other stakeholders who supported and advised me during the term.

While I served as the president for more than seven years from 2011, I established the overarching aspiration (long-term vision) for 2020 at the core of management as a ten-year vision, in order to encourage employees who were losing their motivation through business restructuring that followed the financial crisis in 2008, and aim for a new growth stage. In particular, I made a bold decision to establish TOK Advanced Materials Co., Ltd., in South Korea in 2012, in order to focus on customer-oriented strategies in Asia with a remarkable growth in the semiconductor industry. Although I received many pros and cons from stakeholders at that time, the site substantially contributed to the improvement of our competitiveness in the cutting-edge semiconductor fields, and to the record-high performance in FY 2020/12. The site is also effectively functioning in terms of risk distribution and BCP as diverse global risks emerge. On the other hand, inspiring customers with high value-added products as announced as our management vision had yet to be fulfilled, and several measures for strengthening management foundation scheduled in FY 2020/12 had to be postponed due to coronavirus. These attempts are inherited as qualitative targets and strategies in TOK Vision 2030, and I will support them toward the attainment of the Vision as necessary.

### Promoting governance reform without becoming complacent

Regarding corporate governance, I increased one outside audit & supervisory board member in 2013, and one female outside director in 2015, during my tenure as the president. After I became chairman and one of the two representative directors along with President Taneichi in 2019, we could accelerate governance reform by creating the Executive Fellow system, formulating the Corporate Governance Guidelines, increasing outside directors (to one-third of all directors), and introducing a new remuneration system for directors and audit & supervisory board members. In February this year, we resolved to discontinue the anti-takeover measures, advancing our corporate governance to a new stage. Following my retirement from the position, TOK returned to the structure where the president and chief executive officer serves both as the chair of the board of directors and as executive officer. However, the ratio of outside directors and audit & supervisory board members on the Board of Directors is 46.2%, and they make proposals during deliberation extremely vigorously. I am confident that governance reform at TOK will further proceed in coming years.

### Paving the way through cooperation with stakeholders and contribution to society

Utilizing global personnel (development of human resources and organizations and diversity and inclusion) has been my focus since my tenure as the president and one of the key strategies for TOK Vision 2030. There still remain many requirements in this area. Under the requirement of human resource development with the pursuit of happiness as its concept, I consider that relationships with customers and other external stakeholders enhance happiness most effectively and develops human resources. Therefore, I hope that the development and manufacturing departments will accumulate on-site experience together with external stakeholders, though there are constraints on activities due to COVID-19. In the meantime, non-contact communication is becoming the new normal in the back-office departments with increased ratio of work from home. It is the largest requirement how to form happiness in these departments. I believe that we will be able to find the way by continue practicing our management principles that pursue making sure that all management resources and initiatives ultimately lead to contributing to society.

We kindly request the ongoing support and understanding of all our stakeholders.

# Message from Outside Directors and Audit & Supervisory Board Members

## Focusing on response to diversifying and frequent unexpected risks and on medium- to long-term strategies

**Hiroshi Kurimoto**
*Outside Director, Chairman of the Nomination and Compensation Advisory Committee*

### Decided to discontinue anti-takeover measures

In the process that led to the resolution of discontinuation of anti-takeover measures ("these measures") in February this year, I participated in discussions on various occasions that included meetings of the Board of Directors as the chair of the special committee. We resolved not to continue these measures through careful review, taking into consideration the opinions of institutional investors and other shareholders in Japan and overseas, recent trends on anti-takeover measures, changes in our business environment, and other factors. These measures were introduced in 2006, primarily aiming to acquire sufficient and necessary information and time in the event of receiving an offer for takeover in order to examine and evaluate the offer at the Board of Directors. We determined to discontinue these measures because the requirement above was guaranteed to a certain extent, though not sufficient, through the subsequent amendments of law, including the strengthened regulation of foreign capital by the amended Foreign Exchange Act, which took effect in May 2020. We will leverage the decision to discontinue these measures as a kind of stimulation, thereby urging the Board of Directors to ensure careful management.

### Toward upgrading the new remuneration system for directors and audit & supervisory board members

The new remuneration system for directors and audit & supervisory board members was started March this year, increasing the ratio of performance-linked remuneration to 45%, and introducing a system where annual bonus and performance-linked share-based remuneration can vary in a broad range from 0 to 200% in accordance with the achievement rate of numerical targets, while using ROE as one of the evaluation indicator for the performance-linked share-based remuneration. I highly evaluate this system in that it has established a mechanism that urges directors and audit & supervisory board members to deeply commit to the sustainable growth of the TOK Group, and to the medium- to long-term corporate value enhancement. To further upgrade this system, we will focus on the following two requirements. First, we will examine how to further improve annual bonus and performance-linked share-based remuneration as evaluation indicators, considering the macro environment, business environment, historical performance trends, market expectations, and other factors. The Nomination and Compensation Advisory Committee, the majority of which consists of outside directors including me, will undertake monitoring to avoid arbitrary target setting. Second, we need to evaluate the system whether or not it appropriately functions in a downward performance trend. In particular, it is necessary to identify how the unexpected scale of deterioration in external environment and performance caused by tail risks, such as the pandemic and natural disasters, should be incorporated into the evaluation process. We will deepen discussion on this requirement in FY 2021/12.

### Focusing on risk management and medium- to long-term strategies

Regarding the monitoring of ongoing business deployment under TOK Medium-Term Plan 2021, inside directors and audit & supervisory board members will take the lead in business execution, while five other outside directors and I will focus on making proposals on risk management, thereby coping with diversifying and frequent unexpected risks. In particular, I consider that the skills and risk recognition of the three outside audit & supervisory board members from financial institutions will effectively function in the governance of TOK as a technology-oriented company.

In addition, I recognize that discussion needs to be increased at the meetings of the Board of Directors concerning medium- to long-term strategic topics under TOK Vision 2030, as well as initiatives related to ESG and SDGs. In particular, our purpose (meaning of existence) to contribute to a sustainable future through chemistry is the source of motivation for all human resources throughout the group. Therefore, we will powerfully support, from outside directors' viewpoint, information provision and discussion that the products of TOK are indispensable for society.

# Message from Outside Directors and Audit & Supervisory Board Members

## Advancing risk management and diversity and inclusion as a global company


### Noriko Sekiguchi

*Outside Director, Member of the Nomination and Compensation Advisory Committee*


### Governance reform—Initiatives taken to date

In the course of governance reform implemented by TOK, I particularly highly evaluate the establishment of the executive fellow system because it has formally established a process for internally motivated corporate value enhancement, rather than responding to soft laws. I used to be against the discontinuation of anti-takeover measures for a concern that TOK could easily become a target of takeover as a niche top company in the semiconductor industry. However, I finally agreed to discontinuation, reaching a conclusion that corporate value enhancement through incessant efforts would be the most effective anti-takeover measure, given dialogs with investors and changes in the business environment.

As a member of the Nomination and Compensation Advisory Committee, I suggested that the first year of the new remuneration system for directors and audit & supervisory board members should be carefully reviewed, so that the short-term incentive indicators will be set considering the latest trends in the economy and the semiconductor industry. In the interviews with executive officers for the election of director candidates, I assessed their personality, motivation, and attitude toward duties, while striving to grasp the characteristics of each candidate, such as what they had accomplished, what difficulties they had and episodes at work. Discussion also progressed concerning succession planning. While the process, requirements for election and dismissal, and other elements have been specified, I consider that more details need to be identified through continued discussion on medium- to long-term initiatives.

### Toward strengthening global risk management

As TOK pursues the attainment of TOK Vision 2030 as "The e-Material Global Company," the Group Management System (GMS) continues to be the core of risk management in Japan and overseas. In the immediate future, traveling abroad seems difficult because the containment of the COVID-19 pandemic remains unclear. Therefore, we consider that it is an urgent requirement to achieve close cooperation with overseas sites online. It is also considered necessary to steadily operate the PDCA cycle on measures for the sound development of the China business, as the presence of the Chinese market continues to increase.

To cope with the diversifying and frequent unexpected risks, it will be critical to implement thorough measures to handle expected risks, to monitor the changes and signs of risks and to share information and take rapid action to minimize negative impact if an unexpected risk emerges. TOK Vision 2030 assumes several external environment risks in its formulation stage. The continuous check of the BCP status for each risk at the relevant sites will enable a rapid response to unexpected risks.

### Making proposals for establishing a mechanism to further advance diversity and inclusion

TOK pursues diversity and inclusion as an initiative for the material issue "Enhancement of personnel measures on a global basis." It has promoted employment and promotion based on abilities, regardless of gender or nationality, thereby achieving a steady increase in the ratios of female employees and non-Japanese employees.

Work from home and staggered commuting increased in the COVID-19 pandemic, and led to the progress of work-style reform. They also contributed to the establishment of a comfortable work environment for all employees, thereby enhancing diversity.

In the coming years, it may be useful to indicate the Company's attitude for diversity and inclusion more clearly as a visible company system, so that the attitude will permeate the awareness of individual employees through measures of adding diversity and inclusion to the evaluation items of managers and providing an annual occasion to boost diversity and inclusion through group reports and events.

# Message from Outside Directors and Audit & Supervisory Board Members

## Making proactive proposals on business portfolio reform from a long-term perspective

**Kazuo Ichiyanagi**
*Outside Director, Member of the Nomination and Compensation Advisory Committee*

### Management principles permeate throughout the Company sites

After being appointed an outside director in March last year, I visited the Sagami Operation Center and the Shonan Operation Center, and participated in the technological report meetings held by the Research and Development Department whenever I could spare time in order to see the front lines of manufacturing at TOK. By doing so, I recognized that the management principles of TOK ("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") have permeated throughout each site. I was also deeply impressed by vigorous discussions at the technological report meetings in line with the four management principles. They refreshed my memory of Professor Yasujiro Niwa,* who served as the president of the university from which I graduated, stating, "In the technology breathes its creator, because technology embodies the personality of the creator of the technology." I would like to support TOK, with this corporate culture inherited, in attaining TOK Vision 2030 and developing into a 100-year company in 2040.

* Yasujiro Niwa (1893 to 1975): An engineer who is sometimes selected as one of the ten greatest Japanese inventors; developed the first facsimile in Japan; the first president of Tokyo Denki University

### Reviewing my first year as an outside director and member of the Nomination and Compensation Advisory Committee

It is characteristic to the TOK Board of Directors that the share of outside directors and audit & supervisory board members is relatively high at 46.2%. This structure adequately protects the benefit of general shareholders, and also enables outside directors and audit & supervisory board members to make frank and straightforward suggestions, with the help of moderation by the chair (former Chairman Akutsu/present President Taneichi) to induce many opinions from outside directors and audit & supervisory board members.

As a member of the Nomination and Compensation Advisory Committee, the majority of which consists of outside directors and audit & supervisory board members, I have been engaged in the operation of the new remuneration system for directors and audit & supervisory board members and the election of director candidates. As it was my first year as outside director, I endeavored to have close communication with inside directors and audit & supervisory board members. In interviews with executive officers, I carefully evaluated them from an objective standpoint.

In the discussion that led to the discontinuation of anti-takeover measures, I agreed to discontinuation because the retention of the conventional pre-warning anti-takeover measures might be disadvantageous for investors and stakeholders due to the potential inhibition of proper stock price formation and because other legally acceptable measures could replace the conventional anti-takeover measures to a certain extent and because corporate value enhancement through incessant efforts would be the most effective anti-takeover measure.

A gender goal has been achieved to a certain extent in the skill matrix of the entire TOK Board of Directors. In coming years, I consider it desirable to elect non-Japanese outside director candidates.

### To establish a new earnings driver from a long-term perspective

Semiconductor needs in society will continue increasing. I consider that TOK will be able to attain TOK Vision 2030 by continuously upgrading its strengths to win competition in the front-end processes, back-end processes, cutting-edge fields, and legacy fields of semiconductors over the next 10 years. However, in the path from 2030 onward aiming to become a 100-year company in 2040, it will be critical to establish a new earnings driver because TOK will probably face difficulties in further development with the business portfolio dependent on photoresists. President Taneichi and the management executives clearly recognize this requirement and have promoted the development of new businesses, such as life science materials, optical materials, and functional films, with certain achievements made. I consider that it will be also worth examining to enter the fields closely related to photoresists, such as mask blanks, reviewing the market conditions, and the competitive environment in the entire photolithography processes. In this way, I will make proactive proposals on business portfolio reform from a long-term perspective.

# Message from Outside Directors and Audit & Supervisory Board Members

## Aiming for sustainable development in cooperation with customers and society

Despite the intensifying geopolitical risks, including infectious diseases, climate change, and geopolitical risks, TOK achieved the record-high performance, while fulfilling its supplier responsibility to provide materials indispensable for semiconductor production, and aims to take another leap under the new long-term vision TOK Vision 2030. To attain this vision, TOK needs to further upgrade its sales power for anticipating and grasping both individual customer needs and broad social needs featuring SDGs, development power for creating new added value with innovative ideas and accumulated know-how leveraging networks inside and outside the Company, and production power for efficiently and stably supply reliable products even at the time of disasters and other emergency situations. In addition, TOK needs to have robust financial foundation as the basis of all investments and corporate activities, as well as firmer governance structure to properly handle various risks.

To this end, I will fulfill my responsibility as an outside director through audit and other duties, so that TOK can maintain organization that enables each employee to maximize their abilities by combining vigor and order.

**Nobuyuki Takeuchi**
*Outside Audit & Supervisory Board Member*

**Tadaharu Uehara**
*Outside Audit & Supervisory Board Member*

## Advancing integrated risk management

I am Tadaharu Uehara, appointed outside audit & supervisory board member in March this year. I would like to contribute to the global development of TOK by leveraging my experience abroad at financial institutions, the Ministry of Foreign Affairs, and other organizations.

Business management in the semiconductor-related industries, which lead the fourth industrial revolution, is becoming increasingly difficult and complicated, calling for strategic technological innovation and bold reform, including alliances and partnerships, under the circumstances with increased geopolitical risks, changing global supply chain, knowledge integration for technological innovation driven by AI and 5G, response to climate change risks as an urgent requirement, adaptation to the new work style in the post-COVID-19 era, and other factors.

TOK is on the growth trajectory stated in TOK Medium-Term Plan 2021 and TOK Vision 2030, but it must be noted that successful business management in the upcoming business environmental changes will not be achieved by the same means as in the past successes.

I will fulfill my mission as audit & supervisory board member so that TOK can advance integrated risk management toward the "overarching aspiration for 2030" as a milestone of its going concern, and establish a new business portfolio with high profitability through bold strategic investments and enhanced geopolitical intelligence.

## Increasing competitiveness while strengthening governance structure

I am Teruki Umezaki, appointed as a new outside audit & supervisory board member in March this year. I am serving as a senior executive officer at a life insurance company in Japan, and would like to contribute to the sustainable development of TOK by leveraging my experience.

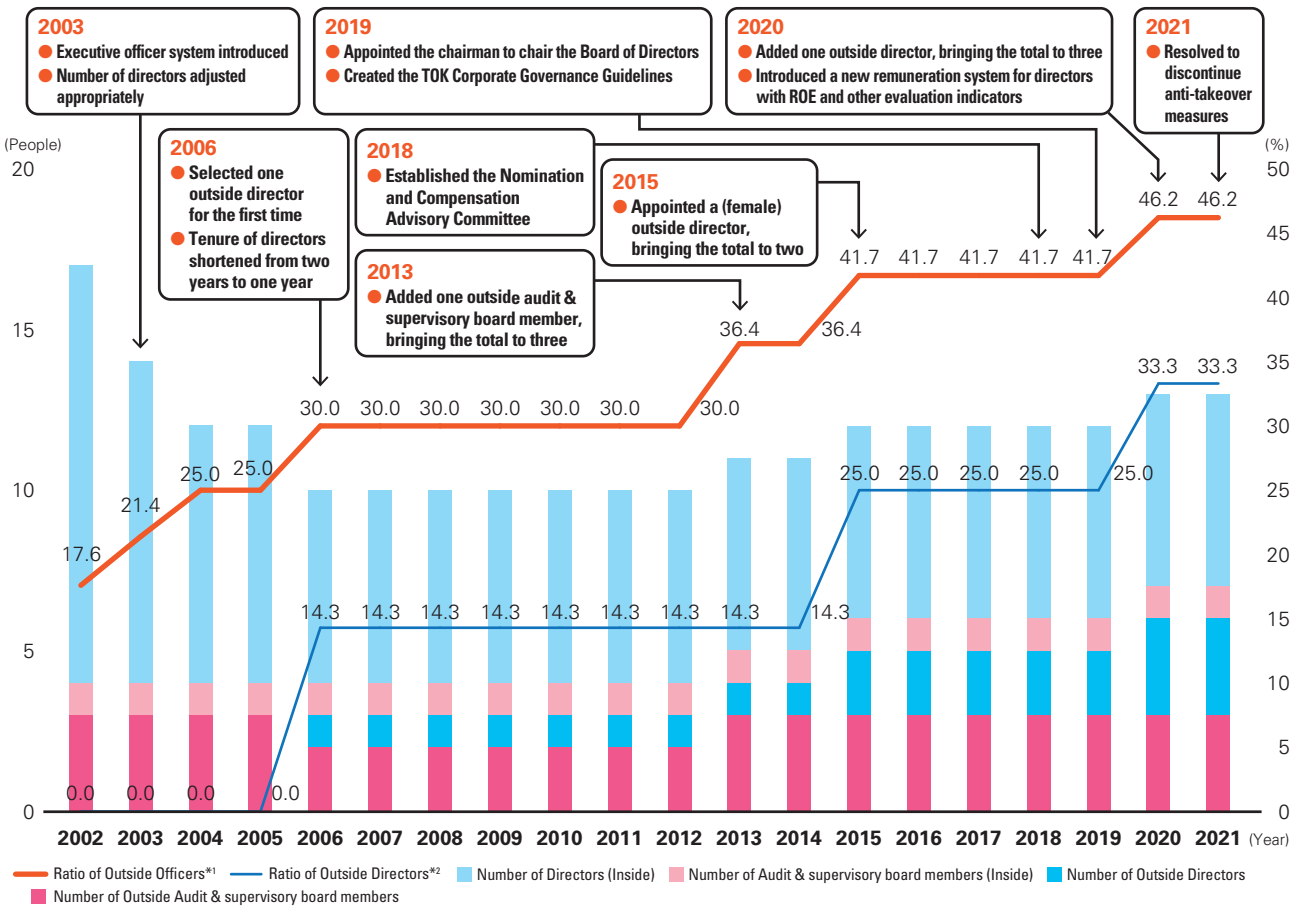
The semiconductor industry is expected to further develop as digital transformation (DX) accelerates across the world in the COVID-19 pandemic. To enhance its sustainable corporate value taking advantage of this situation, it is critical for TOK to increase competitiveness utilizing cutting-edge technologies and human resources as its strengths. At the same time, the Company needs to establish a governance structure that suits a global company by broadly considering the response to geopolitical risks and social requirements, including environmental issues. From this perspective, I will contribute to the advancement of governance structure at TOK, in addition to contribution in the personnel and compliance fields that I experienced and have knowledge of.

**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 Member)
*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" contributing 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, 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.

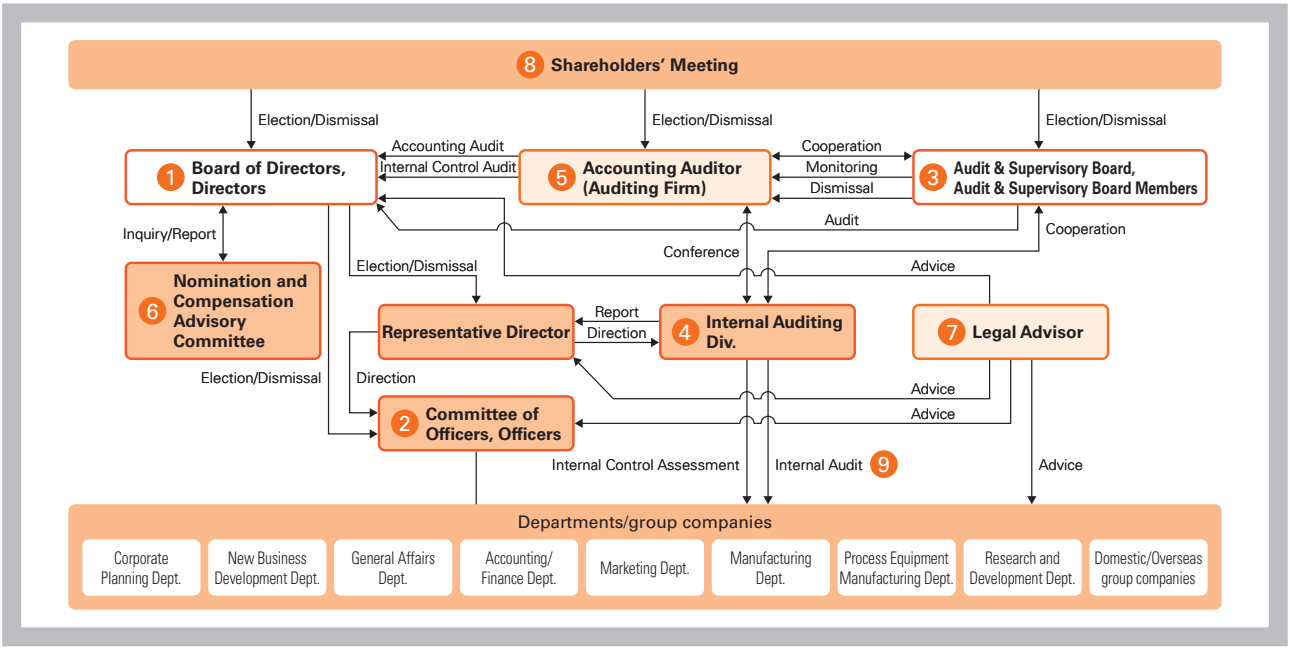
One of TOK's material issues and company-wide strategies in the TOK Medium-Term Plan 2021 is improving corporate governance. The Company created and published the TOK Corporate Governance Guidelines in April 2019 as a compilation of its basic policies and approaches to continuously improve corporate 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 members 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 to strengthen management and upgrade our corporate governance.

**Diagram of Corporate Governance System (As of March 30, 2021)**




## 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 tenure of directors has been shortened from two years to one year since June 2006. To increase transparency in the Board of Directors and to strengthen its oversight function, it was decided in June 2006 to appoint one outside director who has independence. The number of outside directors was increased by one in June 2015 and one in March 2020, leading to three independent outside directors at present. As a result, outside directors take up one-third of the nine directors in total.

In principle, the director system has simplified two 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, 2021, the Board of Directors is chaired by Director and President Noriaki Taneichi, and consists of nine directors (three 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 in the Company's Articles of Incorporation. 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 an assessment and discuss at meetings of the Board of Directors using an anonymous self-evaluation questionnaire of 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 FY2019/12 and made improvements on identified issues)**

Standards for the preparation and operation of materials were established concerning the issues identified in the previous evaluation such as 1) clarification of agenda items, 2) deepening discussion on company-wide managerial requirements, and 3) further enhancement of training. Improvement was also made to review the training details and promote related discussion.

**(Revised the content of the questionnaire for the Board of Directors evaluation for FY2020/12)**

In this sixth session of self-evaluation, questions were included concerning the promotion of DX and during-/post-COVID-19 era, which were identified as requirements and social issues in the previous evaluation. The questionnaire was also reviewed by including continuous questions that required descriptive responses concerning company-wide managerial requirements.

| Time of evaluation | December 2020 (questionnaire survey) |
|---|---|
| Evaluation item | ◆ Composition of Board of Directors<br>◆ Effectiveness of Board of Directors<br>◆ Information related to Board of Directors<br>◆ Decision-making process<br>◆ External communication |
| Evaluation results<br>○: Favorable/ appropriate<br>▲: Requiring improvement | ○ Having a balanced composition of inside directors, in terms of experience and track record with thorough understanding of each field<br>○ Maintaining diversity by incorporating outside directors with different backgrounds, knowledge, and expertise<br>○ The share of independent outside directors has been increased to one-third<br>○ The size of the Board of Directors, frequency of meetings, matters discussed, and time spent on discussions are all appropriate<br>○ In an atmosphere of frank and open discussions, rapid decision-making has done well having the outside directors and outside audit & supervisory board members with high levels of transparency<br>○ Generally good self-improvement and in-house check-and-balance functions<br>▲ There should be deeper discussions about medium- to long-term management strategies toward the resolution of sustainability requirements regarding business domains, risk management, appointment of human resources, and utilization of IT<br>▲ Preliminary briefing and reporting systems should be improved for important matters |
| Measures to be implemented/matters to be examined based on the evaluation results | ❶ Deepening discussions on company-wide managerial requirements<br>❷ Preliminary briefings to outside directors and audit & supervisory board members concerning important agenda items<br>❸ Further enhancing communication among directors and audit & supervisory board members<br>❹ Review of directors and audit & supervisory board members<br>❺ Establishing a mechanism to facilitate discussion and providing preliminary briefing sessions for outside directors and audit & supervisory board members |

## 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, such as 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.

## Establishment of Meetings of Outside Directors and Audit & Supervisory Board Members

TOK has established meetings of outside directors and audit & supervisory board members with the participation of all outside directors and all outside audit & supervisory board members. They are held with the same frequency as meetings of the Board of Directors. The standing audit & supervisory board members also attends the meetings.

- The meetings aim to strengthen the effectiveness and add vigor to discussions at the Board of Directors through the following:
- Exchange of opinions on themes to be taken up at the next meeting of the Board of Directors, as well as on the operation and proceedings of the said 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 ❷

While taking steps to strengthen the Board of Directors' functions 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, 2021, the Committee of Officers was chaired by President Noriaki Taneichi and comprised 13 officers, including six 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 ❸

As of March 30, 2021, 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 meets once a month on a regular basis and holds extraordinary meetings as required. Audit & supervisory board members comply with the Audit Standards (Audit & Supervisory Board Members Auditing Regulations) 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. They also receive reports from directors and others on the execution of duties, and require explanation 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 explanation 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 ❹

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 2020/12 was executed by two certified public accountants: Mr. Hiroki Kitagata and Mr. Yohei Masuda, both of whom are a designated limited liability partner and executive member of Deloitte Touche Tohmatsu LLC. There were nine other certified public accountants, three persons who have passed the certified public accountant examination, and eight 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 2020/12 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 85–86**

In the process of determining remuneration amounts for directors in FY 2020/12, the Nomination and Compensation Advisory Committee formulated the remuneration table for relevant directors, proposed remuneration amount for each director, and proposed remuneration amount for each outside director, 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 the Board of Directors meeting.

As of March 30, 2021, the majority 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 and Kazuo Ichiyanagi, who are outside directors.

## Legal Advisers Diagram 7

The Company has 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 hold our General Meeting of Shareholders in March, when most other Japanese companies' shareholder meetings are not hosted, set a 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 their 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 better understanding by institutional investors overseas. We also describe the reported matters using narrated video footage 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.

# 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. They also receive an explanation of the auditing plan from the accounting auditor once a year. In addition, the audit & supervisory board members also accompany the accounting auditor to the factory audits the accounting auditor conducts if necessary, as well as examine the auditing method of the accounting auditor. Apart from this, the audit & supervisory board members also 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 the 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), and 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 nine directors, three of whom are outside directors, or one-third of them. Similarly, the Company has four audit & supervisory board members of whom three are outside audit & supervisory board members. The Company has established the following criteria and policies regarding independence in the election of outside directors and outside audit & supervisory board member.

## 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/entity for which the Group is a major client (Note 1) or who executes the business of such a person/entity.
c. A major customer of the Group (Note 2) or a person who executes the business of such customer.
d. A major lender of the Group (Note 3) or a person who executes the business of such 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 shareholder.
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. A person who has served a total of more than eight years as an outside officer.
l. 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/entity for which the Group is a major client means a supplier that provides the Group with products or services, the amount of which 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, the amount of which 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 which 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 which 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 in which 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**<br>Representative Director<br>President and Chief Executive Officer<br>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 further development through the measures in the Medium-Term Plan. Thus, Taneichi can be expected to continue contributing to the management of the Company. |
| **Harutoshi Sato**<br>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, Research and Development Department. Owing to this experience, he is well acquainted with the Company's business characteristics and customers and consequently possesses necessary and sufficient knowledge of such matters as 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 management of the Company. |
| **Yoichi Shibamura**<br>Director | Shibamura possesses not only rich experience in financial institutions but also knowledge of management, particularly accounting and finance, having served first as the general manager, Finance Division, after joining the Company and then department manager, Accounting and Finance Department, and contributed to developing the finance strategy, including capital policy. He also has the necessary and sufficient knowledge of such matters as important decision-making by the Board of Directors and supervision of duties executed by other directors. Thus, Shibamura can be expected to contribute to the management of the Company. |
| **Kunio Mizuki**<br>Director<br>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 information management system, the risk management system, and the compliance system, as well as improvement of investor relations. Furthermore, through his experience with the business operations in his charge, he possesses necessary and sufficient knowledge of such matters as 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**<br>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 such matters as important decision-making by the Board of Directors and supervision of duties executed by other directors. Thus, Murakami can be expected to contribute to the management of the Company. |
| **Yusuke Narumi**<br>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 necessary and sufficient knowledge of such matters for important decision-making by the Board of Directors and the supervision of duties executed by other directors. Thus, Narumi can be expected to contribute to the management of the Company. |

## Reasons for the Election of Outside Directors

| Name | Reasons for election |
|---|---|
| **Hiroshi Kurimoto**<br>Nomination and Compensation Advisory Committee Chairman | Kurimoto was elected as outsider director on the expectation that he would continue supervision of the Company's management from an objective and neutral point of view based on his abundant experience and considerable insight as an executive of a listed company, as well as his contribution to enhancement of the corporate governance with his advice on the general management of the Company. |
| **Noriko Sekiguchi**<br>Nomination and Compensation Advisory Committee Member | Sekiguchi was elected as outside director on the expectation that she would continue supervision of 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 for fraudulent accounting conducted in multiple listed companies. Thus, Sekiguchi can be expected to contribute to enhancement of the corporate governance with her advice on the general management of the Company. |
| **Kazuo Ichiyanagi**<br>Nomination and Compensation Advisory Committee Member | Ichiyanagi was elected as outside director on the expectation that he would continue supervision of the Company's management from an objective and neutral point of view based on his abundant experience and considerable insight as an executive of a listed company, as well as his contribution to enhancement of the corporate governance with his advice on the general management of the Company. |

## 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 his experience as audit & supervisory board member of another company, as well as his abundant experience and considerable insight as an executive of financial institutions. Takeuchi was previously representative director and chairman of Mitsubishi UFJ Real Estate Services Co., Ltd., and is still serving there as an advisor as of December 31, 2020. There is a business relationship between Mitsubishi UFJ Real Estate Services Co., Ltd., and the Company, but it is general in nature. Moreover, Takeuchi was once a business executive with Mitsubishi UFJ Trust and Banking Corporation, which owns stock in TOK and conducts cash deposit, stock administration agent, and other transactions with the Company under routine and standard business conditions. However, these capital and business relationships were deemed not to affect Takeuchi's 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 his abundant experience at financial institutions, the Ministry of Foreign Affairs, and other organizations, as well as considerable insight as a management executive. Uehara 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 Uehara's 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 his abundant experience and considerable insight as an executive of financial institutions. Umezaki serves as a senior executive officer at Meiji Yasuda Life Insurance Company, 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 Umezaki's independence as an outside audit & supervisory board members 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 Members meetings |
|---|---|
| **Hiroshi Kurimoto**<br>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 2020. He voiced timely opinions as required when discussing resolutions based on his broad experience and abundant expertise as a management executive of listed companies. Kurimoto attended all of the five Nomination and Compensation Advisory Committee meetings (attendance rate 100%), mainly discussing successor planning, the operation check of the revised remuneration system for directors, changes in managing executive appointments, the selection of executive fellows, and the selection of new director candidates and new independent audit & supervisory board member candidates. He appropriately fulfilled his responsibilities as chair of the Nomination and Compensation Advisory Committee, moderating the agenda, and reporting to the Board of Directors. |
| **Noriko Sekiguchi**<br>Outside Director | Sekiguchi attended 13 out of the 14 meetings of the Board of Directors (attendance rate 93%) held during the fiscal year ended December 2020. 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. Sekiguchi also attended all of the five Nomination and Compensation Advisory Committee meetings (attendance rate 100%), mainly discussing successor planning, the operation check of the revised remuneration system for directors, changes in managing executive appointments, the selection of executive fellows, and the selection of new director candidates and new independent audit & supervisory board member candidates. She appropriately fulfilled her responsibilities as a member of the Nomination and Compensation Advisory Committee, making appropriate suggestions. |
| **Kazuo Ichiyanagi**<br>Outside Director | Ichiyanagi attended all of the 11 meetings of the Board of Directors (attendance rate 100%) held since his appointment on March 27, 2020. He voiced timely opinions as required when discussing resolutions based on his broad experience and abundant expertise as a management executive of listed companies. Ichiyanagi also attended all of the five Nomination and Compensation Advisory Committee meetings (attendance rate 100%), mainly discussing successor planning, the operation check of the revised remuneration system for directors, changes in managing executive appointments, the selection of executive fellows, and the selection of new director candidates and new independent audit & supervisory board member candidates. He appropriately fulfilled his responsibilities as a member of the Nomination and Compensation Advisory Committee, making appropriate suggestions. |
| **Kazumasa Fukada**<br>Outside Audit & Supervisory Board Member | Fukada attended all of the 14 meetings of the Board of Directors (attendance rate 100%) and all of the 14 meetings of the Audit & Supervisory Board (attendance rate 100%) held during the fiscal year ended December 2020. He voiced and raised timely opinions and questions as required at the meetings based on his broad experience including at a financial institution, and his abundant expertise as a business executive. |
| **Koichiro Takahashi**<br>Outside Audit & Supervisory Board Member | Takahashi attended all of the 14 meetings of the Board of Directors (attendance rate 100%) and all of the 14 meetings of the Audit & Supervisory Board (attendance rate 100%) held during the fiscal year ended December 2020. He voiced and raised timely opinions and questions as required at the meetings based on his 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. |
| **Nobuyuki Takeuchi**<br>Outside Audit & Supervisory Board Member | Takeuchi attended all of the 14 meetings of the Board of Directors (attendance rate 100%) and all of the 14 meetings of the Audit & Supervisory Board (attendance rate 100%) held during the fiscal year ended December 2020. He voiced and raised timely opinions and questions as required at the meetings based on his 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. |

The Major Decisions and Agenda of Board of Director Meetings in the Fiscal Year Ended December 2020

- Implementation of measures against COVID-19 and related support (donation)
- External environmental risks, management vision, overarching aspiration (qualitative/quantitative), and management strategies under TOK Vision 2030
- Enhancement of development equipment, manufacturing equipment, and storage equipment for cutting-edge semiconductor materials (Japan, South Korea, etc.)
- Postponement of the introduction of the new personnel system
- Addition of import management function to GMS
- Revision of the remuneration system for directors and executive officers
- Future structure of the TOK Group in China (resolution on the direction)
- Formulation of the CSR Policy
- Revenue of the Basic Policy on the Establishment of Internal Control System
- Continued possession and selling of cross-shareholdings

# Remuneration for Directors and Audit & Supervisory Board Members

**[Basic Policy on Determination of Remuneration for Directors (Excluding Outside 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 has held deliberations to examine the preferred remuneration system for the Company, giving consideration to the outlook for the management environment and the approach to corporate governance in Japan based on which the Company's remuneration policy for directors (excluding outside directors) has been determined as follows.

**[Basic Principle of Remuneration]**

Remuneration for directors (excluding outside directors) is determined based on the following basic concepts.

Aim to support the Company's sustainable value creation

- Set the composition and level of remuneration so as 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 and, based on verification through comparisons with corporate groups of the same size using objective data from outside, also taking into account recent public opinion.
- Proactively disclose information necessary for stakeholders including shareholders, to monitor the relations between remuneration and corporate value

**[Remuneration Structure]**

The Company's remuneration structure for directors (excluding outside 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 below.

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<br>· 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 consolidated operating margin and consolidated net sales for each fiscal year, which are key performance indicators.<br>· 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.<br>· 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<br>· The number of shares to grant is decided within the range of 0% to 200% of the standard amount (the "payment rate"), according to the achievement rate for numerical targets such as earnings during the performance evaluation period.*1<br>· 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.<br>(i) Number of the Company's shares granted to each eligible director<br>Standard share unit number*2 × Payment rate × 50%<br>(ii) Amount of cash to be paid to each eligible director<br>(Standard share unit number × Payment rate − Number of the Company's shares calculated in (i) above) × Stock price at the time of grant<br>· 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<br>· 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<br>· Restriction on transfers is 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 initial performance evaluation period for the performance-linked share-based remuneration system is the two-year period from the fiscal year ending December 31, 2020 through the fiscal year ending December 31, 2021. Aiming to sustainably create corporate value, the Company will use the ROE target, which is a strategic indicator in the Medium-Term Plan, during the initial performance 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.

The indicators used for specific calculation of performance-linked remuneration are decided by a resolution adopted by the Company's Board of Directors after deliberation by the Nomination and Compensation Advisory Committee.

Composition of remuneration


(i) Basic remuneration (ii) Annual bonus (standard amount)
(iii) Performance-linked share-based remuneration (standard amount)
(iv) Restricted share-based remuneration (standard amount)

**[Level of Remuneration]**

The level of remuneration for the Company's directors (excluding outside 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 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"), the proposed remuneration amount for each eligible director, and the 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 Amount for Directors (Excluding Outside Directors)**

The remuneration amounts for directors (excluding outside 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 ¥400 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 as 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 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 ¥50 million per year) 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 Member (Fiscal Year Ended December 31, 2020)

| Position | Total remuneration (Millions of yen) | Total of various types of remuneration (Millions of yen) | | | | | Number of eligible personnel |
|---|---|---|---|---|---|---|---|
| | | Basic remuneration | Annual bonus | Performance-linked, share-based remuneration | Restricted share-based remuneration system | Stock options | |
| Directors (Excluding outside directors) | 523 | 274 | 128 | 37 | 69 | 13 | 8 |
| Audit & supervisory board members (Excluding outside audit & supervisory board members) | 23 | 23 | — | — | — | — | 2 |
| Outside directors and audit & supervisory board members | 56 | 56 | — | — | — | — | 6 |

Note: The amounts for total remuneration and total of various types of remuneration for directors (excluding outside directors) include the portion paid as salary for officer duties undertaken by directors who also serve as officers.

## Remuneration Amounts for Directors and Audit & Supervisory Board Members (FY 2020/12)

| 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 | Restricted share-based remuneration system | Stock options |
| Ikuo Akutsu | 134 | Director | Submitting company | 70 | 32 | 9 | 17 | 3 |
| Noriaki Taneichi | 123 | Director | Submitting company | 64 | 30 | 8 | 16 | 3 |

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/210611.pdf (in Japanese)

## Group Management System (GMS)

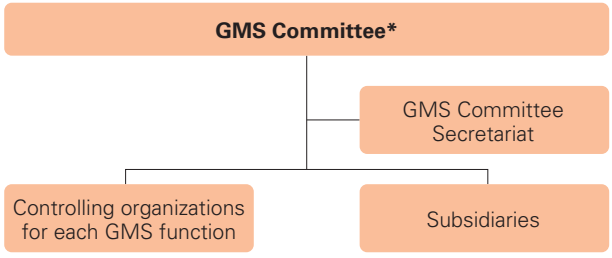
As the TOK Group continues to expand within and outside of Japan, a unified Group management system is needed. We have therefore been focusing on initiatives under the Group Management System (GMS), which manages various fields such as compliance and risk management across the entire Group. By promoting these initiatives, we will tie the Group's value creation to the steady enhancement of sustainable corporate value.

**[Organization Structure for Promoting GMS]**

TOK has established the GMS Committee to ensure that GMS properly functions. The Committee has divided GMS management functions into 15 fields for Group management. It continuously works in a PDCA cycle, deliberating on action plans and activity reports for each field and making adjustments between relevant organizations to resolve issues and so forth.

We will continue to deepen dialog with overseas subsidiaries, maintain compatibility between GMS management functions, integrate with CSR promotion activities, and strengthen the functions of Headquarters, which controls these initiatives. In this way, the TOK Group will make a united effort to promote GMS activities.

GMS Committee Diagram




* Chaired by the Department Manager of the Corporate Planning Department

**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) | |

**[GMS Initiatives]**

To achieve enhancement of sustainable corporate value, the entire Group needs to be optimized. Therefore, we manage progress on targets for each management function and subsidiary, investigate issues and identify points for improvement (self-evaluation), and provide continuous support and monitoring of these.

In 2020, we conducted a self-evaluation of the development and operation of GMS for two GMS management functions and two subsidiaries. We also revised our rules and processes, creating and revising over 70 new documents. We also made progress with a 98% resolution rate on key issues.

## 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. We strive 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.

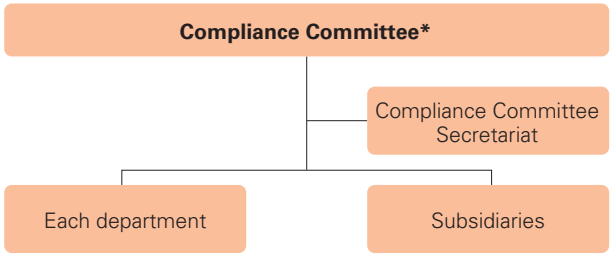
**[Compliance Promotion System and Standards of Conduct]**

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 the violation 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 Anti-Corruption Policy was

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 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. It 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 2020/12, the revision of the group compliance rules was promoted based on activities in the previous fiscal year (listing of laws applicable to business, monitoring for amendments in laws at an increased frequency, and interview results concerning the legal management and information collection). The major revised points are the requirement for the establishment of legal management structure at each site in Japan and overseas, and the increased frequency of monitoring on legal compliance status from twice to four times a year. These changes have enabled the establishment of a process for timely information collection on changing laws and incorporating the information into practice. To help better understanding of compliance, e-learning on overall compliance was implemented for all employees in Japan, through which the changing concepts of compliance were shared, and the examples of violation in society were presented.

### 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 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 2020/12, 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, we will further enhance the system and disseminate it to all employees, officers and directors.

## 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, we strive 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, we have established the Risk Management Rules and the *Risk Management Manual*. Based on the *Manual*, we implement 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 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 2020/12, 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 was also established, headed by the president, to continue the production and supply of products while assuring the safety of employees. We will continue striving for the prevention of infection spread, while taking risk reduction measures toward the long-term development of the TOK Group **(see page 93)**.

### 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, 2020, three drills were implemented out of the four planned drills, and the response rate was maintained at a high level.

### 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 2020, a survey was conducted on the transportation means of suppliers, and alternative means for material transportation were secured in the event of disaster. This enabled TOK to receive supplies without failure when a torrential downpour occurred in Kyushu in July, interrupting the operation of a railroad company that transported raw materials. We also formulated flood prevention plans for sites with the high risk of flooding, and preventive measures have been taken at some sites including the installation of water bars **(see page 100)**. In FY 2021/12, we will continue to expand flood prevention equipment, while formulating BCP scenarios in the event of flooding.

## Improving Information Management

The environment surrounding information management is drastically changing. Leaks of information assets could greatly damage the competitive advantages of the TOK Group and threaten its existence as an ongoing concern. For this reason, reinforcing the information management system is a priority issue in terms of preserving corporate value and fulfilling our social responsibility. From this standpoint, we are redoubling our efforts in ensuring information security by establishing a PDCA cycle.

**[TOK Group Information Management Policy]**

The TOK Group (comprising TOKYO OHKA KOGYO CO., LTD. and its subsidiaries, hereinafter collectively 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.

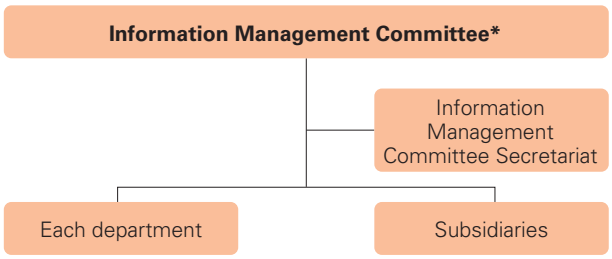
### Audits and continuous improvements

The TOK Group will implement regular audits and make continuous improvements as a part of its management of information assets.

**[Maintain, Manage, and Improve Information Management Systems]**
The TOK Group has created the TOK Information Management Committee, headed by the manager of the General Affairs Department. The Committee determines policies and measures related to information security and personal information protection. The overseas subsidiaries have 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. During the fiscal year ended December 31, 2020, the TOK Group worked to promote paperless practice, while utilizing and protecting information assets. The Company worked to maintain and instill information management standards throughout the organization, including the preparation of the *Files and Folders Classification Guidebook*, the review of information security measures and information management rules in response to changing work styles (when working outside the office or using a web conferencing system), and the implementation of internal training on risk management.

In addition, the Internal Auditing Division regularly audits compliance with rules and other matters on information management as part of its internal audits. It aims to improve the information management system by giving guidance, proposals, and advice to relevant departments.

Information Management Committee Diagram




* Chaired by the Department Manager, General Affairs Department

**Strengthening information management through each responsible division**

The TOK Information Management Committee has identified key topics based on information management policy and put the respective responsible divisions in charge in a bid to strengthen information management.

**Key topics for information management**

Management of trade secrets, training and rules, human security, IT security, physical security, and supplier management

## Risk management

# — To achieve stable supply in the COVID-19 pandemic —

**While the TOK Group continues to expand its activities in Japan and overseas, supported by the strong semiconductor demand, the COVID-19 has yet to subside with the spread of variants. We 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**
- Implement thorough infection prevention measures at each business site
- Implement work from home
- Restrict traveling in Japan and overseas

**2 Safety of external stakeholders**
- Use online operations whenever possible (business negotiations, coordination, audits, etc.)
- On-site collaboration through non-contact operations

**3 Contribution to local community**
- Contribute monetary donations
- Donate relief goods

Temperature taking and hand antisepsis are implemented for all employees and visitors

Web conferencing system is introduced throughout the group

Received letters of appreciation from Kanagawa Prefecture and other local governments for the contribution of monetary donations

Hideo Ohhashi
*Head of Risk Management Secretariat*

### To fulfill the supplier responsibility while assuring the safety of employees

The business of the TOK Group is to supply chemicals and manufacturing equipment to support the production of semiconductors that are indispensable for a sustainable future. Therefore, the Company is required to reduce infection risks during the COVID-19 pandemic, while minimizing the impact on business activities to sustain corporate activities. To establish and maintain an environment where all employees can feel safe and concentrate on their duties, the Company will continue to promote infection prevention measures with cooperation from internal and external stakeholders.

# 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, 2020, 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.<br>● 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, including the memory field, which has large fluctuations in demand and price, the logic field which has relatively small fluctuations, and the power device field that has a broad base.<br>**→ See pages 30–37 and 56–57**<br>● 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.<br>● The Group will expand new business in fields such as life science, which has a different demand fluctuation cycle from semiconductors.<br>**→ See pages 44–45** | ● 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.<br>● 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 sales sites in North America, Asia, and Europe, and hedges exchange risks by carrying out some of its overseas transactions in yen and by using forward exchange contracts. However, the Group may be affected if exchange rate fluctuations are greater than forecast. | ● 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.<br>**→ See pages 46–49**<br>● The Group receives advice on exchange rate risk hedging from three outside audit & supervisory board members who have backgrounds in finance. | ● By minimizing exchange rate fluctuation risk, the Group will minimize the risk of fluctuations in its business performance due to focusing 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.<br>**→ See pages 30–37 and 58–59**<br>● 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.<br>**→ See pages 58–59** | ● The Group will form development communities with stakeholders in Japan and overseas in the cutting-edge fields of electronics materials, such as semiconductor materials.<br>● The Company 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 property, 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, it may become a party 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 Company 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. |
| 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.<br>● 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.<br>● 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.<br>● 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 in which customers use our products, faults may occur that originate in a product defect. The Group has insurance to cover product liability compensation payments, but as 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 sales, development, and manufacturing, while reducing the risk of faults through thorough understanding of customers' manufacturing lines.<br>→ **See pages 30–37 and 52 and 64–67** | ● The Group will further improve customer satisfaction and increase its brand capabilities by increasing customers' manufacturing yields.<br>● 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.<br>● 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.<br>→ **See pages 91–92**<br>● The Risk Management Committee plays a central role in reviewing the risk management system and formulating risk management policy.<br>→ **See pages 91–92**<br>● "Disaster/accident risks" was added as a category in the Risk Management Rules and the *Risk Management Manual*. The Company identifies risks that may cause serious outcomes, analyzes such risks, and determines, implements, and evaluates actions required, among other activities.<br>→ **See pages 91–92**<br>● The Group has established appropriate management systems for preventing infection and the spread of infection.<br>→ **See pages 91–93** | ● 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.<br>● 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 various 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.<br>● 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.<br>→ **See pages 109–110**<br>● The Group had a third-party institution conduct a health and safety audit to further improve the level of occupational health and safety by identifying potential sources of danger.<br>→ **See pages 109–110**<br>● The Group coordinates closely with local subsidiaries overseas to obtain the latest information on revisions to laws and regulations.<br>→ **See pages 106–108**<br>● 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.<br>● The Group will foster greater loyalty among employees by ensuring safety on its manufacturing sites.<br>● The Group will maintain and increase social trust in local communities overseas. |
| Laws and regulations | ● If the Group fails to precisely understand their requirements, or for any reason it is unable to observe the laws and regulations such as approval for business and investment, trade, monopolies, international taxation, the environment, and recycling when they are significantly revised, 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.<br>→ **See pages 108** | ● Developing products that use alternatives to prohibited substances may give rise to new product characteristics and added value.<br>● The Company will differentiate itself from competitors through its ability to comply 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.<br>→ **See pages 21 and 124–125** | ● 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 some unforeseeable event information leaks outside of the Group, this may damage its reputation within society, and it may have to pay liability payments for the damage caused to a company or an 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.<br>→ **See pages 92–93** | ● A solid information management system will increase customer trust, helping to expand business opportunities.<br>● 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

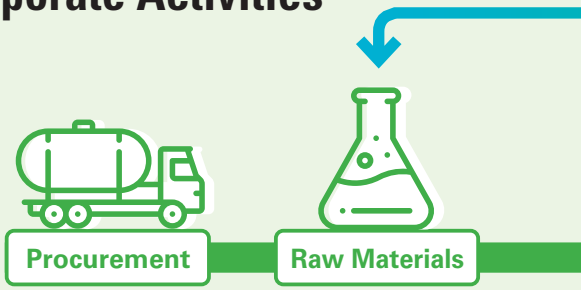
* The scope of reporting on Global Environmental Conservation (pages 96–105) is on Tokyo Ohka Kogyo Co., Ltd., and consolidated subsidiaries in Japan. In other cases, the scope of coverage is listed on each page.

## Reduction in Environmental Impact from Corporate Activities

### Environmental Performance*

TOK conducts daily quantitative and qualitative evaluations of the effects of its corporate activities on the environment and takes 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 | | 16,141 kL crude oil equivalent |
| Electric power | | 11,038 kL crude oil equivalent |
| Petroleum (heavy oil) | | 503 kL crude oil equivalent |
| City gas | | 4,507 kL crude oil equivalent |
| Used water | | 370,000 $m^3$ |
| Chemical substances (Class 1 Designated Chemical Substances under the PRTR Law) | | 1,113 t |

| OUTPUT | | |
|---|---|---|
| $CO_2$ | | 31,000 t-$CO_2$ |
| SOx*1 | | 0.7 t |
| BOD*2 | | 0.2 t |
| General administrative waste | | 33 t (Recycling rate: 40%) |
| Industrial waste | General industrial waste | 1,900 t (Recycling rate: 38%) |
| | Specially controlled industrial waste | 2,480 t (Recycling rate: 93%) |

* January 2020 to December 2020 (Chemical substances: April 2020 to March 2021)

* January 2020 to December 2020

*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

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). 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.

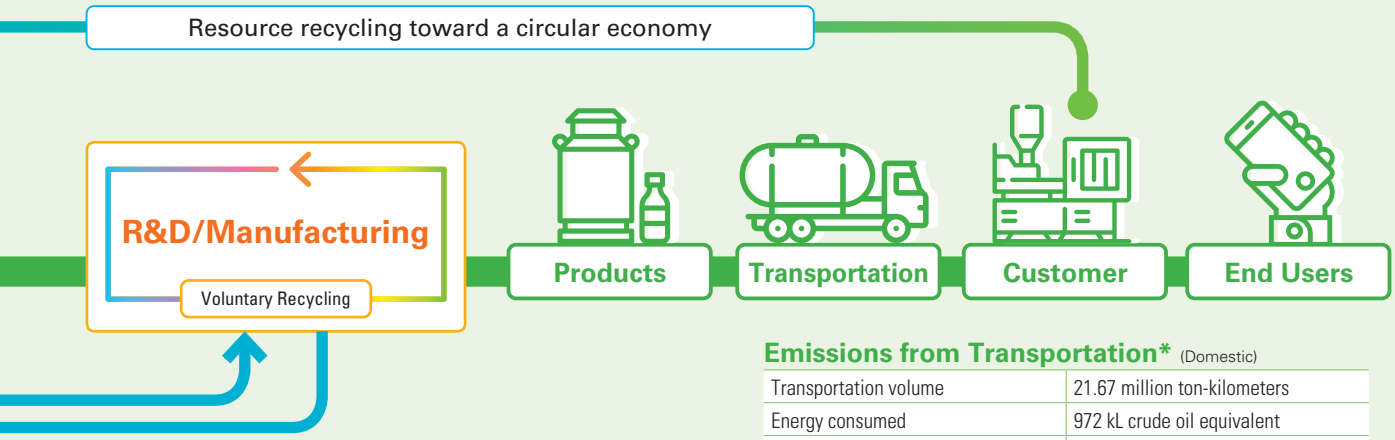
| | | | |
|---|---|---|---|
| Scope 1 | 10,313 t-$CO_2$ | Scope 2 | 20,627 t-$CO_2$ |

#### Scope 3 Emissions by Category

| | | | |
|---|---|---|---|
| Purchased goods and services | 31,297 t-$CO_2$ | Upstream leased assets | — |
| Capital goods | Not applicable | Downstream transportation and distribution | Domestic: 2,582 t-$CO_2$<br>Overseas: 3,812 t-$CO_2$ |
| Fuel-and energy-related activities not included in Scope 1 or 2 | — | Processing of sold products | Not applicable |
| Upstream transportation and distribution | Not applicable | Use of sold products | Not applicable |
| Waste generated in operations | 9,018 t-$CO_2$ | End-of-life treatment of sold products | Not applicable |
| Business travel | 397 t-$CO_2$ | Downstream leased assets | — |
| Employee commuting | 602 t-$CO_2$ | Franchises | — |
| | | Investments | Not applicable |

* January 2020 to December 2020 (Waste generated in operations: April 2020 to March 2021)

* Excludes people seconded to other companies.




## Emissions from Transportation* (Domestic)

| | |
|---|---|
| Transportation volume | 21.67 million ton-kilometers |
| Energy consumed | 972 kL crude oil equivalent |
| $CO_2$ emissions (Japan) | 2,582 t-$CO_2$ |

* January 2020 to December 2020
* Emissions from domestic transportation are based on the Ministry of Economy, Trade and Industry's *Fiscal 2020 Specified Shippers Periodic Report*.

## Environmental Accounting*

TOK has been using environmental accounting since 2000. In 2020, environmental conservation expenses totaled ¥1,025 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<br>Installation of flood control facilities | 69 | 74 |
| | Global environmental conservation cost | Energy conservation activities | 467 | 11 |
| | Resource circulation cost | Installation of melting equipment | 0 | 173 |
| Upstream/Downstream cost | | Green purchasing, collection of used products | 0 | 9 |
| Administration cost | | Approach to environmental management system | 104 | 64 |
| R&D cost | | Research and development related to environmental conservation (costs for chemical substance screening) | 0 | 51 |
| Social activity cost | | Cleanup activities around the production plants | 0 | 0 |
| Environmental remediation cost | | Treatment of soil pollution by the construction of a new building | 3 | 0 |
| Total | | | 643 | 382 |

* January 2020 to December 2020

## 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 | 22 |
| Cost savings | Reduction in disposal costs through a reduction in the volume of waste | 103 |
| Total | | 125 |

* January 2020 to December 2020
*1 Scope of environmental accounting covers production facilities in Japan and distribution centers, excluding the headquarters and marketing offices. The reference used is the *Environmental Accounting Guidelines 2005* published by the Ministry of the Environment.
*2 Amounts of less than one million yen have been rounded off.

# Address Climate Change Issues toward Decarbonization

## Key initiatives/Results in 2020

**Energy consumption per base unit**

**Down 9 points**
(year-over-year)

**Energy-related $CO_2$ emissions per base unit**

**Down 11 points**
(year-over-year)

**Fuel consumption in distribution**

**Down 0.3%**
(year-over-year)

### Basic Concept

The TOK Group quantitatively measures the environmental impact throughout the value chain and works to reduce the environmental load with a full understanding of the impact our production activities have on the environment. We aim to achieve sustainable development alongside society through the development of products that conserve resources and energy.

### Improve Energy Consumption per Base Unit and $CO_2$ Emissions

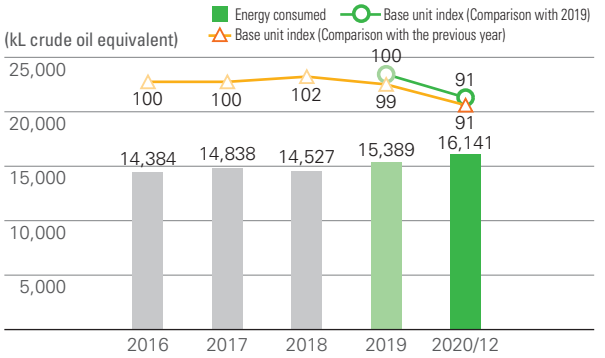
When equipment is introduced or replaced, we endeavor to select models with higher energy efficiency in order to improve the system of each site and optimize the system as a whole.

Energy consumption in 2020 increased by 5% year-over-year because the new R&D Building, which was completed at the Sagami Operation Center in 2019, and one more new building, started full-scale operation, while a variety of improvement measures were implemented, including the replacement of air-conditioning equipment and the shift to LED lighting at certain sites, review of air-conditioning temperature settings, and the survey of illuminance and lighting followed by adjustment to optimal illuminance.

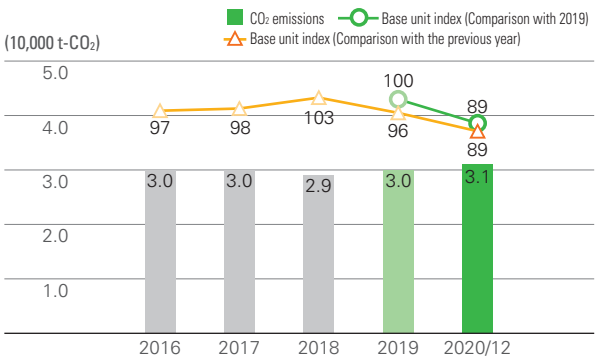
Energy consumption per base unit decreased by 9 points year-over-year, reflecting more efficient production at the Koriyama plant, Gotemba plant, and several other plants. Energy-related $CO_2$ emissions per base unit decreased by 11 points year-over-year owing to increased net sales, coupled with the shift of the total amount of electricity used at the headquarters to renewable energy starting January 2020.

The Company set a new 10-year target in 2020 to reduce energy consumption per base unit and emissions per base unit by 15 points compared with 2019 by 2030, and the Company has been striving to reach this target.

### Energy Consumed




### $CO_2$ Emissions (Converted from Energy Consumption)



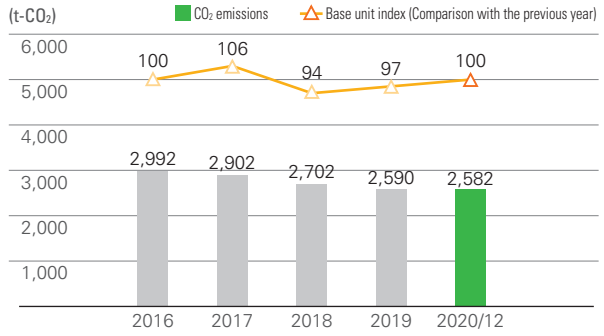
## Improve Energy Consumption per Base Unit in Distribution

For the quality and safety management of products, the Company ensures rigorous temperature control during product storage and transportation. The product storage warehouse is single-storied and requires refrigeration and freezing equipment. Product transportation also requires freezer trucks.

TOK endorses the aim of the White Logistics Promotion Movement and is taking steps to realize sustainable logistics, while working with partner logistics companies to improve energy consumption. In 2020, we introduced new vehicles to improve fuel efficiency. We reviewed the efficiency of transportation routes (such as closure of the Ibaraki SP* among the product storage sites in Japan and distribution starting from neighborhood plants) and kept $CO_2$ emissions at the same level as last year. At present, we are preparing for logistics optimization ranging from the purchase of raw materials to the distribution of products based on the monitoring of warehouse occupancy at each site.

* Stands for constant-temperature constant-humidity stock point

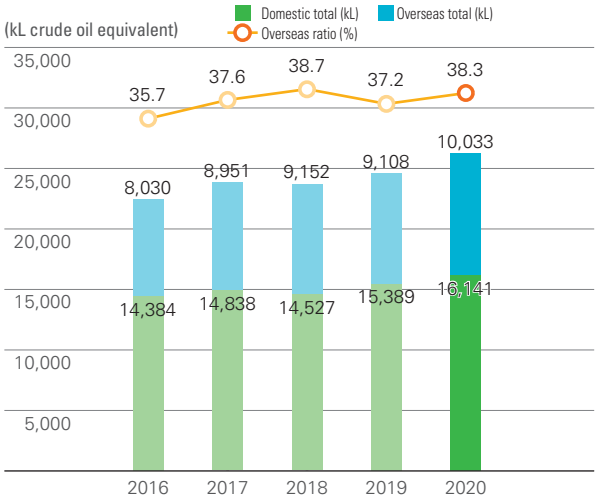
### $CO_2$ Emissions in Distribution




## Measures to Prevent Global Warming at Overseas Manufacturing Sites

The overseas ratio of energy consumption temporarily decreased in 2019 but started to increase again in 2020. The probable causes are the increased production equipment and extended cleanrooms at production sites in the United States and South Korea combined with an increase in production volume. 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 *Integrated Report 2019* regarding the overseas ratio in 2016 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. The Group will address these issues by steadily carrying out initiatives to reduce its environmental impact in order to achieve the new medium- to long-term targets related to energy consumption, which started in 2020.

TOK Human Resources

Kunio Kido
*Section Manager, Facilities Section, Facilities and Construction Div.*

### Proactively proceeding with more advanced measures and the attainment of targets

Saving energy and reducing $CO_2$ emissions are always key themes in the industry, and TOK has implemented proactive measures. In 2020, we introduced equipment that focused on energy efficiency (e.g. super-high efficiency transformers and LEDs) when a new business building was established. Other diverse activities included the energy-saving initiative and other continuous efforts toward the same goal. Climate change has become a major social issue and call for more advanced countermeasures and target setting. Under these circumstances, the TOK Group will gear up related activities and implement proactive measures to attain the set targets.

# Promotion of Resource Recycling: Initiatives to Address Water Risk

## Key initiatives/Results in 2020

**Water usage (all domestic plants)**

**370,000 m³**

**Risk reduction measures**

**Implemented at sites in Japan**

### Basic Concept

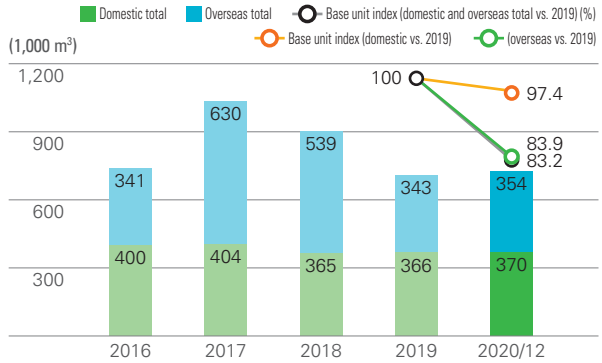
Amid increasing public attention to the social issue of water resources, the Group's products and manufacturing processes use water as an essential resource. Therefore, we strive to minimize the volume of water consumed in production activities and to maintain and improve the quality of wastewater. We aim to contribute more through business activities that consider the global water risks.

### Changes in Water Use Volume

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 2020, water use volume in Japan increased slightly from the previous year to 370,000 m³. Overseas, water use volume at our sites increased by 11,000 m³ from the previous year to 354,000 m³ due to the increased production volume.

Changes in Water Use Volume at Sites in Japan and Overseas




* Starting with the target of FY 2021, the base year was shifted from 2017 to 2019 for new activities.

### Water Risk Management

Water risks and other natural resource risks are widely recognized as serious worldwide risks that are ranked among the five greatest risks in the *Global Risks Report 2021* published by the World Economic Forum. To better understand water use volume at all sites around the world, the TOK Group has 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 restriction and flooding risks due to natural disasters, and the risk of business interruption resulting from water contamination.

### Set a Medium- to Long-Term Target

The Company implemented proactive measures to reduce water risk in 2018 and has worked toward company-wide targets since 2019. In 2020, we examined reduction measures for the risk of contamination of piping and equipment at each site, water use operation, and measures to reduce natural disaster risks, and performed the relevant activities based on the plans. We will continue to implement risk reduction measures to attain the medium- to long-term target of reducing water use by 15% from the 2019 level by 2030.

Installed water bars at the entrances to buildings to reduce flooding risks (Sagami Operation 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.

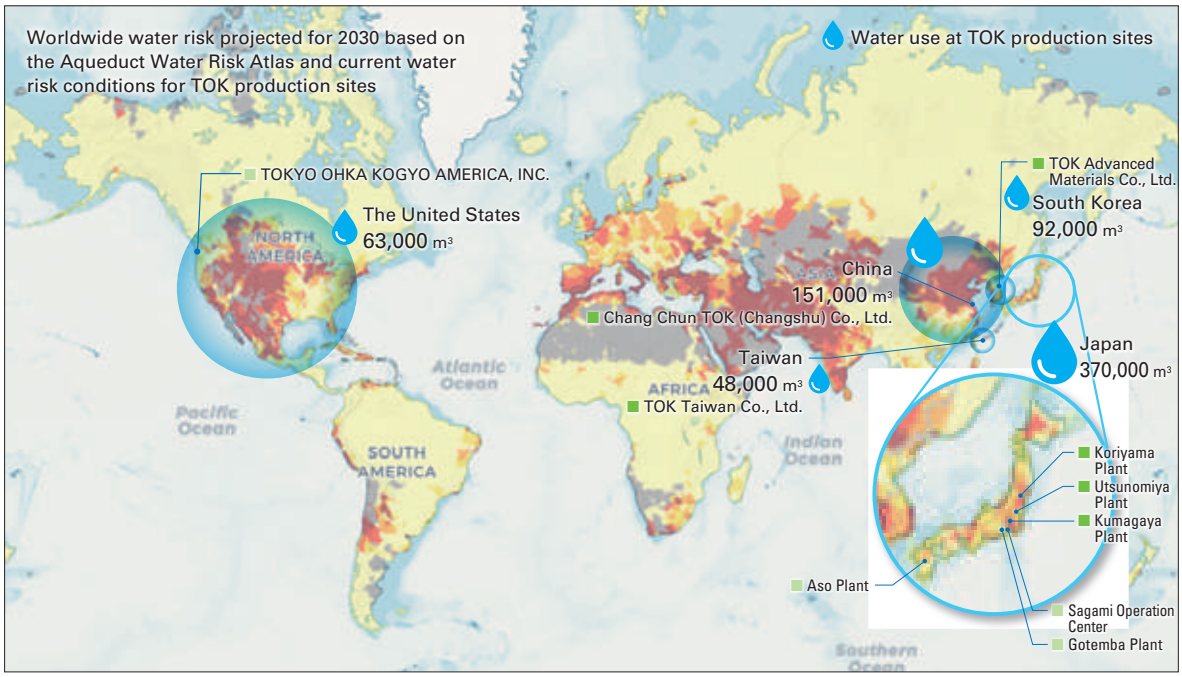
- Low risk (under 10%)
- Low to medium risk (10% to 20%)
- Medium to high risk (20% to 40%)
- High risk (40% to 80%)
- Extremely high risk (over 80%)
- Water shortage

### Overall Water Risk

The current degree of exposure to water risk at TOK's production sites based on a comprehensive evaluation of Physical Risk Quantity, Physical Risk Quality, and Regulatory and Reputational Risk

- Low risk (0-1)
- Low to medium risk (1–2)
- Medium to high risk (2–3)
- High risk (3–4)
- Extremely high risk (4–5)

**The 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 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 work is in progress at the Sagami Operation Center as our R&D hub, and standards of conduct in the event of a flood are being formulated at each site. We 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

Kazuyuki Nitta
*Div. Manager,*
*Production Functionality Characterization Div.*

### Risk reduction to achieve stable product supply and peace of mind for stakeholders

Serious climate change risks have become apparent in catastrophic natural disasters. Extreme torrential rainfall and drought referred to as once in several tens of years now occur almost annually. The Sagami Operation Center is the R&D hub of the TOK Group and is the place where critical equipment and devices are installed. Because the Center adjoins a river, we consider the reduction of flood risks as a key requirement; consequently, we have implemented flood control measures since 2020, including the water cutoff/control work around and inside the buildings. Our water use will continue to increase for air conditioning, manufacturing equipment, devices, and other purposes as the miniaturization and lamination of semiconductors advance and our business scale expands. We will implement measures to effectively use and reuse limited water resources and reduce flooding risks in order to achieve a stable product supply and peace of mind for stakeholders.

# Promotion of Resource Recycling: Reducing Industrial Waste Emissions and Landfill Disposal

## Key initiatives/Results in 2020

**Volume of industrial waste per base unit**

**Up 15 points**
(year-over-year)

**Zero emissions**

**Achieved for seven consecutive years**

### Basic Concept

We conduct 3R activities (reduce, reuse, and recycle) for the effective use of limited natural resources. By restricting the volume of generated waste, thoroughly sorting all waste by type, and increasing the volume that is recycled, we are working to make more effective use of resources. We strive 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

### Volume of Industrial Waste*1, *2


*1 The base unit index is calculated after adding general industrial waste and specially controlled industrial waste.
*2 We are committed to reducing the volume of generated industrial waste, and our goal is to reduce this amount by 5 points (1 point per year) by 2020, taking the index for 2015 as the base unit.

### Reduce Industrial Waste Emissions

In 2016, TOK set a new medium-term target to reduce industrial waste (per base unit) by 5 points by 2020 compared with 2015 (reduction of 1 point annually). With this target in mind, TOK has been working to reduce industrial waste by refining and reusing process effluents, internal effluent processing, internal recovery, and converting waste into items of value.

In 2020, as the final target year, our efforts to proactively reuse process effluents and convert waste into items of value succeeded in attaining the target by reducing our waste generation by 11 points compared with 2015 as the base year of the Medium-Term Management Plan, though the value was an increase by 15 points from the previous year due to the increased production volume. In 2021, TOK will set new targets indexed to 2019 and further continue reduction efforts.

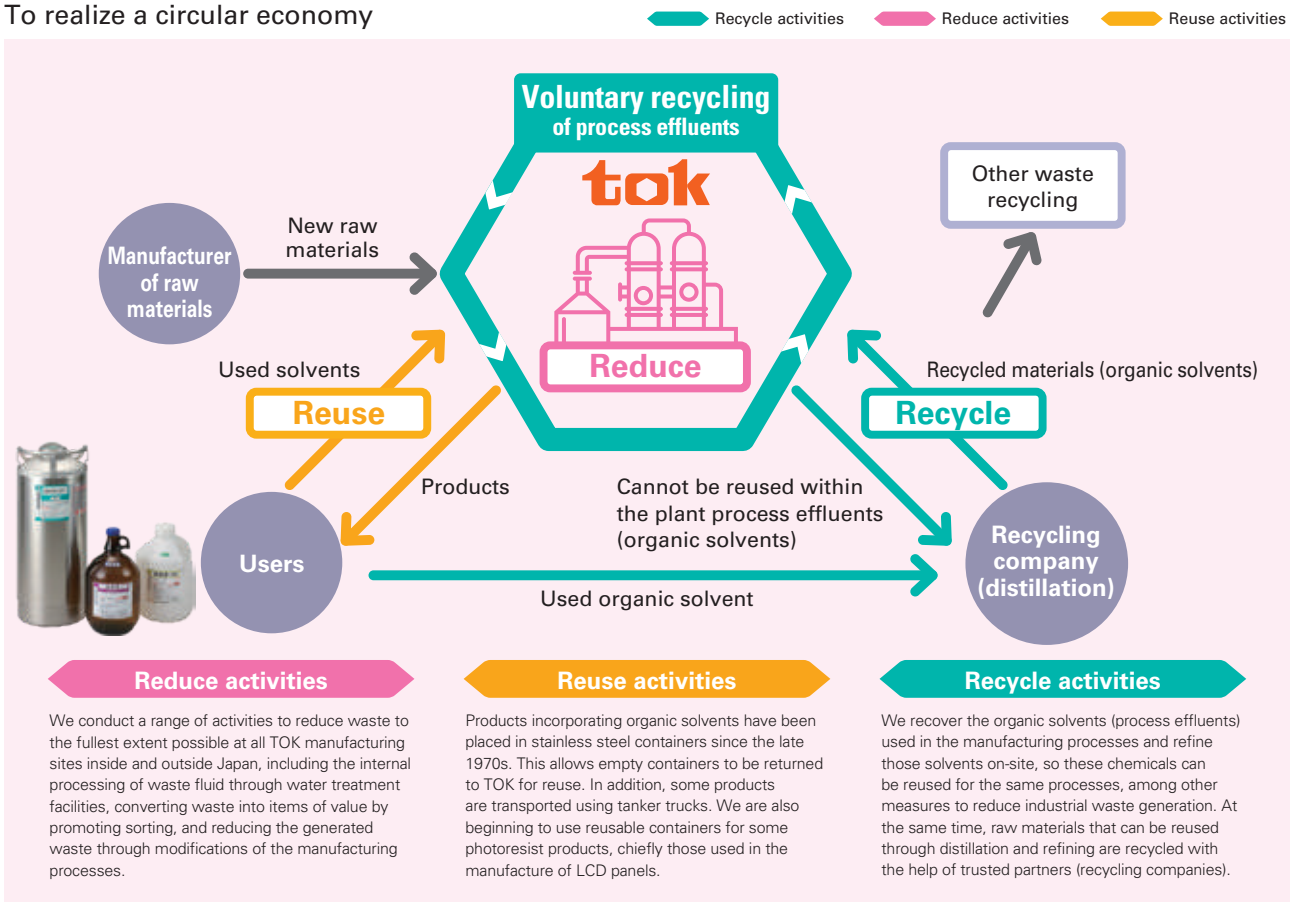
### Achieved Zero Emissions

In 2020, industrial waste for landfill disposal after intermediate treatment stood at less than 1% of total waste, so we have achieved zero emissions for seven consecutive years since 2014.

### Techniques for Recycling Organic Solvent Effluents

TOK strives to effectively use the waste generated by its plants. 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 differing calories and water content. In addition, at the Gotemba plant, we recycle waste oil by distilling it at an external partner company and reuse it in the production process (the circular economy to reuse generated waste through the purification process). TOK will continue its efforts to reduce industrial waste generation by effectively using resources.

## To realize a circular economy




### Reduce activities

We conduct 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. We are also beginning to use reusable containers for some photoresist products, chiefly those used in the manufacture of LCD panels.

### Recycle activities

We recover the organic solvents (process effluents) used in the manufacturing processes and refine those solvents on-site, so 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 pollution.

TOK Human Resources

Hiroshi Sugawara
*Plant Administration Section, Gotemba Plant*

### Advancing environmental conservation activities through cooperation with stakeholders

The industrial waste generated at the Gotemba plant accounts for nearly one-half of all waste generated by TOK. In particular, flammable waste oil, designated as specially controlled industrial waste, has a major impact, and it is an important requirement to reduce this effluent.

Through reduction efforts in cooperation with a partner company, it is now possible to recycle one-half the specified waste oil generated since 2017. We are happy with this accomplishment, which was attained by overcoming many difficulties, including repeated consultations with the administration. The Gotemba plant continued to consult with the partner for further reductions and achieved additional reductions in 2020.

We will continue striving to further reduce waste by asking for cooperation from stakeholders and related entities.

TOK Stakeholders

Mr. Kensaku Horie
*Tokyo Sales Department Nippon Refine Co., Ltd.*

### To realize a circular economy

Since its foundation, the business of our company has been based on refining and recycling toward a society that enables the sustainable development of humankind.

We have done business with Tokyo Ohka (TOK) for many years. At present, we collect used solvent from TOK's Gotemba plant, other plants in Japan, and the Taiwan sites, and refine it for delivery to TOK. The refining of used solvent by our company affects the quality of TOK products. Therefore, we have repeated inspections and consultations with the persons in charge from TOK whenever there is a change in the collection volume and process. Recently, we have started triangular recycling, where we refine the used solvent from TOK's customers for reuse by TOK in their product manufacturing. We plan to expand this initiative in cooperation with the persons in charge from the EHS Division, which leads environmental activities at TOK, and establish a system for achieving a circular economy.

# Air, Water and Soil/Biodiversity

## Key initiatives/Results in 2020

**NOx emissions to the air**
**Down 3.3 t**
(year-over-year)

**Estimated CFC leakage volume**
**156 t-$CO_2$**

**Employee training on CSR**
**185 participants**
(FY 2020/12)

### Basic Concept

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 our livelihoods 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 has shifted to boilers that use natural gas to reduce the emissions of sulfur oxide (SOx) and nitrogen oxide (NOx), which are major contributors to air pollution. Boilers at all plants now use low-emission natural gas as fuel with the exception of plants without access to city gas supplies. In 2020, SOx emissions related to production activities decreased by 0.1 tons year-over-year. NOx emissions decreased by 3.3 tons year-over-year, mainly because of the review of the operating program and other improvements in the method of operation of the electric power generator 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 local 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.

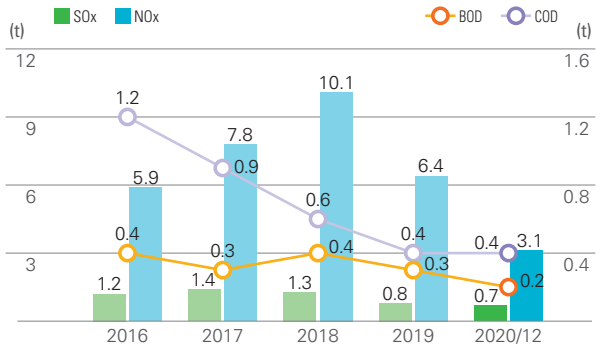
**· Reducing emissions of water-polluting substances**

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 own standards and public 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 2020 were approximately 0.2 tons, while COD emissions were 0.4 tons.

### SOx/NOx/BOD/COD Emissions



## 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 2020 was approximately 156 t-$CO_2$ 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 2020 to March 2021

## Comply with PRTR Law

Under the Japanese Pollutant Release and Transfer Register (PRTR) Law, 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 Law, TOK handled 44 substances (a total of 1,113 tons) in 2020, including an estimated 2 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 2020 to March 2021

## Preserve Biodiversity

The TOK Biodiversity Protection Declaration guides the TOK Group's activities to preserve biodiversity. In 2020, 185 employees participated in biodiversity training, and six employees were dispatched to help with afforestation projects in cooperation with local residents through the Kanagawa Trust Midori Foundation. We will continue to preserve biodiversity with the intention of starting a ripple effect inside and outside the Company and spreading them throughout society.

**TOK Biodiversity Protection Declaration**
https://www.tok.co.jp/eng/csr/env-activity/s_management.html#biodiversity

## Regarding Groundwater Pollution at the Sagami Operation Center

In December 2020, voluntary inspections of groundwater pollution detected arsenic and arsenic compounds exceeding standard values at the Sagami Operation Center. We took careful action to prevent the spread into the surrounding areas and have adequately responded to all administrative instructions, including the prompt conduct of a flow survey. As of May 2021, no pollution has been detected by these substances. We will continue to conduct periodic monitoring.

### 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, we will continue to appropriately maintain and manage our facilities and equipment to ensure continuous normal operation, thereby fulfilling our social responsibility as a company handling chemical substances.

TOK Human Resources

Shinji Okada
*Facilities Section, Koriyama Plant*

### Resolving environmental issues by accumulating basic analysis and endeavor

Regarding activated sludge processing at the wastewater treatment facilities at the Koriyama plant, the high COD value had been a problem for many years. We analyzed the wastewater from each building in an effort to explore measures for improvement and found out that the trace resin content mixed into the wastewater from a specific building could not be adequately treated with activated sludge. We shifted the treatment of this wastewater from activated sludge processing to industrial waste processing, which led to a substantial improvement in the value. At present, we reuse this wastewater to further reduce its environmental impact. We will continue to resolve environmental issues by accumulating basic analyses and endeavors.

# Chemical Substance Management

## Strengthening Activities Related to Product Responsibility and Product Stewardship

Key initiatives/Results in 2020

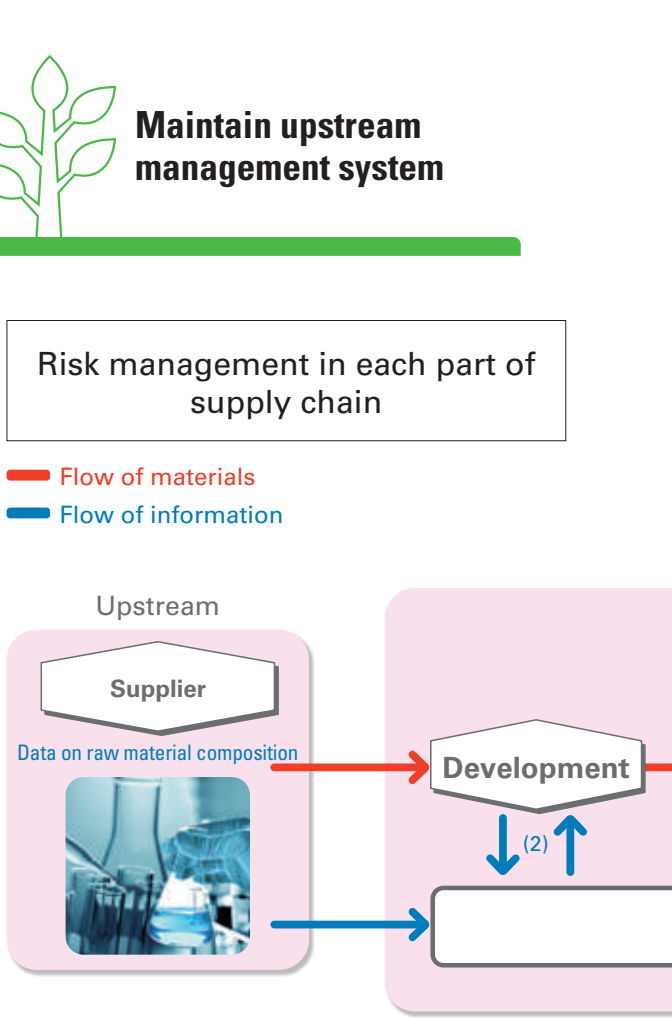
**Accurately evaluated chemical substance risks in a timely fashion and properly managed these risks**

**Maintain upstream management system**

### Basic Concept

Management of chemical substances is a key priority for the Company from the perspective of social responsibility. In addition to observing all laws and regulations, our group-wide efforts ensure the correct management of chemical substances while we remain mindful of globally expanding environmental issues. To this end, we have defined the responsibility to local and international communities as one of the TOK Group Creeds, which break down the management principles, and have been working to reduce our impact on the environment, including combating global warming, managing chemical substances, effectively utilizing resources, and reducing waste, thereby gearing up our product stewardship activities.

Risk management in each part of supply chain




### 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.

Regarding the risk management of chemical substances, our continued efforts culminated in the elimination of PFOA* in 2020. Through these efforts, we have eliminated PFOA and its salts. We will also eliminate the use of PFOA-related substances within 2021. **(see page 108, TOPICS, "Response to the Revised Chemical Substances Control Law")**

* Perfluorooctanoic Acid

**(1) Obtaining information about revisions to laws and regulations and treaties**

For the chemical substances handled by the TOK Group, we put in place a system for complying with legal requirements and ascertaining the use of regulated substances under laws and regulations and treaties that include chemical substance management laws and the regulations in each country, 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, we have proposed and are managing the progress of elimination plans for all products to ensure that the use of such substances is discontinued and inventories are disposed of prior to the implementation of the applicable laws and regulations.

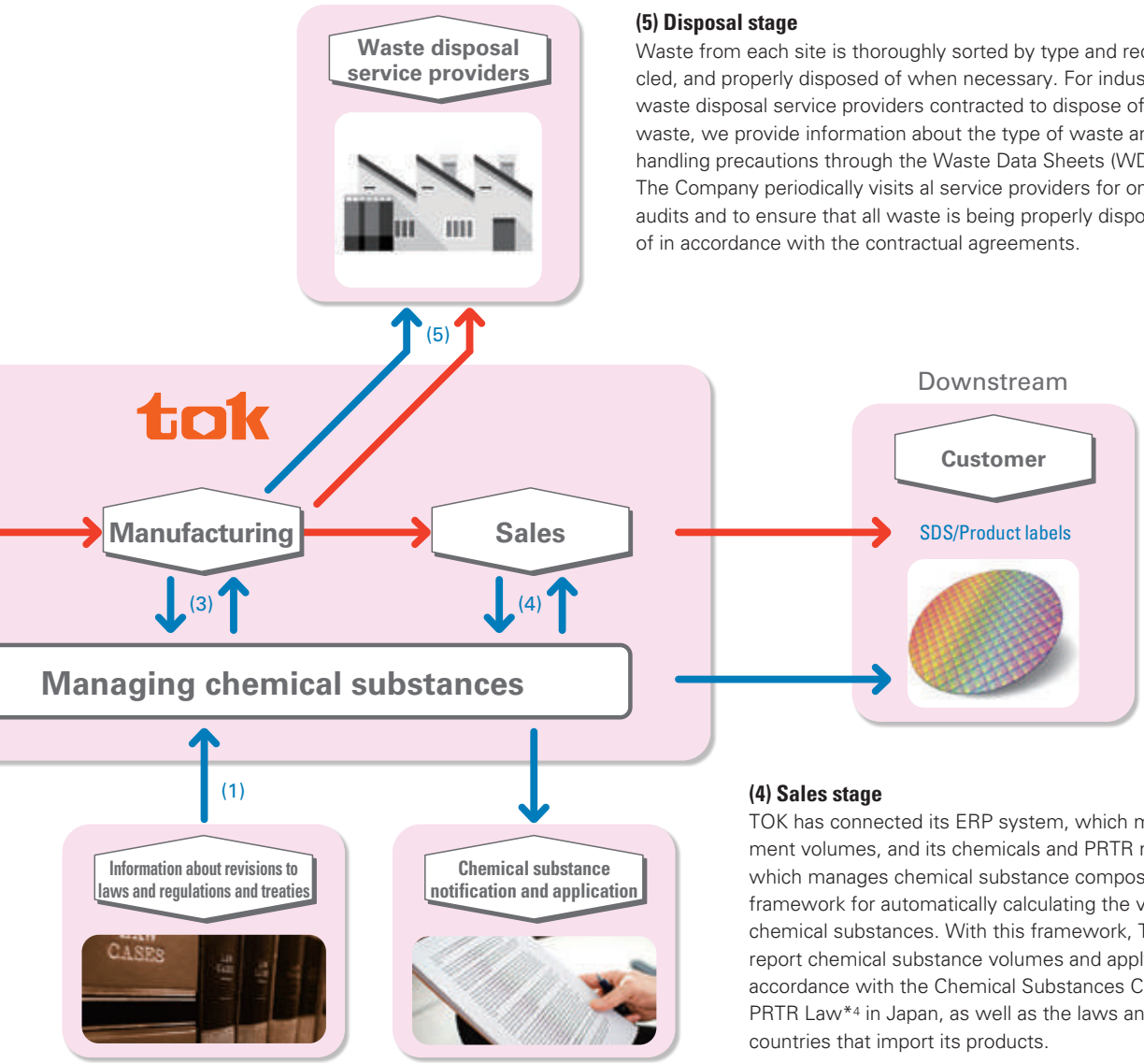
**(2) Development stage**

For newly developed raw materials, in addition to the legal and regulatory information, we check to confirm whether they contain chemical substances identified in our own TOK Group Standards on Chemical Substances Management, which stipulate substances whose use is prohibited or should be eliminated. Moreover, we check the developed products with respect to customer's requirements as well. If the specified substances exceed the levels in the TOK Group Standards on Chemical Substances Management, we propose an alternative plan and strive to eliminate them.

## Maintain Upstream Management System

TOK is working to establish a system for properly conveying information on the chemical substances throughout the supply chain as part of its product stewardship activities, a key pillar of Responsible Care. Timeliness and the accuracy of information are vital when conveying such information about chemical substances. Upstream management is very important for the timely and accurate receipt of information about chemical substances from upstream suppliers. In addition to the information about chemical substances received from these suppliers, TOK must manage the latest information about chemical substance regulations in each country and then display the information in product safety data sheets (SDS) and labels to present its customers with accurate and relevant information about the chemical substances in a timely manner.

In 2020, we streamlined the internal information sharing process so that the timeliness of SDS information would not be compromised during the COVID-19 pandemic. On the other hand, we found problems with work efficiency and information security in the process of obtaining raw material information from suppliers. We will examine how to rationalize the operation of this process.




**(5) 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, we provide 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.

**(4) Sales stage**

TOK has connected its ERP system, which manages product shipment volumes, and its chemicals and PRTR management system, which manages chemical substance composition, to create a framework for automatically calculating the volume of transferred chemical substances. With this framework, TOK can appropriately report chemical substance volumes and apply for their usage in accordance with the Chemical Substances Control Law*3 and the PRTR Law*4 in Japan, as well as the laws and regulations of the countries that import its products.

**(3) Production stage**

All raw materials used to manufacture products are subject to occupational health and safety risk assessments. The Company 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.

*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.
*2 Conflict minerals: Refer to four types of minerals that include tin, tantalum, tungsten, and gold mined in the Democratic Republic of the Congo and adjoining countries experiencing armed conflicts. These minerals are regulated under the U.S. Dodd-Frank Act (financial regulatory reform act).
*3 Chemical Substances Control Law: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.
*4 PRTR Law: Act on Confirmation of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

## TOPICS

### Response to the Revised Chemical Substances Control Law

The Cabinet Order for Partial Revision of the Enforcement Order of the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture (Chemical Substances Control Law) was promulgated on April 21, 2021 (effective date: October 22, 2021). This Cabinet Order adds PFOA and its salts to the Class I Specified Chemical Substances under the Chemical Substances Control Law, following the listing of new substances subject to elimination at the Ninth Meeting of the Conference of Parties to the Stockholm Convention on Persistent Organic Pollutants (POPs) in May 2019. In 2022, PFOA-related substances will also be included into the Class I Specified Chemical Substances in 2022. PFOA, its salts, and PFOA-related substances had been commonly used for photoresists and anti-reflectives for semiconductor production until several years ago. However, the PFOA should be categorized as a persistent organic pollutant based on the review by the Persistent Organic Pollutants Review Committee under the Conference of Parties to the Stockholm Convention on POPs, and the Japanese government promulgated the Cabinet Order above.

Considering the impact of this movement, TOK developed substitute substances in 2012. Efforts have also been promoted to reduce these substances from existing products, and we have already eliminated PFOA and its salts. The amount of PFOA-related substances used in our products has been reduced by 98.6% in 2020 from 2015 as the base year. We will also eliminate PFOA-related substances within 2021, owing to our systematic efforts for elimination. We will continue to implement measures for the prompt acquisition of information on legal revision, thereby minimizing the environmental impact and ensuring the continuity of product supply.

### Properly Comply with PCB Special Measures Act

For low-concentration PCBs,* we have 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 2020, we 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; PCB was formerly used for thermal media, insulating oils, coatings, and other applications because it 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 semiconductor demand has been rising more than ever, the supply-demand conditions have also become tight for certain chemicals used in semiconductor production. It may not be commonly known that this undersupply results not only from material procurement issues and under capacity at manufacturers but also from restrictions on the acceptable manufacture volume for new chemicals based on the volume reporting requirement stipulated by the Chemical Substances Control Law. In some cases, it takes about two years from reporting to permission when acceptable manufacture volumes can be changed. In our industry with technological innovation, it is difficult to forecast customer demand in advance and report planned changes in time. Our requirement for the coming years is to devise a system that enables adaptation to global changes.

TOK Human Resources

Mihye Yoo
*Chemical Substances Management Section, EHS Div.*

### To support worldwide chemical substances management

Because the overseas sales ratio of the TOK Group stands at approximately 80%, it is essential to collect information from around the world for chemical substance management as well. The daily occurrence in our office is that I make a phone call in Korean to the Korean site and hear my colleagues speaking with the Taiwanese site in Taiwanese/Chinese. While regulatory requirements vary by country, we share information within the division on a periodic basis to deepen the understanding of the laws in other countries. Chemical substance regulation is no longer a domestic requirement but has become a worldwide trend. I recognize the importance of a global perspective every day. We will continue to promote appropriate chemical substance management that matches the situation of each country and information sharing featuring horizontal connections.

# Occupational Health and Safety/ Security and Disaster Prevention

## Occupational Health and Safety/Reducing Risks Posed by Chemical Substances

Key initiatives/Results in 2020

**Acquired ISO 45001 Certification**
(Gotemba Plant)

**Severity rate of workplace accidents/ Frequency rate of workplace accidents (Tokyo Ohka Kogyo Co., Ltd., only)**
**0%**

### Basic Concept

The Company recognizes that ensuring the safety and health of workers is the social responsibility of any company and that this is demanded by all stakeholders. We aim to foster and entrench a safety culture and increase the happiness of our employees by providing comfortable, safe workplaces.

### 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 department manager of the General Affairs Department. 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.

Occupational Health and Safety System at TOK
https://www.tok.co.jp/eng/csr/employees/conditions.html

### Acquiring ISO 45001 Certification

Currently, we are receiving an increasing number of questions and requests on CSR from stakeholders. We 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, we are promoting the acquisition and expansion of ISO 45001 certification of the occupational health and safety management system. Through these activities, we are seeking solutions to health and safety issues, including the aging workforce, labor saving, and mental health.

In 2020, we acquired the first ISO 45001 certification in Japan at the Gotemba plant. Preparation is in progress to complete acquisition at all sites in Japan by 2023.

We have also started initiatives to achieve compliance with the RBA Code of Conduct. As part of this initiative, we established the Lockout/Tagout*1 rules on equipment repair and inspection at the Koriyama plant and have started the implementation of a system to prevent accidents caused by the malfunction and misoperation of equipment. We will expand the system to other sites by monitoring the implementation status at the Koriyama plant.

The plant received the RBA*2 audit from 2020 to 2021 and was certified as a workplace that satisfies the RBA Code of Conduct. We will further strengthen our systems to provide safe and comfortable workplaces to our employees not only at the plant but also at all group company sites, as well as for the employees of affiliated companies.

*1 Lockout: Locking the starting gear of machinery/system to prevent activation
Tagout: Putting up a tag that indicates the lockout state to prevent misoperation by others
*2 Responsible Business Alliance: An industry coalition comprising electronic equipment manufacturers and suppliers thereto dedicated to the protection of workers' rights and safety

### Initiatives for Workplace Accident Risk Reduction

**· Improvement of risk assessment**

In 2020, we promoted risk reduction activities on risks with high seriousness at all sites by learning lessons from past accidents of being caught, chemical injuries, and the turnover of heavy objects. We also started risk assessment and hazard prediction activities for infrequent operations and set the points for enhancement for the next fiscal year. In May 2021, we received the Prize for Effort in the Responsible Care Awards from the Japan Chemical Industry Association for the evaluation of our "Utilization of Risk Assessment for the Prevention of Chemical Industries" to reduce chemical industry risks by performing chemical hazard assessments based on the GHS Classification.

**· Established and started operation of internal standards for highly corrosive substances and poisonous/ deleterious substances**

The Company uses chemical substances with corrosive properties in the manufacture of semiconductor-related products. We constantly reassess all manufacturing lines and work procedures and share information about safety measures among sites that use the same chemical substances in an effort for further risk reduction. In 2020, the Company further enhanced its internal guidelines for the handling of highly corrosive chemical

substances, which were formulated in 2019, established the guidelines as international standards, and started implementation.

**Promoted improvement activities incorporating inputs from internal audit and third-party review**

We started the ISO 45001 internal audit last year and are utilizing it for information sharing on workplace accident control and environmental contamination prevention by proactively assigning internal auditors from other sites. We also consider 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 to lead them to implement activities to improve.

## Prevention of Workplace Accidents

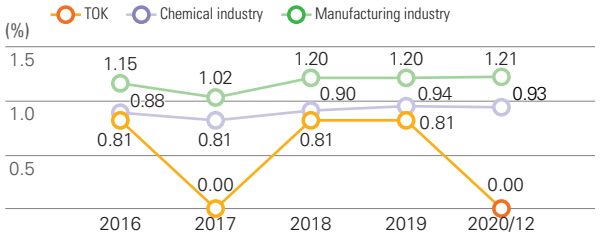
TOK has established the Occupational Health and Safety Policy linked to the CSR Policy. In its production activities, the Company places the utmost priority on the maintenance of the health and safety of workers and implements measures to prevent accidents, natural disasters, and diseases in the workplace, 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, we are 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 2020, there were seven workplace accidents (0 without and 7 with lost workdays) but we achieved 0% as the frequency rate of workplace accidents. Fortunately, no serious workplace accident occurred. For each accident that occurred, we reviewed the risks and took the necessary action for recurrence prevention. We will continue conducting risk reduction activities and employee safety awareness raising by aiming to achieve zero workplace accidents.

### Future Issues and Initiatives

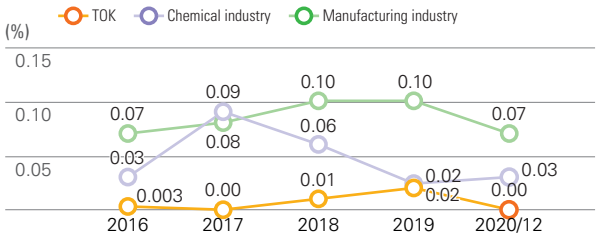
Under the Occupational Health and Safety Policy, the TOK Group places the utmost priority on the maintenance of the health and safety of workers. "Workers" refer not only to the employees of the TOK Group but also to all persons who provide service in the work environment of the TOK Group. We will continue to observe occupational health and safety-related laws and regulations in each country/region, and aim to acquire the ISO 45001 certification at each site, while building a robust management system to prevent workplace accidents.

Frequency Rate of Workplace Accidents (%) (Tokyo Ohka Kogyo Co., Ltd., only)




* 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 (%) (Tokyo Ohka Kogyo Co., Ltd., only)




* 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

TOK Human Resources

Max Peng
*Process Management Div.*
*Tongluo Plant*
*TOK Taiwan Co., Ltd.*

### Aiming to achieve zero workplace accidents while fulfilling supplier responsibility in Taiwan

The Tongluo plant of TOK Taiwan Co., Ltd., was established in 2014 mainly to supply products to customers in Taiwan. Our customers are aware of the environment and occupational health and safety, in addition to product quality. In the year following plant establishment, we acquired the ISO 9001 and ISO 14001 certifications. In 2017, we started activities toward the acquisition of ISO 45001 certification and formulated the health and safety policy. We observe these policies, implement the risk assessment of each task to prevent and improve risks, and strengthen training and emergency drills for employees. Through these continued efforts, we acquired the ISO 45001 certification in 2019. We will continue to fulfill supplier responsibility as the No. 1 manufacturer of photoresists for semiconductors, while maintaining workers' health and safety and comfortable work environments toward zero workplace accidents.

Data Section

# Data Section

# 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 speed up technology development
- Launch new business promptly
- 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 personnel

| Fiscal years ended March 31 until 2017 and fiscal years ended December 31 after 2017 | 2012/3 | 2013/3 | 2014/3 | 2015/3 |
|---|---|---|---|---|
| **Results of operation:** | | | | |
| Net sales | 80,037 | 72,919 | 75,269 | 88,086 |
| Materials Business | 66,644 | 67,697 | 72,866 | 84,611 |
| Equipment Business | 13,392 | 5,222 | 2,402 | 3,475 |
| Operating income | 6,102 | 7,872 | 10,025 | 13,253 |
| Income before income taxes | 6,577 | 8,031 | 11,666 | 14,301 |
| Profit attributable to owners of the parent | 3,818 | 5,443 | 7,549 | 8,818 |
| Free cash flow | (6,641) | 12,363 | (2,610) | 3,380 |
| Investments in plant and equipment | 3,162 | 5,332 | 14,577 | 7,276 |
| Depreciation and amortization | 4,038 | 3,758 | 2,672 | 4,276 |
| R&D costs | 6,157 | 6,211 | 6,389 | 6,903 |
| **Per share data (Yen/US dollars):** | | | | |
| Basic profit | 84.86 | 121.69 | 168.54 | 196.61 |
| Cash dividends applicable to the year | 38.00 | 44.00 | 52.00 | 60.00 |
| Net assets | 2,641.28 | 2,796.37 | 3,044.24 | 3,285.81 |
| **At year-end:** | | | | |
| Total assets | 138,767 | 145,664 | 155,859 | 174,863 |
| Total long-term liabilities | 2,613 | 2,811 | 1,518 | 3,569 |
| Interest-bearing debt | 610 | 488 | 366 | 814 |
| Net assets | 119,590 | 127,838 | 139,962 | 151,999 |
| **Key performance indicators (%):** | | | | |
| Operating margin | 7.6 | 10.8 | 13.3 | 15.0 |
| ROE | 3.3 | 4.5 | 5.8 | 6.2 |
| Ratio of R&D costs to net sales | 7.7 | 8.5 | 8.5 | 7.8 |
| Equity ratio | 85.1 | 85.9 | 87.5 | 84.3 |
| Debt-to-equity (Times) | 0.01 | 0.00 | 0.00 | 0.00 |
| Payout ratio | 44.8 | 36.2 | 30.9 | 30.5 |
| DOE | 1.5 | 1.6 | 1.8 | 1.9 |
| **ESG-related data:** | | | | |
| Number of employees (consolidated) | 1,443 | 1,487 | 1,505 | 1,540 |
| $CO_2$ emissions (converted from energy consumption) (10,000 t)*6 | 3.0 | 3.4 | 3.3 | 3.0 |
| **Industry trends:** | | | | |
| Worldwide semiconductor market (millions of US dollars)*1, (Year) | 291,562 | 305,584 | 335,843 | 335,168 |
| Worldwide photoresists sales (thousands of US dollars)*2 | 1,279,706 | 1,152,306 | 1,288,713 | 1,230,022 |
| Exchange rate (JPY/USD)*4 | 82 | 94 | 103 | 120 |

*1 Source: World Semiconductor Trade Statistics
*2 Calculated by TOK based on data aggregated by SEMI (total sales of ArF and KrF excimer laser and g- and i-Line photoresists). Due to 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 2021

## TOK Medium-Term Plan 2018

### Strategies:

- Reform business portfolios
- Evolve the strategy of building close relationships with customers
- Develop global personnel
- Strengthen the management foundation

## TOK Medium-Term Plan 2021

### Long-term management vision for fiscal 2020:

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-running R&D activities and strategic investments, which led record-high performance.

| 2016/3 | 2017/3 | 2017/12*5 | 2018/12 | 2019/12 | Millions of yen 2020/12 | Thousands of US dollars 2020/12 |
|---|---|---|---|---|---|---|
| 89,969 | 88,764 | 92,411 | 105,277 | 102,820 | 117,585 | 1,141,602 |
| 87,280 | 86,558 | 90,531 | 102,621 | 98,986 | 114,773 | 1,114,306 |
| 2,689 | 2,205 | 1,880 | 2,655 | 3,833 | 2,811 | 27,295 |
| 12,438 | 9,954 | 9,194 | 10,505 | 9,546 | 15,589 | 151,354 |
| 11,777 | 9,220 | 9,492 | 9,814 | 8,657 | 15,349 | 149,026 |
| 7,716 | 6,343 | 6,007 | 6,875 | 5,410 | 9,926 | 96,375 |
| 7,517 | (926) | 4,169 | 6,298 | (4,543) | 19,472 | 189,050 |
| 5,919 | 9,378 | 6,731 | 5,636 | 14,184 | 5,611 | 54,478 |
| 5,631 | 6,118 | 6,035 | 7,063 | 7,216 | 6,772 | 65,753 |
| 7,015 | 8,207 | 6,921 | 8,526 | 8,879 | 9,545 | 92,677 |
| 177.30 | 146.18 | 138.31 | 164.92 | 130.02 | 239.42 | 2.32 |
| 64.00 | 64.00 | 64.00 | 96.00 | 120.00 | 154.00 | 1.49 |
| 3,298.00 | 3,384.14 | 3,490.97 | 3,459.37 | 3,491.23 | 3,651.20 | 35.44 |
| 167,300 | 174,492 | 178,681 | 182,957 | 186,486 | 201,185 | 1,953,259 |
| 2,899 | 2,024 | 3,421 | 10,723 | 14,437 | 15,997 | 155,317 |
| 534 | 135 | — | 10,000 | 11,272 | 10,962 | 106,432 |
| 147,270 | 152,931 | 153,517 | 150,857 | 151,733 | 159,994 | 1,553,343 |
| 13.8 | 11.2 | 9.9 | 10.0 | 9.3 | 13.3 | |
| 5.3 | 4.4 | 4.1 | 4.7 | 3.7 | 6.7 | |
| 7.8 | 9.2 | 7.5 | 8.1 | 8.6 | 8.1 | |
| 85.1 | 84.6 | 82.2 | 78.8 | 77.5 | 75.3 | |
| 0.00 | 0.00 | 0.00 | 0.07 | 0.08 | 0.07 | |
| 36.1 | 43.8 | 46.3 | 58.2 | 92.3 | 64.3 | |
| 1.9 | 1.9 | 1.9 | 2.8 | 3.5 | 4.3 | |
| 1,564 | 1,596 | 1,611 | 1,673 | 1,726 | 1,750 | |
| 3.0 | 3.0 | 3.0 | 2.9 | 3.0 | 3.1 | |
| 338,931 | 412,221 | 468,778 | 412,307 | 440,389 | 527,223*3 | |
| 1,358,009 | 1,504,224 | 1,504,224 | 1,631,851 | 1,679,654 | 2,027,350 | |
| 112 | 112 | 113 | 111 | 109 | 103 | |

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 46–49 "Message from the CFO.")**

$CO_2$ emissions:
The base unit index has steadily declined through a variety of reduction measures, including the shift in the total amount of electricity used at the headquarters to renewable energy starting in January 2020.
**(See pages 98–99, "Address Climate Change Issues toward Decarbonization")**

*4 As of the end of each fiscal year
*5 Due to 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 Tokyo Ohka Kogyo Co., Ltd., and consolidated subsidiaries in Japan. Due to 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 2020/12 Market Trends, Results of Operations, Financial Position, and FY 2021/12 Performance Outlook

## Business Environment

For the current term (FY 2020/12), the global and Japanese economies were slower than in the previous year because economic activities were suppressed as a result of the global COVID-19 pandemic.

In the foreign exchange market for the US dollar and the yen, the yen continued to depreciate as the US dollar strengthened until February due to an increase in the US policy interest rate. From March onward, the yen continued to appreciate because of the outflow of cash to leading currencies other than the US dollar, following the spread of the COVID-19 infections.

## Net Sales and Operating Income

In the fiscal year ended December 31, 2020, consolidated net sales increased by ¥14,765 million (14.4%) from the previous fiscal year to ¥117,585 million. Net sales in the first half decreased by ¥8,271 million (16.9%) to ¥57,203 million. Net sales in the second half decreased by ¥6,493 million (12.1%) to ¥60,381 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 remained steady 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 ¥6,767 million (9.7%) from the previous fiscal year to ¥76,372 million. The cost of sales ratio dropped 2.7 percentage points year-on-year to 65.0%. As a result, gross profit increased by ¥7,996 million (24.1%) to ¥41,212 million.

Selling, general, and administrative (SG&A) expenses increased by ¥1,953 million (8.3%) from the previous fiscal year to ¥25,623 million.

Operating income increased by ¥6,043 million (63.3%) to ¥15,589 million because of the increased sales of high value-added products coupled with the reduced raw material cost that followed the decrease of crude oil price and decreased depreciation and amortization.

## Income before Income Taxes and Profit Attributable to Owners of the Parent

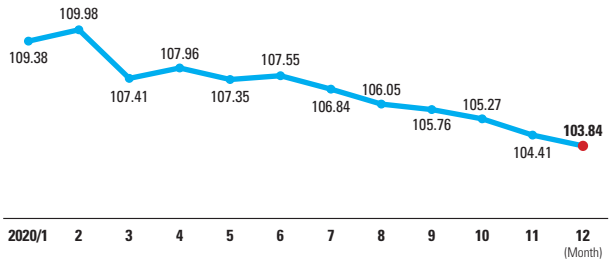
Income before income taxes increased by ¥6,692 million (77.3%) from the previous fiscal year to ¥15,349 million because of the decreased loss on the valuation of investments.

The profit attributable to owners of the parent increased by ¥4,516 million (83.5%) from the previous fiscal year to ¥9,926 million.

## Performance by Segment

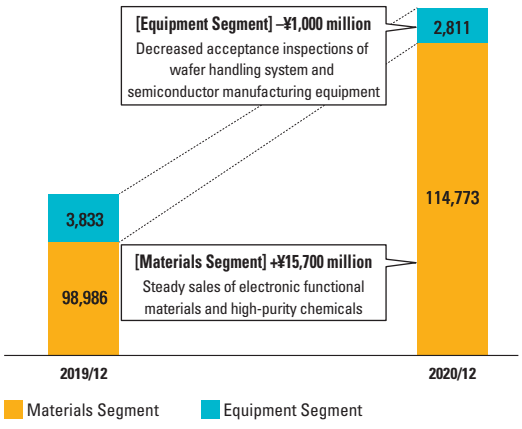
Since the previous term (FY 2019/12), TOK changed the cost allocation method to evaluate and manage financial results by segment more appropriately, and some corporate expenses were allocated to the materials segment.

**Exchange Rate** (Yen/US dollars, Monthly average)




Source: Mitsubishi UFJ Research and Consulting Co., Ltd.

**Net Sales by Segment Year-on-Year Comparison** (Millions of yen)



**Materials Segment:**

Sales in the materials segment, excluding internal transactions, increased by ¥15,786 million (15.9%) from the previous fiscal year to ¥114,773 million. Operating income increased by ¥6,933 million (51.5%) to ¥20,395 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 Division, sales increased by ¥7,629 million (13.1%) from the previous fiscal year to ¥65,878 million. This mainly owed to the increased net sales because sales of semiconductor photoresists and high-density integration materials remained steady in Asia, supported by the strong semiconductor demand for PCs and data servers, though the sales of display photoresists decreased because of the changing demand environment for medium- to compact-sized LCD panels.

■ High-Purity Chemicals Division

Sales in the High-Purity Chemicals Division increased by ¥8,058 million (19.8%) from the previous fiscal year to ¥48,732 million. This was mainly due to increased net sales because the sales of chemicals attached to semiconductor photoresists for Taiwan used in the cutting-edge semiconductor production process remained steady, though the sales of chemicals attached to display photoresists decreased because of the changing demand environment for medium- to compact-sized LCD panels.

**Equipment Segment:**

■ Process Equipment Division

Sales in the Process Equipment Division, excluding internal transactions, decreased by ¥1,022 million (26.7%) from the previous fiscal year to ¥2,811 million. Operating loss increased by ¥23 million to ¥310 million. This was mainly due to the acceptance inspections of the wafer handling system Zero Newton®, and semiconductor manufacturing equipment decreased to a level lower than the previous year.

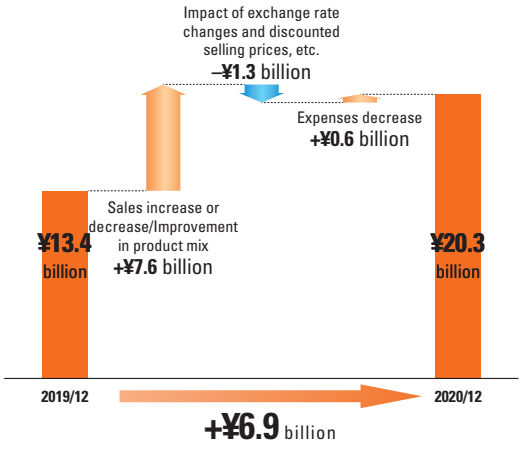
## Financial Condition

Total assets as of December 31, 2020, increased by ¥14,699 million from the previous fiscal year-end to ¥201,185 million.

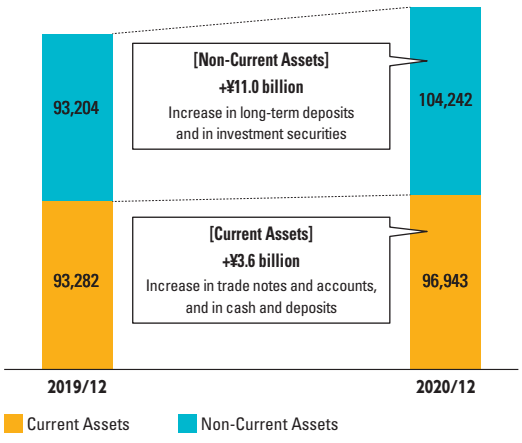
Total current assets increased by ¥3,661 million from the previous fiscal year-end to ¥96,943 million. This mainly reflected the respective increase of ¥2,415 million in trade notes and accounts and by ¥1,416 million in cash and deposits.

Total non-current assets increased by ¥11,038 million from the previous fiscal year-end to ¥104,242 million. This mainly reflected the respective increase of ¥10,000 million in long-term deposit in investments and other assets, and by ¥2,789 million in investment securities.

■ **Breakdown of Change in Materials Segment Operating Income**




■ **Total Assets Year-on-Year Comparison** (Millions of yen)



Total liabilities as of December 31, 2020, increased by ¥6,438 million from the previous fiscal year-end to ¥41,191 million. This mainly reflected the respective increase of ¥3,400 million in trade notes and accounts and the increase of ¥1,158 million in deferred tax liabilities.

Total equity as of December 31, 2020, increased by ¥8,260 million from the previous fiscal year-end to ¥159,994 million. This mainly reflected the accounting of ¥9,926 million as the profit attributable to owners of the parent despite the decrease of ¥5,007 million due to the dividend payment.

As a result, the equity ratio stood at 75.3% at the end of the fiscal year.

## Cash Flows

Net cash provided by operating activities during the fiscal year under review came to ¥22,953 million, an increase of ¥10,209 million from the previous fiscal year. This mainly reflected the respective increase of ¥6,692 million in income before income taxes and the increase of ¥3,937 million in trade notes and accounts payable.

Net cash provided by investment activities came to ¥3,481 million, a decrease of ¥13,805 million from the previous fiscal year. This mainly reflected the decrease of ¥8,892 million in expenses on the purchase of property, plant, and equipment.

Net cash provided by financial activities came to ¥5,937 million, an increase of ¥148 million from the previous fiscal year. This mainly reflected the decrease of ¥1,369 million in the purchase of treasury stock, while the proceeds of long-term loans payable decreased by ¥1,372 million.

As a result, cash and cash equivalents on December 31, 2020, increased by ¥13,498 million to ¥42,728 million from ¥29,229 million at the previous fiscal year-end.

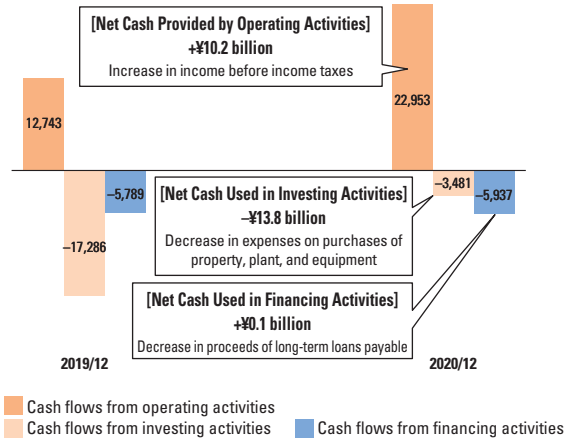
## FY 2021/12 Performance Outlook*

Net sales for FY 2021/12 are estimated at ¥122.6 billion, an increase of 4.3% from FY 2020/12, and expects the high facility operation rate at customers to continue from the previous year, while incorporating the influence from the appreciation of the yen.

Operating income is estimated at ¥16.5 billion, an increase of 5.8%, owing to the increased sales of high value-added products despite the expected rise in raw material prices for high-purity chemicals. The profit attributable to owners of the parent is estimated at ¥10.8 billion, an increase of 8.8% based on the increased operating income and improved special profit/loss.

* Figures announced on February 15, 2021.

**Cash Flows Comparison** (Millions of yen)




**Earnings Forecasts***

(Millions of yen, %)

| | FY 2020/12 | FY 2021/12 Forecast | | |
|---|---|---|---|---|
| | | | Change | % |
| Net sales | 117,585 | 122,600 | +5,015 | +4.3 |
| Operating income | 15,589 | 16,500 | +911 | +5.8 |
| Profit attributable to owners of the parent | 9,926 | 10,800 | +874 | +8.8 |

* Figures announced on February 15, 2021.

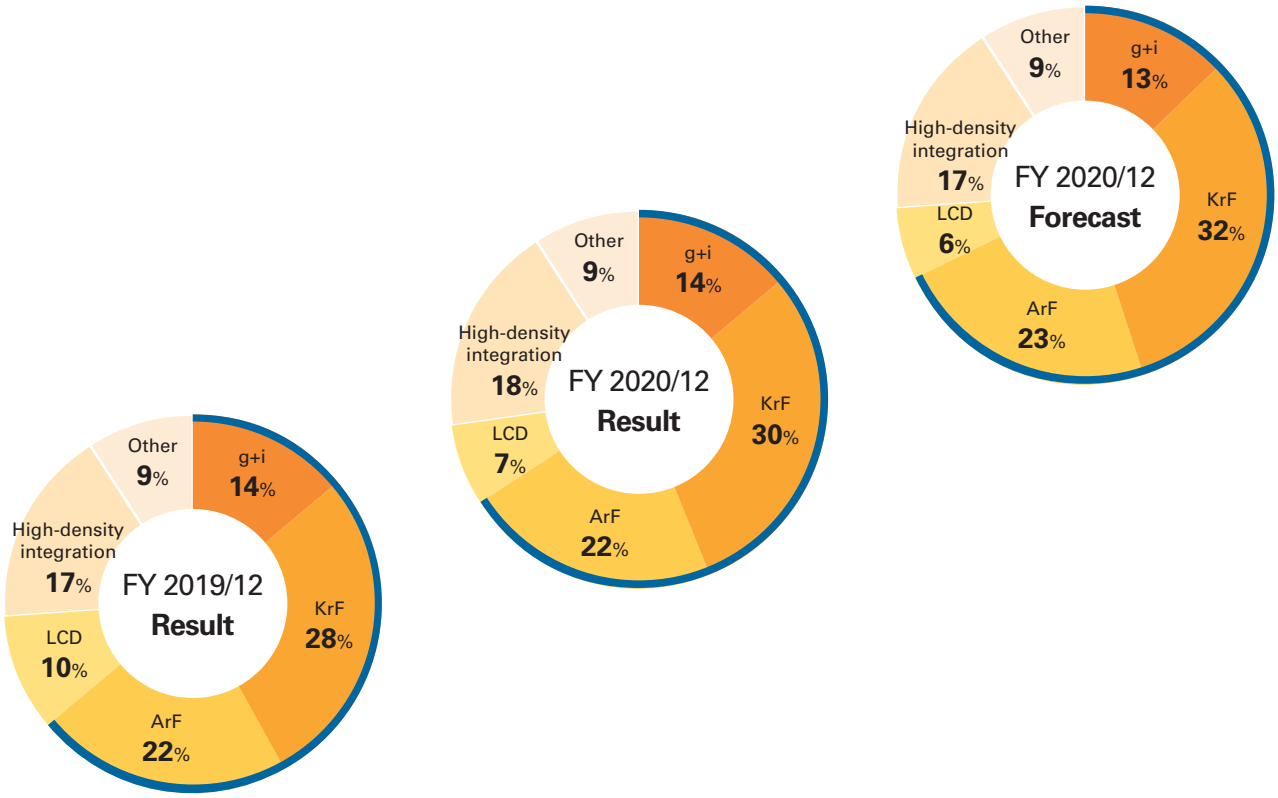
# Reference: Information Related to Electronic Functional Materials & Semiconductor Photoresists

## 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 > to ≥ 250 nm | 250 nm > to ≥ 130 nm | 130 nm > to ≥ 10 nm | 10 nm > |
| | Wide → Narrow | | | |
| Main applications and end products | Automotive power semiconductors<br>Sensors<br>LEDs | Mass-market smartphones<br>High-performance servers<br>Game consoles | Cutting-edge smartphones<br>Wearable devices<br>High-performance servers<br>and so on | Next-generation servers<br>Next-generation supercomputers<br>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, 2020 and 2019

| ASSETS | Millions of yen 2020 | Millions of yen 2019 | Thousands of U.S. dollars 2020 |
|---|---|---|---|
| CURRENT ASSETS: | | | |
| Cash and deposits | ¥ 41,728 | ¥ 28,230 | $ 405,132 |
| Time deposits | 6,094 | 18,175 | 59,165 |
| Receivables: | | | |
| Trade notes and accounts | 26,302 | 23,887 | 255,365 |
| Securities | 2,999 | 2,999 | 29,125 |
| Other | 563 | 557 | 5,466 |
| Allowance for doubtful accounts | (96) | (95) | (932) |
| Inventories | 17,659 | 17,439 | 171,447 |
| Prepaid expenses and other current assets | 1,691 | 2,087 | 16,427 |
| Total current assets | 96,943 | 93,282 | 941,197 |
| PROPERTY, PLANT AND EQUIPMENT: | | | |
| Land | 8,589 | 8,880 | 83,388 |
| Buildings and structures | 71,891 | 69,871 | 697,980 |
| Machinery and equipment | 60,264 | 57,284 | 585,093 |
| Furniture and fixtures | 21,757 | 21,271 | 211,233 |
| Right-of-use assets | 553 | 514 | 5,374 |
| Construction in progress | 4,566 | 6,618 | 44,330 |
| Total | 167,622 | 164,441 | 1,627,399 |
| Accumulated depreciation | (114,510) | (109,384) | (1,111,749) |
| Net property, plant and equipment | 53,112 | 55,057 | 515,650 |
| INVESTMENTS AND OTHER ASSETS: | | | |
| Investment securities | 17,604 | 14,815 | 170,921 |
| Investments in and advanced to an unconsolidated subsidiary and associated companies | 7 | 7 | 72 |
| Investment in capital | 100 | 100 | 970 |
| Net defined benefit asset | 3,683 | 3,204 | 35,762 |
| Long-term time deposits | 28,000 | 18,000 | 271,844 |
| Deferred tax assets | 346 | 395 | 3,362 |
| Other assets | 1,388 | 1,624 | 13,476 |
| Total investments and other assets | 51,130 | 38,147 | 496,411 |
| TOTAL | ¥ 201,185 | ¥ 186,486 | $ 1,953,259 |

| LIABILITIES AND EQUITY | Millions of yen 2020 | 2019 | Thousands of U.S. dollars 2020 |
|---|---|---|---|
| **CURRENT LIABILITIES:** | | | |
| Payables: | | | |
| Trade notes and accounts | ¥ 13,745 | ¥ 10,345 | $ 133,454 |
| Construction and other | 3,520 | 4,351 | 34,181 |
| Income taxes payable | 2,219 | 700 | 21,549 |
| Accrued expenses | 4,661 | 3,871 | 45,253 |
| Advances from customers | 14 | 50 | 142 |
| Other current liabilities | 1,031 | 996 | 10,017 |
| Total current liabilities | 25,193 | 20,316 | 244,598 |
| **LONG-TERM LIABILITIES:** | | | |
| Long-term loans payable | 10,962 | 11,272 | 106,432 |
| Deferred tax liabilities | 2,046 | 887 | 19,864 |
| Net defined benefit liability | 484 | 436 | 4,701 |
| Other long-term liabilities | 2,504 | 1,840 | 24,319 |
| Total long-term liabilities | 15,997 | 14,437 | 155,317 |
| **EQUITY:** | | | |
| Common stock—authorized, 197,000,000 shares in 2020 and 2019 issued, 45,100,000 shares in 2020 and 2019 | 14,640 | 14,640 | 142,140 |
| Capital surplus | 15,207 | 15,207 | 147,649 |
| Retained earnings | 125,795 | 120,908 | 1,221,320 |
| Treasury stock—at cost, 3,591,418 shares in 2020 and 3,711,937 shares in 2019 | (14,477) | (14,969) | (140,561) |
| Accumulated other comprehensive income: | | | |
| Unrealized gain on available-for-sale securities | 7,669 | 5,695 | 74,458 |
| Foreign currency translation adjustments | 2,606 | 2,866 | 25,308 |
| Remeasurements of defined benefit plans | 113 | 145 | 1,104 |
| Total | 151,556 | 144,495 | 1,471,419 |
| Stock acquisition rights | 304 | 379 | 2,958 |
| Non-controlling interests | 8,133 | 6,858 | 78,966 |
| Total equity | 159,994 | 151,733 | 1,553,343 |
| TOTAL | ¥201,185 | ¥186,486 | $1,953,259 |

# Consolidated Statement of Income

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended December 31, 2020 and 2019

| | Millions of yen | | Thousands of U.S. dollars |
|---|---|---|---|
| | 2020 | 2019 | 2020 |
| NET SALES | ¥117,585 | ¥102,820 | $1,141,602 |
| COST OF SALES | 76,372 | 69,604 | 741,481 |
| Gross profit | 41,212 | 33,215 | 400,121 |
| SELLING, GENERAL AND ADMINISTRATIVE EXPENSES | 25,623 | 23,669 | 248,767 |
| Operating income | 15,589 | 9,546 | 151,354 |
| OTHER INCOME (EXPENSES): | | | |
| Interest and dividend income | 474 | 447 | 4,602 |
| Foreign exchange gain (loss)—net | 27 | (410) | 263 |
| (Loss) gain on valuation of derivatives | (52) | 95 | (510) |
| Loss on impairment of long-lived assets | (605) | (477) | (5,878) |
| Loss on valuation of investments in capital | — | (540) | — |
| Loss on valuation of investment securities | (269) | (29) | (2,612) |
| Other—net | 186 | 27 | 1,808 |
| Other expenses—net | (239) | (888) | (2,327) |
| INCOME BEFORE INCOME TAXES AND NON-CONTROLLING INTERESTS | 15,349 | 8,657 | 149,026 |
| INCOME TAXES: | | | |
| Current | 3,123 | 1,972 | 30,329 |
| Deferred | 225 | 49 | 2,189 |
| Total income taxes | 3,349 | 2,021 | 32,518 |
| NET INCOME BEFORE NON-CONTROLLING INTERESTS | 12,000 | 6,635 | 116,508 |
| NON-CONTROLLING INTERESTS IN NET INCOME | 2,073 | 1,225 | 20,133 |
| PROFIT ATTRIBUTABLE TO OWNERS OF THE PARENT | ¥ 9,926 | ¥ 5,410 | $ 96,375 |

| | Yen | | U.S. dollars |
|---|---|---|---|
| PER SHARE OF COMMON STOCK: | 2020 | 2019 | 2020 |
| Basic earnings per share | ¥239.42 | ¥130.02 | $2.32 |
| Diluted earnings per share | 238.78 | 129.62 | 2.31 |
| Cash dividends attributable to the year | 154.00 | 120.00 | 1.49 |

# Consolidated Statement of Comprehensive Income

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended December 31, 2020 and 2019

| | Millions of yen | | Thousands of U.S. dollars |
|---|---|---|---|
| | 2020 | 2019 | 2020 |
| NET INCOME BEFORE NON-CONTROLLING INTERESTS | ¥12,000 | ¥6,635 | $116,508 |
| OTHER COMPREHENSIVE INCOME: | | | |
| Unrealized gain on available-for-sale securities | 1,973 | 1,380 | 19,159 |
| Foreign currency translation adjustments | (174) | (284) | (1,694) |
| Remeasurements of defined benefit plans | (31) | 385 | (306) |
| Total other comprehensive income | 1,767 | 1,481 | 17,158 |
| COMPREHENSIVE INCOME | ¥13,767 | ¥8,117 | $133,666 |
| TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO: | | | |
| Owners of the parent | ¥11,608 | ¥6,904 | $112,705 |
| Non-controlling interests | 2,159 | 1,212 | 20,961 |

# Consolidated Statement of Changes in Equity

TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended December 31, 2020 and 2019

| | 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, 2019 | 41,663 | ¥14,640 | ¥15,207 | ¥120,885 | ¥(13,816) | ¥4,315 | ¥3,137 | ¥(239) | ¥144,130 | ¥310 | ¥6,416 | ¥150,857 |
| Cumulative effect of changes in accounting policy | | | | (332) | | | | | (332) | | | (332) |
| Restated balance | 41,663 | 14,640 | 15,207 | 120,552 | (13,816) | 4,315 | 3,137 | (239) | 143,797 | 310 | 6,416 | 150,525 |
| Profit attributable to owners of the parent | — | — | — | 5,410 | — | — | — | — | 5,410 | — | — | 5,410 |
| Cash dividends paid: | | | | | | | | | | | | |
| Final for prior year, ¥60.0 per share | — | — | — | (2,499) | — | — | — | — | (2,499) | — | — | (2,499) |
| Interim for current year, ¥60.0 per share | — | — | — | (2,501) | — | — | — | — | (2,501) | — | — | (2,501) |
| Purchase of treasury stock | (329) | — | — | — | (1,371) | — | — | — | (1,371) | — | — | (1,371) |
| Disposal of treasury stock | 53 | — | — | (53) | 218 | — | — | — | 165 | (12) | — | 153 |
| Net change in items other than shareholders' equity during the year | — | — | — | 0 | — | 1,380 | (271) | 385 | 1,495 | 81 | 441 | 2,018 |
| BALANCE, DECEMBER 31, 2019 | 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 |

| | 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, 2019 | $142,140 | $147,649 | $1,173,870 | $(145,334) | $55,298 | $27,830 | $1,411 | $1,402,866 | $3,684 | $66,589 | $1,473,141 |
| Profit attributable to owners of the parent | — | — | 96,375 | — | — | — | — | 96,375 | — | — | 96,375 |
| Cash dividends paid: | | | | | | | | | | | |
| Final for prior year, $0.58 per share | — | — | (24,286) | — | — | — | — | (24,286) | — | — | (24,286) |
| Interim for current year, $0.58 per share | — | — | (24,326) | — | — | — | — | (24,326) | — | — | (24,326) |
| Purchase of treasury stock | — | — | — | (25) | — | — | — | (25) | — | — | (25) |
| Disposal of treasury stock | — | — | (312) | 4,798 | — | — | — | 4,485 | (940) | — | 3,545 |
| Net change in items other than shareholders' equity during the year | — | — | — | — | 19,159 | (2,522) | (306) | 16,330 | 214 | 12,376 | 28,921 |
| BALANCE, DECEMBER 31, 2020 | $142,140 | $147,649 | $1,221,320 | $(140,561) | $74,458 | $25,308 | $1,104 | $1,471,419 | $2,958 | $78,966 | $1,553,343 |

# Consolidated Statement of Cash Flows

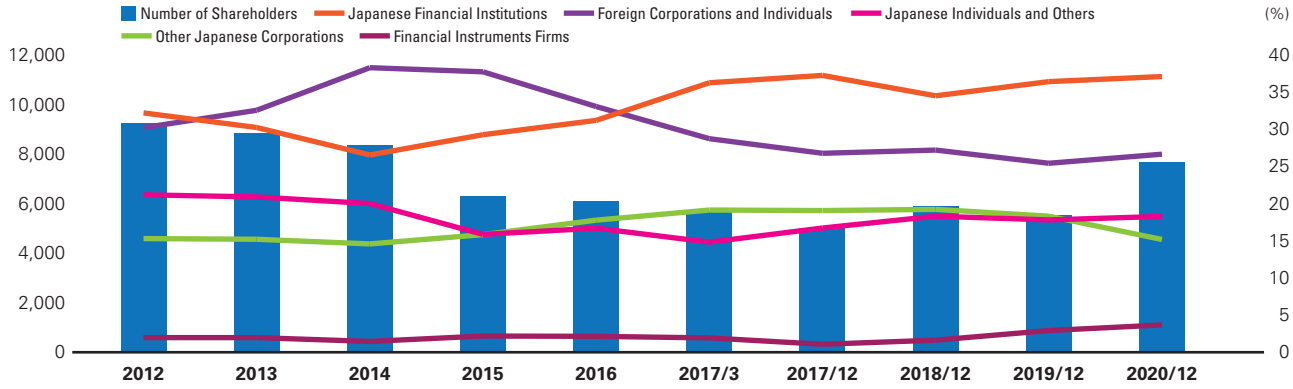
TOKYO OHKA KOGYO CO., LTD. and Consolidated Subsidiaries
Years Ended December 31, 2020 and 2019

| | Millions of yen | | Thousands of U.S. dollars |
|---|---|---|---|
| | 2020 | 2019 | 2020 |
| OPERATING ACTIVITIES: | | | |
| Income before income taxes and non-controlling interests | ¥ 15,349 | ¥ 8,657 | $ 149,026 |
| Adjustments for: | | | |
| Depreciation and amortization | 6,772 | 7,216 | 65,753 |
| Loss on impairment of long-lived assets | 605 | 477 | 5,878 |
| Provision for doubtful accounts | 0 | (56) | 1 |
| Provision for bonuses | 547 | (56) | 5,312 |
| Provision for officers' bonuses | 249 | 8 | 2,423 |
| Increase in net defined benefit asset | (469) | (289) | (4,559) |
| Decrease in net defined benefit liability | (22) | (154) | (219) |
| Interest and dividend income | (474) | (447) | (4,602) |
| Interest expenses | 60 | 62 | 591 |
| Foreign exchange loss—net | 44 | 580 | 432 |
| Loss (gain) on valuation of derivatives | 52 | (95) | 510 |
| Gain on sales of non-current assets | (150) | (118) | (1,465) |
| Loss on retirement of non-current assets | 58 | 127 | 570 |
| Loss on valuation of investments in capital | — | 540 | — |
| Loss on valuation of investment securities | 269 | 29 | 2,612 |
| Increase in trade notes and accounts receivable | (2,356) | (1,367) | (22,873) |
| Increase in inventories | (228) | (388) | (2,215) |
| Increase (decrease) in trade notes and accounts payable | 2,993 | (943) | 29,063 |
| Decrease in advances received | (36) | (37) | (350) |
| Interest and dividend received | 487 | 441 | 4,735 |
| Income taxes paid | (1,637) | (2,302) | (15,895) |
| Other—net | 836 | 859 | 8,118 |
| Net cash provided by operating activities | 22,953 | 12,743 | 222,848 |
| INVESTING ACTIVITIES: | | | |
| Decrease in time deposits—net | 2,108 | 47 | 20,469 |
| Purchase of securities | (8,000) | (6,000) | (77,669) |
| Proceeds from redemption of securities | 8,000 | 4,000 | 77,669 |
| Purchases of property, plant and equipment | (5,881) | (14,774) | (57,102) |
| Proceeds from sale of property, plant and equipment | 457 | 48 | 4,437 |
| Purchases of intangible assets | (127) | (145) | (1,238) |
| Payments into long-term time deposits | (23,000) | (14,000) | (223,300) |
| Withdrawal of long-term time deposits | 23,000 | 14,000 | 223,300 |
| Purchases of investment securities | (99) | (430) | (970) |
| Other—net | 62 | (31) | 606 |
| Net cash used in investing activities | (3,481) | (17,286) | (33,797) |
| FINANCING ACTIVITIES: | | | |
| Proceeds of long-term loans payable | — | 1,372 | — |
| Repayments of long-term loans payable | (309) | (99) | (3,007) |
| Dividends paid | (4,994) | (4,989) | (48,490) |
| Dividends paid for non-controlling interests | (884) | (770) | (8,584) |
| Proceeds from sale of treasury stock | 310 | 143 | 3,011 |
| Purchases of treasury stock | (2) | (1,371) | (25) |
| Other—net | (56) | (74) | (553) |
| Net cash used in financing activities | (5,937) | (5,789) | (57,649) |
| FOREIGN CURRENCY TRANSLATION ADJUSTMENTS ON CASH AND CASH EQUIVALENTS | (35) | (289) | (346) |
| NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS | 13,498 | (10,621) | 131,054 |
| CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR | 29,229 | 39,851 | 283,786 |
| CASH AND CASH EQUIVALENTS, END OF YEAR | ¥ 42,728 | ¥ 29,229 | $ 414,840 |

# 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

(As of December 31, 2020)

| Shareholder | Number of shares held (Thousand) | Rate of Shareholding (%) |
|---|---|---|
| Custody Bank of Japan, Ltd. (Trust Account) | 3,108 | 7.44 |
| The Master Trust Bank of Japan, Ltd. (Trust Account) | 3,062 | 7.33 |
| Meiji Yasuda Life Insurance Company | 1,826 | 4.37 |
| MLPFS Custody Account | 1,459 | 3.50 |
| MUFG Bank, Ltd. | 1,207 | 2.89 |
| The Bank of Yokohama, Ltd. | 1,026 | 2.46 |
| Tokyo Ohka Foundation for the Promotion of Science and Technology | 984 | 2.36 |
| Mitsubishi UFJ Trust and Banking Corporation | 953 | 2.28 |
| Mitsubishi UFJ Capital Co., Ltd. | 860 | 2.06 |
| Tokio Marine & Nichido Fire Insurance Co., Ltd. | 857 | 2.05 |

(Notes)
1. The Company owns 3,339,000 shares of treasury stock, which are excluded from the above major shareholders.
2. The ratio of shareholding is calculated from the number of shares (41,760,382 shares) obtained by subtracting the number of shares of treasury stock from the total number of shares issued.

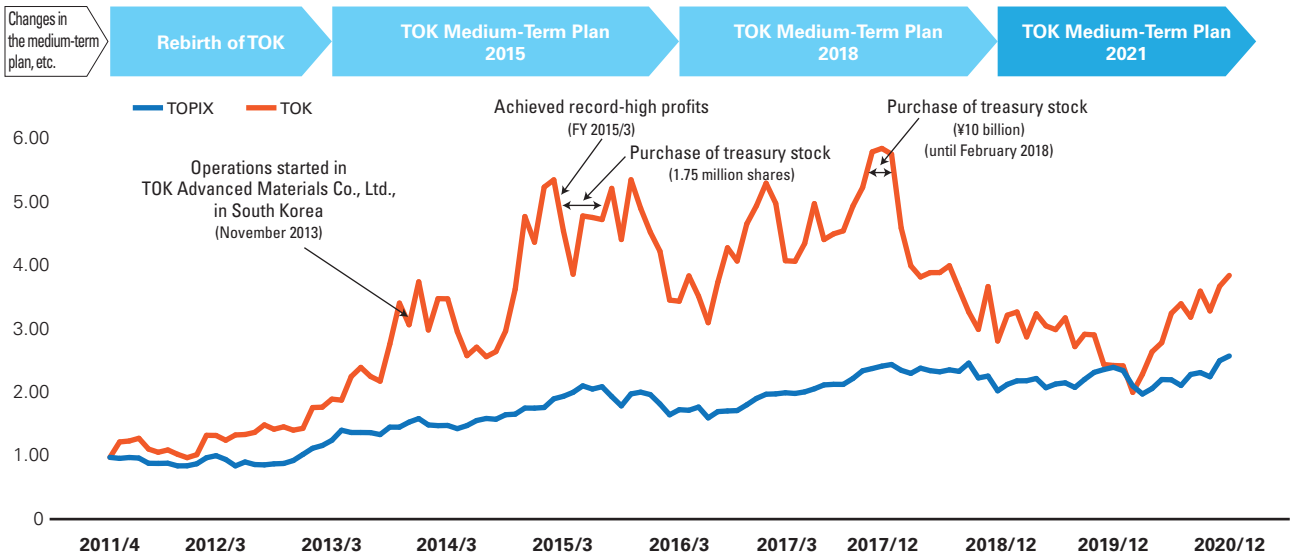
## Basic Stock Information

| | |
|---|---|
| Stock listing | First Section of 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, 2020) |
| Number of shares issued | 45,100,000 shares (As of December 31, 2020) |

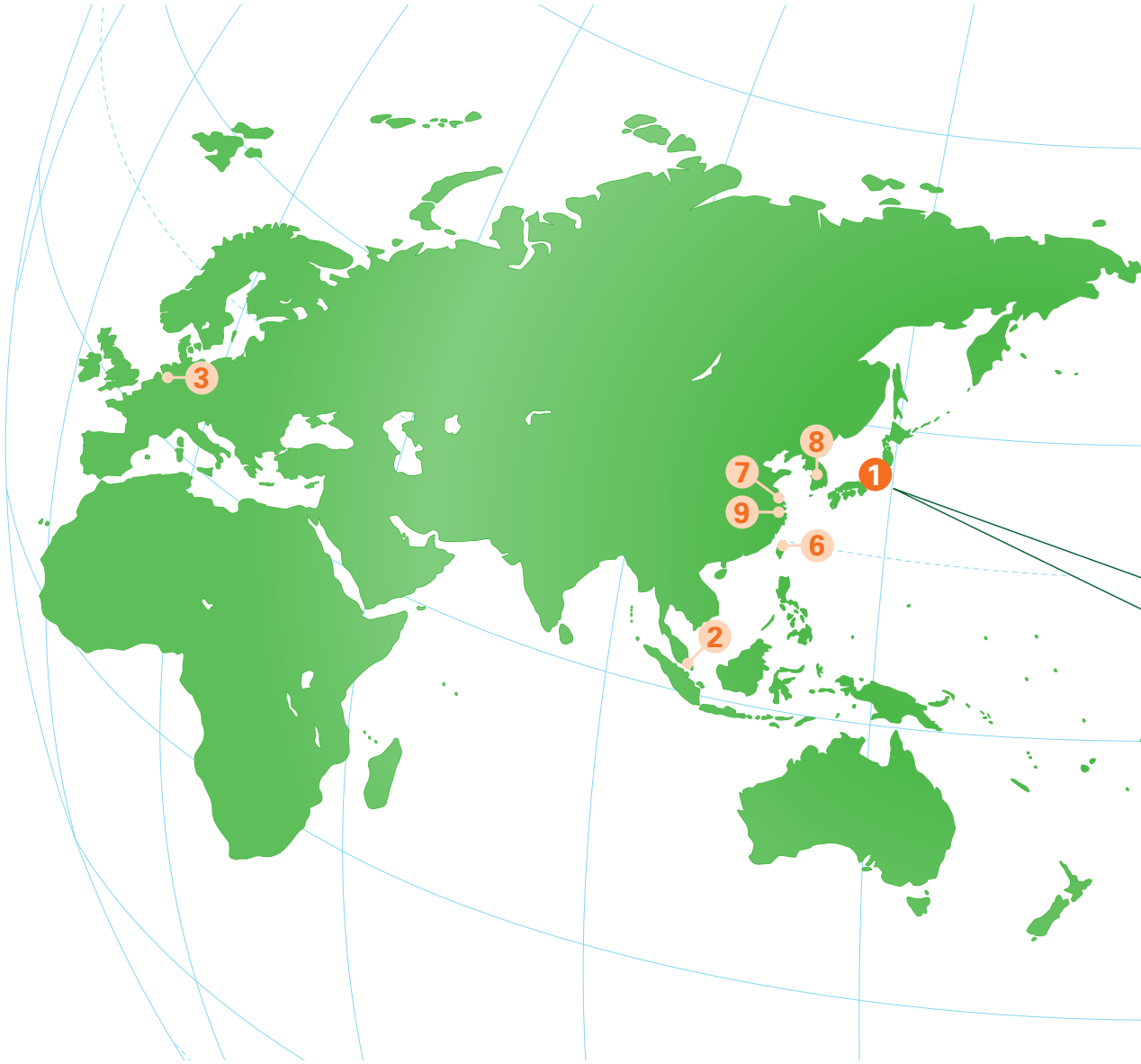
* The Company changed its fiscal year-end from March 31 to December 31 effective fiscal year 2017.

## Ten-Year Trends of TOK TSR

Relative comparison with April 2011 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

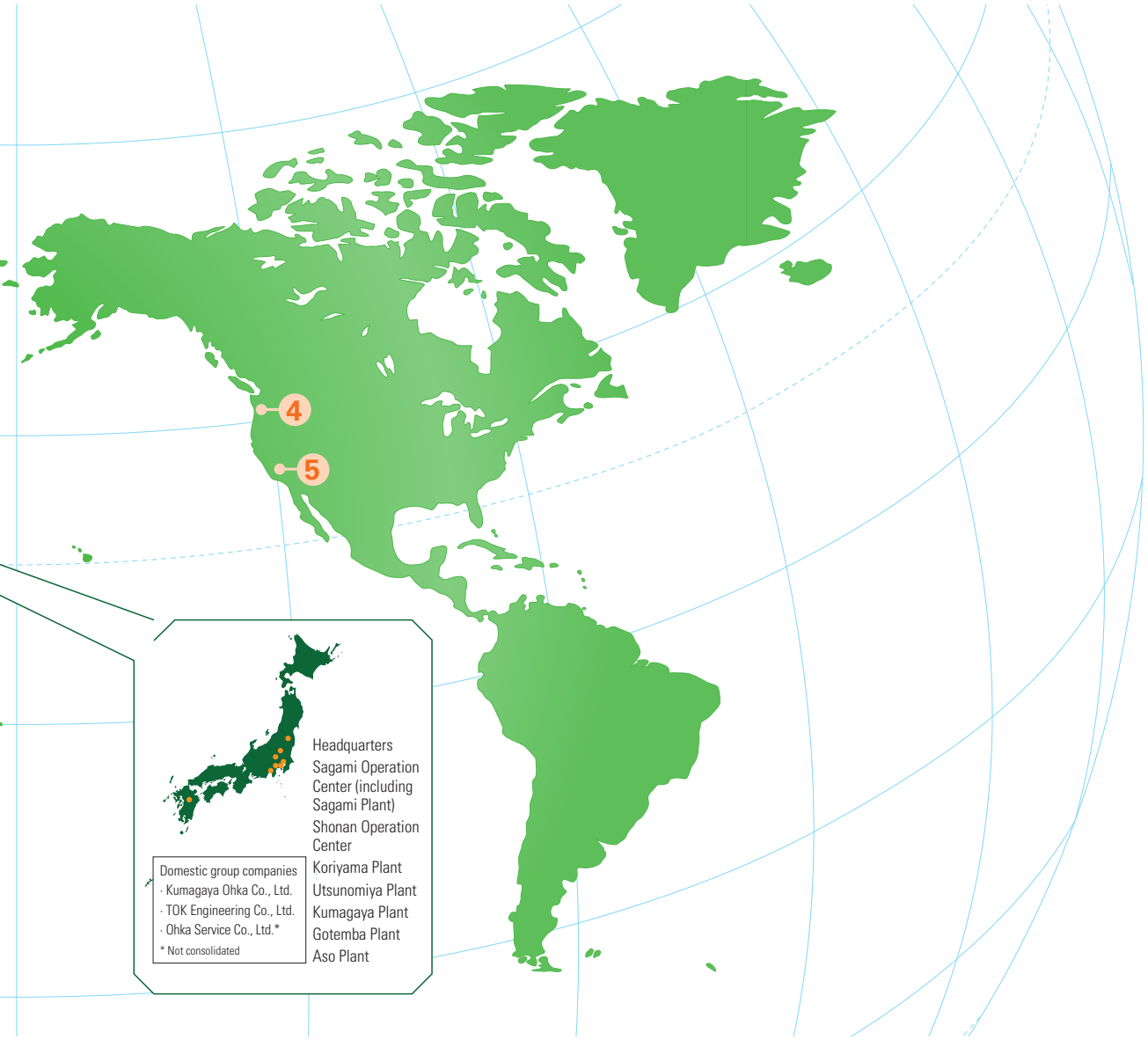
4 Headquarters/Oregon Plant
5 Sales Office (California)

## 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, 2020)

Headquarters

| | |
|---|---|
| Corporate Name | TOKYO OHKA KOGYO CO., LTD. |
| Established | October 25, 1940 |
| Headquarters | 150 Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa 211-0012 JAPAN |
| Number of Employees | 1,750 (Consolidated) |
| Paid-In Capital | ¥14,640,448,000 |
| Website | https://www.tok.co.jp/eng |
| Stock Listing | Tokyo |
| Investor Relations Contact | Public Relations Section, Corporate Communication Division<br>150 Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa 211-0012 JAPAN<br>Tel: +81-44-435-3000<br>Fax: +81-44-435-3020 |

## External Evaluation

### Selected or recognized for ESG-related indices, etc.

- SOMPO Sustainability Index
  (Constituent stock in fiscal 2021, selected for ten consecutive years)

2021 Sompo Sustainability Index

- MSCI ESG Rating
  (2018 to 2020)

Tokyo Ohka Kogyo Co., Ltd., was rated A in the MSCI ESG rating.

MSCI ESG RATINGS A

- MSCI Japan Empowering Women Index
  (2017 and from 2019 to 2021)

2021 CONSTITUENT MSCI JAPAN EMPOWERING WOMEN INDEX (WIN)

- MSCI Japan ESG Select Leaders Index
  (Selected for three consecutive years in 2021)

2021 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX

(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.

- S&P/JPX Carbon Efficient Index
  (As of March 21, 2021)

S&P/JPX Carbon Efficient Index

### Evaluations and commendations for various activities

- Intel Corporation
  Preferred Quality Supplier (PQS) Award
  (2016, 2018, 2020, and 2021)

- Texas Instruments Inc.
  Supplier Excellence Award
  (2018)


- Taiwan Semiconductor Manufacturing Company Limited
  2017 Excellent Performance in Lithography Material (2017)
  IMQR Award (2016)

- Nikkei Annual Report Awards
  Special Award
  (22nd session, 2020)
  Award for Excellence
  (2021, 2018, 2016)

- WICI Japan Integrated Report Awards
  Special Company Prize (Bronze Award)
  (2020)

WICI JAPAN INTEGRATED REPORT AWARD 2020

- Nikkei Science Advertising Awards
  Grand Prize (2016)
  First Prize (2015)

- Global Niche Top Companies Selection 100
  (Ministry of Economy, Trade and Industry)
  (2014, 2020)
- "Excellent Integrated Report" and "Report with Substantial Improvement"
  (2021, 2020)

Selected by the contract operator of the domestic stocks of Government Pension Investment Fund (GPIF)

# Third-Party Verification Report

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

**Integrated Report 2020**
**Third-Party Verification Report**

July 19, 2021

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 maters, covering "Integrated Report 2020" 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 to people responsible for relevant operations and people responsible for preparing the reports, receiving materials, and explanations.
- At the Gotemba 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 Gotemba 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 do not find any significant matters requiring correction.

3) Responsible Care and CSR activities
- In the unprecedented COVID-19 pandemic, it is worth evaluating that the Company's risk management system functioned effectively and rapidly, and that the Company took effective measures including shift to a personnel system responding to work from home and other changes, and the strengthening of information security.
- It is worth evaluating that the Company expanded the scope of the commendation system for technological achievements that have made a remarkable contribution to the corporate business, which was introduced in 1979, to the manufacturing and inspection departments in 2020 and started operation with the expanded scope.
- The Gotemba Plant acquired the ISO 45001 certification in 2020, and the Company plans to acquire the certification for all plants in Japan. The Koriyama Plant also took the RBA review, and the reviewer comments have been incorporated into safety activities at the plant. It is worth evaluating that systematic safety measures have been taken toward no accidents
- It is worth evaluating that the management executives have made investments considering environmental performance, such as utilization by recycled water resources and manufacturing effluent, energy efficiency based on the introduction of high-efficiency electrical appliances, in addition to investment efficiency, toward the reduction of environmental impact.

4) Distinctive characteristics of the Report
- The Report has been continuously upgraded with a shift to the Integrated Report since FY 2018, and with increased completeness incorporating sustainability since FY 2019 and with further enhancement with TCFD (Task Force on Climate-related Financial Disclosures) information starting this year.
- The Report has been edited with consideration for the ease of reading and understanding.
- The Report provides wide-ranging disclosure including negative topics (whistleblowing, environmental conservation, and occupational accidents, etc.)

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