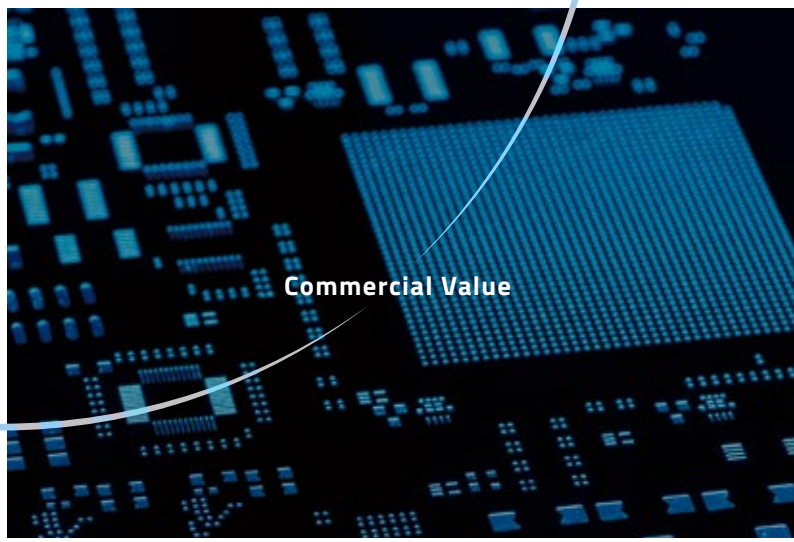
Attracting Tomorrow

Maximizing Three Values

ANNUAL REPORT 2019

- English Version -



TDK's Sustainable Development Policy

Founding Spirit

社是

創造によって

文化産業に貢献する

Corporate Motto
Contribute to culture and industry through creativity

Superheterodyne-type radio
Realizing much better sound through the use of a ferrite core formed the starting point of TDK's contribution to culture and industry.

Common black-and-white consumer TV set
As consumer TV sets became extremely popular during the high economic growth period, ferrite from TDK was extensively used as a core material for deflection yokes on cathode-ray tubes. The move toward bigger screens was also supported by improved performance of the deflection yoke cores.

Dr. Yogoro Kato (left) and Dr. Takeshi Takei

Dr. Kato's laboratory at the Tokyo Institute of Technology

1935

The world's first coils with ferrite cores

In 1935, Dr. Yogoro Kato at the Tokyo Institute of Technology received a visit from Kenzo Saito, who later founded TDK (initially Tokyo Denki Kagaku Kogyo K.K.). Dr. Kato expressed the opinion that "all of Japanese industry so far relies on borrowing from the West. Unless we use our own brain power, it cannot really be called Japanese industry. We need to apply Japanese creativity to develop our own industry." During the visit, Dr. Kato showed Saito a magnetic material called "ferrite" that he had developed together with Dr. Takeshi Takei. The potential of this material at that point was still a total unknown.

What is ferrite?
A magnetic body sintered with metal oxide as the main component. The birth of this new material marked the beginning of a dramatic evolution in electric and electronic technology on a worldwide scale. In 2009, the Institute of Electrical and Electronics Engineers designated ferrite as an IEEE Milestone, recognizing it as a development with significant impact on the advancement of industry and society.

IEEE Milestone plaque

TDK's founder Kenzo Saito

TDK, established by Kenzo Saito with the purpose of commercializing this original Japanese invention, was one of the original venture enterprises that came out of university research. In 1937, the Company was the first worldwide to successfully market ferrite cores for use as components in communication equipment. Following the turbulent times of WWII and its aftermath, Japan's reconstruction entered a phase of high economic growth. TDK's products played an important role as the sound quality of radios and telephones improved and eventually television conquered the market. Saito's stance with regard to technology was to ask what kind of improvement it could bring to the development of society. He always strove to create new value from the materials level on up. As an embodiment of this founding spirit, TDK has continued to reinvent itself and to bring forth innovations that respond to the true needs of society.

Ferrite cores in the early years

Ferrite core catalog

A Stream of Innovations to Enhance Modern-Day Life

Creating New Social Value with Technologies

Cassette tapes triggered a revolution in personal music enjoyment, which became possible anytime, anywhere.

1968
World's first cassette tape designed for music

The 1960s saw the birth of a standard for encapsulating magnetic recording tape in a cassette shell. TDK played its part by developing the world's first cassette tape designed specifically for music.

Notebook-size computers, portable video cameras, cellular phones, and many other compact electronic devices that have flourished since the 1980s would not have been possible without this technology.

1980
Fine multilayering technology breaks new ground

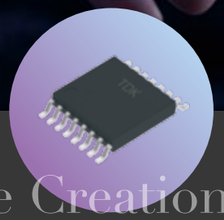
In 1980, TDK became the first company worldwide to successfully realize a fine multilayering process for printing internal electrodes on a sheet of ferrite or similar and stacking them in an alternating left/right pattern to create a multilayer chip inductor.

Amazing advances in hard disk storage capacity changed the use of personal computers both for work and for game playing. Further breakthroughs are currently driving the evolution of cloud computing.

1987
Development of thin-film magnetic heads enables amazingly high recording density

The thin-film magnetic heads that allow extremely high recording densities were developed by applying thin-film process technology at the nanometer level.

The IoT, AI, robotics, and autonomous driving are just some of the developments that have brought the smart society of the future within close reach. Harnessing technologies that have been refined and perfected over the years, the age of a new level of convenience is about to begin.



Value Creation 2020
Leap to new heights by providing market-needed solutions based on our electronic components business

Our current Medium-Term Plan entitled "Value Creation 2020" comprises the creation of Social Value as a major aspect. By delivering products that make meaningful contributions to overcoming important social challenges, we are also growing our business.

Monozukuri Power Sustained by True Hands-On Expertise

Five Core Technologies

With a firm background in magnetics technology and ferrite, we are expanding the horizons of electronics through five core technologies.

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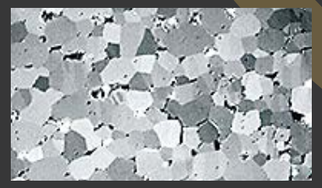


Materials technology

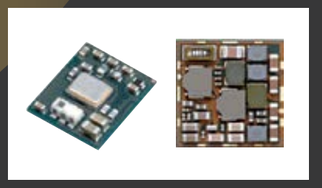
Over 80 years of hands-on experience grants us an enormous competitive advantage.

Process technology

Nanometer-order control technology gives rise to dramatic innovations.

Evaluation and simulation technology

Highly accurate analysis down to the microstructural level improves product functionality.



Product design technology

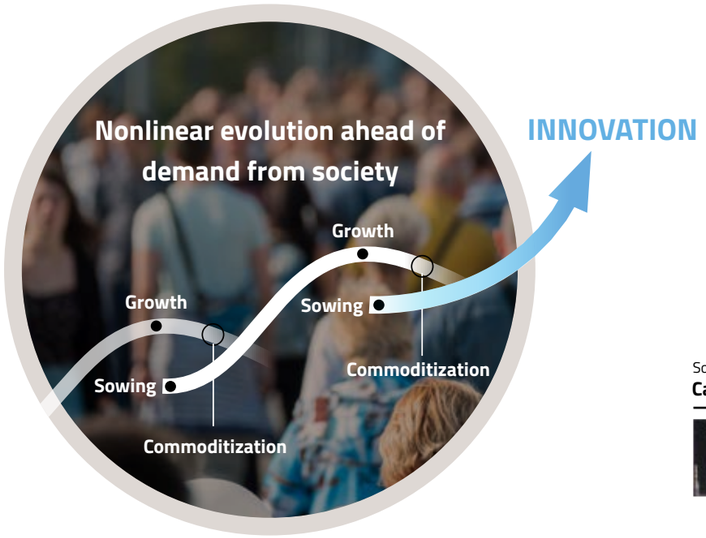
A wealth of expertise and know-how is reflected in products of true value.

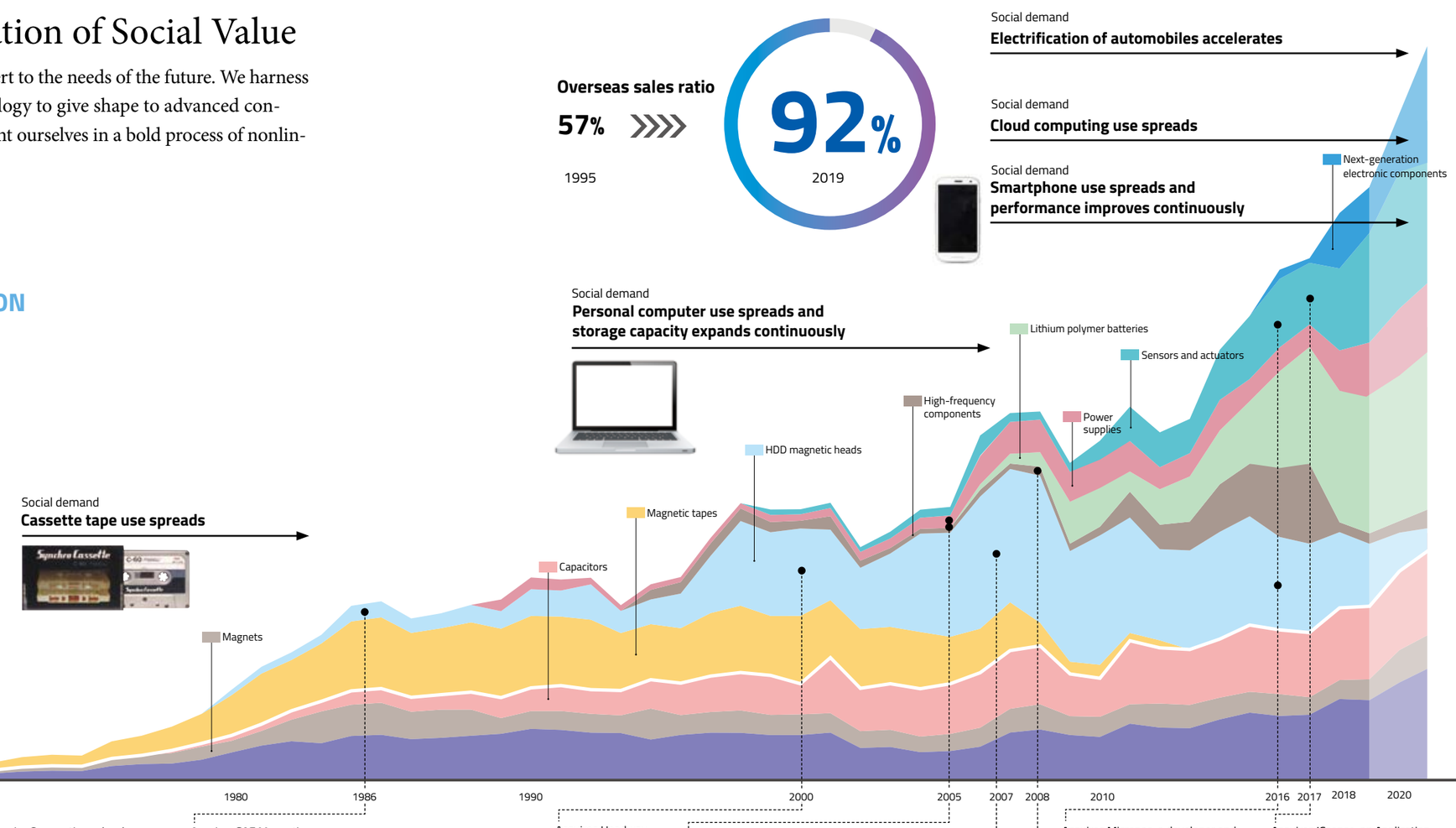
Production technology

Advanced fabrication equipment developed and manufactured in-house lets us turn our *Monozukuri* (manufacturing excellence) approach into tangible form.

Self-Transformation toward the Creation of Social Value

Even at a time when current products are going strong, we are always alert to the needs of the future. We harness our core competence such as materials technology and process technology to give shape to advanced concepts, and we are not afraid to reform our business structure and reinvent ourselves in a bold process of nonlinear evolution. This is how TDK is realizing sustainable development.





Corporate History

- 1935 — Founded in Shiba-ku, Tokyo, with the goal of commercializing the world's first ferrite core.
- 1961 — TDK shares listed on the First Section of the Tokyo Stock Exchange.
- 1965 — Establishes TDK Electronics Corporation, a local subsidiary in New York. Since then, manufacturing and sales sites later established around the world.
- 1986 — Acquires SAE Magnetics, a magnetic head manufacturer.
- 2000 — Acquires Headway Technologies, a magnetic head manufacturer.
- 2005 — Acquires ATL, a manufacturer and seller of lithium polymer batteries.
  Acquires Lambda Power Group, the power supply business of Invensys plc.
- 2007 — Acquires EPCOS (currently TDK Electronics), an electronic device manufacturer.
- 2008 — Acquires Magnecomp, an HDD suspension manufacturer.
- 2010 — Acquires Micronas, a developer and manufacturer of magnetic sensors.
  Acquires Hutchinson, an HDD suspension manufacturer.
  Acquires Tronics, a MEMS design and manufacturing company.
- 2016 — Acquires ICsense, an Application Specific Integrated Circuit (ASIC) development and custom IC design company.
- 2017 — Acquires InvenSense, a company with an extensive portfolio of MEMS and other sensor products.

Ferrite tree

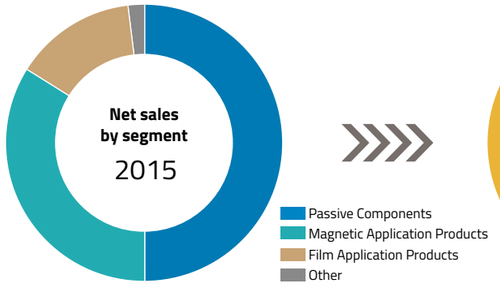
TDK, which positions ferrite at its foundation, has created various kinds of products.

Ferrite

- Ferrite cores
  - Inductors
    - Transformers
    - Reactors
    - Noise suppression filters
    - Clamp filters
    - Chip beads
  - Common mode filters
    - 3-terminal filters
      - Varistors
      - Arresters
      - NTC/PTC thermistors
  - Radio wave anechoic chambers
  - Radio wave absorbers
  - Noise suppression sheets
- Ferrite magnets
  - Neodymium magnets
  - Bond magnets
- Ceramic capacitors
  - Film capacitors
  - Aluminum electrolytic capacitors
  - Electric double-layer capacitors (EDLC)
- Lithium polymer batteries
- On-board chargers
- Switching power supplies
  - DC-DC converters for xEV
- Thin-film electronic components
  - HDD magnetic heads
  - TMR sensors
  - Biosensors
  - Temperature sensors
  - Current sensors
  - Gear tooth sensors
  - Acceleration sensors
  - Ultrasonic sensors
  - Gyroscope sensors
  - Inertial sensors
  - MEMS microphones
  - Pressure sensors
  - Hall sensors
- Film solar cells
  - Transparent conductive films
- Flash storages
  - Flash memory controllers
- Piezo actuators
  - PiezoHapt™ / PowerHap™
- Semiconductor embedded substrate (SESUB) modules
- High-frequency components and modules

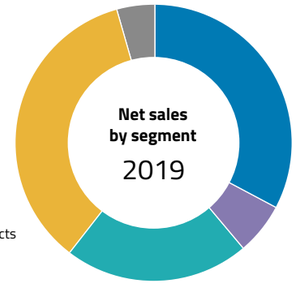
Looking toward Further Nonlinear Evolution

While existing products such as passive components and lithium polymer batteries are performing well, TDK is currently actively pursuing a new business structure based on a long-term perspective, with a view toward upcoming changes in the fabric of society.



Consolidated net sales
¥1,082.6 billion

Consolidated operating income
¥72.5 billion



Consolidated net sales
¥1,381.8 billion

Consolidated operating income
¥107.8 billion

Passive Components
31.4% (¥433.4 billion)

Sensor Application Products
5.5% (¥76.5 billion)

Magnetic Application Products
19.7% (¥272.8 billion)

Energy Application Products
38.9% (¥537.5 billion)

Other
4.5% (¥61.6 billion)

A new world is coming with advances in the IoT and AI whereby everything will connect via the Internet and behave and be upgraded autonomously. In such a world, we expect the following business opportunities to emerge in which we can make use of our core technologies.

- **Numerous sensors will connect the real world and cyberspace; steady growth is expected in our target non-optical sensor market.**
- **Demand will expand for small, large-capacity, high-reliability batteries supporting the autonomous operation of "things."**
- **The electrification of automobiles will advance further, with autonomous driving vehicles to appear in the future.**
- **The IoT will accelerate the digitization of manufacturing and its conversion to a service.**
- **Renewable energy will spread rapidly.**

In our existing businesses, the following changes in the business environment have been clearly observed.

- **Shrinking of the HDD market for consumer products, but growth in demand for data centers**
- **Demand for modularization due to the further enhancement of smartphone functionality**

Strengths Sustainably Creating Social Value

Different and difficult to imitate
Materials and Process Technologies 01
Materials technology elicits raw materials suitable for the targeted properties in a product through advanced expertise in complex composition processes and control of additives. Process technology maximizes the properties of these materials while also expanding the scope of their application in products. Creating "black boxes" for techniques of controlling crystal particles at the atomic level, intellectual property, and other know-how makes them difficult to imitate overnight.

Achieving our own *Monozukuri* Innovation
Integrated Production 02
Integrated production, where everything from materials development to the final product is handled in-house, allows TDK to improve its *Monozukuri* (manufacturing excellence) and increase productivity through the introduction of the IoT and robots. Our ability to control quality entirely in-house as well gives us a competitive advantage in areas where quality requirements are particularly high, including the automotive market.

Foundation of management from a long-term perspective
Customer Base 03
TDK has built strong relationships with its customers in the automotive, ICT, industrial and energy, and other markets. This allows us to more accurately forecast future changes in technology trends, and reduces the risks involved in making aggressive R&D and capital expenditures.

Innovation foundations and enhanced M&A success rates
Strength of Diversity 04
TDK has built relationships with the companies it has acquired based not on controlling them but on positioning them as equal partners and drawing out their strengths to the greatest degree possible. This strength of diversity raises the business portfolio shift success rate, promotes the creation of innovation, and serves as a basis for enhancing resiliency against climate change.

Capturing business opportunities in global markets
Global Business Base 05
TDK's global business base, with an overseas production ratio of 85.4% and an overseas sales ratio of 91.8%, not only effectively deepens relationships with customers worldwide and distributes risks but also serves as a competitive advantage that will allow us to capture business opportunities in the global IoT market.

TDK's Value Cycle

Based on the Medium-Term Plan "Value Creation 2020," TDK will generate three types of "value" aimed at raising its corporate worth—Social Value, Commercial Value, and Asset Value—while serving society and growing its business in the wake of that progress.

Social issues

- Environmental issues associated with population growth and urbanization, shortages of resources and water
- Deterioration of social infrastructure
- Population aging
- Workstyle innovation
- Decline in industry competitiveness

Technological evolution

Digital Transformation (DX)

- Expansion of digital markets
- Creation of massive platforms and concentration
- Development of AI and robotics markets
- Expansion of the sharing economy

Energy Transformation (EX)

- Increase of energy efficiency
- Expansion of renewable energy

Medium-term management targets of Value Creation 2020

- **Operating income ratio: over 10%**
- **ROE: over 14%**

To execute growth strategies and promote the improvement of our financial condition, we aim to achieve positive free cash flow while executing well-balanced capital allocation to investments, shareholder returns, and the reduction of interest-bearing debts.

- Aiming for the steady recovery of previous investments
- Pursuing the enhancement of companywide asset efficiency

Medium-term management targets of Value Creation 2020

- **Net sales: ¥1,650.0 billion**

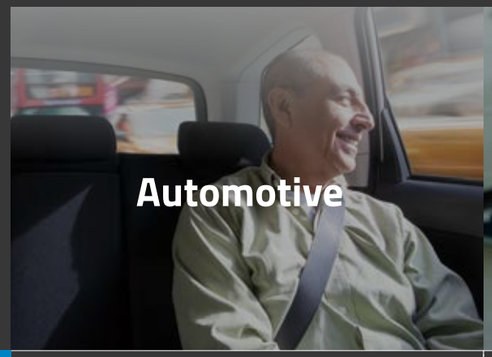
Based on materials and process technologies and electronic components, we provide solutions stemming from the concept of *Kotozukuri* (integrated solutions) and respond in a timely manner to societal demand.

Three priority markets

- Automotive market
- ICT market
- Industrial and energy market

Contribute to Culture and Industry through Creativity

Overview of TDK



Competitors

	Automotive	ICT	Industrial and Energy	Competitors
Passive Components	**Capacitors** Soft-termination multilayer ceramic chip capacitors, aluminum electrolytic capacitors, etc. **Inductive devices** SMD inductors with guaranteed high-temperature ratings, common mode filters for automotive-use LAN, etc. **Other passive components** Piezo actuators	**Capacitors** 3-terminal feed-through capacitors, etc. **Inductive devices** SMD inductors, thin-film common-mode filters, etc. **Other passive components** Ceramic high-frequency components, multilayer chip varistors, etc.	**Capacitors** Film capacitors, aluminum electrolytic capacitors, etc. **Inductive devices** Transformers, EMC filters, etc. **Other passive components** Varistors, arresters, etc.	**Capacitors** Murata Manufacturing, TAIYO YUDEN, SEMCO (Korea), Yageo (Taiwan), etc. **Inductive devices** Murata Manufacturing, TAIYO YUDEN, SEMCO (Korea), Cyntec (Taiwan), etc. **Other passive components** Murata Manufacturing, ALPS ALPINE, Panasonic, AMOTEC (Korea), etc.
Sensor Application Products	**Sensors** Sensors (gear tooth, pressure, angle, current, temperature, etc.)	**Sensors** Sensors (barometric pressure, gyroscope, acceleration, MEMS microphones, etc.)	**Sensors** Sensors (pressure, gyroscope, acceleration, current, etc.)	**Sensors** Murata Manufacturing, ALPS ALPINE, TAIYO YUDEN, Bosch Sensortec (Germany), STMicroelectronics (Switzerland), Infineon (Germany), Asahi Kasei Microdevices, Allegro (U.S.), Shibaura Electronics, etc.
Magnetic Application Products	**Magnets** Magnets for motors (cooling fan, door lock, etc.), magnets for xEV drive motors, etc.	**Recording devices** HDD magnetic heads, HDD suspensions, etc. **Magnets** HDD magnets, etc.	**Magnets** Magnets for industrial equipment, etc.	**HDD magnetic heads*** Seagate Technology (U.S.), Western Digital Technologies (U.S.) **HDD suspensions** NHK SPRING, etc. **Magnets** Shin-Etsu Chemical, Hitachi Metals, ZHONG KE SAN HUAN (China), etc.
Energy Application Products	**Power supplies** DC-DC converters, on-board chargers	**Energy devices** Lithium polymer batteries (for smartphones, tablet devices, notebook computers, wearable devices, game consoles, etc.) **Power supplies** POL converters	**Energy devices** Lithium polymer batteries (for drones, residential energy storage systems (ESSs)) **Power supplies** Switching power supplies (AC-DC, DC-DC), bidirectional DC-DC converters, wireless power transfer systems	**Energy devices** Samsung SDI (Korea), LG Chemical (Korea), Murata Manufacturing, Panasonic, BYD (China), etc. **Power supplies** Delta Electronics (Taiwan), Artesyn Embedded Power (U.S.), MEAN WELL (Taiwan), XP Power (Singapore), Cosel, etc.
Other		Camera module actuators (VCM/OIS)	Load ports, flip-chip bonders, flash memory application devices, anechoic chambers	

* TDK is the world's only specialized manufacturer of HDD magnetic heads. HDD magnetic head production is currently concentrated at three companies—TDK, Seagate Technology, and Western Digital Technologies.

CONTENTS

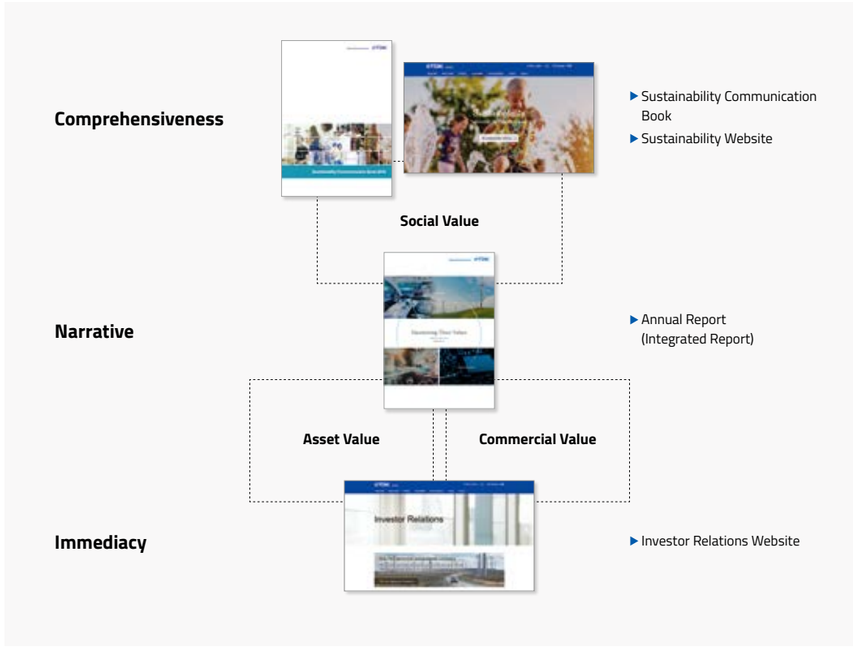
Annual Report 2019

Cautionary Statements with Respect to Forward-Looking Statements

Annual Report 2019 contains forward-looking statements, including projections, plans, policies, management strategies, targets, schedules, understandings, and evaluations about TDK and/or its Group companies ("the TDK Group"). These forward-looking statements are based on the current forecasts, estimates, assumptions, plans, understandings, and evaluations of the TDK Group in light of information currently available to it, and contain known and unknown risks, uncertainties, and other factors. The TDK Group therefore wishes to caution readers that, being subject to risks, uncertainties, and other factors, the TDK Group's actual results, performance, achievements, or financial positions could be materially different from any future results, performance, achievements, or financial positions expressed or implied by these forward-looking statements, and the TDK Group undertakes no obligation to publicly update or revise any forward-looking statements after the issue of *Annual Report 2019* except as provided for in applicable laws and ordinances.

Editorial Policy

TDK emphasizes proactive and appropriate information disclosure and bilateral communications with various stakeholders for the sustainable enhancement of corporate value. *Annual Report 2019* focuses on stories centered on the cycle of corporate value creation from Social Value, Commercial Value, and Asset Value while attempting to provide optimal information disclosure according to the information needs of each stakeholder including enhancement of online sustainability pages and other information in response to the need for comprehensive disclosure of environment, social, and governance (ESG) information.



How the Public Sees Us

- **TDK receives Corporate Governance of the Year® 2018 "Winner Company" Prize** 1
- **TDK wins Prize for Excellence in 21st Nikkei Annual Report Awards 2018**
- **TDK named a Clarivate Analytics Derwent Top 100 Global Innovator 2018–19** 2
- **TDK's Solid-State Battery 'CeraCharge™' wins 2018 Nikkei Superior Products and Services Award for Excellence**
- **TDK selected for inclusion in the Ethibel EXCELLENCE by Ethibel Investment Register, and inclusion in ECPI Indices, ESG indices established by ECPI Global Ethical Equity**

To Our Stakeholders

Enhancing Social Value Leads to the Sustainable Growth of Both Society and TDK

TDK is capturing the wave of social change brought about by DX (Digital Transformation) and EX (Energy Transformation) sustainably enhancing its corporate value guided by the corporate motto, “Contribute to culture and industry through creativity.”

Shigenao Ishiguro

President & CEO

Create a framework for ensuring sustainability

Future of TDK Suggested 80 Years Ago by Our Pioneering Forefathers

Since I became CEO in June 2016, I have been considering the question of what TDK needs to do to continue its sustained growth. Looking back over the past three years, management efficiency has improved steadily. Consolidated net sales reached new records every term, operating income passed the ¥100 billion mark in fiscal 2019,* and return on equity (ROE) also moved close to 10%. In terms of financial performance, therefore, we have been able to show solid growth each fiscal year. To realize sustainability as a company, however, it is essential to flexibly adapt to internal and external changes in the business environment and to build a framework for continued growth. This is also the duty that I have to our stakeholders. In looking for answers to this challenge, I first asked the question, "How was TDK able to shape an 80-year history of growth?"

Having been founded in 1935 with the objective of realizing industrial applications for the magnetic material ferrite, TDK brought ceramic capacitors to the market, eventually followed by various passive components, magnets, and other products. In this way, TDK contributed to the worldwide growth of the electronics industry. Proprietary magnetic materials technology formed the basis for strong growth in such sectors as magnetic tapes and HDD magnetic heads, while strategic M&As brought in new drivers of growth, including SAW filters and other high-frequency components, as well as lithium polymer batteries. In recent years, the TDK of the future has gradually taken shape, centered on such pillars as passive components, lithium polymer batteries, and various types of sensors. However, the process of incorporating new businesses often involves the withdrawal from other sectors and the utilization of proceeds from the sale of businesses. For example, TDK sold its semiconductor subsidiary in the 1990s and applied the cash to an expansion of the HDD magnetic heads business. More recently, our aggressive investments in the sensor business took advantage of the funds from a carve-out of the high-frequency components business. And there are aspects that go beyond the use of funds. Expertise in coating technologies from the recording media business, which was shed in the 2000s, has found application in such products as lithium polymer batteries and functional films. By successfully pursuing M&As while retreating from other sectors, TDK has kept transforming itself.

While thinking about what should serve as a criterion in this transformation process, I found my answer in the very motto of our company. In that moment, I realized that the founder and the leaders that followed him shared the same sense of values that I also strongly believe in.

* Operating income compared on a basis excluding the capital gains on the transfer of business to Qualcomm recorded in fiscal 2017

Values that TDK should share on a global basis

Our Value Criteria: "Can It Contribute to Society?" and "Can It Be Realized with Our Technology?"

TDK's founder, Kenzo Saito, was a true entrepreneur driven by the desire to contribute to the advancement of society. Inspired by the belief that "it will surely be useful to the world," he tackled the potential of ferrite, which so far had not found any use. In later years, he recalled, "A person can make their business into a success by working with a strong sense of social values and with the dedication to never give up no matter what obstacles they may face." This kind of management philosophy is expressed in our corporate motto "Contribute to culture and industry through creativity" and corporate principles of "Vision," "Courage," and "Trust." Making a contribution to the world through technology has always been the driver of TDK's actions.

As TDK continues to move forward, I have come to the conclusion that the insights of the founder from some 80 years ago still resonate: "Can it contribute to society?" and "Can it be realized with our technology?" For example, TDK so far has not been widely engaged in the medical field, but the potential for electronics-related solutions is ever expanding, ranging from prevention and treatment to health management. If TDK can be of use in these areas, there is no reason why we should not aim to expand our business operations accordingly.

As we move into the future, another important yardstick is the question of whether we can apply our accumulated core technologies to a given task. Just as the technological knowledge in magnetics that was gained through the engagement with ferrite helped us enter the field of HDD magnetic heads, our materials technology, along with process technology for getting the most out of materials, formed a solid basis for establishing a wide portfolio of excellent products in a broad range of fields. As with these core technologies, the dedication to *Monozukuri* (manufacturing excellence) is a key value that dates back to our very beginnings and that will continue to enable sustainable and meaningful social contributions.

The Medium-Term Plan "Value Creation 2020" P. 28 that was launched in May 2018 (covering the period from fiscal 2019 to 2021) reflects the value criteria of "Can it contribute to society?" and "Can it be realized with our technology?" Starting from market-in-based *Kotozukuri* (integrated solutions), *Monozukuri* makes it happen. With *Kotozukuri* and *Monozukuri* mutually reinforcing each other, we intend to continue bringing high added value to the world at large.

The driving force of sustained enhancement of corporate value

Propelled forward by the Creation of Social Value

The Value Creation 2020 plan defines three components of corporate value, namely, Social Value, Commercial Value, and Asset Value. We are aiming to maximize value by setting specific targets for each of these. As Social Value is considered to act as the driving force for TDK's sustainability, it is given top priority. Contributing to a sustainable society in turn enhances Commercial Value and Asset Value and thereby further reinforces the creation of Social Value. A framework for continuously repeating this cycle is being established throughout the entire TDK Group.

In 2019, we formulated the Sustainability Vision, which states that, through its innovative core technologies and solutions, the TDK Group advances the development of a sustainable society and champions well-being for all people. This is taken to mean that TDK technologies should benefit people and enable them to build a healthy world for future generations. This is also what inspires us to work toward achieving the Sustainable Development Goals (SDGs). P. 72

The Value Creation 2020 concept

Advance of DX and EX opens up unlimited market possibilities

Social Value Can Be Created in Any Market

The progress of digital technology has influenced business operations and lifestyles in a myriad of ways. Dramatic progress in such areas as the IoT and AI has altered the way information is created, transmitted, and processed, as well as transforming the industry and our world itself. Since the Industrial Revolution, people have enriched their lives through the use of fossil fuels. But as such problems as global warming and the depletion of fossil fuels worsen, the need to establish a new kind of energy society that breaks away from that tradition has become essential. Digital transformation (DX) and energy transformation (EX) are two major trends that would not exist without electronics. For TDK, these developments represent an enormous opportunity to contribute to markets with technologies and solutions. In terms of DX, we can utilize digital data to optimize *Monozukuri* manufacturing, reduce losses of energy and resources, and realize zero-defect product quality, thereby passing on value to society. In terms of EX, TDK's expertise in electricity and magnetism helps improve energy conversion efficiency, which is highly significant for all aspects of daily life.

Before us is a vast array of market scenarios through which we can contribute to solving social issues by leveraging the strengths of our original technologies and products. P. 38

The capability to provide Social Value

Relying on Advanced Technological Power, Development Power, and *Monozukuri* Power

If we ask whether TDK has the capability to grasp these business opportunities, the answer is "Yes."

TDK possesses a wide range of products and technologies to support DX, including its sensors, power supplies, and diverse electronic components utilized in ICT equipment, as well as semiconductor embedded substrates (SESUB), which contribute to the miniaturization and modularization of electronic devices. In the area of non-optical sensors, for example, we have a world-class lineup that includes magnetic sensors based on magnetics technology, gyroscope, acceleration, inertial, and ultrasonic sensors realized with MEMS technology, and temperature and pressure sensors. This enables us to offer integrated sensor solutions, including signal-processing IC technology and software technology, for the automotive, ICT, and industrial and energy markets. In the automotive market, in addition to sensors, we offer DC-DC converters and other power supply devices, neodymium magnets for drive motors, automotive-grade multilayer ceramic chip capacitors (MLCC) for electronic control units (ECU), and many other products and technologies. These make a significant contribution to xEV (HEV/PHEV/EV), as well as to the spread of advanced driving assistance systems (ADAS) and autonomous driving. In Japan, the fifth-generation mobile communications system (5G) is slated to begin operation in 2020. Although we have carved out our SAW and BAW filter businesses, we still offer other high-frequency components and many other products and technologies relevant to the 5G market. P. 40

As for EX, our expertise in materials technology accumulated since the founding of the Company has wide applications. Looking at the different scenarios where energy is being produced, we supply, for example, film solar cells as well as large neodymium magnets for wind power generators. Our AC-DC switching power supplies and DC-DC converters convert energy. As for efficient power distribution, TDK products and technologies again are a significant factor, for example, in wireless power transfer systems utilizing either electromagnetic induction or magnetic resonance. And lithium polymer batteries and other TDK products play an important role in the storage of energy. As a case in point, Amperex Technology Limited (ATL), acquired by TDK, is a dominant company and has a highly successful first-to-market track record in the lithium polymer battery sector. We are laterally propagating this business model in the development of mini cells for highly compact electronic and wearable devices and in the manufacturing of power cells for drones, e-drives, and residential energy storage systems. P. 46

Regarding *Monozukuri* too, the answer of whether we can grasp the business opportunities is "Yes." In markets where TDK will further increase its presence, such as automobiles and medical equipment, any defect in a product can potentially have very serious consequences and may severely damage TDK's corporate value. Since about three years ago, TDK has been pursuing *Monozukuri* Innovation that combines the Industry 4.0 concept with its zero-defect product quality policy. Under the slogan "Quality cannot be assured by final inspection," we are implementing quality control throughout all manufacturing processes, with the aim of creating production lines that do not permit any defective output. We are making sure that *Arubeki-Sugata* (ideal process) is a globally shared concept within the Company. To give concrete shape to the concept at the forefront of manufacturing, in April 2017 we launched a model production line at the Inakura Factory East Site in Akita Prefecture making extensive use of the IoT, AI, and robotics. This approach will be expanded globally with the aim of realizing location-independent production, so that the same level of quality can be achieved regardless of physical location.

Creating the framework for continued success

Building a Strong and Flexible Organization Encompassing Diversity and a Global Outlook

Short-term risks are mainly due to external factors, but in the medium and long term we must also consider risks within TDK itself. If we fall behind in the DX trend or become insensitive to the needs of the world, TDK will inevitably decline. Therefore, we have been promoting reforms to fundamentally change TDK from the inside.

Rather than expecting companies acquired through M&As to take on TDK's culture, we respect their cultures and ways of thinking and have left management independence to each company. This has fostered our strength of diversity created by human resources of many different nationalities. We are promoting a global human resource strategy. In 2018, we established our Global Human Resources HQ in Munich, Germany, with Corporate Officer Andreas Keller as general manager. The main aim here is to continue our respect for diversity while merging the relative strengths of each culture to create a strong organizational framework that can respond flexibly to changes in the social climate. We are close to completing a human resource platform including global human resource evaluation standards, promotion of communication for strengthening cooperation, and systems to discover and nurture excellent human resources across the globe. The sharing of successful case examples is also progressing. In the near future, we look forward to an environment where the horizontal deployment of excellent human resources can be realized even more actively.

Creating the framework for continued success

Governance to Enable Speedy Decision-Making

The TDK Group has some 140 consolidated subsidiaries. In an age where dramatic changes are expected, increased speed of management is an essential concern. Rather than aiming for single centralized control, we believe that it is necessary to be an autonomous, decentralized organization. True to the slogan "Empowerment and transparency," I believe it is important to place trust in people who share our goals and principles, motivate them by delegating authority, and ensure transparency for stakeholders without hiding things from one another.

With this in mind, we have implemented a reform of the management meeting at our headquarters. P. 61 Previous meetings tended to have discussions along business division lines, and the overall TDK perspective and management perspective were sometimes lacking. Therefore, we have renewed the participation roster, aiming to enable healthy opinion exchanges between management functions and business functions. The name has been changed to Executive Committee Meeting (ECM). Currently, we are discussing reports from each business unit from a multifaceted, neutral, and companywide perspective, taking such aspects as technology, quality assurance, finance, and human resources into consideration. After having been thoroughly discussed at the ECM, issues are submitted to the Board of Directors to enable focused discussions at an even higher level, thereby making it possible to arrive swiftly at decisions. With non-Japanese nationals representing more than 90% of our employees, the common language for the TDK Group is English. Therefore, the ECM and other important internal meetings are all conducted in English. The ECM is held several times per year not only in Japan but overseas as well, in order to bring the Group closer together and provide a morale boost to business sites worldwide.

The headquarters function has also undergone structural reform. To allow Business Companies (BCs) and Business Groups (BGs), which are the main operators of our business, to directly interact with customers and devote their full power to delivering *Kotozukuri* solutions, authority has been delegated and lateral connections have been put into place to provide logistical support. The Global Headquarters supplies functions to BCs and BGs covering technological development, human resources, legal support, among others acting as an axis to promote global collaboration. The Regional Headquarters in China, America, and Europe work closely with the Global Headquarters while providing comprehensive functions that are tailored to each region.

With regard to development, the Global Headquarters is responsible for developing materials and core technologies for the future, while the BCs and BGs concentrate on utilizing existing technologies to create products. This is designed to result in an overall increase of development speed. With the aim of accelerating product development speed through hands-on experience of actual needs onsite around the world, over 100 development personnel formerly affiliated with the Headquarters have been dispatched to BCs.

Through this organizational reform, the delegation of authority has been steadily transitioning from the Board of Directors to the executive side, and from the executive side to BCs and BGs, and tangible results can be seen in terms of speedier decision-making and increased collaboration. Monitoring at the Global Headquarters and Regional Headquarters has been strengthened, and efforts are also being made to further enhance transparency. As shown by the evaluation of the Board of Directors as well, I feel that the series of reforms has resulted in steady improvements in management.

Toward the realization of a sustainable society and enterprise

Organizational Structure That Produces Tangible Results

At present, there are concerns about the impact of U.S.–China trade friction, Brexit, and other factors on the global economy. TDK's outlook for fiscal 2020 does not project major growth in areas in which it performed strongly in fiscal 2019, such as lithium polymer batteries and such passive components as MLCC. However, we are steadily implementing measures based on the Medium-Term Plan, aiming for record-high consolidated net sales and operating income. We are also pursuing revenue improvements from sensors and magnets. At the same time, fiscal 2020 is designated as a pivot point for long-term growth measures, and we will be pursuing a policy of aggressive investments.

Unlimited possibilities lie ahead for the TDK Group, and we have a wealth of technological capabilities and know-how to contribute. In order to sustainably create value, it is necessary to flexibly respond to changes in the business environment and to have an organizational structure that allows for continued growth. I believe that we meet both of these requirements. The results will become clearly apparent within the current "Value Creation 2020" period. Contributing to culture and industry through creativity, as our corporate motto envisions, harks back to the founding of TDK and shapes our future path too. We will continue to evolve and do our best to play our part in the realization of a sustainable world.

October 2019

Shigenao Ishiguro
President & CEO

Consolidated Business Results Highlights

Years ended March 31

Millions of yen

Consolidated business highlights*1	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Net sales	¥ 792,624	¥ 862,492	¥ 802,534	¥ 841,847	¥ 984,525	¥1,082,560	¥1,152,255	¥1,178,257	¥1,271,747	**¥1,381,806**
(Overseas sales)	704,874	764,807	702,469	747,062	890,520	989,348	1,061,203	1,073,024	1,158,004	**1,268,437**
Cost of sales	604,454	645,514	624,271	668,258	763,572	802,225	831,123	855,948	928,525	**985,321**
Selling, general and administrative expenses	158,727	149,114	157,724	151,535	184,337	207,876	227,718	113,649	257,630	**287,561**
Operating income	29,443	67,864	20,539	22,054	36,616	72,459	93,414	208,660	89,692	**107,823**
Income before income taxes						74,517	91,839	211,717	89,811	**115,554**
Income from continuing operations before income taxes	25,576	64,519	14,668	19,765	39,772					
Net income (loss) attributable to TDK	13,520	45,264	(2,454)	1,195	16,288	49,440	64,828	145,099	63,463	**82,205**
Capital expenditures	64,370	78,638	99,653	85,606	68,606	102,525	160,674	167,631	178,612	**173,592**
Depreciation and amortization	83,788	77,594	80,197	77,938	83,109	80,249	83,224	87,491	92,171	**106,631**
Research and development	53,942	52,973	52,551	53,943	63,385	70,644	84,920	91,254	102,641	**115,155**
Ratio of overseas production to net sales (%)	80.5	83.6	80.2	81.8	86.7	87.9	86.3	86.1	84.5	**85.4**
Net cash provided by operating activities	118,247	101,879	55,334	108,942	127,308	142,850	151,563	160,136	91,310	**140,274**
Net cash used in investing activities	(105,963)	(61,341)	(29,898)	(90,156)	(55,438)	(127,312)	(140,585)	(71,111)	(246,099)	**(140,179)**
Net cash provided by (used in) financing activities	(38,369)	(31,860)	12,929	4,395	(56,118)	(35,243)	29,305	(37,753)	110,088	**9,435**
Cash and cash equivalents at end of period	132,984	129,091	167,015	213,687	250,848	265,104	285,468	330,388	279,624	**289,175**
Total assets	1,091,458	1,060,853	1,072,829	1,169,575	1,239,553	1,404,253	1,450,564	1,664,333	1,905,209	**1,992,480**
TDK stockholders' equity	543,756	534,273	498,159	561,169	635,327	738,861	675,361	793,614	824,634	**877,290**
Working capital	286,370	199,186	219,918	232,693	279,504	352,364	289,760	388,542	296,899	**208,165**
Number of shares issued (thousands)	129,591	129,591	129,591	129,591	129,591	129,591	129,591	129,591	129,591	**129,591**

Yen

Per-share data										
Net income (loss) attributable to TDK (basic)	¥104.82	¥350.90	¥(19.06)	¥ 9.50	¥129.47	¥392.78	¥514.23	¥1,150.16	¥502.80	**¥651.02**
Net assets	4,215	4,142	3,957	4,461	5,050	5,865	5,355	6,289	6,532	**6,947**
Dividends	60.00	80.00	80.00	70.00	70.00	90.00	120.00	120.00	130.00	**160.00**
Payout ratio (%)	57.2	22.8	—	737.2	54.1	22.9	23.3	10.4	25.9	**24.6**

Key financial ratios										
Overseas sales ratio (%)	88.9	88.7	87.5	88.7	90.5	91.4	92.1	91.1	91.1	**91.8**
SG&A ratio (%)	20.0	17.3	19.6	18.0	18.7	19.2	19.8	9.7	20.2	**20.8**
Operating income ratio (%)	3.7	7.9	2.6	2.6	3.7	6.7	8.1	17.7	7.1	**7.8**
ROE (%)	2.5	8.4	(0.5)	0.2	2.7	7.2	9.2	19.8	7.8	**9.7**
ROA (%)	1.2	4.2	(0.2)	0.1	1.4	3.7	4.5	9.3	3.6	**4.2**

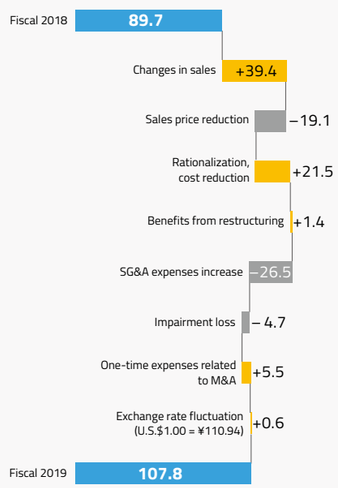
Non-financial indicators										
Number of employees	80,590	87,809	79,175	79,863	83,581	88,076	91,648	99,693	102,883	**104,781**
Overseas employees ratio (%)	87.2	88.5	87.4	88.2	89.1	89.8	90.3	90.7	90.7	**90.7**
CO_2 emissions from production activities (t-CO_2)	878,303	1,095,462	1,109,926	1,102,989	1,190,458	1,269,086	1,474,119	1,463,396	1,647,096	**1,669,733**
CO_2 emissions reduction through products (t-CO_2)*2			321,000	498,000	886,000	1,251,000	1,581,000	1,675,000	2,041,000	**2,149,000**

*1 In accordance with the provisions of ASC No. 205-20, "Presentation of Financial Statements–Discontinued Operations," operating results related to the data tape business and the blu-ray business are separately presented as discontinued operations in the consolidated statements of operations for fiscal 2014. Also, reclassifications have been made to the consolidated statements of operations after fiscal 2010, to conform to the presentation used for fiscal 2014. However, overseas sales, depreciation and amortization, research and development, and ratio of overseas production to net sales include the amounts of discontinued operations.

*2 Because the TDK Environmental Action 2020 Plan came into effect from fiscal 2011, the "CO_2 emissions reduction through products (t-CO_2)" figures are for fiscal 2012 onward.

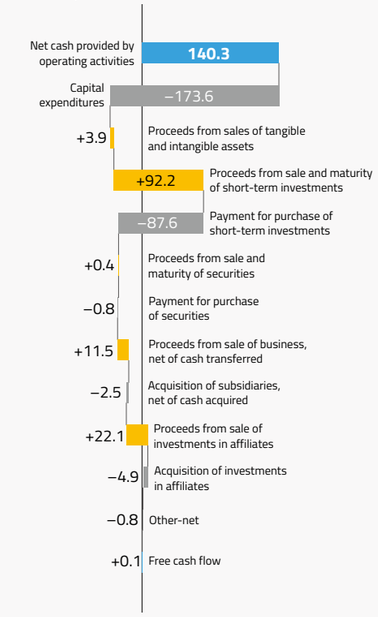
Breakdown of operating income changes

Billions of yen

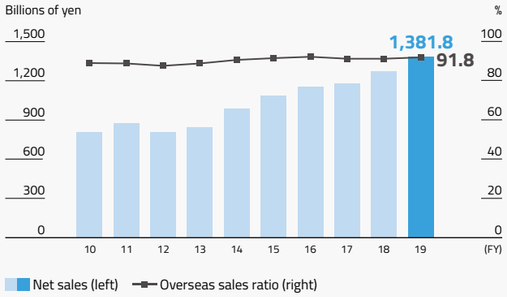


Breakdown of free cash flow

Billions of yen

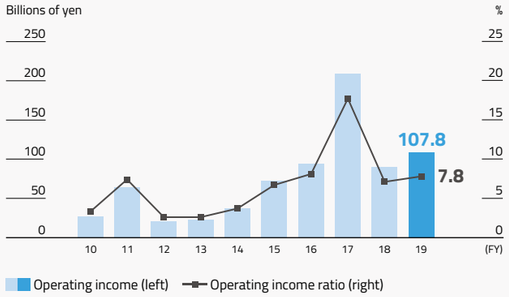


Net sales / Overseas sales ratio



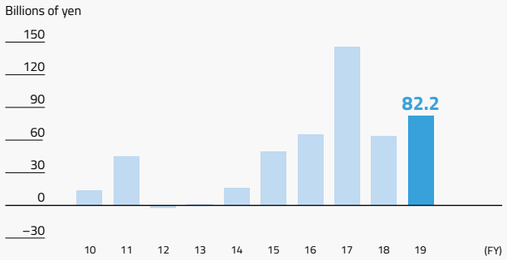
As a result of an increase in the number of parts used on automobiles in conjunction with the electrification of vehicles and increased production of HDDs for data centers, net sales were ¥1,381.8 billion, a record high, in fiscal 2019. Sales have increased over the past 12 years, particularly in Asia, and overseas sales accounted for 91.8% of total net sales in fiscal 2019.

Operating income / Operating income ratio



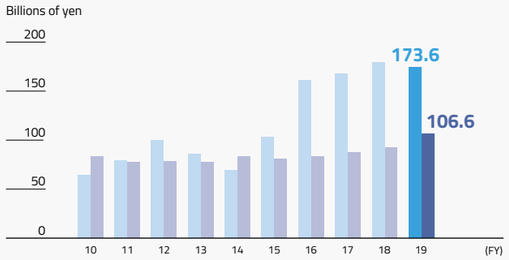
As a result of the structural reforms that were initiated in fiscal 2012, we were able to establish a firm earnings structure with a good balance among the major segments. In fiscal 2017, capital gains of ¥144.4 billion were recorded in conjunction with the business tie-up with Qualcomm and the agreement to establish a joint venture. As a result, operating income in fiscal 2018 fell 57.0% year on year, to ¥89.7 billion. However, operating income in fiscal 2019 was up from the previous fiscal year, and the operating income ratio improved 0.7 percentage points.

Net income (loss) attributable to TDK



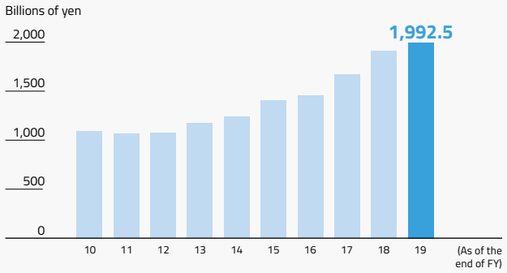
Performance was sluggish from fiscal 2009 due in part to reduced demand for electronic components resulting from the global economic slowdown and the impact of the Great East Japan Earthquake. After structural reforms were implemented beginning in fiscal 2012, however, results gradually improved. As a result of the impact from reporting gains from the transfer of business to Qualcomm in fiscal 2017, net income in fiscal 2018 fell 56.3% year on year, to ¥63.5 billion, but net income in fiscal 2019 was up from the previous fiscal year.

Capital expenditures / Depreciation and amortization



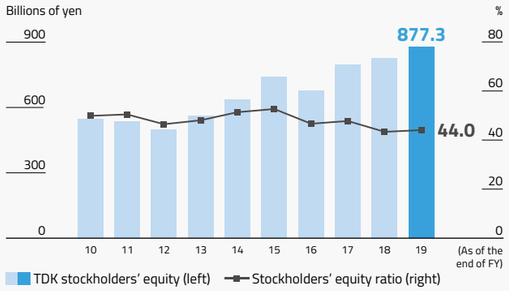
Under the three-year Medium-Term Plan covering the period from fiscal 2016 to fiscal 2018, TDK made ¥506.9 billion in capital expenditures. Under the current Medium-Term Plan, the first year of which was fiscal 2019, TDK is actively pursuing capital expenditures aimed at accelerating expansion of core businesses, strengthening its overseas R&D bases, and accelerating *Monozukuri* Innovation and expects to invest a total of ¥500.0 billion over the three years.

Total assets



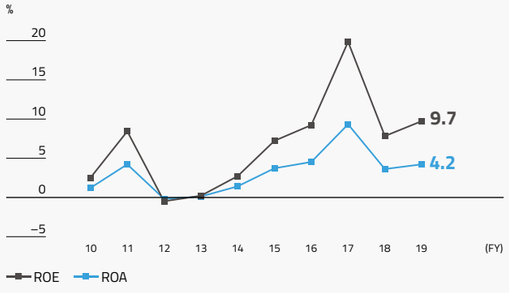
The trend of gradual growth has continued since fiscal 2011 due to increases in tangible fixed assets and investments. Total assets as of the end of fiscal 2019 increased 4.6% year on year, to ¥1,992.5 billion. The main positive factors were increases in tangible fixed assets of ¥57.5 billion, inventories of ¥19.4 billion, and cash and cash equivalents of ¥9.6 billion.

TDK stockholders' equity / Stockholders' equity ratio



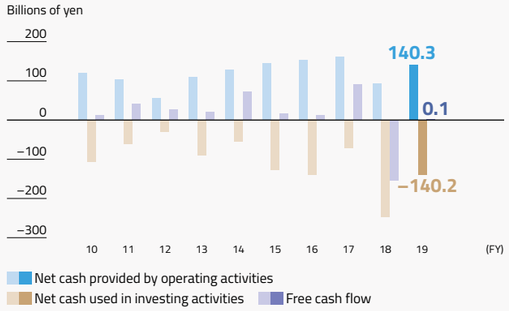
TDK stockholders' equity was up 6.4% year on year, to ¥877.3 billion, as of the end of fiscal 2019. Long-term debt was down ¥86.2 billion year on year and trade payables decreased ¥36.9 billion, and as a result, the stockholders' equity ratio improved 0.7 percentage points year on year, to 44.0%

ROE / ROA



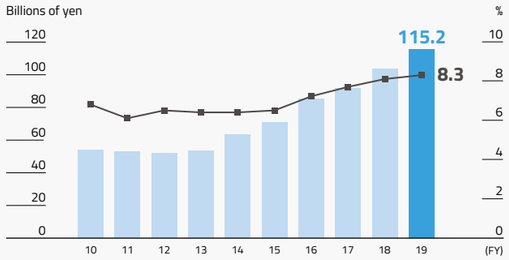
ROE and ROA were at low levels following the global economic downturn, but after structural reforms were implemented from fiscal 2012, both improved as a result of higher net income and other factors. Both indicators were up substantially as a result of special factors that resulted in reporting gains on the transfer of business to Qualcomm in fiscal 2017 and fell again in fiscal 2018 due to the counteraction to those factors, but they increased in fiscal 2019.

Cash flows



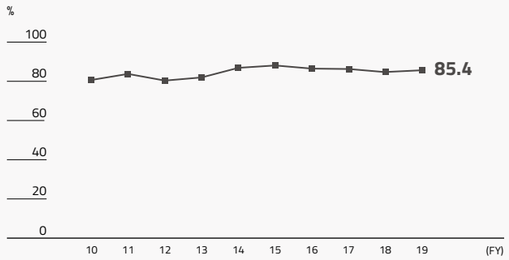
The business transfer to Qualcomm in fiscal 2017 resulted in a significant improvement in free cash flow. Funds obtained as compensation for the business transfer are being utilized in new M&As in accordance with our growth strategy, and we are working to further strengthen our earnings structure. In fiscal 2018, free cash flow was negative ¥154.8 billion as a result of active capital expenditures, R&D, and M&As, but turned positive in fiscal 2019.

R&D Expenses / R&D Expenses to Net Sales Ratio



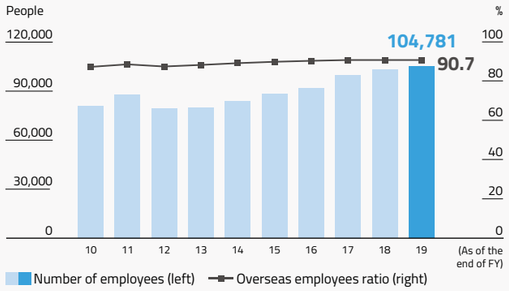
R&D expenses have continuously increased since fiscal 2012, and TDK invested ¥115.2 billion in R&D in fiscal 2019, a record high, so that it can respond to rapid technological innovation in electronics markets and maintain high competitiveness. Going forward, we will continue to actively invest in the development of new technologies and further reinforce our R&D structures.

Overseas Production Ratio



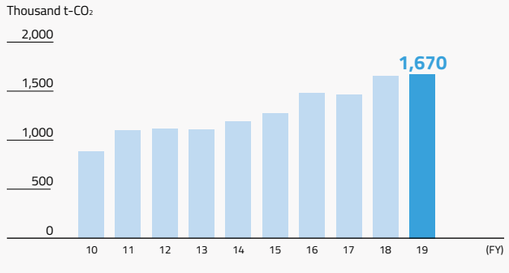
Compared with fiscal 2010, the overseas production ratio in fiscal 2019 was up 4.9 percentage points, reaching 85.4%. TDK seeks to establish location-independent production systems and is working toward the ability to supply products with the same high quality from any location.

Number of employees / Overseas employees ratio



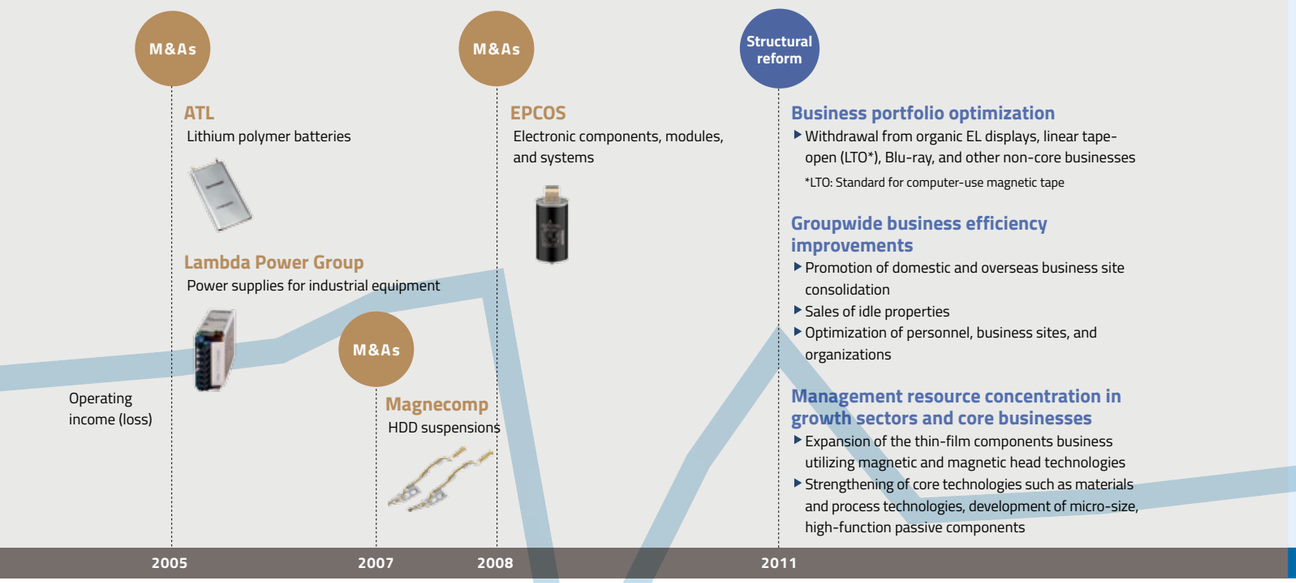
TDK implemented personnel optimization measures as a part of the structural reforms conducted since fiscal 2012, but has been increasing the number of employees to raise competitiveness since fiscal 2016, the first year of the previous Medium-Term Plan, and the number of employees reached 104,781 as of the end of fiscal 2019. In addition, the overseas employees ratio has been increasing and was 90.7% as of the end of fiscal 2019.

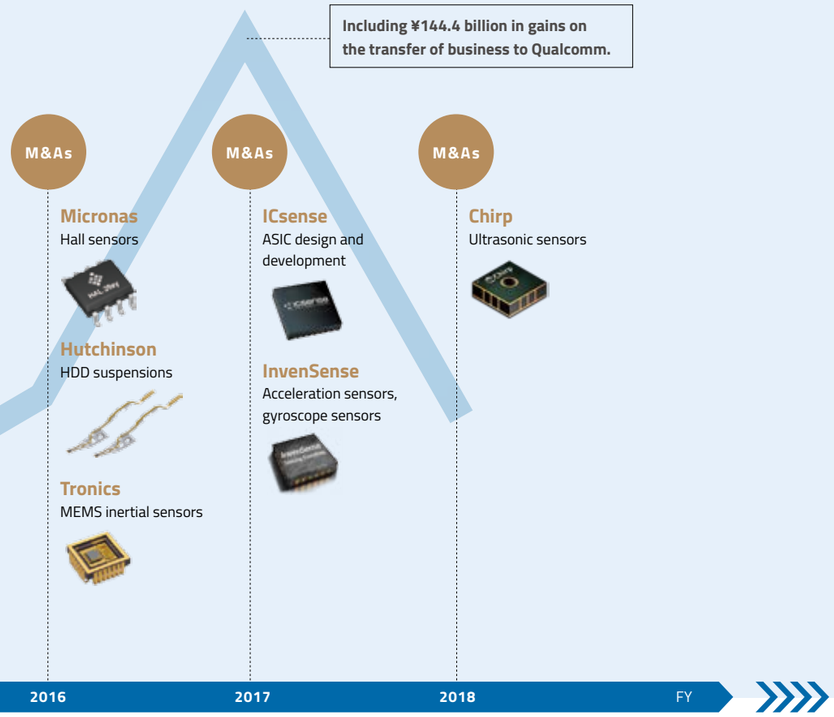
CO_2 emissions from production activities



TDK established the TDK Environmental Vision 2035 and is working to reduce environmental load from a life cycle perspective that covers all phases from the use of raw materials to the use and disposal of final products. We are aware that CO_2 emissions from energy consumption at production sites has a major environmental impact within TDK, and we are reducing energy use by implementing energy-saving measures through assessment at the time of capital expenditures and creating energy management structures.

Summary of the Process Leading to Value Creation 2020

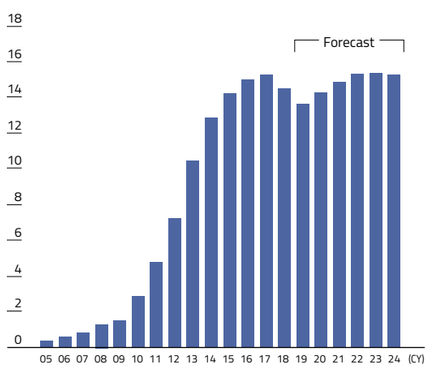




Sowing seeds to grow with the expanding smartphone market

In 2005, TDK acquired ATL of Hong Kong, an entity possessing original technology in lithium polymer batteries. Purchased in 2008 was EPCOS AG (currently TDK Electronics AG, referred to as "EPCOS" and "TDK Electronics," respectively), which used its competency in high-frequency components and module technologies to forge a powerful presence in European automobile and industrial equipment markets. Combining their technologies with our own expertise in components and production technologies, we strategically moved to tap into the expanding market for smartphones.

Smartphone market trends (unit shipments)



Data provided by Techno Systems Research Co., Ltd.

Structural reforms for overcoming difficulties

TDK was able to overcome difficulties including the swift decline in demand that occurred in conjunction with the global financial crisis starting in 2008, the Great East Japan Earthquake of 2011, flooding in Thailand and appreciation of the Japanese yen to peak at ¥75 to the US dollar. TDK implemented sweeping structural reforms to shore up its earnings framework. As a result of decisive measures such as withdrawing from the recording media and other non-core businesses, concentrating management resources in core units, consolidating domestic and overseas business sites, optimizing personnel and business sites, and other strategies, performance figures rapidly recovered starting in fiscal 2013.

Structural reforms to bolster integrated production

In Japan, we closed aging passive component manufacturing bases and concentrated business sites while adopting in-house production processes previously outsourced to collaborating plants. These initiatives focused on restoring *Monozukuri* power through integrated production. Overseas, we acted to simplify complex supply chains.

Fruits of structural reforms

Reviewing the results of the previous Medium-Term Plan (fiscal 2016 to fiscal 2018), sales set record highs each term, with structural reforms proving effective in strengthening the earnings structure and operating income also gaining ground. TDK cultivated ATL's lithium polymer batteries and EPCOS's high-frequency components, riding the tailwind of the global expansion of the smartphone market. This stance was accompanied by solid efforts to address demand for component miniaturization and modularization to keep pace with the steady move to higher smartphone functionality, honing our underlying technologies to be ready for the next stage of evolution.

Operating income ratio

2.6% (Fiscal 2013) »» **7.1%** (Fiscal 2018)

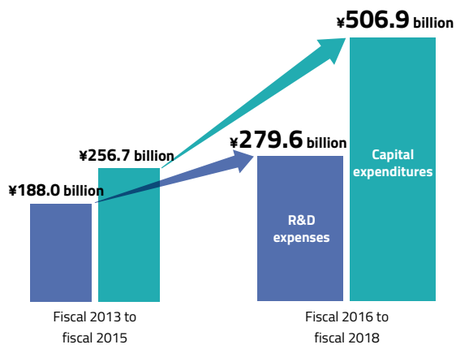
Sales to the automotive market

¥142.7 billion (Fiscal 2013) »» **¥231.4 billion** (Fiscal 2018)

New strategic positioning to meet the next stage of social needs

Against the backdrop of redoubled demand for customization and modularization in the smartphone market, needs have grown for coordination of the various electronic components mounted in those products. To constantly supply customers with optimum solutions, TDK moved from traditional in-house self-sufficiency to cooperation with IC manufacturers, transferring one portion of our high-frequency component business to Qualcomm. Similarly, in gearing up to meet the next stage of social needs, from fiscal 2016 we pursued sensor-focused M&As as a means to field a wide-ranging arsenal of technologies, while solid growth investments were advanced to expand sales to the automotive market.

Future growth investments



Medium-Term Plan “Value Creation 2020”

Based on the growth foundations that TDK has built until now, TDK is taking action in accordance with the Medium-Term Plan “Value Creation 2020” covering the three fiscal years from 2019 to 2021. Starting from Social Value, TDK is promoting Commercial Value and Asset Value to achieve business growth and create additional Social Value.

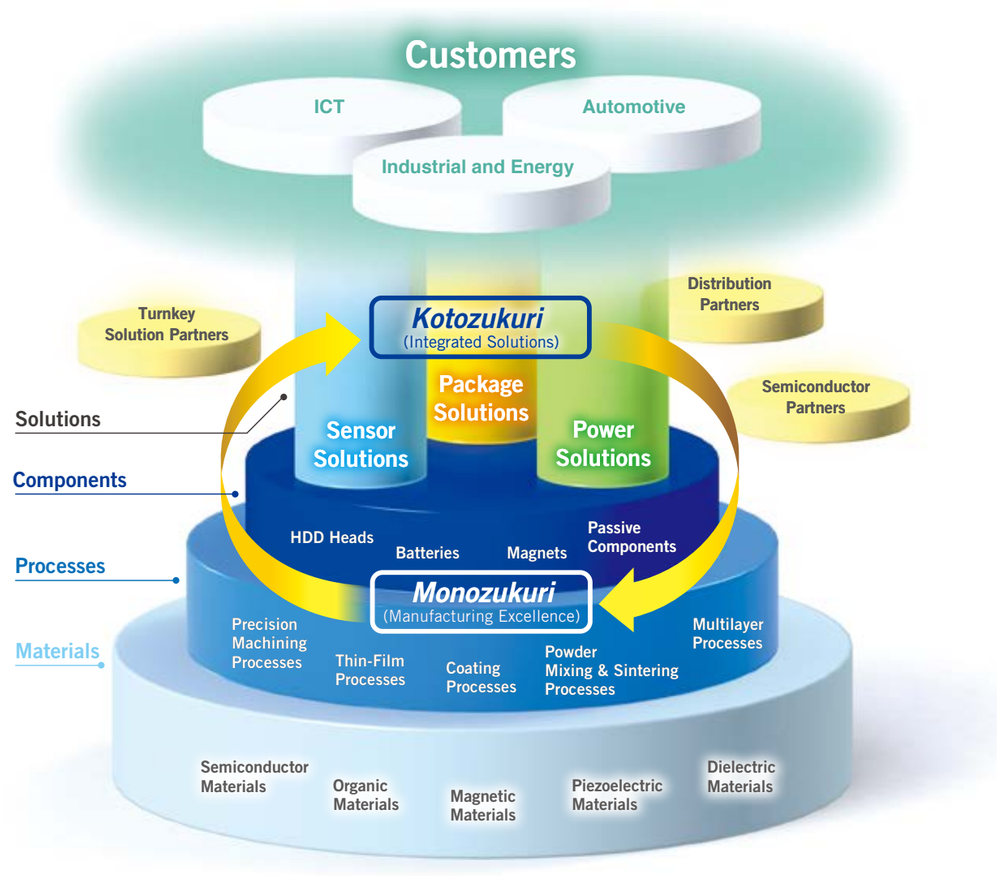
TDK

Medium-Term Plan Basic Policy

“Value Creation 2020”

Leap to new heights by providing market-needed solutions based on our electronic components business

TDK will use its core technologies including materials technology and process technology, the foundation of the Company’s growth since its establishment, to build a solid *Monozukuri* (manufacturing excellence) base and will actively cooperate with semiconductor partners, turnkey solution partners, and distribution partners to provide solutions derived from *Kotozukuri* (integrated solutions). TDK will achieve sustainable growth by linking customer needs and societal demand determined through the process of *Kotozukuri* with increasingly advanced *Monozukuri*.



Social Value

Starting point of value creation

Aiming for a sustainable society and enterprise

- TDK will realize greater happiness and well-being in society through cutting-edge technologies.
- TDK will effectively utilize finite resources.
- TDK will be a global and diversified enterprise.

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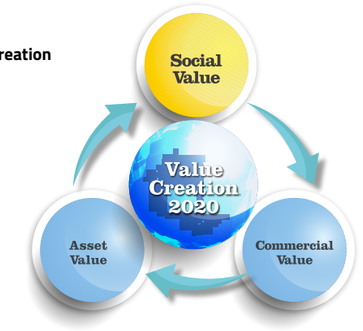


Commercial Value

Financial returns created from Social Value

Management targets in the medium term

Net sales

- Results (fiscal 2018): **¥1,271.7 billion**
- Target (fiscal 2021): **¥1,650.0 billion**
- CAGR: **9%**

CAGR by segment

- Passive Components: **7%**
- Sensor Application Products: **35%**
- Magnetic Application Products: **2%**
- Energy Application Products: **8%**

P. 30

Asset Value

Pursuit of capital efficiency to create additional Social Value

Medium-term financial strategy

- To execute growth strategies and promote the improvement of our financial condition, we aim to achieve positive free cash flow while executing well-balanced capital allocation to investments, shareholder returns, and the reduction of interest-bearing debt.
- We aim to steadily recover previous investments.
- We will enhance companywide asset efficiency.

- Steadily recover growth investments executed toward transforming business earnings structure
- Execute further growth investments based on well-balanced capital allocation

Well-balanced capital allocation

- Growth investments
- Shareholder returns
- Repayment of interest-bearing debt

Negative free cash flow

↓

Positive free cash flow

Medium-term financial targets

Capital efficiency
- Operating income ratio: over 10%
- ROE: over 14%

Shareholder returns
- Increase dividends stably through growth of income per share
- Target a 30% dividend payout ratio

Financial soundness
- TDK stockholders' equity ratio: over 50%
- Net cash

P. 34–P. 36

Progress of Value Creation 2020

Consolidated results for fiscal 2019

Consolidated net sales achieved a new record high for the sixth consecutive fiscal year and operating income reached the ¥100 billion level, a new record for income.* Income before income taxes and net income attributable to TDK also set new records.

The market deteriorated sharply in the second half in conjunction with the economic slowdown in China precipitated by trade friction between the U.S. and China. Orders fell in the automotive, ICT, and industrial and energy markets, which are priority markets. Despite this, sales of main products including lithium polymer batteries and capacitors remained firm throughout the fiscal period, and as a result, net sales were up 8.7% year on year.

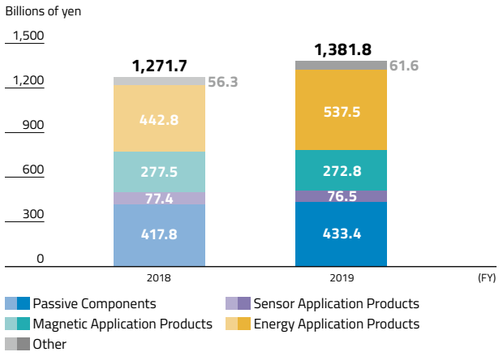
In addition to effects from increased sales of lithium polymer batteries, capacitors, and other products, the product mixes for HDD magnetic heads and HDD suspensions improved, resulting in an increase in income of approximately ¥39.4 billion. Meanwhile, lower sales prices resulted in a decrease in income of approximately ¥19.1 billion, but this amount was covered through rationalization, cost reduction, and restructuring efforts. Selling, general and administrative expenses increased approximately ¥26.5 billion in conjunction with the expansion of the lithium polymer battery and other businesses and reinforcement of development structures in the sensor business, and one-time expenses related to M&A, which were used primarily for the acquisition of InvenSense, Inc. ("InvenSense"), were down ¥5.5 billion compared with the previous fiscal year. As a result, operating income increased 20.2% year on year and the operating income ratio improved 0.7 percentage points, to 7.8%. In conjunction with changes to U.S. generally accepted accounting principles relating to retirement benefit expenses, results for the previous fiscal year were reclassified and ¥4.1 billion of retirement benefit expenses were recorded as non-operating expenses. Income before income taxes was up 28.7% year on year, net income attributable to TDK rose 29.4%, and net income per share attributable to TDK was ¥651.02, compared with ¥502.80 in the previous fiscal year.

* In fiscal 2017, operating income was ¥208.7 billion, but this included ¥144.4 billion in one-time gains from the sale of business.

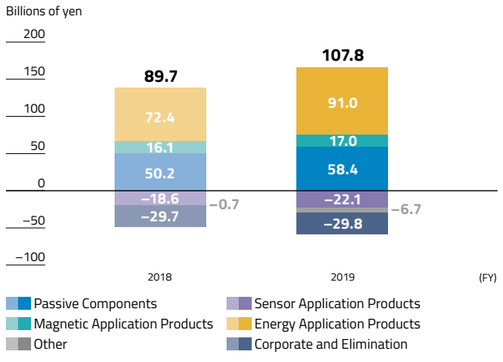
Consolidated results for fiscal 2019

Billions of yen		Fiscal 2018 full-year results	Fiscal 2019 full-year results	Year-on-year change	
				Billions of yen	%
Net sales		1,271.7	**1,381.8**	110.1	8.7
Operating income		89.7	**107.8**	18.1	20.2
Operating income ratio		7.1%	**7.8%**	+0.7 pt	—
Income before income taxes		89.8	**115.6**	25.8	28.7
Net income attributable to TDK		63.5	**82.2**	18.7	29.4
Earnings per share (Yen)		502.80	**651.02**	—	—
Ex-rate	U.S.$ (Yen)	110.93	**110.94**	—	
	Euro (Yen)	129.64	**128.48**	Appreciated by 0.9%	
Ex-rate impact on net sales & operating income		Net sales: Decreased by about ¥5.0 billion Operating income: Increased by about ¥0.6 billion			

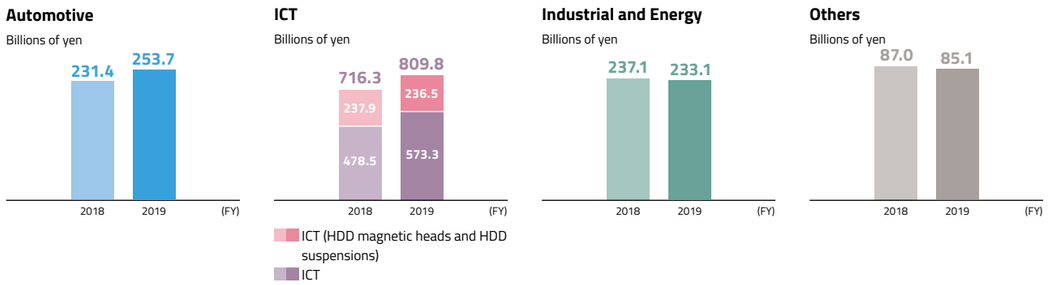
Net sales by segment



Operating income (loss) by segment

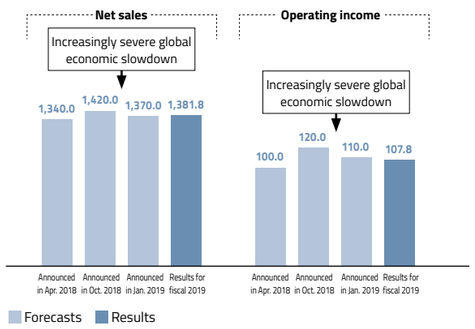


Net sales by market

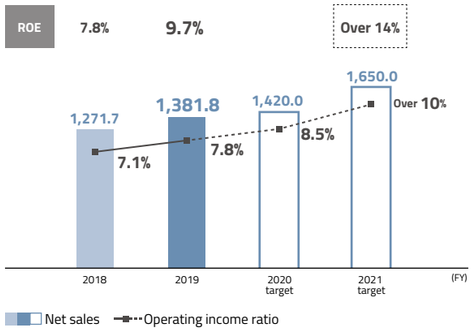


Progress toward achieving the Value Creation 2020 targets

Fiscal 2019 forecasts and results



Progress toward achieving management targets



Forecasts for fiscal 2020

Efforts will be made to increase net sales by 2.8% compared with fiscal 2019, for a seventh consecutive record high. We will also work to increase operating income by 11.3% to achieve another record. Planned dividends per share are to be increased by ¥10 in both the first and second halves for an annual increase of ¥20 and an annual dividend of ¥180.

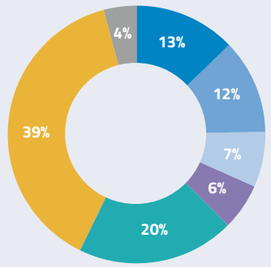
Consolidated results and dividends forecasts for fiscal 2020

Billions of yen		Fiscal 2019 consolidated results	Fiscal 2020 consolidated results forecasts	Year-on-year change	
				Billions of yen	%
Net sales		1,381.8	**1,420.0**	38.2	2.8
Operating income		107.8	**120.0**	12.2	11.3
Operating income ratio		7.8%	**8.5%**	+0.7 pt	—
Income before income taxes		115.6	**118.0**	2.4	2.1
Net income attributable to TDK		82.2	**84.0**	1.8	2.2
Earnings per share (Yen)		651.02	**665.14**	—	—
Dividends per share (Yen)		1st half: 80 2nd half: 80 Annual: 160	**1st half: 90** **2nd half: 90** **Annual: 180**	—	—
Ex-rate	U.S.$ (Yen)	110.94	**108.00**	—	
	Euro (Yen)	128.48	**122.00**	—	
Capital expenditures		173.6	**200.0**	26.4	15.2
Depreciation and amortization		106.6	**130.0**	23.4	22.0
Research and development expenses		115.2	**120.0**	4.8	4.2

Consolidated Results by Segment for Fiscal 2019

Net sales

¥1,381.8 billion



Passive Components Segment
- Capacitors — 13%
- Inductive Devices — 12%
- Other Passive Components — 7%

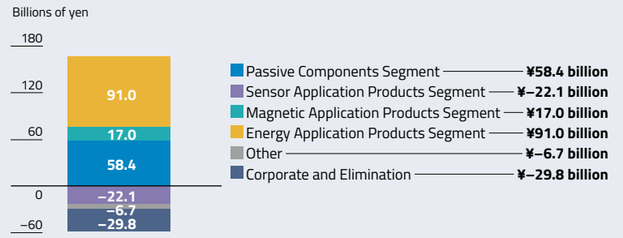
Sensor Application Products Segment
- Sensor Application Products — 6%

Magnetic Application Products Segment
- Magnetic Application Products — 20%

Energy Application Products Segment
- Energy Application Products — 39%
- Other — 4%

Operating income

¥107.8 billion



Passive Components Segment

Net sales

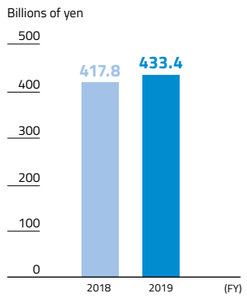
¥433.4 billion (up 3.7% year on year ↗)

Operating income

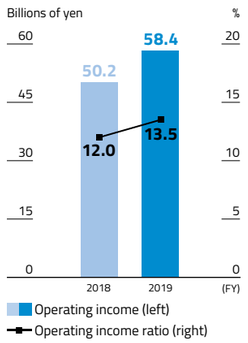
¥58.4 billion (up 16.3% year on year ↗)

Net sales were up 3.7% year on year, operating income increased 16.3%, and the operating income ratio improved 1.5 percentage points, to 13.5%. Thus, profitability improved. In ceramic capacitors, sales of highly reliable products with redundant features were strong in the automotive market and net sales increased. As a result of this as well as an improved product mix, higher production efficiency, and other factors, profitability was up substantially, supporting income in the Passive Components segment. Sales of aluminum electrolytic capacitors and film capacitors were flat. Sales of inductive devices increased, but operating income was down as a result of production adjustments in the second half. Sales of high-frequency components were up as a result of increased sales in the ICT market and other factors, but lower sales of piezoelectric material components and circuit protection components in the ICT market and effects from decreased demand in the European automotive market resulted in lower sales and income.

Net sales



Operating income / Operating income ratio



Sensor Application Products Segment

Net sales

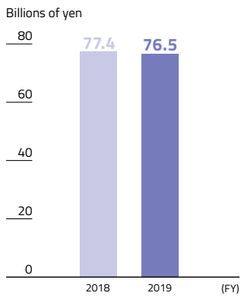
¥76.5 billion (down 1.2% year on year ↘)

Operating loss

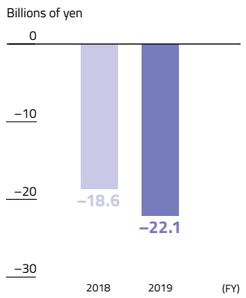
¥−22.1 billion

Net sales were down 1.2% year on year and an operating loss of ¥22.1 billion was reported as a result of approximately ¥5.4 billion in costs in relation to the acquisition of InvenSense and other factors. Demand for home appliances in China fell, but sales in the automotive market increased, resulting in higher sales of temperature and pressure sensors. Operating loss expanded slightly as a result of increased expenses for development of pressure sensors and sales expansion. In magnetic sensors, sales of Hall sensors in the automotive market were up, resulting in higher sales and income. Sales of TMR sensors for smartphones were also up, resulting in improved profitability. With regard to MEMS sensors, market introduction of new products was delayed and sales for smartphones and drones were down as a result of the impact of the economic slowdown in China, and there was also lower demand for game consoles, resulting in a sharp decrease in sales. Acquisition-related expenses were down ¥5.5 billion compared with the previous fiscal year, but development and other expenses were up, resulting in increased losses.

Net sales



Operating loss



Magnetic Application Products Segment

Net sales

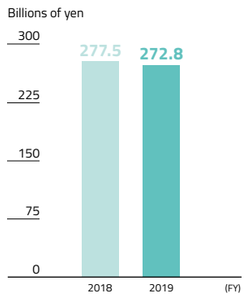
¥272.8 billion (down 1.7% year on year ↘)

Operating income

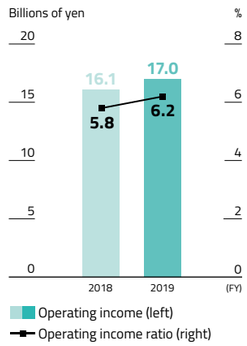
¥17.0 billion (up 5.6% year on year ↗)

Net sales were down 1.7% year on year and operating income was up 5.6%. HDD magnetic head sales volume was down approximately 8% year on year, but average sales prices increased in conjunction with improvements in the product mix, including a higher percentage of sales of nearline products, and as a result, sales were steady. Net sales of HDD suspensions were also nearly flat as higher average sales prices in conjunction with an improved micro-actuator sales ratio offset the decrease in sales volume. The decline in HDD assembly sales volume was counteracted by higher sales of suspension application products, and overall, sales levels remained the same as the previous fiscal year. Operating income increased due to contributions from higher average sales prices and improved profitability of suspension application products. Sales of magnets were down due to lower demand for wind power generators and industrial equipment. With regard to ferrite magnets, approximately ¥4.7 billion in impairment losses for fixed assets were recorded, primarily as a result of delays in productivity improvements, and losses for magnets as a whole increased.

Net sales



Operating income / Operating income ratio



Energy Application Products Segment

Net sales

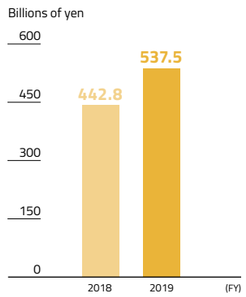
¥537.5 billion (up 21.4% year on year ↗)

Operating income

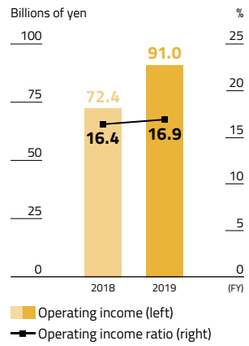
¥91.0 billion (up 25.7% year on year ↗)

Net sales increased 21.4% year on year and operating income was up 25.7%. Sales of lithium polymer batteries were up substantially as a result of increased market share of sales to main customers in the Chinese smartphone market, and sales for mobile devices, including laptops and tablets, as well as non-mobile applications such as game consoles were also up, resulting in higher sales and income. Despite a decline in demand in the second half for power supplies for industrial equipment for use in semiconductor production equipment and robots, both net sales and operating income were generally flat compared with the previous fiscal year.

Net sales



Operating income / Operating income ratio



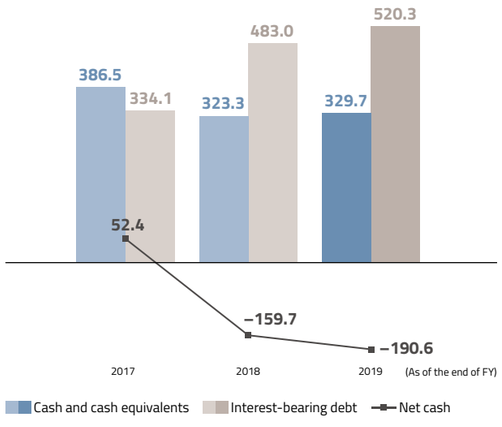
Message from the Corporate Officer of Finance & Accounting

We will endeavor to build the foundations of sustained growth through the pursuit of Asset Value and continuous growth investments.

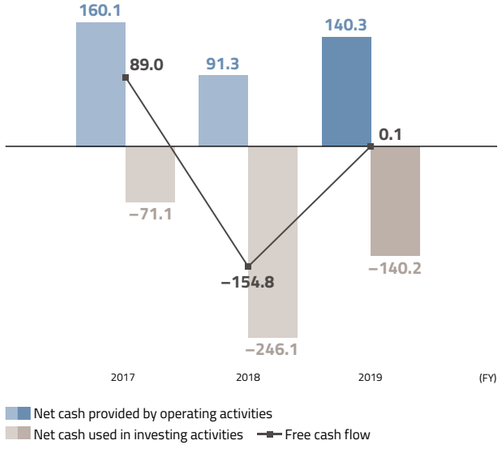
Tetsuji Yamanishi

General Manager of Finance & Accounting HQ
Senior Vice President
Representative Director

Financial position



Cash flows



Fiscal 2019 review

We made steady progress with improvements in Asset Value.

In fiscal 2019, the first year of the Medium-Term Plan "Value Creation 2020" (covering the three years from fiscal 2019 to fiscal 2021), business was substantially affected in the second and third quarters by the economic slowdown in China precipitated by U.S.–China trade friction and the global economic downturn. As a result, orders for commodity electronic components for automotive applications and HDD magnetic heads for data centers were down sharply. In addition, delays in introducing new sensor products, higher development costs, and other factors caused an increase in operating losses, and magnets posted impairment losses of approximately ¥4.7 billion. However, sales of lithium polymer batteries, automotive MLCCs, and other products remained firm throughout the fiscal year and were able to offset these negative factors. Net sales set a new record for the sixth consecutive fiscal term, and operating income, income before income taxes, and net income all reached record highs.*

In recent years, TDK has made large-scale investments exceeding operating cash flows in order to transform business structures. Under "Value Creation 2020," Asset Value is positioned alongside Social Value and Commercial Value as a strategic pillar. We have set financial targets for an operating income ratio of over 10% and for ROE of over 14% and are working to build structures that can generate stable returns commensurate with investments. We have also set a target of achieving a positive net cash flow by fiscal 2021. In fiscal 2019, the operating income ratio improved by 0.7 percentage points, to 7.8%, and ROE improved by 1.9 percentage points, to 9.7%. Although free cash flow was low, it did return to the black.

Issues have become apparent in some businesses, but fiscal 2019 was a year of steady progress in improving Asset Value, including supporting companywide profitability by making strong businesses even stronger and improving free cash flow.

* Comparison is made based on the exclusion of the gains on the sale of business to Qualcomm recorded in fiscal 2017.

Achieving the Value Creation 2020 targets

We will aim for stable, positive free cash flow.

We are planning for increases in net sales of 2.8% and operating income of 11.3% in fiscal 2020, and we expect to reach record highs as in fiscal 2019.

Substantial growth in passive components and lithium polymer batteries, sales of which were strong in fiscal 2019, is not expected, but our plans are based on profit improvement in business segments facing issues, such as sensors and magnets. With regard to sensors, we will seek a 30% annual increase in net sales again by achieving an increase in well-balanced sales. In the magnet business, we plan to increase profitability by responding accurately to market needs through improvements in production efficiency. While lithium polymer batteries grow into an even stronger business and passive components achieve higher profits than initially anticipated, component ratios are changing from those anticipated at the time of formulation of the Medium-Term Plan, including longer-than-expected delays in improving sensor profits. Nevertheless, we believe it is feasible to achieve an operating income ratio of over 10% in fiscal 2021, which will be the final year of the plan.

Capital expenditures in fiscal 2020, including investment amounts that were postponed in fiscal 2019, are expected to be approximately ¥200 billion, which would be more than initially planned. But investments over the three years are expected to be approximately ¥500 billion, which would be in accordance with the plan. Planned research and development expenses for fiscal 2020 are approximately ¥120 billion. Of that amount, 70%–80% will be allocated to R&D for expanding existing businesses, and the remainder will be invested in R&D with a focus on materials technology and venture capital. The largest portion of R&D expenses in existing businesses will be for sensors, followed by investments in lithium polymer batteries.

A factor in free cash flow turning positive in fiscal 2019 was a reduction in capital expenditures from the initially planned amount of approximately ¥210 billion to a little over ¥170 billion as a result of a careful examination of the timing of investments in response to a rapid decline in orders in the second half. Free cash flow is expected to remain positive in fiscal 2020 even when the one-time gains of approximately ¥120 billion reported in conjunction with the carving out of the high-frequency components business are excluded. In fiscal 2021 and thereafter, the recovery of these investments will proceed, and we expect to maintain stable positive cash flows and achieve net cash.

Sustainable enhancement of Asset Value

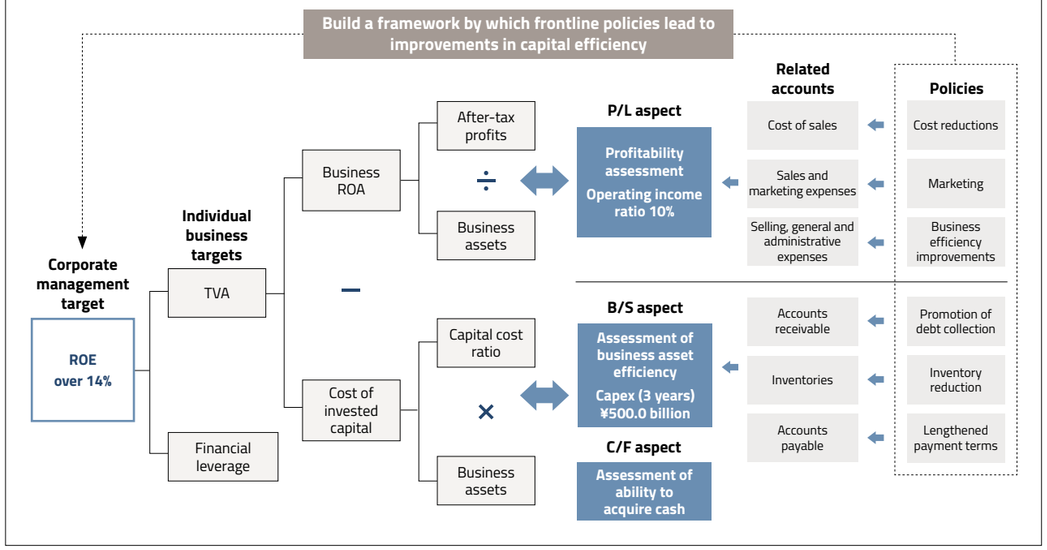
We will steadily achieve our targets and aim to reach to the next stage.

Until now, TDK has achieved growth by expanding the "ferrite tree." P. 04 During the Value Creation 2020 period, TDK is promoting the recovery of prior investments and is not thinking of making any new large-scale acquisitions. In order to take advantage of growth opportunities as DX and EX advance, however, it will be necessary to invest in the further reinforcement of existing businesses and to make investments to acquire technologies that TDK does not have. Accordingly, our fundamental policy is for about half of the profits that the Company generates to be reinvested, up to the amount of depreciation expenses. Based on TVA (TDK Value Added), which compares capital costs (weighted average capital costs multiplied by cost of invested capital) with returns, we will further reinforce investment valuation. Policy also calls for the TDK stockholders' equity ratio to be maintained at about 50% in line with assets, including goodwill, which expands in conjunction with investments. We will allocate the remainder of profits as shareholder returns with a dividend payout ratio of 30%. With regard to shareholder return methods, we will investigate means of optimizing the total return ratio. Rather than simply aiming to improve capital efficiency, we see share buybacks as one option for achieving stable shareholder returns.

We are also promoting the spread of "logic trees" to work sites. Instead of uniformly applying logic trees to all businesses, we operate logic trees with features tailored to the circumstances of each Business Company and Business Group. For example, we set operational key performance indicators for businesses that maintain stable profit levels in order for them to achieve even higher levels of earnings power. As we expand undertakings to all businesses, we are conducting operations with a focus on expanding free cash flow in such high-growth businesses as lithium polymer batteries. We are expanding these initiatives on a global scale.

We will steadily work toward achieving an ROE of over 14%, a target set for Asset Value, through improved profitability, balanced capital allocation, practice of logic trees, and other methods discussed above. Under the next Medium-Term Plan, we hope to achieve the hoped-for capital efficiency and transition to a major growth stage throughout the Group.

Financial and operation logic tree



Riding the Mighty DX and EX Wave, TDK Aims to Sustainably Enhance Corporate Value.

DX and EX Open Up Unlimited Market Possibilities

The dual forces of Digital Transformation (DX) and Energy Transformation (EX) are creating a host of possibilities for TDK.

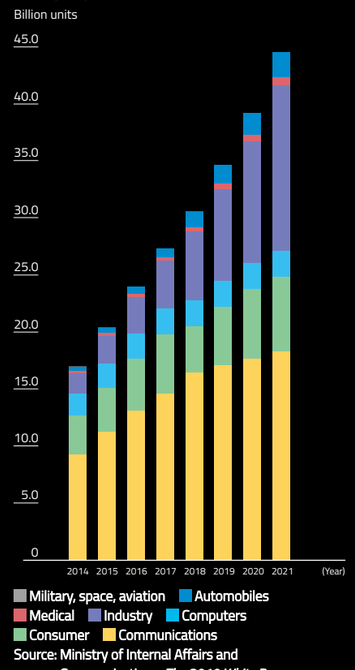
DX Digital Transformation

Global DX market showing rapid growth

Investments in DX-related technologies and services are said to be expanding on a global scale at an average annual growth rate of 17%. The investment amount in 2022 is expected to reach some U.S.$2 trillion. In addition to conventional Internet-capable terminals such as personal computers and smartphones, the scope of network connectivity is getting much wider. The “connected car” brings IoT applications to automobiles and other means of transportation, and connectivity drives the expansion of the digital healthcare market in the medical sector, as well as industrial, infrastructure, and logistics innovations such as the smart factory and the smart city. The world will be networked as never before.

Growing demand for sensors and passive components designed to be incorporated into a myriad of devices

Worldwide IoT device trends and projections



Source: Ministry of Internal Affairs and Communications, *The 2019 White Paper on Information and Communications in Japan*

EX Energy Transformation

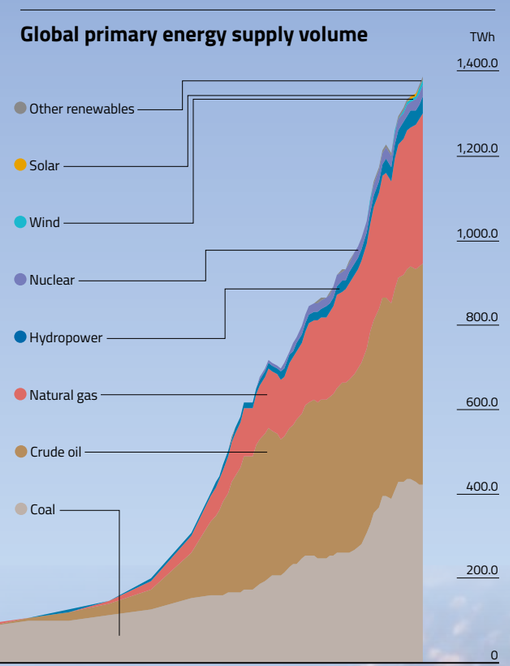
Improving energy efficiency

The current world population stands at about 7.7 billion, and is expected to surpass 10 billion by 2050.* As the consumption of energy rises along with the growth of the population, fossil fuels, which so far have been the main source of energy, are expected to be depleted, and the curbing of global warming has become a global issue. The use of renewable energy sources and higher energy efficiency therefore will be pressing concerns.

* United Nations, *World Population Prospects 2019*

Demand for lithium polymer batteries, power supplies, generator magnets, etc., projected to rise

Global primary energy supply volume



Source: Based on BP, *Statistical Review of World Energy 2017*

The Capability to Provide Social Value

TDK Commands a Wide Range of Products and Technologies for DX

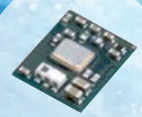
With the rapid evolution of the Internet of Things (IoT), big data, artificial intelligence (AI), and robotics, along with the information and communication technology (ICT) behind these developments, DX is bringing dramatic changes to every aspect of people's lives. TDK commands an impressive array of technologies that push the boundaries of electronic components.

IoT INSIDE

IoT devices

TDK has the power to meet the pressing needs of the age, such as compatibility with the fifth-generation mobile communications system (5G) for smartphones, smaller dimensions, lower profiles, and higher integration and modularization of IoT devices. TDK has developed sophisticated high-frequency components and worked together with IC manufacturers to realize semiconductor embedded substrate (SESUB) technology, which enables the design of highly competitive modules with small dimensions and low profiles. The next generation of electronic components and modules with high added value is currently being created in our labs.

We also contribute sensor solutions in the VR/AR domain. Through the integration of core technologies, we are working on bringing next-generation wearable solutions to consumers.



SESUB

7-axis InvenSense sensor

Drone INSIDE

Drones

As major efforts are being made particularly in the development of commercial-use drones, the drone market worldwide is expected to rapidly expand further. But in order for drones to become actual flying robots, improved flight stability along with safety and reliability to prevent collisions and crashes are key issues. Sensors together with software development are the major factors in bringing about a true drone innovation. TDK has an extensive lineup of non-optical sensor products, and we are also globally building a diverse solution business by combining multiple sensors and supplementing sensing with software.

Market trends in drone hardware

Source: Impress Corporation, *Drone Business Research Report 2019*

Storing and supplying energy

- Solid-state batteries
- Film solar cells

- Chip varistors (electrostatic discharge protection components)
- Electric double-layer capacitors (EDLC)

- Wireless power transfer

Sending and receiving radio waves

- Chip antennas

- Inductors for near-field communication (NFC) circuits
- Magnetic sheets for NFC

Capturing data

- Temperature sensors

- Pressure sensors
- Motion sensors
- Angle sensors

Generating and capturing sound

- Beepers

- MEMS microphones

Suppressing noise

- Chip beads
- Noise filters
- Noise suppression sheets

- Varistors (electrostatic discharge protection components)

Realizing further compactness and efficiency

- Semiconductor embedded substrates (SESUB)

- Piezo haptic actuators
- Transparent conductive films
- Lens actuators

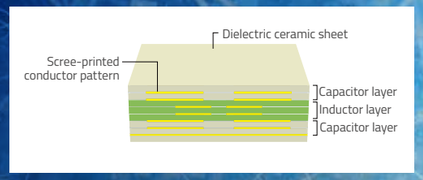
WITH

5G

In step with 5G

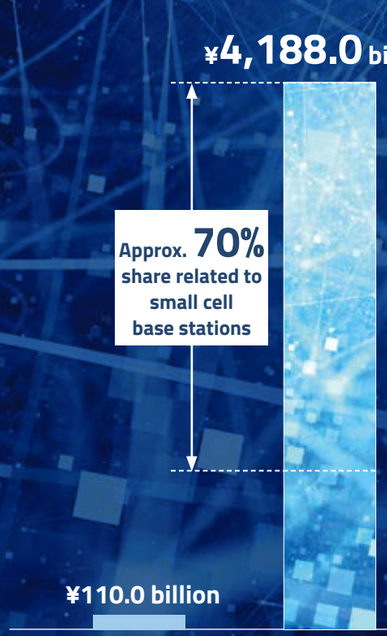
Featuring ultra-high speed, large capacity, multiple simultaneous connections, and ultra-low latency, the upcoming fifth generation mobile communication system (5G) is attracting attention as an infrastructure suited to the IoT society where everything is connected to the Internet. Because the millimeter waves used by 5G are easily blocked by objects, it will be necessary to install a larger number of base stations for small cells. According to projections, the share of small cell base stations in the total base station count will be around 70% by the year 2023. Multi-antennas that support beam forming technology, a key aspect of 5G communications, will play an important role in such small cell base stations. TDK will be supplying so-called LTCC AiP devices, which are proprietary antenna in package (AiP) configurations developed by making full use of our know-how in low-temperature cofired ceramic (LTCC) technology accumulated over many years. In addition, we will provide a wide variety of other products and technical services that support 5G communication networks, including components for communication circuits, sensing applications, and noise suppression components, as well as batteries. In this way, we will be contributing to the new network standard.

Layered structure of LTCC device



A circuit consisting of capacitors, inductors, and many other elements is printed on a dielectric sheet for multilayering, resulting in a drastic reduction in space requirements, even as compared with high-density mounting of components on a PCB.

Global market for 5G base stations



Source: Fuji Chimera Research Institute, Inc., *Future Perspective of Core Technology to Realize 5G/High Speed Large Capacity Communication 2018*

TDK products communication circuits

High-frequency components and modules
Contribution to stable radio wave transmissions for 5G communications

Inductors for NFC circuits
Assurance of stable communication quality

Inductors for high-frequency circuits
Reduction in signal loss and improved performance of high-frequency circuits

Sensing

MEMS motion sensors
Sensors for detecting various movements. Also have applications in 5G terminals

TMR magnetic sensors
Highly sensitive magnetic sensors to which HDD head technology is applied

Noise suppression sheets
Magnetic sheets to prevent device malfunctions caused by radiated noise

INSIDE

xEV

xEVs

Pursuit of automotive-grade quality

TDK is supplying an enormous variety of components and products for automotive use, including passive components that connect the chips in engine control units (ECU) to the real world, thereby allowing the realization of electronic control. We also offer various types of sensors and parts for the power train, body, and for safety- and information-related tasks. This contributes to the electrification of the automobile and the spread of advanced driving assistance systems (ADAS), and helps improve safety and convenience. To ensure the high reliability demanded of electronic components used in cars, where in certain situations even lives may be at stake, we implement a strict *Monozukuri* (manufacturing excellence) policy aimed at zero-defect product quality. Our multilayer ceramic chip capacitors (MLCC), inductors, and similar passive components are designed to withstand extreme temperatures, and all other components also provide an outstanding degree of resistance to vibrations and shocks and are able to handle high levels of heat and humidity. We also provide various products that contribute to the safety and comfort of xEV (HEV/PHEV/EV, etc.), which are becoming ever-more popular worldwide.

Custom products from TDK for xEV

Sensor Business Formation and Strategy

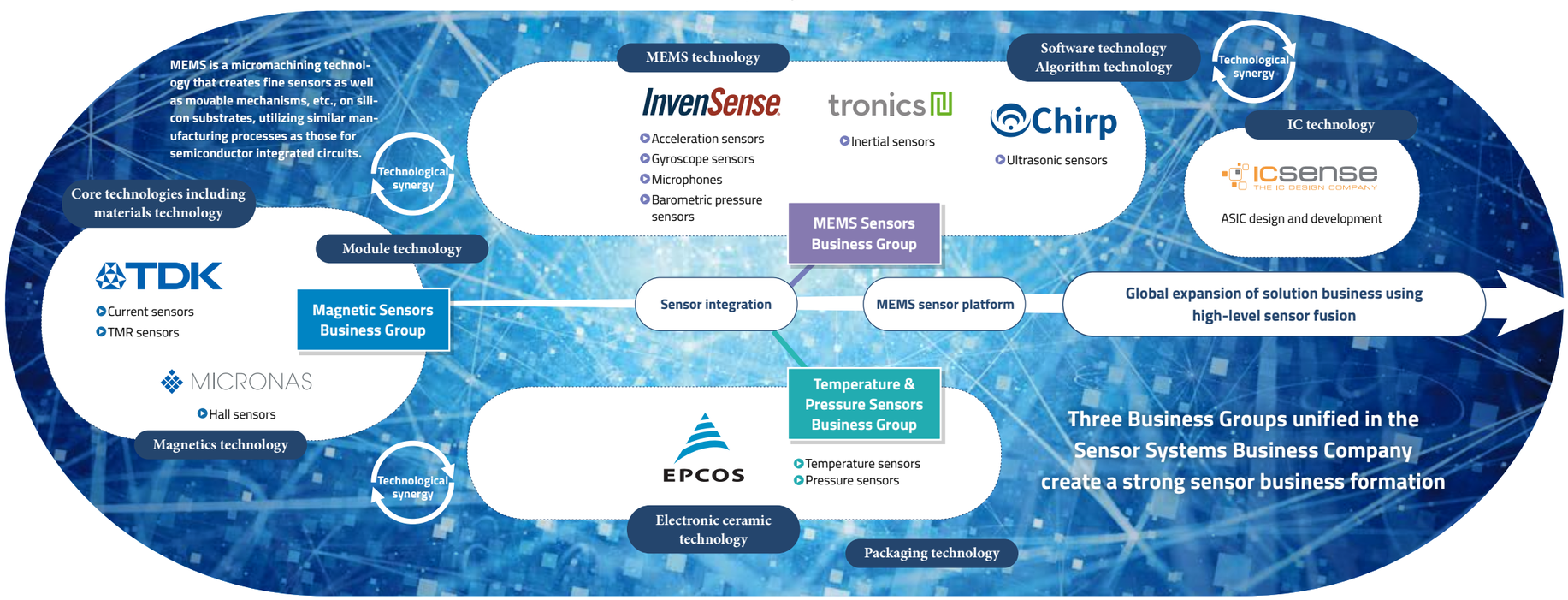
Through M&As, TDK has built up a world-class portfolio of non-optical sensors. We will also contribute to DX by providing comprehensive sensor solutions.

Formation

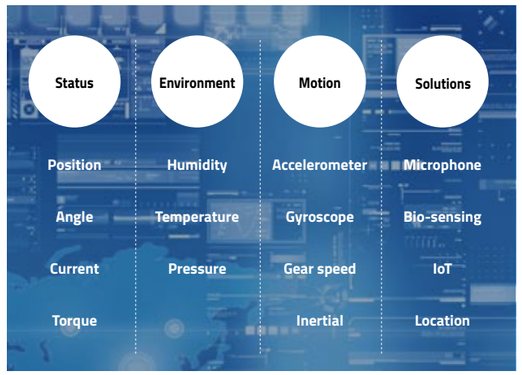
In addition to conventional products such as magnetic sensors and temperature sensors, we have expanded our lineup of non-optical sensors through aggressive acquisitions to meet major market needs. In addition, by incorporating IC design technology and software technology, we have realized a vertically integrated business model, ranging from the provision of materials to advanced composite sensor configurations that integrate multiple sensors and ICs. We have linked the three business groups "Temperature and Pressure Sensors," "Magnetic Sensors", and "MEMS Sensors" to create the Sensor Systems Business Company* for developing sensor solutions on a global basis.

* Sensor Systems Business Company: Newly created entity that encompasses TDK's sensor divisions and sensor-related group companies

Vertically integrated business model enables us to offer advanced solutions



World-leading lineup of non-optical sensors



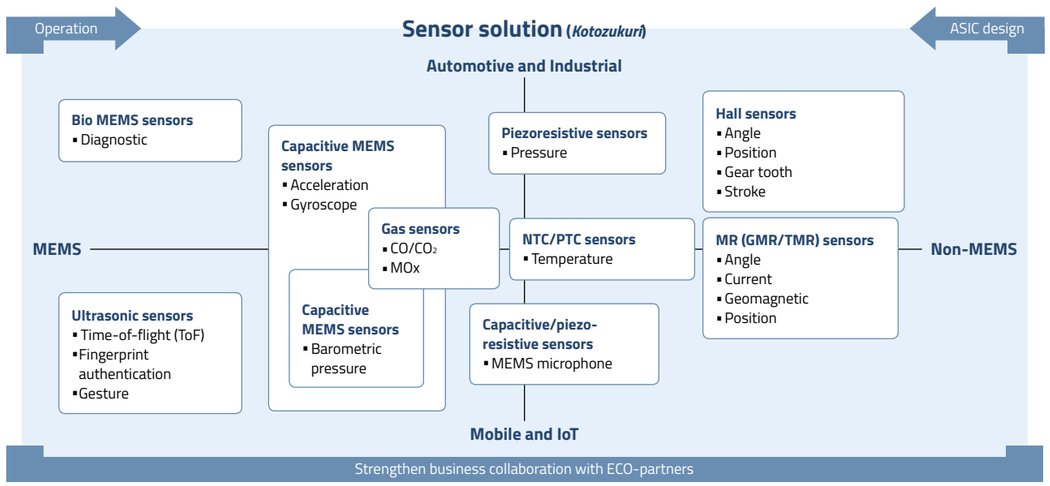
Growth strategy

TDK has devised a growth strategy for expanding the sensor business with a medium- to long-term perspective, and we are steadily turning strategy into reality.

We will be progressively expanding sales of automotive sensors in a process of organic growth. Redundant sensor configurations combining TMR sensors (benefitting from HDD magnetic head technology) with Hall sensors, temperature and pressure sensors, acceleration sensors, gyroscope sensors, time-of-flight (ToF) sensors, and other MEMS sensors will be among the growth products.

With regard to magnetic sensors in consumer applications including mobile and IoT devices, we are working to capture demand for product replacements with TMR sensors offering advantages such as high accuracy and low power consumption. For MEMS sensors such as microphones and ultrasonic sensors, we are developing new applications including smart speakers and fingerprint authentication.

Sensor business strategy



The Capability to Provide Social Value

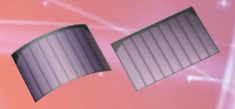
TDK Contributes to EX with Power Electronics Technologies Based on Its Magnetics Expertise

In the area of EX (Energy Transformation), the use of renewable energy is, of course, of great importance, but it is also essential to realize an infrastructure that minimizes the waste of energy. This applies to all major stages of EX, namely, the efficient generation, transmission, storage, and conversion of energy. TDK's technologies are at work in all of these areas.

Generation

Powerful neodymium magnets contribute to reduced energy requirements and power consumption in xEV drive motors, thereby improving fuel economy. Our large, high-performance neodymium magnets for wind power generators are also in demand in the renewable energy market. TDK's firm solar cells are also notable as they produce electricity even with artificial light.

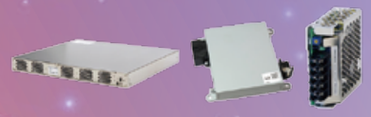
Neodymium magnets



Film solar cells

Conversion

Focusing on power supplies for industrial equipment, we provide AC-DC switching power supplies, DC-DC converters designed to minimize losses and optimize power supply conditions, and power supplies for battery charging.



DC-DC converters/AC-DC switching power supplies

Conveyance

High-frequency components from TDK are utilized for example in smart meters for transmitting power use information and other equipment supporting the smart grid.

High-frequency components

Protection

Our surge arresters that protect electronic networks in telecommunications systems and power systems from lightning and line abnormalities have gained a high market share. We also supply products for electromagnetic interference protection.

Over-voltage protection varistors/arrestors
Various EMC countermeasure components/ anechoic chambers

Supply

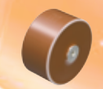
TDK has conducted advanced technical research into wireless power transfer with not only the electromagnetic induction method but also the magnetic resonance method. In addition to smart devices, we are exploring the commercialization of medium-capacity wireless power supply systems for industrial logistics robots employing the magnetic resonance method suitable for automated guided vehicles (AGVs), as used in factories and warehouses. We are also working on wireless power transfer systems for charging EVs.

Wireless power transfer technology for EVs (top)
Wireless power transfer for ICT equipment

Transmission

Our portfolio includes film capacitors used for adjusting and stabilizing the frequency and voltage of the power grid, and which function as output filters for various power converters, switches for power grids, circuit breakers for substations, and capacitors for medical and industrial X-ray imaging equipment.

Power film capacitors



Ultra-high voltage ceramic capacitors

Storage

TDK supplies a variety of rechargeable batteries ranging from low-profile batteries in small devices such as smartphones to massive high-capacity batteries found in wind and solar power generation systems. We are especially strong in the field of lithium polymer batteries for smart devices, and are working toward a further expansion of their application scope. We are also conducting world-leading research into surface-mount-type, solid-state batteries.

Lithium polymer batteries

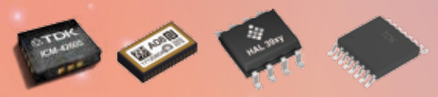
Control

TDK commands a wide range of products and technologies for controlling electricity, such as ASIC technology and passive components for power conditioners that turn DC into AC.

Aluminum electrolytic capacitors

Detection

We have an extensive lineup of non-optical sensors.



Temperature/pressure sensors, magnetic sensors, MEMS sensors

In Depth

Power Storage

Strategy in the Power Storage Sector

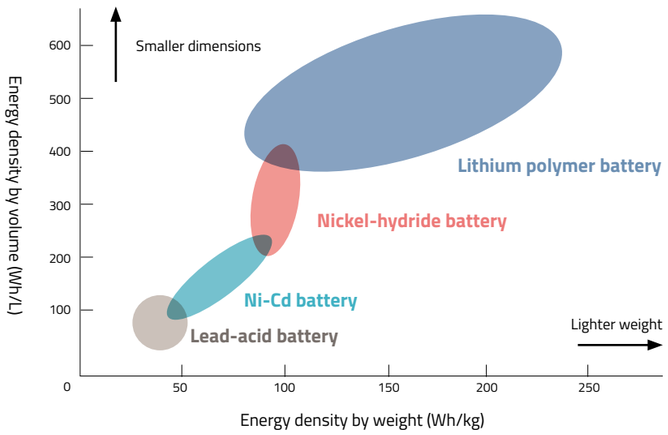
General view of ATL's Ningde Factory

Lithium polymer batteries play a leading role in TDK's energy business

Lithium polymer batteries from ATL occupy the top share in the global market for rechargeable batteries of smartphones. Their high quality and high reliability are universally recognized, and ATL is also renowned for its close integration of manufacturing, development, and sales, forming a flexible production framework that makes it possible to swiftly respond to customer needs. Previously, smartphones and other ICT devices were the main target markets for ATL, but the development of mini cells and power cells is poised to further expand the product lineup beyond ICT devices.

Lithium polymer batteries, which are extensively used in smartphones and notebook PCs, were a breakthrough development in rechargeable batteries. They were successfully put into practical use in 1991, featuring lithium compounds (such as lithium cobaltate) as the positive electrode and carbon (such as graphite) as the negative electrode. They provide excellent characteristics in terms of weight and volume energy density, low self-discharge, and long service life.

Energy density of various rechargeable batteries

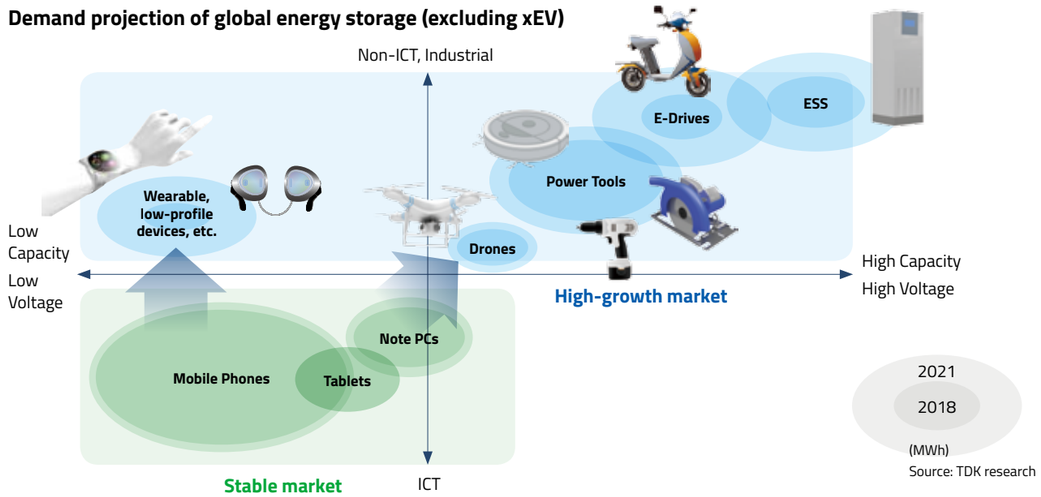


Expansion into mini cell and power cell markets

TDK is currently engaged in the lateral deployment of ATL's successful first-to-market model. While deepening our penetration of the smartphone market and further strengthening our solid business foundation, we are also promoting application of the model to realize expansion into new areas.

One of the new targets is the mini cell market. The trend toward wearable devices is expected to spread further, and the number of ultra-miniature IoT devices is bound to increase. We will be intensively promoting sales of rechargeable batteries that contribute to size and weight reductions. Another section of the market that we will be aiming for is power cells, where the focus will be on drones and e-drives as well as residential energy storage systems.

Demand projection of global energy storage (excluding xEV)



Source: TDK research

TDK's Energy Solutions

World's first solid-state battery that allows charge and discharge: CeraCharge™

We have developed the world's first chip-type, solid-state battery called CeraCharge™, using ceramic electrolyte.

By harnessing multilayering technology gained in our work with MLCCs, we successfully combined high energy density with small dimensions. Instead of the liquid electrolyte commonly used in batteries, a solid ceramic electrolyte is employed, thereby ensuring a high degree of safety without the risk of electrolyte leakage. In the future, the combination with energy harvesting technology will eliminate the need for battery replacement, which is expected to result in wide use in various IoT devices.

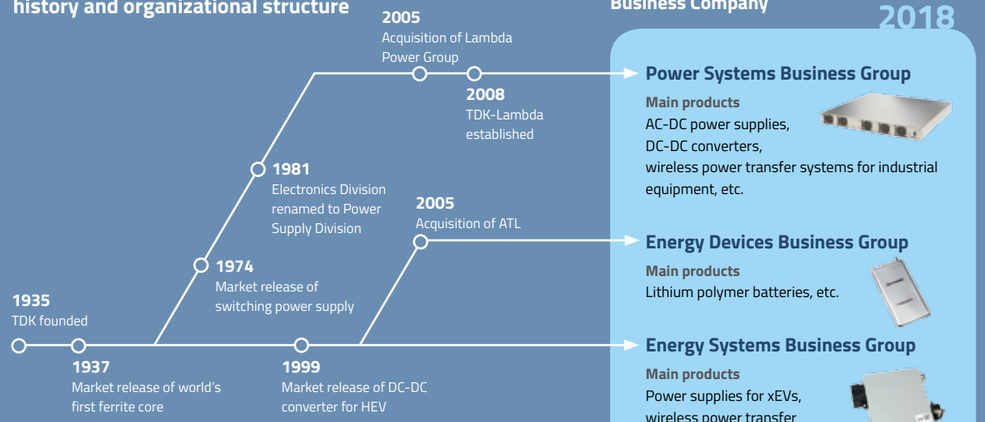
CeraCharge™

Three Business Groups that carry TDK's energy business

TDK's Energy Solutions Business Company is the command tower for three Business Groups: Power Systems Business Group, Energy Devices Business Group, and Energy Systems Business Group.

TDK entered the energy business in 1974, when ferrite memory cores lost their competitiveness due to the advent of semiconductor memory. A successful business transformation of the electronics division was achieved with the move to switching power supplies. After the launch of xEVs in the 1990s, we developed a compact, lightweight, high-efficiency DC-DC converter for HEVs using power ferrite and magnetics technology. Subsequently, we acquired the lithium polymer battery manufacturer ATL in 2005, followed by the acquisition of the power supply operations of the Lambda Power Group, thereby achieving a full-scale entry into the energy business. In 2018, we formed the Energy Solutions Business Company to establish a strong organizational framework for navigating the turbulent EX waters.

TDK's energy-related technology development history and organizational structure



Energy Solutions Business Company 2018

Power Systems Business Group

Main products
AC-DC power supplies, DC-DC converters, wireless power transfer systems for industrial equipment, etc.

Energy Devices Business Group

Main products
Lithium polymer batteries, etc.

Energy Systems Business Group

Main products
Power supplies for xEVs, wireless power transfer systems, etc.

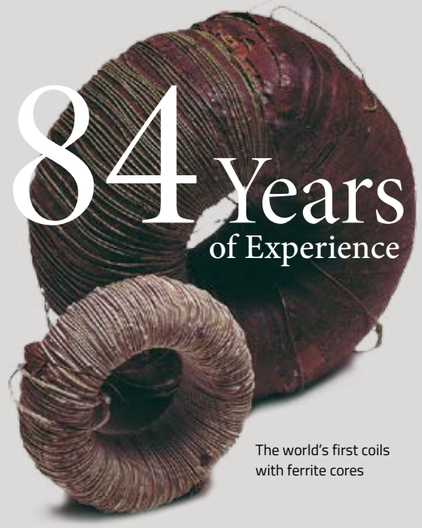
Framework for Enhancing Corporate Value and Sustainability

Ensuring Continued Success

Staying on top of major trends such as DX and EX means that
TDK is continuously enhancing its core technologies and *Monozukuri* skills while
strengthening governance, structural reforms, and sustainability initiatives.

Ongoing improvements in core technologies

We are devoting intensive efforts to continuously strengthen our competency in the five core technologies, including materials technology, which has been a source of innovation since our inception. P.54

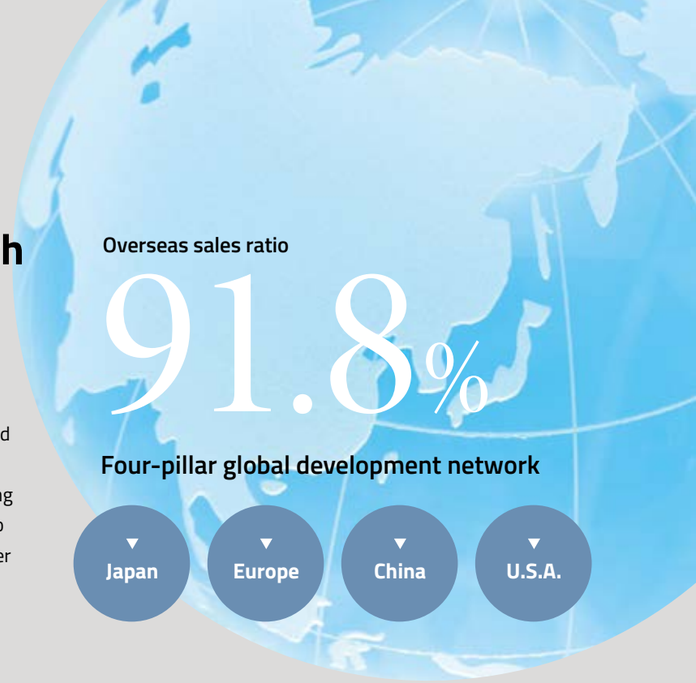


The world's first coils with ferrite cores

Boosting innovation with four pillars worldwide

The TDK Group derives more than 90% of its net sales from overseas markets. Our extensive network is sustained by four R&D sites strategically positioned around the globe.

We are increasingly delegating authority and pursuing research close to the actual area of demand, in order to deliver products that are perfectly matched to customer needs. Development efficiency is enhanced by sharing R&D results on a global basis. P.58



Persistently enhancing governance linked to strategy

Having always been conscious of global standards and working to build a corporate governance system, we are further strengthening governance in line with our strategy to achieve sustainable growth. P.60

Realizing *Monozukuri* Innovation for sustainable development

—The pursuit of *Arubeki-Sugata*

TDK is realizing a *Monozukuri* Innovation that combines the Industry 4.0 concept with its zero-defect product quality policy. *Arubeki-Sugata* (ideal process) is a shared concept within the TDK Group as we engage in manufacturing innovation at a global level. P.56

Arubeki Sugata

Aiming for Sustainability

We are promoting initiatives for a human resource strategy that has shifted to harnessing the strength of our diversity, making a contribution to the happiness of people through technologies and products, and aiming at sustainable growth of the Company and of society at large. P.72

Ongoing Improvements in Core Technologies

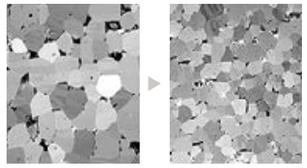
Since its inception, TDK has grown on the strength of five core technologies: materials technology based on ferrite; process technology used to realize materials' characteristics; evaluation and simulation technology to promote development designs; product design technology for merging electronic components into advanced and multiple functions; and production technology to support mass output.

TDK continues to steadily hone this core know-how with the aim of eliminating defects during the production process. The goal is the *Arubeki-Sugata* (ideal process) of *Monozukuri* through harmony between people and robots, moving to realize "Industry 4.0 + Zero Defect."

Materials technology

Researching the properties of materials at the atomic level and developing original electronic components and devices to meet advanced needs

Materials design technology
Realizing required characteristics through the blending of main materials and control of trace additives.



Powder control technology
Improving materials' characteristics through crystal grain miniaturization and uniformity.

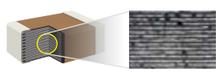
Microstructure control technology
Realizing required characteristics through control of crystal grain internal composition and grain boundaries.

Process technology

Creating high-performance and functional products with nanometer-order control technology

Forming technology
Adding binding agents to material powder and forming small, slim and complex-shaped products.

Sintering technology
Sintering to solidify and harden with precision control of temperature and atmosphere (gas components in the furnace).



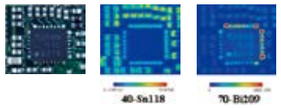
Thick-film process technology
Printing and multilayering electrodes and other elements to produce chip capacitors, chip inductors, and other layered electronic components.

Thin-film process technology
Forming thin film to create electrodes, coils, and head elements to manufacture HDD magnetic heads and thin-film electronic components.

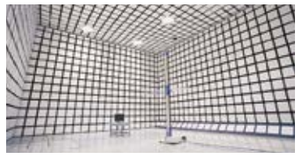
Evaluation and simulation technology

Initiating such as materials analysis, simulation of product structure, heat and magnetic fields, and noise measurements and countermeasures to raise product functions

Evaluation and analysis technology
Conducting microstructure observations, atom distribution visualization, and other advanced processes.



Simulation technology
Visualizing heat distribution released from circuits, distribution of noise-causing magnetic fields, among others.



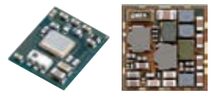
EMC countermeasure technology
Protecting electronic equipment from external noise penetration, as well as controlling noise released by such equipment.

Product design technology

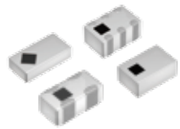
Integrating electronic components to realize high-performance, multiple-function electronic devices and optimum combination modules

Circuit technology
Using optimum component selection, wiring, heat dissipation design, and other simulation to advance circuit designs.

Packaging technology
Pursuing smaller size and higher performance with component final assembly, binding, sealing, advanced structural design, configuration design, and other expertise.



Semiconductor Embedded Substrate (SESUB) technology
Embedding ICs, components, wiring, and other elements in substrate thickness to achieve modularization.



Low-temperature cofired ceramic (LTCC) technology
Printing and laminating capacitors, inductors, and numerous other elements on dielectric sheets.

Production technology

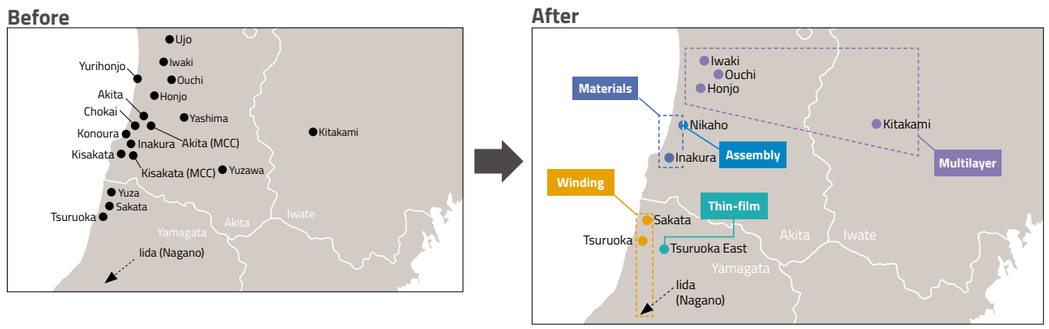
Stepping to further raise quality, cost, delivery, and service (QCDS) via speedy responses to market changes, together with increasing product strength

Equipment technology
Realizing superb products from superb production equipment. Development of original engineering methods and in-house creation of production facilities are key TDK *Monozukuri* strengths.

Monozukuri Innovation for Sustainable Development

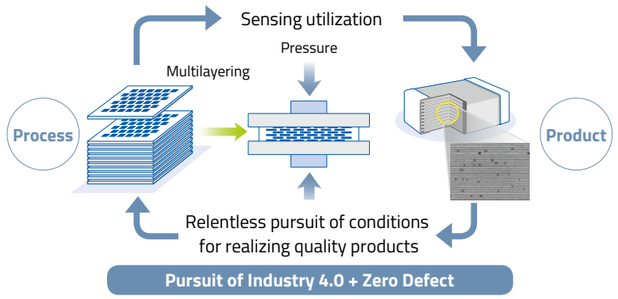
Akita Future Project

Our drive during the 1990s to relocate production sites overseas resulted in some issues such as a decreased manufacturing capability, reduced efficiency due to movement between sites, and dispersion of core technologies. Since around 2016, we have been working on the Akita Future Project, which aims to restrengthen manufacturing power through integrated production, accumulating dispersed sites and technologies in Akita Prefecture where TDK was founded. The integration of sites for each core technology related to passive components minimizes movement between sites, thereby improving efficiency and the fluidity of human resources. Vertically divided business units centered on a product-oriented axis, along with horizontal deployment of core technologies, make it possible to quickly respond to market changes and speed up new product development.



Industry 4.0 + Zero Defect

The combination of Industry 4.0 with our zero-defect product quality concept is a major pillar of the Akita Future Project. In the future, electronics are bound to spread to every aspect of people's daily lives. xEVs (including HEVs/PHEVs/EVs) are becoming more widespread, while autonomous driving technologies are being readied for practical introduction. In the health and wellness sector, remote diagnosis and other advanced techniques are showing high promise. These trends in areas where safety is crucial mean that the quality of electronic components is more important than ever. TDK's "Industry 4.0 + Zero Defect" innovation of industrial production combines its drive to eliminate defective products with the Industry 4.0 concept.



Next-generation *Monozukuri* is becoming a reality

TDK's quality policy is based on the realization that quality cannot be assured by final inspection. It must be built into the whole process, from product design to completion. A multitude of data about the respective production processes is therefore acquired and analyzed for quality management, in order to create a production line that does not permit defective output.

In 2016, a model production line based on this approach was completed at our Honjo Factory East Site in Akita Prefecture for the fabrication of multilayer ceramic chip capacitors (MLCCs). The design concept of the line involves the utilization of the IoT, which makes it possible to autonomously detect process problems in real time, so that the line can be stopped if necessary, to prevent a defective product from reaching the next stage. After verifying the concept at the Honjo Factory East Site, it is to be applied to other existing production lines, with the ultimate aim of realizing location-independent production, so that the same quality level can be achieved at all our global sites regardless of physical location. The ideal form of a production process that does not allow defective output is an example of the Groupwide *Arubeki-Sugata* concept that is being disseminated to our sites around the world.

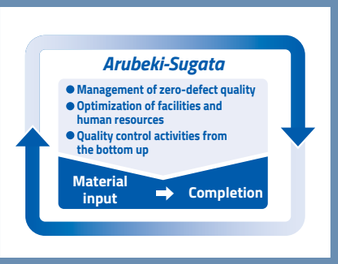
Honjo Factory East Site, Akita Prefecture

TOPIC

Progressively realizing *Arubeki-Sugata*

The *Arubeki-Sugata* movement arose out of self-motivated initiatives by employees involved in the thin-film coil manufacturing process at the Sakata Factory in Yamagata Prefecture, and it has since spread to all production sites.

The Inakura Factory East Site in Akita Prefecture is our main ferrite core factory that consolidates all ferrite core manufacturing processes from other factories. After thoroughly analyzing losses in the production process and eliminating all factors that could negatively affect quality, the process of sintering ferrite granules and creating finished products was automated. As a result, a line that formerly had a total length of 200 meters is now a mere five meters long, while production capacity has increased and lead time was significantly shortened. Furthermore, quality risks were successfully reduced. Another case in point is the Tsuruoka East Factory in Yamagata Prefecture where thin-film coils (inductors) are manufactured. Processes with inherent quality risks were automated and various other initiatives resulted not only in a reduction of quality risks but also an increase in productivity by 60%.



Rather than having to sort out defective products from the final output of a line, thorough quality management covers the entire process from materials selection to completion of the product.


A manufacturing floor with a design that reflects *Arubeki-Sugata* insights

Inakura Factory East Site

Line length **1/40**

Lead time **1/10**

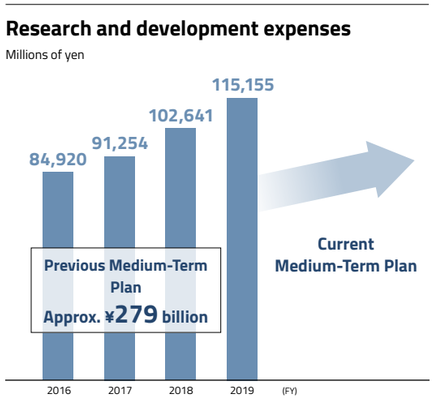
Production capacity **4 times**

Simply trying to improve yields and reduce costs while disregarding remaining quality risks is not the proper way to improve manufacturing. Rather, the aim must be to thoroughly analyze the manufacturing process to identify and remove all possible instances of quality risks. This is what the *Arubeki-Sugata* activities within the framework of TDK's *Monozukuri* Innovation are designed to do.

Boosting Innovation with Four Pillars Worldwide

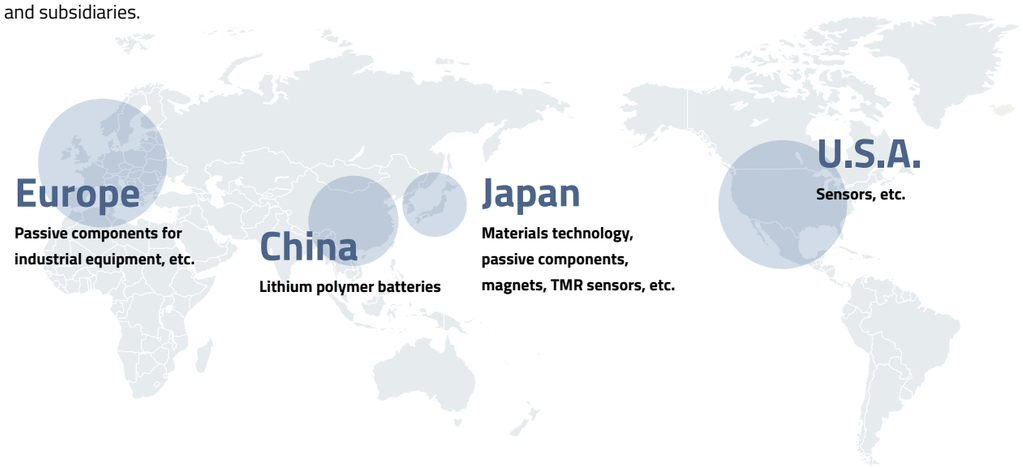
R&D for creating a stable future

The Medium-Term Plan "Value Creation 2020" (from fiscal 2019 to fiscal 2021), which has seen a change in our business structure through M&As, encompasses higher R&D expenses than the preceding Medium-Term Plan (from fiscal 2016 to fiscal 2018). We are strengthening our foundation to realize strong organic growth. Our foremost focus is on the area of sensors, where we plan to invest in creating solutions with high added value. With regard to lithium polymer batteries, investments are mainly focused on reinforcing the R&D activities of ATL. In addition to existing batteries for smartphones, development projects are targeting other fields as well, such as mini cells and power cells.



Promoting development that leverages respective strengths of four global pillars

The R&D activities of the TDK Group are organized in a structure encompassing four geographically different locations, to meet the needs of customers in the respective areas. The Technical Center in Japan is the core base of global research and development, working on core technologies such as materials technology, passive components, magnets, among others. R&D facilities in the United States, Europe, and China are targeting areas related to products that are strong in their respective regions. These facilities are also working on product development, applications, and system development. In addition, some regional headquarters, which were newly established in an organizational reform, and the Technology and Intellectual Property HQ at the headquarters in Japan are collaborating globally to advance research and development beyond the framework of businesses and subsidiaries.



Toward being first to market

In research and development, we have been increasing the speed of development by relying on a framework focused on specific areas of expertise. The first-to-market principle aimed at being a leader in bringing advanced products to the customer requires that development, sales, and production are working in a closely linked arrangement, thereby accelerating the business cycle. In order to speedily offer *Kotozukuri* solutions matched to the actual needs of the market, we have relocated development personnel formerly affiliated with the headquarters to the Business Companies.

TOPIC

Lateral deployment of ATL's speedy development model

ATL strongly dominates the market of lithium polymer batteries for smartphones. The secret behind this success is the unrivaled development speed of the company. ATL has gained the trust especially of customers who aim to bring products with leading-edge technologies quickly to the market. By speeding up development, ATL has successfully set itself apart from its competitors. We are now actively engaged in laterally deploying this development model to the mini cell and power cell sectors as well, in order to create a wide portfolio that goes beyond smartphones.

Lithium polymer battery

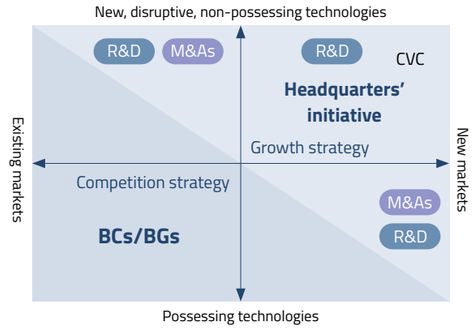
First to market with switching power supplies

TDK-Lambda, which holds the world's top share in standardized power supplies for industrial equipment, is applying the new paradigm to technology development, moving strongly toward being first to market. In addition to using simulation and automated design procedures, the company has integrated its development and manufacturing departments, resulting in a drastic shortening of development times through designs with a focus on production efficiency.

Convection cooling, 600W, AC-DC switching power supply with communication functions

Speeding up R&D and management

In sectors where we can rely on proprietary technologies to conduct short- to medium-term business operations in existing markets, we are realizing our strategies with Business Companies (BCs) and Business Groups (BGs). By contrast, technologies whose practical application is envisioned for five years or more in the future are the responsibility of the headquarters. When it comes to applying and diverting existing technologies to new markets, or making forays into completely new markets that require new technologies, TDK will select suitable measures such as M&As and the utilization of corporate venture capital. In this way, we will further perfect existing technologies, speed up the acquisition of new technologies, and accelerate the speed of management itself.



TOPIC

A new corporate venture company: TDK Ventures Inc.

With the intention of investing in early-stage venture companies, TDK has established a new corporate venture capital company called TDK Ventures Inc. as a wholly owned subsidiary in the U.S. The planned scale of investments for the time being is U.S.$50 million. Detecting trends in new technologies at an early stage, reinforcing the technology road map, and speeding up development are the targets that will greatly expand the possibilities of electronic components.

Corporate Governance

Persistently Enhancing Governance Linked to Strategy

TDK, which first embarked on globalization in the 1960s, remains constantly aware of global standards and has worked to strengthen its corporate governance systems. Today, TDK continues to consider measures needed to achieve long-term, sustainable improvement in corporate value.

Factors behind strengthening of corporate governance

- Some businesses will be affected by short-term market fluctuations. At the same time, they can take from several years to as long as a decade to see the results of investments in the form of R&D expenses, and management decisions need to be based on a medium- to long-term perspective.
- As a global company, ensuring business moves forward smoothly requires a governance structure that is also compatible with the standards of countries in Europe and the Americas.
- With non-Japanese employees representing in excess of 90% of the workforce on a consolidated basis, TDK needs to consider further globalization at the officer level.

History of corporate governance reforms

2002/6
- Number of Directors reduced from 12 to seven
- **First Outside Director invited to join the Board**
- **Compensation Advisory Committee launched (chaired by an Outside Director)**
- Funding of Directors' retirement bonuses suspended

2004/6
- **First non-Japanese Corporate Officer appointed**

2008/8
- **Nomination Advisory Committee launched (chaired by an Outside Director)**

2009/6
- **Two non-Japanese Corporate Officers appointed**
- **One Outside Director added for a total of three**

2015/5
- **First analysis and evaluation conducted of Board of Directors' effectiveness, and an outline of the results publicized**

2016/6
- **TDK Basic Policy on Corporate Governance established**

2018/6
- **Makoto Sumita, formerly an Outside Director and Chairman of the Board, appointed Chairman & Director**

Makoto Sumita

Chairman & Director (present post)
INNOTECH CORPORATION

From Outside Director to Chairman & Director of the Company

Mr. Sumita, who was previously an outside director, has been appointed chairman & inside director. Through his experience as an outside member of the Audit & Supervisory Board since June 2011 and Outside Director since June 2013, he has a deep understanding of TDK's management, business portfolio, and so on. From the perspective also of an outside stakeholder, he endeavors to make decisions on important matters and to supervise the performance of duties, as well as to strengthen corporate governance.

Corporate governance reforms

Reassessing Director composition and criteria for submissions to the Board

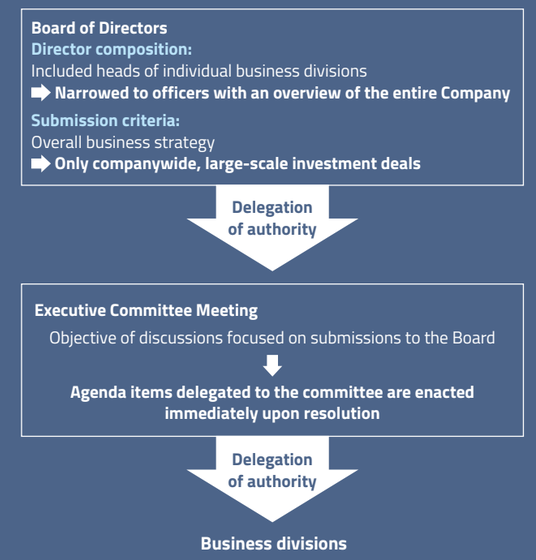
The composition of Directors has been reassessed, narrowed down to those officers with an overview of the entire Company, a shift from the previous inclusion of the heads of the individual business divisions. At the same time, by changing submission criteria to focus on large-scale, companywide investment deals, the Board is achieving a deeper level of discussion and more rapid decision-making regarding important deals.

Enhancing Executive Committee Meeting discussions

With the authority delegated to it by the Board of Directors in conjunction with the reassessment of Board submission criteria, the Executive Committee Meeting is now able to engage in deeper discussions on management strategy and arrive at decisions quickly.

Reassessing Group administrative structure

A foundation for enhancing business efficiency within a global structure has been put in place via a reassessment of Group administrative systems by the individual business divisions, headquarters, and regional headquarters.



Progress based on the results of primary evaluation by third-party evaluation institution in June 2018

1. **Demonstrating appropriate supervision and advisory functions to steadily achieve the Medium-Term Plan**
   In order to steadily achieve the Medium-Term Plan, the Board of Directors has carried out sufficient monitoring and verification by reviewing the progress status with Outside Directors and Outside Audit & Supervisory Board Members multiple times and in other ways.
2. **Further strengthening the governance and compliance systems**
   In order to strengthen the supervisory function in the global business system, the Group management system of each Business Division, Headquarters, and Regional Headquarters has been revised by reviewing the organization, job authority, and division of duties. It is recognized that the TDK Group's governance and compliance systems are being established through these efforts.
3. **Efficiency of operations of the Board of Directors**
   It is thought that the efficiency of operations of the Board of Directors has been enhanced by improving the discussions at the Executive Committee Meeting, which is a meeting body prior to the Board of Directors, and revising the criteria for agenda items for discussion by the Board of Directors.

Evaluation of the effectiveness by the Board of Directors

Based on the primary evaluation by the third-party evaluation institution, the Board of Directors, after conducting deliberations several times, confirmed that the effectiveness of the Board of Directors and its Advisory Committee (Nomination Advisory Committee and Compensation Advisory Committee) were sufficiently secured. Also, the Board of Directors confirmed that it is continuously enhancing its effectiveness by making improvements based on the results of the Board of Directors' evaluation in the previous fiscal year.

Future issues

(1) With regard to the Medium-Term Plan, sufficient discussions have been made from the process of formulation to the monitoring of the progress, and it is recognized that it is necessary to deepen discussions on longer-term issues in the future.

(2) It is recognized as a future issue that the Nomination Advisory Committee will deepen discussions on the succession plan (CEO, Chairman of the Board, Directors and Audit & Supervisory Board Members, including Outside Directors and Outside Audit & Supervisory Board Members) and share basic ideas with the Board of Directors.

Board of Directors' View of a Continuously Evolving TDK

We asked Makoto Sumita, Chairman & Director, and Kazumasa Yoshida, Outside Director, to discuss the evolution of TDK's corporate governance and organization as linked to its growth strategy.

Mr. Yoshida, tell us how you came to take on an Outside Director position?

Yoshida Since joining Intel Corporation, an American company, in 1984, I have consistently worked in the field of electronic components. I had been in touch with Mr. Sumita during my time at Intel, and he was the one who contacted me. As electronic components have become a key factor for innovation in hardware, TDK has built an extremely broad portfolio, generating a wide range of innovations. I thought the opportunity to become involved with TDK's enormous potential was highly attractive, and in 2014, I gladly accepted the offer to join the Board.

Sumita At the time, it was clear that the industry was moving toward further integration of passive components and semiconductors. Then-President Takehiro Kamigama came to me to ask if I knew of an executive familiar with semiconductors, so I recommended Mr. Yoshida, who had a deep understanding of the structure of the semiconductor market and who had also distinguished himself as a spokesperson for the industry. For TDK, I think his agreement to take the position was extremely well-timed.

What is your perspective on the changes in governance at TDK since you took up your position?

Sumita Over the past eight years, I have observed TDK from an outside perspective, and I think changes in governance began in earnest just in the past five years or so. Eight years ago, many Japanese companies had yet to acknowledge the importance of outside directors. As I recall, the kind of interaction we see today, where the business execution side actively seeks advice from outside directors, was similarly lacking at TDK. As momentum grew for governance reforms, however, and companies began reevaluating the role of the outside director, TDK appointed one of its own outside directors as chairman, bringing the Company external leadership. These changes have entailed more than simple passive acceptance of outside demands for a corporate governance code or other measures—it may be more correct to see them as having actively evolved to take the form needed to advance the company's growth strategy.

Yoshida As market conditions have undergone major changes, I get the impression that TDK has successfully transformed itself while remaining aware of how its decision-making processes and organization need to evolve in order to create competitive products. Today, I think, they have created a framework that is comparable with that of any global company in the West, characterized particularly by an increased awareness of the kind of openness and transparency on which its overseas members place a premium. They have also developed a rapid cycle for reporting to the Board of Directors, engaging in transparent discussions, and then tying those discussions to solid execution through communication with employees around the world, who in turn offer progress reports to the Board.

How are efforts progressing to enhance the operational efficiency of the Board of Directors, an issue pointed out in the Board's 2018 evaluation of effectiveness?

Sumita We have asked that all important proposals go before the Board, and encourage Outside Directors and Outside Audit & Supervisory Board Members to offer their opinions from the perspective of their respective areas of expertise and engage in candid discussions. There is a trade-off between conducting more fulfilling discussions and efficiency, which we have resolved by having the Board focus on larger issues of direction, and by using Board meetings as a venue for monitoring progress. First, the Executive Committee Meeting (ECM), which takes place prior to the Board meetings, decided which issues should be discussed by the Board and reevaluated criteria for presenting those issues thereto. We greatly increased the monetary criteria for capital expenditures and other deals to be approved by the Board of Directors, which has led to a more careful assessment of the appropriateness and effectiveness of large-scale investments based on a close examination of their track record and outstanding issues. We also reevaluated the composition of our Directors. Directors who also serve as the heads of business divisions inevitably bring views that are biased in favor of their individual businesses. We thus limited membership of Directors to those in a position to offer a companywide perspective. Meanwhile, we worked to delegate authority by having the ECM, consisting primarily of the heads of business divisions, closely discuss business-related proposals and submit them to the Board. This is how progress was made in enhancing the efficiency of Board operations.

Yoshida Responding to sudden changes in the market requires transforming how TDK does business, and the traditional decision-making processes need to change along with it. At previous Board meetings, the business execution side would explain its position using vast amounts of documentation. We made the process more efficient and more dynamic by intentionally focusing discussion on the issues. For instance, we conduct more active discussions by narrowing our focus to questions such as what issues lie before us in preparing to achieve our vision for three years hence and whether TDK is capable of solving those issues—and if not, how it should go about acquiring those capabilities. Greater delegation of authority has led, I feel, to a dramatic increase in our decision-making speed.

Business promotion systems also significantly reworked.

Sumita The most significant aspect of our organizational reforms was the establishment of regional headquarters. Having each region address its own financial, accounting, legal, hiring, and compliance issues, for example, greatly improves business efficiency. And having our Business Companies in each region share their issues leads to improved organizational strength for TDK as a whole.

Yoshida Offering proposals based on an integrated platform, rather than electronic components alone, greatly increases value for the customer. TDK is working to integrate a wide range of products, from passive

components to batteries and sensors, providing a common platform across a variety of different markets, including the automotive, ICT, and industrial and energy markets. Organizational reforms, which lead to encouraging lateral cooperation, can be seen as a step in that direction.

Sumita Taking on the risk of entering new businesses is important. Still, if this effort to provide a common platform moves forward, I believe it is possible to achieve what President & CEO Shigenao Ishiguro calls *Kotozukuri* (integrated solutions), even as we work to integrate our existing businesses. TDK then has the potential to achieve a level of profitability not possible through the sale of individual products.

As chairman of the Compensation Advisory Committee, Mr. Yoshida, how do you view TDK's compensation system?

Yoshida With performance and remuneration clearly linked and a Compensation Advisory Committee—comprising a majority of Outside Directors—that conducts transparent evaluations, I believe our compensation system is competitive. The next step for TDK, where employees overseas represent over 90% of total personnel, is to enhance the equitability and transparency of its compensation system not only at the headquarters but across the Group as a whole. While this will not be easily achieved, we are currently working to correct gaps in the way evaluations and remuneration are handled between companies TDK has acquired and TDK's management. If we can do that, we can enhance the mobility of our human resources, allowing personnel to move laterally between Group companies and ensuring an improvement in competitiveness for TDK as a whole.

What about the succession plan?

Sumita Until last year, I served as chairman of the Nomination Advisory Committee, and was involved in the nomination of President & CEO Ishiguro. I think TDK's evaluation process—centered on its Outside Directors—is effective. That said, with globalization advancing to this point, we need to put in place a mechanism by which our members overseas can also become leaders. TDK has already made progress in compensation-linked efforts, building a system that allows for side-by-side comparisons of ability and salary levels. To improve the quality of management at TDK, the Nomination Advisory Committee also proposed appointing non-Japanese and women as Outside Audit & Supervisory Board members; one of each was appointed at the end of June 2019. Going forward, TDK will continue to increase diversity in its Board of Directors.

Yoshida The members of the Board of Directors are highly aware of issues regarding the succession plan. A framework has been put in place over the last year, with Andreas Keller, Corporate Officer and General Manager of Human Resources HQ, in charge of conducting regular reviews. The Nomination Advisory Committee also takes a close look at the experience, performance, and career development desires of management individuals overseas.

How do you view the current Medium-Term Plan "Value Creation 2020?"

Sumita I get the sense that, in the past, people felt that a failure to achieve a plan was unavoidable in the event of changes in business conditions or other assumptions. Under Value Creation 2020, however, although business progress may vary from the original outlook due to sudden changes in the business environment, TDK has a much stronger commitment to its financial targets. Rather than revamping the Medium-Term Plan in any major way, it focuses instead on how to recover from setbacks and still hit its targets, as well as on how to expand those businesses with growth potential. Even as many companies predict a drop in income in fiscal 2020, TDK has presented a plan calling for increased income. This is indicative of TDK's attitude that solid achievement of their business plan on a single-year basis is crucial to achieving their three-year plan. I think this has also enhanced their credibility in the market.

What about sensors and magnets, where progress has fallen behind?

Sumita Even the MLCC business, which is performing strongly today, posted long-term losses until a few years ago. By spending the time and funds to innovate production and by setting its sights on the automotive market, the business has been able to achieve high profit margins. TDK is looking at sensors and magnets with a similarly long-term strategy, but one that assumes that, in the short term, up-front investments will continue. Expanded applications for magnets are seen as a certainty, but in terms of market structure, it is also a business in which it can be difficult to improve profitability. We are currently investing in the deployment of state-of-the-art equipment and automated inspection devices, while moving forward with innovations that will enable us to offer the market high-value-added products with a variety of features and forms. We expect these efforts to contribute to companywide performance over the course of the next Medium-Term Plan.

Yoshida Recognizing that TDK has a track record of taking the time to solve difficult issues is what enables the Board of Directors to make investment decisions. We are confident that sensors will become a core technology going forward and want to carefully cultivate that potential. The same goes for magnets—it may take time, but I think eventually that business will also generate solid earnings.

Sumita In terms of the need to look 10 years ahead and view things over an extended time line, the same can be said of R&D. With a four-pillar global development structure now in place, TDK is currently working to leverage each site's respective strengths, collaborating to conduct R&D. We are also developing a framework for open R&D utilizing both internal and external resources, but it will likely be a while before those efforts begin moving forward together.

With Mr. Sumita as chairman of the Board, what perspective will you bring to backing TDK's further evolution?

Sumita For TDK to be successful both in Digital Transformation (DX) and Energy Transformation (EX), it will require not only moving forward with product development but also a dynamic transformation on the part of TDK itself. My understanding is that simultaneously prompting innovation in these efforts will be an important role of the Board of Directors going forward. For instance, we currently use business ROA as a means of evaluating the profitability of a business, but by assessing our businesses in greater detail and presenting a target figure for profitability, we believe the business divisions and those on the front lines will take it upon themselves to effect transformation. This is something we hope to discuss as we prepare for the next Medium-Term Plan.

Finally, what message do you have for TDK?

Yoshida Each time I visit the front lines, I am so impressed by and proud of how each employee takes responsibility for their work and faces the challenges they are given head-on. TDK presents a very clear story around attempting to discover the hidden potential of technology, backed by an equally clear-cut message from President & CEO Ishiguro and accompanied by action. I hope TDK's employees will continue to work with confidence in their efforts to further TDK's growth. As an Outside Director, I look forward to engaging in discussions of an even higher quality than before and to contribute to enhancing TDK's corporate value.

Sumita I also believe that TDK's strength lies in its frontline capabilities. It is the individuals working at the Company's plants and other sites the world over who support TDK through their creativity and ingenuity. If the Board of Directors is able to recognize this, and bring a similar perspective to their efforts to create worker-friendly environments, I think those frontline capabilities can be leveraged to an even greater extent, in turn significantly expanding TDK's own potential. With that understanding, and as someone who brings an outside perspective to the role of Chairman & Director, I will encourage proactive interaction both inside and outside the Company.

Thank you for your time today.

Sustained Improvements Stressing Effectiveness

Designing of structures that emphasize increases in corporate value over the long term

Points

- **TDK has pursued an optimal balance between monitoring-type governance (separation of management execution and supervisory functions) and management-type governance (Directors also serve as Corporate Officers).**
- **TDK appointed an Outside Director as Chairman & Director.**

Emphasis on effectiveness over form

TDK has put inside directors in charge of non-business divisions and is working to increase the pace of decision-making and reinforce both monitoring and supervisory functions while designing structures that place greater emphasis on raising corporate value than form in all areas, including the processes related to nomination and compensation and policies on the appointment of outside officers. The appointment of an Outside Director as Chairman & Director is one part of these efforts.

A truly globalized organization

The TDK Group is working to advance collaboration and resource sharing among a variety of Business Companies and regions by establishing some new regional headquarters, built around its Business Companies and Business Groups with cross-functional cooperation centered on its global headquarters.

Cross-shareholdings

TDK's basic policy regarding cross-shareholdings is to consistently enhance corporate value of the TDK Group through such shareholdings and TDK holds shares of other companies for the purpose of either (1) strategic shareholding for the development of its business or (2) maintenance and improvement of business relationships. As to cross-shareholdings, TDK verifies the rationality of continuous holding of such shares and the number of such shares, etc., stock by stock every year at Meetings of the Board of Directors, etc., based on the purpose of such shareholding, situation of transactions, profitability relative to the cost of capital, financial condition, etc., and if the necessity to hold shares of a particular stock has decreased, TDK discusses and negotiates with the issuing company of the stock and promotes the reduction through sale, etc., of such shares. In exercising voting rights as to its cross-shareholdings, TDK determines to approve or disapprove with full respect for the issuing company's management policies, etc., and considering whether the proposal is appropriate in light of the purpose of strategic shareholding for the development of TDK's business or maintenance and improvement of business relationships, whether the proposal can continuously increase the corporate value of TDK, the issuing company's social responsibilities, whether there is any act which may harm the trust of shareholders, etc. Also, TDK conducts a dialogue with the issuing company regarding the content of the proposal, etc., as appropriate.

Highly transparent nominating system

Points

- **TDK established the Nomination Advisory Committee, chaired by an Outside Director and comprising a majority of Outside Directors.**
- **The Committee contributes to ensuring the appropriateness of nominations of TDK's Directors, Audit & Supervisory Board Members, and Corporate Officers, and to transparency in the decision-making process.**

Nomination policies and procedures

TDK established the Nomination Advisory Committee as an advisory body to the Board of Directors. The committee is chaired by an Outside Director, and a majority of its members are also Outside Directors. It contributes to securing transparency in the decision-making process and reasonableness in the appointment of Directors, Audit & Supervisory Board Members, and Corporate Officers by nominating candidates after deliberating on the expected requirements regarding the nomination of Directors, Audit & Supervisory Board Members, and Corporate Officers. The Committee also deliberates on the independence of Outside Directors.

When nominating the CEO, the Committee formed an image of the ideal person suitable for the role of top executive and conducted deliberations that also covered such issues as systems and the term of office. An outside expert organization was also utilized and efforts were made to ensure objectivity.

Outside officers appointed with an emphasis on effectiveness

Points

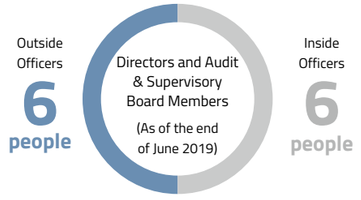
- **TDK has established "items to be verified regarding independence" to ensure the independence of Outside Directors and Outside Audit & Supervisory Board Members.**
- **Outside Directors have a deep understanding of technology and knowledge of global management.**
- **Outside Audit & Supervisory Board Members comprise professionals from important and diverse fields of expertise, including finance, legal affairs, internal controls, risk management, and others.**

One-third or more of the Directors is independent Outside Directors

The Board of Directors, comprising Directors and Audit & Supervisory Board Members, has a total of 12 members, of whom six are outside officers. To secure the independence of the Outside Directors and Outside Audit & Supervisory Board Members recruited to the Board, TDK established "items to be verified regarding independence" by making reference to Article 436-2 (Securing Independent Director(s)/Auditor(s)) of the Securities Listing Regulations and Section III, 5(3)-2 of the Guidelines Concerning Listed Company Compliance, etc., established by the Tokyo Stock Exchange, Inc.

The basic policy is that one-third or more of the Directors shall be independent Outside Directors. Currently, three of seven directors are independent Outside Directors, and an independent Outside Director is chairman of the Board. To reinforce the independence, objectivity, and accountability functions of the Board of Directors in relation to the nomination and compensation of officers, majorities of the Nomination Advisory Committee and the Compensation Advisory Committee, which are advisory organizations to the Board of Directors, are independent Outside Directors and both committees are chaired by independent Outside Directors.

Actively inviting Outside Officers



Outside Directors with extensive practical experience

Persons recruited as independent Outside Directors have extensive practical experience relating to corporate management or a high level of financial knowledge and are able to provide advice from an independent perspective with regard to general management for enhancing the Company's corporate value.

Reasons for nomination of Outside Directors and Outside Audit & Supervisory Board Members

Outside Directors	Reasons for nomination
Kazumasa Yoshida	Mr. Yoshida has an abundance of experience and knowledge concerning the management of companies related to the electronics industry, global business, and consumer business as well as a broad perspective.
Kazuhiko Ishimura	Mr. Ishimura has an abundance of experience and advanced, specialized knowledge regarding business management as well as a broad perspective.
Kazunori Yagi	Mr. Yagi has extensive knowledge related to finance and accounting, as well as an abundance of experience and knowledge concerning corporate management in the electronics industry.

Outside Audit & Supervisory Board Members	Reasons for nomination
Jun Ishii	Mr. Ishii has an abundance of experience and knowledge in group governance, risk management, etc., of an international electronics company.
Douglas K. Freeman	Mr. Freeman, as a lawyer, has specialized knowledge in law and an abundance of experience in international corporate legal affairs.
Michiko Chiba	Ms. Chiba, as a certified public accountant, has specialized knowledge in finance and accounting and an abundance of experience in audit.

Remuneration system linked to medium- to long-term corporate value

Points

- **The system was designed with an emphasis on linkage with short-term as well as medium- to long-term results.**
- **TDK constantly pursues the formulation of a competitive remuneration system to secure diverse and excellent human resources.**
- **TDK aims to set remuneration at levels enabling the maintenance of competitiveness compared with other companies of similar scale, mainly in the same business category.**

Design and determination process of remuneration for Directors and Audit & Supervisory Board Members

TDK designs its remuneration system for Directors and Audit & Supervisory Board Members with an emphasis on linkage with short-term as well as medium- to long-term results, and is also continuously pursuing the formulation of a competitive remuneration system so that it can recruit diverse and excellent human resources, for the purpose of promoting as much as possible behavior on the part of Directors and Corporate Officers geared toward enhancing corporate results and stock value. With regard to the determination of individual compensation, the Compensation Advisory Committee, which is chaired by an independent Outside Director and of which more than half of the members are independent Outside Directors, examines the remuneration system and the level of remuneration pertaining to Directors and Corporate Officers and reports to the Board of Directors in order to preserve the transparency of the remuneration decision-making process and help ensure that individual remuneration is reasonable.

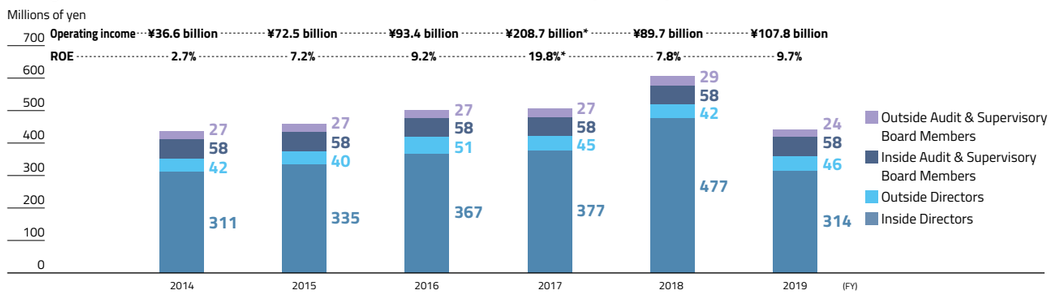
Results linkage system

Factor	Type of compensation	Strategic purpose of compensation	Method of calculation
Short-term results linkage system	Results-linked bonus	Intended to clarify the responsibility of Directors and Corporate Officers to achieve consolidated financial results in each fiscal year and to increase motivation for raising short-term financial results.	In addition to consolidated financial results (operating income, ROE) in the relevant fiscal year, indicators are set for each division, and bonuses vary from 0% to 200% of base salary depending on the degree of attainment of targets.
Medium- to long-term results linkage system	Stock-linked compensation stock options	A system for raising corporate value from a medium- to long-term perspective and recipients share the same advantage of a rising stock value of the Company and the same risk of it falling as shareholders. The introduction of such a system is intended to increase the ambition and morale of eligible Directors and Corporate Officers with respect to the enhancement of results and stock value. It is also intended to further strengthen the link between executive remuneration and medium- to long-term results and corporate value.	Some stock-linked compensation stock options have a results achievement condition attached to them. The results achievement condition takes consolidated results under the Medium-Term Plan (operating income, ROE) as an index, and varies the number of exercisable options between 0% and 100% of the number of options granted, depending on the degree of attainment of targets. TDK has established Corporate Stock Ownership Guidelines. TDK makes an effort to ensure that eligible Directors and Corporate Officers hold at least a certain number of shares in TDK pursuant to their rank, including stock-linked compensation stock options.

Standard Allowance

Compensation structure	Basic remuneration	+	Short-term incentive (Results-linked bonuses)	+	Medium- to long-term incentive (Stock-linked compensation stock options)
Linked indicators			Operating income, ROE, targets of each division		Operating income, ROE
Fluctuation range			Depending on the degree of achievement of operating income and ROE, division objectives, vary from 0% to 200% of base salary		Depending on the degree of achievement of operating income and ROE, for the grant number, an exercisable percentage fluctuates between 0% and 100%

Changes in total amount of remuneration for Directors and Audit & Supervisory Board Members



* Includes ¥144.4 billion in gains from business transfer to Qualcomm

Diversity in response to globalization

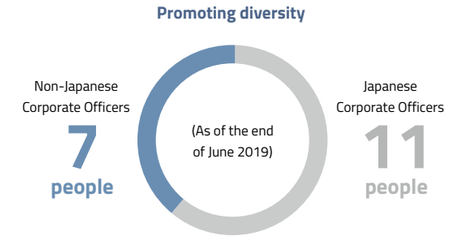
Points

- **Seven of 18 Corporate Officers (39%) are non-Japanese.***
- **TDK has established Human Resources HQ in Germany with aim of further utilization of global human resources.**

* As of the end of June 2019

Promoting diversity in management systems

TDK began encouraging globalization at an early stage, appointing a non-Japanese person as a Corporate Officer in 2004 and promoting the globalization of management by increasing the number of non-Japanese Corporate Officers since then. Today, more than 90% of sales and employees are derived and based overseas, while 39% of the Company's Corporate Officers are non-Japanese. In recent years, globalization has advanced as TDK implemented a number of M&As, and the globalization and diversification of management structures is an important issue. We will continue to recruit outstanding human resources from around the world under the Human Resources HQ established in Germany in 2018.



Executive Vice President
Joachim Zichlarz
Chief Financial Officer of Electronic Components Business Company, and General Manager of Europe HQ

Corporate Officer
Joachim Thiele
Deputy General Manager of Electronic Components Sales & Marketing Group, and General Manager of Industrial & HA Group of Electronic Components Sales & Marketing Group

Corporate Officer
Michael Pocsatko
Deputy General Manager of Electronic Components Sales & Marketing Group, and General Manager of ICT Group of Electronic Components Sales & Marketing Group

Corporate Officer
Hong Tian
General Manager of Micro-actuator Solutions Business Group

Corporate Officer
Albert Ong
Chief Executive Officer of Magnetic Heads Business Company, and General Manager of HDD Components Business Group of Magnetic Heads Business Company

Corporate Officer
Andreas Keller
General Manager of Human Resources HQ

Corporate Officer
Ji Bin Geng
General Manager of Energy Devices Business Group of Energy Solutions Business Company

Directors, Audit & Supervisory Board Members, and Corporate Officers (As of the end of June 2019)

Directors

Shigenao Ishiguro

Representative Director
President and CEO
General Manager of Humidifier Countermeasures HQ

Tetsuji Yamanishi

Representative Director
Chief Compliance Officer
General Manager of Finance & Accounting HQ

Makoto Sumita

Chairman & Director

Seiji Osaka

Director
General Manager of Corporate Strategy HQ

Kazumasa Yoshida

Outside Director
Chairman of Compensation Advisory Committee
Member of Nomination Advisory Committee

Summary of career
Born on Aug. 20, 1958

Oct. 1984	Entered Intel Corporation
Oct. 1999	Manager of Technology/OEM Alliance Business Strategy of Enterprise Service Group of said company
Mar. 2000	General Manager of Communication Product Group of Intel K.K.
May 2002	General Manager of Intel Architecture Business of said company
Jun. 2003	Representative Director and President of said company
Dec. 2004	Vice President of Sales and Marketing Group of Intel Corporation
Jun. 2012	Outside Director of Onkyo Corporation (present post)
Feb. 2013	Outside Director of Gibson Brands, Inc.
Jun. 2013	Outside Director of CYBERDYNE, INC. (present post)
Oct. 2013	Advisor of Intel K.K.
Jun. 2014	Outside Director of the Company (present post)
Jun. 2015	Outside Director of Mamezou Holdings Co., Ltd. (present post)
Jul. 2016	Outside Director of FreeBit Co., Ltd. (present post)

Kazuhiko Ishimura

Outside Director
Member of Nomination Advisory Committee
Member of Compensation Advisory Committee

Summary of career
Born on Sep. 18, 1954

Apr. 1979	Entered Asahi Glass Co., Ltd. (currently AGC Inc.)
Jan. 2006	Executive Officer and GM of Kansai Plant of said company
Jan. 2007	Senior Executive Officer & GM of Electronics & Energy General Division of said company
Mar. 2008	President & COO & Representative Director of said company
Jan. 2010	President & CEO & Representative Director of said company
Jan. 2015	Chairman & Representative Director of said company
Jun. 2015	Outside Director of the Company (present post)
Jun. 2017	Outside Director of IHI Corporation (present post)
Jan. 2018	Chairman & Director of Asahi Glass Co., Ltd. (currently AGC Inc.) (present post)
Jun. 2018	Outside Director of Nomura Holdings, Inc. (present post)

Kazunori Yagi

Outside Director
Chairman of the Board
Chairman of Nomination Advisory Committee
Member of Compensation Advisory Committee

Summary of career
Born on Apr. 1, 1949

Apr. 1972	Entered Yokogawa Electric Works Ltd. (currently Yokogawa Electric Corporation)
Oct. 1999	Vice President (Officer) and General Manager of Finance & Business Planning, in charge of Corporate Marketing of said company
Apr. 2001	Senior Vice President and General Manager of Finance & Business Planning of said company
Jun. 2001	Director, Senior Vice President, and General Manager of Finance & Business Planning of said company
Jul. 2002	Director, Executive Vice President, and General Manager of Finance & Business Planning of said company
Jul. 2005	Director, Executive Vice President and General Manager of Management Administration Headquarters of said company
Jun. 2011	Advisor to said company, Outside Audit & Supervisory Board Member of Yokogawa Bridge Holdings Corporation (present post)
Jun. 2012	Outside Director of JSR Corporation
Jun. 2013	Outside Audit & Supervisory Board Member of the Company
Mar. 2014	Outside Director of OYO Corporation
Jun. 2017	Outside Audit & Supervisory Board Member of Sojitz Corporation (present post)
Jun. 2018	Resigned as Outside Audit & Supervisory Board Member of the Company Outside Director of the Company (present post)

Audit & Supervisory Board Members

Takakazu Momozuka

Full-time Audit & Supervisory Board Member

Satoru Sueki

Full-time Audit & Supervisory Board Member

Jun Ishii

Outside Audit & Supervisory Board Member

Summary of career
Born on Mar. 24, 1956

Apr. 1979	Entered Matsushita Electric Industrial Co., Ltd. (currently Panasonic Corporation)
Apr. 2007	Executive Officer of said company
Apr. 2012	Managing Executive Officer of said company
Jun. 2014	Managing Director of said company
Apr. 2015	In charge of Human Resources, General Affairs, Social Relations, Legal Affairs, Fair Business, Corporate Governance, Risk Management, Facility Management, Corporate Sport Promotion, and Executive Support Office; and Director, Risk & Governance Management Division of said company
Jun. 2017	Director, Managing Executive Officer, Chief Risk Management Officer (CRO), and Chief Compliance Officer (CCO); in charge of Corporate Governance; Director, Risk & Governance Management Division; and in charge of General Affairs, Social Relations, Facility Management, and Executive Support Office of said company
Apr. 2018	Director of said company (Retired in Jun. 2018)
Jun. 2019	Outside Audit & Supervisory Board Member of the Company (present post)

Douglas K. Freeman

Outside Audit & Supervisory Board Member

Summary of career
Born on May 23, 1966

Apr. 1990	Entered Goldman Sachs Japan Co., Ltd.
Apr. 1996	Registered as lawyer in Japan Joined Mitsui, Yasuda, Wani & Maeda
Jun. 1997	Joined Hamada Law Offices
Sep. 2002	Registered as lawyer in New York, the United States of America
Sep. 2002	Joined Sullivan & Cromwell LLP
Sep. 2007	Principal of Law Offices of Douglas K. Freeman (present post)
Feb. 2016	Outside Director of U-Shin Ltd. (present post)
Apr. 2019	Professor of Keio University Law School (present post)
Jun. 2019	Outside Audit & Supervisory Board Member of the Company (present post)

Michiko Chiba

Outside Audit & Supervisory Board Member

Summary of career
Born on Jun. 27, 1961

Apr. 1984	Entered Tokyo Metropolitan Government
Oct. 1989	Joined Showa Ota & Co. (currently Ernst & Young ShinNihon LLC)
Mar. 1993	Registered as certified public accountant in Japan
Jul. 2010	Senior Partner, Ernst & Young ShinNihon LLC
Sep. 2016	Principal of Chiba Certified Public Accountant Office (present post)
Jun. 2018	Outside Audit & Supervisory Board Member of CASIO COMPUTER CO., LTD.
Mar. 2019	Outside Audit & Supervisory Board Member of DIC Corporation (present post)
Jun. 2019	Outside Director, Audit & Supervisory Committee Member of CASIO COMPUTER CO., LTD. (present post) Outside Audit & Supervisory Board Member of the Company (present post)

Corporate Officers

President and CEO

Shigenao Ishiguro

Executive Vice Presidents

Seiji Osaka
Joachim Zichlarz

Senior Vice Presidents

Atsuo Kobayashi
Noboru Saito
Tetsuji Yamanishi
Mitsuru Nagata

Corporate Officers

Joachim Thiele
Michael Pocsatko
Hong Tian
Albert Ong
Dai Matsuoka
Osamu Hikita
Andreas Keller
Shigeki Sato
Fumio Sashida
Hiroyuki Yashiro
Ji Bin Geng

Sustainability

Basic Policy

TDK Group Sustainability Vision

As well as aiming to solve social problems through our business on the basis of our corporate philosophy, which is our fundamental stance, we have formulated a new TDK Group Sustainability Vision. This vision proclaims that by fully utilizing TDK's proprietary core technologies and solutions, we will "advance the development of a sustainable society and promote the well-being for all people."

In the formulation of this vision, we again assorted the social environment surrounding us from a long-term perspective and studied the potential of the TDK Group's strengths and resources. In the process, we heard the opinions of not only management but also external experts.

Going forward, we will share this vision throughout the Group, put it into practice in our business, and consider and implement specific measures toward the realization of a happy society.

In the Value Creation 2020 Medium-Term Plan, which kicked off in fiscal 2019, TDK aims for sustained business growth while creating three Values. The realization of Social Value, which is one of them, is closely related to the United Nations' Sustainable Development Goals (SDGs).

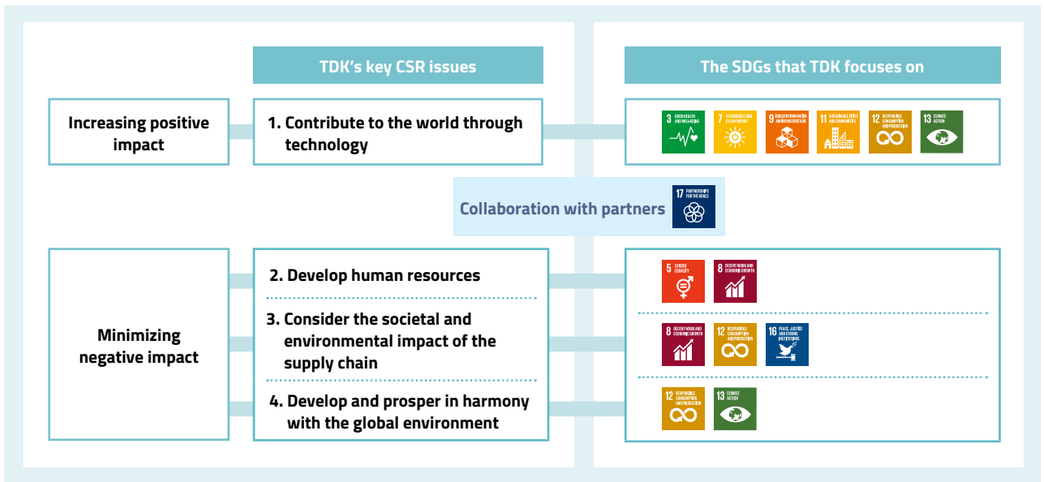
Technology for the well-being of all people

The TDK Group strives to restore and protect the global environment while promoting respect for human rights. Through its innovative core technologies and solutions, the Group advances the development of sustainable society and champions well-being for all people.

The TDK Group's key CSR issues and the SDGs

The TDK Group seeks to realize a sustainable society, identifying "Contribute to the world through technology," "Develop human resources," "Consider the societal and environmental impact of the supply chain," and "Develop and prosper in harmony with the global environment" as key issues guiding its CSR activities. TDK's "Contribute to the world through technology" is based on its technologies and products and the external social environment, focusing on fields enabling maximized provided value through the SDGs. TDK has clarified social challenges behind the six SDGs below and contributes to the realization of an ideal society in which these challenges are solved through its technologies and products. TDK further implements initiatives toward "Develop human resources," "Consider the societal and environmental impact of the supply chain," and "Develop and prosper in harmony with the global environment," thereby contributing to the various relevant SDGs.

TDK's key CSR issues and the SDGs



Contributing to the SDGs through technologies and products

TDK contributes to realization of a happy future society through its technologies and products that address six SDGs: Good Health and Well-Being (SDG 3), Affordable and Clean Energy (SDG 7), Industry, Innovation, and Infrastructure (SDG 9), Sustainable Cities and Communities (SDG 11), Responsible Consumption and Production (SDG 12), and Climate Action (SDG 13).

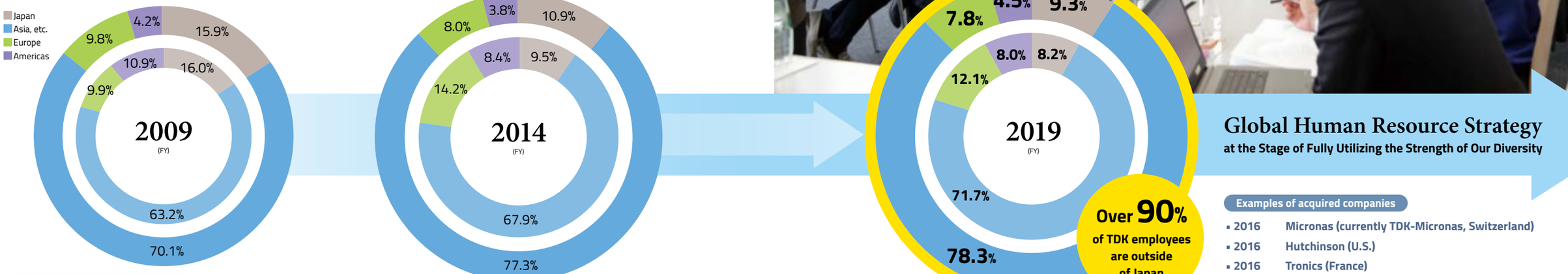
These SDGs represent areas in which we feel we can provide maximum value considering the potential of our technologies and products to contribute toward solutions to social issues facing us today. In our efforts to draw an ideal society where issues are successfully solved, TDK will further develop its technologies and products, thereby contributing toward solutions enabling the realization of a happy future society.

The SDGs	Social issues that TDK addresses	An ideal society
3 GOOD HEALTH AND WELL-BEING	▪ Increasing health and welfare challenges facing an aging society ▪ Sharply increasing medical expenses ▪ An increase in people requiring nursing care with the transition to an aging society ▪ Challenges in facilitating active lives and social participation for the disabled	▪ Ensuring universal availability of highly advanced medical technology ▪ Maintaining a simple understanding of one's own health ▪ A comfortable lifestyle for nursing care patients ▪ Supporting independent lives and social participation for the disabled
7 AFFORDABLE AND CLEAN ENERGY	▪ Climate change from increased fossil fuel usage	▪ Transitioning to renewable energy (Gasoline-powered cars → EVs) ▪ Use of highly efficient renewable energy
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	▪ Fragile infrastructure of developing countries ▪ Deteriorating infrastructure of advanced countries ▪ Labor shortages ▪ Explosive increase in amount of information (IoT, autonomous driving, etc.)	▪ Strengthening the infrastructure base ▪ Recreating a resilient infrastructure ▪ Supplementing the labor shortages, enhancing productivity ▪ Ensuring storage capacity ▪ Realization of high-speed, high-capacity transmission
11 SUSTAINABLE CITIES AND COMMUNITIES	▪ Increasing natural disasters accompanying climate change ▪ Hypoactivity of local regions accompanying urban population concentration ▪ Privacy and leakage of personal information ▪ Traffic accidents	▪ Minimizing damage ▪ Provision of basic life services without regional favoritism ▪ Ensuring security ▪ Realizing "zero traffic accidents"
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	▪ Environmental pollution from abandoned electronics ▪ Exhaustion of resources	▪ *Monozukuri* (manufacturing excellence) without hazardous materials ▪ Curtailed usage of scarce resources ▪ Resource recycling ▪ A recycle-oriented society ▪ A sharing economy
13 CLIMATE ACTION	▪ Climate change from increased fossil fuel usage	▪ Transitioning to renewable energy (Gasoline-powered cars → EVs) ▪ Use of highly efficient renewable energy ▪ Improved energy usage

Toward the Stage of Utilizing the Strength of Our Diversity

As a result of our advancement overseas, M&A, and other factors, TDK has cultivated a strength of diversity formed by diverse human resources from a wide range of regions. Now, TDK is embarking on a global human resource strategy to fully display that strength.

Net sales (inside) / Number of employees (outside)



Examples of acquired companies

- 2005 ATL (Hong Kong)
- 2007 Magnecomp (Thailand)
- 2008 EPCOS (currently TDK Electronics, Germany)

The strength of our diversity fostered by post-merger integration respecting equality

TDK, which began the overseas expansion of its operations in the 1960s, has been actively promoting globalization against the background of such factors as the subsequent transfer by customers of their manufacturing sites to overseas locations. Since the turn of the century, with our eyes on future markets, TDK has been boldly carrying out a reform of its business structure through M&As. TDK's post-merger integration policy of maintaining relations of equality rather than control and respecting corporate cultures has been hugely successful, and companies like ATL in Hong Kong and EPCOS (now TDK Electronics) in Germany have subsequently come to contribute enormously to our revenues. In the background lies TDK's thinking that since acquisition targets are companies with not only outstanding technologies but also excellent managers, human resources, strategies, and operations, the probability of success of an M&A increases if these aspects are respected and managers of the acquired company are delegated authority.

Global Human Resource Strategy

at the Stage of Fully Utilizing the Strength of Our Diversity

Examples of acquired companies

- 2016 Micronas (currently TDK-Micronas, Switzerland)
- 2016 Hutchinson (U.S.)
- 2016 Tronics (France)
- 2017 ICsense (Belgium)
- 2017 InvenSense (U.S.)

Effectiveness of the strength of our diversity

The TDK Group comprises affiliated business companies with not just multiple nationalities but also strengths in various domains, technologies, know-how, and so on. That is the essence of the strength of our diversity. For example, while TDK in Japan is strong in passive components, magnets, and magnetic technology, as well as materials technology, in which persistent development is conducted from a long-term perspective, TDK in the United States, centering on InvenSense, has strengths in MEMS sensors, software, and so on. In Europe, TDK Electronics (formerly EPCOS) and others are strong in industrial sensors and passive components, and in China, ATL, for example, has an extremely high level of competitiveness in lithium polymer batteries. We are building a business model that is best suited to each region and product characteristics and ensures exceptionally speedy business. Furthermore, this dispersion of regions and customers and our wide-ranging product portfolio lead to a high degree of resilience against risks of fluctuations in the market environment.

Toward the stage of utilizing the strength of our diversity

As a result of TDK's efforts since 2016 to transform its business structure through M&As centering on sensors, the Company has expanded its business foundations to more than 30 countries and regions worldwide. In fiscal 2019, our overseas sales ratio was 91.8%, and our overseas employee ratio was 90.7%. In the future, in order to supply the best solutions through various technologies and products, it will be necessary for us to vitalize collaboration among regions and among Business Companies. Furthermore, if we can make effective use of the different strengths in the TDK Group, we will be able to further boost the competitiveness of TDK as a whole through the interaction of our fortes. On the basis of this approach, as we have been doing so far, TDK will continue to forcefully promote a global human resource strategy aimed at enhancing the fluidity of human resources among Business Companies worldwide and discovering and nurturing human resources beyond national borders, while also bolstering the strength of our diversity by maintaining the independence of affiliated companies.

Andreas Keller

Corporate Officer
General Manager of
Human Resources HQ

Accelerating the advancement of a global human resource strategy

Since 2018, TDK has been working on a large-scale reform of its human resource systems. This has been driven by the emergence of DX (Digital Transformation) and EX (Energy Transformation), two new mega trends that have led us to recognize that gathering human resources from around the world who are capable of staying ahead of technological developments, and fostering their skills appropriately, is an urgent task if we are to achieve our growth strategy going forward.

Specifically, we have set out three core goals—developing the next generation of human resources, establishing an efficient global human resource platform, and improving communication—and have put in place measures and policies aimed at achieving those goals. One of our greatest successes to date has been our progress in measuring and visualizing the English and communication skills of individual employees across the Group as a whole, and in putting in place various systems in conjunction with transnational transfers of personnel. This has allowed for a more flexible exchange of human resources on a global scale, while making the process of participating in development programs required for advancement and promotion easier and more efficient. During the current Medium-Term Plan (covering the period from fiscal 2019 to fiscal 2021), we are primarily in the infrastructure-building stage, but we are also making steady progress with more concrete efforts, among them developing various Groupwide management development programs for management-level and high-potential employees. The main goal is to improve their management and leadership skills, which will help foster the development of the existing and next generation of strong leaders. Some of the development programs were created in collaboration with various state-of-the-art business schools around the world. For the next Medium-Term Plan (covering the period from fiscal 2022 to fiscal 2024), we will focus on extending these efforts further into the workplace while ensuring the results are carefully validated.

Obviously, given our current business environment, the need for overwhelmingly rapid transformation applies to human resource systems as well. In advancing these reforms, we selected individuals from among human resource professionals at Group companies worldwide to be responsible for specific areas, including evaluation, training, and hiring. Each of them leveraged their personal strengths and exhibited strong leadership in these efforts. As a result, it took us only about two years to implement reforms that would normally require four or five years to complete. This may be a perfect example of the strength of diversity, an ideal TDK upholds for the entire Company.

This kind of global-scale strength of diversity has been demonstrated particularly in recent years as we have accelerated our M&A efforts, reinforcing our desire to further solidify this trend through our human resource system reforms. By doing so, we hope to help TDK make the leap to being recognized for its presence as a truly global company, and a leader among Japanese firms.

Global promotion of next-generation leader development programs

Through M&As by TDK in recent years, diversification has advanced rapidly, and the strength of our diversity has been further bolstered. An issue for TDK from now on will be how to enhance this strength of diversity synergistically while also respecting diversity in the Group. For this purpose, we are promoting a global management program to develop next-generation leaders. TDK prepares and operates the best possible programs for various career levels, such as young employees, mid-level managers, senior managers, and candidate corporate officers.

The program for young employees is called the Territorial Career Development Program. This program, which began in fiscal 2019, aims to discover talented human resources around the world and to foster leaders capable of being active globally in a wide range of areas. Selected employees from TDK's four regions worldwide participate in the nine-month program with the aim of displaying their abilities in different areas and cultures. Various subprograms are organized to enhance the participants' management capabilities, including the further upgrading of their work knowledge, improvement of their leadership skills, and activation of communication.

Toward the stage of utilizing the strength of our diversity

1 **Developing the next generation of human resources**
Appointing talented personnel regardless of nationality

2 **Establishing an efficient global human resource platform**
Unifying evaluation and compensation standards

3 **Improving communication**
Vitalizing communication throughout the TDK Group

Toward the sustained improvement of corporate value

- **Increased fluidity of human resources on a global scale**
- **Sharing of knowledge and strengthening of collaboration**
- **Globalization of governance**

Make It Attractive

Envisioning a happy future society enabled by TDK's distinctive technologies and products

TDK continues to pursue new potential and challenges in the hope that the application of its unique technologies and products will help create a happy future society. This enables the realization of Social Value, which is a part of TDK's "Value Creation 2020" Medium-Term Plan and is a shared initiative among TDK Group companies. By utilizing the Company's unique technological and product strength in seven markets, we will solve social issues and help bring about a happy future society.

IoT

The world's smallest 7-axis sensor, which combines a 6-axis inertial sensor with a pressure sensor, embodies reliable sensing technologies that are not adversely affected even under harsh environmental conditions. This sensor is used in drones that carry out social missions such as transporting medical supplies in conflict regions, and providing reliable flight and accurate position information to support these drones performing critical tasks in diverse terrains around the world.

Mobility

We developed a motion sensor with seven sensors that is just 3 mm square—the industry's smallest. In addition to providing data on acceleration and direction to guide vehicles to their destinations, they can safely guide vehicles to the side of the road in the event of an emergency. They support autonomous driving technologies and hold substantial potential for the creation of a safe society with no traffic congestion or traffic accidents.

Wellness

We created a compact biomagnetic sensor by integrating MR element process technologies acquired from HDD magnetic heads with magnetic circuit design technologies. This makes it possible to perform biomagnetic field measurements without the insertion of a device into the body, something that was not possible in the past. This sensor will be used in devices that are more compact and cost less than earlier products to perform stress-free diagnoses for patients.

Connections

The drama of athletic competition will soon become more exciting than ever. With 5G, viewers will be able to watch multiple broadcasts simultaneously and instantly express their excitement around the world. High-frequency components with enhanced filtering functions and maximized total performance will simplify handling by customers. We are developing products for all 5G applications such as infrastructure, autonomous driving, and tele-medicine.

Energy

Lightweight, compact, and high-reliability capacitors used in power electronics facilitate high-efficiency generation and transmission of renewable energy and improve people's quality of life. Looking to the future, we are designing low-inductance capacitors suitable for high-switching frequencies and will contribute to the creation of a sustainable society through clean energy.

Robotics

The MEMS microphone, which has a tiny membrane that can detect sound, was developed by applying silicone MEMS technology. A robot equipped with the microphone can detect sounds and speakers at long distances, and when multiple microphones are used, a robot can identify where a sound or voice is coming from. Such applications will help hearing-impaired individuals and make it easier to call for help by persons who are unable to act during an emergency.

Experience

VR and AR applications have enriched experiences in education and brought about significant progress and quality enhancement in learning by children. TDK's ultrasonic sensors can detect a device's orientation, rotation, position, and other information with high precision and determine accurately the movement of a hand in a virtual space. In addition, VR systems that use these sensors are low cost, making it possible for more people to have interactive experiences.

The Environment

Trends in TDK's environmental activities

From 2003
TDK Environmental Action 2010
Strengthening of EMS
Addressing risk management and a recycling-oriented society

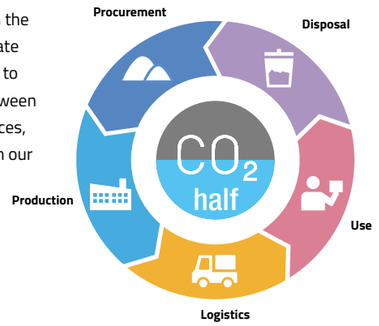
From 2006
TDK Environmental Action 2015
Implementation of environmental management
Moving from image generation to management establishment

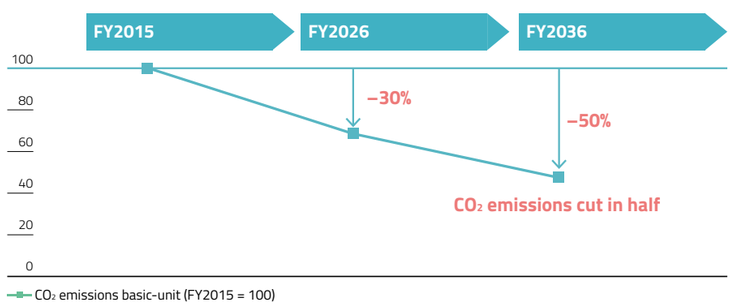
From 2011
TDK Environmental Action 2020
Environmental growth strategies
Envisioning an era of product differentiation driven by environmental performance

Until 2035
TDK Environmental Vision 2035

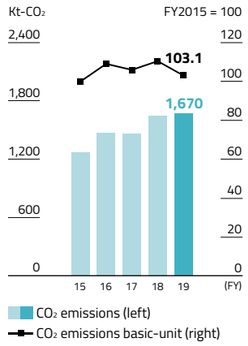
TDK Environmental Vision 2035

TDK believes that, in order to realize the sustainable development of society, environmental activities based on a long-term outlook are necessary. In the TDK Environmental Vision 2035, which commenced activities in fiscal 2017, toward the realization of our corporate vision, we see our *Arubeki-Sugata* (ideal process) in 2035 to be one of operating with an environmental load that does not disturb the natural cycle. Our target, therefore, is "to halve the CO_2 emission basic-unit from a life cycle perspective by 2035." This Environmental Vision is based on our recognition that it is the duty of a company to minimize the environmental load in business activities, revitalize the natural environment, and supply products that contribute to customers and society. Moreover, learning from the United Nations Framework Convention on Climate Change (COP 21) Paris Agreement, which seeks to curb global warming by achieving a balance between greenhouse gas emissions and absorption sources, we are pursuing the TDK ideal of acting to attain our *Arubeki-Sugata*.

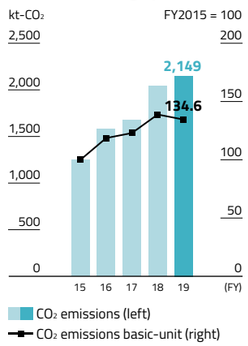




Trends in CO_2 emissions from production activities*



Trend in the reduction of CO_2 emissions through products*



* A third-party review of the calculation method was performed. Please refer to the following website for more information.
https://www.tdk.com/corp/en/sustainability/sustainability_data/sus05900.htm

Environmental activities from a life cycle perspective

Groupwide activities from a life cycle perspective

Within TDK Environmental Vision 2035, the declaration is made to reduce the environmental load from a life cycle perspective. This represents an initiative not limited to measures at the manufacturing stage in factories and the use stage for customers, aspects outlined in the conventional TDK Environmental Action 2020 policy. To expand in this way, we deem it critical for all TDK Group employees to share the same vision and move forward with the same objectives in mind. The "revitalizing and protecting the global environment" expressed in this corporate vision refers to the skillful operation of our business hand in hand with the natural environment. Without that commitment, there will be no sustainable development on the horizon. The entire Group shares an *Arubeki-Sugata* (ideal process) and undertakes voluntary initiatives in pursuit of that vision.

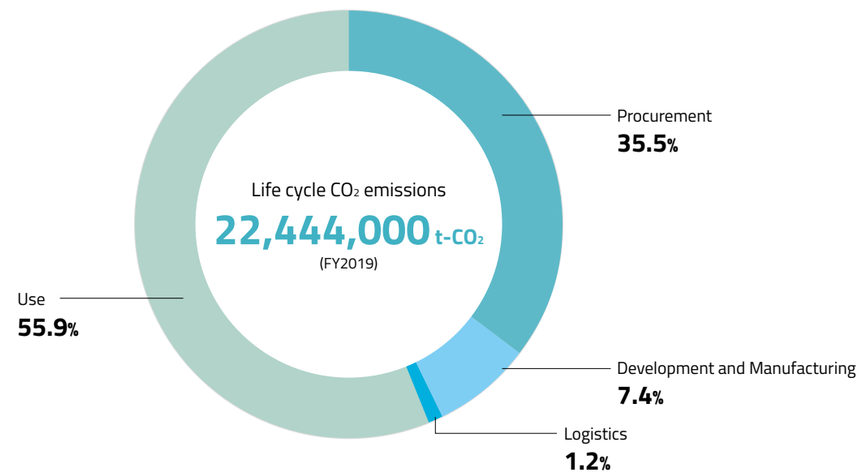
Initiatives from a life cycle perspective and the concept of environmental load

TDK conducts business on a global scale, and as a result, in order to reduce environmental impact, initiatives are needed that not only reduce our own environmental load but also cover the entire value chain.

Presented here are the environmental considerations and main initiatives that TDK views from a life cycle perspective and an overview of environmental load. Investigations regarding environmental load are being conducted to establish criteria for the TDK Environmental Vision 2035.

Environmental considerations

Procurement	Development and Manufacturing	Logistics	Use	Disposal
TDK is promoting green procurement and eliminating the use of restricted substances, while also taking measures to reduce suppliers' environmental impact.	TDK is promoting environmentally conscious design through product assessments and reducing environmental loads during manufacturing by cutting down on energy and resource use.	TDK is working with customers to reduce environmental load on top of enhancing in-house logistical efficiencies.	TDK is producing eco-friendly products to help customers reduce their environmental load, while promoting understanding of the value of doing so.	TDK is using recyclable materials and designing products for easy disassembly in consideration of the disposal of products at the end of their lifetime.



Society

TDK's supply chain responsibility

TDK offers high-value-added solutions based on materials and components technologies. As globalization accelerates and we expand our target markets, we develop ongoing relationships with a wide range of customers and business partners. Some companies are buyers, as well as suppliers, for TDK in certain business areas.

Responsible management of supply chains is coming under strict scrutiny with the strengthening of legal systems and international industry initiatives. For example, the United Kingdom passed the Modern Slavery Act in March 2015, and the Electronic Industry Citizenship Coalition (EICC) changed its name to the Responsible Business Alliance (RBA) in October 2017. Because these trends greatly affect TDK's business environment, it is vital that we take suitable measures in our business supply chains.

A shared understanding of social issues and common investigative practices is essential for the practical and effective implementation of CSR in the supply chain. To bring improvements in efficiency to the entire supply chain, TDK is working with other organizations from the stage of formulating rules, cooperating with the industry as a whole, and proposing the standardization of investigative methods.

Important issues at each level of the supply chain

Procurement	Development	Manufacturing	Logistics	Sales
● Ensure the quality of purchased products ● Promote global human resource training program ● Use CSR check sheets and implement CSR audits ● Carry out conflict minerals survey ● Practice green procurement	● Develop new products through sustained research and development ● Carry out product assessments ● Promote global human resource training program ● Realize technological innovation ● Create products contributing to the environment ● Perform product assessments	● Create manufacturing process capable of reproduction without variation ● Promote global human resource training program ● Hold innovative craftsmanship training ● Implement CSR self-checks and CSR self-audits by third party organizations ● Initiate CSR self-checks at manufacturing sites: 100% ● Reduce the environmental load of plants	● Ensure logistics quality ● Promote global human resource training program ● Reduce the environmental load in logistics	● Promote sales of products that solve environmental and social issues ● Ensure customer satisfaction ● Promote global human resource training program ● Respond appropriately to CSR surveys and other inquiries from customers ● Promote sales of products that contribute to the environment

● Contribute to the world through technology
● Develop human resources
● Consider the societal and environmental impact of the supply chain
● Develop and prosper in harmony with the global environment

Toward zero defects

Dr. Werner Pint
Head of the Technology Quality Corporate Department
TDK Electronics AG

Zero-defect quality begins in the first stage of development

Zero-defect quality must be designed into our products and processes right from the start. It is our responsibility to our customers and to society as a whole that our customers' products and applications function properly and safely for their entire life cycle. Zero-defect quality also means that we manufacture our products without wasting resources, whether we are talking about raw materials, semi-finished and finished goods in our production, energy, or water. The result is a highly efficient production process that contributes to sustainability.

In order to achieve zero-defect quality, we need not only an advanced quality management system but also, above all, well-trained and competent staff. That is why we implemented a compulsory training program for all of our factories at TDK Electronics. We also need perfectly tuned and maintained production equipment. We are improving our manufacturing processes with Industry 4.0 methods by evaluating production data in real time and employing predictive maintenance to eliminate defect risks before they even occur. It is our standard practice to identify and assess such risks during product development. Thus, zero-defect quality begins in the first stage of development.

Think for yourself, devise improvements, and implement them through team cooperation

As a first step, the risks in 392 operations were methodically identified, resulting in a list of 1,702 problems. The *Arubeki-Sugata* (ideal process) for each problem and risk was then examined and defined, and a manual to convey the information to the manufacturing floor in an easy-to-understand manner was created. The aim was a concise, memorable format, with slogans such as "no waste, no wobble, no worry." For example, risks and losses associated with transfer operations were reduced (no waste), standardized work operations and work layouts were defined to eliminate unevenness (no wobble), and work flow lines were designed to enable natural movement without strain (no worry).

Quality control activities have a particularly important role to play in this undertaking. As Tomomichi Hatakeyama, manager of Tsuruoka Higashi Factory, puts it, "Think for yourself, devise improvements, and implement them through team cooperation." A wide range of measures has been implemented to that end. Staff recite the purpose of their own process daily, to foster a clear understanding of the positioning of one's work within the overall process sequence. Tools such as monitors and tablets are used for discussions and to allow checking operations via video at any time by anyone. Special areas created within the work area are set aside for meetings, allowing teams to get together and engage in close communication. "I believe it is only through the steady repetition of diligent actions that zero-defect product quality can be realized."

Tomomichi Hatakeyama
Tsuruoka Higashi Factory Manager
TDK Shonai Corporation

CORPORATE INFORMATION

As of March 31, 2019

Corporate name	TDK Corporation
Corporate headquarters	Nihonbashi Takashimaya Mitsui Building, 2-5-1 Nihonbashi, Chuo-ku, Tokyo 103-6128
Date of establishment	December 7, 1935
Authorized number of shares	480,000,000 shares
Number of shares issued	129,590,659 shares
Number of shareholders	22,455
Common stock	¥32,641,976,312
Securities traded	Tokyo Stock Exchange (Listed on the 1st Section in October 1961)
Securities code	6762
Number of employees (consolidated)	104,781
Transfer agent	Sumitomo Mitsui Trust Bank, Limited 1-4-1, Marunouchi, Chiyoda-ku, Tokyo 100-8233
Independent registered public accounting firm	KPMG AZSA LLC (the Japan member firm of KPMG International)

ADR information

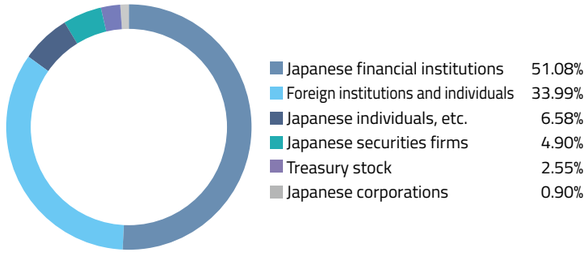
Type	Level 1 with sponsorship
ADR Ratio	1 common stock = 1 ADR
Ticker Symbol	TTDKY
CUSIP	872351408
Depositary Bank	Citibank, N.A. Shareholder Services P.O. Box 43077 Providence, Rhode Island 02940-3077 U.S.A. Tel: 1-877-248-4237 CITI-ADR (toll free) Tel: 1-816-843-4281 (out of U.S.) Fax: 1-201-324-3284 URL: http://www.citi.com/adr E-mail: citibank@shareholders-online.com

Principal shareholders (10 largest shareholders)

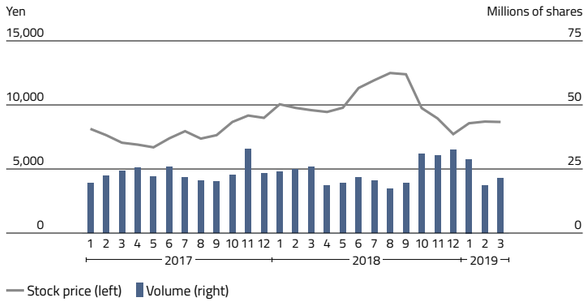
Name of shareholder	Number of shares held (thousands of shares)	Percentage of number of shares held in the total number of issued shares* (%)
The Master Trust Bank of Japan, Ltd. (Trust account)	26,573	21.04
Japan Trustee Services Bank, Ltd. (Trust account)	15,197	12.03
Trust & Custody Services Bank, Ltd. (Securities investment trust account)	3,381	2.68
JPMC OPPENHEIMER JASDEC LENDING ACCOUNT	2,853	2.26
Japan Trustee Services Bank, Ltd. (Trust account 9)	2,356	1.87
JP MORGAN CHASE BANK 380055	2,231	1.77
STATE STREET BANK WEST CLIENT - TREATY 505234	2,224	1.76
Japan Trustee Services Bank, Ltd. (Trust account 5)	2,052	1.62
JP MORGAN CHASE BANK 385151	1,852	1.47
Nippon Life Insurance Company	1,640	1.30
Total	60,359	47.79

* Other than the above, the Company holds 3,302 thousand shares of treasury stock.

Status by ownership



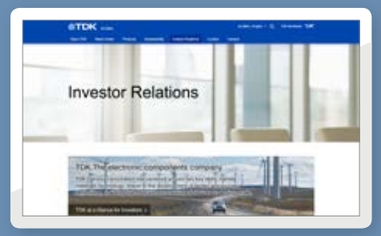
TDK's stock price and volume



About Our Website

Investor Relations (IR)

https://www.tdk.com/corp/en/ir/index.htm



- Securities Reports
- Quarterly Financial Statements
- Management Policy

Sustainability

https://www.tdk.com/corp/en/sustainability/index.htm

- Sustainability Communication Book
- CSR Activities

Product Center

https://product.tdk.com/info/en/products/index.html

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2-5-1 Nihonbashi, Chuo-ku, Tokyo 103-6128
https://www.tdk.com/corp/en/