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President & CEO

Driven by the spirit of our founder, handed down for more than 80 years, we will open up the future for TDK.

The TDK Group is bringing a sense of speed to driving self-transformation forward. By resolving social issues through a hybrid business model combining materials, components, and solutions, we will achieve sustainable growth in corporate value.

Always quick to sense society's changing needs

TDK has achieved sustainable growth through nonlinear change

About 80 years ago, TDK (then known as Tokyo Denki Kagaku Kogyo K.K.) was founded with the goal of turning “ferrite,” a unique Japanese invention, into a commercial product. At the time, ferrite was a completely unknown quantity, both in terms of its applications and its potential for commercialization. Our corporate motto, “Contribute to culture and industry through creativity,” embodies the spirit of originality expressed in the words of TDK’s founder, Kenzo Saito, who spoke of “creating value that does not yet exist in the world on a material level,” and also his belief that “if there is a will that something is truly of social value, there is a way.”

Over the years, this spirit of originality has been handed down at TDK, which has always concerned itself with what society will need next, and we have continued to generate original innovation—including the cassette tape in 1968, fine multilayering technology in 1980, and HDD magnetic heads in 1987—and contribute to society’s development. This ability to quickly sense society’s needs is what

has enabled us to replace our product portfolio before our main products enter their decline, and has allowed us to undertake a transformation of our business structure, leading to our sustainable growth.

Today, TDK is facing a new time of change. Growth has slowed in HDD magnetic heads, our mainstay product since the 1990s, and commoditization is expected to progress further across a wide variety of components we supply for use in smartphones and other information and communication technology (ICT) equipment. As we look ahead to this new society, concern is growing that reliance on *Monozukuri* (manufacturing excellence) alone, on our founding strengths in materials technology and process technology, will limit our ability to deliver sustainable growth.

To continue to “contribute to culture and industry” in the years ahead, TDK is embarking on a transformation, not only of its business portfolio, but of the very nature of the business itself.

Capturing the limitless potential of electronic components

To create “something that does not exist in the world” today requires change

It is difficult to accurately predict how future society will be shaped by the Internet of Things (IoT), artificial intelligence (AI), and other technologies. Still, we are confident in the limitless potential of electronic components. In 2015, TDK launched production of highly accurate, highly sensitive tunnel magneto resistance (TMR) sensors applying HDD magnetic head technology, marking its full-scale entry into the sensor market. Going forward, sensors will begin replacing functions in which people had previously intervened across a variety of fields, including automobiles, public infrastructure, and healthcare, and their potential will expand endlessly.

Power electronics is another very promising field, and power electronics technology and products are nothing less than TDK's core competence. I believe their potential for us is even greater than that of sensors, as the need for power electronics grows in every field—including in the home—to efficiently generate, supply, convert, and store electricity.

In the past, single issues were solved with single components. Going forward, however, problem-solving will become more difficult without a

composite of multiple, varied components. For example, the spread of xEV has brought us connected cars. However, as they are more widely equipped with advanced driver-assistance systems (ADASs), not only will they require multiple components to sense vibration, slope, temperature, and other factors, but they will also need wireless communications capability to accumulate and analyze that data. There is a countless number of fields where this kind of integration is needed. In addition, many of these processes require electricity. TDK has the potential to assemble and provide all of these components.

In many cases, these are things that currently “do not exist in the world.” To create them, we must reshape our business into something not found on just an extension of our traditional path. We need to shift from our origins in *Monozukuri*, providing customers with products that respond to their needs, to a focus on *Kotozukuri* (integrated solutions), offering solutions that anticipate those needs. Doing so will require a wide-ranging arsenal of technology.

M&A as a means to an end

The TDK approach to post-merger integration means respect for diversity and a willingness to hand over the leading initiative

TDK has, since prior times, made active use of M&A as a means of transforming its business portfolio. In many cases, we have developed our own acquisition candidates that have the technology we need to achieve our long-term growth strategy, examining them carefully in terms of whether or not our philosophies can be shared and our technologies integrated. We have also consistently taken an approach that gives the leading initiative in the business to the respective acquired companies, resulting in growth in corporate value for both sides.

For example, our HDD magnetic head business expanded significantly with our 1986 acquisition

of SAE Magnetics (H.K.) Ltd. (SAE). Thanks to the contributions of Ampere Technology Limited (ATL), acquired in 2005, TDK saw solid growth in net sales of rechargeable batteries. The EPCOS Group, a major German components manufacturer acquired in 2008, played a leading role in our growth in the smartphone market with, among others, its high-frequency components. Around 2015, we began moving forward with M&A centered on the sensor business, with an eye on possible gains from a sale through the transfer of the EPCOS Group's high-frequency components business. In that process, we narrowed our focus to

non-optical sensors, rather than optical sensors, a field in which we had no core technology and in which other companies already had a strong lead.

In March 2016, we made Micronas Semiconductor Holdings AG (Micronas) a subsidiary, building a beachhead in the market for Hall sensors, which make up 80% of magnetic sensors. At the same time, along with TMR sensors, pressure sensors, and temperature sensors, we bolstered our portfolio for the automobile industry and enhanced our expertise, enabling us to expand our sales channels. In December 2016, we added inertial sensors with high-accuracy MEMS technology to our portfolio with the acquisition of Tronics Microsystems SA (Tronics) as a subsidiary, marking the beginning of our entry into the aviation market. In May 2017, we completed our acquisition of InvenSense, Inc. (InvenSense), which developed the world's first

six- and nine-axis motion sensors. By adding MEMS technology-based inertial sensors, pressure sensors and ultrasonic sensors, microphones, and other products to our portfolio, we can now consider the entire non-optical sensor market a target.

In March 2017, we completed our acquisition of ICsense NV (ICsense), which develops and supplies Application Specific Integrated Circuit (ASIC) technology to read values detected by sensors and perform signal processing, as well as offering custom IC design services. This will enable TDK to design ASICs tailored to the characteristics of specific sensors, building an end-to-end value chain that extends from materials technology to sensor elements, signal processing, and software provision.

Through these M&As, TDK has built a balanced portfolio that allows it to approach a wide range of markets.

Open collaboration and an internal focus on continuing to develop competitive advantage

Materials and components refined over 80 years

Today, with the rapid changes taking place across all areas of society, we believe that basing ourselves in an open environment that includes other industries is the way to expand the range of solutions we can offer. For example, in wearable devices we are seeing an increase in opportunities for collaboration with universities and other institutions with the expertise to make use of data on vital signs to improve health. This is a new development that is different from the conventional electronic components business.

Semiconductor manufacturers will be particularly important partners as we work to create a new business model. Fourth generation mobile communication system (4G) smartphones today increasingly offer multiband capability, and also need to support a diverse wireless environment that includes wireless LAN and Bluetooth connectivity. With 5G expected to bring further complexity, IoT devices must be small and highly integrated while achieving sophisticated multi-functionality. Modularization technology is essential to that complexity. We believe that a rational approach going forward will be not to work alone, or to work with high-frequency components alone, but to offer modules and solutions by developing close relationships with semiconductor manufacturers.

This was behind the February 2017 establishment of our joint venture with Qualcomm Incorporated (Qualcomm), RF360 Holdings Singapore PTE Ltd. (RF360), a carve-out of our high-frequency components business. We are now working with Qualcomm on high-frequency solutions across a broad range of areas, including next-generation mobile telecommunications, IoT, and automotive-related fields. We are also engaged in a variety of joint development projects, including sensor reference design. Our hope is to build relationships with a wide range of semiconductor manufacturers, using our technology and products to give form to algorithms and leveraging our mutual strengths to generate new value.

While intensifying efforts toward open collaboration, there is another area we need to continue refining internally, and that is the competitiveness of our materials technology and process technology centered on magnetics, and of the passive components developed utilizing those technologies. These represent a competitive advantage TDK has worked to establish throughout its more than 80-year history, and a base for sustainable growth that cannot easily be imitated by other companies. They also form a solid foundation for our new business model.

A new business model**Creating a virtuous cycle of materials, components, and solutions**

Our technology arsenal is in place, and TDK is embarking on a new, hybrid business model that combines materials, components, and solutions. By refining our materials and components technologies, we have built a base of competitive, single components, and utilizing the resources of Qualcomm and other IC partners, we will offer high-value-added sensor solutions and power solutions in the priority ICT, automotive, and industrial and energy markets. By quickly tying the needs of these industries to our development efforts, we will further enhance the competitiveness of our components and expand volume, creating a virtuous cycle by connecting those components to high-value-added solutions. This in turn will increase the value of the business model as a whole, and result in expanded earnings.

In the sensor business, we will take advantage of our world-leading lineup of non-optical products, contributing to resolving customer issues with a variety of advanced compound sensors while also expanding into sensor fusion with the addition of software. At the same time, we will move forward to offer total solutions across a wide range of markets, not only for the automotive industry, but also for fields such as entertainment, IoT, and industrial equipment, including robotics. Our goal is to

become the world's No. 1 sensor solution provider (□□ P.36 Special Feature: Sensor Solutions).

With regard to power solutions, enormous potential exists even when narrowed down to batteries alone. Smartphones and automobiles are not the only things that run on batteries. There are many other familiar areas where solutions can be provided using light, safe, high-efficiency pouch cell batteries, including power tools and home appliances. The possibilities are also limitless for new applications, including drones, industrial robots, and automated guided vehicles (AGVs). TDK is proud to offer a broad array of products for the power conversion field, including DC-DC and AC-DC converters, as well as for the power control field. Further, we plan to offer high-value-added power solutions leveraging these technologies that allow for freedom of control over energy. One example is in the automotive market, where our magnets for power generating motors contribute to efficient power generation, and in power supply and charging, where we are going beyond sales of individual products such as compact, on-board chargers and coils to push ahead with practical development of a magnetic resonance wireless power transfer system for charging moving vehicles (□□ P.38 Special Feature: Power Solutions).

Goals of the InvenSense acquisition**The foremost objective is to obtain the ability to conduct a fast-paced business and draw out future needs**

The background to our approximately U.S.\$1.3 billion investment in acquiring InvenSense requires, I think, a more detailed explanation. This acquisition aims for an impact viewed from a long-term, big-picture perspective.

One reason for the decision was, as mentioned earlier, the fact that this will enable us to target the entire non-optical sensor market through the acquisition of MEMS sensor technology.

Also a factor was our determination that we could significantly increase the corporate value of InvenSense. While the company's portfolio is centered primarily on inertial sensors for the mobile

and IoT markets, it has particular strengths in MEMS technology. By combining that technology with a wide variety of the TDK Group's sensors, and by utilizing our sales channels, we can expand the potential for market development and build a balanced customer portfolio. In doing so, we will enhance corporate stability, and, by further leveraging our piezoelectric elements, also bolster our development of next-generation products. Additionally, use of mounting technology and semiconductor embedded substrate (SESUB) technology will make a variety of other composite products possible.

InvenSense is the first fabless company acquired by TDK. Previously, we had sought out value in companies that vertically integrated everything from development to production, acquiring manufacturing firms. Meanwhile, the value in InvenSense, a fabless company, lies not in its manufacturing capabilities, but in its ability to accurately translate customer needs into the product designs and prototypes it provides. This ability to conduct a fast-paced business and draw out future needs is precisely the value in which I have the

highest expectations. It would not be exaggerating to say that InvenSense holds the key as TDK looks to expand its solutions business. In the sensor business, we have already begun sharing in their expertise. We hope to work together from a short-term, medium-term, and long-term perspective to utilize our customer bases, expand our portfolio of products that apply our respective technologies and applications, and ensure this partnership generates synergy.

Speed increases competitiveness and profitability**Under a "First-to-Market" approach, we are working to increase our speed Companywide**

The cassette tapes and HDD magnetic heads that have driven our growth, and the battery business led by ATL, all have speed in common—the ability to quickly deliver products that anticipate market needs. As change accelerates in the years to come, speed will become an increasingly important factor in business.

Speed is also an important target of M&As and business tie-ups. For example, the ability of InvenSense to respond quickly directly accelerates the speed of business, and by bringing their production in-house at TDK, we can significantly reduce the lead times required for prototype development compared with contracting production outside. The total value chain we have built through our collaboration with Qualcomm and our acquisition of ICsense similarly bring speed to development.

Based on this thinking, I have proposed a "First-to-Market" approach, and by involving development, production sites, and all of our other organizations and personnel in the effort, we are making a strong push to speed up our business.

Development is being encouraged to of course anticipate the needs of the market, but also to stay ahead of our road map by getting an early start on development efforts. The value-added time when we manufacture at our production sites in fact represents only about 20-30% of the overall time. The rest can be considered non-value-added time, during which for one reason or another the flow of production has fallen behind. We are now promoting reduction of non-value-added time, not just at our production sites but in all of our divisions. We are also advancing efforts to shift our business from a monthly to a weekly basis. This allows for a more flexible response to changing plans, and also reduces waste, which we believe will greatly shorten the business cycle.

I believe that improving our cost rate and shortening our cash conversion cycle are certain to lead to a stronger earnings structure for TDK. By shortening working hours, efforts to reduce non-value-added time will, I think, also contribute to enhancing human productivity.

Near-term performance trends and an outline for medium-term growth

Many seeds being planted for growth under the next Medium-Term Plan

Fiscal 2017 was positioned as the year we decided and embarked on building a new business portfolio aimed at future growth. While operating income increased 2.2 times year on year, excluding the ¥144.4 billion gain on the sale of our high-frequency components business, it actually fell by 9.2%. Our goal for fiscal 2018 will be to bring our operating income ratio to levels sufficient to fill in for what was carved out, but it is expected to remain at 7.2%, and neither the operating income ratio nor ROE will achieve the target of greater than 10% set out in our current Medium-Term Plan.

Next year, we will be announcing our upcoming three-year Medium-Term Plan, and a clear explanation of TDK's growth strategy for building a new business model, upon which we have already embarked, will be provided then. At that time, we will also officially report on our numerical targets, but for now, I would like to just touch on the outlines. In fiscal 2021, the sensor business is expected to still be in the midst of generating synergies with the companies we have acquired. However, we

hope to increase our share of that market, which is expected to grow at an annual rate of 8%, from approximately 13% today to around 20%. We envision net sales roughly doubling from current levels, reaching the ¥200.0 billion range. Given the current situation, I think we have the ingredients to make that happen. In addition, there will be ¥1,200.0 billion from organic growth* in our existing components business, as well as ¥200.0 billion in net sales from sensors and an additional ¥100.0 billion in power solution-related sales, centered on power supply products. That total of ¥1,500.0 billion in consolidated net sales is what we are picturing for the final fiscal year of the plan. As we build a new business model, we will simultaneously strengthen our earnings structure. We will be examining our income goals more closely going forward, but my hope is to attempt to generate operating income on a scale of ¥200.0 billion.

* Growth realized by utilizing internal resources to expand current product sales.

Laying a foothold for the next Medium-Term Plan

Focusing on building a strategic foundation

In fiscal 2018, we will move steadily ahead with preparations for our next Medium-Term Plan.

Our most important issue will be to strengthen our passive components and materials businesses, which form our strategic foundation. We will focus particularly on enhancing QDC (Quality, Delivery, and Cost) competitiveness by strengthening our *Monozukuri* power.

TDK will be expanding its business in the automotive market and other fields where the quality of components involves human lives. Product life cycles are expected to extend from about three to five years for home appliances, and to 10 years or more for components in continuous use in automobiles and public infrastructure. Our mission thus becomes one of not only providing conventional quality assurance at the time of shipment but also ensuring post-shipment quality assurance. I think this will, in turn, lead to greater competitive

strength. TDK combines "Industry 4.0" concepts with a "zero defect" quality approach, pursuing not only production efficiency, but ensuring rigorous quality control from the initial materials by utilizing IoT in upstream management, enabling us to achieve overwhelmingly reliable quality. At our new factories in Akita Prefecture, we are moving forward with deployment of a new model line, beginning with our multilayer ceramic capacitor production line, that will take data on energy consumption patterns, vibrations, and other information detected by a variety of sensors to form a store of big data, which will be compared with and analyzed against quality data. Eventually, this will be extended to ferrite, magnets, batteries, and other products, then rolled out at production sites around the world, allowing us to achieve location independent production that will ensure identical quality worldwide.

In the sensor business, we have integrated an organization that was scattered across a variety of business units, establishing Sensor Systems Business Company, comprising six Group companies with development and production sites in 13 countries worldwide. We will ensure a speedy launch of the sensor business by sharing resources and promoting cross-divisional collaboration in development, marketing, and production. We also plan to begin putting structures in place for the expansion of our energy-related businesses.

Maturation of the market for HDD magnetic heads is expected to progress further, with the exception of HDDs for nearline applications, where the number of heads installed in each HDD is

expected to increase. By providing thermal-assisted recording and other advanced technology, we aim to support our customers while building a lean operation centered on Headway Technologies, Inc. (Headway Technologies) of the United States and SAE to ensure stable earnings. We also plan to merge the production and development technology of Hutchinson Technology Incorporated (Hutchinson), acquired in October 2016, achieve vertical integration of the suspension business, and maximize the synergies of the business merger, under a policy of extending application of the company's technology to new components in the ICT market and elsewhere.

Pushing forward to become a "centennial company"

Continuing to pursue what society needs

Having embarked on new reforms, no issue is more important for TDK than people as we solidly execute our strategy, prepare to mark our 100th anniversary in 2035, and work toward the continued expansion of corporate value beyond that milestone. Since first setting out to globalize its business in 1950, TDK has cultivated strength of diversity, readily accepting the varied cultures and values of the companies we have acquired and incorporating their dynamism in our business. Of our 18 current corporate officers, six are non-Japanese, and we have made steady progress in diversifying our management ranks ([□□ P.64 Corporate Governance](#)). Still, for TDK, which has become an even more diverse group through its M&As in recent years, to grow into a truly global company, we must strengthen our human resource management to ensure the entire Group is headed in a common direction. In April 2017, Andreas Keller was appointed as General Manager of Human Resources and Administration HQ at TDK Corporation, and we are moving forward with efforts to promote cross-border personnel exchanges and establish human resource development and training policies that are consistent across the Group. We are also working to identify talented personnel on a global basis and put in place structures for making high-level use of their capabilities.

The most important thing we must continue to protect and put into practice if we are to maintain sustainable growth is the founding spirit I referred

to at the beginning. I intend to see that our Group-wide motto, "Contribute to culture and industry through creativity," spreads even further within the Group, so that we remain sensitive to identifying what society needs next and able to resolve society's issues with a creativity unique to TDK. In addition, with locations in approximately 30 countries worldwide, and with over 90% of its net sales occurring overseas, TDK is also dealing with an expanding supply chain as globalization has accelerated in recent years. This brings a commensurate increase in the risk that we may place a greater burden on regional communities and the environment. Our hope is that as we offer a competent response to sustainable development goals (SDGs) and other societal demands, we can work with society to achieve sustainable growth.

The road ahead for TDK does not exist as an extension of the roads we have already traveled. More than 80 years ago, Kenzo Sato held to the belief that "if there is a will that something is truly of social value, there is a way." We carry that belief with us today, and as one TDK Group, we continue the challenge of opening up the future.

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Shigenao Ishiguro

President & CEO