

Message from the Director in Charge of Marketing

We are advancing our sales and marketing activities, motivated by the desire to meet the expectations of customers and society.



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Megatrends

■ 5G Communications as New Social Infrastructure

The key traits of 5G communications, namely high-speed, high capacity, low latency, and multiple simultaneous connections, are likely to greatly benefit not only smartphones and other mobile devices, but also IoT that connects things to the internet. 5G's low latency, which is one-tenth that of 4G, and multiple simultaneous connections, which are 10 times that of 4G, will make it possible to solve a variety of social issues, such as remotely operating machinery to deal with labor shortages in medical, construction, and distribution settings, in addition to improving the safety of autonomous vehicles and remote medicine. Big data generated by countless sensors will lead to the realization of smart cities that efficiently consume energy and intelligent transport systems (ITS) with fewer traffic jams and accidents. 5G is expected to play a vital role as new social infrastructure.

One of our management principles is to "contribute to society." Having identified the "development and provision of high value-added products that will contribute to innovation" as a material issue, TOK will continue to refine its world-leading microprocessing technology and high purification technology with the aim of contributing to the development of 5G communications as social infrastructure along with its customers.

Risks and Opportunities

■ Steadily Tapping into Numerous Business Opportunities

We anticipate numerous business opportunities in the 5G semiconductor device market. First, the Company will provide high value-added materials for 5G base stations that have begun to be installed in communications infrastructure. Since 5G signals travel along more linear paths and have shorter wavelengths than 4G signals, a much larger number of base stations will need to be deployed for 5G services. As these base stations use many semiconductors, TOK expects steady growth in earnings from the provision of advanced photoresists for 3D-NAND and 10–5nm semiconductors, and clean solutions for 10–5nm semiconductors. In addition to KrF excimer laser photoresists and i-Line photoresists for ubiquitous sensors, TOK is keen to steadily tap into demand for other types of photoresists for high-performance computing (HPC) applications that will quickly process the massive volume of data generated by sensors.

■ Focusing on 5G-related Trends in the U.S. and China

Competition in 5G has heated up between the U.S. and China recently. Therefore, there is a risk that 5G-related supply chains will be divided along lines drawn by the U.S. and China in the global semiconductor industry, semiconductor materials industry, and semiconductor manufacturing equipment industry, resulting in a slower-than-expected proliferation of 5G and growth in related markets. In response to this potential risk, the TOK Group takes the approach of dispersing risk through business development in the five regions of Japan, the U.S., China, South Korea, and Taiwan. Moreover, the TOK Group intends to minimize the impact of risks if they materialize by accelerating the reform of its business portfolios that began under the "TOK Medium-Term Plan 2015."

Marketing Strategy in the 5G and IoT Markets

■ "Unknown Domains" Not Currently Visible Are Keys

Currently, there is decent visibility on growth in demand related to base stations and HPC. In reality, technological innovation that exceeds expectations will be necessary for a new world to emerge from the proliferation of 5G. We believe successful marketing in the 5G and IoT market will hinge on discovering business opportunities in the "unknown domains" of technological innovation. In line with company-wide strategy (2) "Strengthen marketing, increase understanding of the customers' value creation processes and translate these efforts into new value creation" in the "TOK Medium-Term Plan 2021," the Company is concentrating its efforts on strengthening sales and marketing in these "unknown domains" of the 5G and IoT markets.

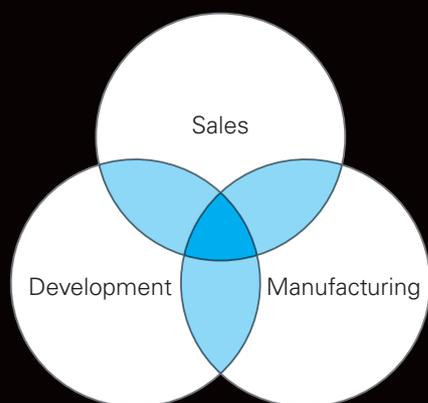
For example, one "unknown domain" of 5G communications is the faster speed of outgoing data transmissions, in addition to faster incoming data transmissions. This functionality is likely to be groundbreaking for sensor devices that transmit large volumes of data, and should present a major business opportunity in related materials. In April 2019, the Company merged together the Marketing Div., which was responsible for sales and marketing photoresists used to make IoT sensors, and the Panel Material Marketing Div., which oversaw the sales and marketing of materials for panel production, into the newly established Imaging Material Marketing Div. This brings together the Company's resources in the sensor and display fields, positioning it to

target growth in the sensor device market that is expected to expand strongly in the 5G and IoT era.

■ Marketing Strategy Based on “the Trinity” of Sales, Development, and Manufacturing

One more point to note in our initiative to strengthen sales and marketing is to evolve our strategy of building close relationships with customers that has been in motion since the “TOK Medium-Term Plan 2015.” This strategy of building close relationships with customers, which is based on “the trinity” of sales, manufacturing, and development, has gained momentum over the previous two medium-term plans, becoming an integral part of our front-line operations and a new aspect of our DNA, equivalent in stature to our aim to “create a frank and open-minded business culture.” Under the “TOK Medium-Term Plan 2021,” TOK will evolve this strategy of building close relationships with customers into a marketing strategy based on “the trinity” of sales, manufacturing, and development. Instead of having the marketing divisions do all of the marketing on their own, operations in sales, development, and manufacturing will monitor the latest trends in technologies and constantly propose methods that differ from before, while at the same time focusing on the creation of new niche top products by coalescing around new business models and measures to reduce costs.

Marketing strategy based on “the trinity” of sales, manufacturing, and development



 Driving force: Desire to meet the expectations of customers and society

Leveraging Strengths in Sales and Marketing

■ Driven by the Desire to Meet the Expectations of Customers and Society

Since its founding, TOK has created value by working closely with its customers. Our desire to meet and surpass the technological requirements of our customers while staying one step ahead of the times is embedded in our corporate culture, and it is also the driving force behind sales and marketing activities. For example, KrF excimer laser photoresists for 3D-NAND are products we have developed with the desire to meet customer requirements. We have increased

our market share in these photoresists lately, even though the market had almost matured and they had no longer played roles as cutting-edge materials in miniaturization, by tapping into new demands for thick-film formation, where the staircase structures unique to 3D-NAND are formed. Furthermore, our photoresists for IoT sensors, which have received high marks from our customers, are products we developed with the desire to meet customer requirements at a time when the growth potential of the markets was uncertain, allowing us to obtain a slice of the market.

In non-photosensitive materials, our high-functional films have begun to be used as separators in lithium-ion batteries for special B-to-B applications. These high-functional films are high value-added products that are beneficial to society within the context of reducing the risk of lithium-ion batteries catching fire, a social problem that we proudly took action to solve from a desire to meet society’s expectations, even though this choice entailed many hardships because creating materials with strong heat resistance requires a very large number of processes.

TOK will continue to evolve its sales and marketing activities, driven by the desire to meet the expectations of its customers and society.

■ Sharing Our Desire to “Meet Expectations” with Local Personnel Overseas

Since TOK began establishing local subsidiaries overseas in the 1980s, the Company has been deeply involved with not only local customers, but also local personnel in charge of sales and marketing at each overseas site. We have focused on sales and marketing from the unique standpoint of being driven by the desire to meet the expectations of customers and society, operating businesses in tune with local cultures. As a result, local personnel have come to deeply appreciate and put into practice this principle, becoming a new force in the Group for creating value.

New strength: Ability to create value through local personnel overseas

