

To Our Stakeholders — A Message from the President —



Challenge for the Future

I will drive TOK's sustainable value creation by strengthening our marketing to "Meet Social Expectations with Chemicals."

Noriaki Taneichi

Representative Director, President & Chief Executive Officer



TOK's Value Creation

◆ Providing High Added Value for Customers in All Our Output

The smartphone has become embedded in our lifestyles, as an essential part of our daily lives. The maturing smartphone market is unlikely to grow much more, given its large size already. In the coming era of 5G and IoT, however, the smartphone is evolving into a “hub” of new innovations, as one of the most important items that connect people with society. Smartphones compatible with 5G are forecast* to spread at a faster pace than previous mobile phones.

Do you know how much the data storage capacity of a major smartphone brand has increased over the 11 years since it emerged in the U.S. in 2007? It has actually increased 128 times. This could not have been achieved without fine chemical manufacturers like TOK supplying unceasingly evolving photoresists and other materials to global semiconductor manufacturers, helping them narrow the line width of semi-

conductors to less than one quarter of what they were 11 years ago. This advance, called semiconductor miniaturization, has allowed higher performance and smaller sizes in not only smartphones, but also many other types of electronic devices.

Semiconductor miniaturization has continued to contribute to the sustainable development of society by improving environmental performance and ensuring safety and security in our daily lives.

In addition to photoresists, all of our products and services deliver high added value for customers. Our products start as an input in the value creation process of customers, and have a special influence on the quality of customers’ output in terms of product quality and yields. In other words, the “Development and provision of high value-added products that will contribute to innovation,” one of TOK’s material issues, entails contributing to industrial evolution and technological innovation by providing high value-added tailor-made products alongside customers on the cutting edge of the world of technology. I believe this is the true essence of value creation at TOK, and a driving force behind the creation of shared value for our customers and society, which helps solve social issues.

* Source: IHS Markit

◆ Meeting Customer and Social Expectations with Chemicals

The semiconductor industry accounts for about 0.5%*1 of global GDP, but the ripple effects are several ten times higher than this figure when including the impact semiconductors have on final products and other industries. Semiconductors are essential for industry, and have been one of the most important industries from the standpoint of solving issues faced by the human race and for the sustainable development of society. Make no mistake, the value delivered by semiconductors will continue to increase into the future as well. Moreover, this means that the social responsibilities and public mission of TOK, as the world’s leading*2 manufacturer of photoresists, an irreplaceable material in semiconductor production, will only increase in importance.

Since being offered the position of president of TOK last year, I had been thinking about my final decision. The reason why was because I was regretful for the slow progress made

on reforming the business portfolio in the final year of the “TOK Medium-Term Plan 2018” as the person in charge of new business development, and also because I had spent the previous 14 years focused on marketing to create new business pillars to complement photoresists. I

needed this time to ask myself what only I could accomplish as president of TOK, and also to reassess the *raison d’être* for TOK in society.

While mulling for several months, I noticed that two Japanese characters in the Company’s name (Ohka) mean more than “applied chemistry.” They also mean to “meet expectations with chemicals,” and this is where TOK finds its *raison d’être*. The process of “meeting customer expectations with chemicals,” and ultimately solving the social issues behind customer expectations, is fundamentally the marketing that I had poured my heart into for many years. Once I realized this, it clearly dawned on me what my mission is. I will drive the creation of new value by further enhancing our marketing and continuing to hone our world-leading technological capabilities that have been accumulated over the past 80 years or so.

*1 Based on 2017 results (calculated by TOK based on data from the World Bank and World Semiconductor Trade Statistics)

*2 Share of sales volume for 2017 (Calculated by TOK based on Fuji Keizai’s “Whole View of Photo-functional Material and Product Market 2018”)

Honing our world-leading technological capabilities while further enhancing marketing

◆ Becoming a “100-Year Company” in 2040

Another reason to enhance marketing is to fortify TOK's ability to sustainably create value.

Our founder Shigemasa Mukai's philosophy has been passed down through the generations, and TOK has sustained growth with a business model that prioritized the continued development and introduction of high value-added products to the niche markets with rapidly changing technologies. With this in our DNA, we will not waver from the basic strategy of continuing to advance our world-leading high purification technology and microprocessing technology while staying in tune with customer needs.

However, to expand profits further and become a “100-year company” in 2040, we must continue to prosper in existing businesses while building new earning pillars. The pace of technological change in the electronics industry has accelerated, and development has become increasingly difficult every year. In the context of prospering and establishing new earning pillars against this backdrop, starting development after discussions with customers is already too late. We must enhance our marketing strategy to quickly build a marketing model in which we proactively repeat the cycle of hypothesis and verification.



◆ Meeting Social Expectations with Chemicals for a Sustainable Earth

While solidifying our ability to sustainably create value, we will continue to put into practice the four management principles we have had since our founding: “Continue efforts to enhance our technology,” “Raise the quality levels of our products,” “Contribute to society,” and “Create a frank and open-minded business culture.”

Given the rapid pace of change in the business environment and deepening seriousness of social issues such as climate change, I felt we must slightly reinterpret these four management principles in order to increase their effectiveness while redoubling our efforts. Going forward, we will put our management principles into practice based on a rewritten mission to “Explore new technologies and enhance technological capabilities to meet social expectations with chemicals for a

sustainable earth.”

By “meeting social expectations with chemicals,” we aim to enhance marketing and realize an abundant society with more conveniences. TOK will continue to refine its strengths that facilitate sustainable value creation on the cutting edge, while listening to the voices of its customers and working closely with them in various regions around the world. At the same time, we will improve our ability to take a bird's eye view of trends in society and markets.

The newly added “for a sustainable earth” reflects the rather large role that TOK should play in combating the increasing risks caused by climate change. For example, data

servers for the cloud computing environments that have grown exponentially over the past few years use a fair number of cutting-edge semiconductors that consume less power, but more electricity than is saved on the semiconductor side is required for air conditioning systems to cool down these computers. This

is because excess unconsumed energy is released as heat, one issue that we intend to solve by advancing semiconductors and the materials used to make them.

I majored in chemistry at university, partially out of concern for environmental problems, and I have long been very interested in environmental-related businesses. As products related to technologies that control electrons, TOK has provided cutting-edge photoresists that help reduce power consumption in semiconductors, i-Line photoresists for power semiconductors, as well as 3D packaging equipment and plasma ashing systems for power devices. TOK will develop materials that contribute to technologies for controlling heat and light in a bid to create new environmentally friendly products. In terms of technologies for controlling heat, we are developing high-functional films with high heat resistance, high chemical resistance, and ultra-low dielectric constants for use in high value-added lithium-ion batteries, for example. In terms of technologies for controlling light, TOK has been advancing joint development with Pixelligent Technologies, LLC in the U.S., in which it made an investment in April 2018, with the aim of creating high refractive index materials that should considerably help reduce power consumption.

In addition to these initiatives, TOK will enhance marketing in environmental-related fields while expanding its lineup of high value-added environmentally friendly products. The Company is in position to promote the creation of value for a sustainable earth.



Continue to hone our strengths that enable sustainable value creation on the cutting edge while working closely with customers

TOK Medium-Term Plan 2021



Review of the “TOK Medium-Term Plan 2018”

TOK recorded its first operating loss since going public in the fiscal year ended March 31, 2009, soon after the collapse of Lehman Brothers. Although the Company secured operating income in the following year of 2010, thanks to business structural reform, in order to reenergize shaken employee morale and aim for a new stage of growth, TOK formulated “Overarching aspiration” as its long-term management vision targeting 2020, 10 years into the future. Under the “TOK Medium-Term Plan 2018,” launched as a three-year plan for achieving our numerical target for operating income of ¥20 billion in 2020, we endeavored to “Reform business portfolios,” “Evolve strategy of building close relationships with customers,” “Develop global personnel” and “Strengthen management foundation” while making aggressive strategic investments.

Although TOK was able to see results in line with objectives for KrF excimer laser photoresists for 3D-NAND, high-density integration materials and high-purity chemicals, the Company was unable to get major customers to adopt its ArF excimer laser photoresists as expected, partly resulting from delays in major customers’ production plans, and it encountered delays in developing the Equipment Business and new business. As a result, operating income did not meet the target of ¥15 billion in the final year of the plan. Even though the global semiconductor market was expanding on an unprecedented scale, we regret disappointing many of our shareholders and investors by not reaching a new record high in profits, despite being the subject of their interest as a company with advantages in miniaturization, higher densities, and 3D packaging. During the new medium-term plan, TOK aims to stage a comeback in areas that led to the shortfall, namely ArF excimer laser photoresists, the Equipment Business, and the creation of new businesses.

However, TOK made considerable progress setting a foundation for sustainable growth in the future. The Company was able to secure a good position in the development of EUV photoresists for the 7nm node on the cutting edge of semiconductor miniaturization, thanks in part to results from open innovation. We successfully developed and won a major contract for ultra-high-performance clean solutions for the 10nm node. Our strategy of building close relationships with customers has advanced to a new stage, as we are building development systems even closer with this customer for reaching even

greater levels of miniaturization. In high-density integration materials, sales have grown to roughly quadruple their level six years ago, reflecting strong growth in materials for fan-out wafer level packaging, which contribute to the smaller sizes and lower energy consumption of smartphones, and MEMS materials, which enable high-density integration. I was extensively involved in the launch of this business about 10 years ago, coming up with a marketing strategy while working closely with the development team. Our decision to specialize in the development of next-generation high-resolution positive photoresists and not immediately enter the market was the right move in hindsight. With this as a model example of TOK’s future marketing strategy, we will steadily tackle growing customer needs in the 5G and IoT era.

With the preparations we made during the “TOK Medium-Term Plan 2018,” we will return to a growth trajectory while firmly leveraging our reinforced R&D and production bases inside and outside Japan. The “TOK Medium-Term Plan 2021,” launched in the fiscal year ending December 31, 2019, was created with “meeting customer and social expectations with chemicals” in mind.

Return to a growth trajectory by steadily reaping the benefits of preparations made to date

Basic Policies and Targets of the “TOK Medium-Term Plan 2021”

Under the “TOK Medium-Term Plan 2021,” we continuously aim to be a globally trusted corporate group by inspiring customers with high value-added products, the “Overarching aspiration for 2020” in our long-term management vision. Our qualitative goal is to “Cultivate niche markets that the TOK Group should develop.”

With the semiconductor industry likely to expand over the long term, TOK is prepared to aggressively pursue business opportunities in the Chinese market in particular. However, due to strong uncertainties arising from semiconductors being a focal point of the trade friction between the U.S. and China recently, we have set ranges for quantitative targets, and aim for operating income in the ¥15.0–20.5 billion range for the fiscal year ending December 31, 2021. With this target, we are focusing on measures to strengthen business portfolio reforms and return to a growth trajectory with the aim of attaining record-high profits in the second year of the plan. While this would be one year later than our target for operating income of ¥20 billion in 2020, we are keen to achieve this target.

◆ Growth Drivers in 5G, IoT and Innovation

As growth drivers for strengthening business portfolio reforms, we are focusing on maximizing opportunities that will arrive in the coming 5G and IoT era. It is estimated* that 5G will add a total of \$2.2 trillion to the global economy by 2034, and account for 5.3% of GDP growth, and semiconductors are likely to represent a large portion of this.

In addition to smartphones and tablet devices, all sorts of things, like automobiles, home appliances, and industrial equipment, will be connected to networks, and data obtained from various sensors will be processed digitally. All of these devices will require high-speed data processing capabilities in a society with 5G and IoT. Semiconductors will continue to see even greater demand for higher performance. Leveraging the advantages of 5G, namely high-speed, high capacity, low latency, and multiple simultaneous connections, it will become possible to alleviate personnel shortages in healthcare, construction, and logistics situations through remote operations. The spread of 5G and IoT will make it possible to solve a variety of social issues like this.

The TOK Group will focus on the following business strategies leveraging its technological capabilities accumulated over many years in the semiconductor front-end (miniaturization) and back-end (packaging, 3D packaging, etc.) processes, as well as its close relationships of trust with customers on the cutting edge of technology. TOK aims to help solve many issues faced by society while achieving the quantitative targets in the “TOK Medium-Term Plan 2021.”

* Source: GSMA Intelligence “The Mobile Economy 2019”

◆ ArF/EUV Photoresists

In ArF excimer laser photoresists for 10nm-level semiconductors, which are likely to be increasingly used in mobile devices, HPC*, game consoles and 5G base stations, TOK targets higher sales in the U.S. and South Korea, where customers have already adopted our photoresists, while seeking to expand sales in China. The Company also aims to steadily increase sales of EUV photoresists for 7nm semiconductors in Taiwan, where mass production is ramping up.

* High Performance Computing: Massive calculations and data processing performed by super computers and other high-performance computers

◆ KrF/i-Line Photoresists

In KrF excimer laser photoresists for 3D-NAND, which is expected to find greater use in data servers, mobile devices, automotive equipment and 5G base stations, TOK will firmly latch onto opportunities presented by more layers being added to 3D-NAND, along with higher production volumes, in Japan and Asia. For i-Line photoresists, TOK is engaging in R&D to create more added value to meet new emerging needs in line with advances in semiconductor devices.

◆ High-Purity Chemicals

As with ArF excimer laser photoresists, the Company plans to increase sales of clean solutions and high value-added thinner to customers that have already adopted our products for 10nm-level semiconductor processes in North America and Taiwan. Moreover, TOK will make efforts to expand sales of high-purity chemicals in China.

◆ High-Density Integration Materials

Among high-density integration materials for semiconductor devices, which are likely to be used in mobile devices and HPC applications, TOK intends to maintain its share in packaging materials with existing customers, while focusing on expanding sales to OSAT* manufacturers and winning adoption for cutting-edge processes. In MEMS materials, the Company aims to increase sales for high-frequency devices and expand the customer base in order to increase sales further.

* Outsource Assembly and Test: A business model that only entails the back-end process for semiconductor foundries

◆ Equipment Business

As the core product of the Equipment Business, TSV* equipment is the most promising piece of equipment for semiconductor 3D packaging and high-integration technologies. However, earnings have been stagnant in this segment due to the slow launch of the TSV market. Investors and analysts have criticized our strategy, suggesting we integrate it with the Material Business segment or withdraw entirely.

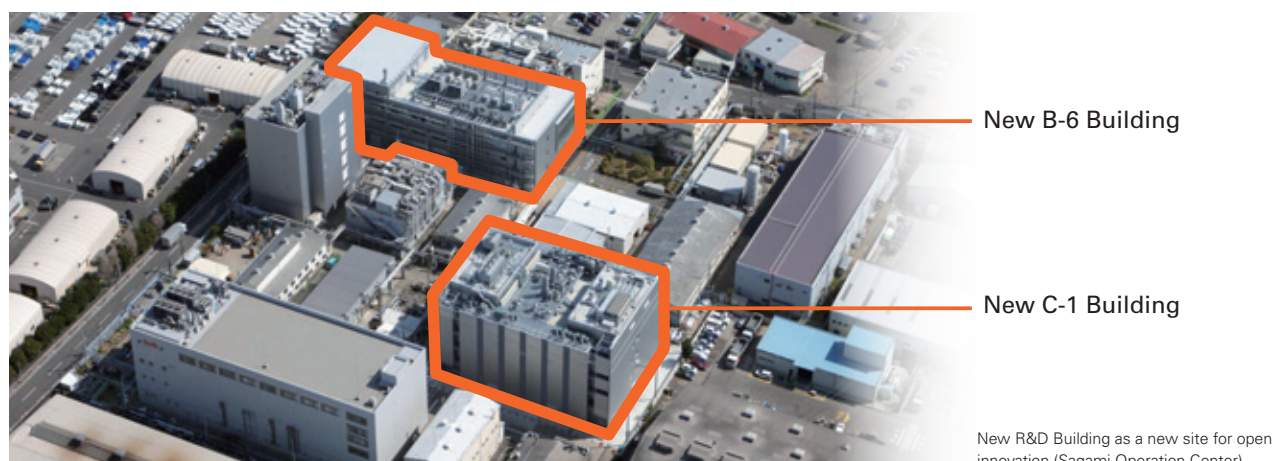
However, the Company’s Equipment Business focuses on niche domains that differ from major equipment manufacturers. We are focusing our energies on the M&E (Materials & Equipment) strategy for proposing “processes” that draw out the maximum potential of the characteristics of materials, based on our deep knowledge of semiconductor materials. Recently, our plasma ashing system and TSV equipment have been adopted for the production of power devices. We are confident that there are still many opportunities for growth backed by the Company’s strengths and recent social issues. To address the high cost structure, a feature of providing original solutions for each process at customers, we are moving ahead with measures to increase efficiency including integration of a related subsidiary and cost reduction.

* Through Silicon Via



M&E (Materials & Equipment) Strategy

Aim to achieve the quantitative targets in the “TOK Medium-Term Plan 2021” and help solve the many issues faced by society



◆ New Business

New business development plays a crucial role in strengthening business portfolio reforms. TOK is concentrating resources in the three fields of high-functional films, optical materials, and life science-related materials.

In high-functional films, an application of the Company's dry film photoresist technologies to porous polyimide, TOK is focusing on the expansion of sales and development of applications, as customers have begun to adopt our films in separators for lithium-ion batteries used in special applications that require high heat resistance and safety.

In optical materials, which enable both control and sensitivity of light, we are leveraging our production expertise for photoresists to develop nanoimprint materials and high refractive index materials.

In life science-related materials, the Company is keen to expand sales in Europe with biochips leveraging our photoresist technology beginning to be used in DNA sequencers*.

* DNA sequencer: This system rapidly decodes the base sequences of DNA, and is expected to contribute to the advancement of medical care and drug discovery.

◆ Investment Plan

TOK plans to spend a total of ¥31 billion on capital investments over the next three years in order to smoothly execute the aforementioned business strategies and maintain investments with long-term perspectives extending into and beyond the next medium-term plan.

Overseas, the Company is expanding production facilities in the U.S., South Korea, and Taiwan, and reaping benefits from R&D conducted during the previous medium-term plan while making preparations for future growth.

In Japan, TOK continues to invest in the Sagami Operation Center, its main R&D site for core technologies. Moreover, the Company is investing in a super clean room for the development of next-generation miniaturization products, and is constructing an open innovation facility to create new value with many stakeholders, which will be completed in September 2019.

◆ Company-Wide Strategies for Sustainable Value Creation

The series of business strategies and investment plans I have described so far have been formulated within the scope of our projections at this juncture, but actual technological innovation could exceed our expectations, or the projections of anyone else, and place unprecedented demands on speed.

With this in mind, the TOK Group intends to focus on the following four company-wide strategies and reinforce balance sheet management, in order to rapidly respond to sudden changes in the future, and to realize sustainable value creation.

Implement business strategies to steadily address recent needs, and company-wide strategies to realize sustainable value creation

◆ Company-Wide Strategy (1)

Accurately identify and rapidly address the customers' voice to build an even larger and stronger pipeline to customers—Rapidly and steadily work to develop a support structure rigorously focused on customer satisfaction along with R&D

Approximately five years have passed since the Company embarked on its strategy of building close relationships with customers, developing “the trinity” of development, manufacturing, and sales by establishing local sites close to customers in the U.S., South Korea, and Taiwan, the leaders in cutting-edge semiconductor fields. These local customers have adopted many of our products, especially our cutting-edge products. Our strategy of building close relationships with customers has become the norm, and is deeply ingrained in all employees at all front lines of the Group. On the other hand, every year the level of difficulty increases in developing products for cutting-edge fields, leading to an increase in projects requiring the collective capabilities of the TOK Group, and not just the resources of local sites overseas.

In this context, TOK plans to make its pipelines to customers larger and stronger by rapidly providing local customers with the highest added value from any site in the world.

Company-Wide Strategy (2)

Strengthen marketing, increase understanding of the customers' value creation processes and translate these efforts into new value creation—Through rigorous marketing, TOK will carefully identify solutions that lead to the creation of new value for customers as it makes intensive and proactive efforts to address those solutions

As we described above, our capability to develop high value-added tailor-made products by listening to customers and working closely with them over and over again is a strength of TOK that has been passed down since its founding. When I joined the Company, my superiors told me to simply get out of the office and visit customers, ingraining in me the importance of face-to-face communications. As a result of putting this idea into practice in Taiwan and the U.S., TOK was honored with best supplier awards from a major customer in the U.S. TOK will maintain this ability to work with customers, and will enhance its ability to sustainably create value. To this end, we will strive to resolve issues customers have not noticed yet, using our technologies based on proactive hypotheses and verifications of customers' value creation processes.

Supplier awards received in recent years

● Intel Corporation
"Preferred Quality Supplier (PQS) Award"
(2018, 2016)

● Texas Instruments Inc.
"Supplier Excellence Award" (2018)

● Taiwan Semiconductor Manufacturing Company Limited
"2017 Excellent Performance in Lithography Material"
"IMQR Award" (2016)



Company-Wide Strategy (3)

Strengthen human resources who can perform research, make decisions, and take actions on their own initiative—Bolster human resources that will pursue the possibilities of business with a variety of customers and continue to tackle challenges until they succeed

With close communications with customers embedded in its DNA, TOK has grown allowing customers to shape our HR development. In semiconductor-related business, sales to overseas customers now account for almost 80% of the total, and enhancing training for young employees has become an urgent issue. Accordingly, the Company plans to create a training system that mainly focuses on practical hands-on training in addition to classroom instruction during the first year of the "TOK Medium-Term Plan 2021," and then launch the new training system in the second year.

We are also augmenting our training system for employees in overseas sites. One of my most precious assets is the experiences I had in the semiconductor photoresist business for six years each in Taiwan and the U.S., which exposed me to the business philosophies of our customers overseas, as well as the experience I gained managing local employees. Based on these experiences, I aim to strengthen our human resources at overseas sites.

Company-Wide Strategy (4)

Strengthen management foundation

The Group Management System (GMS) is an initiative TOK undertook during the previous medium-term plan to prevent potential risks from emerging and to minimize the impact of such risks in all of the activities of the Group, since overseas sales account for roughly 80% of the total. In the current medium-term plan, the Company aims to increase the sophistication of the GMS. TOK has reinforced corporate governance, establishing the Nomination and Compensation

Advisory Committee in December 2018, appointing a Chairman and Representative Director in January 2019, and issuing corporate governance guidelines in April 2019. Under this new structure, the Company

will pursue more effective corporate governance. To use management resources more efficiently, we continue to focus on balance sheet management, as explained below.

Strengthen Balance Sheet Management

TOK intends to strengthen balance sheet management in continuation from the previous medium-term plan, focusing on an optimal balance between investment, cash reserves, and shareholder returns while responding to changes in the business environment.

TOK will ensure it has sufficient cash reserves to continue with the development of technologies that distinguish itself from rivals, taking on challenges even if development time frames become considerably longer. At the same time, management aims to improve ROE by enhancing asset efficiency while monitoring indicators such as ROIC and IRR. The Company will maintain R&D functions and expand production capacity at overseas sites, and keep risk reserves for rapidly restoring and rebuilding operations when the unexpected happens, including major disasters. TOK will ensure it has the wherewithal to fulfill its responsibilities as the world's leading supplier of photoresists.

New Shareholder Return Policy and Dividend Policy

TOK has updated its policies on shareholder returns and dividends for shareholders by more clearly explaining its approach to cash reserves with an emphasis on the steady and continuous return of profits to shareholders.

Starting with year-end dividend for the fiscal year ended December 31, 2018, the Company adopted a dividend policy that targets a DOE of 3.5% and increased the annual dividend by ¥32 to ¥96 per share. Management plans to distribute an annual dividend of ¥120 per share, up ¥24, for the fiscal year ending December 31, 2019.

As before, TOK flexibly conducts share buybacks as a means of returning profits to shareholders.

Updated our policy for steady and continuous shareholder returns, targeting a DOE of 3.5%

Aiming to Create Shared Value

◆ Putting Our “Contribute to Society” Corporate Philosophy into Practice throughout Our History

As discussed above, during a few months after being offered the position of President, I thought over the *raison d'être* for TOK in society, and took a long look back at TOK's involvement in society over the course of its history.

Since its founding, “Contribute to society” has been a core aspect of the Company's management philosophy, and TOK has had no shortage of opportunities to put this principle into practice in various situations. For example, our founder Shigemasa Mukai endeavored for six years to finally develop high-purity potassium hydroxide in 1934, an essential material in batteries for hard hat lights worn by coal miners back then. TOK played an instrumental role in improving the safety of coal mines, a major social issue during the early Showa era.

Furthermore, in 1955, TOK was the first company to successfully produce high-purity potassium silicate in Japan, a product it called Ohkaseal. This material lowered the cost of cathode-ray tubes used in black and white TVs, hastening their proliferation in households. Soon after World War II, Japanese citizens had a new form of entertainment in their lives that formed a cornerstone of the information society.

Among the experiences I have had since joining TOK in 1986, one of the most remarkable was TOK's development of the Spinless® coater in 2003 as a key piece of equipment for LCD production. The Spinless® coater reduced the amount of photoresists required in production by one-third, and even though this meant the Company's shipments of photoresists would decline, the Company prioritized the release of this product in order to reduce the impact on the global environment and help customers cut costs.

Moreover, TOK has made even greater contributions to society than these contributions in the display field by helping to reduce power consumption through the miniaturization of semiconductors, and providing photoresists and equipment for power devices, as has been mentioned before.

◆ Identification of Material Issues to Enhance Corporate Value

Taking stock of these contributions to society that TOK had made through these businesses, management created a list of material issues for enhancing corporate value as the first step for organically linking together its growth strategy to become a “100-year company” and the development of new businesses that will become its second and third pillars of earnings. The material issues for the TOK Group have been identified as “Development and provision of high value-added products that will contribute to innovation,” “Environmental protection,” “Chemical substance management,” “Enhancement of personnel measures,” “Occupational health and safety/security and disaster prevention,” and “Enhancement of corporate governance.” By aiming to contribute to the achievement of SDGs related to these material issues, TOK will strive to sustainably increase corporate value and create shared value.

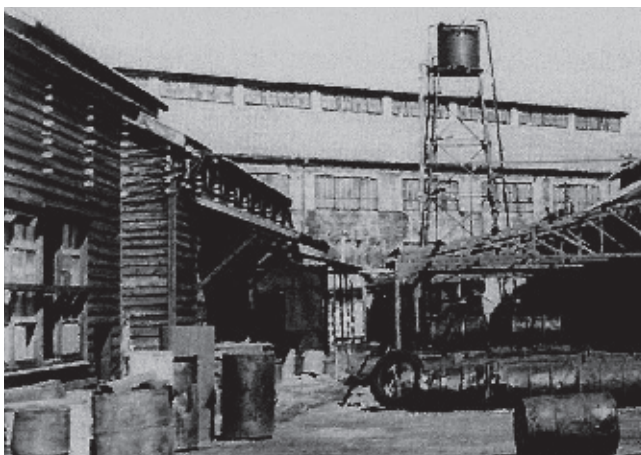
◆ Formulation of the 2030 Vision

There are about 18 months left until the final fiscal year of our “Overarching aspiration for 2020” that was created in 2010. Our long-term management vision will remain “Aim to be a

globally trusted corporate group by inspiring customers with high value-added products.” At the same time, TOK began to formulate its 2030 Vision this fiscal year, including new quantitative targets.

We are now running simulations of potential changes in the business environment and management resources over the next decade with senior department manager-class employees who will steer the operations of the Group in 2030. Using a backcasting approach, we are working on the composition of the business portfolio, quantitative targets and priority measures for 2030. We intend to share our 2030 Vision with stakeholders at a proper time during the current medium-term plan. I hope our stakeholders look forward to learning more about TOK's plans for value creation.

Formulating a new long-term management vision by backcasting



Kawasaki Plant in the 1940s

