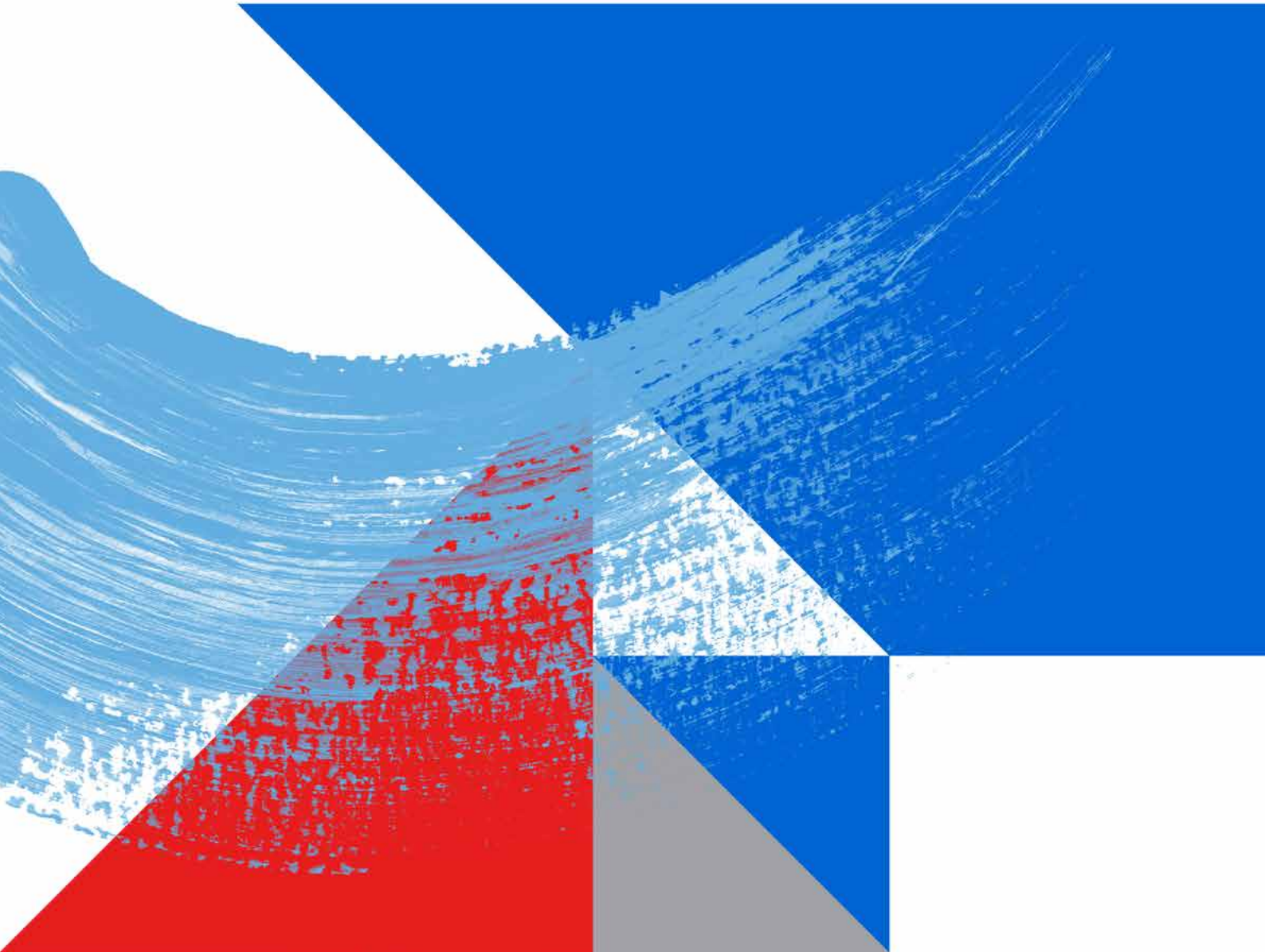
TOSHIBA

Integrated Report

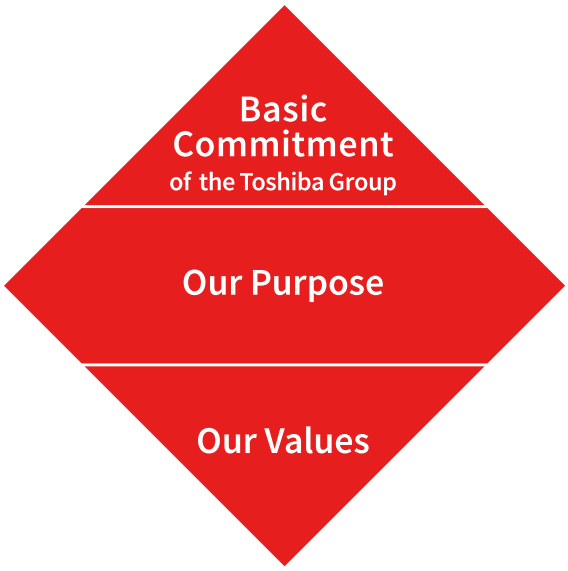
Year ended March 31, 2023

2023



The Essence of Toshiba

The Essence of Toshiba is the basis for the sustainable growth of the Toshiba Group and the foundation of all corporate activities.



The Essence of Toshiba comprises three elements: Basic Commitment of the Toshiba Group, Our Purpose, and Our Values.

With Toshiba's Basic Commitment kept close to heart, we clarified our purpose – the difference that Toshiba Group makes in society – together with our values, the shared beliefs that guide our actions.

Basic Commitment of the Toshiba Group

Committed to People, Committed to the Future.

At Toshiba, we commit to raising the quality of life for people around the world, ensuring progress that is in harmony with our planet.

Our Purpose

We are Toshiba. We have an unwavering drive to make and do things that lead to a better world.

A planet that's safer and cleaner.
A society that's both sustainable and dynamic.
A life as comfortable as it is exciting.

That's the future we believe in.
We see its possibilities, and work every day to deliver answers that will bring on a brilliant new day.

By combining the power of invention with our expertise and desire for a better world, we imagine things that have never been – and make them a reality.

That is our potential. Working together, we inspire a belief in each other and our customers that no challenge is too great, and there's no promise we can't fulfill.

We turn on the promise of a new day.

Our Values

Do the right thing

We act with integrity, honesty and openness, doing what's right— not what's easy.

Look for a better way

We continually strive to find new and better ways, embracing change as a means for progress.

Always consider the impact

We think about how what we do will change the world for the better, both today and for generations to come.

Create together

We collaborate with each other and our customers, so that we can grow together.

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Message from CEO

Taro SHIMADA

Representative Executive Officer,
President and CEO

The tender offer for shares of Toshiba Corporation conducted by TBJH Inc. which took place from August 2023, has now been completed. Since 2021, Toshiba has been reviewing strategic alternatives. The Board of Directors and Executive Officers held many serious discussions over what path the Toshiba Group should take and what is the best option for our various stakeholders. We concluded that the best way forward is to privatize Toshiba to build a stable business foundation and gain the unified support of shareholders. Going forward, Toshiba will strive to enhance corporate value over the medium- to long-term under its new shareholder structure.

Toshiba Group aims to achieve carbon neutrality and a circular economy through digitalization.

Digital technology is an important means of enhancing corporate value. As the digital economy evolves, new social value will be created in the future having various companies get connected across industrial boundaries. Toshiba has identified its own digital evolution (DE), digital transformation (DX) and quantum transformation (QX) strategies.

DE, which is the first stage, involves digitalizing infrastructure to enhance services and recurring businesses. This is to be followed by DX, which is a stage to build platforms based on DE, forming a cycle where earnings rapidly expand. Beyond that, various platforms will be created under the DX stage, and QX will emerge, in which optimal solutions are identified from a complex interplay of platforms.

Let's look at Toshiba Group's growth potential over the short-, medium- and long-term. First in the short-term, we intend to expand our facilities in order to address strong demand for the power semiconductors and rechargeable batteries that are so vital to the achievement of carbon neutrality.

Over the medium-term horizon, we aim to expand digital business driven by our infrastructure assets. We will achieve DE and DX through software defined transformation that separates apps, software and hardware and builds platforms. Furthermore, we are taking the lead on various initiatives in the quantum field to help generate the QX that society expects to be implemented from 2030 onwards, and in regard to quantum cryptography communications, commercial demonstrations are underway around the world.

Over the long-term, we intend to provide the technologies and solutions required to achieve carbon neutrality and turn those activities into future pillars of earnings. Not only will we strive to reduce CO_2 emissions, but we will also focus on carbon negative activities that involve the removal of CO_2, such as CO_2 capture, transport, storage, and utilize, so we can provide customers with a variety of technologies, products and solutions for both CO_2 reduction and removal.

Toshiba's key strength that will support this growth lies in its technological diversity. This is not the mere result of a single technology creating a single product, but of combining various technologies that we have amassed in the laboratory. The way to create unprecedented products and services is to combine technologies from multiple fields. To ensure we successfully link high-potential technologies to our business, we intend to break down organizational barriers, "not-invented-here syndrome," and any other internal and external rigidities, and to promote various internal reforms.

"Committed to People, Committed to the Future." Toshiba Group is made up of people who feel naturally empowered when they see this Basic Commitment. It is my job to build a stable management platform after privatization, and show how transforming the company from a medium- to long-term perspective will enable us to grow as a company that is able to contribute to the realization of a sustainable society.

To achieve growth in a sustainable manner, we will continue to place the highest priority on life, safety, and compliance (observance of laws, regulations, social norms, and ethics) and strive to strengthen our environment, social, and governance (ESG) activities in order to build an ethical and transparent management platform.

I would like to take this opportunity to ask Toshiba's multifaceted stakeholders for their kind understanding of our Group's unwavering Basic Commitment and determination and for their continued support.

November 2023

Message from the Chairperson of the Board of Directors

In September 2023, the tender offer by TBJH Inc. for shares of Toshiba Corporation was successfully completed. The Board of Directors had supported this tender offer and recommended that shareholders tender their shares. We express our deep appreciation to many shareholders for their understanding of the company's position.

Going forward, as a privately owned company, Toshiba will continue to enhance its corporate value.

Since becoming Chairperson, I have said that Toshiba is a "good company," with its wonderful corporate philosophy of "Committed to People, Committed to the Future," and excellent employees who dedicate themselves for the benefit of customers and society, but yet not a "strong company." And to transform Toshiba to a strong company, we went through a process of almost a year that concluded with privatization.

All of the Directors shared the mission to build a strong Toshiba. With the Special Committee composed entirely of Outside Directors playing the key role, we put a great deal of time and effort into overseeing Mr. Shimada, the CEO, and his executive team, to ensure that the process was fully competitive and fair. We were able to achieve a fair and transparent process, maintain a competitive environment and reach a result. We believe that our shareholders are convinced of that, and we now feel that we have fulfilled our obligations as the Board.

For Toshiba to execute a consistent business strategy over the medium- to long-term and to succeed in its transformation to become a strong company, it is necessary to build a stable management base, and privatization will contribute to enhancing Toshiba's corporate value. The privatization is a major milestone, however, it is not the goal.

Guided by its corporate philosophy of "Committed to People, Committed to the Future," Toshiba has a vision for contributing to the achievement of carbon neutrality and a circular economy through digitization, and technological diversity backed by its history that makes this possible. Toshiba's role in contributing to the realization of a sustainable society will not change. Toshiba's most important management resource is its excellent employees, like those I have met myself in our labs, factories and other facilities, in Japan and overseas. It is important to focus on intangible assets such as human capital, which are not recorded on the balance sheet, and to bring out the full value of such assets. When trying to overcome difficulties, I believe that it is the power of people that counts.

I am convinced that Toshiba, having gone through privatization, and by focusing on business and management that promotes growth, will be able to realize its potential and accomplish a true revival, and grow once again.

November 2023

Akihiro WATANABE
Outside Director
Chairperson of the Board of Directors

History of Value Creation—Toshiba's DNA

Toshiba's Roots

Toshiba's roots can be traced back to the time when the heritage of two men—Hisashige Tanaka, dubbed *Karakuri Giemon* (inventor of mechanical devices), and Ichisuke Fujioka, known as the Thomas Edison of Japan—joined forces.

Tanaka Engineering Works (later Shibaura Engineering Works), founded by Tanaka in 1873, and Hakunetsu-sha, established by Fujioka in 1890, were the two companies that would eventually become Toshiba Corporation. They both were business ventures that dreamed of a bright future for Japan, aspiring to create something never seen before that would benefit people and society.

Committed to People, Committed to the Future.

"Committed to People, Committed to the Future." is the long standing Basic Commitment of Toshiba Group that expresses our credo since founding to always be on the watch for issues facing society amid the changing times and resolve them through business.

Today, in our everyday lives, we are asked to be responsible for a sustainable future. Natural disasters caused by climate change threaten the safety and security of our lives. Social and environmental stability are impaired by problems such as information inequality and natural resource depletion.

Our unwavering drive to make and do things that lead to a better world for over 140 years

1875 Hisashige Tanaka founded a telegraphic equipment factory in Tokyo.

Hisashige Tanaka

Tanaka Engineering Works

Shibaura Engineering Works

Ichisuke Fujioka

Tokyo Denki

Hakunetsu-sha

1890
Ichisuke Fujioka established Hakunetsu-sha & Co., Ltd. and manufactured Japan's first electric incandescent light bulbs.

1930 Japan's first
Completed and released electric washing machines and refrigerators.

1939 Tokyo Shibaura Denki

1967 World's first
Completed the automated mail processing equipment.

1989 World's first
Developed an ultra-supercritical high capacity steam turbine.

1991 World's first
Developed the 4-megabit NAND-type Electrically Erasable and Programmable Read-only Memory (EEPROM).

1984 Renamed Toshiba Corporation.

1978 Japan's first
Developed a Japanese word processor.

1985 World's first
Developed and launched the laptop personal computer.

Toshiba's Technology to Turn on the Promise of a New Day

Founding

In 1930, Toshiba released Japan's first electric washing machines and completed Japan's first electric refrigerators. In 1955, the Company also released Japan's first electric rice cookers.

At a time when many women's lives were bound to the domestic realm, these products allowed women to have more free time.

1960s

The automated mail processing equipment completed in 1967 was the world's first to mechanize manual work by recognizing handwritten characters, and became a forerunner of labor-saving equipment in the advanced information society.

At the same time, it led to the widespread use of optical character reading (OCR) technology, automatic ticket gates, and other cutting-edge image recognition technologies. In addition, research on superconducting materials, which began in the early 1960s, has borne fruit in the form of heavy ion cancer treatment devices, leading to the technology for next-generation medicine.

1970s

In 1978, Toshiba completed Japan's first practical *kana-kanji* conversion system and released Japan's first Japanese word processor.

The development of *kana-kanji* conversion technology and high-capacity storage led to mobile music devices enjoyed by people out on the street, e-mail, social media, and other methods of communication, which have become the norm today.

1980s

Toshiba commercialized the world's first laptop personal computer in 1985, and the world's first NAND flash memory in 1991. These developments laid the foundation for an internet-driven society.

Toshiba is working for a sustainable future for the earth and its people by contributing to the realization of carbon neutrality and a circular economy.

Specific initiatives include protecting the safety and security of individual livelihoods by building infrastructure that is accessible to everyone, and ensuring social and environmental stability by building a society connected by data.

For many years now, Toshiba has engaged in businesses that support essential social infrastructure, including power generation, water treatment and transportation. Today, the knowledge, technology and customer connections cultivated thorough these businesses are invaluable assets. We will draw on them as we continue to create previously unseen value by maximizing the power of data.

2016 World's first

Superconducting rotating gantry irradiation system for heavy-ion radiotherapy

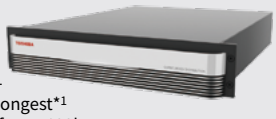
Collaboration with QST/iQMS

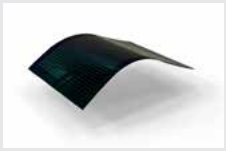
2017 World's first

Developed the practical multi parameters phased array weather radar.

2021 World's No. 1

Demonstrated quantum cryptographic communications covering the world's longest*1 communication distance of over 600km.





2021 World's No. 1

Film-based perovskite photovoltaic module with the world's highest*2 power conversion efficiency

2021 Japan's No. 1

Share of mega solar power plant installations

2007 World's first

Developed the 320-detector row CT scanner.

2020 Japan's first

Launched operations of a large-scale carbon capture and storage facility in Omuta, Fukuoka Prefecture*3.

2020 World's leading scale

World's leading scale H_2 energy system (Fukushima Hydrogen Energy Research Field: FH2R) * NEDO Project

*1. Toshiba's survey in June 2020

*2. Among film-based perovskite photovoltaic modules with and active area of over 100cm^2 made of plastic substrates, Toshiba's survey (as of September 10, 2021)

*3. Japan's first carbon capture unit to capture over 50% of total CO_2 emissions from a thermal power plant

2010s

In 2017, Toshiba developed the world's first practical multi parameters phased array weather radar.

As torrential rains are caused by locally and rapidly developing cumulonimbus clouds, they had been considered difficult to predict. However, the multi parameters phased array weather radar makes it possible to predict the signs of torrential rains and resulting rainfall quickly and accurately.

2020s

In 2021, Toshiba developed the world's largest film-based perovskite photovoltaic module with the world's highest power generation efficiency. The module can be installed in urban areas where it is difficult to secure a large area of land, even on the walls of buildings and condominiums and the roofs of large vehicles, which used to be considered unsuitable for installation.

"We want to be the first to deliver products and services that make people's dreams come true and change society." This passion has been the source of Toshiba's products and services.

Toshiba's technology has altered the way people live and has also changed society.

Toshiba Group Management Policy

Toshiba Group's Vision

Contribute to the achievement of carbon neutrality & circular economy through digitization

Committed to People, Committed to the Future.

At Toshiba, we commit to raising the quality of life for people around the world, ensuring progress that is in harmony with our planet.

Future

For our children

Social Challenges	Toshiba Initiatives
Achieving sustainability of people and the planet	**Achieving carbon neutrality and a circular economy**

People

Safe, secure lifestyles for everyone

Poverty, human rights, disasters, disputes	**Building an infrastructure that everyone can enjoy**

Planet

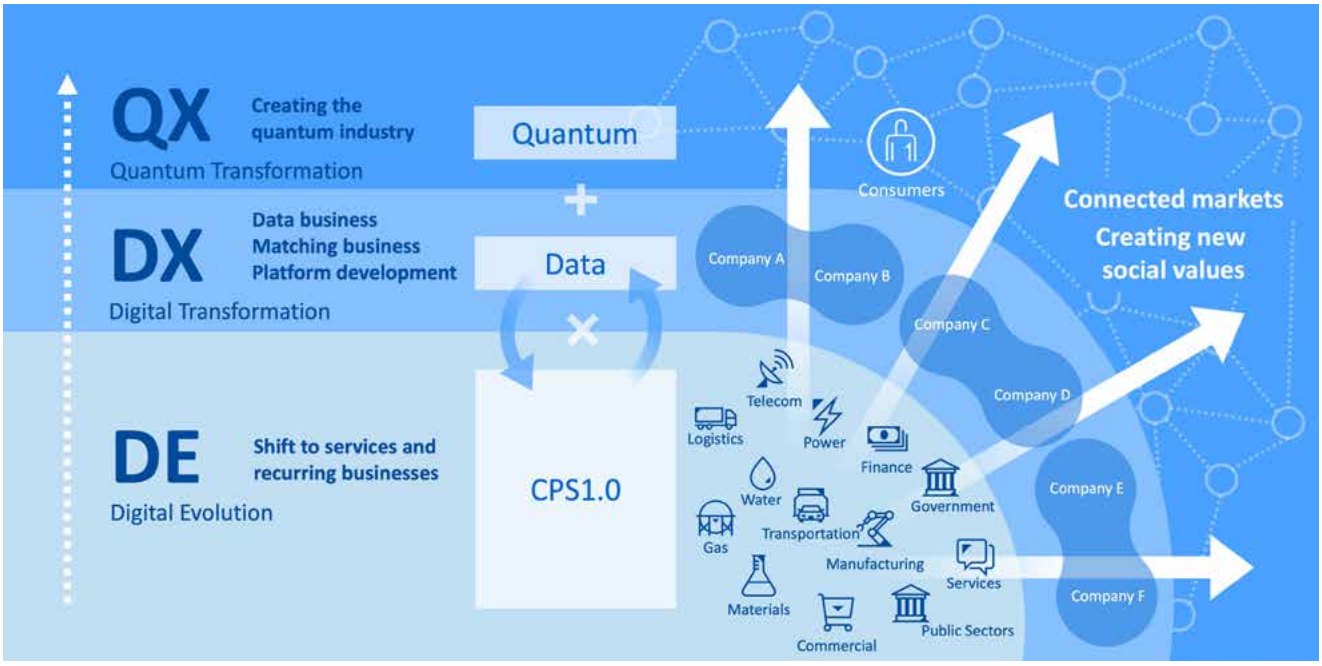
Social and environmental stability

Education, equality & fairness, climate change, resource depletion	**Building a society connected by data**

"Committed to People, Committed to the Future," this is the Basic Commitment of Toshiba. We commit to raising the quality of life for people around the world, ensuring progress that is in harmony with our planet.

It is important to first protect the safety and security of everyday life of each individual. It is to make a world without poverty, disasters or conflicts. What we can do is to "build an infrastructure that everyone can enjoy." Once "People" are satisfied, the next level is to consider the "Planet." Realization of social and environmental stability becomes the next important step, and Toshiba aims to "build a society connected by data." After the society is further stabilized, we will move on to consider the "Future." In other words, the greater question becomes the future of our children, and the sustainability of people and the planet. What we can do and what we should do is to "realize carbon neutrality and circular economy."

Evolution of the digital economy



As means to realize these things that need to be done, “digital” is important. As the digital economy evolves, new social value will be created in the future having various companies get connected across industrial boundaries.

Toshiba has identified the DE, DX and QX strategy to respond to those changes.

The first step of its development is digital evolution (DE) to enhance services and recurring businesses.

That is to be followed by digital transformation (DX), which is a stage to build platforms based on DE. Once the platforms are built, it will be possible to create a cycle of rapidly expanding earnings.

We will further develop this into a quantum transformation (QX), a quantum world where various platforms are connected across industries. That will occur after DX, but Toshiba possesses numerous innovative technologies that can provide a foundation of DX.

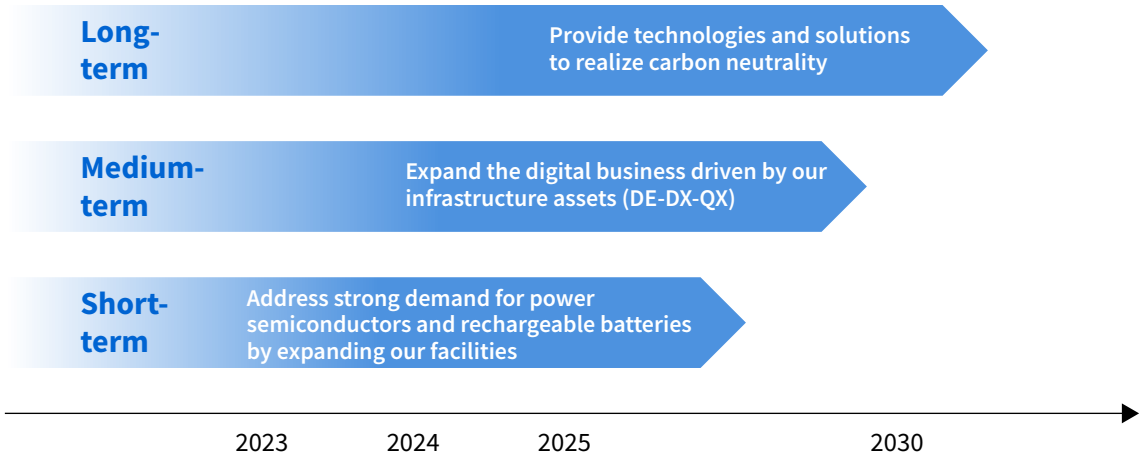
Business growth in three steps (time horizons)

Here is our growth strategy to enhance Toshiba Group’s corporate value formulated in three phases; short-, medium- and long-term horizons.

In the short-term, we will strengthen our production capacity in the device field in order to capture demand for products including power semiconductors and SCiB™ rechargeable batteries, for which supply is short due to the rapid spike in demand for EV and other products.

Over the medium-term, we will transform our business by digitizing the infrastructure assets that Toshiba has cultivated over its long history and deployed across society.

Lastly, we believe that the technologies and solutions to achieve carbon neutrality, which will become increasingly important as we move toward 2030, will grow to become pillars of our earnings.



Short-term Address strong demand for power semiconductors and rechargeable batteries by expanding our facilities

First, measures to respond to growing demand for power semiconductors and rechargeable batteries in the short-term.

Demand for power semiconductors, which efficiently control electric power, is growing worldwide as needs for energy saving expand.

In particular, demand for automotive and industrial applications where our semiconductor business excels is expected to continue to grow at a CAGR of 7% through 2025.

We are currently receiving inquiries from customers that far exceed our production capacity, and the construction of a new 300mm wafer fab at Kaga Toshiba Electronics Corporation, where power semiconductors are manufactured, has begun with the aim of starting operations in FY2024.

This is expected to make a significant contribution to sales and OP growth in FY2024 and beyond.

Deploy resources to start operations of new 300mm wafer fab at Kaga in FY2024

Kaga Toshiba's new 300mm fab
(computer-generated image of facility upon completion of Phase 2)

Construction of new fab began in April 2023

Products that support our competitiveness

Power MOSFETs for automotive applications

High power modules (PPI)*1

SiC MOSFET modules for railways (iXPLV)*2

*1 PPI (Press Pack IEGT): Press pack hermetic sealed modules
*2 iXPLV (intelligent fleXible Package Low Voltage): Package for SiC modules

We have also received orders for SCiB™ rechargeable batteries in a wide range of fields as an important device indispensable for achieving carbon neutrality.

They are used not only in transportation vehicles such as trains, passenger and commercial cars, but also in industrial equipment such as automated guided vehicles and infrastructure such as electricity supply demand adjustment facilities.

In line with the government policy of ramping up domestic production capacity, we have received a subsidy from METI and plan to ramp up production capacity at our Yokohama Battery Operations in 2025.

Increase production capacity to meet growing demand in heavy-duty domains where the strengths of SCiB™ can be leveraged

SCiB™ rechargeable battery main products

Business expansion targeting domains in which high input/output and high reliability are essential

Railways

Storage battery systems for electricity supply demand adjustment

UPS

Automobiles

Commercial cars

AGVs

Fab at Yokohama Battery Operations

Planning to increase production capacity from FY2025

Medium-term Expand the digital business driven by our infrastructure assets (DE-DX-QX)

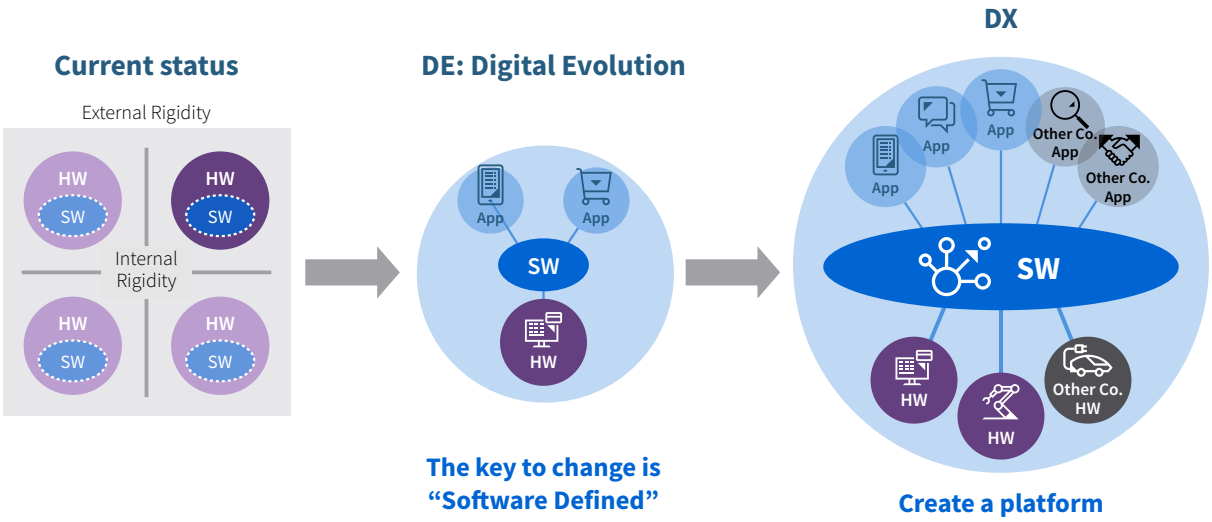
Here we explain software defined transformation, a medium-term effort that holds the key to expanding the digital business driven by our infrastructure assets.

Currently, software is embedded into hardware and provided as a system. To reach the DE, the first stage, it is important to first unbundle the software and hardware. We call this software defined transformation. In reality, some software remains within the hardware, but this software defined transformation which allows access to the outside world will make significant changes.

It enables the addition of a variety of applications, which will generate new services as well as to enhance the recurring businesses or providing SaaS business where necessary functions will be provided as a service for only the necessary volume. This will contribute significantly to making business more profitable.

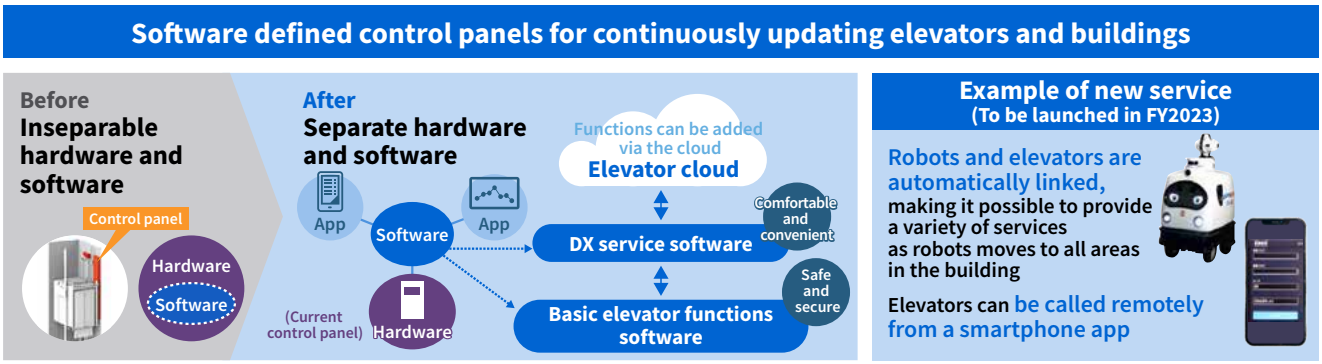
Next, software standardization enables us to build platforms by securing connectivity with third-party hardware and applications. This is the DX, the second stage. It enables a highly scalable business model while keeping down the capital deployment and leads to exponential growth.

Create a platform after separating apps, software and hardware



DE example: Software defined transformation for elevators

Here is an example of DE in the elevator business.



* The system is not available for certain elevators. Details such as service profiles and fees have yet to be developed and determined.

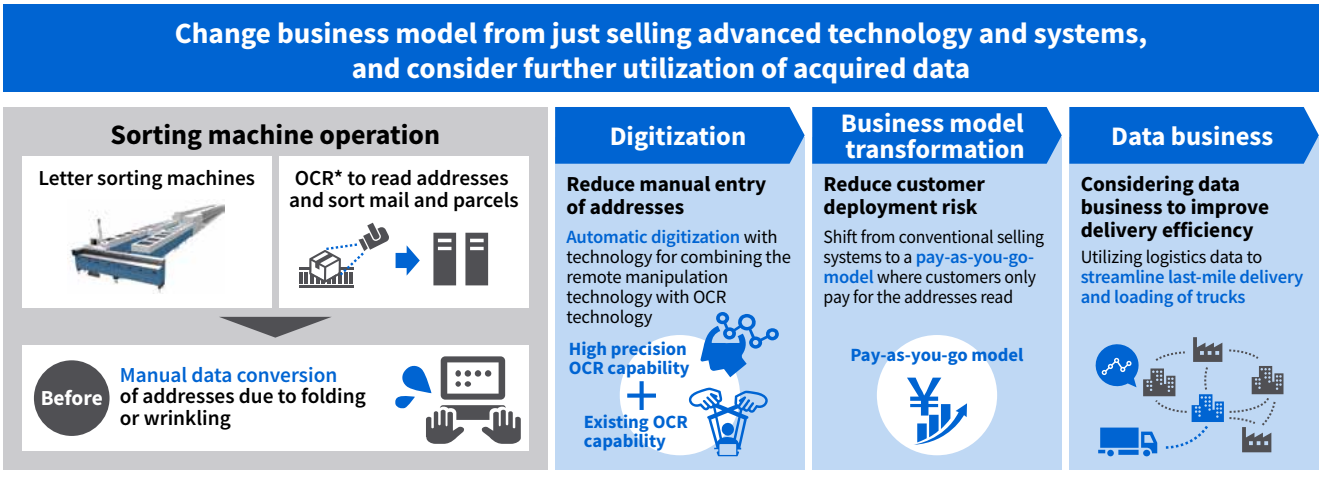
By separating the control panel of the elevator cage into hardware and software and by installing a DX controller, new functions can be added via the cloud without additional on-site work.

This is very convenient for customers as functions can be updated without interrupting the elevator operation.

For instance, new functions can be automatically linked to the building security and disinfection robots, which can then patrol every floor. The system can also be linked to a smartphone app to remotely call the elevators.

DX example: Logistics data entry service (pay-as-you-go OCR)

Here is an example of DX, a service that improves the digital recognition of recipients' addresses in logistics systems.



* OCR: Optical Character Recognition (the reading of text in images)

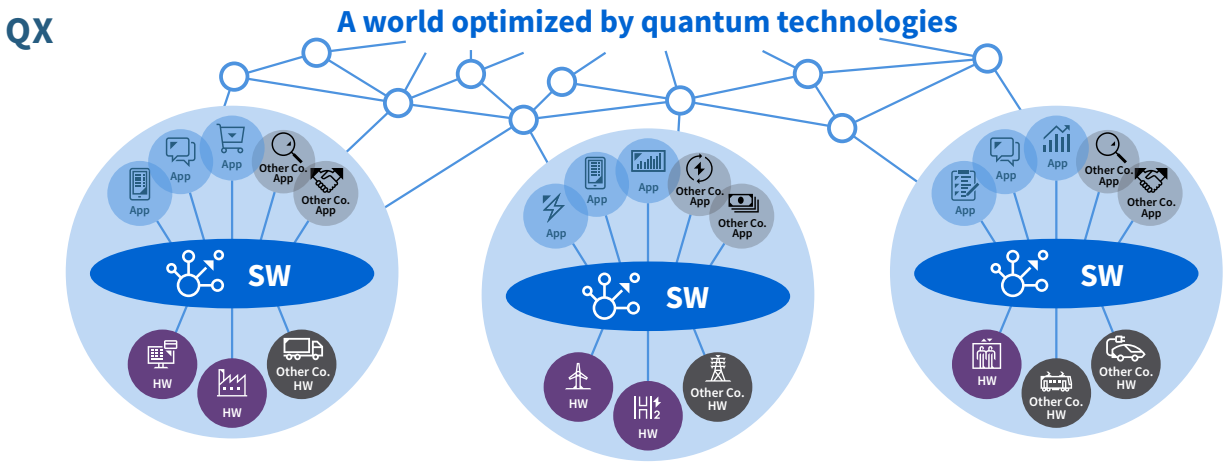
The first step is digitization. On the ground for logistics, OCR is used to read recipients' addresses, but addresses that cannot be recognized by the existing OCR are manually processed. We provide a service that achieves automatic digital conversion of data by combining the remote manipulation technology with high-precision OCR technology.

Also, as part of business model transformation, switching from outright system sales to a pay-as-you-go model reduces the burden and risk associated with system installation for the customers.

And for further business development, we envision a business that goes beyond simply reading the address to one that utilizes the data to improve the efficiency of last-mile delivery and loading of trucks.

The future created by quantum technologies (2030 onwards)

Beyond that, various platforms under DX stage will be created and a world of QX will emerge, in which optimal solutions are identified from a complex interplay of platforms.



Toshiba has been a pioneer in the field of quantum computing and some of our efforts have already reached the stage of commercialization.

Based on many years of research in quantum computing, we have developed SQBM+™, a solution that can solve society's complex combinatorial optimization problems and have begun offering it on the Amazon and Microsoft cloud.

The world is faced with the challenge of choosing the best solution from an exponential number of options for dynamic combinatorial problems such as logistics optimization, traffic congestion alleviation, and financial transactions, and static combinatorial problems such as new drug discovery.

SQBM+™, an innovative technology born from quantum computer research

Toshiba's innovative SQBM+™ technology can solve these large-scale combinational optimization problems in a short time.

Launched a service for faster processing of large-scale "combinatorial optimization problems" on the Amazon and Microsoft cloud platforms, and continue to work with partners to improve performance and resolve issues

A practical solution that can handle even large-scale problems and be applied to multitude of social issues

Examples of combinational optimization problems

Logistics optimization

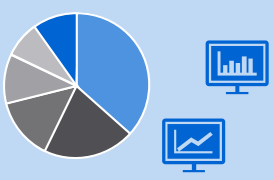
Find the transportation route that minimizes the distance traveled

Traffic congestion alleviation

Determine the distance each vehicle must travel to best avoid congestion

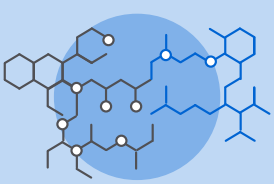
Financial portfolio optimization

Determine a portfolio of stocks that offers low risk and high returns



Molecular design for drug discovery

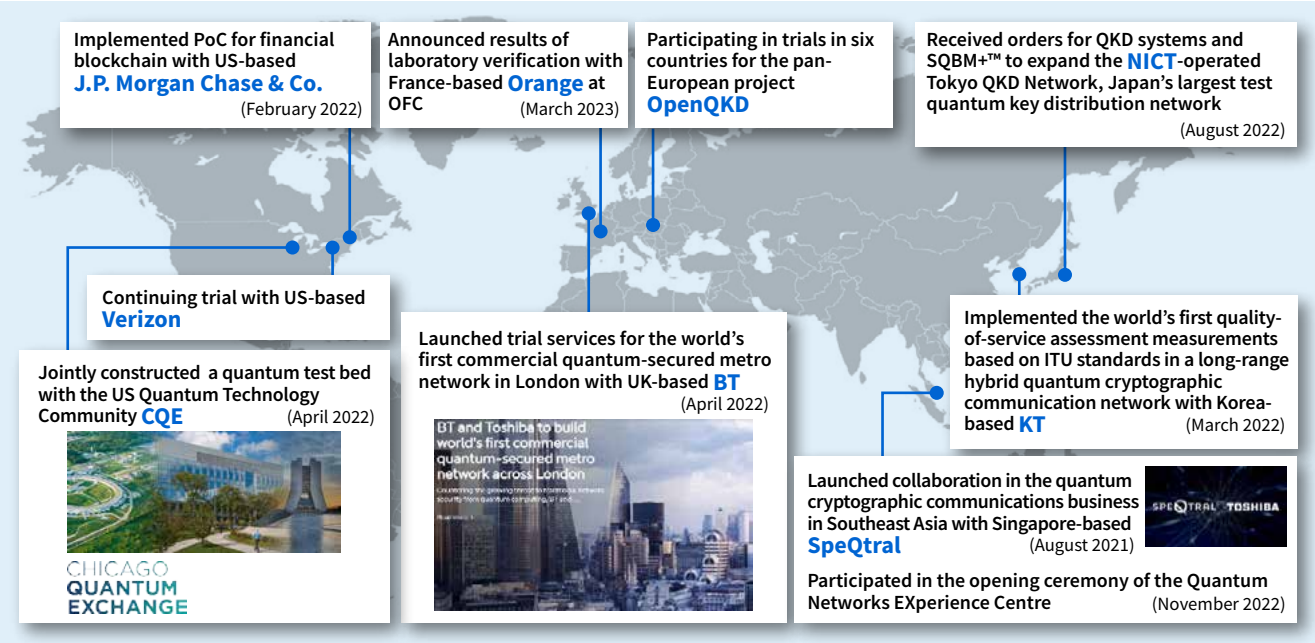
Identify molecular combinations that will increase drug efficacy



Worldwide rollout of quantum cryptography communication business

It is a general understanding that once quantum computing is perfected, current mathematical encryption technologies will be easily undermined. Toshiba is a leading manufacturer in quantum cryptography, a communication method that prevents the theft of encrypted data.

We have already started commercial demonstrations of quantum cryptography and are deploying it with various partners around the world.



These new communication infrastructures will eventually lead to the quantum internet, where not only encryption, but also data itself will be connected in a quantum state.

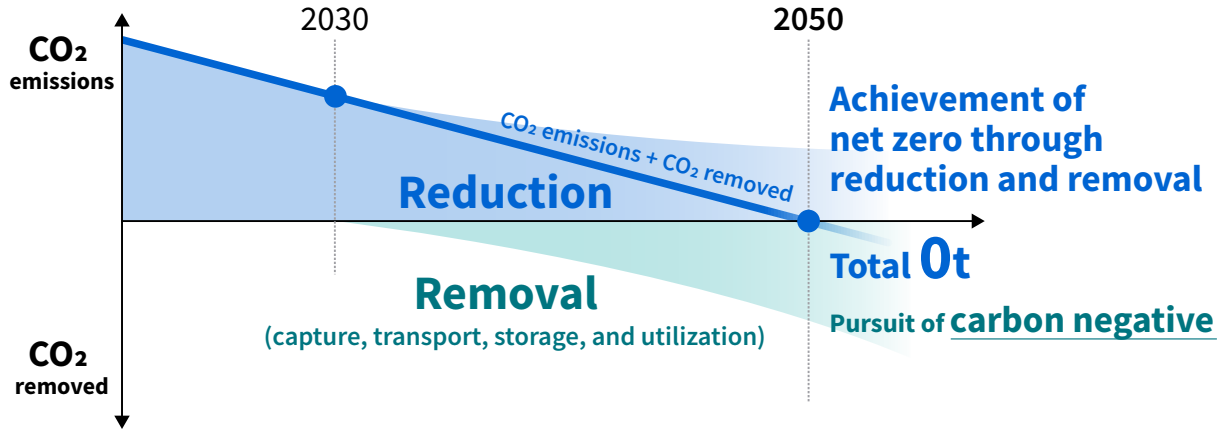
Long-term Provide technologies and solutions to realize carbon neutrality

Approach to achieving carbon neutrality

In view of the long-term horizon, technologies and solutions to achieve global carbon neutrality will be our key revenue driver.

In 2020, CO_2 emissions were reduced by 7% worldwide as a result of global economic slowdown stemming from the pandemic lock-downs. The challenge is that we will not achieve carbon neutrality unless we continue the 7% reduction every year until 2050. In other words, it is impossible to achieve net zero emissions only by reducing CO_2 emissions. We need to pursue carbon negative, by actively capturing and removing carbon from the atmosphere.

Carbon negative: Also focus on CO_2 removal (capture, transport, storage, and utilization)



Toshiba is committed to providing its customers with a variety of reduction and removal solutions.

Toshiba Group sites' efforts toward 100% renewable energy

Toshiba Group sites have also started efforts toward 100% renewable energy.

The Smart Community Center in Kawasaki initiated a Virtual Power Purchase Agreement (VPPA) for the use of its electricity and its energy needs have been 100% covered by electricity from renewable energy sources from April 2023.

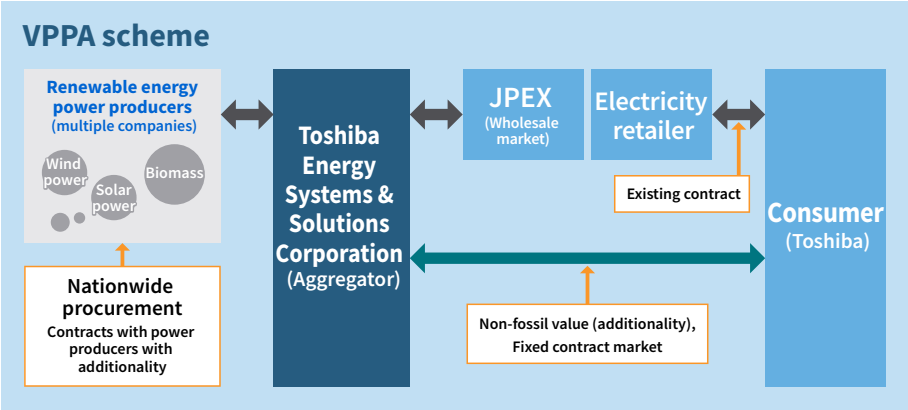
Within this initiative, Toshiba Energy Systems & Solutions Corporation is playing the role of an aggregator linking the power generators to customers.

Going forward, we will continue to develop renewable energy aggregation services for customers both within and outside the Group.

Initiated a Virtual Power Purchase Agreement (VPPA*)

for the Smart Community Center, Toshiba Group's business headquarters in Kawasaki. Alongside purchases of FIT non-fossil certificates, the center's energy needs are

100% covered by electricity from renewable sources from April 2023.



* VPPA (Virtual Power Purchase Agreement): A means by which a consumer virtually procures only the environmental value of renewable electricity generated at a power plant off the electricity consumer's premises

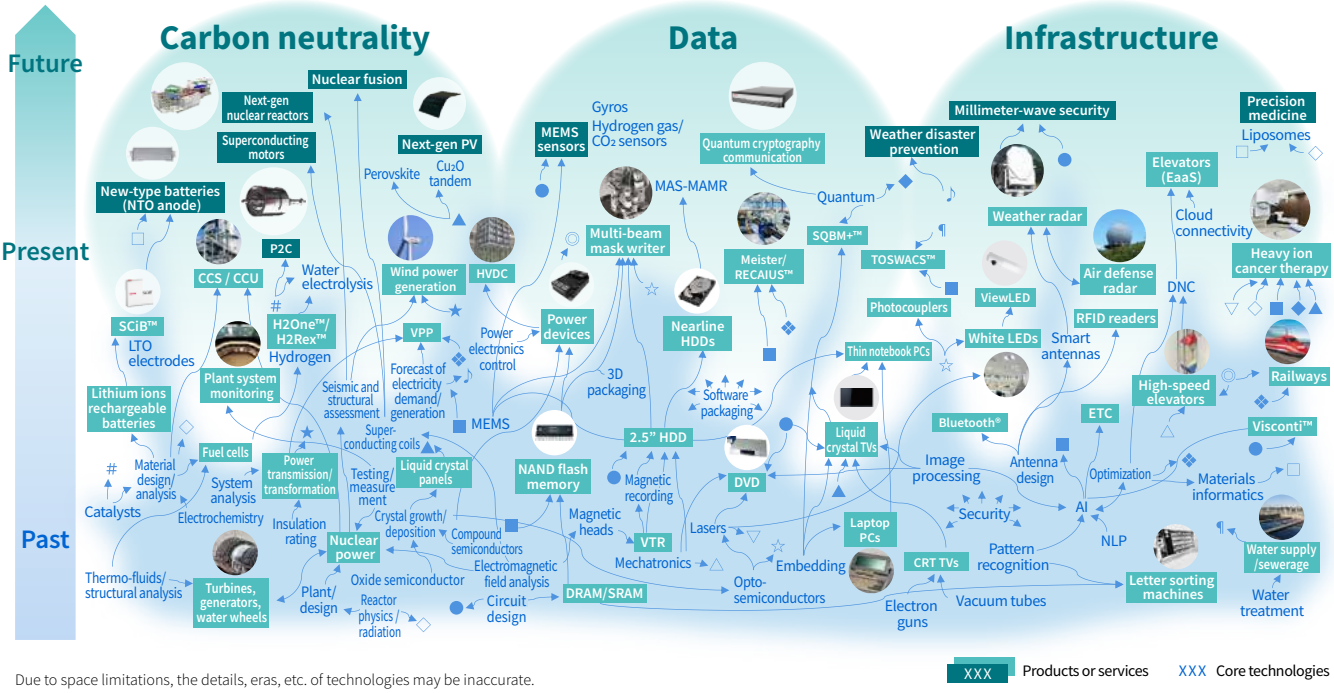
Technological diversity: the source of new products and services

Toshiba's strength lies in its technological diversity.

For almost 150 years since its foundation, Toshiba has been providing products and services that make people's lives more comfortable and convenient and society more safe and secure.

This has not simply been the result of a single technology creating a single product, but rather, the results of a combination of various technologies that we have accumulated in our research laboratories.

Combination of technologies accumulated at laboratories and within the Group to create one product and service one after another



Due to space limitations, the details, eras, etc. of technologies may be inaccurate.

Even today, we have numerous technologies with high business potential and these technologies can be combined across multiple areas to create products and services that do not exist in the world today.

However, there are challenges to commercializing these high-potential technologies and enhancing Toshiba Group's corporate value. We need to break down two types of rigidity: internal rigidity, where the organization is siloed and the results of improvements are not shared throughout the Group, and external rigidity, where the organization is obsessed with proprietary technologies and the view that everything should be done in house.

We have taken various measures to break down the internal rigidity that had created barriers between organizations within the Group. In October 2023, for example, we integrated the corporate staff function and the subsidiaries' staff function. And going forward, we will continue to review our business management structure to further break down internal rigidity.

In breaking down external rigidity, if we determine that values can be realized at an early stage through collaboration with external partners, we will consider using partners such as companies seeking to expand their business in specialized fields or existing players in those fields.

Under the Basic Commitment of Toshiba Group, "Committed to People, Committed to the Future," we have continued to provide products and services that support people's lives and society. This is our mission that will not change in the future.

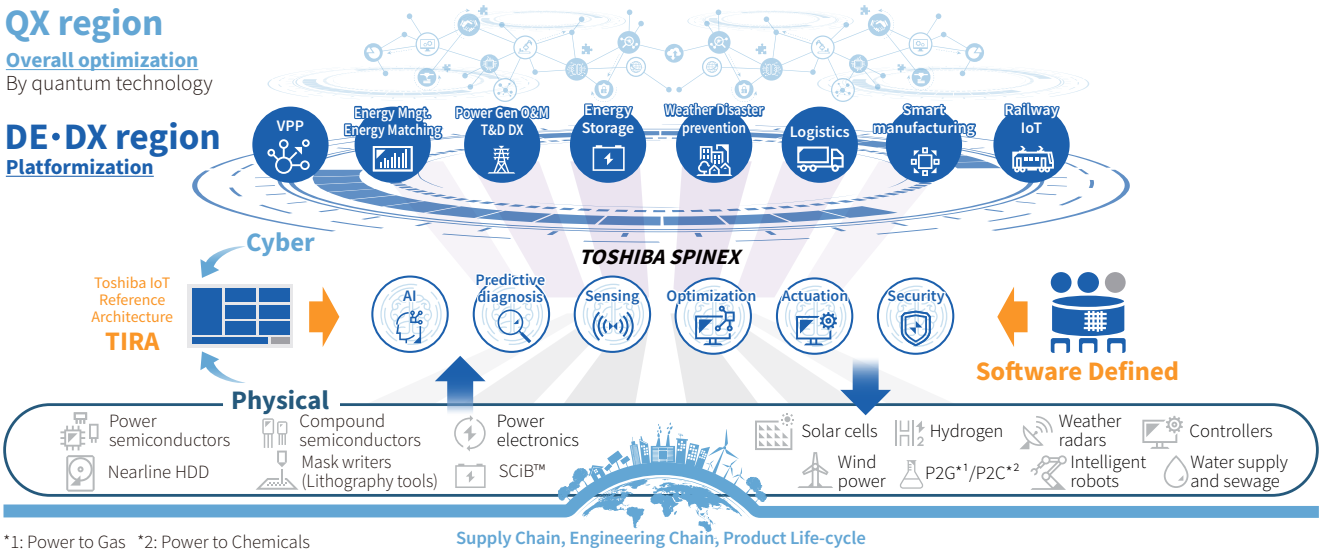
Toshiba's strength is its technological diversity. We will maintain this strength and improve corporate value over the medium- to long-term.

Toshiba Group Technology Strategy

Toshiba Group Technology Policy

Under the Basic Commitment of Toshiba Group, “Committed to People, Committed to the Future,” we will create products, solutions, and services that are supported by our solid technological capabilities to realize a carbon-neutral and carbon-negative society and a safe and secure social infrastructure. By getting the most out of our technological diversity, one of Toshiba Group’s strengths, we will create and develop strong core physical technologies while appropriately motivating and training technical personnel who are the source of our technological capabilities. Furthermore, we will continue to create value for our customers through new products, solutions, and services by promoting digitalization (DE, DX, and QX) based on the idea of “Software Defined.”

Toshiba Group Technology Policy

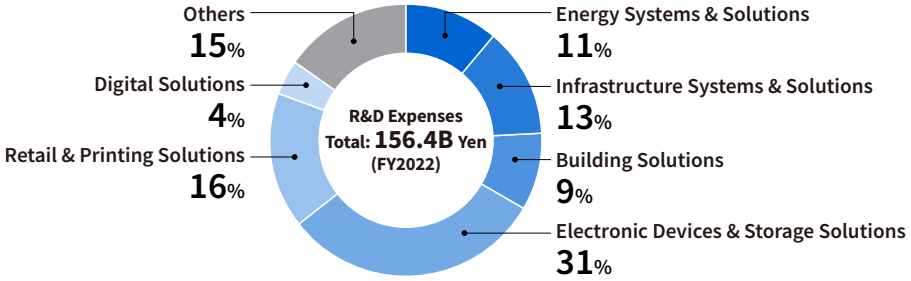


*1: Power to Gas *2: Power to Chemicals

In FY2022, we spent R&D expenses of 156.4 billion yen, approximately 5% of net sales. Based on its business strategy, Toshiba Group concentrates its investment on focus business domains including Energy Systems & Solutions, Infrastructure Systems & Solutions, Building Solutions, Retail & Printing Solutions, Electronic Devices & Storage Solutions, and Digital Solutions. At the same time, the Group invests in R&D with an awareness of development efficiency and time frames. The Group classifies R&D investments into three major categories (existing business domains, peripheral domains of existing business, and new domains/fundamental) based on the time frame and role until commercialization. We have defined KPIs that measure the progress of R&D in these categories and their return on investment (ROI) to monitor and evaluate their annual changes and visualize such progress and ROI. We also use such KPIs to make decisions on strengthening, continuing, downsizing, or discontinuing R&D for each theme.

Specifically, in the short-term (by around 2025), the Toshiba Group will strengthen the development of SCiB™ rechargeable battery and power semiconductors, for which we plan facility expansion in order to meet strong demand. In the medium-term (by around 2028), the Group will, using its infrastructure assets, expand the digital service business, including next-generation solar cells, virtual power plants, smart manufacturing, millimeter wave-based detection of potentially dangerous items, quantum key distribution (QKD), and security services for social infrastructure, based on the idea of Software Defined. Lastly, in the long-term (by around 2030), we will focus on high-temperature superconductivity technology, Power to Chemicals, quantum Internet, and other technologies to achieve true carbon neutrality and carbon negativity and to realize quantum transformation (QX). We will also focus on research and development of advanced technologies such as liposomes in the precision medicine field.

Breakdown of R&D Expenses in FY2022



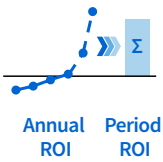
Breakdown of R&D expenses for FY2022 and initiatives to visualize ROI in R&D

Monitor changes over years by introducing KPIs in each target group

R&D investment	Objectives	KPI ▶ Monitoring and evaluation of annual changes
Existing business domains	Develop products and services necessary to maintain and grow existing business	• ROI in R&D Period ROI Annual ROI • Business growth CAGR
Peripheral domains of existing business	Develop innovative products and services in existing and peripheral business domains	
New domains/ Fundamental	Do R&D from a medium- to long-term standpoint to develop products and services in new domains and create and contribute to future businesses Themes that provide overarching support for product and service development and engineering reforms in various fields including AI, production, and manufacturing technology	• Benchmarking ✓ Evaluation based on megatrends and business strategy • Consistency with the roadmap in product development ✓ Progress level (business contribution) ✓ Technology readiness level

$$\text{Period ROI} = \frac{\sum \text{Operating profit (sum of total period)}}{\sum \text{R\&D investment (sum of total period)}}$$

$$\text{Annual ROI} = \frac{\text{Operating profit (every fiscal year)}}{\text{Annual R\&D investment (every fiscal year)}}$$



Toshiba Group R&D Structure

Toshiba R&D divisions are composed of Toshiba's corporate R&D organizations at headquarters and group companies' R&D and design and engineering divisions. We pursue research and development together with these technology divisions. The corporate R&D organizations take a medium- to long-term approach to enhance fundamental technology, do research on new business domains, and work on innovative and advance research and development. The group companies' R&D organizations and technology and engineering divisions support fundamental technologies of our business domains, and develop new products and differentiated technology in line with our business plans. We strive to commercialize products and mass-produce products that satisfy our customers' needs. The close cooperation between these divisions enables us to deliver products to the market.

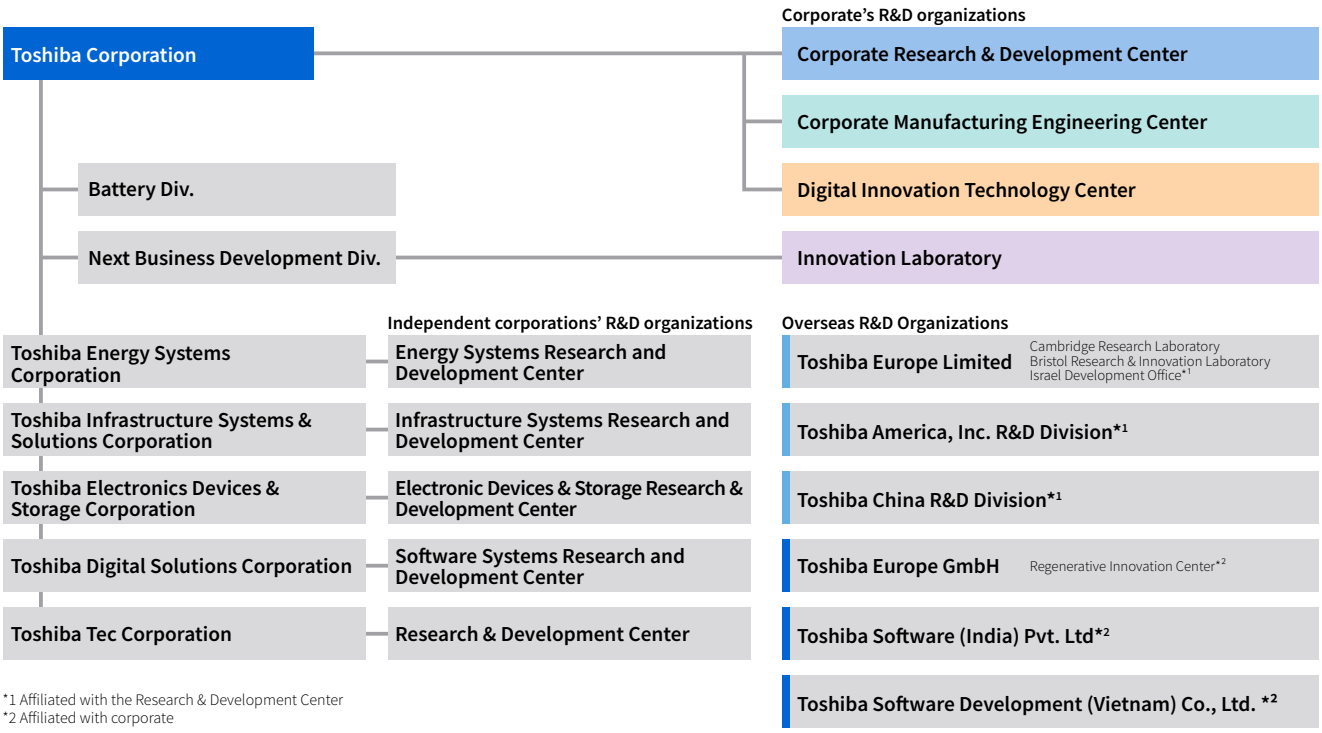
In FY2023, the Toshiba Group merged the Corporate Software Engineering & Technology Center with the Software Systems Research & Development Center, which used to serve as a works lab of Toshiba Digital Solutions, and reorganized it into the Digital Innovation Technology Center in order to promote DE and DX while strengthening and expanding its data services. The center aims to develop fundamental technologies to improve productivity and quality of software development in the Toshiba Group and to strengthen its software design, development, and quality capabilities. In addition, we have established the Next Business Development Division and the Innovation Laboratory, specialized organizations to promote the creation and commercialization of new products and services across the Group. We have built an R&D structure that brings together technical personnel across organizations for each theme to strengthen and accelerate development.

Toshiba has built research and development sites not only in Japan but also in the United States, Europe, India, Vietnam, Israel, among others. These sites work together organically across borders to conduct a wide array of cutting-edge research and development.

In September 2023, we established a new technology center, Regenerative Innovation Centre, in Düsseldorf, Germany. The center will be the home of a pioneering technology hub in Europe, focused on technological development and social implementation related to carbon neutral circular economy. Together with partners, it will promote advanced technology development, social demonstration, standardization, and other activities.

In order to boost our global competitiveness, we are improving our capability to respond swiftly to changes in the market, in our research and development as well. Particularly in Asian countries, where markets are expanding, we are working to locally operate not only manufacturing sites, but also engineering sites and development sites. We will create products and services that will appeal to the global market.

Toshiba Group R&D Organization



*1 Affiliated with the Research & Development Center
*2 Affiliated with corporate

Toshiba Group's Strength in Technology

Through a good track record in productization and systematization mainly in the energy/social infrastructure field over 145 years, Toshiba Group has cultivated research and development ability to generate "1" from "0" leveraging "technological diversity," a new combination of these core technologies, as well as combined strength in engineering ability to structure devices, components, and systems meeting social and customer needs as solutions. Rather than simply a single technology creating a single product, a combination of various technologies that we have amassed in processes of research and development has been creating new products and services.

Today, we are creating technologies with high potential one after another by grasping the needs of society from the development conception phase, in addition to a new combination of core technologies in multiple areas.

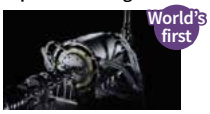
For example, Toshiba Energy Systems & Solutions Corporation has developed the world's first prototype of a lightweight, compact, high-power superconducting motor with a maximum output of 2 MW, bringing together the superconductivity technology and manufacturing technology for high-speed rotating machines it has cultivated over many years. It is necessary to explore not only carbon-free fuel, but also systems to achieve total carbon neutrality in the industry of large mobility vehicles such as aviation as a whole; thus, the industry needs to develop lightweight and high-powered motors for propulsion systems. The motor is less than one-tenth the weight and size of an equivalent conventional motor, making it possible to replace fossil-fuel-driven engines with motors, thereby contributing to zero-emissions for various types of large mobility vehicles. In recognition of its future potential, our superconducting motor was awarded the Grand Prix in the Total Solutions category of the CEATEC AWARD 2022.

Superconductivity

Commercialized products including silicon single-crystal pullers, expanded into other market sectors using core technologies

Silicon single-crystal puller

Superconducting motor



Core Techs: Superconducting coils × Refrigerators

NTO*1 Anode Batteries

Start sample cells delivery (FY2023)

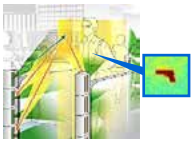
PoC demonstrations with fast charging for commercial EVs

Core Techs: SCiB™ × Nb*2 (material)

Millimeter-wave Imaging

Security gate application demonstration (FY2023)

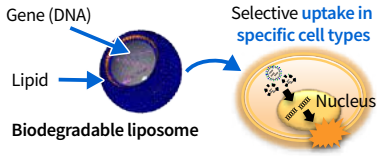
Detects dangerous objects hidden under clothes in walk-through inspections at public areas, buildings, etc.



Core Techs: Radar × Signal Processing

Biodegradable liposome

Started paid PoC (FY2023), collaborated with CiRA Foundation



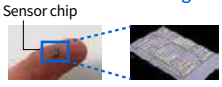
Core Techs: Material design × MI*3 (AI)

MEMS Sensors

Considering commercialization with strategic customers/partners

Hydrogen/CO_2 gas sensors
High-speed detection of gas emissions and leakage

Sensor chip



Gyro sensors
Small size, accurate sensing

Core Techs: Semiconductor × MEMS

Film-Based Perovskite PV

Developing the technology based on GI fund project*4
Accelerating product development through projects across research and business divisions

Lightweight and flexible:
can be installed where current products cannot be installed

Core Techs: Coating x Nanomaterials

*1 Niobium titanium oxide *2 Niobium *3 Materials informatics *4 Green Innovation Fund projects

Changing the Value of High-quality Technology —Initiatives for Linking Technology to Products, Systems, and Services—

To link high-quality, potential technologies to products, solutions, and services without failure to solve social issues, Toshiba is promoting demonstration experiments in collaboration with our business partners. Here are some of such initiatives and R&D cases that actually led to the creation of new services.

Toshiba Improves the Accuracy of Forecasting the Amount of Renewable Energy Generation and Achieved Approximately 70% Reduction of Imbalance Amount by Utilizing Storage Batteries

Toshiba Energy Systems & Solutions Corporation was selected as the consortium leader of "FY2022 Renewable Energy Aggregation Demonstration Project*1," publicly facilitated by the Ministry of Economy, Trade and Industry, and developed new method to forecast the amount of renewable energy power generation. An average of approximately 70% reduction of imbalance*2 amount was achieved with the control method that utilizes storage batteries while reflecting the real-time actual amount of renewable energy generation. Toshiba will continue to develop optimal control technologies using renewable energy power generation forecast and storage batteries, and through the renewable energy aggregation business, contribute to realization of a stable and efficient power system that utilizes renewable energy, thereby addressing climate changes.

*1 The official name of the project is "FY2022 Subsidy for Demonstration Project for Establishing Next-Generation Technologies Using Distributed Energy Resources such as Storage Batteries (Renewable Energy Aggregation Demonstration Project within the Renewable Energy Generation Aggregation Technology Demonstration Project)."
*2 Imbalance is the difference between the amount of electricity demanded (used) and the amount of electricity supplied that occurs when a renewable energy power generator is unable to achieve the same amount of electricity as planned and actual simultaneously.

Toshiba Links Quantum Security and Personal Authentication, Successfully Delivering Secure Personalized Healthcare Use Case

Together with the Tohoku University Tohoku Medical Megabank Organization, Tohoku University Hospital, and the National Institute of Information and Communications Technology, Toshiba has demonstrated the world's first*1 personalized healthcare*2 system that stores genome data, collected from many individuals, in multiple locations and utilizes them for medical treatment and healthcare using an information theoretically secure method based on the quantum key distribution (QKD) link, the secret sharing system and personal authentication technology. This system is theoretically secure against the threat of store now and decrypt later attacks, prevents data leaks, falsification, and loss of genome data. In this system, data decryption and reconstruction*3 are performed by using personal authentication and individual consent. The system is expected to contribute to the realization and spread of personalized healthcare.

A part of this work was performed for Council for Science, Technology and Innovation (CSTI), Cross-ministerial Strategic Innovation Promotion Program (SIP), "Photonics and Quantum Technology for Society 5.0" (Funding agency: QST).

*1 Toshiba's research as of December 8, 2022
*2 Health risk management optimized for individuals by analyzing personal genome data together with environmental factors such as lifestyle habit, and calculating the risks of contracting diseases for each individual
*3 Reconstruction refers to the decryption of data encrypted with quantum cryptography, whereas restoration refers to the restoration of the original data by combining multiple secret shared data fragments.

QKD system

Toshiba Launches “Weather Data Service” to Analyze Weather Observation Data Using Its Proprietary Method

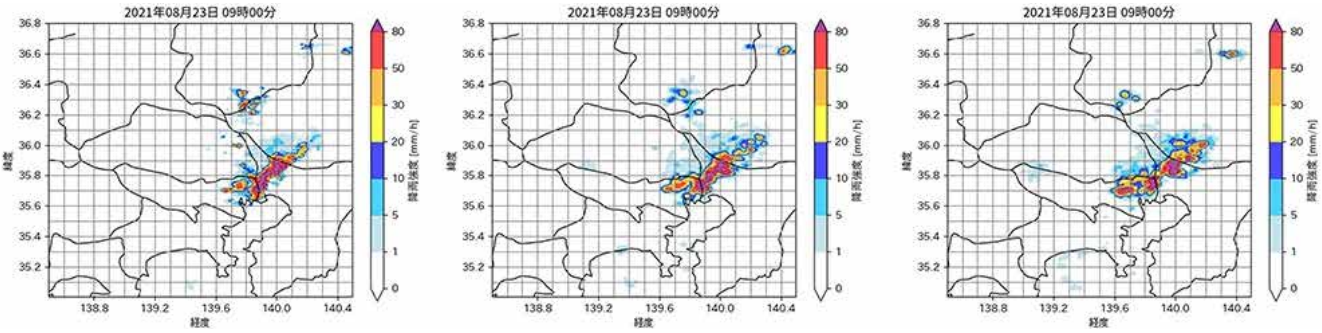
Toshiba Digital Solutions Corporation has begun offering the Weather Data Service, a solution to analyze observation data received from weather radars with high accuracy and in real time.

Since delivering weather radar systems in 1955, Toshiba Group has been contributing to a safe and secure lifestyle by providing weather radar and weather observation systems that process information from observation data. Toshiba has also been working to resolve problems in flooding. For example, we conducted a demonstration experiment*1 with a local government in August 2022 on the effectiveness of local government officials’ operations for measures against flood damage.

As a first step, we began offering the Rainfall Forecasting Service on May 29, 2023, which provides highly accurate forecasts of localized heavy rain. It uses Toshiba’s proprietary analysis method based on VIL-NC*2 to analyze weather radar observation data in real time to accurately forecast signs and the amount of localized heavy rainfall up to 30 minutes ahead. We will contribute to the prevention and mitigation of damage from natural disasters by providing the service to private companies and local governments that support social infrastructure.

In addition to the Rainfall Forecasting Service, which we just launched, we plan to release the Particle Classification Service, a solution to classify precipitation particle into rain, snow, and hail in real time, and the Gust Detection Service, which detects a position of wind gust over a wide area*3.

Comparison between short-time rainfall forecast and actual observation



Actual observation　10 minutes ahead　20 minutes ahead

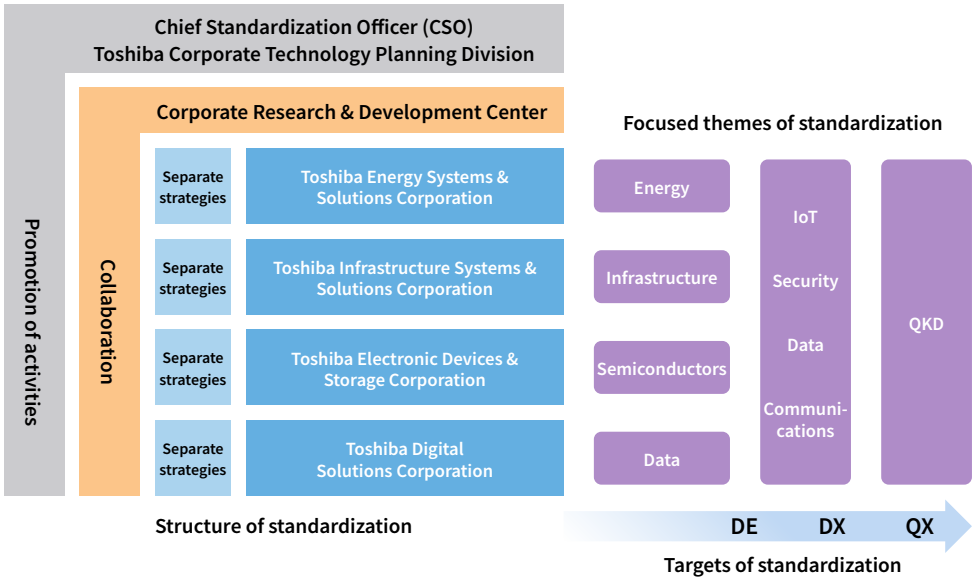
*1 News release dated August 18, 2022
“Toshiba to Launch a Demonstration Experiment on the Effectiveness of Flood Damage Countermeasures Based on Highly-accurate, Real-time Rainfall and Flooding Forecasts During Torrential Rains”
*2 VIL-NC stands for vertically integrated liquid water content–NowCast.
A rainfall forecasting algorithm developed by the National Research Institute for Earth Science and Disaster Resilience for use with weather radar
*3 The Particle Classification Service and the Gust Detection Service are currently under development and planned to be released in the future.

Toshiba Group's Standardization and Rule-making Activities

To ensure that the Toshiba Group's technologies are implemented in society, it is important to conduct rule-making activities including those for standardization to create a market where such technologies are accepted and to have commercialization strategies for individual products incorporating those technologies. Standardization in this section refers to activities on international standardization in general, not only those for international standards, JIS and other national standards, and regional de jure standards but also so-called forum standards developed by industry associations, forums, consortiums, and other entities.

The Toshiba Group's standardization activities are conducted under a system in which the Corporate Technology Planning Division serves as the hub for the standardization activities, while individual activities are performed by divisions including the Corporate Research & Development Center and four independent corporations, under the supervision of the Chief Standardization Officer (CSO), who is responsible for group-wide standardization. To effectively combine the business strategies of the entire Group with standardization strategies, the Corporate Technology Planning Division collects and shares related information, formulates strategies with business divisions, and streamlines standardization-related operations. A total of approximately 1,000 people throughout the Toshiba Group are engaged in standardization activities.

Structure and focused themes of Toshiba's standardization activities



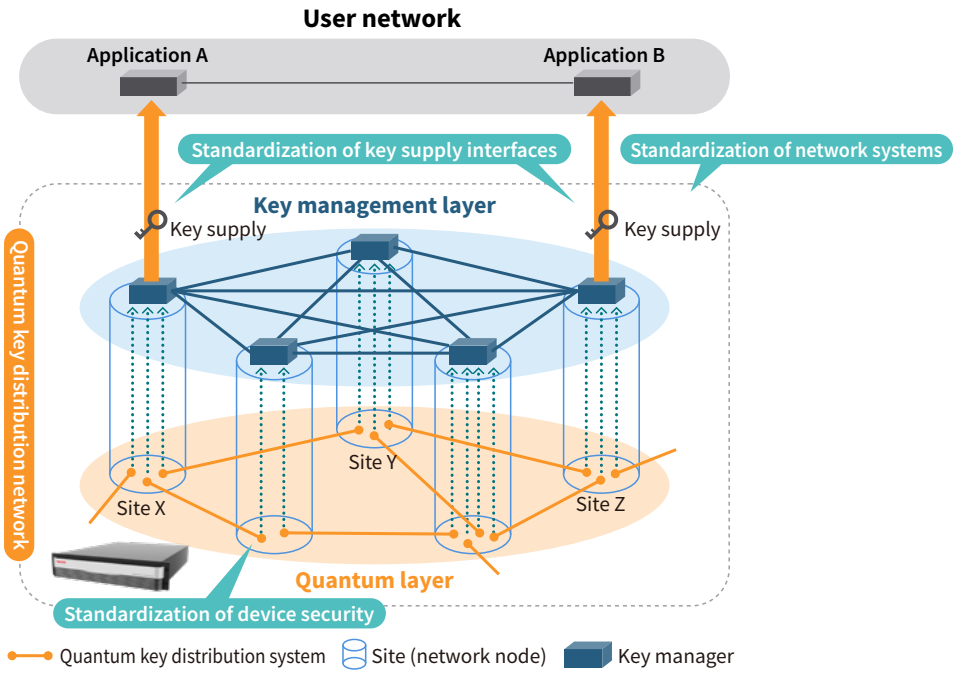
The Toshiba Group has been working on many standardization activities since its founding. In particular, Toshiba has focused on activities at the International Electrotechnical Commission (IEC), an international standards organization in the electrical field. As far back as 1906, Ichisuke Fujioka, Toshiba's founder, participated in a preparatory meeting for the establishment of the IEC, and in 2002, Seiichi Takayanagi, former Senior Executive Vice President, was appointed as IEC President. Currently, Naoto Nishida, Toshiba's Fellow, is a member of the IEC Board, the main executive body of the IEC.

Among the outstanding standardization activities of the IEC are those of the Technical Committee for Electrical Energy Storage Systems (TC 120). The Toshiba Group contributed to the establishment of the committee and has produced international secretaries to promote its activities. The Group is expanding activities not only in its existing business areas but also in the area of digitization (DE → DX → QX), which is one of its management policies. Examples of those activities include the standardization of the IoT reference architecture in the Industrial Internet Consortium (IIC), participation in the IEC's Subcommittee for "Classes, Properties and Identification of products—Common Data Dictionary (CDD)" (SC 3D), which is deeply involved in the digitization of Carbon Footprint of Products (CFP), and the standardization of QKD, which is described later in this report. The Toshiba Group will continue to promote standardization activities as one of its driving forces for business development.

International QKD Standardization Activities

As the importance of secure cryptographic communication is expected to increase in the future information society, hopes are high for quantum key distribution (QKD), an information-theoretically secure encrypted communication technology using the principles of quantum mechanics, which even quantum computers' overwhelming computational capabilities cannot break. Toshiba is leading the world in researching and developing unique technologies for accelerating and stabilizing QKD. At the same time, we are working on international standardization of quantum key distribution networks (QKDNs), which are essential technologies for the real-world deployment of QKD.

Conceptual model of a quantum key distribution network (QKDN) and approaches to international standardization



The standardization of QKDN systems is primarily being led by the International Telecommunication Union Telecommunication Standardization Sector (ITU-T). The National Institute of Information and Communications Technology (NICT), NEC Corporation, and Toshiba jointly proposed the QKDN system configuration shown in the figure above. Based on this, in 2019, the ITU-T published its ITU-T Y.3800 recommendation. With regard to the standardization of key supply interfaces, the European Telecommunications Standards Institute (ETSI) published the ETSI GS QKD 014 standard in 2019, to which Toshiba contributed. For the standardization of device security, two initiatives were undertaken separately by JTC1, a joint technical committee of the International Organization for Standardization (ISO) and IEC, and ETSI. Participating in both initiatives, Toshiba contributed to the publication of ETSI GS QKD 016 and ISO/IEC 23837.

Intellectual Property

Intellectual Property Strategy

Toshiba Group aims to strategically utilize intellectual property to realize DE, DX, and QX, increase opportunities to find solutions to social issues, and maximize our corporate value. We are promoting a cycle of "taking a comprehensive overview to develop an intellectual property strategy," "restructuring intellectual property," and "opening up intellectual property."

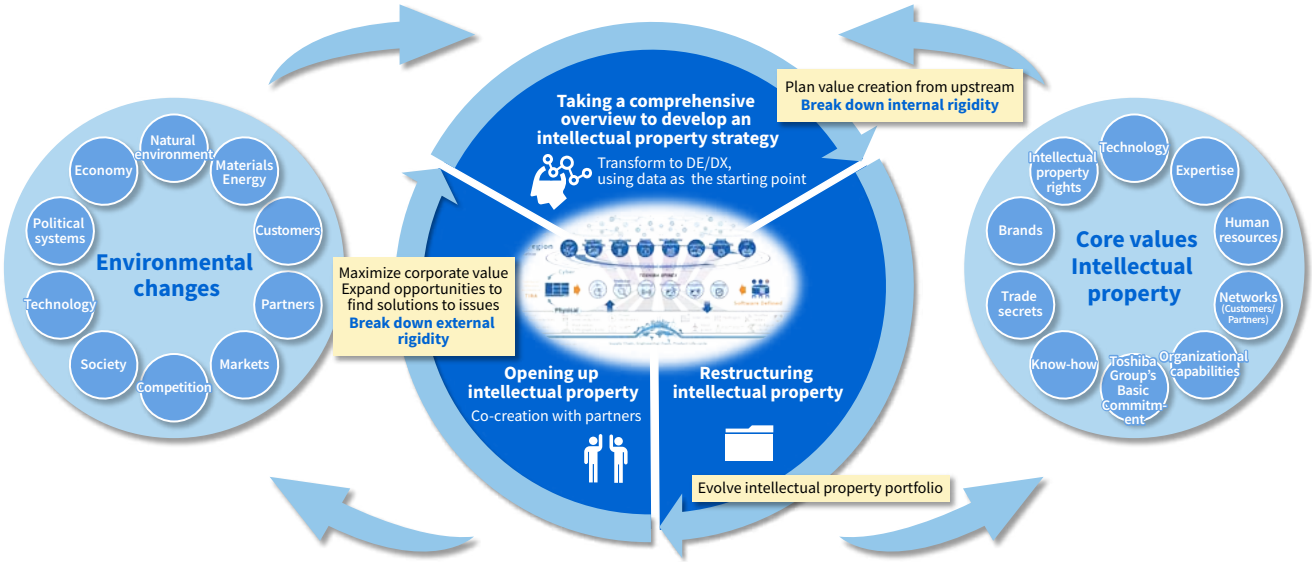
"Taking a comprehensive overview to develop an intellectual property strategy" is the most important step. From the upstream stage of developing a business concept, we take a comprehensive overview of the situation from various perspectives, including a variety of environmental changes, the core values of the Company (intellectual assets), and business strategies, and consider how to use intellectual property and how to link it to business values. In considering these things, we also break down our internal rigidity by adopting a business concept based on the transformation to DE and DX, and the utilization of data.

"Restructuring intellectual property" is a step to organize intellectual property items such as patents, data, and know-how when implementing the envisioned intellectual property strategy. After identifying and organizing the intellectual property items that we have, we can acquire any intellectual property items that we are lacking to maximize our intellectual property portfolio. This allows us to improve the quality of our intellectual assets. Since it is essential to manage confidential information regarding data and know-how, we are also committed to ensuring thorough management of the Company's confidential information so as to prevent leaks.

"Opening up intellectual property" is the step of co-creation with partners by utilizing intellectual property. Even social issues that cannot be solved by the Company alone can be solved through co-creation with partners. For this reason, we will break down external rigidity by promoting co-creation with partners using intellectual property as the starting point, and this will lead to an increase in opportunities to find solutions to social issues and the maximization of our corporate value.

Toshiba Group's intellectual property strategy

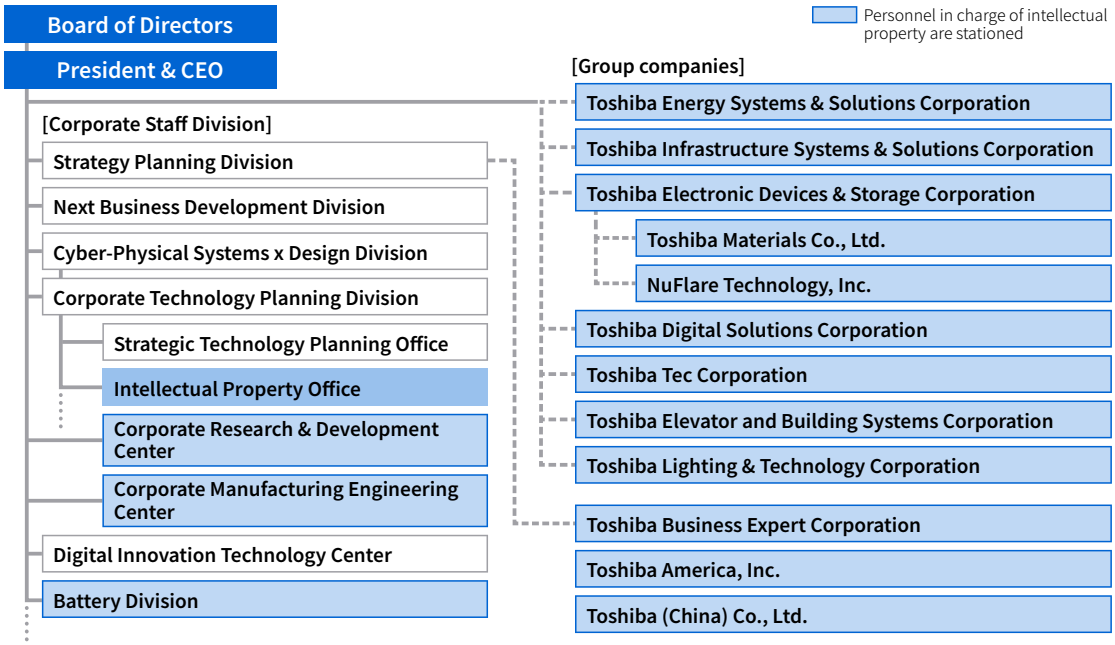
Strategically utilize intellectual property to realize DE, DX, and QX, increase opportunities to find solutions to social issues, and maximize our corporate value



Promotion Structure of Intellectual Property Strategy

The organizational structure of the Intellectual Property Division is composed of the corporate staff division's Intellectual Property Office, and the intellectual property divisions at our individual laboratories and key Group companies. The corporate staff division's Intellectual Property Office is responsible for, related to intellectual property across Toshiba Group, formulating and promoting strategy and measures, handling contracts and disputes, managing patent information and deals with matters related to intellectual property right laws, such as the Copyright Law. Meanwhile, the intellectual property divisions of research laboratories and Group companies formulate intellectual property strategies in their respective development and business domains and work to build and utilize an optimal intellectual property portfolio. We have intellectual property officers located in both the United States and China to help promote out intellectual property strategy globally.

With regard to management resource allocation, including investment in intellectual property, and the execution of strategies relating to our business portfolio, each of our Executive Officers report to the Board of Directors on the status of their respective initiatives, whereupon they receive supervision and advice.



Education on Intellectual Property

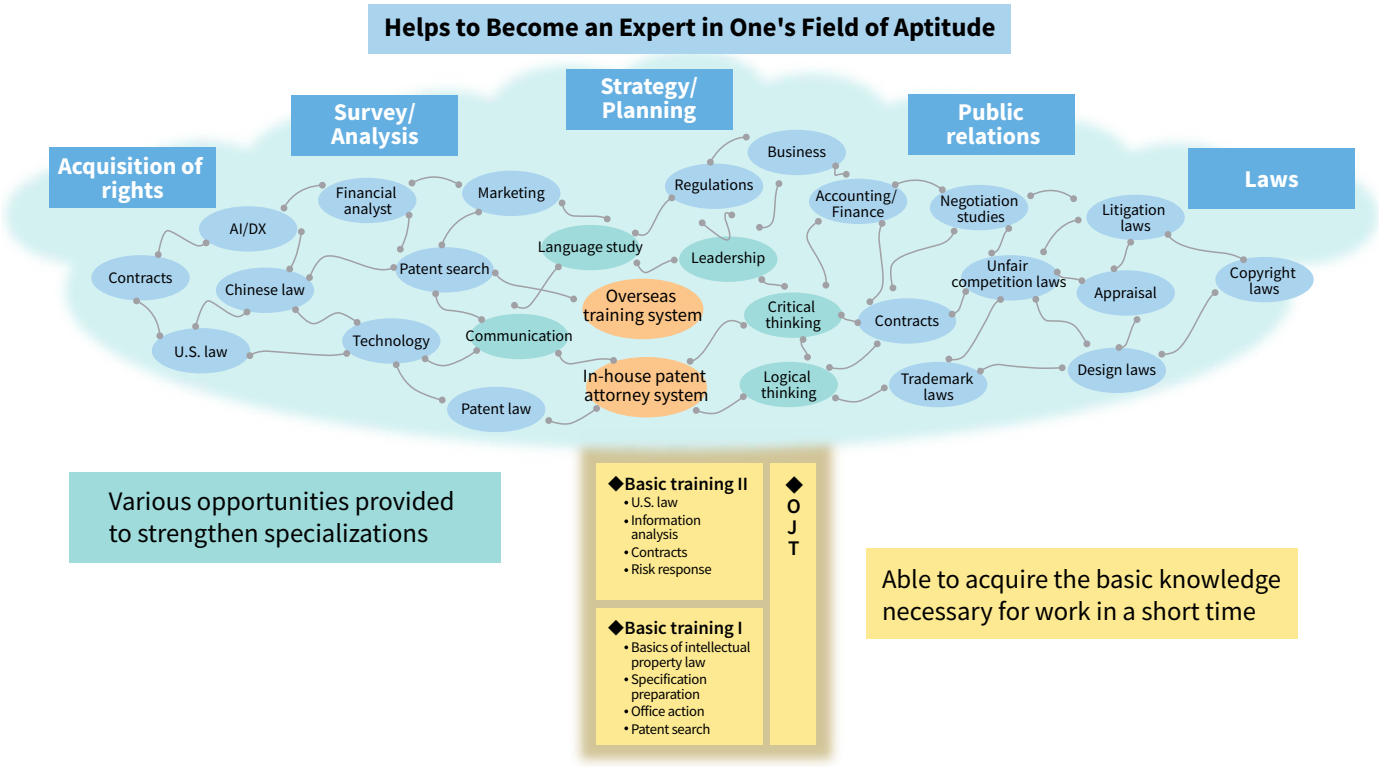
Toshiba Group provides its employees in Japan with e-learning type training each year for the purpose of refreshing their awareness of the Standards of Conduct regarding intellectual property rights and, primarily, for alerting them to copyright issues. The participation rate in FY2022 was 99.6%.

Newly hired employees are provided with general training on intellectual property rights as part of the Corporate Entry Program (CEP), which is followed by level-specific education/training programs in line with each business division.

We have established a basic training program for intellectual property officers with the education covering areas such as knowledge-acquisition of both domestic and overseas intellectual property rights, preparation of patent specification documents, practical training with office action, and on-the-job training, so that they will be able to put their training into practice in two years.

In addition, we provide education at our overseas subsidiaries that is appropriate for each region. For example, our Chinese subsidiaries provide copyright training on the proper use of software, and our U.S. subsidiaries provide intellectual property training targeting both newly hired and existing employees.

Conceptual diagram of human resources development



In addition, we provide copyright education on such topics as proper use of software at our overseas subsidiaries in China, South Korea, Hong Kong, and Taiwan. For example, our U.S. subsidiaries provide education programs appropriate for the region, such as intellectual property education, for all employees using LMS (Learning Management System).

Toshiba Group Patent Conference

Toshiba Group holds the Toshiba Group Patent Conference each year, where it awards particularly outstanding inventions with “Excellent Invention Award.”

In FY2022, we held an awards ceremony for the first time in four years, where we granted 5 Business Contribution Prizes to commemorate inventions that had made significant contributions to the Company’s business, and 4 Future Value Creation Prizes in commemoration of inventions which we expect will contribute to business or provide value to society in future.

Representatives of the award winners

CEO message

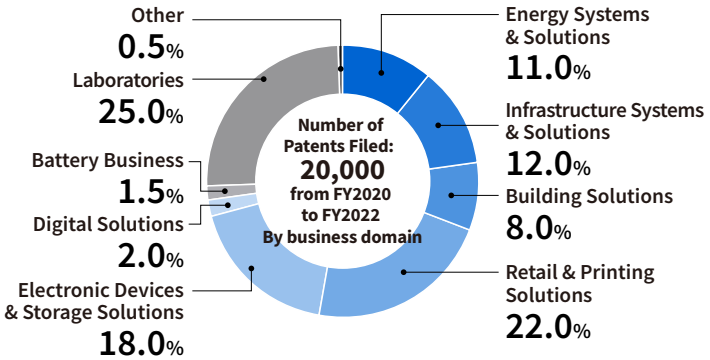
The final stage of the conference also featured a special lecture from a guest lecturer and a number of webinars themed around the topic of how intellectual properties extend across multiple sectors with the aim of cultivating an intellectual property mindset and discovering new aspects of intellectual property activities. Moving forward, we will continue to provide an environment that facilitates employees to create inventions, and will strive to improve employees’ motivation for invention.

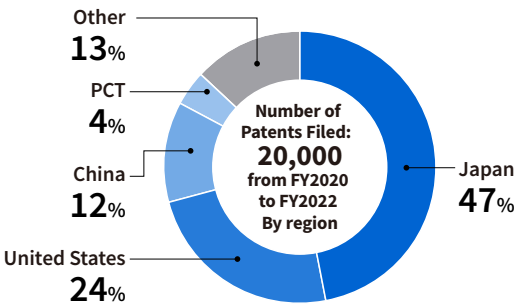
Global Patent Portfolio

Reflecting our global expansion, more than half of our patent applications are filed with foreign countries, particularly in the United States and China. We select and file for patent items in each business domain so that we can create an optimal portfolio based on our intellectual property strategy.

The number of patent applications we have made this past three years is as detailed below:

Number and Breakdown of Patents Filed (from April 2020 to March 2023)

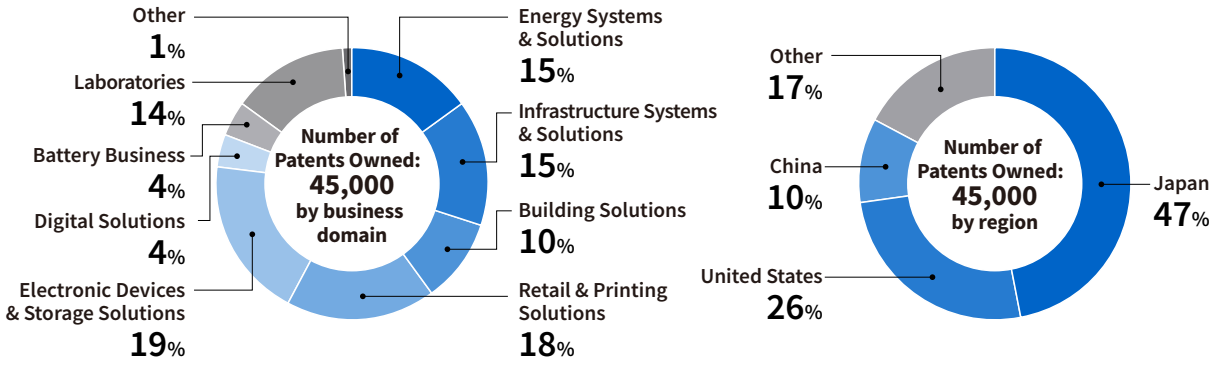




Intellectual Property

Each year, we evaluate all of our registered patents owned, and create an optimal portfolio based on such evaluation results for each business domain. The status of patents owned as of March 2023 is as follows.

Number and Breakdown of Patents Owned (as of March 2023)

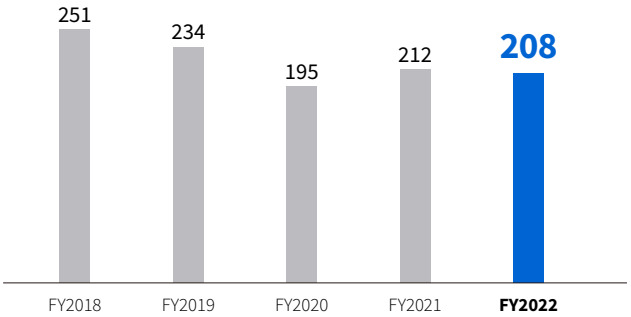


Protection of Toshiba Brand

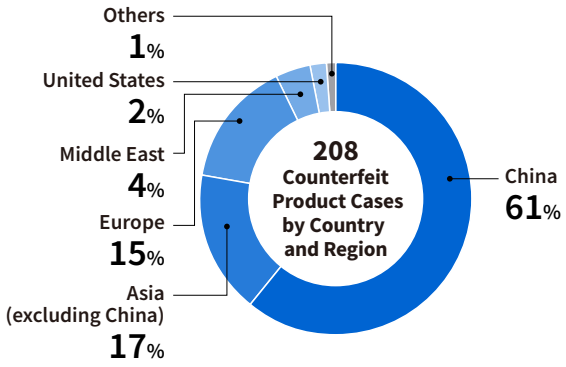
The Toshiba brand symbolizes the value of Toshiba Group as a corporation, and the value of the products or services that we offer. In order to ensure the protection of the Toshiba brand, we manage trademark rights and remove counterfeit products.

Failure to take action against counterfeits of Toshiba products would pose not only the risk of damage to Toshiba's brand value and public confidence, but also the risk of purchasing counterfeit products that do not meet the quality expectations of customers who mistake them for genuine products, as well as an increased risk of an accident occurring. For this reason, we strive to eradicate counterfeit products, collaborating with domestic and overseas anti-counterfeit organizations, and are actively appealing to local bodies such as government agencies for more stringent control.

Trends in Incidents of Counterfeit Products up to FY2022
(Cases)



Breakdown of Counterfeit Product Cases Responded by Region
(from April 2022 to March 2023)



Evaluation by External Parties

Toshiba Group's diverse state-of-the-art technologies and its brand are highly appreciated. Prominent awards received include the following:

Selected for Clarivate Top 100 Global Innovators™ 2023

Clarivate, a global information services company, has selected Toshiba for 12 years running as one of the Clarivate Top 100 Global Innovators™, a list of the best 100 innovative companies and institutions around the world, based on Clarivate's patent data analyses.

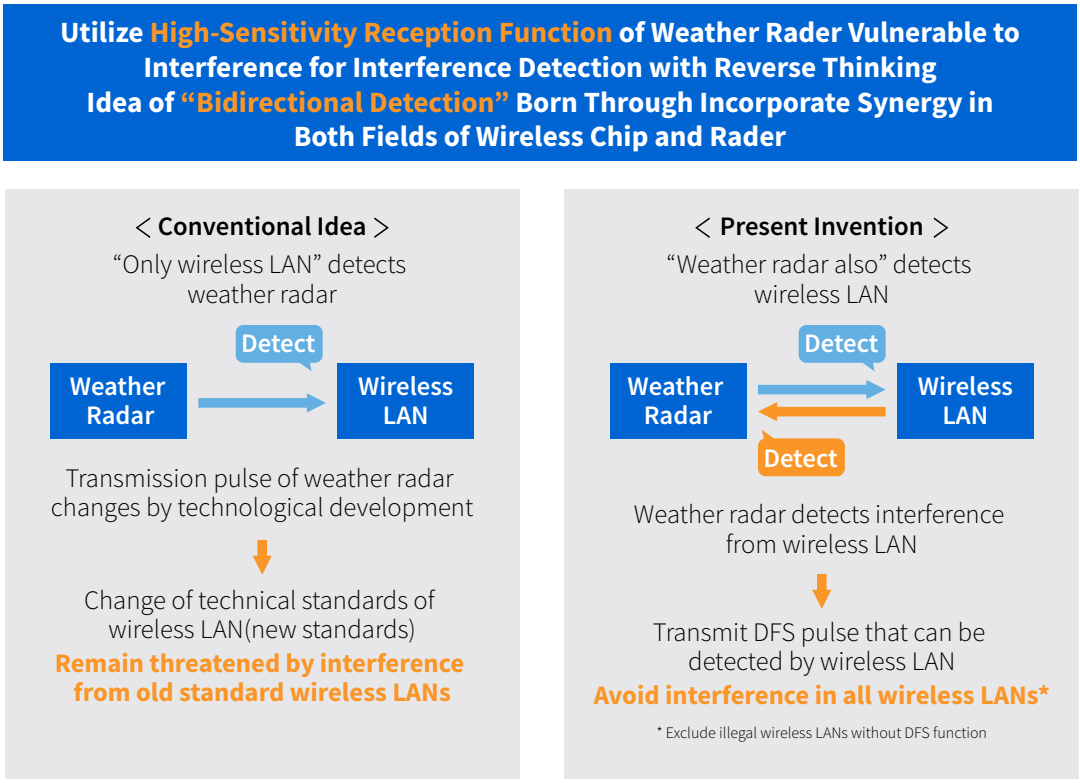
Winner of FY2022 National Commendation for Invention – The Invention Prize
Invention of weather radar having interference avoidance function of wireless LAN(Patent No. JP6383134)

An invention related to weather radars developed to avoid interference from Wireless LAN(WLAN) received the FY2022 National Commendation for Invention – The Invention Prize.

This invention relates to a weather radar that avoids radio wave interference from WLAN and achieves accurate weather observation.

WLANs are equipped with DFS (Dynamic Frequency Selection) to avoid radio wave interference to weather radars, etc. However, DFS does not work with older types of wireless LANs, thereby affecting weather observations. Therefore, we invented a weather radar that can avoid radio wave interference by transmitting a special pulse pattern to activate the DFS on the WLAN side when a signal from a WLAN is detected.

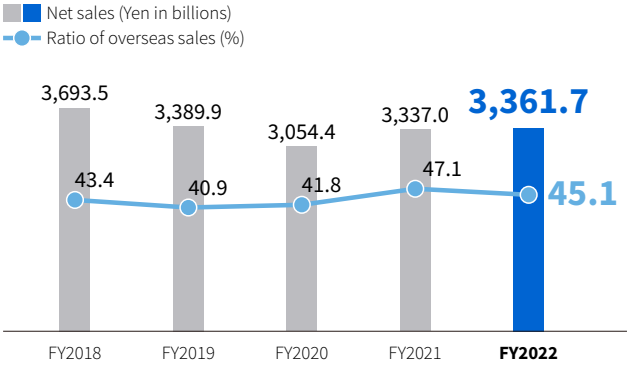
Toshiba delivered a weather radar equipped with this function to the Ministry of Internal Affairs and Communications in 2021. This invention has contributed to frequency sharing amond the 5 GHz band (C band) weather radar and 5 GHz WLAN.



Financial Highlights (Consolidated)

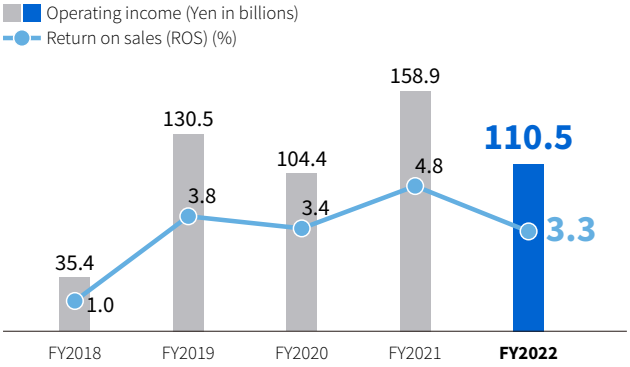
For the detailed financial information, please refer to the **Financial Report for the Fiscal Year ended March 31, 2023** .

Net sales / Ratio of overseas sales



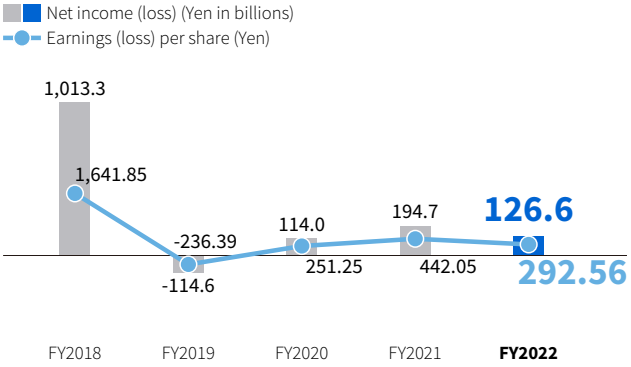
Despite lower sales in Building Solutions, due to the impact of deconsolidation of the air conditioning business, etc., and in HDDs and Others in Electronic Devices & Storage Solutions, net sales increased by 24.7 billion yen year on year to 3,361.7 billion yen, reflecting higher sales in all other business segments.

Operating income / Return on sales (ROS)



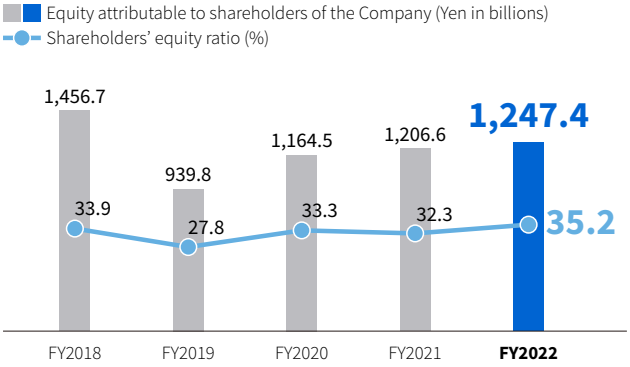
Operating income decreased by 48.4 billion yen year on year to 110.5 billion yen mainly due to one-time factors in HDD, Retail & Printing, Power Generation Systems, etc.

Net income (loss) / Earnings (loss) per share



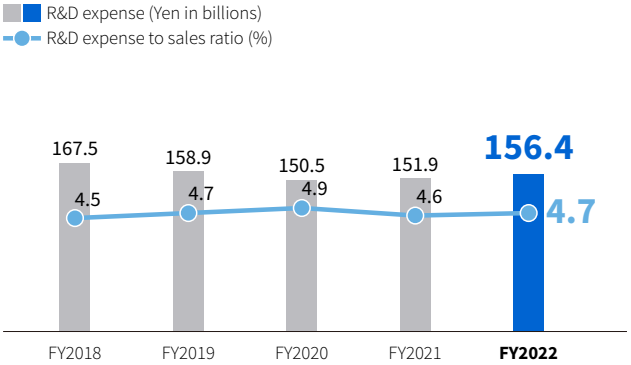
Net income decreased by 68.1 billion yen year on year to 126.6 billion yen mainly due to the impact of reversal of deferred tax assets of a consolidated subsidiary.

Equity attributable to shareholders of the Company / Shareholders' equity ratio



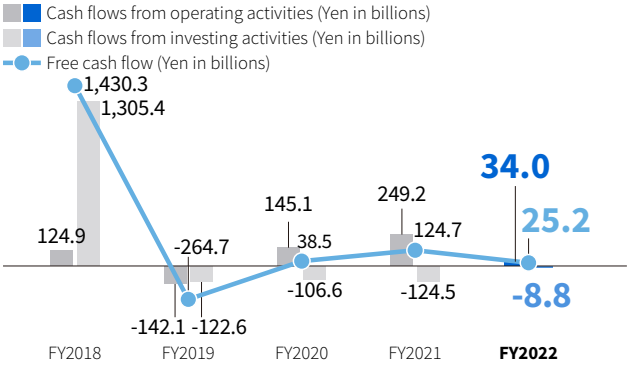
Equity attributable to shareholders of the Company increased by 40.8 billion yen from the end of the previous fiscal year to 1,247.4 billion yen due to increases in net income and comprehensive income.

R&D expense / R&D expense to sales ratio



R&D expenses amounted to 156.4 billion yen, 4.5 billion yen higher than in the previous fiscal year. The R&D expense to sales ratio was 4.7%, 0.1% higher than the previous fiscal year.

Cash flows

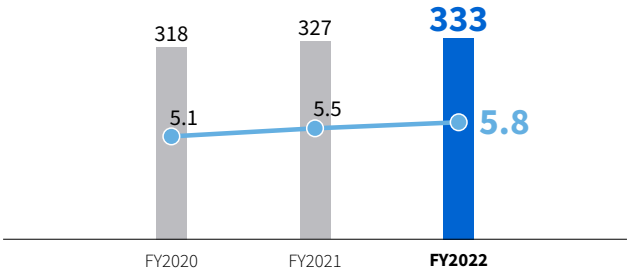


Cash flows from operating activities decreased by 215.2 billion yen year on year to 34.0 billion yen. Cash flows from investing activities decreased by 115.7 billion yen year on year to 8.8 billion yen. As a result, free cash flow decreased by 99.5 billion yen year on year to 25.2 billion yen.

Non-Financial Highlights (Consolidated)

Trends in the number / percentage of female exempt employees (Toshiba and key Group companies*, section manager level or higher)

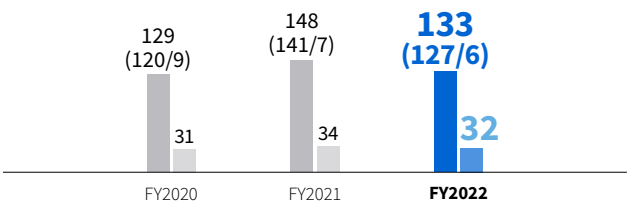
Number of female exempt employees (Persons)
Percentage of female exempt employees (%)



*Sum of the figures for Toshiba Corporation, Toshiba Energy Systems & Solutions Corporation, Toshiba Infrastructure Systems & Solutions Corporation, Toshiba Electronic Devices & Storage Corporation, and Toshiba Digital Solutions Corporation

Number of reports received by whistleblower system

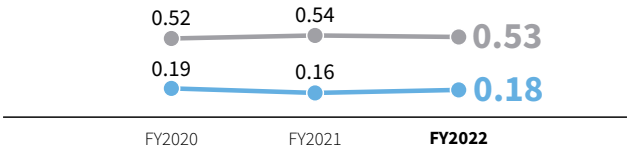
Toshiba Hotline (Cases)
Audit Committee Hotline (Cases)



*Figures in parentheses: (Number of reports to the internal secretariat / Number of reports to an attorney's office)
*Includes duplicate reports made to the internal secretariat

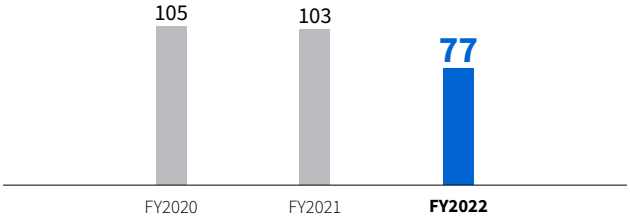
Lost-time injury frequency rate* at Toshiba Group in Japan*

National average for electrical appliance industry
LTIFR at Toshiba Group in Japan



*LTIFR: Lost Time Injury Frequency Rate, the number of lost time injuries occurring in a workplace per 1 million man-hours worked
*Includes accidents involving part-time workers, fixed-term workers and dispatched workers

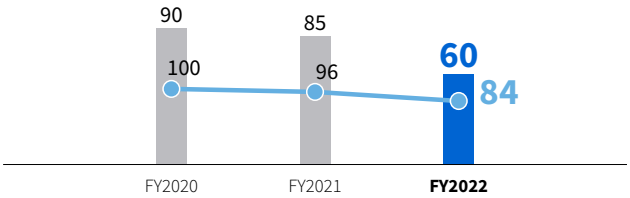
Total GHG emissions* (Million t-CO_2)



*CO_2 emission coefficients for electricity are calculated using emission coefficients provided by power companies.

Energy-derived CO_2 emissions and rate of improvement of emissions per unit activity

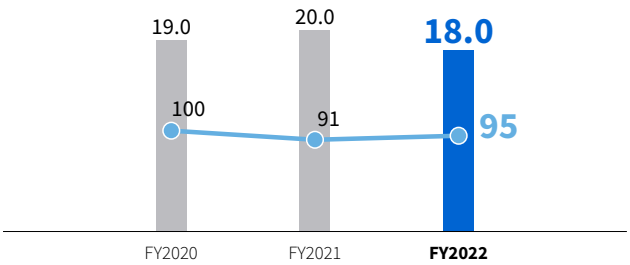
Emissions (Million t-CO_2)
Rate of improvement of emissions per unit activity (%)



*CO_2 emission coefficients for electricity are calculated using emission coefficients provided by power companies.
*Per unit activity refers to values related to energy consumption required for manufacturing (nominal output, the number of products manufactured, number of persons, total floor area, etc.).
*The rate of improvement per unit activity of output with FY2020 as 100%.

Amount of water received and rate of improvement of the amount of water received per unit activity

Amount of water received (Million m^3)
Rate of improvement of the amount of water received per unit activity (%)



*The rate of improvement per unit activity of output with FY2020 as 100%.

Management Organization Chart

TOSHIBA CORPORATION

Energy Systems & Solutions

- Toshiba Energy Systems & Solutions Corporation
- Toshiba Plant Systems & Services Corporation

Infrastructure Systems & Solutions

- Toshiba Infrastructure Systems & Solutions Corporation

Building Solutions

- Toshiba Elevator and Building Systems Corporation
- Toshiba Lighting & Technology Corporation

Retail & Printing Solutions

- Toshiba Tec Corporation

Electronic Devices & Storage Solutions

- Toshiba Electronic Devices & Storage Corporation

Digital Solutions

- Toshiba Digital Solutions Corporation

- Toshiba America, Inc.
- Toshiba Europe Ltd.
- Toshiba Asia Pacific Pte. Ltd.
- Toshiba (China) Co., Ltd.

As of October 1, 2023

Toshiba Group's Business Activities

Energy Systems & Solutions ▸P.37

The scope of our business embraces large-scale power generation systems for nuclear and thermal power, along with renewable energy generation systems for hydro, geothermal, solar, and wind power. Our related businesses include power transmission and distribution systems that deliver electricity directly to end users, Virtual Power Plant (VPP) for efficient utilization of distributed energy sources, and green hydrogen energy systems that harness renewable energy.

▶ **Energy Business Domain:**
- Toshiba Energy Systems & Solutions Corporation
- Toshiba Plant Systems & Services Corporation

Infrastructure Systems & Solutions ▸P.39

For many years, we have provided products, systems, and services to public-sector customers responsible for maintaining the infrastructure of essential utilities. In coming years, we will fully embrace IoT and artificial intelligence (AI) in order to establish safer, more secure, and more convenient social infrastructure systems.

▶ **Social Infrastructure Business Domain:**
- Toshiba Infrastructure Systems & Solutions Corporation

Building Solutions ▸P.41

Our portfolio covers elevators & escalators for buildings and facilities, ventilation, and lighting, all essential to the day-to-day comfort of people. Through these businesses, we also offer energy-saving, environmentally conscious products and services, as well as building solutions that improve building security and reliability.

▶ **Building Solutions Business Domain:**
- Toshiba Elevator and Building Systems Corporation
- Toshiba Lighting & Technology Corporation

* The business results of Toshiba Carrier Corporation are included in FY2022. However, Toshiba Carrier Corporation was deconsolidated from Toshiba Group on August 1, 2022, on completion of a share transfer.

Retail & Printing Solutions

- Toshiba Tec Corporation

Electronic Devices & Storage Solutions ▸P.43

We anticipate steady growth, and are promoting expansion in our electronic devices & storage solutions business by focusing on semiconductors for automobile and industrial use, large-capacity HDDs for data centers, semiconductor manufacturing equipment, and parts and materials. By supplying high value-added products, we will contribute to the achievement of carbon neutrality, the development of a digital society and the realization of a safe and secure society.

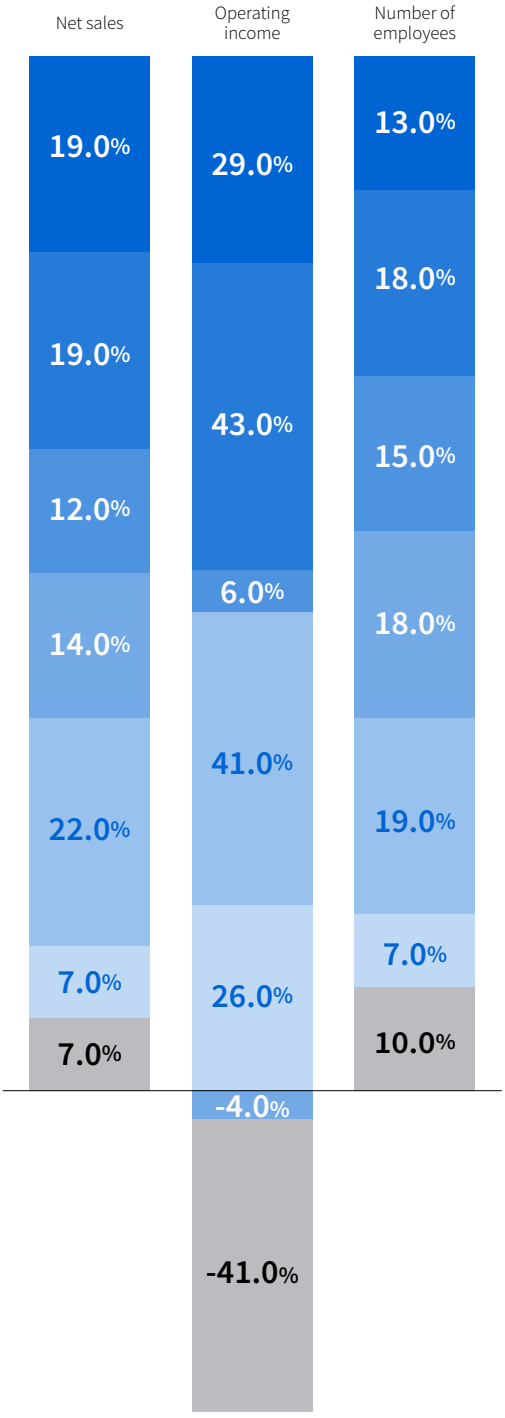
▶ **Electronic Devices Business Domain:**
- Toshiba Electronic Devices & Storage Corporation

Digital Solutions ▸P.45

By utilizing the knowledge that Toshiba has amassed across numerous business domains, along with cutting-edge technologies like IoT, AI and quantum related technologies, we create digital solutions that provide our customers with new value and services, and that enrich the wider society.

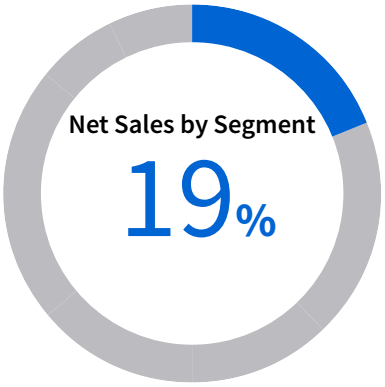
▶ **Digital Solutions Business Domain:**
- Toshiba Digital Solutions Corporation

Breakdown of each index for each segment (FY2022)

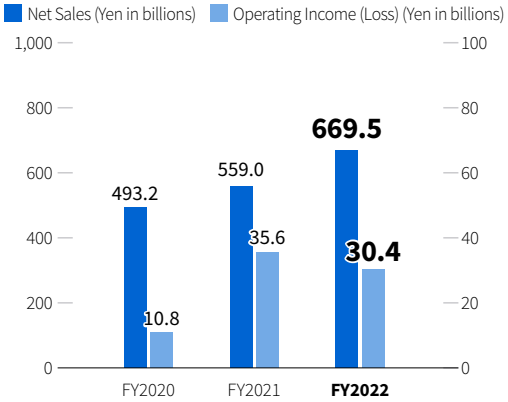


・Ratio in the above graph prior to elimination of inter-segment sales

Energy Systems & Solutions



Net Sales/Operating Income (Loss)



Main Businesses

(As of March 31, 2023)

- Nuclear power generation systems
- Thermal power generation systems
- Hydroelectric power generation systems
- Solar Photovoltaic systems
- Transmission & Distribution systems

Business Overview

The Energy Systems & Solutions segment saw higher sales. Power Generation Systems recorded higher sales, as Nuclear Power Systems recorded higher sales due to the difference in progress of projects to enhance safety measures, etc., and Thermal & Hydro Power Systems saw higher sales due to the difference in progress of orders received, etc. Transmission & Distribution Systems also saw higher sales as, Transmission & Distribution Systems and Solar Photovoltaic Systems recorded higher sales.

In terms of profit and loss, the segment as a whole saw a decrease in operating income. While Transmission & Distribution Systems saw an increase in operating income from the impact of higher sales, Power Generation Systems recorded lower operating income due to analysis of project costs by Toshiba Plant Systems & Services Corporation, and review of provision for Power Generation Systems product warranty, etc.

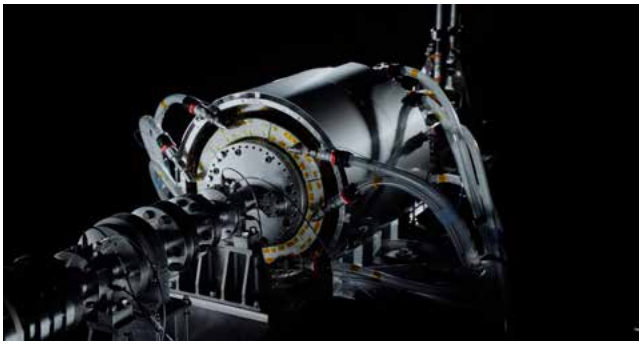
Development of Lightweight, Compact, High-Power Superconducting Motor Prototype for Mobility Applications

Toshiba Energy Systems & Solutions Corporation has developed a compact, lightweight, and high-power superconducting motor that is the first in the world to achieve the high-speed rotation required for large mobility applications such as aircraft.

As global environmental awareness grows, movements to reduce greenhouse gas emissions, such as CO_2, are accelerating rapidly in the mobility industry, including among aircraft and automobile manufacturers. The aviation industry has set a goal of reducing emissions of CO_2 to zero (net-zero carbon) by 2050. However, in addition to changing over to sustainable aviation fuel (SAF), the evolution of whole aviation systems is required, and the industry needs to develop lightweight and high-powered motors.

Toshiba Energy Systems & Solutions Corporation has developed a prototype for a compact, high-speed superconducting motor with a high-power output of 2 MW, bringing together its manufacturing technology for high-speed rotating machines and superconductivity technology that it has fostered over many years. The motor is less than 1/10th the weight and size of a conventional motor with the same level of power output. The motor is the first of its kind in the world, developed through the integrated strength of the Toshiba Group. It has earned strong recognition for its future possibilities, and was awarded the grand prize in the Total Solutions Category at the CEATEC AWARD 2022.

Going forward, we will work to make motors with even greater improvements, and by combining them with the products and services of the Toshiba Group, we will provide new value to the mobility industry and contribute to the realization of a carbon-neutral society.



Prototype of the superconducting motor

Toshiba Energy Systems & Solutions Corporation Begins Sales of Japan's First Environmentally Friendly Gas-Insulated Switchgear That Uses Natural Origin Gases

Toshiba Energy Systems & Solutions Corporation delivered a gas-insulated switchgear that uses natural origin gases to TEPCO Power Grid, Inc., and the switchgear began operations in February 2023.

This order is a replacement for equipment at TEPCO Power Grid, Inc.'s Fuchu Substation in Tokyo and is Japan's first environmentally friendly gas-insulated switchgear that uses natural origin gases to be used at a TSO (transmission system operator).

Gas-insulated switchgears are devices that interrupt current and prevent it from affecting other power equipment in the event of an anomaly in the transmission system and are essential equipment underpinning social infrastructure. As its electrical insulating medium, rather than sulfur hexafluoride (SF_6), a greenhouse gas, this equipment uses a mixture of nitrogen and oxygen, which are safe and have no global warming impact even in the event of a leak. This product is the result of joint development that Toshiba Energy Systems & Solutions Corporation has been pursuing with Meidensha Corporation since 2020. Having completed the prescribed type testing, sales of the product are now underway.

Toshiba Group has been working on gas-insulated switchgears since the 1960s, and has a great deal of expertise in their overall product development. Meanwhile, for more than 15 years, we have been conducting research and development of equipment that uses natural origin gases as a measure to reduce environmental impact.

AEROXIA™, environmentally friendly GIS(Gas-Insulated Switchgear)

In view of the ongoing adoption of environmental regulations governing the use of SF_6 gas for electric power equipment in Europe, North America, and other regions, we will expand our lineup of electric power equipment that uses natural origin gases, starting with gas insulated switchgears, which are easy to handle and pose no environmental risk, under the AEROXIA™ brand in Japan and overseas. By actively developing environmentally friendly products, the Toshiba Group will continue working to help achieve carbon neutrality.

Toshiba Energy Systems & Solutions Corporation Wins Contract for IoT Services Using EtaPRO™ for an Indonesian Geothermal Power Plant

Toshiba Energy Systems & Solutions Corporation, through its Indonesian subsidiary, Toshiba Asia Pacific Indonesia, has won a contract for an Indonesia's state-owned geothermal power company, PT Geo Dipa Energi, for an IoT service for the power generation facilities at its Patuha Geothermal Power Plant.

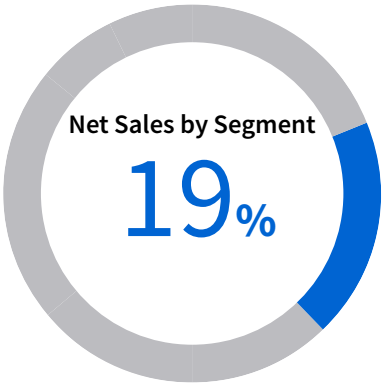
This service uses IoT and AI technologies, including predictive failure diagnosis and performance monitoring at the plant. The system provided through this service employs EtaPRO™, a monitoring software for plant operation acquired by the Company in FY2021, and represents the world's first commercial application of EtaPRO™ at a geothermal power plant.

The service uses AI to analyze real-time power plant operation data obtained from various sensors and detect signs of anomalies that may cause problems during normal operation. In doing so, it reduces the number and duration of power plant shutdowns. A demonstration project showed that it was able to reduce the rate at which problems occurred by over 20%. Compared to thermal power plants, the detection of anomalies in geothermal power plants is difficult, given the unstable condition of the steam flowing into the turbine, but this service allows the detection of anomalies even under those conditions.

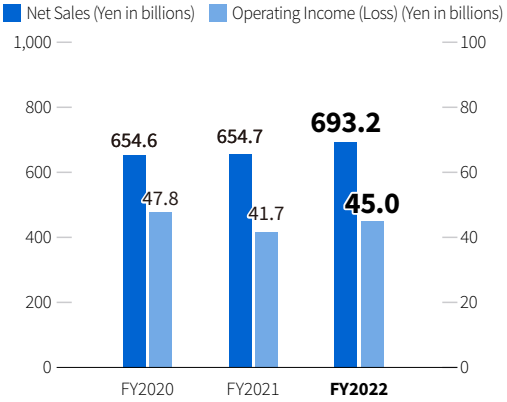

Patuha Geothermal Power Plant in Indonesia

By deploying this service worldwide, Toshiba Energy Systems & Solutions Corporation aims to reduce the customer's cost of power generation by helping improve power plants' utilization rates, thereby promoting the spread of geothermal power generation and helping to achieve carbon neutrality.

Infrastructure Systems & Solutions



Net Sales/Operating Income (Loss)



Main Businesses

(As of March 31, 2023)

- Water supply and sewage systems
- Road systems
- Telecommunication systems
- Railway systems
- Power distribution systems
- Communication & broadcast systems
- Security & automation systems
- Motor & drive systems

Business Overview

The Infrastructure Systems & Solutions segment saw higher sales overall. Public Infrastructure recorded lower sales due to decreased volume in the social systems business, but Railways and Industrial Systems reported higher sales mainly due to increased volume by recovery from market downturn caused by COVID-19 and exchange rate changes, etc. in the industrial systems.

In terms of profit and loss, the segment as a whole saw higher operating income. While Public Infrastructure saw lower operating income due to lower sales in social systems business, Railways and Industrial Systems saw an increase, reflecting higher sales in the industrial systems and by impact of the absence of the previous year's restructuring, etc.

Delivery of Multi-Parameter Phased Array Weather Radar Systems

Toshiba Infrastructure Systems & Solutions Corporation delivered two multi-parameter phased array weather radar systems to the Radio Research Institute of NICT.

These two systems replaced the phased array weather radar systems installed in Kobe City, Hyogo Prefecture, and Suita City, Osaka Prefecture. The new weather radar has a new multi-parameter (also known as dual-polarization) feature that estimates rainfall by simultaneously emitting electromagnetic waves in two directions—vertically and horizontally polarized waves. This new feature enables the radar to measure rainfall with higher accuracy in addition to three-dimensionally tracking rainclouds at high speed in 30 seconds to 1 minute.

Multi-parameter phased array weather radar

In recent years, tremendous damage caused by localized heavy rains (also known as torrential rains), tornadoes, and other extreme weather events has become a social problem. This upgrade provides improved accuracy of rainfall observation, making it possible to predict the signs of torrential rains and resulting rainfall quickly and accurately. The new radar also achieves network observation with multiple weather radars for the first time as a multi-parameter phased array weather radar. This expands the observation range and ensures rainfall observation accuracy even when it deteriorates during heavy rains by having the other radar cover the area. For this reason, it is expected to accelerate research and demonstration for use in flood prevention activities and evacuation instructions for residents in the Kansai area.

We will continue to promote the installation of multi-parameter phased array weather radar systems in other areas to help mitigate damage caused by heavy rains.

Local 5G Research and Business Co-Creation Initiatives

Differently from "public 5G" by which carriers provide nationwide communication services, in addition to the features of 5G wireless including high-speed, high-capacity, low-latency, and multi-connections, "local 5G" is built and operated independently by vendors for designated areas and uses. As such, it has expected benefits in a wide range of fields, but also has issues such as obstructions causing lost signals and signals leaking out-

side of coverage areas.

To resolve these issues, Toshiba Infrastructure Systems & Solutions Corporation is conducting verification testing with various universities and companies.

In March 2022, with Nakao Research Laboratory of the Department of Systems Innovation, School of Engineering, The University of Tokyo, we began joint research to evaluate the effectiveness of the use of technological know-how to eliminate radio shielding as well as the company's proprietary Distributed Antenna System (DAS), and participated in a technological evaluation of a local 5G system on public roadways.

We also launched joint research with the Metropolitan Expressway Co., Ltd and Nokia Solutions and Networks Japan G.K. on building a local 5G wireless communication area to contribute to collecting accurate information during disasters and to speed operations during normal times, evaluating the feasibility of developing local 5G on metropolitan highways within about one year.

Furthermore, from November 2022 through February 2023, with Sharp Corporation, BIG RED FARM, Niikappu-cho, Hokkaido, EXEO Group, Inc., CHOWA GIKEN Corporation, YANMAR AGRIBUSINESS CO., LTD., Nagoya Broadcasting Network Co., Ltd., and Dogin Regional Research Institute Co., Ltd., we conducted verification testing of grazing land management using local 5G at BIG RED FARM Meiwa in Niikappu-cho, Hokkaido.

Local 5G DAS (Distributed Antenna System)

In August 2022, we opened "Creative Circuit L5G™," the co-creation center to conduct verification testing of applications using local 5G at our Fuchu Complex. At the co-creation center, everyone including those from outside the Company can experience applications envisioning local 5G at infrastructure facilities. Toshiba Infrastructure Systems & Solutions Corporation is also working at the co-creation center to collect data using 5G wireless lines from devices in operation, such as robots and automatic guided vehicles (AGV) that had previously been difficult to collect, aiming to create added value in the use of AI, etc.

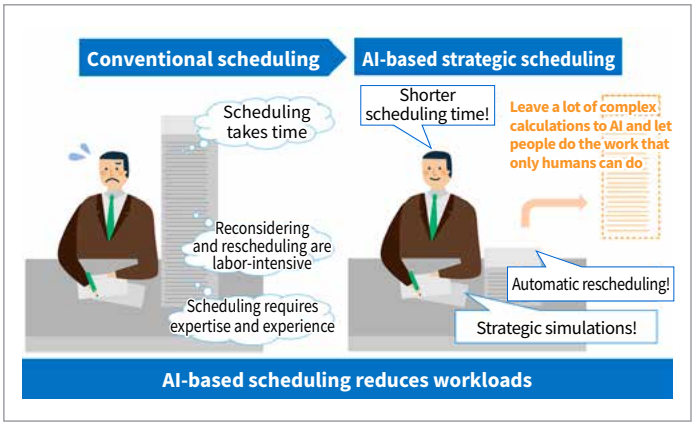
Going forward, we aim to aggressively develop 5G in various directions.

Optimizing Timetables and Train Operations Using AI on the Tokyo Tama Intercity Monorail

Toshiba Infrastructure Systems & Solutions Corporation and the Company have provided results in the optimization of timetables and train operations using AI to Tokyo Tama Intercity Monorail Co., LTD.

The optimization implemented by Toshiba Infrastructure Systems & Solutions Corporation uses the transportation optimization AI developed by Toshiba Corporate Research & Development Center using the timetables data assets of the Group's transit scheduling ICT solution TrueLine® introduced at Tokyo Tama Intercity Monorail Co., LTD.

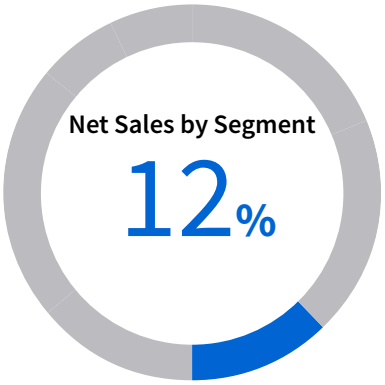
Railway companies combine trainset inspection and cleaning schedules with trainset rosters according to each timetables for efficient operations. However, understanding which trains are usable and responding to different timetables on weekdays, weekends and holidays are extremely complex. This process has required workers with specialized knowledge and experiences, as well as a significant amount of labor in rescheduling when even a single change occurs.



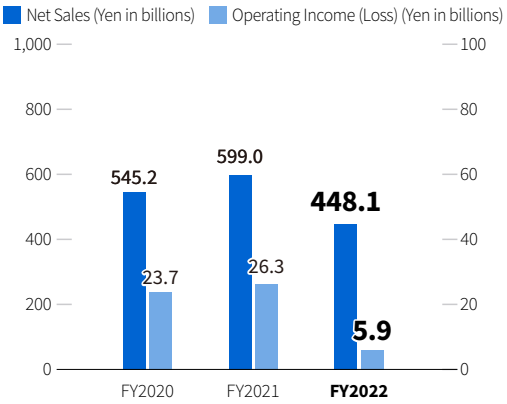
Toshiba Infrastructure Systems & Solutions Corporation has performed multiple evaluations using AI together with Tokyo Tama Intercity Monorail Co., LTD., confirming the ability to schedule for the efficient inspection and cleaning of trainsets and management plans that evenly distribute inspection cycles. Through these results, various everyday work scheduling has become simpler, and rescheduling can be done quickly in the event that they are disrupted. We have also confirmed results in reducing operating costs, and these results have been applied in revisions of timetables.

Toshiba Infrastructure Systems & Solutions Corporation will continue contributing to the operations of railway companies through our various digital technologies starting with TrueLine®, which uses the Group's AI.

Building Solutions



Net Sales/Operating Income (Loss)



Main Businesses

(As of March 31, 2023)

- Elevators
- Light fixtures
- Industrial light parts

Business Overview

Sales of elevator overseas business, and lighting increased, but due to impact of air conditioning business deconsolidation and lower sales in elevator domestic business, the Building Solutions segment saw lower sales overall.

In terms of profit and loss, lighting saw higher operating income, but due to impact of air conditioning business deconsolidation and lower operating income in elevator business the segment as a whole saw lower operating income.

Expanding Our Lineup of the Antibacterial, Deodorizing UVish Series

Toshiba Lighting & Technology Corporation has added the UVish Ceiling Recess Type to its UVish series lineup of disinfecting and deodorizing devices that feature the double effect of UV- LED that emits ultraviolet C waves considered highly effective in inactivating viruses and bacteria together with photocatalysis. Sales of the UVish Ceiling Recess Type were launched in March 2023.

Prior to the UVish Ceiling Recess Type, disinfecting and deodorizing devices had generally been placed on the floor. However, when placing devices on the floor, there were various challenges. For example, obstructions to wheelchairs and walking in social welfare facilities, concerns about tampering by children and accidents from contact or falling in kindergartens and nursery schools, and space limitations in restroom booths have made installation difficult.

By installing the UVish Ceiling Recess Type in the ceiling, these concerns are resolved, allowing the disinfecting and deodorization of spaces where devices previously could not be installed.

Additionally, Toshiba Lighting & Technology Corporation further expanded the UVish series lineup with the sales launch of the UVish Floor Type 200, which can cover larger spaces than previous devices of up to 200 m³.

UVish Ceiling Recess Type with motion sensor and light

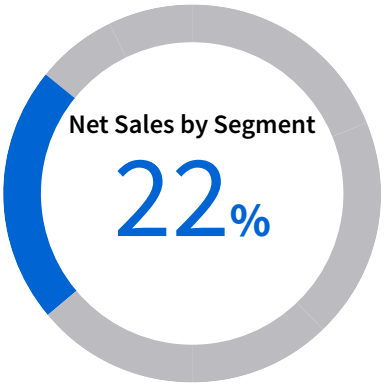
SPACEL Wins the GOOD DESIGN AWARD 2022

Toshiba Group company's SPACEL machine-room-less elevators won the GOOD DESIGN AWARD in the GOOD DESIGN AWARD 2022, an awards program to promote integrated design held by the Japan Institute of Design Promotion. The award was given to a joint application by the Company and Toshiba Elevator and Building Systems Corporation, and the following points received a positive evaluation.

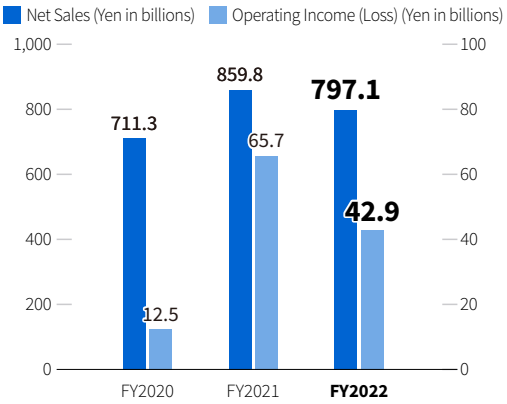
SPACEL, machine-room-less elevator

- A system for development and the ability to realize continuous evolution of a single brand for more than 20 years that has produced elevators that are disaster-resilient, safe, and peoplefriendly
- The achievement of a high level of completeness in which a wide range of know-how and design considerations are reflected in the various elements making up the space and function, based on a fundamental framework with a consideration of social issues
- Large indicators provide information in a manner that is intuitive and clearly visible, making conditions easy to gather in the confined space of an elevator and providing a sense of calm and comfort
- Attention to detail, as for example in the unique functions that fill the gaps around the door, providing various solutions to a range of user conditions

Electronic Devices & Storage Solutions



Net Sales/Operating Income (Loss)



Main Businesses

(As of March 31, 2023)

- Power devices
- Small-signal devices
- Optoelectronic devices
- In-vehicle digital & logic
- Analog ICs
- HDDs
- Semiconductor manufacturing equipment
- Devices & materials

Business Overview

The Electronic Devices & Storage Solutions segment as a whole saw lower sales. While Semiconductor saw higher sales from firm markets, mainly in industrial use, etc., HDDs & Others saw lower sales due to shrinkage in mobile and desktop HDD markets and nearline HDD market adjustment, etc.

In terms of profit and loss, the segment as a whole saw lower operating income. While Semiconductor saw higher operating income reflecting higher sales, HDDs & Others saw lower operating income due to lower sales and provision for product warranty, etc.

Launch of Third-Generation SiC (Silicon Carbide) MOSFETs That Contribute to Higher Efficiency of Industrial Equipment

As a new power semiconductor product, Toshiba Electronic Devices & Storage Corporation has commercialized third-generation SiC MOSFETs[*1] with low resistance during operation (on-resistance) and significantly reduced switching losses.

Power semiconductors, whose role is to supply and manage power, are essential components for boosting the energy-saving features of all types of electrical equipment, and for achieving carbon neutrality, and demand is projected to continue expanding against the backdrop of the continued electrification of automobiles, higher voltage and lower power consumption requirement for industrial equipment, etc. SiC is attracting attention as a next-generation power semiconductor material with higher voltage, higher current and lower loss than conventional Si (silicon).

The new product reduces on-resistance per unit area by approximately 43%[*2] and switching losses by approximately 20%[*2]. The third-generation SiC MOSFETs, which achieve both reduced on-resistance and reduced switching losses, will contribute to further achieving larger capacity and improving the efficiency of industrial equipment.

Going forward, Toshiba Electronic Devices & Storage Corporation will continue to expand its power semiconductor product lineup and expand its production facilities, aiming to realize a carbon-free society by providing more user-friendly, high-performance power devices.

*1 MOSFET stands for Metal Oxide Semiconductor Field Effect Transistor, a type of transistor structure.

*2 Compared to second-generation SiC MOSFETs. According to testing conducted by Toshiba Electronic Devices & Storage Corporation.

Third-generation SiC MOSFETs

Construction of New Manufacturing Facility for Silicon Nitride Balls

Toshiba Materials Co., Ltd. has decided to construct a new manufacturing facility for silicon nitride balls on the premises of its headquarters. Production is scheduled to begin in November 2023 with an investment in excess of 5 billion yen. This investment will increase production capacity to 150% of the FY2021 level at full capacity.

Silicon nitride balls and bearings

With the electrification of automobiles, the market is demanding shorter charging times and lower costs. In response, there is increasing adoption of high voltage batteries and integration of motors with inverters (devices with power circuits that generate alternating current of different frequencies from either direct or alternating current). However, electrolytic corrosion (damage to a bearing caused by a current flowing through it) of motor bearings used in such Electronic Devices & Storage Solutions units has become a problem, and this may hinder the development of highly reliable and widespread electric vehicles. For this reason, in recent years, one of the most effective solutions has been the adoption of hybrid bearings which consists of ceramic balls that have the advantages of excellent strength and superior wear resistance in place of standard steel balls, and steel inner and outer races.

Toshiba Materials Co., Ltd. manufactures silicon nitride balls recognized for their reliability and for delivering the highest mechanical performance. Its experience and record of success in bearing balls that meet demands for high-speed rotation and anti-electrolytic corrosion, including machine tools, wind power generators and rolling stock, have won the company about 50% of the world market. With significant increases in demand for bearings for electric vehicles on the horizon, Toshiba Materials Co., Ltd. has now decided to make this significant investment in increasing capacity.

Toshiba Materials Co., Ltd. will continue stable supply of high-quality products, and will contribute to increased use of environmentally friendly electric vehicles.

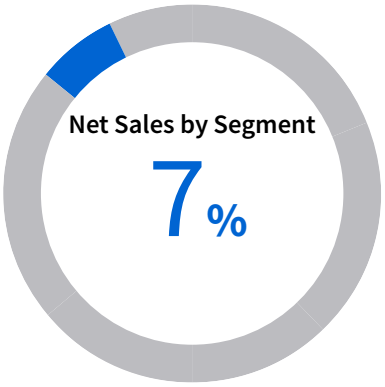
GOOD FACTORY AWARD® From the Japan Management Association

Buzen Toshiba Electronics Corporation has been awarded the 11th GOOD FACTORY AWARD® for 2023 by the Japan Management Association. This is the first time that a manufacturer in the Kyushu region has received this award. It is also the first time in seven years that the Toshiba Group has won the award.

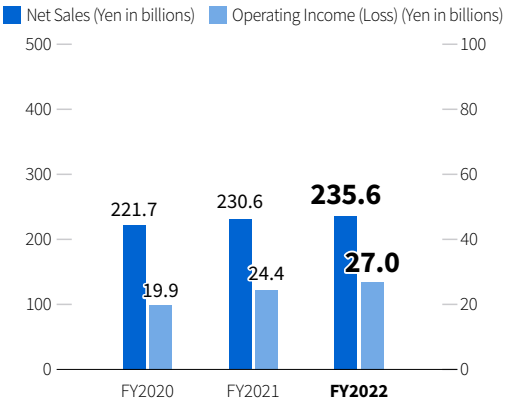
Buzen Toshiba Electronics Corporation, winner of the 11th GOOD FACTORY AWARD®

The GOOD FACTORY AWARD® consists of four different awards. In recognition of its management system and human resource development, Buzen Toshiba Electronics Corporation was selected for the Factory Management Award, which recognizes an overall high level of factory management and well-balanced factory operations.

Digital Solutions



Net Sales/Operating Income (Loss)



Main Businesses

(As of March 31, 2023)

- Digital solutions services

Business Overview

The Digital Solutions segment as a whole saw higher sales. While there was an impact of the sale of Chubu Toshiba Engineering Corporation, system projects for public and private sectors both grew.

In terms of profit and loss, the segment as a whole saw higher operating income. While there was impact of the sale of Chubu Toshiba Engineering Corporation, system projects for public and private sectors both went strong.

Promotion of Quantum-Related Businesses

Toshiba Digital Solutions Corporation is promoting businesses that utilize quantum technology, such as Quantum Key Distribution (QKD) and SQBM+™, a quantum-inspired optimization solution.

QKD is the technology to distribute the encryption keys that are used to protect important confidential data. Theoretically impossible to intercept the encryption key, it protects the data communication infrastructure from the threat of cyber attacks and enables secure data communication.

The Company is also working on quantum-inspired optimization technology inspired by quantum phenomena. This is proprietary technology of the Company for "combinatorial optimization," which derives the optimal solution from a vast number of alternatives. For many social and industrial challenges, combinatorial optimization is essential for selecting the optimal items from an enormous range of choices; for example, optimizing financial transactions, the movement of industrial robots, travel and transmission routes, and molecular design for drug discovery. Through collaborations with research institutions such as universities as well as with companies, the Toshiba Group has been conducting verification experiments, etc. to solve social issues in a variety of fields. Drawing on the knowledge gained through these efforts, we were able to provide systematized SQBM+™ as a solution.

Quantum Key Distribution System

In April 2022, the Company launched the trial service of the world's first QKD-secured metro network for commercial use in London, UK, and in August 2022, the Company received an order from Japan's National Institute of Information and Communications Technology (NICT) for QKD and SQBM+™ for the Tokyo QKD Network. Going forward the Group will continue to contribute to the implementation of quantum technology in society and the creation of new industries.

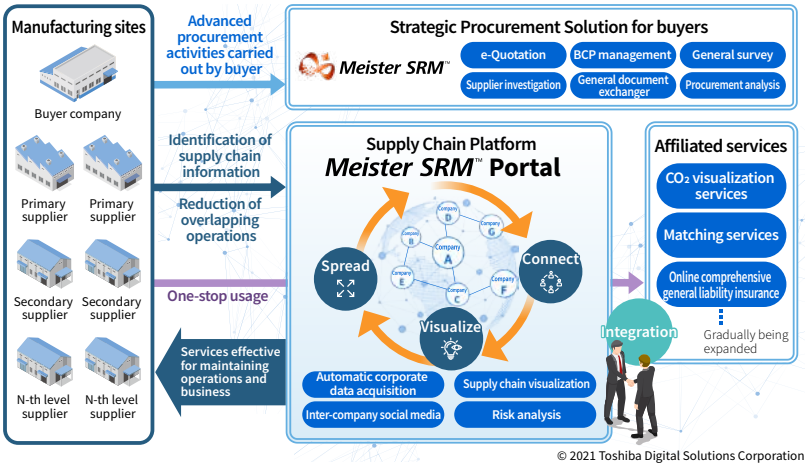
Launch of Meister SRM™ Portal, a Supply Chain Platform

Toshiba Digital Solutions Corporation has started offering the Meister SRM™ Portal supply chain platform, which is a new service of its Meister SRM™ strategic procurement solution.

In order to respond to unpredictable changes in the business environment, manufacturers need to take steps to strengthen their supply chains. Suppliers are also required to communicate closely with each other in order to develop new partners, understand the risk of production stoppages in the event of disasters, and monitor the status of their carbon neutrality measures.

The Meister SRM™ Portal is a cloud service that connects companies involved in manufacturing and supports the business activities of companies in the supply chain. By allowing companies subscribing to the service to disseminate and share information about themselves and to connect autonomously, the service makes the supply chain network visible and facilitates the understanding of risks in the supply chain and the expansion of networks of business partners. In cooperation with partners, we also provide services for calculating and visualizing greenhouse gas emissions, as well as business matching services for manufacturing. In October 2022, Mitsui Sumitomo Insurance Company, Limited linked its newly built insurance sales system to the Meister SRM™ Portal and began offering a mechanism to purchase comprehensive general liability insurance for the manufacturing industry over the Internet. We plan to continue expanding our services through the Meister SRM™ Portal.

Going forward, the Toshiba Group will continue to contribute to the strengthening and upgrading of supply chains by connecting companies involved in manufacturing, facilitating the dissemination and sharing of information between these companies, and providing a variety of services that support business activities in a coordinated and integrated manner.



Conceptual diagram of Meister SRM™ Portal

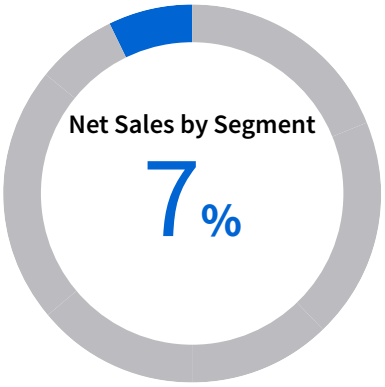
Establishment of a System to Strengthen the Smart Manufacturing Business

On April 1, 2023, Toshiba Digital Solutions Corporation and Toshiba Infrastructure Systems & Solutions Corporation established the Smart Manufacturing Division with the goals of strengthening Toshiba's capacity to respond to digital transformation (DX) in the manufacturing industry, where market expansion is expected, and promoting business growth.

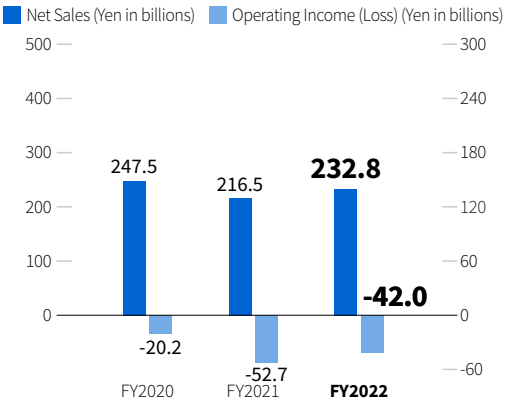
In response to uncertain social conditions and labor shortages, the manufacturing industry is accelerating its investment in digitalization for business continuity, including visualization and remote control and operation of factories, plants, and buildings, as well as supply chain resiliency. In addition, it is expected that DX investment in data utilization will continue to expand, including data linkage and system integration that encompasses a series of flows from design and development to production and maintenance. Furthermore, in order to respond to new social issues such as carbon neutrality, it is more necessary than ever to address issues that cut across the boundaries of IT, such as the optimal operation of facilities, the use of renewable energy, and resource reuse, as well as systems that control and operate control equipment in factories, plants, and buildings, and related technologies (OT: Operational Technology).

The Toshiba Group has established a structure to provide IT and OT solutions for the manufacturing industry in an integrated manner through the collaborative business operations of the Smart Manufacturing Division, which was co-established within both Toshiba Digital Solutions Corporation, which specializes in the IT domain, and Toshiba Infrastructure Systems & Solutions Corporation, which specializes in the OT domain. By leveraging the latest digital technology centered on the Meister series as well as technologies we have cultivated over many years in the industrial domain, we plan to accelerate our efforts to expand our Smart Manufacturing business, focusing on the DX market in the manufacturing industry.

Others



Net Sales/Operating Income (Loss)



Main Businesses

(As of March 31, 2023)

- Battery, etc.

Business Overview The segment as a whole saw higher sales and rise in operating income.

Ranked No. 1 in Japan, the U.S. and Europe in Overall Patent Strength for Lithium-Ion Battery-Related Technologies

An independent survey by Patent Result Co., Ltd. in September 2022 ranked Toshiba No. 1 in Japan, the United States and Europe for patents covering oxide-based negative electrode technology for lithium-ion batteries.

Toshiba began research and development in oxide-based negative electrodes before 2000, with a focus on Lithium Titanium Oxide (LTO) negative electrodes. Toshiba first applied the technology in the SCiB™, the lithium-ion battery it brought to market in 2008. Typical lithium-ion batteries have carbon-based negative electrodes, but Toshiba recognized that LTO, an oxide-based negative electrode, offered excellent characteristics in six crucial areas: safety, long life, rapid charging, high input and output, low-temperature performance, and a wide effective SOC[*1].

SCiB™ has been highly evaluated for its excellent safety, long life, and rapid charge/discharge characteristics, and is currently used in a wide range of applications including hybrids and other types of passenger cars, commercial vehicles such as electric vehicle (EV) buses, trains, ships, electric power, energy, and industrial equipment such as AGVs[*2]. SCiB™ also helps to reduce emissions of carbon dioxide (CO_2) and nitrogen oxides (NOx), and is expected to be further utilized in the accelerating global effort to realize a carbon-neutral society.

Going forward, we will continue to promote research and development of battery technologies that realize safe, secure, and efficient energy utilization and actively pursue further patent activities.

*1 SOC: State of charge. The batteries can be used at 0 to 100% state of charge, reducing the required battery footprint.

*2 AGV: Automatic guided vehicle

SCiB™, lithium-ion battery

Sustainability Management

Toshiba Group Sustainability Policy

Toshiba Group has long positioned "Committed to People, Committed to the Future." as the main text of our Basic Commitment, the expression of our unwavering determination to contribute to society's development through our business activities. Grounded in this commitment, as a member of a society that faces issues that include energy shortages, resource depletion, and climate change, we have taken initiatives to help solve issues by considering the impact of our corporate activities on society over the long-term, rather than simply pursuing short-term profits. To further advance the initiatives and strengthen our activities to contribute to social sustainability, we have established Toshiba Group Sustainability Policy, for promoting sustainability management and enhancing our corporate value. Toshiba Group Sustainability Policy was resolved by the Board of Directors.

Toshiba Group Sustainability Policy

The Basic Commitment of Toshiba Group is "Committed to People, Committed to the Future." This commitment is the foundation of Our Purpose: an unwavering drive to make and do things that lead to a better world. Toshiba Group aims to solve issues facing our society and to contribute to its development through our business.
Toshiba Group considers the long-term impact of its corporate activities on society and takes action to address the material issues we identify. In accordance with the Standards of Conduct for Toshiba Group, we place the highest priority on life, safety, and compliance (observance of laws, regulations, social norms, and ethics), and drive sustainability management in cooperation with our stakeholders in order to enhance our corporate value. We comply with international standards and seek opinions from the experts thus enabling us to make responsible decisions regarding our commitment to society.

1. Toshiba Group contributes to the sustainable development of society by developing and producing products and services which enrich lives. It does so by bringing together its history of creativity, technological strength and advanced quality that it has long cultivated.
2. Toshiba Group proactively works to reduce environmental impacts throughout its entire value chain with the goal of positively addressing various global environmental issues.
3. Toshiba Group supports internationally recognized principles on human rights, and respects the human rights of every stakeholder who contributes to its activities, including customers, shareholders and employees.
4. Toshiba Group works with suppliers to promote sustainable procurement activities which take into account such matters as human rights and the environment.
5. Toshiba Group's sustainability management approach incorporates a long-term perspective to protect and maintain its sustainable growth.
6. Toshiba Group reports on its sustainability objectives, activities and results to promote a constructive dialogue and trusted relationships with stakeholders.

October 21, 2021

Committed to People, Committed to the Future.

In order to develop sustainably as a company, Toshiba Group strives to strengthen E (environment), S (social), and G (governance) and implement sustainability management as steps to build ethical and transparent management foundations. At the same time, we will make efforts to create and provide rich value in collaboration with our various stakeholders, such as our customers, shareholders and investors, suppliers, employees, and local communities. We conduct all corporate activities fairly and honestly, guided by **the Standards of Conduct for Toshiba Group**.

Sustainability Management Structure

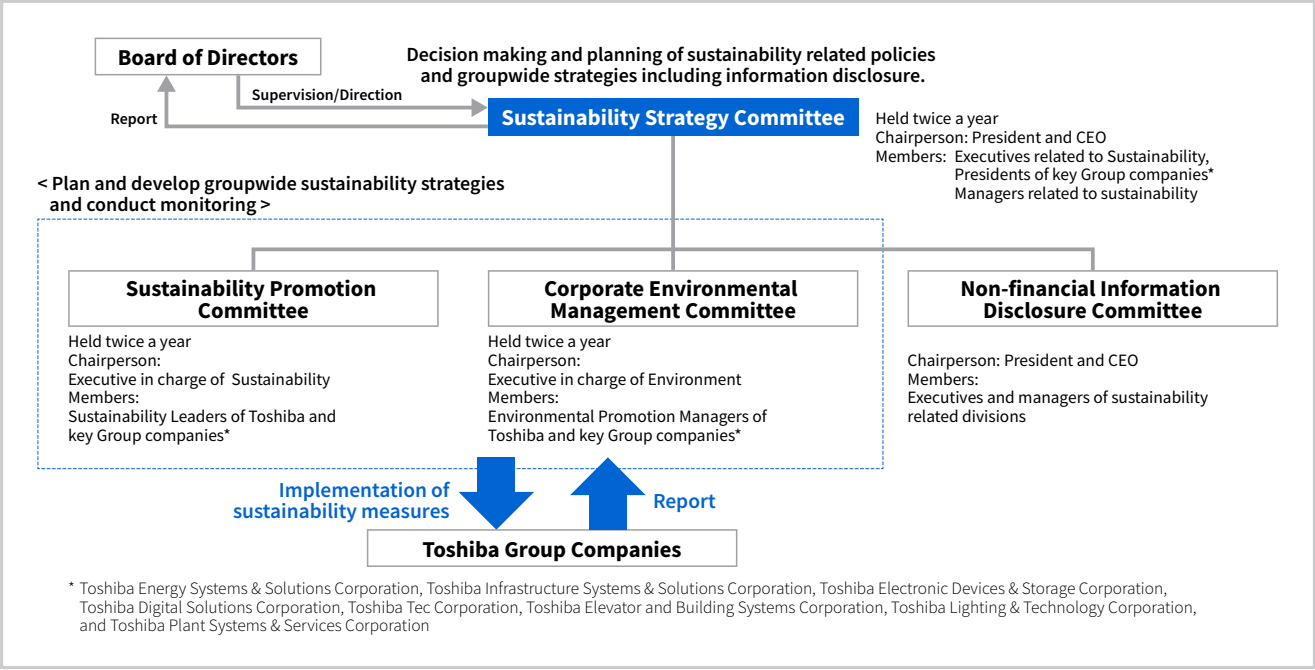
In 2003 Toshiba established an in-house organization to promote CSR, and has put in place a promotion system that covers the Group. As companies are urged to make more effort to help solve global issues represented in the Sustainable Development Goals (SDGs) and help create a sustainable society, we established the Sustainability Management Division in April 2021. Incorporating a sustainability perspective into management, we promote ESG and SDGs activities through all of our corporate activities. We reviewed our sustainability management structure and newly established the Sustainability Strategy Committee chaired by the President and CEO with members comprising executives related to sustainability, presidents of key Group companies*, and managers related to sustainability. Starting from FY2021, the committee meeting is held twice a year as a general rule. The Sustainability Strategy Committee decides on strategies and measures to promote sustainability in Toshiba Group.

Under the Sustainability Strategy Committee, we set up three committees, namely the Sustainability Promotion Committee that considers specific measures based on decisions made by the Sustainability Strategy Committee, develops an action plan, and monitors progress; the Corporate Environmental Management Committee that has functioned since 1991; and the Non-financial Information Disclosure Committee that approves the disclosure of ESG information to be included in our Integrated Report and Sustainability Report. The Sustainability Promotion Committee is chaired by the executive in charge of sustainability. The Corporate Environmental Management Committee is chaired by the executive in charge of environment. As a general rule, each of the committees holds a meeting twice a year to discuss and examine various measures that Toshiba Group is promoting.

The executive in charge of sustainability and environment regularly report the status of measures being taken and receive supervision and advice at the Board of Directors meetings.

* Toshiba Energy Systems & Solutions Corporation, Toshiba Infrastructure Systems & Solutions Corporation, Toshiba Electronic Devices & Storage Corporation, Toshiba Digital Solutions Corporation, Toshiba Tec Corporation, Toshiba Elevator and Building Systems Corporation, Toshiba Lighting & Technology Corporation, and Toshiba Plant Systems & Services Corporation.

Sustainability Management Structure



The main details of the initiatives undertaken at each committee meeting in FY2022 are as follows:

Sustainability Strategy Committee

Formulation of AI Governance Statement, report on human rights impact assessments, report on climate change initiatives, introduction of technological trends related to sustainability

Sustainability Promotion Committee

FY2021 summary, FY2022 plan, confirmation of KPIs linked to material issues, report by the Sustainability Strategy Committee

Corporate Environmental Management Committee

FY2021 summary, FY2022 plan, confirmation of progress of KPIs and Environmental Action Plan (EAP) linked to material issues, reports related to environmental risk compliance, etc.

Non-financial Information Disclosure Committee
Confirmation and approval of information presented in the sustainability website and Integrated Report

Details of the Sustainability Strategy Committee meetings are reported to the Board of Directors to recieve supervision and advice.

Monitoring

The Sustainability Promotion Committee monitors the progress of sustainability-related measures such as KPIs based on material issues.
See below for material issues and KPIs.

▶Material Issues and KPIs

From FY2023 onward, the Sustainability Promotion Committee will monitor the status of sustainability-related measures, such as the achievement of KPIs, and work to further strengthen initiatives.

Increasing Employee Awareness of Sustainability

In order to raise sustainability awareness of employees in Toshiba Group, the President and CEO reaffirms the philosophy of Basic Commitment of the Toshiba Group at every opportunity, such as the start of each half-year term, at company ceremonies, and at start-of-year addresses. The importance of implementing sustainability management is also communicated. We also conduct sustainability management-related training for newly hired employees and newly appointed managers as needed as well as annual e-learning for all employees in line with the Standards of Conduct for Toshiba Group in areas such as the environment, information security, respect for human rights, engineering ethics, compliance with antitrust laws and prohibition of bribery.

Toshiba Group's Sustainability Month
Since FY2006, Toshiba Group has designated December as Sustainability Month (renamed from CSR Month in FY2020). During this month, we hold seminars on topics such as human rights, and concentrate on social contribution activities at each of the Group companies and business sites.

In FY2022, the President and CEO explained important sustainability-related issues that we should focus on, including climate change and human rights issues, and the implementation of measures to achieve our goals. He pointed out that in order to contribute to the realization of a sustainable society, Toshiba Group itself needs to be a sustainable company, and in order to realize sustainability, it is essential for each and every one of us to have a strong awareness and accrue behavioral change.

During the month, Mr. Hidemitsu Sasaya, a Professor at Chiba University of Commerce and ESG/SDGs consultant, gave an online seminar on the background to expansion of ESG investment and the realization of ESG management.

We also utilized our internal website to distribute the content aimed at deepening knowledge of ESG and the Toshiba Group's sustainability management as well as seminars on human rights, and also to share examples of social contribution activities and health and safety activities that were commended for their excellence.

Additionally, in FY2022, an annually-held Toshiba Group Volunteer Days event took place at the beginning of December, which is around the International Volunteer Day on December 5, to provide volunteering opportunities for all Toshiba Group employees.

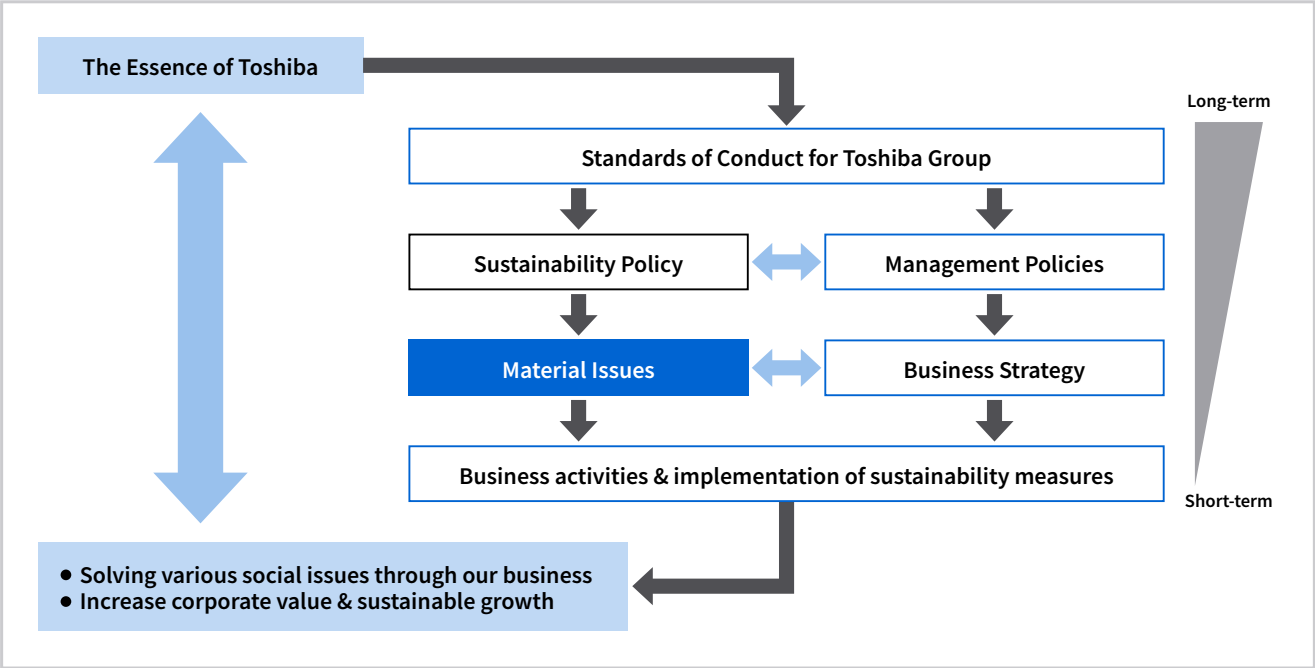
Moving forward, we will continue to work to raise each employee's awareness of sustainability.

Material Issues and KPIs

Guided by the Essence of Toshiba, Toshiba Group works on material issues that could impact business activities from a medium and long-term perspective in accordance with the Sustainability Policy and promotes sustainability management that contributes to the development of society.

We have tackled the material issues identified in 2013 by regularly confirming their status. However, response to climate change is now required on a global scale, and social issues are changing according to various perspectives as seen in the SDGs adopted by the United Nations. Toshiba Group also reviewed its businesses. Accordingly, we re-identified new material issues in FY2021.

We position the material issues under the Essence of Toshiba and the Sustainability Policy, and will work on initiatives Group-wide.



Toshiba Group's Material Issues

We believe that in order for people and businesses to survive, it is vital that the earth, in which we live, is safe, stable, and a place that humans can thrive. Guided by the Essence of Toshiba, our business activities contribute to finding solutions to a range of social issues and supporting the sustainable growth of society, in consideration of not only the present global environment but also the planet in the future. We recognize the importance of maintaining a management foundations with integrity and transparency to support our business activities, and, to that end, have set out the following as material issues to be addressed by Toshiba Group so as to increase our corporate value.

	Vision for 2030	Material Issues
For the irreplaceable global environment in which we live	Promote corporate activities with full consideration for the global environment throughout our value chain, from design, procurement, manufacturing, logistics and sales, through to disposal.	• Respond to climate change • Respond to the circular economy • Consider ecosystems
For respect of human rights, to nurture people and technology, and to give back to society	Encourage every Group employee to feel pride and fulfillment in their work, and to harness creativity and technology in collaborating with business partners to realize rich value.	• Secure, retain and train human resources • Ensure employee health and safety • Promote respect for human rights • Promote sustainable procurement • Strengthen R&D to stimulate innovation
For further strengthening thorough governance	Practice transparent corporate governance and optimal internal controls; and execute management with integrity, trusted by stakeholders.	• Strengthen governance • Strengthen cyber resilience

In order to ensure a bright future for people and the planet, Toshiba Group is aiming to realize carbon neutrality and a circular economy.

Specifically, we will make maximum use of the power of data to build infrastructure that everyone can enjoy in the safe and secure life and a connected data society that will ensure social and environmental stability. We recognize that the “strengthen cyber resilience,” which is indispensable to promoting data-based business, the “strengthen R&D to stimulate innovation,” which forms the foundation of our business, and the “secure, retain and train human resources” are material issues especially tied to our business deeply., Toshiba Group address all our material issues including these with integrity.

Process of Material Issues Identification

Before re-identifying material issues, Toshiba Group extracted and organized issues with reference to the SDGs, which are universal social issues, the Global Risks Report published by the World Economic Forum (WEF), and guidelines including the SASB Standards. We narrowed them down to those of priority, evaluating them by their closeness to the businesses specified in the Mid-term Business Plan that starts from FY2022 and their importance in terms of strengthening the foundations to drive businesses. External experts then reviewed the draft of the selected issues. In August 2021, the Sustainability Strategy Committee chaired by the President and CEO confirmed the selection. The re-identified material issues were also reported to the Executive session of the Board in September 2021. The Executive Session of the Board was established to revitalize the exchange of information among outside directors and to further improve their understanding of the Company's business, etc., and is comprised solely of outside directors. In principle, meetings are regularly convened once a quarter, and held on an extraordinary basis if requested by an outside director.

KPIs

The Sustainability Strategy Committee decides on KPIs in line with material issues and we work on them.
The Sustainability Promotion Committee monitors efforts related to these items to strengthen future initiatives.

For the irreplaceable global environment in which we live

Respond to Climate Change

KPIs	FY2022 Targets	FY2022 Achievements	FY2023 Targets
Total GHG generated from business activities	1.02 million t-CO_2	0.77 million t-CO_2	0.98 million t-CO_2
Reduction rate of GHG emissions from products and services associated with power supply (compared to FY2019)	11.4% reduction	70.4% reduction	13.6% reduction
Reductions in GHG emissions contributed by products and services associated with renewable energy supply (cumulative total from FY2021)	28 million t-CO_2	50 million t-CO_2	43 million t-CO_2
Reductions in GHG emissions contributed by products and services associated with energy consumption (cumulative total from FY2021)	41 million t-CO_2	38 million t-CO_2	57 million t-CO_2

See below for details of achievements and initiatives.

▶**Response to Climate Change**

Respond to the Circular Economy

KPIs	FY2022 Targets	FY2022 Achievements	FY2023 Targets
Waste volume in business activities	25,000 t	30,000 t	25,000 t
Amount of plastic resources recycled in products and services (cumulative total from FY2021)	1,200 t	1,552 t	1,800 t
Amount of resources saved in products and services (cumulative total from FY2021)	270,000 t	200,000 t	400,000 t

See below for details of achievements and initiatives.

▶**Response to the Circular Economy**

Consider Ecosystems

KPIs	FY2022 Targets	FY2022 Achievements	FY2023 Targets
Amount of chemicals discharged per unit from business activities	99% compared to FY2021	91% compared to FY2021	99% compared to FY2022
Amount of water received per unit from business activities	99% compared to FY2021	104% compared to FY2021	99% compared to FY2022

See below for details of achievements and initiatives.

▶**Consideration of Ecosystems**

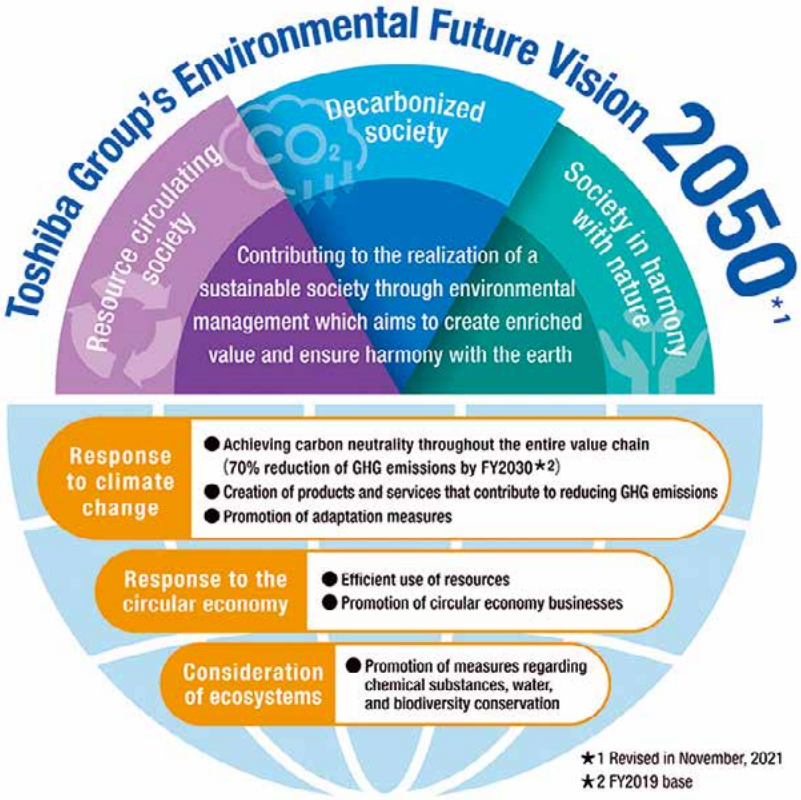
Environmental Future Vision 2050

In recent years, climate change, the depletion of energy and resources, and various other environmental issues have intensified, to the point where they threaten the safe, secure lives of future generations. With regard to climate change in particular, given the impacts of floods, droughts, and enormous typhoons in many parts of the world, the 2015 adoption of the Paris Agreement*1 has accelerated the movement toward carbon neutrality in each country. In the face of these circumstances, companies must recognize the importance of climate change from a long-term perspective and proactively respond in order to achieve carbon neutrality.

In addition, over the last several years, countries worldwide have been trying to address issues such as the transition to a circular economy, marine plastics, water resources, and biodiversity conservation; and society's interest in such issues are on the rise. Meanwhile, the dissemination of the SDGs, the expansion of ESG investment, and other movements involving corporate management aimed at sustainability overall are gaining momentum.

Amid these changing circumstances, we consider it important to continue providing enriched value to customers while responding to global trends from a long-term perspective in order to contribute to the realization of a sustainable society and to aim to grow sustainably as a company. As such, Toshiba Group formulated the Environmental Future Vision 2050 as a new long-term vision in November 2020 to address carbon neutrality, the circular economy, and other issues from a global perspective. With the goal of "contributing to the realization of a sustainable society through environmental management which aims to create enriched value and to ensure harmony with the earth," the Environmental Future Vision 2050 aims to realize a sustainable society—in other words, a decarbonized society, a resource circulating society, and a society in harmony with nature. Under the same concept of backcasting,*2 which has been incorporated at the formulation of the previous Vision from 2007, we will promote the implementation of initiatives in three areas: "response to climate change," "response to the circular economy" and "consideration of ecosystems" so as to realize the ideal situation in 2050. In November 2021, we revised the vision "response to climate change" to further accelerate initiatives toward achieving carbon neutrality throughout the entire value chain*3.

*1 The Paris Agreement is an international framework adopted at the 21st session of the Conference of the Parties (COP21) that seeks to reduce the volume of greenhouse gas (GHG) emissions. It aims to restrain the increase in the global average temperatures to less than 2°C from the pre-industrial level and to pursue efforts to limit the temperature increase even further to 1.5°C. To this end, the Agreement's target is to lower the volume of GHG emissions to substantially zero by the latter half of this century.
*2 Backcasting is a method that defines a desired goal and works back through the series of actions necessary for its achievement.
*3 Vision "Response to climate change" formulated in November 2020: "Contribution through the entire value chain to achieve net zero GHG emissions in society (50% reduction across the Group's value chain by FY2030)"
Vision "Response to climate change" revised in November 2021: "Achievement of carbon neutrality throughout the entire value chain (70% reduction of GHG emissions by FY2030)"



For respect of human rights, to nurture people and technology, and to give back to society

Secure, Retain and Train Human Resources

KPIs	FY2022 Targets	FY2022 Achievements	FY2023 Targets
Percentage of female employees in executive and in managerial positions (Percentage of female exempt employees)*1	6.0%	5.8%	6.5%
	Set a target of 8% for FY2025		
Engagement score in the employee engagement survey*1	63%*1 (55 points*2)	55 points*1	57 points*3
	Set a target of 59 points or above for FY2025*3		
Number of AI experts*4	2,000	2,100	2,200

*1 At Toshiba, Toshiba Energy Systems & Solutions Corporation, Toshiba Infrastructure Systems & Solutions Corporation, Toshiba Electronic Devices & Storage Corporation, and Toshiba Digital Solutions Corporation
*2 The engagement measurement method has been changed from FY2022. 63% of the conventional method is equivalent to 55 points in the new method.
*3 All companies participating in the TEAM survey (Reference: in FY2022, 87 Toshiba Group companies in Japan and overseas, or 64% of all employees, participated.)
*4 At Toshiba, Toshiba Energy Systems & Solutions Corporation, Toshiba Infrastructure Systems & Solutions Corporation, Toshiba Electronic Devices & Storage Corporation, Toshiba Digital Solutions Corporation, Toshiba Tec Corporation, Toshiba Elevator and Building Systems Corporation, and Toshiba Lighting & Technology Corporation

See below for details of achievements and initiatives.

▶Fair Evaluation and Talent Development
▶Promotion of Diversity and Inclusion

Ensure Employee Health and Safety

KPIs	FY2022 Targets	FY2022 Achievements	FY2023 Targets
Fatality due to work-related accidents	Zero (no accidents)	1	Zero (no accidents)
Severity rate of work-related accidents*1	0.01*2 or less	0.005	0.01*2 or less
Ratio of employees with metabolic syndrome*1	Same as the previous fiscal year or less	34.6%	Same as the previous fiscal year or less
	28.6% or less*3 by the end of FY2025; The targets for each year up to FY2025 should be at the same value as the previous fiscal year or less.		

*1 At Toshiba and Toshiba Group in Japan
*2 The target value is the average value (value published by Ministry of Health, Labour and Welfare) for the electrical appliance industry (companies of 1,000 employees or more) for 2020
*3 The 2019 national average (value published by Ministry of Health, Labour and Welfare) was decided as the target value at the OHS Management Conference held in the first half of FY2020

See below for details of achievements and initiatives.

▶Ensure Employee Health and Safety

Respect for Human Rights

KPIs	FY2022 Targets	FY2022 Achievements	FY2023 Targets
Rate of human rights-related seminars and workshops for sustainability leaders held	100%*1	100%*1	100%*2
Participation rate in human rights education programs (e-learning) under the Standards of Conduct for Toshiba Group	100%	99%	100%
Human rights due diligence initiatives (a) Implementation rate of human rights impact assessments in our own company's businesses	100%*1	100%*1	—
Human rights due diligence initiatives (b) Implementation rate of the survey on the actual conditions and the measures for correction, prevention, and mitigation	—	—	100%*1

*1 At Toshiba, key Group companies, Toshiba Elevator and Building Systems Corporation, Toshiba Lighting & Technology Corporation, and Toshiba Plant Systems & Services Corporation
*2 Implement at expanded targets

See below for details of achievements and initiatives.

▶Respect for Human Rights

Promote Sustainable Procurement

KPIs	FY2022 Targets	FY2022 Achievements	FY2023 Targets
Obtaining consent for the Toshiba Group Procurement Policy from new suppliers	100%	100%	100%
Number of companies where we conducted our Sustainable Procurement Survey*1	11,400	12,622	13,000
Implementation rate of sustainable procurement training on Group procurement employees*2	38%	41%	100%

*1 The number of companies is a cumulative total. Implementation rate at key business partners is 100%.
*2 Excluding Toshiba Tec Corporation.

See below for details of achievements and initiatives.

▶Promote Sustainable Procurement
▶Fair Trading (Risk Management and Compliance)
▶Procurement

Strengthen R&D to Stimulate Innovation

KPIs	FY2022 Target	FY2022 Achievements	FY2023 Target
Ratio of R&D expenses to sales	5.0% or higher	4.7%	5.0% or higher

See below for details of achievements and initiatives.

▶Strengthen R&D to Stimulate Innovation
▶Technologies

For further strengthening thorough governance

Strengthen Governance

KPIs	FY2022 Target	FY2022 Achievements	FY2023 Target
Percentage of outside directors on Toshiba's Nomination Committee, Audit Committee, and Compensation Committee*	100%	100%	100%

* Toshiba

Strengthen Cyber Resilience

KPIs	FY2022 Target	FY2022 Achievements	FY2023 Target
Maturity self-assessment regarding cyber security management*	Higher than previous fiscal year	3.4	Higher than previous fiscal year (upon reaching 4, remain at 4 or higher)

* At key Group companies, Toshiba Elevator and Building Systems Corporation, Toshiba Lighting & Technology Corporation, Toshiba Plant Systems & Services Corporation, and Toshiba Development & Engineering Corporation

See below for details of achievements and initiatives.

▶Cyber Security Report
▶Cyber Security

Information Disclosure Based on the TCFD Recommendations

The Task Force on Climate-related Financial Disclosures (TCFD), which was established by the Financial Stability Board, published its final report in 2017 that urged companies to disclose information on their climate-related risks and opportunities. We have endorsed the TCFD recommendations and are a member of the TCFD Consortium, which aims to promote actions by organizations in Japan in support of the TCFD recommendations. Based on the TCFD recommendations, we will proactively disclose information on risks and opportunities for our business brought about by climate change and promote initiatives to reduce such risks and maximize opportunities.

Governance

We have a system in place that has the Board of Directors appropriately supervise our efforts to address climate change and other important sustainability-related issues. Important policies, strategies, and measures concerning sustainability are discussed at the Sustainability Strategy Committee meeting held twice a year before they are reported to the Board of Directors. Executives related to sustainability, presidents of key Group companies, and managers related to sustainability participate in the meetings of the Sustainability Strategy Committee chaired by the President and CEO. Of the items discussed at this meeting, the Executive in charge of Sustainability and the Executive in charge of Environment report on important issues related to management at the Board of Directors meetings to be reflected in the Group's business strategy. Specifically, the status of initiatives related to climate change is reported to the Board of Directors four times a year.

The main resolutions and cases regarding climate change reported at recent Board of Directors meetings are as follows:

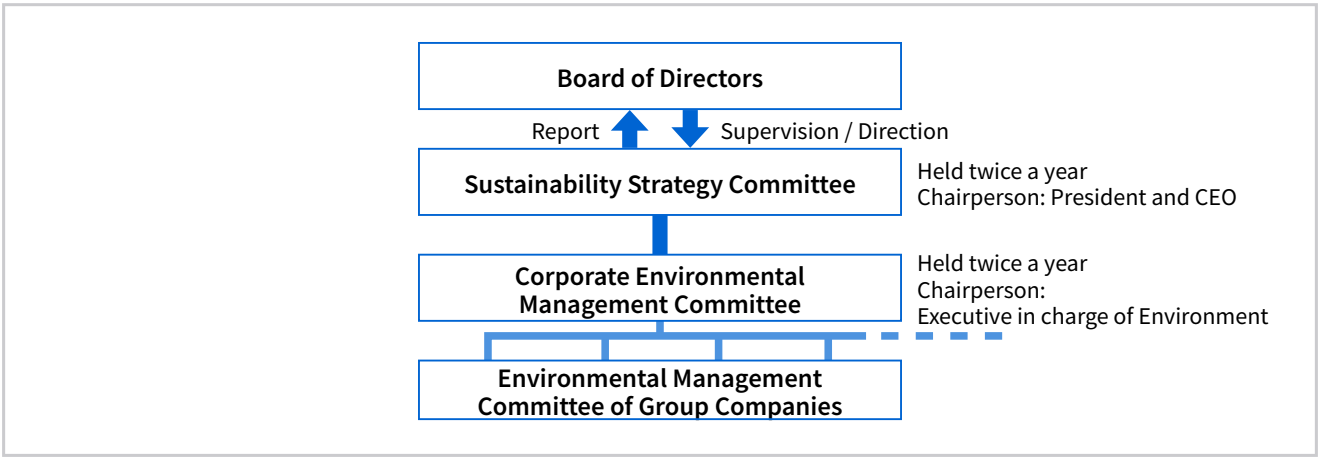
- FY2021: Toshiba Group Sustainability Policy, which is a new policy on sustainability management that includes the company's response to climate change, was resolved.
- FY2022: Toshiba Group's carbon neutral promotion scheme and the setting of renewed SBT (Science Based Targets) as well as the setting of non-financial KPIs associated with Toshiba Group's material issues, including response to climate change, were reported.

More detailed measures and policies related to the environment are discussed at the meetings of the Corporate Environmental Management Committee set up under the Sustainability Strategy Committee. The Corporate Environmental Management Committee meeting, chaired by the Executive in charge of Environment, is held twice a year and is attended by environmental promotion managers of key Group companies and corporate staff division managers. What is discussed here is then spread within each Group company in the Environmental Management Committee of Group Companies meetings to be held at key Group companies.

Toshiba Group has introduced evaluation of non-financial aspects to its executive compensation system. In the individual evaluation for performance-linked compensation of Toshiba Corporation's Executive Officers and Corporate Officers as well as some senior directors at Group companies, special contributions for environmental management, including response to climate change, are taken into account. The evaluation items include the status of progress toward GHG reduction targets and initiatives for achieving carbon neutrality.

Using the same evaluation items as for officers, we also conduct environmental management evaluation of our key group companies. The results of environmental management evaluations are reflected in each company's performance evaluation as well as each company's employee bonuses.

▶Toshiba Group Environmental Audits and Performance Evaluation System



▶Environmental Management Structure
▶Sustainability Management

Strategy

Under Environmental Future Vision 2050, Toshiba Group is undertaking initiatives on climate change with the aim of achieving carbon neutrality throughout our entire value chain. In addition to reducing GHG emissions within the Group, measures are actively being implemented in each stage of the value chain, including increasing the creation of products and services that contribute to reducing GHG emissions in society and cooperating with suppliers to reduce upstream emissions.

Toshiba Group material issues also include "response to climate change" as a key item, and achieving carbon neutrality is an important policy shared by the entire Toshiba Group.

▶Environmental Future Vision 2050
▶Material Issues and KPIs

To realize highly resilient corporate management as society changes in various ways due to the impact of climate change, it is important to respond appropriately by grasping the risks and opportunities from climate change facing our company. Under the Sustainability Strategy Committee chaired by the President and CEO, Toshiba Group conducts scenario analysis for each business domain to grasp and consider countermeasures for climate change-related risks and opportunities.

Setting scenarios

In scenario analysis, we set up the following two scenarios:

- **1.5°C scenario:**

For mainly transition risks and opportunities, we use the Net Zero Emissions by 2050 (NZE) scenario created by the International Energy Agency (IEA), assuming a world where the temperature increases by 1.5°C compared to the level before the industrial revolution. This scenario predicts increase in costs due to carbon tax, energy saving related regulations, the introduction of renewable energy, etc., as well as increase in business opportunities due to growing demand for energy technologies to realize decarbonization and energy-saving products and services.

- **4°C scenario:**

For mainly physical risks and opportunities, we use the RCP 8.5 scenario described in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), assuming a world where the temperature increases by more than 4°C compared to the level before the industrial revolution. Although this scenario does not predict an impact due to regulations and technology as the 1.5°C scenario does, the impact of physical damage such as greater risk of natural disasters like typhoons and floods caused by unusual weather may increase.

Analysis method

- **Scope:**

To confirm the wider impact on all our main businesses, we expanded the targets of scenario analysis to the following seven business domains in FY2023. Since each domain has various businesses and the content and degree of impact of risks and opportunities vary according to the business, we conduct a detailed analysis for each business division to identify risks and opportunities that are specific to each business. Not stopping at the initiatives of our own company, the analysis covers the entire value chain including the upstream (suppliers) and downstream (customers, users).

- Energy Systems & Solutions Business
- Infrastructure Systems & Solutions Business
- Building Solutions Business
- Retail & Printing Solutions Business
- Electronic Devices & Storage Solutions Business
- Digital Solutions Business
- Other (Battery Business)

- **Time frames:**

Three time frames are set (short-, mid-, and long-terms). We assumed the present to 3 years as the short-term in light of the period of the mid-term business plan, up to FY2030 as the mid-term in light of the setting periods of Toshiba Group's management policy and our GHG emissions reduction targets (mid-term), and up to FY2050 as the long-term in light of Toshiba Group's Environmental Future Vision 2050 and our GHG emissions reduction targets (long-term).

• **Analysis Steps:**

We conduct scenario analysis in line with the steps, “Risk importance assessment,” “Definition of scenario groups,” “Business impact assessment,” and “Definition of countermeasures” based on the TCFD recommendations.

In the most recent scenario analysis, we used a common format in the business domains listed in the scope on the previous page. First, each business division identifies transition and physical risks and opportunities that climate change would pose to their respective business in line with the two scenarios, “1.5°C” and “4°C,” based on the risk and opportunity categories presented in the TCFD recommendations, in light of the relevant business circumstances. Then, each business division assesses the importance of each risk and opportunity in accordance with the company-wide assessment standards. We set (1) three levels of impact (assessed by impact on sales or expense amounts) and (2) three levels of likelihood (assessed by probability and frequency) as the assessment standards. By multiplying the two assessment results, we categorize the final importance into one of three levels: low, medium, and high. Note that in this report we have mainly disclosed risks and opportunities with medium and high importance based on the assessment results.

In addition, these analysis results were reviewed by related corporate staff divisions (Strategic Planning Division, IR Division, Sustainability Division, Environment Division) to reflect the viewpoint of each area of expertise. Moreover, of the risks and opportunities that have been identified and assessed, those with particularly high importance or those that are unique to each business are calculated for the amount of financial impact and countermeasure costs by setting parameters, and we will give priority to formulating countermeasures for such items.

Analysis results

The main results of the latest scenario analysis conducted in FY2023 are as follows.

Risks and Opportunities Common to Toshiba Group

Category		Main Risks	Importance	Main Countermeasures
Transition Risks	Policy and Legal	• Increase in response costs due to the wider introduction of carbon taxes and the emissions trading systems and to the rise in the certificate price, price passed through to raw materials • Increase in requests for the introduction of renewable energy due to GHG emissions reduction targets and policies of countries • Increase in response costs due to stricter energy saving related laws and regulations and information disclosure related laws and regulations	Meidum	▶ **Introduction of the internal carbon pricing system for suppressing increase in future energy costs and certificate and credit related costs** ▶ **Expanding the introduction of renewable energy** ▶ **Promotion of the development of environmentally conscious products with high energy saving performance**
	Technology	• Missing out on sales opportunities due to delayed development in response to growing demand for products and services that contribute to carbon neutrality	Meidum	▶ **Investment in the research and development of renewable energy related technologies and products and services with high energy saving performance**
	Market	• Missing out on sales opportunities due to delayed response to changes in the preference of the market and customers, such as growing demand to respond to climate change • Increase in prices of procured items due to accelerated decarbonization initiatives at suppliers	Meidum	▶ **Appropriate and quick response to requests from markets and customers** ▶ **Formulation of a procurement plan for business continuity including securing multiple suppliers**
	Reputation	• Increase in business continuity risk as a result of lost trust from stakeholders due to delayed response to climate change • Missing out on opportunities to receive ESG investment due to declined evaluation regarding climate change response	Small	▶ Promotion of initiatives and strengthening of information disclosure in light of requirements from outside the company - **Response to Climate Change** - **Evaluations**
Physical Risks		• Suspended operations and increased response costs due to the impacts of natural disasters such as typhoons and floods (listed below) - Damage to production equipment - Impact on component procurement due to damage to suppliers - Impact on logistics and sales capabilities - Impact on employees	Meidum	▶ Strengthening of business continuity plan (BCP) ▶ Securing multiple suppliers - **Risk Management Using the Business Continuity Plan (BCP)**

Category	Main Opportunities	Importance	Main Countermeasures
Opportunities	• Increase in demand for technologies, products, and services that contribute to carbon neutrality	Large	▶ Provision of products and services that contribute to carbon neutrality - **Provision of green transformation (GX) consulting service (Japanese only)** - **Development and provision of renewable energy related technologies, VPP, hydrogen solutions, CO_2 separation and capture technology**

* “Transition Risks" and "Opportunities" in common risks/opportunities are mainly identified assuming the 1.5°C scenario. “Physical Risks” are identified assuming the 4°C scenario.
* “Importance” of common risks/opportunities is based on the assessment of "impact" and "likelihood" as described in the "Analysis steps" above, and is determined comprehensively considering other factors such as the status of our response to the risks/opportunities.

Toshiba Group's Risks and Opportunities by Business

With respect to risks by business, mainly transition risks under the 1.5°C scenario are described. For physical risks under the 4°C scenario, please refer to Risks and Opportunities Common to Toshiba Group.

Opportunities are also described mainly under the 1.5°C scenario. However, these also include some opportunities under the 4°C scenario (increase in demand for disaster management solutions, disaster-resistant elevators, and emergency storage battery systems).

	Main Risks	Main Opportunities	Related products, services, and initiatives
Energy Systems & Solutions Business	• Increase in response costs and missing out on sales opportunities due to regulations on the sale of equipment that uses sulfur hexafluoride (SF_6) such as gas insulated switchgears, for which regulations are increasingly restrictive • Missing out on sales opportunities for products due to delayed development of new technologies related to renewable energy • Missing out on sales opportunities due to the shortage or difficulty in procuring renewable energy-related components • Increase in product development and production costs due to changes of the materials of energy related products for low carbonization or decarbonization • Costs for design changes to wind power generation facilities in the case of winds exceeding expectations due to extreme weather	• Increase in demand for renewable energy-related technologies • Increase in demand for virtual power plants (VPP) • Increase in demand for hydrogen solutions • Increase in demand for SF_6 gas-free equipment • Spread and expansion of CCUS (Carbon dioxide Capture, Utilization and Storage) • Spread and expansion of Direct Current Power Transmission grids	▶ Renewable Energy & VPP ▶ Hydrogen Energy ▶ Toshiba and Meidensha to develop GIS jointly using natural origin gases ▶ Efforts for CO_2 emission reduction-CO_2 capture technology ▶ Development Project of Integrated Demonstration Facility and Supply Chain for Sustainable CCUS Adopted by Ministry of the Environment ▶ The Renaissance of Direct Current Power Transmission: Why Now and What Makes It Special?
Infrastructure Systems & Solutions Business	• Increase in development costs as a result of introducing low carbon technologies or next-generation technologies to social infrastructure products, industrial equipment, etc. • Increase in response costs and missing out on sales opportunities due to regulations on the sale of equipment that uses sulfur hexafluoride (SF_6) such as cubicle gas insulated switchgears (C-GIS) for which regulations are increasingly restrictive • Increase in procurement costs due to price hikes in steel, copper, aluminum, magnets, etc. • Increase in product development and production costs as a result of changing the materials for low carbonization and decarbonization in social infrastructure facilities, etc.	• Increase in demand for railway systems using batteries that contribute to reducing environmental impacts • Increase in demand for automotive products (motors, etc.) due to increased sales of electric vehicles • Increase in demand for products with low CO_2 emissions and systems linked to such products • Increase in demand for disaster management solutions	▶ Railway Systems ▶ Automotive Motors ▶ Automotive Motors (U.S. manufacturing site) ▶ Disaster Management Solutions ▶ Stormwater Drainage Solutions ▶ Renewable Energy Power Generation Systems (Japanese only) ▶ Phased Array Weather Radar ▶ Robotics, Logistics System Solutions
Building Solutions Business	[Lighting Business] • Missing out on sales opportunities for next-generation solutions to achieve carbon neutrality due to delayed development • Increase in procurement costs due to price hikes in main materials, including steel sheets, aluminum, copper, glass, resin, etc. [Elevator & Escalator Business] • Missing out on sales opportunities due to delayed development of energy-saving technologies for elevators and escalators • Increase in product costs due to increased procurement costs as a result of improved energy-saving functions of elevators and escalators	[Lighting Business] • Increase in demand for high efficiency LED lighting due to increased upgrading to equipment with high energy-saving performance • Increase in demand for automotive high efficiency LED products due to a greater number of vehicles with high environmental performance (hybrid vehicles, electric vehicles, etc.) [Elevator & Escalator Business] • Increase in demand for elevators and escalators with high energy-saving performance • Increase in demand for renewal to the latest control systems due to the acceleration of energy-saving initiatives for existing buildings • Increase in demand for disaster-resistant elevators, such as those that resist flood damage	[Lighting Business] ▶ General Lighting LED lighting with camera ViewLED (Japanese only) ▶ Industrial Lighting　An eco-friendly light source ▶ Environmental Initiatives (Environmentally Conscious Products (ECPs)) (Japanese only) [Elevator & Escalator Business] ▶ Toshiba Machine-Room-Less Elevators　SPACEL Energy-saving Type ▶ Toshiba Machine-Room-Less Elevators　SPACEL SDGs Initiatives ▶ Toshiba Escalators Standard/ Space-saving Type TG Series (Japanese only) ▶ Toshiba Escalators Standard/ Space-saving Type TG Series SDGs Initiatives (Japanese only)
Retail & Printing Solutions Business	• Missing out on sales opportunities for retail & printing related products* and solutions due to failing to meet the standards required by the market and customers • Missing out on sales opportunities for retail & printing related products and solutions due to delayed development of energy-saving technologies • Missing out on sales opportunities due to a lack of emphasis on energy-saving and renewable energy effects of solutions to customers • Increase in costs due to price pass-through to procured items and distribution costs as a result of accelerated response to climate change by suppliers and distribution partners * POS products, Auto ID products, MFP products, and inkjet head products	• Increase in demand for POS products with high energy-saving performance, auto ID products, MFP products, Loops (paper reuse system), linerless label printers, MPS/MDS (optimization of customer printing costs) solutions, etc. • Increase in demand for data services, including retail media (advertisement distribution service) due to the spread of smart receipts and also data sales due to increased collection of ID-POS data • Increase in demand for products and services that contribute to limiting food disposal loss and the resulting reduction in energy consumption • Increase in demand for inkjet head products and inkjet head solution services that contribute to low power consumption and reduced environmental impacts	The following links are all in Japanese. ▶ Data Use Services ▶ Distribution Headquarters/Store System ▶ POS Registers/Store Equipment ▶ Label Printers/Automatic Recognition System ▶ MFPs/Office Equipment ▶ Inkjet Heads

	Main Risks	Main Opportunities	Related products, services, and initiatives
Electronic Devices & Storage Solutions Business	•Increase in costs as a result of installing detoxifying equipment or changing to alternative gases due to tightened regulations on wafer-etching process gas •Increase in amount of capital investment for reducing greenhouse gas emissions •Increase in response costs due to an expanded information disclosure obligation regarding climate change response •Missing out on sales opportunities due to being unable to develop products that contribute to carbon neutrality including power semiconductors at an appropriate time •Increase in raw material costs due to increased demand for products and technologies that contribute to carbon neutrality (electric vehicles, etc.)	•Increase in demand for energy efficiency products, including power semiconductors and high-efficiency semiconductors •Increase in demand for semiconductor products that are adapted to demand for energy-saving products •Increase in demand for products related to electric vehicles due to the expansion of their market •Increased in demand for low power-consumption helium-filled HDDs	▶Power Semiconductors ▶Toshiba to Expand Power Semiconductor Production Capacity with 300-millimeter Wafer Fabrication Facility ▶Automotive Devices ▶Storage Products ▶Epitaxial Reactors with High Growth Rate ▶Parts Materials (Silicon nitride bearing ball, Silicon nitride ceramic substrate)
Digital Solutions Business	•Missing out on sales opportunities due to delayed development of innovative digital technologies and ICT solutions that contribute to carbon neutrality •Missing out on sales opportunities due to a lack of human resources who support the advancement of digital technologies that contribute to the achievement of carbon neutrality; increase in costs for securing and developing human resources	•Increase in demand for ICT solutions (manufacturing IoT solution "Meister Factory series," manufacturing IoT cloud service "Meister ManufactX™," etc.) that contribute to reducing greenhouse gas through improved productivity and streamlining of operations •Increase in demand for co-creation and collaboration with partners who are developing decarbonization businesses (strategic procurement solution "Meister SRM™," etc.) •Increase in demand for maintenance, operation, and recurring businesses for reducing environmental impacts •Increase in demand for co-creation and data utilization businesses (human resource management solution "Generalist®," etc.) that involve customers and the industry	▶Factory IoT Platform ▶Manufacturing IoT Cloud Service ▶Strategic Procurement Solution "Meister SRM™" (Japanese only) ▶Toshiba Succeeds in CO_2 Data Calculation and Data Linkage in Demonstration Test Phase 2 of "CO_2 Data Linkage on the Virtual Supply Chain" Hosted by "Green x Digital Consortium (Secretariat: JEITA)" —Demonstrating Data Linkage/Exchange Using Meister SRM Portal and Asset Administration Shell Technology— (Japanese only) ▶Human Resource Management Solution "Generalist®" (Japanese only)
Other (Batttery Business)	•Increase in costs for automotive batteries due to tightening of automobile fuel consumption regulations •Price hikes in raw materials due to export controls in rare metal-producing countries •Increase in costs and price pass-through to procured products due to compliance with EU battery regulations •Increase in R&D expenses for the development of materials and establishment of manufacturing technologies with less greenhouse gas emissions to reduce carbon footprint •Increase in procurement costs that are associated with changes in materials due to advanced energy-saving technologies for batteries •Missing out on overseas sales opportunities due to delayed investment decisions in response to increasing demand for automotive batteries, etc.	•Increase in demand for automotive batteries as a result of the shift to hybrid and electric vehicles •Increase in demand for stationary and industrial batteries with high energy-saving performance for railways, vessels, industrial equipment, etc. •Increase in demand for storage battery systems due to accelerated introduction of renewable energy •Increase in demand for products that meet adaptation needs, such as emergency storage battery systems	▶SCiB™ ▶Toshiba's SCiB™ rechargeable battery used in various fields ▶SCiB™ Topics ▶Sustainability of SCiB™ ▶Expansion of the Facilities of Yokohama Battery Operations for Increasing Production of Lithium-ion Batteries

For the details of the scenario analysis results for the Retail & Printing Solutions business, please refer to "**Toshiba Tec Group Integrated Report 2023**."

As a result of the scenario analysis for each business assuming the 1.5°C and the 4°C scenario, we identified different risk factors depending on the characteristics of each business. For example, technology and market risks of renewable energy-related products in the Energy Systems & Solutions business, policy and legal risks concerning GHG emissions in manufacturing processes in the Electronic Devices & Storage Solutions business, and risks related to human resources in the Digital Solutions business. As for opportunities, we also identified various business opportunities for each business, including renewable energy-related technologies, railway systems, disaster management solutions, high efficiency LED lighting, elevators with high energy-saving performance, POS systems and multifunction peripherals (MFPs), power semiconductors, ICT solutions that contribute to reducing GHG emissions, and automotive batteries.

Countermeasures

Some of the countermeasures for risks and opportunities that were identified and assessed in the scenario analysis are incorporated into the mid-term business plan of each business domain, and measures are promoted. Risks and opportunities of high importance will continue to be reflected in mid-term business plans, and their progress will be managed regularly.

Toshiba Group's management policy announced in June FY2022 declares that we regard the social trend toward carbon neutrality as an opportunity and will contribute to achieving carbon neutrality by building infrastructure that everyone can enjoy and a connected data society in our business activities. To increase this policy's effectiveness, we first launched a Toshiba Group company-wide project in FY2022 to formulate a GHG reduction roadmap that incorporates specific measures toward carbon neutrality at our own business and production sites, and then promote these activities. In addition, toward contributing to carbon neutrality of the entire society, we have established a structure to promote our business quickly and effectively by making a organizational change to strengthen our energy aggregation business in FY2022, and launching a Negative Emission Project Team in FY2023.

Going forward, we will continue to link scenario analysis results to Toshiba Group's business strategy and engage in resilient business management while appropriately responding to risks and opportunities.

▶Our strategy
▶Response to Climate Change in Business Activities
▶Products and Services Associated with Power Supply
▶Products and Services Associated with Power Consumption
▶Contribution to GHG reduction through digital technology
▶Adaptation Measures to Avoid the Effect of Climate Change
▶Initiatives for Carbon Neutral (Toshiba Energy Systems & Solutions Corporation)

Risk Management

Toshiba Group's risk management concerning climate change is incorporated into the company-wide risk management process. For business risks that have significant impact on management including climate-related risks, we clarify management decision criteria, permissible risk limits, and corporate policy on business withdrawal in making management decisions to achieve Toshiba Group's sustainable growth and increase corporate value. In addition, for each risk case, the Business Risk Review Committee conducts risk assessment, identifies the maximum risk, and establishes items for monitoring. Matters of particular importance are discussed at the Management Meeting. The Business Risk Review Committee meeting is held several times monthly as matters arise. We have added climate-related risks (policy and legal risks, technology risks, market risks, reputation risks, and physical risks) based on the TCFD recommendations to the business risk criteria and will work to strengthen the assessment processes concerning climate change going forward.

With regard to risk management specialized for climate change, we identify risks and assess their importance as part of the scenario analysis for the main business domains, which are conducted under the Sustainability Strategy Committee, and share the results with the Committee. For the risks identified and assessed here, the Executive in charge of Sustainability and the Executive in charge of Environment bring them up to the Board of Directors meetings to be reflected in the Group's management strategy.

▶Structure of Risk Management and Compliance

Metrics and Targets

Under Environmental Future Vision 2050, we aim to achieve carbon neutrality throughout Toshiba Group's entire value chain by FY2050. As a milestone, we aim to reduce GHG emissions by 70% by FY2030 compared to the FY2019 level.

We set out the following breakdown of GHG reduction targets for FY2030 and are promoting related initiatives.

1. Reduce the total of Scope 1*1 and Scope 2*2 (GHG emissions generated from Toshiba Group's own business activities) by 100%*3 by FY2030. (from the FY2019 level)
2. Reduce the total of Scope 3*4 by 70%*5 by FY2030. (from the FY2019 level)

*1 Volume of direct emissions through fuel use at Toshiba Group
*2 Volume of indirect emissions through use of electricity and heat purchased by Toshiba Group
*3 Purchasing of carbon credits to offset GHG emissions of process gases etc., which are difficult to reduce, is incorporated into the carbon neutrality process. The target is set by 70% reduction if purchasing of carbon credits is excluded.
*4 Volume of indirect emissions generated by Toshiba's value chain (raw materials procurement, distribution, sales, disposal, etc.) outside Scope 1 and 2
*5 We promote GHG reduction measures especially for Category 11 (emissions caused by the use of sold products and services) and Category1 (emissions from purchased goods and services), where emissions are particularly high.

As of FY2022, reduction is progressing smoothly in all of Scope 1, 2, and 3 toward achievement of the targets. We will continue to promote GHG reduction measures at each stage of the value chain.

For the results of Scope 1, 2, and Scope 3 Category 11 (emissions caused by the use of sold products and services), we undergo a third-party verification to ensure data reliability.

▶Environmental Future Vision 2050
▶The Seventh Environmental Action Plan
▶Response to Climate Change
▶Greenhouse Gas Emissions Across the Value Chain
▶Third-party Verification

Consideration of Ecosystems

Toshiba Group will assess its dependencies and impacts on nature due to its corporate activities as well as identify risks and opportunities related to nature, followed by consideration of countermeasures. We aim to develop effective activities that contribute to 'nature-positive' world from the viewpoint of both "avoiding and reducing impacts on nature" as well as "restoring and regenerating nature."

Response to "water risks" is an important issue in our environmental management. Toshiba Group, encompassing many businesses, has businesses with large impacts on water resources and other natural capital*, and has sites in various regions around the world. Therefore, we assess and analyze "water risks" that affect corporate activities and are working to strengthen water risk management.

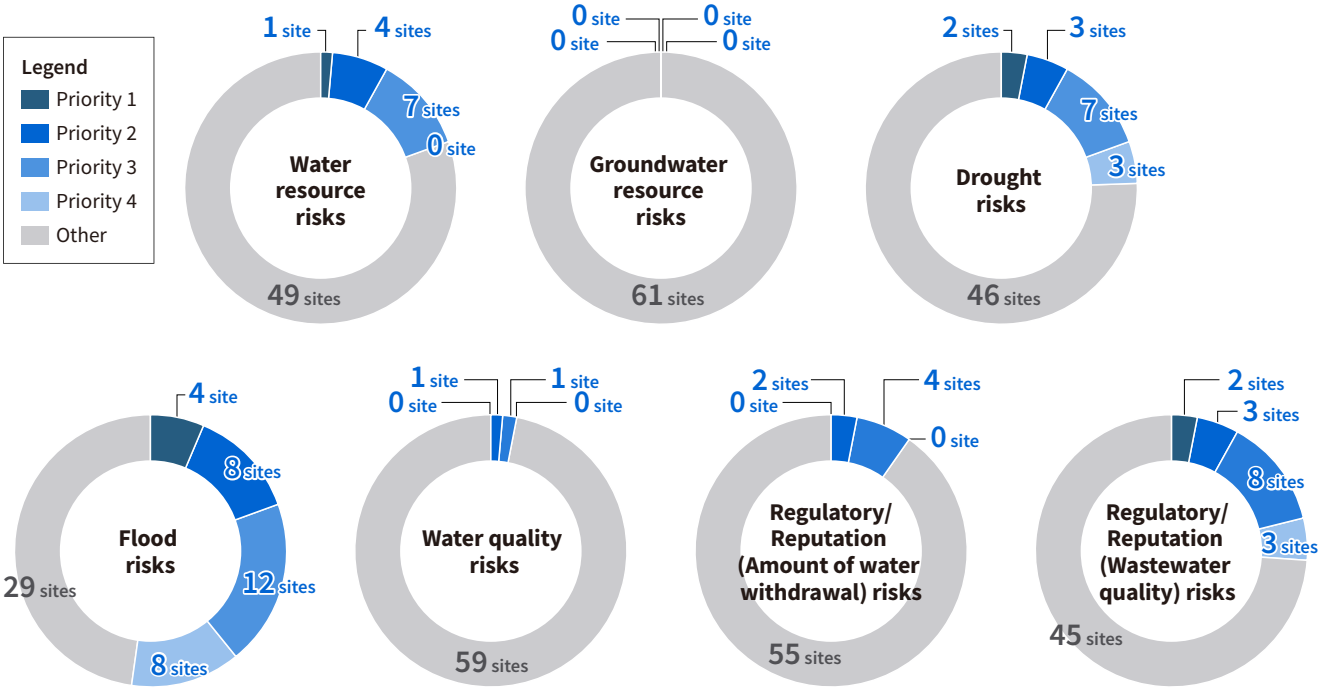
* The impacts of each business on natural capital (especially water resources) are assessed using the MST tool, which is a tool for conducting materiality analysis of 12 impact categories within 5 issue areas, including changes in the use of ecosystems; exploitation of resource such as water; climate change; pollution; and invasive species, per sector.

Water Risk Assessment

Regarding all Toshiba Group production sites in Japan and abroad (approximately 60 sites), we assess water risks by categorizing them into "water quantity (water resource, groundwater resource, and drought) risks," "water quality risks," "flood risks," and "regulatory and reputational risks."

In this assessment, we first conducted the primary assessment using "Aqueduct," a water risk assessment tool run by the World Resources Institute (WRI), along with implementation of a questionnaire survey of the target sites and analysis of hazard maps to supplement the assessment results, in order to obtain and develop data for each site. Through this process, we assessed the water risks of river basins (external factor assessment) on a five-point scale (very High/High/Medium/Low/very Low).

Next, from the sites with a high risk level identified as "very High" or "High" in the external factor assessment results, we chose high priority sites (Priority 1 to 4) taking into consideration the business impact level (Category 1 to 5) based on major indicators, including the amount of water withdrawal, amount of water discharged, and output, then finally extracted sites with high water risks.

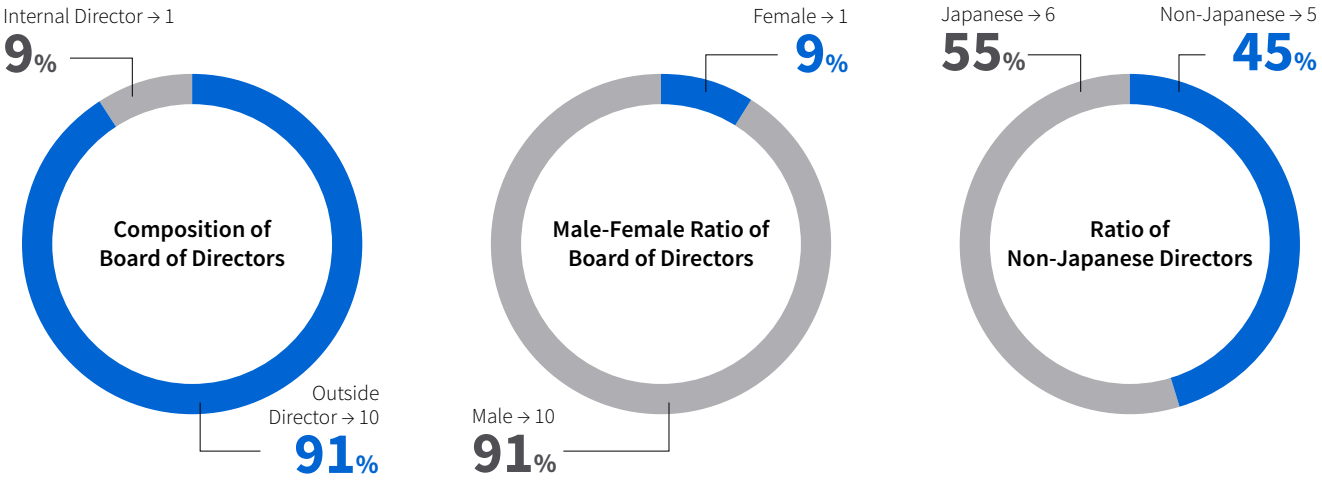


By minimizing water risks mainly at high-risk sites extracted in the assessment, Toshiba Group will contribute to resolving water issues in various areas through the provision of products and services that contribute to reducing water risks.

▶Consideration of Ecosystems
▶Response to Water Risk

These pages show information about FY2022 based on the information as of November 2023.

Highlights of Corporate Governance



Point 1 Committees composed exclusively of Outside Directors

The Nomination Committee, Audit Committee, Compensation Committee and Special Committee, composed exclusively of Outside Directors, determine the content of proposals for the election and dismissal of Directors to be submitted at shareholder meetings, supervise the execution of duties by Executive Officers, and determine the content of individual compensation for Executive Officers, among other matters. The Nomination Committee, Audit Committee, Compensation Committee and Special Committee are chaired by an Outside Director.

Point 2 Directors with a wide range of skills and backgrounds

While having Directors recommended by our major shareholders as shareholder representatives, the Board of Directors is equipped with skill sets required for promoting business transformation for the Company and handling high-risk matters, comprising members who have experience in international business, expertise in business portfolio management, business restructuring, M&A, and capital markets and capital allocation, and expert knowledge of law and compliance, including five foreign-national Directors.

Point 3 Review of strategic alternatives

In April 2022, the Company established a Special Committee, composed of Outside Directors, to engage with potential investors and sponsors and review strategic alternatives that include privatization, and solicited proposals from potential investors and sponsors as potential partners regarding strategic alternatives to enhance the Company's corporate value.

The management team led the engagement with potential investors and sponsors and review of strategic alternatives that include privatization. The Special Committee was substantially involved in the engagement and review by confirming the status of them in a timely manner, confirming the approach of the management team in advance, and expressing its opinions on important aspects.

The Company's Board of Directors carefully considered a tender offer by TBJH Inc. for shares in the Company while respecting the content of a report submitted by the Special Committee to the fullest extent possible, and resolved to support the tender offer and recommend that shareholders tender their shares in the tender offer.

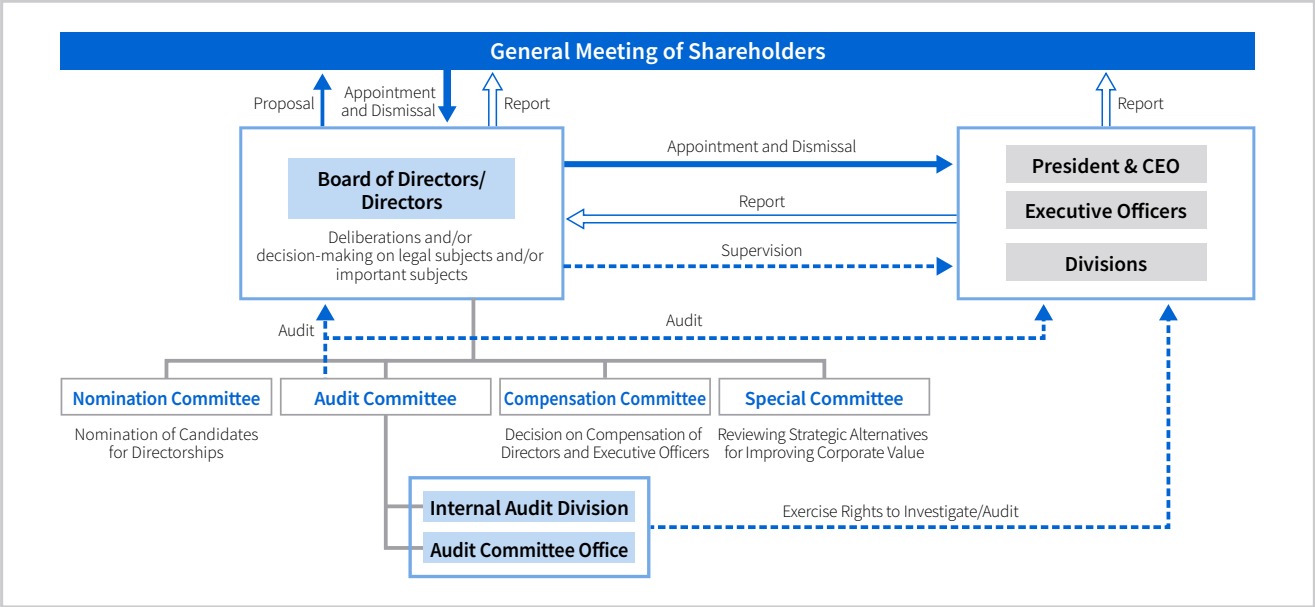
Corporate Governance

Basic Views of Corporate Governance

The basic policy and objectives of Company's corporate governance are to realize sustainable growth and raise the enterprise value of the Group over the medium- to long-term, and to contribute to the interests of all stakeholders, including shareholders, investors, employees, customers, business partners, creditors, and local communities. Under this policy, as the Company puts importance on the Board of Directors' function to supervise business execution, the Company adopts a company with Nomination committee, etc., as its form of organization, that delegates business execution decisions to Executive Officers, allowing the Board of Directors to concentrate on monitoring and supervising execution and determining basic strategy.

The Company has also established "Corporate Governance Guidelines" as of December 21, 2015, that form the framework of governance of the Company.

Corporate Governance Structure



State of Activities of the Board of Directors and Committees

During the FY2022, the Board of Directors met 20 times, the Nomination Committee 10 times, the Audit Committee 15 times, the Compensation Committee 13 times, and the Special Committee 41 times. The following outlines the Board of Directors' and committees' principal activities.

State of activities of the Board of Directors

- In April 2022, a Special Committee ("SC") was formed to engage with potential investors and sponsors and explore strategic alternatives.
- In March 2023, the Board of Directors resolved to consult with SC (i) whether the certain series of transactions, including a tender offer for the common shares of the Company, conducted by TBJH Inc. for the purpose to make TBJH become the sole shareholder of the Company and have the Company privatized (the "Transaction"), would contribute to the enhancement of the Company's corporate value, (ii) whether the procedures for consideration, discussion and negotiation of the Transaction were fair, (iii) whether the methods and terms of the Transaction are fair and appropriate, (iv) whether the Transaction is not disadvantageous for general shareholders of the Company in light of (i) through (iii), and (v) whether or not the Board of Directors should support the tender offer and recommend that shareholders tender their shares in the tender offer in light of (i) through (iv).
- In March 2023, with respect to the tender offer by TBJH Inc. for the Company's common shares, with the utmost respect for the contents of the report submitted by the SC in response to the aforementioned consultation, the Company resolved to express its opinion supporting the tender offer, if commenced, as of March 2023.
- The Board of Directors was provided with reports on business plans, budget, risk control information and the state of duty execution by Directors and Executive Officers pursuant to applicable laws and regulations, the Articles of Incorporation, the Board of Directors Regulations, etc.

State of activities by committees

a. Nomination Committee

- The Nomination Committee deliberated candidates for succes-

sors to Executive Officer, President and CEO.
- The Nomination Committee deliberated on the composition of the Board of Directors.
- The Nomination Committee deliberated on the election of Chairperson of the Board of Directors to be submitted to the Board of Directors.

b. Audit Committee

- The Audit Committee audited the state of the execution of duties by executives, by attending the Board of Directors and other key meetings and by making inquiries to Executive Officers and other personnel, with a focus on the state of observance of corporate ethics and laws and regulations and preventing the recurrence of inappropriate accounting conduct. In addition, the Audit Committee received reports regularly from the Internal Audit Division on their audit results, and from the Legal & Compliance Division and the Project Audit Division on their state of activities, thereby verifying the state of implementation of internal control system. All of the full-time and part-time Audit Committee members attended all hearings and reporting sessions, checked materials and minutes, and participated actively in audit activities.
- Audit Committee members, led by Chairperson of the Audit Committee, collected information actively, which involves attending important meetings (such as corporate management meetings, Risk-Compliance Committee meetings, and Annual Securities Report Disclosure Committee meetings). In addition, Mr. Hashimoto worked to enhance communication with each department through meetings with executives in each department. The information collected was shared with the Audit Committee members in a timely manner.
- The member of Audit Committee attended the Special Committee as an observer to oversee engagement with potential investors and sponsors and the fairness of consideration of strategic alternatives.
- Regarding events that have a major impact on business performance during the period, particularly the appropriateness of reserves for estimated losses was directly checked by the relevant departments and explained by the Accounting Department and the accounting auditor.
- Based on the results of audits by group companies from the Internal Audit Department, it was pointed out that organizational initiatives for governance, risk management, and internal control at domestic and overseas Group companies should be considered on the executive side.
- With regard to the inappropriate accounting conduct, the Company continued the claim for damages filed in the Tokyo District Court in November 2015 against five former executives, including those with experience as President. The first trial judgment was handed down in March 2023, and as a result from measures to be taken the Audit Committee decided to be appeal in April 2023.
- Through the whistleblowing system operated by the Audit Committee, the committee received 32 whistleblowing reports and responded. The Audit Committee was briefed on details and status of responses of all 198 reports to the whistleblowing contact point on the Company's executive side. The committee has prioritized the reports related to accounting and compliance to verify their investigation results and status of improvements. In addition, the Audit Committee received a number of reports concerning the past use of entertainment expenses spend by Executive Officer, investigated them.
- Through liaison meeting with Group company auditors, as well as through education and the like, the Audit Committee worked to improve audit quality of the Company and Group companies by bolstering coordination with Group company's auditors.
- Regarding the evaluation of the effectiveness of the Board of Directors, which is one of the measures to prevent recurrence based on the recommendations of the investigation report of the Governance Enhancement Committee received in November 2021, the Audit Committee took the initiative to draft a basic policy for such evaluation and selected a third-party evaluator.

c. Compensation Committee

- The Compensation Committee deliberated on the provision of the performance-linked compensation for Executive Officers, etc. according to their performance evaluation for FY2021.
- The Compensation Committee deliberated on revisions to the Compensation Policy and the Officer Compensation Rules.
- The Compensation Committee deliberated on the details of the individual compensation to be paid to Directors and Executive Officers from July 2022.
- The Compensation Committee deliberated on the extraordinary compensation for Directors.
- The Compensation Committee deliberated on the compensation plan for Directors and Officers.

d. Special Committee

- On April 7, the Company established a Special Committee, in order to engage with potential investors and sponsors and review strategic alternatives, and on April 21, a resolution was made to solicit proposals on strategic alternatives to enhance the Company's corporate value from potential investors and sponsors who may become potential partners.
- Solicitation for proposals was conducted in two phases, with the initial phase providing limited disclosure information and soliciting a broad range of non-legally binding proposals, and initial proposals were received from ten potential partners, including Japan Industrial Partners, Inc. (JIP).
- After selecting and narrowing down several potential partners, including JIP in the second phase, and after conducting several months of management interviews and due diligence, a legally binding proposal was received from JIP on September 30, 2022.
- Subsequently, as a result of discussions on the tender offer price and confirmation of the funding support, discussions with JIP were finalized in mid-March 2023, and the Special Committee submitted its report of findings to the Board of Directors on March 23, 2023, based on a request from the Board of Directors.

Evaluation on effectiveness of the Board of Directors

The FY2022 evaluation on effectiveness of the Board of Directors (hereinafter referred to as the "FY2022 Review") was implemented by Board Advisors Japan, Inc. (hereinafter referred to as "Board Advisors"), as a third-party evaluator, from November 2022 to March 2023.

In the FY2022 Review, the evaluation methods, including the advance questionnaire to all Directors, the individual interviews of approximately two hours of all Directors, the individual interviews of approximately one hour of the four Executive Officers and the interview of the Board of Directors secretariat, have been taken. The advance questionnaire consists of 14 areas, namely,

Board overall review, Board structure, advance preparation, management, discussion, Nomination Committee, Compensation Committee, Audit Committee, monitoring of management, risks, tone at the top, self-evaluation, miscellaneous and degree of significance of agenda items and volume of discussion. The individual interviews were conducted based on the answers thereto of the respective Directors.

Board Advisors provided the summery of the FY2022 Review as follows:

- The Company's Board of Directors is tackling the "Review of Strategic Alternatives," which the shareholders expected the Board to deal with as the top priority challenge after the ordinary shareholders meeting.
- It was confirmed as a result of the FY2022 Review that the effectiveness of the Company's Board and three statutory committees is generally ensured.

Board Advisors reported that it was confirmed that the Company's Board and three statutory committees have the following characteristics.

(i) Sharing of the Board's objectives: All Directors correctly understand that the "Review of Strategic Alternatives" is the most significant responsibility of the Company's Board at the moment.
(ii) Appropriate Board structure: The Board structure is in line with the expectation of the shareholders for the current Board.
(iii) Enhancement of the discussion on the "Review of Strategic Alternatives": Detailed discussion on "Review of Strategic Alternatives" is being conducted with utilization of outside advisors and much time of the Board is spent on such review.
(iv) Smooth conduct of meetings by the Chairperson: The evaluation of the conduct by the Chairperson of Board is mostly high. He spends a significant amount of time to listen to all Directors and conducts meetings while generating the sense of acceptance.
(v) Audit Committee with a high level of commitment: The evaluation of the activities of the Audit Committee is mostly high. Under the Chairperson's leadership, the committee energetically responds to various incidents while maintaining close communication with the members with high levels of expertise and management experiences.

Board Advisors reported that the Board is expected to examine the following challenges for further improvement of its effectiveness and proposed the following possible directions for action. In response, the Company will consider measures to further improve the effectiveness of the Board of Directors, while also considering the progress of the "Review of Strategic Alternatives."

(i) Strengthening of the relationship of trust between the monitoring and the management: Hold off-site meetings to deepen mutual understanding between the monitoring and the management. / Clarify the information on the management to be reported to the Board of Directors.
(ii) Enhancement of discussion on the mid- to long-term management strategy: Thoroughly manage the progress of the mid- to long-term management plan. / Hold a board meeting at least once every quarter with sufficient time secured for a face-to-face meeting.
(iii) Promotion of board diversity: Explore the possibility of inviting those having managed manufacturers and succeeded in overall corporate reform and female Independent Outside Directors.
(iv) Strengthened management of the three statutory committees:
  - Nomination Committee: Enhance the discussion on the challenge to promote board diversity.
  - Compensation Committee: Conduct deeper discussion on the level of compensation for the Directors.
  - Audit Committee: Facilitate the strengthening of the internal control system for the management. / Enhance the committee's monitoring of the management.

Compensation Policy

The Compensation Committee establishes compensation policy regarding compensation of each Director and/or Executive Officer. With respect to matters such as compensation for Company Directors and Executive Officers for the current fiscal year, the Compensation Committee has determined that the Company's method for determining compensation and the amount of compensation already determined are aligned with this policy.

<Compensation for Directors>

Compensation for Directors = Base salary + Committee allowance + Attendance allowance for travel to non-resident countries

Since the main responsibility of Directors is to supervise the execution of the overall Group's business, and increase the corporate value, the basic policy is to determine compensation for Directors by chiefly focusing on securing highly competent personnel, ensuring effective functioning of the supervisory function, and improving corporate value from a medium- to long-term perspective.

- Directors are paid the Base salary (fixed amount) and the Committee Allowance (fixed amount) in accordance with the scope of their responsibilities. If multiple committees concurrently serve, the applicable Committee Allowances will be added up and paid. Directors who concurrently hold offices as an Executive Officer are paid only the compensation for Executive Officers and not paid compensation for Directors.
- The Base Salary and the Committee Allowance are paid by cash and shares of the Company at a prescribed rate.
- When traveling to attend a Meeting of the Board of Directors, Executive Session of the Board, or a Committee held in a non-resident country, the Attendance Allowance is paid according to the actual travel record.
- With regard to compensation paid by stock that is paid in the form of the Company's stock, mechanisms such as restricted stocks with transfer restrictions until retirement will be used.

<Compensation for Executive Officers>

Compensation for Executive Officers = Base salary + Performance-linked compensation (shares and cash)

Since the main responsibility of Executive Officers is to increase corporate value in their capacity as executives responsible for companies or divisions within the Group, the Company has a ba-

sic policy to determine compensation for Executive Officers at an adequate level to secure highly competent personnel and ensure the effectiveness of their compensation package as an incentive to improve business performance, based on a balance between fixed compensation and performance-linked compensation.

- Compensation for Executive Officers consists of Base Salary (fixed amount), determined according to rank, and performance-linked compensation.
- Performance-linked compensation is determined in accordance with the performance and medium- to long-term management indicators of the Company overall and the divisions under the charge of the Executive Officers during the fiscal year, with cash and stock of the Company paid at a rate set according to rank.
- The Base Salary and the Performance-linked compensation are paid by cash and shares of the Company at a prescribed rate.
- With regard to compensation paid by stock that is paid in the form of the Company's stock, mechanisms such as restricted stocks with transfer restrictions until retirement will be used to secure effectiveness as an incentive for medium- to long-term improvement of business performance.

<Compensation standards>

Compensation standards are determined at suitable levels as a global company, with the aim of securing highly competent management personnel suitable for managing Toshiba which is entering a period of change. The compensation standards of other listed companies and payroll and benefits are considered when determining the Company's compensation standards of management.

Policy on Risk Management and Compliance

Toshiba Group has set up three lines of internal control system, with the relevant business divisions as the front line, the administrative divisions as the second, and the audit divisions as the third. The system is designed to effectively manage risks by assigning to each line a clearly defined role and set of duties, which it carries out appropriately, at the same time exercising a checks-and-balances function. In order to respond to changes in the business environment and to the diverse and ever-changing risks that arise when conducting business activities, we will ensure effective risk management.

Toshiba's shares were designated as securities on alert on September 15, 2015 due to inappropriate accounting. After that, Toshiba improved its internal control system and the designation was lifted on October 12, 2017. As reported in the Report on Improvements of Internal Management System and Progress Report on Improvements of Internal Management System released on October 20, 2017 and July 25, 2018 respectively, Toshiba has continued its efforts to strengthen the internal control system and worked to regain the trust of shareholders, investors, and all other stakeholders. On August 1, 2017, Toshiba's shares were reassigned to the Second Section of Tokyo Stock Exchange and Nagoya Stock Exchange. As a result of aforementioned efforts, our shares were designated as first section securities of both of the exchanges again on January 29, 2021. Toshiba will continue to work to enhance its internal control system.

At Toshiba Group, top management regularly issues messages on compliance so as to clarify its own stance and to foster a culture in which compliance is prioritized across the whole Group.

At Toshiba Group, we formulated and are striving to entrench the Standards of Conduct for Toshiba Group (SOC) as a specific action guideline since we are a company that contributes to the realization of a sustainable society while conducting fair, sincere and highly transparent business activities. We are also working toward making the SOC an integral part of the entire Toshiba Group. The SOC is one of the Toshiba Group's important basic guidelines, and therefore, its revision requires approval by the Board of Directors.

Response to fraud

Toshiba Group maintains a policy of zero tolerance against fraud.

As a preventative activity, every year we systematically organize fraud risk scenarios in specific fields, conduct inspections to understand the actual situation at each Group company, and strengthen guidance for improvement. In FY2022, we conducted inspections on fraud risk related to production management and inventories.

In the event of a case of fraud, we conduct an investigation of all facts to identify the cause of any such occurrences, treat the facts seriously, make every effort to prevent recurrence, and disclose information in a proper and timely manner as necessary. Any employees involved with cases of fraud are handled rigorously, including through the implementation of disciplinary action.

Structure of Risk Management and Compliance

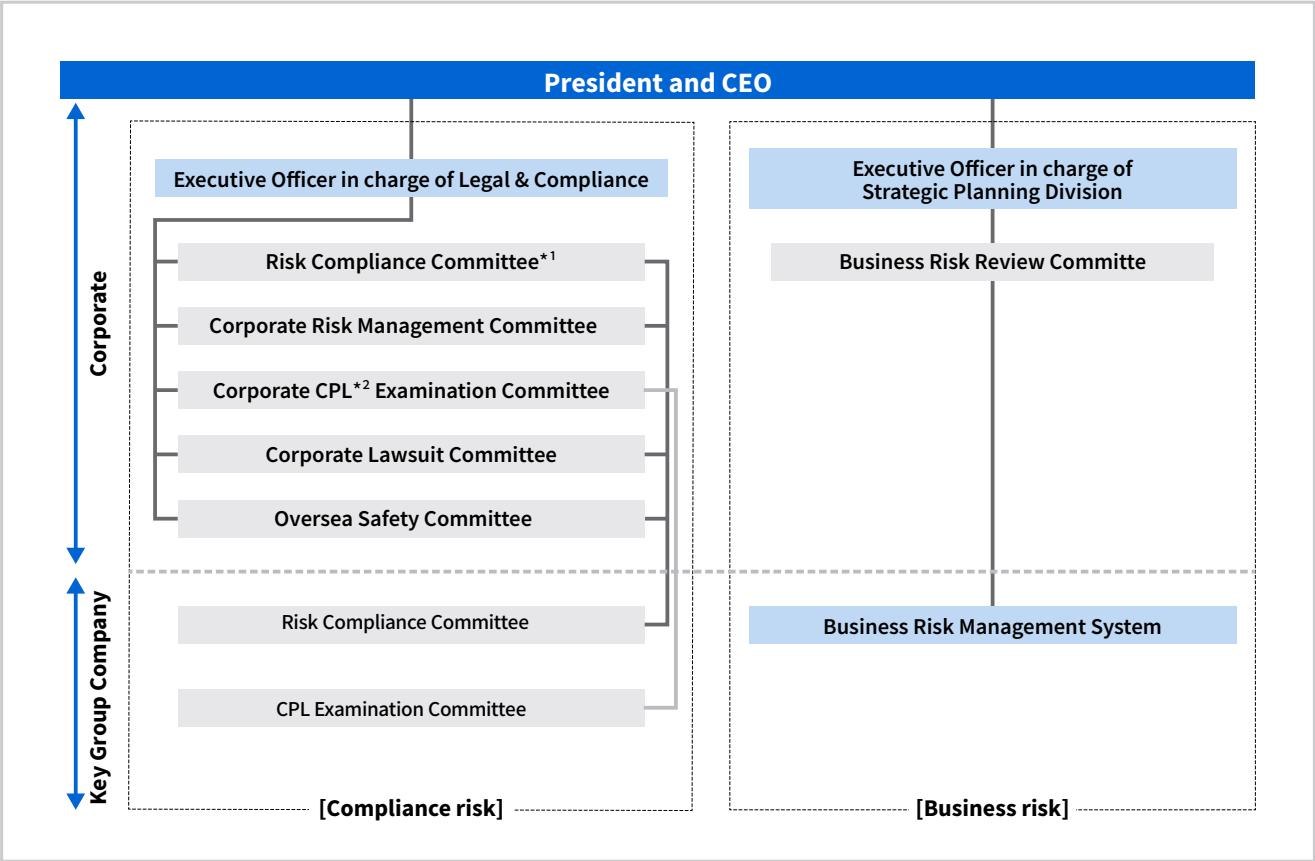
Toshiba has separate management systems for compliance and other risks and business risks. Business risks refer to uncertain factors that may prevent the achievement of business and project objectives on strategic decision-making and execution of business activities.

To address compliance and other risks, we appoint a Chief Risk Compliance Management Officer (CRO) to oversee risk management and compliance for the whole Group. In addition, under the CRO, the Legal & Compliance Division responds to whistleblower reports, attempts to achieve global compliance, aims to strengthen the whistleblower system, and is advancing effective risk management and compliance activities.

The CRO chairs the Risk Compliance Committee, which is attended by relevant Executive Officers, including the President and CEO. The committee analyzes whistleblower reports and cases both inside and outside the Company and evaluates the impacts of risks and the status of risk control in accordance with the risk table that covers compliance risks based on the Standards of Conduct for Toshiba Group. It then determines priority measures of the immediate fiscal year. The Risk Compliance Committee is attended and monitored by members of the Audit Committee who also serve as Outside Directors. The agenda deliberated at the committee is reported to the Board of Directors. In FY2022, the Risk Compliance Committee met five times.

In response to the inappropriate accounting treatment in 2015, Toshiba has worked to strengthen accounting compliance

Risk Management and Compliance Committee



*1: The Risk Compliance Committee manages matters related to the Standards of Conduct for Toshiba Group and matters related to risk management and compliance.
*2: CPL is an abbreviation combining CL (contractual liability) and PL (product liability).

by establishing a special accounting compliance system. In order to further strengthen the overall compliance system, from FY2021, we evolved the system into one that encompasses accounting compliance and other types of compliance, and began promoting centralized management.

Toshiba operates a risk management system (RMS) incorporating a PDCA cycle* led by administrative divisions at the second line of internal control system. The aim is to identify the status at each Toshiba Group company of initiatives on compliance risk and to promote improvement in an integrated manner. With the RMS, we implement the Risk Assessment Program (RAP) to assess risks of Toshiba Group companies. The administrative divisions provide guidance to improve the compliance risks identified. At the same time, the relevant business divisions at the front line of internal control system themselves work to identify and mitigate the risks autonomously.

Furthermore, since FY2020, we have systematically organized fraud risk scenarios related to financial reporting and accounting, and conducted inspections on Group companies to understand the status of their fraud risk, while strengthening guidance to improve such status.

In the event of a serious compliance-related incident, there is a system in place by which such incident is reported immediately to the President and CEO, CRO, and members of the Audit Committee, among others, through the reporting system. Under these systems, the relevant in-house committees, etc. promptly evaluate and implement countermeasures.

Meanwhile, Toshiba deals with business risks by clarifying management decision criteria, permissible risk limits and corporate policy on business withdrawal in making management decisions for business execution to achieve Toshiba Group's sustainable growth and increase corporate value. In addition, for each risk case, the Business Risk Review Committee conducts risk assessment, identifies the maximum risk, and establishes items for monitoring.

* Plan: Identification and assessment of risks; Do: creation and operation of rules; Check: review and fact-finding surveys; Action: formulation and implementation of improvement plans

Whistleblower System

In order to create an open work environment, Toshiba is enhancing its whistleblower system, on top of preventing risks by stimulating day-to-day communication in each workplace.

In January 2000, Toshiba established a whistleblower system Toshiba Hotline to collect internal information on SOC violations, particularly those concerning laws and regulations, and to deal with wrongdoing through a self-rectification system. Under this system, an employee can report an incident and seek advice via e-mail or phone. In April 2019, we transferred the function of receiving whistleblower reports to an external organization to further ensure anonymity, lower the hurdle of reporting to the hotline, and build a stronger sense of safety. E-mail support is available 24/7. In June 2022, we began accepting reports in English, targeting those employees at Toshiba Group companies in Japan who find it difficult to make the reports in the Japanese

language. Also, a reception hotline was set up at an external attorney's office in January 2005, primarily to receive information about potential legal violations.

Furthermore, in October 2015, the new Audit Committee Hotline was set up, which allows people to report directly to the Audit Committee, which is composed of Outside Directors. With this new system, even matters in which the involvement of top management is suspected can be safely reported.

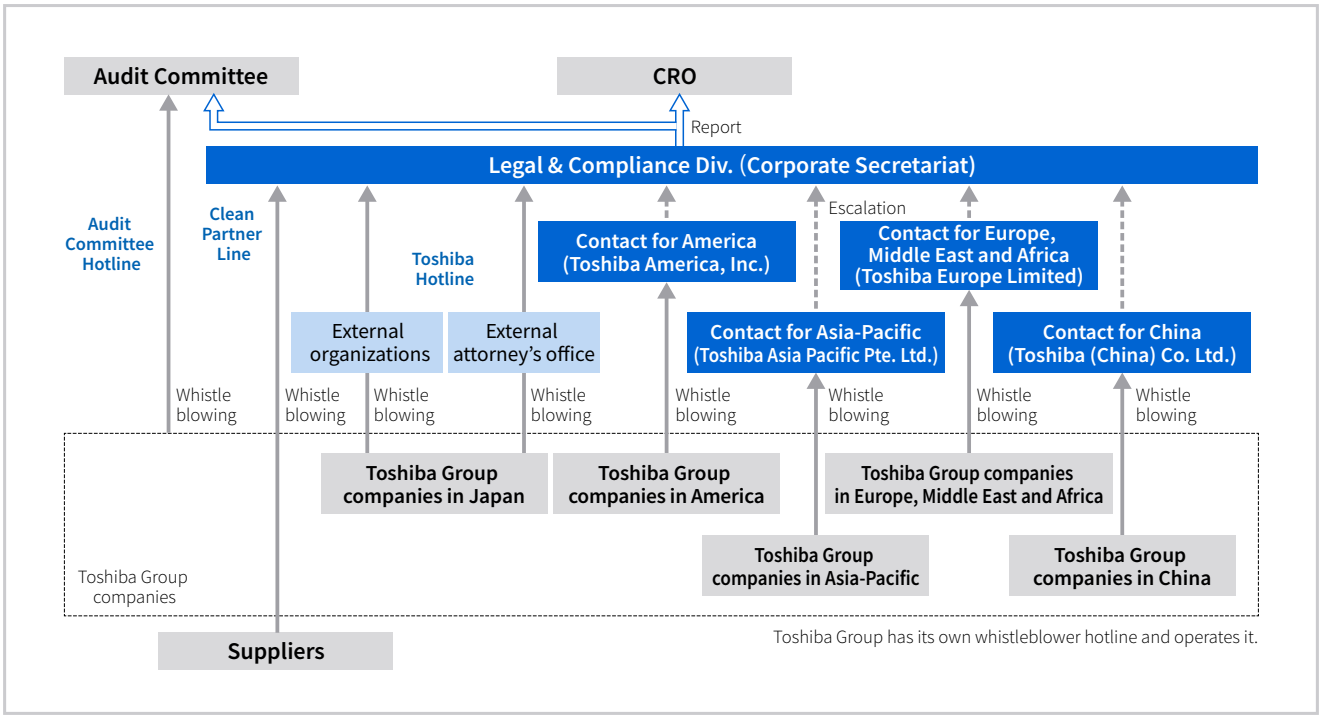
The Audit Committee also has access rights to the Toshiba Hotline, and provides appropriate guidance and supervision.

In April 2006, Toshiba set up a supplier whistleblower system Clean Partner Line to receive reports from suppliers and business partners to prevent SOC violations by employees in charge of procurement and order placements for construction and other works.

Each Toshiba Group company has its own whistleblower system. In addition, employees of the Toshiba Group in Japan can use the aforementioned Toshiba Hotline. Besides the whistleblower system at each company, in FY2021, we introduced the Toshiba Group Overseas Hotline for Toshiba Group companies overseas, by designating each Regional Representative Subsidiary as the secretariat for the corresponding region so as to cover laws and regulations and languages for different countries and regions.

At Toshiba Group, in accordance with laws, regulations, and internal regulations, officers and employees who make whistleblower reports with honest and legitimate intent do not receive unfavorable treatment such as dismissal and demotion as a result of having made the reports. Toshiba Group strives to ensure that the officers and employees can use the whistleblower system at ease. Specifically, each Group company has stipulated in its regulations a confidentiality obligation that allows limited persons in charge to access to what is reported by whistleblowers and a prohibition of unfavorable treatment of whistleblowers, as well as prepared manuals for persons in charge of whistleblowing. Toshiba Group in Japan maintains and operates a response system that complies with the amended Whistleblower Protection Act.

Toshiba's Whistleblower System



Directors

The Company is promoting various initiatives with the aim of expanding its Total Shareholder Return (TSR) through maximizing its corporate value.

Currently, of the eleven (11) Directors, ten (10) are Outside Directors and one (1) is Director who also serves as Executive Officer. Outside Directors are the majority of the Board of Directors, in order to enhance the governance. In addition, including five (5) non-Japanese Outside Directors, the Board of Directors is composed of Directors with experience in international business, expertise in business portfolio management, business restructuring, M&A, capital markets and capital allocation, and deep knowledge in law and compliance, and the composition of directors could also reflect in management sufficient diversity viewpoints in terms of gender and international experience.

In deciding the candidates for Director, the Nomination Committee judged that the candidates conformed to the Director Nomination Criteria separately designated by the Nomination Committee and that the candidates had the appropriate qualifications for Director.

Name		Current position(s) in the Company	Corporate management	Law and compliance	Accounting and auditing	Diversity*	M&A	Corporate restructuring	Capital markets	International business esperience
Taro SHIMADA		Representative Executive Officer President and Chief Executive Officer	○					○		○
Akihiro WATANABE	Outside Director Independent	Chairperson of the Board of Directors Vice Chairperson, Nomination Committee Vice Chairperson, Special Committee	○		○		○		○	○
Paul J. BROUGH	Outside Director Independent	Vice Chairperson, Special Committee Member, Nomination Committee	○	○	○	○		○		○
Ayako Hirota WEISSMAN	Outside Director Independent	Chairperson, Compensation Committee Member, Special Committee	○			○			○	○
Jerome Thomas BLACK	Outside Director Independent	Chairperson, Special Committee Member, Nomination Committee	○		○	○	○	○		○
George Raymond ZAGE III	Outside Director Independent	Chairperson, Nomination Committee Member, Special Committee	○		○	○	○	○	○	○
Katsunori HASHIMOTO	Outside Director Independent	Chairperson, Audit Committee Member, Nomination Committee	○	○	○		○			○
Mikio MOCHIZUKI	Outside Director Independent	Member, Audit Committee Member, Compensation Committee	○	○	○		○			○
Ayumi UZAWA	Outside Director Independent	Member, Audit Committee Member, Compensation Committee		○	○					
Eijiro IMAI	Outside Director Independent	Member, Compensation Committee Member, Special Committee		○			○	○	○	
Nabeel BHANJI	Outside Director Independent	Member, Special Committee				○	○	○	○	○

*Diversity indicates diversity of gender, ethnicity, nationality, and other identities.

These pages show information about FY2022 based on the information as of November 2023.

Director

Taro SHIMADA

Director
October 22, 1966

Career highlights and significant concurrent positions

April 1990: Joined ShinMaywa Industries, Ltd.
September 1999: Joined Structural Dynamics Research Corporation
February 2010: Representative Director and President, Japanese Corporation and Executive Vice President, U.S. Headquarters, Siemens PLM Software
September 2015: Senior Executive Officer, General Manager of Digital Factory Business Headquarters, and General Manager of Process and Drive Business Headquarters, Siemens K.K.
October 2018 – March 2019: Joined the Company as Corporate Digital Business Officer
April 2019 – April 2020: Executive Officer and Corporate Vice President of the Company
October 2019 – April 2020: Director and Corporate Vice President, Toshiba Digital Solutions Corporation
April 2020 – March 2022: Executive Officer and Corporate Senior Vice President of the Company
Director and President, Toshiba Digital Solutions Corporation
December 2020 – May 2022: Outside Director, WingArc1st Inc.
March 2022 – Present: Representative Executive Officer, President and CEO of the Company
May 2022 – Present: Chair of the Quantum STrategic Industry Alliance for Revolution
June 2022 – Present: Director of the Company

Outside Directors

Akihiro WATANABE

Outside Director
February 18, 1959

Career highlights and significant concurrent positions

October 1980: Joined Heiwa Audit Corporation
May 1982: Joined New York office of Peat Marwick Mitchell & Co. (currently KPMG LLP)
July 1990: Audit Department Partner, New York office of KPMG LLP
July 1994 - March 2002: Representative Director, KPMG Corporate Finance K.K.
April 2002 – Present: Representative, Akihiro Watanabe CPA Office
October 2002 – March 2019: Visiting Professor, Kobe University Graduate School of Business Administration
April 2004 – March 2022: Founder, Representative Director and Partner, GCA Corporation
August 2004 – April 2011: Outside Director, Chair of Audit Committee, Acrologix, Inc.
April 2005 – March 2011: Lecturer, Hitotsubashi University Graduate School of Law (Law School)
April 2008 – March 2013: Visiting Professor, Chuo Graduate School of Strategic Management (Business School)
November 2008 – April 2015: Outside Director, Chair of Audit Committee, Ranbaxy Laboratories, Inc.
November 2011 – October 2014: Board of Trustee, International Valuation Standards Council
December 2015 – Present: Outside Director, Maruho Co., Ltd.
September 2016 – May 2018: Outside Director, FamilyMart UNY Holdings Co., Ltd. (currently FamilyMart Co., Ltd.)
February 2021 – August 2022: Chairman, Managing Director, Chairman of Asia Corporate Finance, Houlihan Lokey K.K.
June 2022 – Present: Outside Director of the Company

Paul J. BROUGH

Outside Director
November 13, 1956

Career highlights and significant concurrent positions

September 1983: Joined KPMG Hong Kong
October 1991: Partner, KPMG Hong Kong
July 1995: Head of Consulting, KPMG Hong Kong
October 1997: Head of Financial Advisory Services, KPMG Hong Kong
October 1999: Asia-Pacific head of Financial Advisory Services, KPMG Hong Kong and member of KPMG's global advisory steering group
September 2008: Joint-Liquidator of various Lehman Brothers entities located in Asia.
April 2009 – March 2012: Regional Senior Partner, KPMG Hong Kong
March 2012 – Present: Chief Executive, Blue Willow Limited
September 2012 – January 2013: Chief Restructuring Officer, Sino-Forest International Corporation
September 2012 – April 2021: Independent Non-Executive Director, GL Limited
February 2013 – April 2015: Chairman and CEO, Emerald Plantation Holdings Limited Group
October 2013 – May 2015: Director (until May 2015) and Interim CEO (until April 2015), Greenheart Group Limited
October 2013 – February 2023: Independent Non-Executive Director, Habib Bank Zurich (Hong Kong) Limited
May 2015 – May 2017: Independent Non-Executive Director, Noble Group Limited
January 2016 – June 2016: Executive Director and Chief Restructuring Officer, China Fishery Group Limited
September 2016 – Present: Independent Non-Executive Director, Vitasoy International Holdings Limited
May 2017 – December 2018: Executive Chairman, Noble Group Limited
May 2017 – Present: Independent Non-Executive Director, The Executive Center Limited
December 2018 – October 2019: Executive Chairman, Noble Group Holdings Limited
June 2019 – Present: Outside Director of the Company
November 2021 – Present: Independent Non-Executive Director, Guoco Group Limited

Outside Directors

Ayako Hirota WEISSMAN

Outside Director
May 9, 1957

Career highlights and significant concurrent positions

January 1984:	Vice President, Equitable Capital Management
January 1987:	Managing Director, Smith Barney, Harris Upham & Co. Inc. (now Citigroup)
October 1999:	Partner, Feirstein Capital Management LLC
January 2002:	Portfolio Manager, Kingdon Capital Management LLC
June 2006:	Founder and Chief Executive Officer, AS Hirota Capital Management LLC
November 2010 – Present:	Senior Vice President, Senior Portfolio Manager and Director in charge of Asia Strategy, Horizon Asset Management, Inc. (now Horizon Kinetics LLC)
June 2015 – June 2019:	Outside Director, SBI Holdings, Inc.
June 2019 – Present:	Outside Director of the Company
February 2020 – Present:	Non-Executive Director, Nippon Active Value Fund plc

Jerome Thomas BLACK

Outside Director
May 29, 1959

Career highlights and significant concurrent positions

July 1982:	Joined Arthur Andersen & Co.
October 1986:	Joined Ernst & Young LLP
January 1995:	Joined Kurt Salmon Associates, Inc.
March 2002:	Global Practice Development Managing Director, Kurt Salmon Associates, Inc.
January 2005:	Managing Director, North America, Kurt Salmon Associates, Inc.
January 2006:	President, Consumer Products Division, Kurt Salmon Associates, Inc.
January 2008:	Chief Executive Officer, Kurt Salmon Associates, Inc.
March 2009:	Joined Aeon Co., Ltd., Advisor
May 2009:	Executive Officer, Chief Executive of Group Strategy & IT and Chief Executive Officer of ASEAN Operation, Aeon Co., Ltd.
March 2010:	Executive Officer, Chief Executive Officer of ASEAN Business and Chief Executive Officer of Group IT and Digital Business, Chief Group Strategy Officer, Aeon Co., Ltd.
March 2011:	Senior Managing Executive Officer, Chief Group Strategy Officer; Chief Executive Officer of Group IT and Digital Business, Aeon Co., Ltd.
March 2012:	Senior Managing Executive Officer, Advisor to Group CEO; Chief Group Strategy Digital and IT Officer, Aeon Co., Ltd.
March 2013:	Senior Managing Executive Officer, Advisor to Group CEO; Chief Strategy, Digital, IT and Marketing Officer, Aeon Co., Ltd.
March 2014:	Senior Managing Executive Officer, Merchandising Strategy and Digital Shift Promotion Officer, Aeon Co., Ltd.
February 2015 – May 2016:	Executive Officer, Digital Business, Aeon Co., Ltd.
March 2016 – February 2017:	Director, Executive Officer and Vice President of AEON RETAIL Co., Ltd.
April 2017 – Present:	Advisor, Aeon Co., Ltd.
June 2019 – Present:	Outside Director of the Company
May 2021 – December 2022:	Senior Advisor, Japan Computer Vision Corporation

George Raymond ZAGE III

Outside Director
January 20, 1970

Career highlights and significant concurrent positions

June 1991:	Joined PriceWaterhouse
August 1992 – February 2000:	Vice President of Investment Banking Division, Goldman Sachs & Co
March 2000:	Joined Farallon Capital Management L.L.C
September 2002:	Managing Director, Farallon Capital Asia Pte. Ltd.
January 2008 – August 2018:	Managing Director and CEO, Farallon Capital Asia Pte. Ltd.
August 2013 – Present:	Independent Non-Executive Director, Whitehaven Coal Limited
August 2016 – June 2021:	Commissioner (Non-Executive), PT Aplikasia Karya Anak Bangsa(Go-Jek)
August 2018 – Present:	Founder and CEO, Tiga Investments Pte. Ltd. Senior Advisor (Part time), Farallon Capital Management, L.L.C
April 2019 – Present:	Commissioner (Non-Executive), PT Lippo Karawaci Tbk
June 2019 – Present:	Outside Director of the Company
June 2020 – November 2022:	Chairman and CEO, Tiga Acquisition Corp
May 2021 – Present:	Director, EDBI Pte. Ltd.
September 2021 – Present:	Independent Non-Executive Director, The Executive Center Limited
November 2022 – Present:	Director, Grindr Inc.

These pages show information about FY2022 based on the information as of November 2023.

Outside Directors

Katsunori HASHIMOTO

Outside Director
September 16, 1955

Career highlights and significant concurrent positions

- **April 1978:** Joined YKK Corporation
- **October 1986:** Chief Financial Officer, U.K. subsidiary of YKK Corporation
- **April 1990:** Corporate Accounting, Finance, Department, DuPont K.K.
- **August 1996:** Senior Financial Analyst, Automotive, DuPont de Nemours, Inc.
- **January 1998:** Global Business Reporting Project Leader, Finance, DuPont de Nemours, Inc.
- **October 1998 – April 1999:** Audit Manager, Finance, DuPont de Nemours, Inc.
- **May 1999:** Treasurer, Tokyo Treasury Center, DuPont K.K.
- **August 2001:** General Manager of Finance, DuPont K.K.
- **January 2002:** Director of Finance, DuPont K.K. (Board of Directors)
- **November 2009:** Director and Managing Executive Officer – Finance and Affiliated, DuPont K.K.
- **January 2013:** Director and Senior Managing Executive Officer, DuPont K.K.
- **June 2014 – July 2018:** President and Representative Director, Danisco Japan Ltd.
- **September 2014 – September 2020:** Director and Executive Vice President, DuPont K.K.
- **October 2020 – Present:** Chairperson, DSS Sustainable Solutions Japan, LLC
- **October 2020 – Present:** Professor, Graduate School of Business Administration, Tokyo Metropolitan University
- **June 2021 – Present:** Outside Director of the Company

Mikio MOCHIZUKI

Outside Director
July 8, 1954

Career highlights and significant concurrent positions

- **April 1978:** Joined Ishikawajima-Harima Heavy Industries Co., Ltd. (currently IHI Corporation)
- **April 2011:** Executive Officer, IHI Corporation and President and CEO, IHI Inc. (Regional Headquarter for the Americas)
- **April 2014:** Managing Executive Officer and General Manager of Finance & Accounting Division, IHI Corporation
- **June 2016:** Director, Managing Executive Officer and General Manager of Finance & Accounting Division, IHI Corporation
- **April 2017:** Director, Managing Executive Officer, President of Industrial Systems & General Purpose Machinery Business Area, IHI Corporation
- **April 2018:** Director, IHI Corporation
- **June 2018 – June 2021:** Advisor, IHI Corporation
- **June 2021 – Present:** Outside Director, Aida Engineering, Ltd.
- **June 2022 – Present:** Outside Director of the Company

Ayumi UZAWA

Outside Director
June 21, 1967

Career highlights and significant concurrent positions

- **October 1990 – March 1993:** Joined Asahi Shinwa Accounting Corporation (currently KPMG AZSA LLC), Osaka Office
- **August 1994:** Registered as Certified Public Accountant
- **August 1995 – March 1999:** Joined Deloitte Touche Tohmatsu (currently Deloitte Touche Tohmatsu LLC), Tokyo Office
- **April 1999 – October 2004:** 2nd Investigation Division, Criminal Affairs Bureau, the Metropolitan Police Department (Financial Investigator and Inspector)
- **November 2004 – February 2011:** Special Investigation Division, Secretariat, Securities and Exchange Surveillance Commission
- **March 2011 – Present:** Representative, Uzawa CPA Office
- **July 2011:** Registered as Certified Fraud Examiner
- **July 2011 – Present:** Advisor, Financial and Securities Expert Committee, Supreme Public Prosecutors' Office
- **June 2012 – June 2018:** Director, Japan Association of Certified Fraud Examiners (ACFE Japan)
- **June 2013 – November 2014:** Outside Director, Meiji Machine Co., Ltd.
- **December 2014 – November 2016:** Outside Director, Japan Best Rescue System Co., Ltd.
- **September 2016 – Present:** Auditor (part-time), Aurora Debt Collection Co., Ltd.
- **April 2020 – March 2021:** Contract Staff (Advisor), New Energy and Industrial Technology Development Organization
- **June 2022 – Present:** Outside Director of the Company.

Eijiro IMAI

Outside Director
July 2, 1980

Career highlights and significant concurrent positions

- **October 2004 – April 2007:** Joined Nishimura & Tokiwa (currently Nishimura & Asahi)
- **May 2007:** Joined Bain Capital Asia LLC
- **October 2013:** Joined Farallon Capital Japan LLC
- **January 2019 – Present:** Managing Director, Farallon Capital Japan LLC
- **March 2022 – Present:** Outside Director, BroadBand Tower, Inc.
- **June 2022 – Present:** Outside Director of the Company.

Outside Director

Nabeel BHANJI
Outside Director
December 19, 1985

Career highlights and significant concurrent positions

July 2007 – September 2008:	Investment Banker, Goldman Sachs & Co
September 2008 – May 2010:	Investment Professional, Apax Partners
July 2012 – Present:	Senior Portfolio Manager, Elliott Investment Management
April 2021 – Present:	President, Elliott Opportunity II Corporation
June 2022 – Present:	Outside Director of the Company.

Executive Officers

Representative Executive Officer President and CEO	Taro SHIMADA	
Representative Executive Officers Corporate Executive Vice Presidents	Takayuki KONNO	General Executive, Marketing Div., Battery Div. and Branch Offices, Responsible for Infrastructure Systems business (Representative Director, President and CEO, Toshiba Infrastructure Systems & Solutions Corporation), Responsible for Building Solutions business, Assistant to Corporate Senior Vice President; YOTSUYANAGI (Toshiba Plant Systems & Services Corporation)
	Hiroyuki SATO	General Executive, Group Management Div., Responsible for Electronic Devices & Storage business (Representative Director, President and CEO, Toshiba Electronic Devices & Storage Corporation)
Executive Officers Corporate Senior Vice Presidents	Keiichi YUMITA	General Executive, Information Systems Div. and Business Process Re-engineering Div.
	Tsutomu KAMIJO	General Executive, Procurement Div. and Corporate Production Planning Div., Assistant to Corporate Senior Vice President; SATA (Corporate Manufacturing Engineering Center)
	Shunsuke OKADA	General Executive, Cyber-Physical Systems x Design Div. and Digital Innovation Technology Center, Assistant to Corporate Senior Vice President; HARUYAMA (Next Business Development Div.), Vice President, Cyber-Physical Systems x Design Div., Responsible for Digital Solutions business (Director, President and CEO, Toshiba Digital Solutions Corporation)
	Takamasa MIHARA	General Executive, Human Resources and Administration Div. and Corporate Communications Div.
	Tadasu YOTSUYANAGI	General Executive, Negative Emission Project Team, Sustainability Management Div. and WEC Div., Responsible for Energy System business (Representative Director, President and CEO, Toshiba Energy Systems & Solutions Corporation / Toshiba Plant Systems & Services Corporation)
	Yutaka SATA	General Executive, Corporate Technology Planning Div., Research & Development Center, and Corporate Manufacturing Engineering Center, Assistant to Corporate Senior Vice President; HARUYAMA (Next Business Development Div.) and Assistant to Corporate Senior Vice President; OKADA (Digital Innovation Technology Center)
	Masaki HARUYAMA	General Executive, Strategic Planning Div. and Next Business Development Div., Assistant to Corporate Executive Vice President; SATO (Group Management Div.)
Executive Officer Corporate Vice President and CFO	Yasuhiro MATSUNAGA	General Executive, Finance & Cash Management Div. and Accounting Div. Vice President, Finance & Cash Management Div.
Executive Officers Corporate Vice Presidents	Ayumi WADA	General Executive, Legal & Compliance Div.
	Yuko HIRAI	General Executive, Internal Audit Div. Vice President, Audit Committee Office
	Toru MASUYAMA	General Executive, Project Monitoring & Oversight Div. and Quality Promotion Div. Vice President, Project Monitoring & Oversight Div.
	Tomoaki KUMAGAI	General Executive, Global Strategy & Business Development and Global Strategy & Business Development Div. Vice President, Global Strategy & Business Development Div.

As of October 1, 2023

SASB Reference Table

Topic	Accounting Metric	Category	Unit of Measure	Code	
Energy Management	(1) Total energy consumed (2) Percentage grid electricity (3) Percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	RT-EE-130a.1	
Hazardous Waste Management	Amount of hazardous waste generated, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	RT-EE-150a.1	
	Number and aggregate quantity of reportable spills, quantity recovered	Quantitative	Number, Kilograms (kg)	RT-EE-150a.2	
Product Safety	Number of recalls issued, total units recalled	Quantitative	Number	RT-EE-250a.1	
	Total amount of monetary losses as a result of legal proceedings associated with product safety	Quantitative	Reporting currency	RT-EE-250a.2	
Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	Percentage (%) by revenue	RT-EE-410a.1	
	Percentage of eligible products, by revenue, that meet ENERGY STAR® criteria	Quantitative	Percentage (%) by revenue	RT-EE-410a.2	
	Revenue from renewable energy-related and energy efficiency-related products	Quantitative	Reporting currency	RT-EE-410a.3	
Materials Sourcing	Description of the management of risks associated with the use of critical materials	Discussion and Analysis	n/a	RT-EE-440a.1	
Business Ethics	Description of policies and practices for prevention of: (1) corruption and bribery; and (2) anticompetitive behavior	Discussion and Analysis	n/a	RT-EE-510a.1	
	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption	Quantitative	Reporting currency	RT-EE-510a.2	
	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	Quantitative	Reporting currency	RT-EE-510a.3	

Activity Metric	Category	Unit of Measure	Code	
Number of units produced by product category	Quantitative	Number	RT-EE-000.A	
Number of employees	Quantitative	Number	RT-EE-000.B	

*1: Renewable energy refers to energy from solar power
*2: The total volume of hazardous waste is the amount of specially controlled industrial waste defined by the Waste Management and Public Cleasing Law in Japan
*3: Volume of hazardous waste recycled refers to the amount of specially controlled industrial waste that the company recycled

Disclosure	Reference
(1) 19,718,000 GJ (2) 84% (3) 9.1%*1	▶ Overview of Environmental Impacts ▶ Response to Climate Change in Business Activities
Total amount of hazardous waste: 3,100 t*2 Percentage recycled: 83%*3 Percentage incinerated: 10%*4	▶ Overview of Environmental Impacts ▶ Reduction of Waste Volume in Business Activities
Number of substances: 25*5 Amount of chemical substances released: 744,052 kg*5 No reportable chemical substances were released into the soil	
Number of recalls started from FY2022: 1 voluntary recalls Number of units recalled: 191	▶ Disclosure of Product Safety and Quality Information
—	
Toshiba Group promotes green procurement as a part of our environmental considerations in the manufacturing processes. Our Green Procurement Guidelines supported management of chemical substances in procured goods by establishing the "Toshiba Group Environment-related Substance List," which includes applicable substances on the IEC62474 Declarable Substance List. Since 1999, we have revised the Green Procurement Guidelines as necessary in order to respond to changing circumstances, such as stricter regulations on chemicals contained in products.	▶ Toshiba Group Green Procurement Guidelines ▶ Green Procurement / Green Purchase
Some multifunction peripherals (MFPs) manufactured and sold by Toshiba Tec Corporation meet the ENERGY STAR® criteria. However, net sales from these products is insignificant in terms of Toshiba Group's overall consolidated sales.	
Toshiba Group provides a wide range of equipment, systems and services that generate, transfer, store and smartly use electricity. We aim to build a society that realizes both a stable electricity supply and harmony with the environment and future generations can live with peace of mind.	
Toshiba Group introduced Business Continuity Plan (BCP) Procurement Guidelines in 2012. In the same year, we built a system to manage corporate information on upstream suppliers, in order to minimize the risk of and the time required to resolve supply chain disruptions.	▶ Risk Management Using the Business Continuity Plan (BCP)
Toshiba Group has engaged in rigorous efforts to prevent violation of antitrust law, bribery, and other corrupt practices. For each, it has established compliance programs reflecting laws and regulations in Japan and overseas as well as associated sets of guidelines. Those guidelines clearly define and prohibit subject acts such as cartels, bribery and facilitation payments. In addition, the compliance programs and guidelines stipulate the internal systems, and provide for pre-screening related to contact with civil servants and a due diligence policy for comprehending risks of bribery regarding with concerned parties. Also, in accordance with provisions of the compliance programs, Toshiba makes sure to provide education, and conduct voluntary audit, etc. To prevent violations and early detect situations leading to violations, Toshiba Group established the whistleblower system for employees and the Clean Partner Line for suppliers and business partners as a system to report violations or suspected violations, encouraging them to use such systems.	▶ Compliance with the Antimonopoly Act and Anti-corruption
0 yen	
0 yen	

Disclosure	Reference
Toshiba Group contributes to a sustainable future through the global delivery of products and services in a wide range of business domains.	▶ Toshiba Group Business Domains
106,648*6	▶ Corporate Data

*4: Volume of hazardous waste incinerated refers to the amount of specially controlled industrial waste that the company used for energy recovery
*5: Reportable amount of chemical substances released is the number and volume of substances managed by Toshiba Group among substances designated as hazardous substances in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCA) in the U.S.
*6: As of March 31, 2023

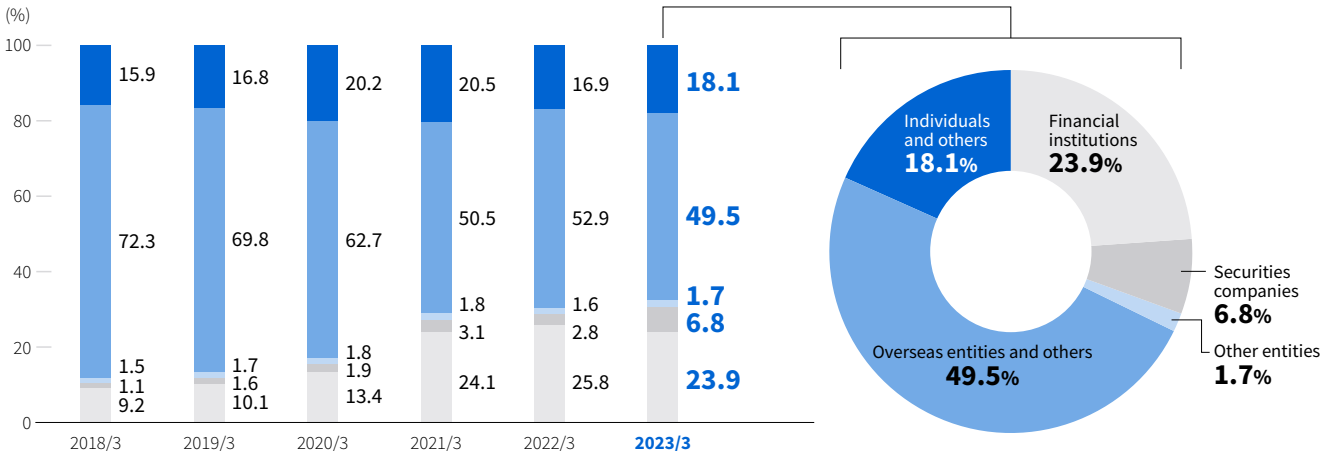
Shareholder Information

Distribution of Shareholder

(As of March 31 of each year)

	2018/3	2019/3	2020/3	2021/3	2022/3	**2023/3**
Individuals and others	15.9 %	16.8 %	20.2 %	20.5 %	16.9 %	**18.1 %**
Overseas entities and others	72.3	69.8	62.7	50.5	52.9	**49.5**
Other entities	1.5	1.7	1.8	1.8	1.6	**1.7**
Securities companies	1.1	1.6	1.9	3.1	2.8	**6.8**
Financial institutions	9.2	10.1	13.4	24.1	25.8	**23.9**

Note: For the purpose of calculation of shareholding ratio, share units of treasury stock are included in "Individuals and others."



Principal Shareholders

(As of March 31, 2023)

Name of Shareholder	Shareholding ratio (percentage)
The Master Trust Bank of Japan, Ltd. (Trust Account)	11.1 %
SUNTERA (CAYMAN) LIMITED AS TRUSTEE OF ECM MASTER FUND	4.6
CHINOOK HOLDINGS LTD	3.6
Custody Bank of Japan, Ltd. (Trust Account)	3.0
BCSL CLIENT RE BBPLC NYBR	2.9
Nippon Life Insurance Company	2.6
GOLDMAN SACHS INTERNATIONAL	2.5
Toshiba Employees Shareholding Association	2.2
GOLDMAN, SACHS & CO. REG	1.9
CGMI PB CUSTOMER ACCOUNT	1.8

(Notes)

1. For the purpose of calculation of shareholding ratio in the above table of principal shareholders, treasury shares are excluded from total number of issued shares (denominator).
2. The change report on large-volume holdings offered for public inspection on March 4, 2021 notes that a total of 11 companies, including BlackRock Japan Co., Ltd., held 23,720K shares as of February 26, 2021 (percentage of stock certificates, etc. held: 5.21%). However, as the Company was unable to confirm the beneficial ownership or number of shares held as of the end of the fiscal year under review, these companies are not included in the table above.
3. The change report on large-volume holdings offered for public inspection on March 31, 2022 notes that Effissimo Capital Management Pte Ltd. held 42,868K shares as of March 24, 2021 (ratio of stock certificates, etc. held: 9.90%). However, as the Company was unable to confirm the beneficial ownership or number of shares held as of the end of the fiscal year under review, Effissimo Capital Management Pte Ltd. is not included in the above table.
4. The change report on large-volume holdings offered for public inspection on June 2, 2022 notes that, as of May 26, 2022, Farallon Capital Management L.L.C. and CHINOOK HOLDINGS LTD jointly held 22,960K shares (ratio of stock certificates, etc. held: 5.30%). As the Company cannot confirm the beneficial ownership or number of shares held by Farallon Capital Management L.L.C. and CHINOOK HOLDINGS LTD as of the end of the fiscal year under review, Farallon Capital Management L.L.C. is not included in the above table and data for CHINOOK HOLDINGS LTD stated in the above table is based on the details of the shareholder registry.
5. The change report on large-volume holdigns offered for public inspection on March 29, 2023 notes that 3D Investment Partners Pte. Ltd. held 21,233K shares as of March 22, 2023 (ratio of stock certificates, etc. held: 4,90%). However, as the Company was unable to confirm the beneficial ownership or number of shares held as of the end of the fiscal year under review, 3D Investment Partners Pte. Ltd. is not included in the above table.

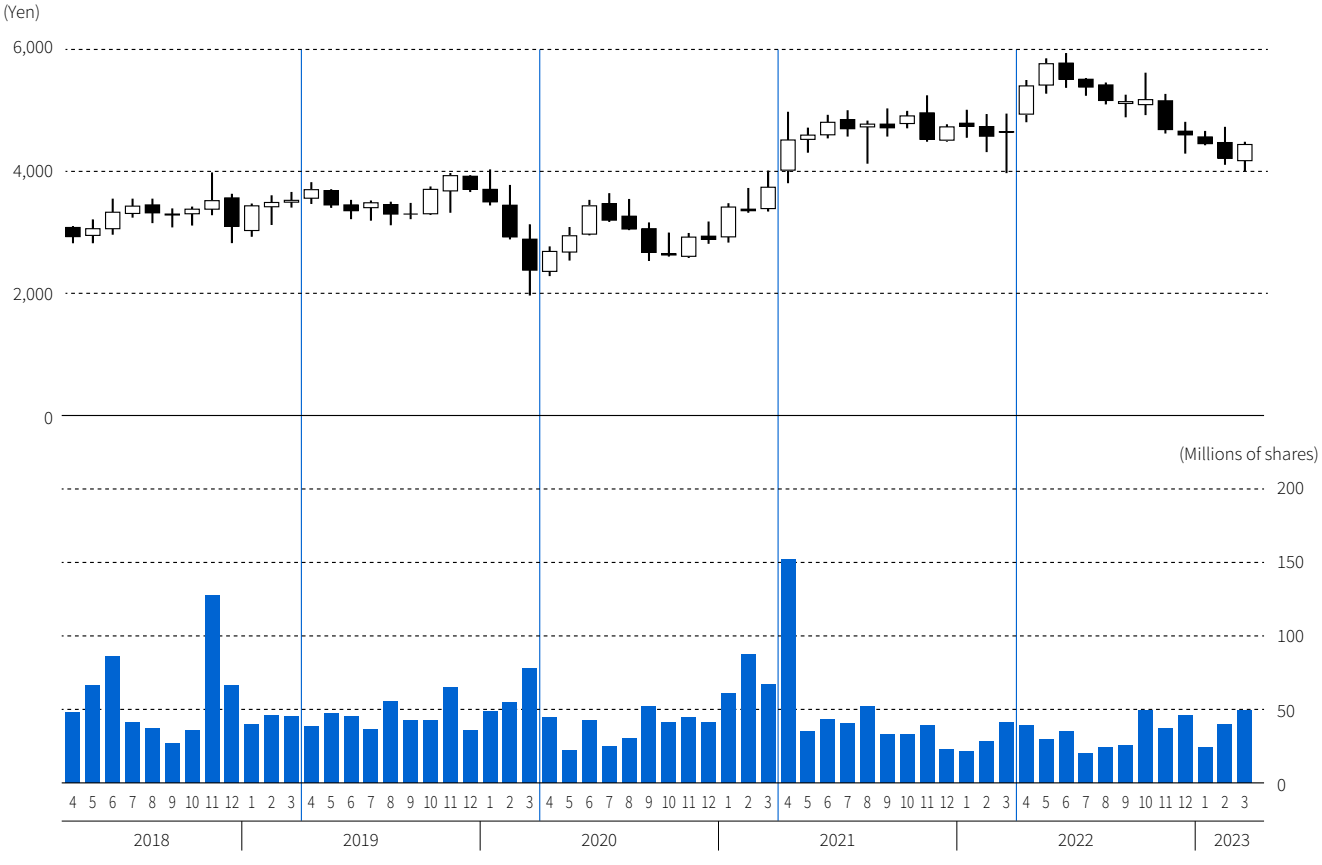
Stock Information

	2019/3	2020/3	2021/3	2022/3	**2023/3**
Common stock price (Yen, fiscal year)*1					
High	3,980	4,030	4,010	5,245	**5,938**
Low	2,842	1,982	2,301	3,825	**4,023**
Nikkei average (Yen)	21,205.81	18,917.01	29,178.80	27,821.43	**28,041.48**
Number of shares issued (Millions of shares)	544	455	455	433	**433**
Market capitalization (Billions of yen)*2	1,917.6	1,082.9	1,702.7	2,014.1	**1,925.3**
Earnings (Loss) per share attributable to shareholders of the Company (Yen)	1,641.85	(236.39)	251.25	442.05	**292.56**
Annual dividends per share (Yen)	30	20	80	220	**220**
Payout ratio (%) (Consolidated)	1.83	—	31.8	49.8	**75.2**
Number of shareholders	270,570	269,067	270,598	228,187	**228,229**
Price-to-earnings ratio (PER) (Times)	2.15	—	14.89	10.52	**15.19**
Price-to-cash flows ratio (PCFR) (Times)	2.0	(3.3)	8.5	7.3	**8.7**
Price-to-book value ratio (PBR) (Times)	1.3	1.1	1.5	1.7	**1.5**

* The Company implemented a share consolidation with a ratio of 10 common shares to 1 share as of October 1, 2018.
*1 Common stock price from August 1, 2017 until January 28, 2021 is based on the 2nd section of the Tokyo Stock Exchange, and from January 29, 2021 until April 3, 2022 on the 1st section of the Tokyo Stock Exchange. Also from April 4, 2022 onward is based on the Prime Market of the Tokyo Stock Exchange.
*2 Market capitalization = Common stock price [year-end/yen/close] x Total issued shares

Stock Price and Trading Volume Trends (for past 5 fiscal years)

FY2018*	FY2019*	FY2020*	FY2021*	FY2022*
High ¥3,980	High ¥4,030	High ¥4,010	High ¥5,245	High ¥5,938
Low ¥2,842	Low ¥1,982	Low ¥2,301	Low ¥3,825	Low ¥4,023



* The Company implemented a share consolidation with a ratio of 10 common shares to 1 share as of October 1, 2018. The stock price and the trading volume are calculated assuming that the share consolidation was implemented on April, 2018.

Consolidated Subsidiaries and Affiliated Companies Accounted for by the Equity Method

Consolidated Subsidiaries

(As of March 31, 2023)

Domestic

- Japan Semiconductor Corporation
- Kaga Toshiba Electronics Corporation
- Nishishiba Electric Co., Ltd.
- Nuclear Fuel Industries, Ltd.
- NuFlare Technology, Inc.
- Toshiba Data Corporation
- Toshiba Electronic Devices & Storage Corporation
- Toshiba Digital Solutions Corporation
- Toshiba Elevator and Building Systems Corporation
- Toshiba Energy Systems & Solutions Corporation
- Toshiba Global Commerce Solutions Holdings Corporation
- Toshiba Industrial Products and Systems Corporation
- Toshiba Infrastructure Systems & Solutions Corporation
- Toshiba IT-Services Corporation
- Toshiba Lighting & Technology Corporation
- Toshiba Materials Co., Ltd.
- Toshiba Plant Systems & Services Corporation
- Toshiba Tec Corporation*
- Toshiba Tec Solution Service Corporation
- Toshiba Denzai Marketing Co.,Ltd.
- Toshiba Trading Inc.

88 companies in total including the 21 above
* Listed Company in stock market

Overseas

- Toshiba America Business Solutions, Inc.
- Toshiba America Electronic Components, Inc.
- Toshiba America, Inc.
- Toshiba Asia Pacific Pte., Ltd.
- Toshiba (Australia) Pty., Ltd.
- Toshiba (China) Co., Ltd.
- Toshiba Dalian Co., Ltd.
- Toshiba Electronic Components Taiwan Corporation
- Toshiba Elevator (China) Co., Ltd.
- Toshiba Elevator (Shenyang) Co., Ltd.
- Toshiba Europe GmbH
- Toshiba Europe Ltd.
- Toshiba Gulf FZE
- Toshiba Hydro Power (Hangzhou) Co., Ltd.
- Toshiba Industrial Products Asia Co., Ltd.
- Toshiba Information Equipment (Philippines), Inc.
- Toshiba International Corporation
- Toshiba International Procurement Hong Kong, Ltd.
- Toshiba JSW Power Systems Private Ltd.
- Toshiba Lighting & Technology (Kunshan) Co., Ltd.
- Toshiba Semiconductor (Thailand) Co., Ltd.
- Toshiba Tec Europe Imaging Systems S.A.
- Toshiba Tec France Imaging Systems S.A.
- Toshiba Tec Information Systems (Shenzhen) Co., Ltd.
- Toshiba Tec Singapore Pte., Ltd.
- Toshiba Tec U.K. Imaging Systems Ltd.
- Toshiba Transmission & Distribution Systems Asia Sdn. Bhd.
- Toshiba Transmission & Distribution Systems (India) Private Ltd.
- TPSC (India) Private Ltd.
- TPSC (Thailand) Co., Ltd.

165 companies in total including the 30 above

Affiliated Companies Accounted for by the Equity Method

(As of March 31, 2023)

Domestic

- EREX New Energy Saiki Co., Ltd.
- Kioxia Corporation
- Kioxia Holdings Corporation
- KK6 Safety Measures Joint Venture Corporation
- SBS Toshiba Logistics Corporation
- Toshiba Mitsubishi Electric Industrial Systems Corporation
- WingArc1st Inc.

47 companies in total including the 7 above

Overseas

- Changzhou Toshiba Transformer Co., Ltd.
- Dalian Toshiba Locomotive Electric Equipment Co.,Ltd.
- GE Toshiba Turbine Components de Mexico S.R.L. de C.V.
- MTJV (Thailand) Co., Ltd.
- Henan Pinggao Toshiba High-Voltage Switchgear Co., Ltd.
- PG Toshiba (Henan) Switchgear Components Manufacturing Co. , Ltd.
- Schneider Toshiba Inverter SAS
- TDS Lithium-Ion Battery Gujarat Private Ltd.
- TMEIC Corporation Americas
- TMEIC Industrial Systems India Private Ltd.
- Toshiba Mitsubishi-Electric Industrial Systems (China) Corporation

83 companies in total including the 11 above

Corporate History

July	1875	A shop-cum-factory (called Tanaka Seizo-sho from 1882; later Shibaura Engineering Works Co., Ltd.) opened in Tokyo.
Apr.	1890	Hakunetsu-sha & Co., Ltd. (from 1899 Tokyo Electric Company) founded.
Jan.	1896	Tokyo Hakunetsu Dentokyu Seizo Co., Ltd. established (Renamed Tokyo Electric Co, Ltd. in 1899)
June	1904	Shibaura Engineering Works Co., Ltd. established.
Sept.	1939	Shibaura Engineering Works Co., Ltd. merged with Tokyo Electric Company to become Tokyo Shibaura Electric Co., Ltd.
Oct.	1942	Absorbed Shibaura Mazda Industry Co., Ltd. and Nippon Medical Electric Co., Ltd., expanding home appliance line-up.
July	1943	Absorbed Tokyo Electric Co., Ltd. and Toyo Fire Brick Co., Ltd., expanding line-up of communications equipment.
Feb.	1950	Under the Law on Elimination of Excessive Concentration of Economic Power, a group of 14 companies, including Tokyo Electric Appliances Co., Ltd., now Toshiba TEC Corp., was separated from Tokyo Shibaura Electric Co., Ltd.
Apr.		Absorbed Toshiba Rolling Stock Co., Ltd., expanding rolling stock products.
Nov.	1955	Absorbed Dengyo-sha Prime Mover Works Ltd.
Nov.	1961	Absorbed Ishikawajima-Shibaura Turbine Co., Ltd., expanding line-up of turbines.
Apr.	1984	Japanese official trade name changed to “Toshiba Corporation.”
Apr.	1999	Introduced in-house company system.
July	2001	Changed registered headquarters from Kawasaki City, Kanagawa, to Minato Ward, Tokyo.
June	2003	Adopted the Company with Committees (now, Company with a Nomination Committee, etc.) system.
Oct.		Transferred electric equipment for manufacturing plant business to TMA Electric Corp. (now Toshiba Mitsubishi-Electric Industrial Systems Corp.).
Oct.	2006	Acquired Westinghouse Group.
Oct.	2009	Acquired HDD business from Fujitsu Ltd.
Oct.	2010	Merged mobile phone business with that of Fujitsu Ltd. and transferred it to Fujitsu Toshiba Mobile Communications Ltd. (now FCNT LLC.).
July	2011	Acquired Landis+Gyr AG.
Mar.	2012	Transferred all shares of Toshiba Mobile Display Co., Ltd. to Japan Display Inc., a company established with co-funding by Innovation Network Corporation of Japan (now Japan Investment Corporetion), Toshiba Corporation, Sony Corporation and Hitachi, Ltd.
Aug.		Toshiba TEC Corporation acquired the retail store solutions business of US-based IBM (International Business Machines Corporation).
Mar.	2016	Sold off all shares of Toshiba Medical Systems Corporation (now Canon Medical Systems Coporation).
June		Sold off 80.1% shares of Toshiba Lifestyle Products & Services Corporation.
Mar.	2017	Westinghouse Group deconsolidated from Toshiba Group by Westinghouse Electric Company filing a voluntary petition for relief under Chapter 11.
Apr.		Split off and transferred the memory business to formerly Toshiba Memory Corporation by means of a company split.
July		Split off and transferred the social infrastructure business to Toshiba Electric Service Corp. (now Toshiba Infrastructure Systems & Solutions Corp.) by means of a company split. Split off and transferred the electronic devices business to Toshiba Electric Devices & Storage Corp. by means of a company split. Split off and transferred the ICT solutions business to Toshiba Solutions Corp. (now Toshiba Digital Solutions Corp.) by means of a company split.
July		Sold off 100% shares of Landis+Gyr Group.
Oct.		Split off and transferred the energy business to Toshiba Energy Systems & Solutions Corp. by means of a company split.
Feb.	2018	Transferred 95% shares of Toshiba Visual Solutions Corporation (now TVS REGZA Corporetion) to China’s Hisense Group.
June		Transferred all shares of formerly Toshiba Memory Corporation.
Oct.		Transferred 80.1% shares of Toshiba Client Solutions Co., Ltd. (now Dynabook Inc.) to Sharp Corporation. (Transferred 19.9% shares of Dynabook Inc. to Sharp Coporation in August 2020)
Aug.	2022	Transferred 55% of the outstanding shares of Toshiba Carrier Corporation to Global Comfort Solutions LLC.

Corporate Data (As of March 31, 2023)

Toshiba Corporation

1-1, Shibaura 1-chome, Minato-ku, Tokyo, Japan (headquarters)

Founded	July 1875
Number of Employees	Approx. 107,000 (consolidated)
Fiscal Year	April 1 to March 31
Authorized Number of Shares	1 billion
Number of Shares Issued	433,137,955
Number of Shareholders	185,721
Stock Exchange Listings	Tokyo, Nagoya
Ticker Code on the Tokyo Stock Exchange / ISIN	6502 / JP359 2200004
Shareholder Registration Agent	Sumitomo Mitsui Trust Bank, Limited

- This report has not been audited by our independent auditor.
- Forward-looking statements
  This report contains forward-looking statements concerning future plans, strategies and the performance of Toshiba Group. These forward-looking statements are not historical facts, rather they are based on management's assumptions and beliefs in light of the economic, financial and other data currently available. Since Toshiba Group promotes business in various market environments in many countries and regions, its activities are subject to a number of risks and uncertainties that,without limitation, relate to economic conditions, worldwide mega-competition in the electronics business, customer demand, foreign currency exchange rates, tax rules, regulations and other factors. Toshiba therefore wishes to caution readers that actual results might differ materially from its expectations.
- Regarding items reported in this report
  Any corrections made to this report will be published on our website, as referenced above.
- Product names may be trademarks of the respective companies.
- This report has been prepared for the purposes of providing information and does not constitute an offer to sell or a solicitation of an offer to buy any security of Toshiba, its subsidiaries or any other company in Japan, the United States or any other jurisdiction.

Editorial Policy

The goal of this report is to act as an effective communication tool that helps all stakeholders including shareholders and investors to understand about Toshiba Group. We have endeavored to report strategies and results in an integrated manner including both financial and non-financial information.

This integrated report conforms to the integrated reporting frameworks recommended by the International Integrated Reporting Council and by the Guidance for Collaborative Value Creation issued by the Japanese Ministry of Economy, Trade and Industry.

Environment Social Governance
Guidance for Collaborative Value Creation

Reporting period: April 1, 2022 to March 31, 2023, including some information after April 2023.
Reporting scope: Toshiba Corporation and Toshiba Group

Please refer to our website for detailed investors information and non-financial information.

Reports

Financial and non-financial information

Integrated Report

Financial reports (main), non-financial outlines

Details of cyber security enhancement activities

Cyber Security Report

Overview of cyber security activities

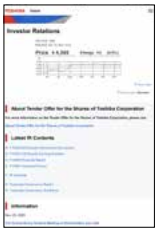
Website

Sources of timely information

Financial information

IR website

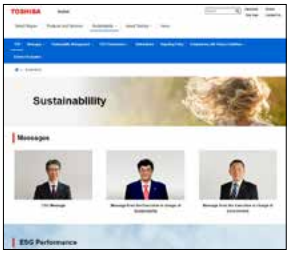
Financial information; legal disclosures



IR website for smartphones

Financial information; legal disclosures

Non-financial information



Sustainability website

Sustainability infomation

Environment website

Environmental information

Committed to People, Committed to the Future.

Toshiba Corporation

1-1, Shibaura 1-chome, Minato-ku, Tokyo, 105-8001, Japan

Contacts:

Investor Relations Group
Corporate Strategy Office
Strategic Planning Division

Inquiry page on Investor Relations
URL https://www.global.toshiba/ww/ir/corporate/helpful-info/contact.html

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