

Constantly Refined
Magnetics
Technology



1935
One of four great
world-class Innovations
Ferrite core

“A more than 80-year history in tandem with magnetism”

The magnetic material “ferrite” is an original Japanese invention of Dr. Yogoro Kato and Dr. Takeshi Takei of the Tokyo Institute of Technology. As an important magnetic material for cutting-edge electronic equipment, ferrite continues to contribute widely to society, and in 2009 was designated as an IEEE Milestone. With its origins in this landmark invention, TDK has continued to refine its magnetics technology throughout the course of its more than 80-year history.

Constantly Upholding
a Spirit of
Originality

社是
創造に
よつて
文化産業に
貢献する

Corporate Motto
Contribute to
culture and industry
through creativity

“Creating value that does not yet exist in the world on a material level”

Today's TDK was founded in 1935 as Tokyo Denki Kagaku Kogyo K.K., with the goal of industrializing ferrite. Identifying with Dr. Kato's statement that, “the Japanese must develop their own genuine industries,” Kenzo Saito, the Company's first president, succeeded in commercializing a so-called “ferrite core.” His philosophy of “creating value that does not yet exist in the world on a material level” continues to be handed down at TDK today.

MILESTONE

Innovation and Self-Transformation as Driving Forces

With magnetics technology as its core competence, TDK has developed a succession of global innovations that leverage its spirit of originality. Continuous innovation in its existing products, a process repeated throughout TDK's more than 80-year history, along with nonlinear innovation via strategic withdrawal from non-core businesses and optimization of its business portfolio, will continue to be the driving forces behind the Company's ongoing growth.

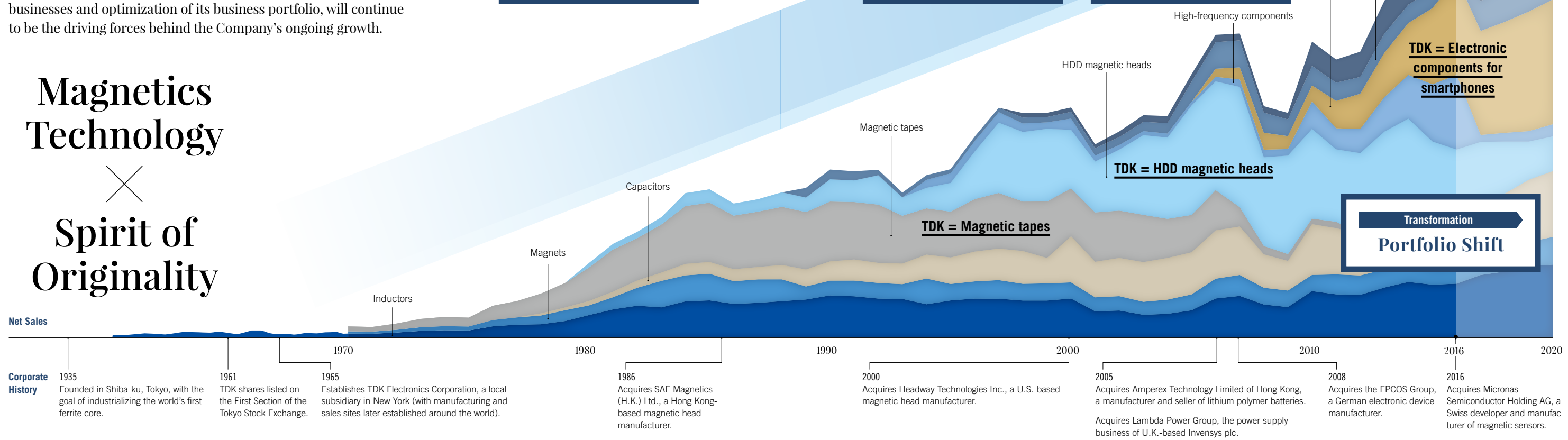
Magnetics Technology × Spirit of Originality

Transformation
Governance
Number of Outside Officers (Directors and Audit & Supervisory Board Members)
2002 → 2017
1 person → 6 people
(As of end of June 2017)

Transformation
Globalization
Overseas Production Ratio
1995 → 2017
42% → 86%

Transformation
Shift to Growth Areas
Expansion of Automotive Sales
2010 → 2018 (Target)
12% → 30%

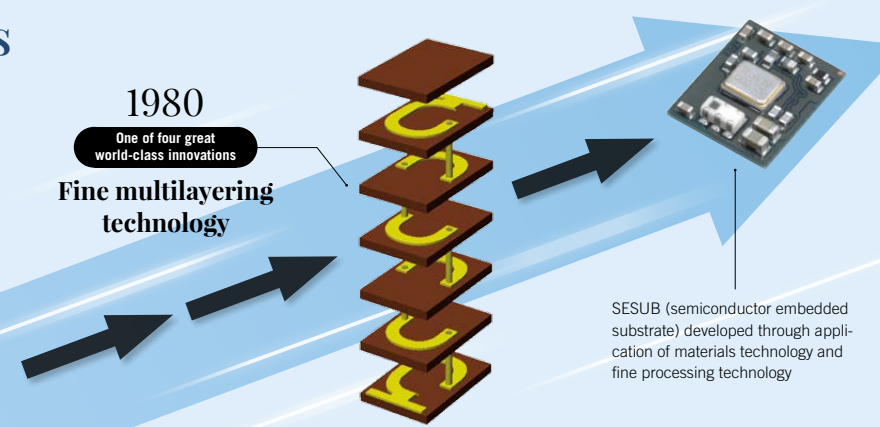
The TDK of the Future



Innovation That Drives Transformation

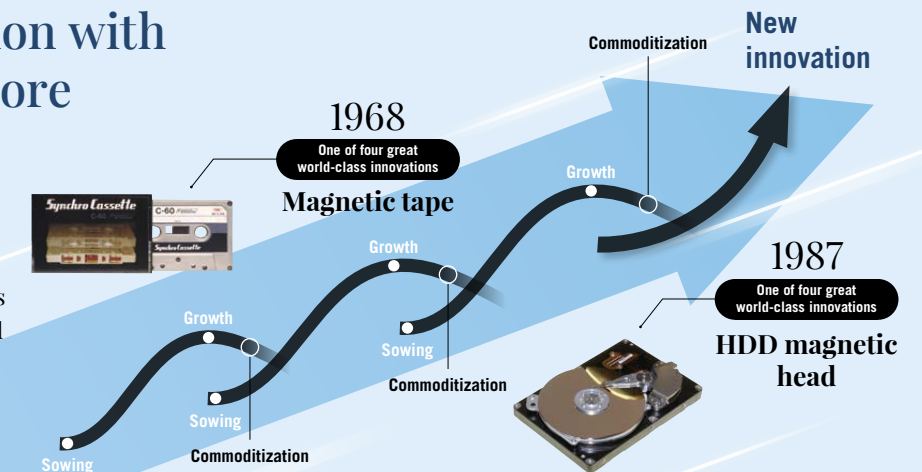
Continuous Innovation in Passive Components

The multilayer chip inductor, based on the world-leading fine multilayering technology developed by TDK in 1980, contributed greatly to the creation of small, thinner electronic equipment. Continuous innovation in these types of passive components and other existing products is one driver of TDK's sustainable growth.



Nonlinear Innovation with Magnetism at Its Core

While its main products are doing well, TDK works to forecast long-term technology trends and develop core businesses for the future, sometimes boldly replacing its main business focus. This is what we call "nonlinear innovation," and it provides a schematic for TDK's sustainable growth. HDD magnetic heads that have achieved phenomenal recording density are one such example.



INNOVATION PROCESS

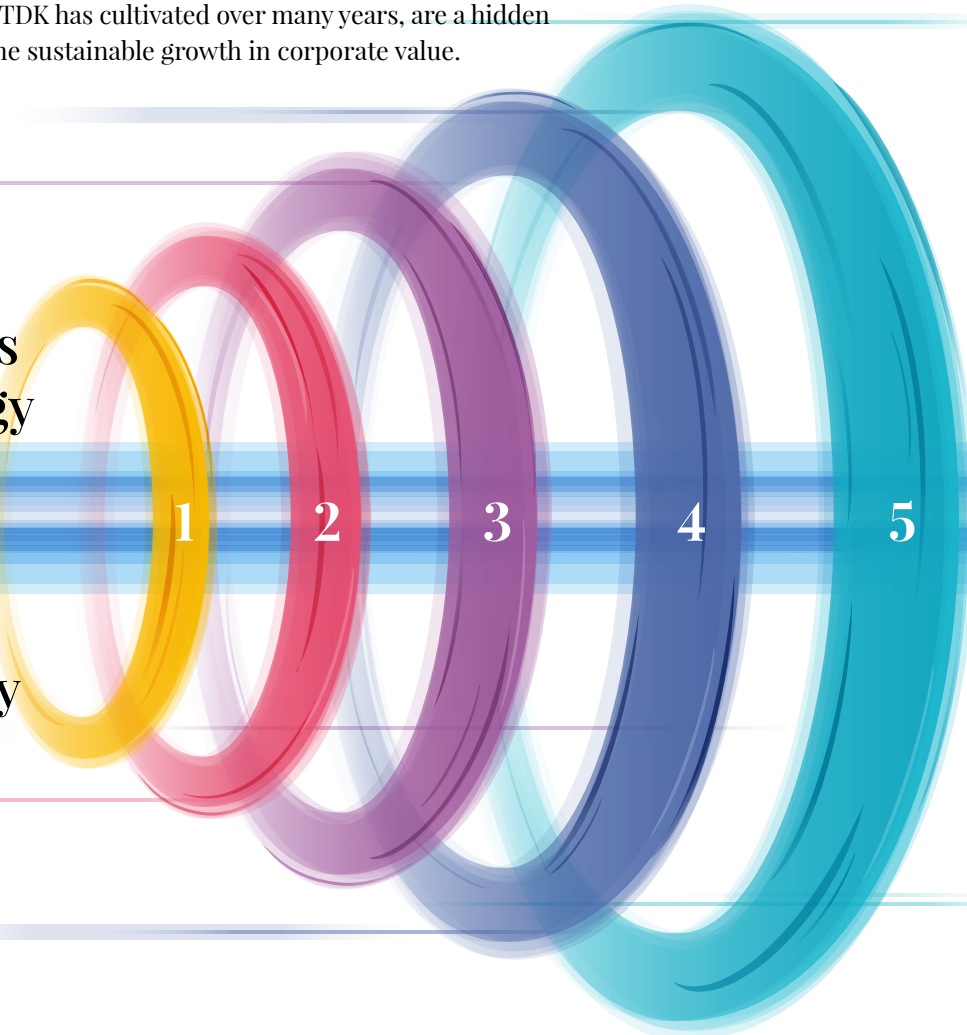
Achieving Sustainable Growth in Corporate Value through 5 Competitive Advantages

Competitive advantages, including materials and process technologies, a customer base, strength of diversity, a global business base, and integrated production, are the foundation of TDK's growth. Synergies between these competitive advantages, which stand solidly on the magnetics technology TDK has cultivated over many years, are a hidden strength supporting the sustainable growth in corporate value.

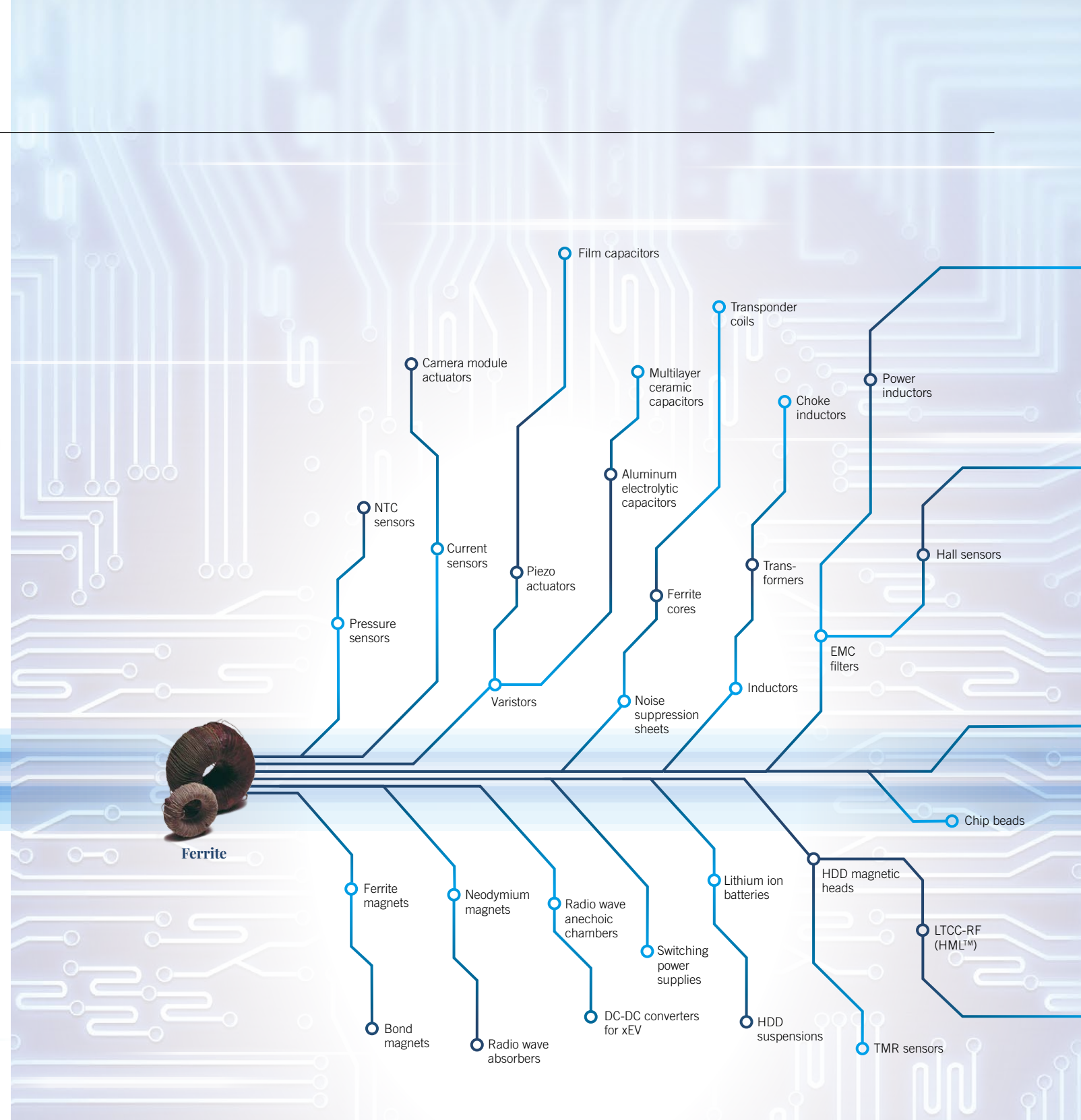
Magnetics Technology



Spirit of Originality



Competitive Advantages Supporting Sustainable Growth at TDK



Infinite Innovation

With ferrite as a starting point, TDK has extended the boundless potential of innovation by refining and exerting its competitive advantages, and today, we are taking on the challenge of new business innovation.

1 Materials and Process Technologies

— Creating “Black Boxes” to Prevent Imitation

Materials technology elicits 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 for controlling crystal particles at the atomic level, for intellectual property, and for other know-how makes them difficult to imitate overnight.

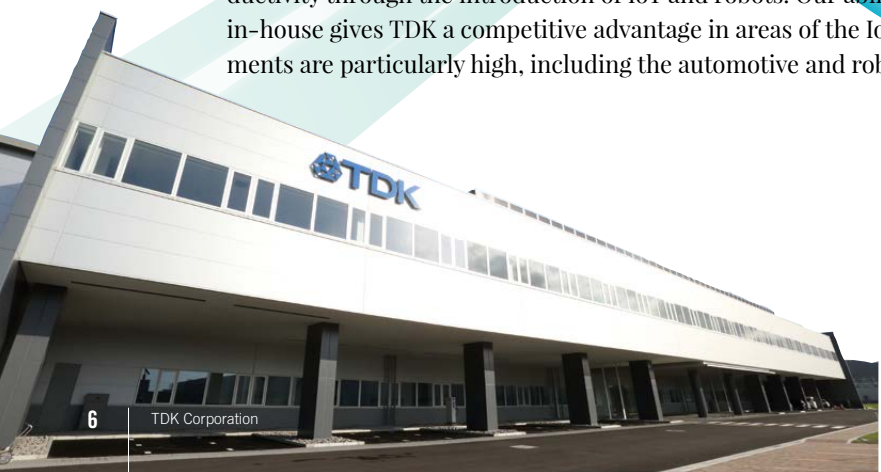


Competitive Advantages Supporting the Creation of Innovation and Long-Term Value

5 Integrated Production

— A Powerful Advantage in the Age of IoT

Integrated production, where everything from materials to the final product is handled in-house, allows TDK to take the initiative in product evolution, and we have successfully increased productivity through the introduction of IoT and robots. Our ability to also control quality entirely in-house gives TDK a competitive advantage in areas of the IoT market where quality requirements are particularly high, including the automotive and robotics fields.



Honjo Factory East Site

Location: 1-8 Manganji, Yurihonjo City, Akita Prefecture, Japan
 Floor space: Approximately 50,000 m²
 Building structure: Two-story building
 Main business: Development, design, and manufacture of high-frequency components, piezoelectric components, and other electronic components

2 Customer Base

— Enabling Investment from a Long-Term Perspective

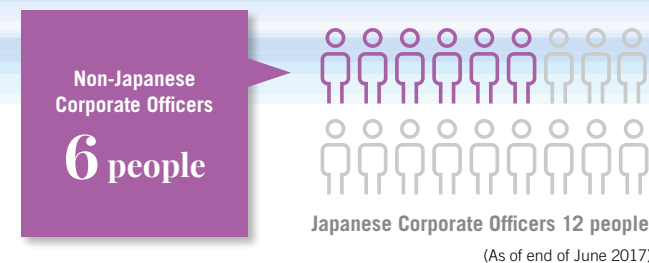
TDK has built strong relationships with its customers in the automotive, ICT, industrial and energy markets, and other markets. This competitive advantage allows us to more accurately forecast future changes in technology trends, and reduces the risks involved in making aggressive R&D and capital investments.



3 Strength of Diversity

— A Spirit of Equality Leading to M&A Success

TDK has built its relationships with the companies it acquired based not on controlling them, but on positioning them as equal partners. This expertise in post-merger integration, cultivated over long years of experience in M&A, is a powerful weapon in ensuring the success of our business portfolio.



4 Global Business Base

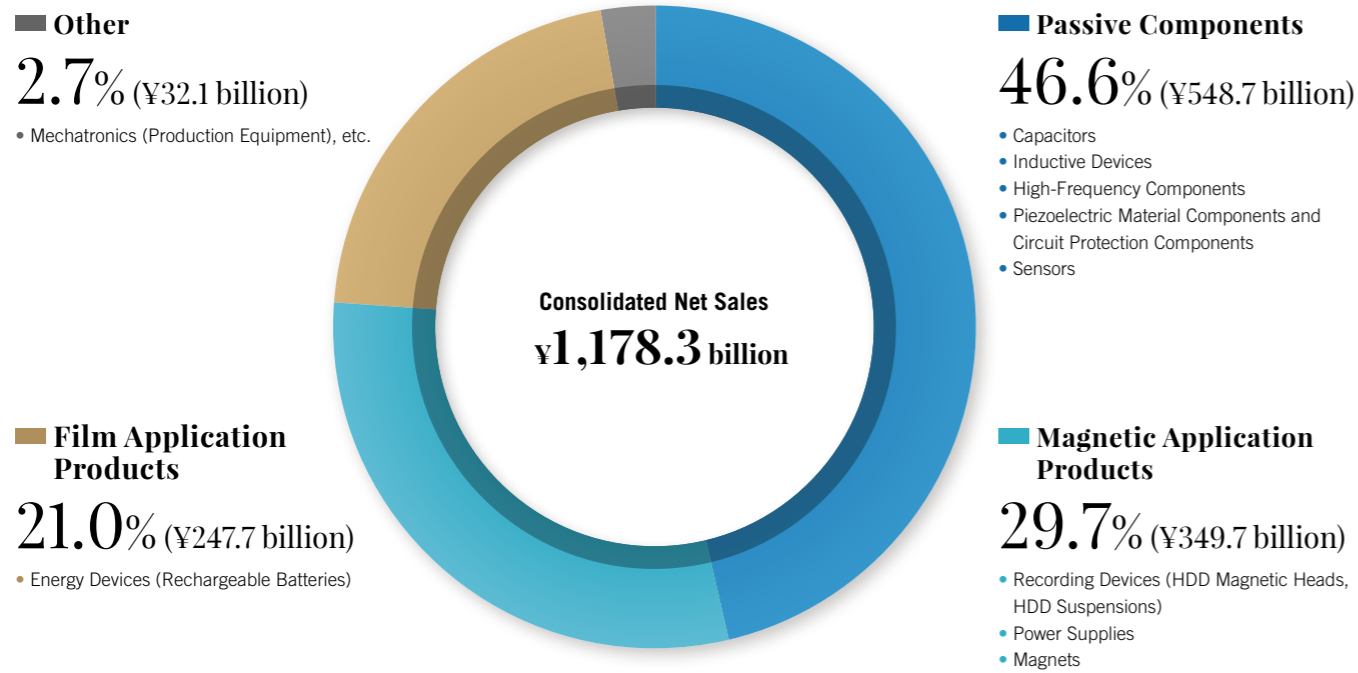
— Overseas Sales in Excess of 90%

TDK began full-scale globalization efforts in the 1960s, enhancing its local production and technical support infrastructure overseas and expanding its business with manufacturers outside Japan. This global business base, with approximately 90% of production and sales generated overseas, is a competitive advantage that will allow us to capture business opportunities in the IoT market, which is expected to expand worldwide.



BUSINESS PORTFOLIO

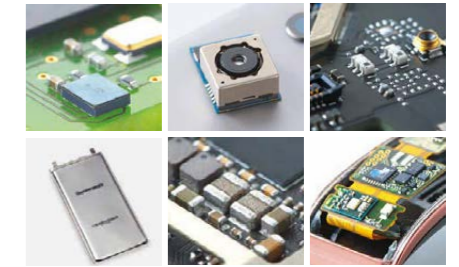
Net Sales by Product Segment



Automotive Market

Leveraging Relationships with Automobile Manufacturers and a Broad Portfolio to Accelerate Business Expansion

TDK has worked to enhance its product portfolio in such areas as passive components, magnets, and power supply, contributing to the increased use of electronics by offering products compatible with demands for high reliability. The expected widespread use of xEV (HEV, PHEV, BEV, etc.) and the rapid development of IoT mean that the market for electronic components for automobiles is also expected to expand. By adding a broad array of non-optical sensors and wireless power transfer systems to its portfolio, TDK is expanding its business in the automotive market.



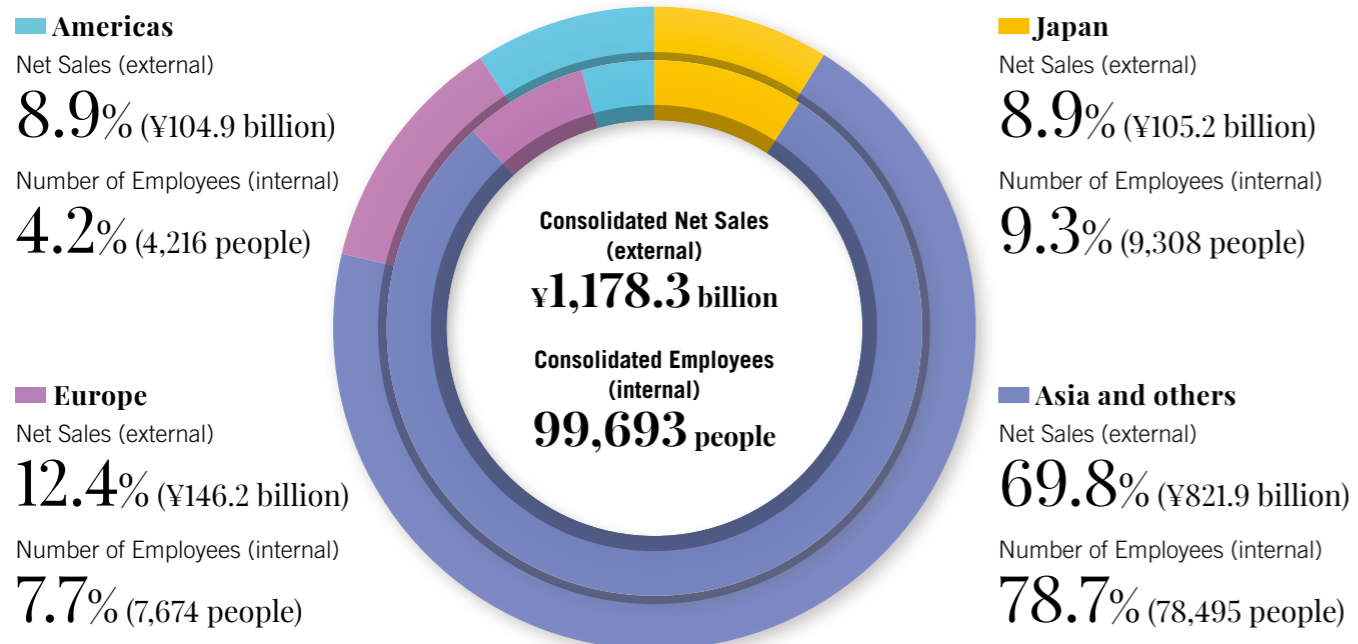
ICT Market

Contributing to the Evolution of ICT Devices through Use of Thin-Film Technology and Modularization

TDK offers more than 20 types of products for smartphones, including lithium polymer batteries, thin-film power inductors, and various types of sensors. As smartphones simultaneously become more highly functional, incorporate a wider range of functions, and become thinner, the electronic components built into them will require even greater integration. TDK will support the evolution of ICT devices by accelerating the creation of next-generation electronic components that take advantage of its strength in thin-film technology, and the modularization of electronic components utilizing SESUB, TDK's innovative semi-conductor embedded substrate technology that allows for high-density mounting.

Focusing on High-Potential Markets

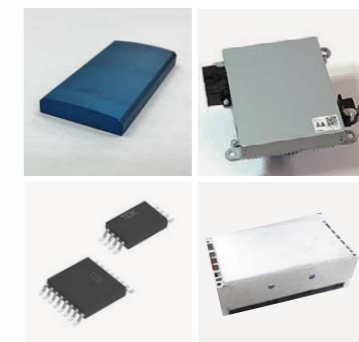
Net Sales by Region



Industrial and Energy Market

Contributing to Energy Savings and Efficiency with a Focus on Power-Related Components and Sensors

The industrial and energy market is also a priority for TDK. We provide highly reliable, highly efficient electronic components for renewable energy systems, railways, and industrial robots, contributing to energy savings and efficiency. In addition to wireless power transfer coils and other power-related components that control and supply electrical power and which take advantage of our core competence in magnetics technology, we are working to expand sales with a focus on sensors. We are also working to provide high-value-added solutions for industrial robots, an area where particularly rapid growth is expected.



We Are Ready to Transform

TDK Product Brands



Collaboration with IC Manufacturers

Sensor Solutions

Another Re-Invention

RF360

Power Solutions

Through a series of M&As, beginning with Micronas in 2016 and concluding with InvenSense in 2017, through its business tie-up with Qualcomm, and through the establishment of the joint venture company RF360, TDK has prepared for the transformation to a hybrid business model. Building on a foundation of materials and electronic components differentiated by advanced technology, we will provide sensor solutions and power solutions, creating a high-value-added business model and pushing forward with market expansion.

Transformation

Shift to a High-Value-Added Business Model

Taking advantage of its strengths as a comprehensive manufacturer of electronic components, TDK will go beyond stand-alone sales of those products to provide solutions centered on sensors, building a business model with even higher added value.

Transformation

Into the Vast IoT Market

By shifting the focus of its business from the product-dependent *Monozukuri* (manufacturing excellence) model of the past to a *Kotozukuri* (integrated solutions) model based on offering the optimal solutions for leading customers to business success, TDK will capture the unlimited potential of the vast IoT market, achieving sustainable growth in corporate value.

Transformation

Market Expansion

In addition to developing new customers in the automotive, ICT, and industrial and energy markets, and expanding the scope of applications for its products, TDK will work closely with Qualcomm and other IC manufacturers as it looks to develop demand for consumer applications, which represent an even larger market.