# TOSHIBA

# **Integrated Report**

Year ended March 31, 2024

# 2024



# 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 the CEO

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In 2025, we celebrate our 150th anniversary. Inspired by this and our philosophy, "Committed to People, Committed to the Future.," we will continue to create lasting value for society, the planet, and the generations yet to come.

# Taro SHIMADA

Representative Director Corporate Officer, President and Chief Executive Officer Toshiba Corporation Companies have a responsibility to contribute to better lives, and to the sustainability of the world and its people. They do this by considering complex, serious social issues from long-term perspectives, and finding solutions to them through their business activities. Doing this also increases corporate value. Today, many people routinely exchange information via mobile devices, and industry accumulates vast amounts of information from countless IoT devices and sensors. We live in a time when we all have to utilize the power of data—and whether or not a company can take advantage of the opportunities offered by the development of the digital economy will determine its competitiveness.

"Committed to People, Committed to the Future." is the long standing Basic Commitment of Toshiba Group. It is a statement that expresses our enduring credo of contributing to the development of society by solving social issues through business, promoting sustainable management, and simultaneously helping to realize safer, more secure individual livelihoods, and social and environmental stability. Since our founding, in 1875, with the venture spirit that has inspired Toshiba for many generations, we have combined our powers of invention and expertise to tackle social issues, and today we are taking on problems such as natural disasters resulting from climate change, inequalities such as information disparities and the digital divide, and resource depletion. The ability to work with our stakeholders to "turn on the promise of a new day" is our reason for existence.

Our goal is to achieve carbon neutrality and a circular economy. More specifically, Toshiba will build infrastructure that everyone can enjoy and a connected data society. In this process, we will continually create value by maximizing the power of data, and draw on the product expertise, technologies, and customer relationships we have cultivated over the years to support social infrastructure, including the energy, water treatment, transportation and devices businesses. We are also committed to advancing quantum technology, paving the way for the future ahead.

In order to secure sustainable improvement of corporate value, we will continue to prioritize life, safety and compliance over all other management issues, and to act with a strong awareness that we will never allow actions that undermine the healthy relationship of trust with our stakeholders. As a signatory to the United Nations Global Compact, we are striving to strengthen our environmental, social and governance (ESG) performance, and collaborating with our stakeholders to build ethical and transparent management foundations and to create rich value. We will contribute to the achievement of the SDGs through our corporate activities, with a focus on 10 goals where we are working to maximize positive impacts and minimize negative impacts.



The 10 goals that Toshiba Group focuses on

# **Message from the Corporate Senior Executive Vice President**

In December 2023, Toshiba became a private company, giving us the opportunity to pivot to a new management structure and open a new chapter in our history. In May 2024, we introduced "Toshiba's Revitalization Plan," our medium-term strategy for restoring Toshiba to its true potential. It emphasizes leveraging technology to address societal changes and challenges, and contributing to society through green transformation (GX) and digital transformation (DX).

During the plan's development, our management team promoted thorough and constructive discussions with frontline employees, the people central to our ability to create value, and collaborated closely with our shareholder, Japan Industrial Partners. We also addressed challenges in underperforming businesses while advancing proper risk assessments and mitigation strategies.

The plan's measures for improving the management infrastructure include the visualization of KPIs and enhanced managerial accounting, reducing fixed costs to lower the break-even point, and prioritizing strategic investments for growth. By enhancing earning power and channeling the resources this generates into people, businesses, and technological development, we are establishing robust foundations for sustainable corporate activities that make meaningful contributions to society.

The impact of these reforms is already evident. Revising pricing strategies to accurately reflect value and strengthening risk management for individual projects significantly improved profitability. In the first half of FY2024, operating income was 3.2 times that of the same period the previous year, and profit reached the highest level since the exit of the memory business from our portfolio. In fact, all business segments returned to profitability, reflecting Toshiba's enduring technological strengths, and the trust placed in us by our customers. Energized by these results, we remain steadfast in our commitment to fully implement the measures necessary to achieve our FY2026 target of a 10% operating income margin.

In executing our growth strategy, we must address significant global challenges, including energy shortages, resource depletion, and climate change. In Japan, we anticipate substantial changes in the energy and infrastructure markets. We see all of these as presenting us with major opportunities. We will identify key areas to target and secure growth by establishing robust hardware in the energy and infrastructure sectors, and creating added value by integrating hardware with digital solutions.

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In line with the goals set forth in "Toshiba's Revitalization Plan," we are driving forward various initiatives to address societal changes and challenges through the power of technology, with the aim of making a meaningful contribution to society.

# <mark>Ko</mark>ji Ikeya

Corporate Officer Corporate Senior Executive Vice President Toshiba Corporation

# **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 150 years



### 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 laborsaving 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 highcapacity 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.



#### 2010s

In 2017, Toshiba developed the world's first practical multi parameter 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 parameter phased array weather radar makes it possible to predict the signs of torrential rains and resulting rainfall quickly and accurately.

#### 2020s

In 2022, Toshiba developed the world's first lightweight, compact, and high-power superconducting motor. This motor is capable of being applied to large mobility platforms such as aircraft. With the increasing demand to reduce greenhouse gas emissions, this motor is anticipated to contribute to the electrification of aircraft and provide new value to the mobility industry.

"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**

In December 2023, Toshiba Corporation transitioned to a private company, withdrawing from the Prime Market of the Tokyo Stock Exchange and the Premier Market of the Nagoya Stock Exchange. This shift allows us to fully focus on future reforms, fundamentally address structural challenges, and return to "what Toshiba should be."

Toshiba's mission is to leverage technology to address global changes and social challenges. Guided by our management philosophy, "Committed to People, Committed to the Future.," we are committed to sustainability management and strive to contribute to society through Green Transformation (GX) and Digital Transformation (DX).

Announced in May 2024, our new medium-term business plan, "Toshiba's Revitalization Plan," sets a key milestone: achieving a 10% operating profit margin (ROS) by FY2026. To reach this goal, we will strengthen our earning power and strategically reinvest generated resources into our people, businesses, and technological advancements.

The basic thinking behind the plan is to improve the management infrastructure, lower the break-even point by making the company leaner and stronger, and to invest in growth strategies. We will achieve these objectives by ensuring that each of our businesses play its role to the full.



#### Positioning of the Plan and its Core Targets

FY2024 marks the "lean-in" phase, where we focus on streamlining operations, reducing fixed costs, and lowering the break-even point to strengthen profitability ahead of a rebound. From the second year onward, we will strategically reinvest the resources generated in year one into key areas, transitioning into the "growth phase," where we aim to increase marginal profit ratios.

#### Sales and Components (Yen in Billions)

	3,285.8	Sales +14% 3,750.0
	62%	Variable costs Variable costs 61%
	33%	Fixed costs▲5%Operating income
(Yen in Billions)	FY23 Actual	FY26 Budget
Sales	3,285.8	3,750.0
Fixed costs (%)	1,092.5 (33.2%)	1,050.0 (28.0%)
Provisions / Before buffer Operating income(%)	148.4 (4.5%)	
Provisions / Buffer	▲ 108.5	
Provisions / After buffer Operating income(%)	39.9 (1.2%)	380.0 (10.1%)

We developed the new plan around three key points.

#### 1. Raise the probability of achieving plans

No longer rely on aggressive sales plans. Instead, develop high probability plans that are backed up by concrete measures, and manage them with KPIs.

#### 2. Drastic reduction of fixed costs

Conduct a thorough review of itemized expenditures and eliminate fixed costs that do not contribute to future growth.

#### 3. Advanced loss-control management

Minimize downside risks by enhancing project screening processes and implementing comprehensive risk analysis to reduce the need for provisions.

Our targets for FY2026 are sales of 3.75 trillion yen; a fixed cost ratio of 28%, a 5% decrease from FY2023; and an ROS of 10%.

#### **Toshiba Group Management Policy**

## **Toshiba's Overall Management Strategy**

Our management philosophy, "Committed to People, Committed to the Future.," the apex of the pyramid in the diagram below, expresses exactly the values required today, and provides the fundamental premise of our new plan.

In achieving our target of a 10% operating income margin (ROS), it is essential to effectively coordinate "Group-Wide Strategies" that reduce fixed costs and make optimal allocations of resources with "Business Strategies" centered on business divisions that improve profitability.

In addition, it is imperative that we increase the feasibility of these strategies by rebuilding our "Management Infrastructure," which includes defining and monitoring KPIs and streamlining business processes.

We will accomplish the measures we have formulated by building an optimal system for collaboration between the headquarters and business divisions and by carefully implementing various measures.



#### Committed to People, Committed to the Future.

#### Management strategy to achieve a 10% ROS

- Improve the break-even point by reducing fixed costs
- Improve profitability across all businesses and achieve a group-wide ROS of 10%
- Create innovative technologies and aim for their early commercialization

#### Rebuild management infrastructure to enhance strategy execution

- · Establish optimal engagement between business units and headquarters
- Define highly probable plans and examine overall risk
- Determine and monitor KPIs, establish a project management structure
- · Simplify and streamline business processes

## **Group-Wide Strategies**

To address internal rigidities and break down barriers between organizations and group companies, we will relocate and consolidate our headquarters. This involves moving from Hamamatsucho, Tokyo, to Kawasaki, Kanagawa Prefecture, centralizing our base around the Smart Community Center to be closer to our business divisions and R&D teams. This is scheduled for completion in the first half of FY2025. In addition to this, we will continue to consider the optimal operating structure, including the integration of the key group companies into Toshiba Corporation.

Furthermore, in January 2025, Toshiba implemented a headquarters reorganization. The headquarters will focus on and strengthen only those functions necessary for the corporation and that drive growth and improvement across the Group. The company will transfer functions required for business operations to business divisions, which will clarify cost control within the units and allow them to make decisions aimed at raising efficiency and maximizing profitability.

Our future growth is driven by our people, and we prioritize investments in our human resources. In addition to raising wages, we will continue to promote work style reform and support career development, transforming the company into a more employee-friendly workplace. To enhance employee engagement, we will actively incorporate employee feedback and establish a compensation system that appropriately rewards employees for their contributions. We will also promote the selection of talent regardless of age or length of service, expand educational investments, and increase the number of new graduate hires to rejuvenate our organization.

We are also intensifying efforts to improve productivity. As part of our work efficiency improvement efforts, our meeting reforms have simplified meetings, reduced pre-meetings, and limited the number of participants, all to significantly reduce the man-hours spent on meetings. Our estimates show that meetings hosted by corporate staff divisions can be reduced by 24%. On top of this, by actively utilizing generative AI, we aim to drive operational reforms and expect to improve monthly work efficiency by 5.6 hours per person.

# **Business Strategies (Business Portfolio)**

	Strengthen Areas		eas Improvement/Challenge Areas		
	High Growth Businesses	Revenue Growth Businesses	Transformation Businesses	PJ Loss Prevention Business	New Fields
Applicable Business	Businesses with superior market positioning in growing markets	Businesses with superior market positioning in mature markets	Businesses with low profitability	Businesses whose earnings are deteriorating due to specific PJs	Businesses being launched as new business fields
Policy	• To achieve its full potential, the company will focus resources on increasing sales and market share.	• Manage fixed costs and capital investments to maximize profits.	<ul> <li>Identify the structural factors behind declining profitability and implement targeted improvement measures.</li> </ul>	• Identify the structural factors behind losses; HQ and BUs to act as one to implement countermeasures.	• Thoroughly implement a gate management system to make objective investment and withdrawal decisions.
Expected Profit	Further profit growth through increased scale	Achieve an ROS of 10% or more	Achieve an RO	S of 5% or more	Set according to each business
Main Products and Services	Power Generation To Semiconductors	&D Public infrastructure Digital	Railway, Industrial systems Elevators, Lighting	Retail and printing HDD	

We have redefined our business portfolio into five categories. At the forefront are our high-growth businesses, which hold leadership positions in expanding markets. We will concentrate our resources in these areas to unlock their full potential and accelerate growth.

Revenue growth businesses operate in mature markets, but they have strong positions with a stable revenue base. Here we aim to achieve an ROS of 10% or more through appropriate management of fixed costs and capital investment.

We will improve on low profitability in transformation businesses and project loss prevention businesses by identifying factors behind profit declines and taking improvement measures, with the aim of securing an ROS of 5% or more.

#### **Toshiba Group Management Policy**



Our overall business portfolio generated a company-wide average ROS of around 5% in May 2024. We aim to raise this to 10% by FY2026, the final year of the current plan. The Energy and Infrastructure segments have long provided Toshiba with stable foundations, but current demand expansion is about to transform them into growth businesses. The Device segment, while having high market growth expectations, faces challenges in profitability. By reforming the earning structure, we aim to capitalize on growing markets and achieve significant growth.

While we will work on improving profitability through FY2026, achieving the plan is not our final goal. By making sure that all businesses are aware of global best practices, and that they show their full potential, we aim to achieve continued growth beyond the medium-term business plan.

## **Restructuring Management Infrastructure**

We are advancing the reconstruction of management infrastructure through KPIs, monitoring, managerial accounting, and project management. First, we carefully selected simple KPIs linked to the plan's policy through thorough discussions with business divisions, and set them according to the characteristics and challenges facing each business, and have started monthly monitoring. By aligning business divisions and the headquarters through standardized KPIs, we enhance early risk detection and facilitate proactive countermeasure discussions. From now, we will promote the penetration of KPIs in business divisions and affiliated companies, in Japan and overseas.

Next, in managerial accounting, we are addressing the challenge of not being able to obtain required figures with appropriate granularity in a timely manner by improving our data infrastructure. Specifically, we are managing figures by business units, sub-divisions of business divisions, designing cost criteria that allow cross-company lateral comparisons, visualizing project profitability, and increasing the granularity of cost management. Doing this will build a system that goes beyond getting a simple grasp of the company's financial status, and that provides data and information that contributes to decision-making.

Finally, in project management, to minimize losses, we are reviewing the management structure for highly difficult projects and the decision-making structure of the approval process, ensuring thorough project profitability management by the headquarters. We believe that visualization of lifetime profitability will allow us to make decisions from a medium- to long-term perspective, and to set appropriate sales prices and conditions that take future risks (losses) into account.

### **Growth Strategies for the Future**

Two key concepts underpin our forward-looking growth strategy: "Establish strong hardware in Energy and Infrastructure" and "Enhance added value by combining hardware and digital technologies." We recognize that utilizing digital technology on highly competitive hardware will allow us to expand our business and increase profitability, and we are promoting collaboration with our Research and Development Center, which has cultivated advanced technologies, and business divisions engaged in digital businesses.



We foresee major shifts in the Energy and Infrastructure segments—not as challenges, but as strategic growth opportunities. The Energy segment is being carried forward on the tailwinds of increased electricity demand and the expansion of renewable energy, both expected to continue for a long time. Responding to this, and to the future energy mix trends considered in Japan's Seventh Basic Energy Plan, we will formulate a growth strategy built on our vision of society in 2040.

Along with further reinforcing our power transmission and distribution business, which is currently experiencing strong demand, we aim to expand our business in line with the increase in businesses related to renewable energy and nuclear power generation. Additionally, we plan to invest the funds generated from existing businesses into future GX solutions, such as next-generation renewable energy, including hydrogen, to support our customers' decarbonization. We also believe that it is necessary to consider collaborations with other companies.

In the Infrastructure segment, Japan is expanding its defense budget. Demand for defense equipment where we have strengths, such as radar systems and guidance devices, is expected to increase rapidly, and we have already received many orders. We are meeting them by making new capital investments to increase production. We will also utilize our advanced technologies in areas like AI and quantum cryptography communications. Regarding future market growth, we intend to position the defense business at the center of our growth strategy and to commit to it by strengthening our technical, proposal and supply capabilities, reinforcing our resources, including personnel, and also to consider collaborations with third parties, including established defense contractors and startups. We are now, as a unified Group, actively discussing a growth strategy centered on energy and infrastructure, and it will be a key element of our FY25 medium-term business plan.

In the Devices segment, we aim to expand the scale of the business by strengthening third-party partnerships to meet increasing global demand for power semiconductors and hard disk drives. In the Digital segment, we will further strengthen our system integration business, which is performing well in the government and transportation sectors, by combining its capabilities with hardware. Both segments are advancing research into elemental technologies with our Research and Development Center, and the results will also contribute to the development of differentiated technologies for the Energy and Infrastructure segments.

# **Toshiba Group Technology Strategy**

# **Basic Policy**

Guided by its Basic Commitment, "Committed to People, Committed to the Future.," Toshiba Group leverages its proven technologies to develop products, solutions, and services that realize safe, reliable infrastructure and contribute to the achievement of carbon neutrality and a circular economy.

We drive innovation and the development of core physical technologies by making the most of our technological diversity—our core strength—and by cultivating and motivating the talented people who form the foundations of our capabilities. In the digital realm, promoting the concept of software-defined ensures that we can generate new value for our customers by advancing digital evolution (DE), digital transformation (DX) and quantum transformation (QX), and by building a connected data society.

#### Toshiba Group's R&D Vision



Reinforcing our research and development capabilities to stimulate innovation is a key material issue. We are doing this by maintaining our investment in R&D at approximately 5% of sales, and an approach that prioritizes focused investments in strategic businesses and emphasizes efficiency and effectiveness in decisions on R&D expenditure.

#### Breakdown of R&D expenses (FY2023)



### **Research and Development Structure**

Our research and development (R&D) organization structure consists of the R&D division of Toshiba Corporation and the R&D, design, and technology divisions of major group companies. Each division plays a distinct role, ensuring that R&D activities are efficiently coordinated across the organization.

Toshiba Corporation's R&D division takes a long-term approach to deepening foundational technologies, driving innovative and forward-thinking research aimed at:

- Developing new products;
- Significantly enhancing the value of existing products; and
- Improving productivity and quality in existing businesses through technology development and real-world applications.

Meanwhile, the R&D, design, and technology divisions of major group companies support core technologies within their respective business domains. Their efforts focus on:

- Developing new products and differentiated technologies in alignment with business strategies; and
- Commercializing and scaling production to meet customer needs.

By fostering close collaboration among these divisions, we ensure the seamless introduction of innovative products into the market.

#### Toshiba Group R&D Structure

		Corporate's R&D organizations
Toshiba Corporation		Corporate Research & Development Center
		<ul> <li>Corporate Manufacturing Engineering Center</li> </ul>
Battery Div.		Digital Innovation Technology Center
Next Business Development Div.		Innovation Laboratory
	Independent corporations' R&D organizations	Overseas R&D Organizations
Toshiba Energy Systems Corporation	Energy Systems Research and Development Center	Toshiba Europe Limited Cambridge Research Laboratory Bristol Research & Innovation Laboratory Israel Development Office <sup>+1</sup>
Toshiba Infrastructure Systems & Solutions Corporation	Infrastructure Systems Research and Development Center	Toshiba America, Inc. R&D Division*1
Toshiba Electronics Devices & Storage Corporation		Toshiba China R&D Division*1
Toshiba Digital Solutions Corporation	Software Systems Research and Development Center	Toshiba Europe GmbH Regenerative Innovation Center*2
Toshiba Tec Corporation	- Research & Development Center	Toshiba Software (India) Pvt. Ltd*2
*1 Affiliated with the Research & Development Center		Toshiba Software Development (Vietnam) Co., Ltd. *2

\*2 Affiliated with corporate

Beyond Japan, Toshiba Group operates R&D centers in the United States, Europe, India, Vietnam, and Israel. Their research work is organically linked with that of R&D centers in Japan, realizing cutting-edge research and development on a global scale. Our determination to advance carbon neutrality and a circular economy through digitization can be seen in the Regenerative Innovation Centre we have established in Düsseldorf, Germany. This new R&D operation is our hub for building strong industry partnerships across Europe, and for promoting research collaborations that focus on the development of state-of-the-art technologies, and their real-world validation, implementation and standardization.

#### **Toshiba Group Technology Strategy**

#### Major Research and Development Centers



### **Examples of R&D Contributing to Addressing Social Challenges**

Through R&D, Toshiba advances technological innovations that address pressing social challenges, including the realization of a carbonneutral society and the need for a safe and secure world in response to rising geopolitical risks. One recent breakthrough is our latest SCiB<sup>™</sup> lithium-ion battery, which maintains the defining features of Toshiba's SCiB<sup>™</sup>—ultra-fast charging and long lifespan—while achieving higher volumetric energy density. Another innovation is in spatial security management technology: a walk-through screening solution that utilizes millimeter-wave radar modules originally developed for automotive applications. Without requiring individuals to stop for inspection, the system detects hazardous items hidden inside clothing.

# Development of a Lithium-Ion Battery with Ultra-Fast Charging and Long Lifespan, Offering Energy Density Equivalent to LFP Batteries

Toshiba has developed a lithium-ion battery with a niobium titanium oxide (NTO) anode that achieves an energy density<sup>\*1</sup> comparable to that of lithium iron phosphate (LFP) batteries while also offering ultra-fast charging and a long lifespan—approximately 10 times more cycles<sup>\*2</sup> than LFP batteries—making it ideal for buses, trucks, and other large commercial vehicles.

This high-performance battery was made possible through advanced electrode manufacturing technology that uniformly distributes nano-level conductive agents on the surface of NTO particles, forming a robust conductive network between them. This innovation enhances both energy density and battery longevity while enabling ultra-fast charging.

The new battery achieves an approximately 70% charge in just five minutes and maintains over 80% capacity even after more than 15,000 ultra-fast charge and discharge cycles. Its structure fundamentally prevents lithium deposition, significantly reducing the risk of smoke emission or combustion, ensuring safe operation in both low- and high-temperature environments.

Given that commercial vehicles operate at high utilization rates in extreme conditions, this battery meets critical requirements for electrification by combining ultra-fast charging, high safety, and reliability. Additionally, its long lifespan and rapid charging capabilities reduce the overall battery size and replacement frequency, leading to lower initial and operating costs.

In 2018, Toshiba entered a joint development agreement with CBMM, headquartered in São Paulo, Brazil, and Sojitz Corporation of Japan to commercialize this battery. As part of this collaboration, a real-world demonstration of electric buses equipped with this battery began in June 2024 at CBMM's Araxá Mine in Minas Gerais, Brazil.\*<sup>3</sup>

\*1 The amount of energy stored per unit volume

<sup>\*2</sup> Toshiba comparison. Based on partial charge and discharge cycles within a certain capacity range (not full charge and discharge cycles) assumed for ultra-fast charging cycles.

<sup>\*3</sup> Press Release, "Toshiba, Sojitz and CBMM Unveil an Ultra-Fast Charging Electric Bus Prototype Powered by Next-Generation Lithium-ion Batteries with Niobium Titanium Oxide Anodes -Now in demonstration operations at CBMM's industrial plant in Araxá, Brazil, further paving the way to battery commercialization-" (Announced on June 20,2024)





At the opening ceremony to mark the launch of EV bus demonstration project by Toshiba, Sojitz, and CBMM

# Development of a Walk-Through Hazard Detection System Using Millimeter-Wave Radar for Secure Space Management Solutions

In recent years, the threat of terrorism in public spaces—impacting both the general public and high-profile individuals—has increased. In response, Toshiba is advancing the development of a secure space management solution that utilizes millimeter-wave radar technology,\*<sup>1</sup> originally designed for automotive applications. This system rapidly detects hazardous objects hidden inside clothing, without requiring individuals to stop for screening.

Familiar body scanners, like those at international airport security checkpoints, use microwave radar,\*<sup>2</sup> requiring approximately 3 to 5 seconds per scan. These systems necessitate stationary inspections, limiting their usability to high-traffic areas. In contrast, our new millimeter-wave radar-based system detects concealed hazardous items in under one second, allowing for seamless, walk-through screening. This innovation eliminates the need for individuals to pause for inspection, making it ideal for train stations, shopping malls, event venues, and other public spaces.

Designed with flexibility and ease of deployment in mind, the system allows for software-defined customization, enabling calibration at installation and AI-driven hazard detection to be tailored to specific operational environments. This enhances both deployment efficiency and operational effectiveness.

At CEATEC 2023, Japan's premier electronics trade show, this system received the Minister for Internal Affairs and Communications Award as part of the CEATEC AWARD 2023. It was recognized for its modular hardware design, which enables functionality to be defined via software for versatile applications, as well as its potential for non-destructive inspections using millimeter-wave technology across multiple industries. Additionally, the system was highly evaluated for its practicality and market potential. Toshiba is committed to further refining this technology and accelerating its implementation in real-world applications.

- \*1 Millimeter waves have a frequency range of 30 GHz (gigahertz) to 300 GHz and a wavelength range of 1 millimeter to 1 centimeter. They have excellent resolution compared to microwaves. They also have high transparency, unlike visible light and infrared.
- \*2 Microwaves have a frequency range of 3 GHz to 30 GHz and a wavelength range of 1 centimeter to 10 centimeters. They are used in applications like wireless LAN, satellite communications, defense, and weather radar.



Image of the walk-through hazard detection system using millimeter-wave imaging radar

### Innovation Management in Research and Development

We recognize continuous innovation as the key driver of success. Drawing on the principles of the Innovation Management System defined in the ISO 5600 series of standards, we bring a structured approach to managing R&D, and assess research topics through multiple gate evaluations based on five key criteria:

- 1. Business Readiness Level (BRL)
- 2. Technology Readiness Level (TRL)
- 3. Technical Strength and Potential
- 4. Product Competitiveness
- 5. Why Toshiba? (Validate the strategic significance of pursuing commercialization within Toshiba.)

This framework ensures the timely delivery of innovative products and services aligned with societal needs and contributes to sustainable growth.



#### Management of Research and Development Themes Based on Innovation Management

### Innovation Management and Rule-Making Activities

Enhancing the BRL of R&D themes requires a strong focus on rule-making activities, including standardization. This must encompass both de jure standards—international standards (ISO, etc.) and national standards (JIS, etc.)—and forum standards developed by industry groups, forums, and consortia.

At lower levels of BRL, the aim is to identify and analyze existing standards and regulations. At medium levels, open/close strategies are devised, and rule creation is promoted as a way to establish open areas within industries. At higher levels, leveraging rules and standards facilitates market entry by multiple stakeholders, driving further market expansion. By aligning with this approach to rulemaking, we aim to contribute to society's sustainable development.

# Framework for Rule-Making Activities

The Chief Standardization Officer (CSO) oversees Toshiba's standardization and rule-making activities, with the Corporate Technology Planning Division operating under the CSO's leadership as the central hub for coordinating efforts across corporate R&D and four key group companies.

The division supports rulemaking at key group companies by gathering and sharing relevant information, developing strategies in collaboration with business units, and disseminating best practices. It integrates these activities with intellectual property strategies in order to maximize the impact of open/close approaches, working in close collaboration with the intellectual property team.



#### Structure and focused themes of Toshiba's standardization activities

A notable example of our standardization efforts is our leadership in IEC Technical Committee 120 on "Electrical Energy Storage Systems." We played a pivotal role in setting up the committee, and continue to promote progress by providing its secretariat.

Beyond current business areas, in alignment with our management vision, we are extending our participation in promoting standardization to DE, DX and QX. Initiatives here include contributing to IEC's Subcommittee 3D, "Product Classes, Properties, and Identification – Common Data Dictionary (CDD)" in support of digitizing the carbon footprint of products (CFP) and advancing quantum cryptography communications standards.

Looking to the future and Toshiba Group's long-term development, we will continue to advance standardization as critical to sustained growth and innovation.

# **Intellectual Property**

# **Basic Policy**

Toshiba Group promotes a co-creation cycle that generates new value through three key initiatives:

- 1. Developing an intellectual property strategy with a holistic perspective
- 2. Optimizing intellectual property assets
- 3. Managing intellectual property through an open/close approach

"Developing an intellectual property strategy with a holistic perspective" is the most important step. From the early stages of business design, we take a comprehensive view of the landscape, considering changes in the external environment, the company's patents, intellectual assets such as know-how, and overall management and business strategies. We evaluate how intellectual property can be leveraged and linked to the value provided to customers, while taking into account transformations such as DE (Digital Evolution), DX (Digital Transformation), and QX (Quality Transformation) as well as the utilization of data.

"Optimizing intellectual property assets" is another critical step. This involves executing the intellectual property strategy by accurately assessing how our core-value intellectual assets—including not only intellectual property rights but also technology, know-how, human resources, skills, and brands—are structured. Any missing intellectual property is acquired, while confidential information, such as know-how, is safeguarded through strict secrecy measures to prevent leaks. Through these efforts, we are enhancing and refining the quality of our intellectual property portfolio.

"Managing intellectual property through an open/close approach" is an essential cycle. On the "close" side, we secure sustainable business competitiveness by protecting differentiating technologies through patents and safeguarding proprietary know-how. On the "open" side, we explore standardization while utilizing an optimized intellectual property portfolio to collaborate with corporate partners and customers. This collaboration expands opportunities to address societal challenges that Toshiba Group alone cannot resolve, ultimately contributing to the maximization of corporate value.



### **Organizational Structure**

The Strategic Planning Group, Legal & Contract Group, and Licensing & Litigation Group of the Intellectual Property Office are responsible for developing intellectual property strategies that take a comprehensive view of management and business strategies, changes in the external environment, and intellectual assets. They also formulate intellectual property policies that apply across Toshiba Group by swiftly gathering information on legal amendments and other regulatory changes, as well as providing analyses, recommendations, and insights based on patent data and other information. Additionally, they handle intellectual property compliance matters, including those related to Copyright Act and Unfair Competition Prevention Act, as well as intellectual property education, securing business advantages, and managing contracts and dispute resolution with a forward-looking approach to risk mitigation.

Meanwhile, the Intellectual Property Division, which is dedicated to research laboratories and business units, develops intellectual property strategies tailored to each development and business domain, working to build and optimize intellectual property portfolios. To drive its global intellectual property strategy, Toshiba has intellectual property specialists stationed in both the United States and China.

Regarding investment in intellectual assets and the allocation of management resources, as well as the execution of business portfolio strategies, executive officers report on progress to the Board of Directors, which provides oversight and guidance.



#### **Intellectual Property**

## **Education in Intellectual Property**

#### For All Employees

As part of the education on the Standards of Conduct for Toshiba Group, employees in Japan receive annual e-learning training to reinforce their understanding of the Standards of Conduct regarding intellectual property rights, with a particular focus on raising awareness of copyright-related issues. The participation rate for FY2023 was 99.6%.

Newly hired employees undergo general intellectual property training as part of the Corporate Entry Program. This is followed by levelspecific training programs tailored to the policies and needs of each business division.

Our subsidiaries in China, South Korea, Hong Kong, and Taiwan provide copyright education on topics such as the proper use of software, while our U.S. subsidiaries conduct intellectual property education programs tailored to regional requirements, utilizing a Learning Management System. In this way, Toshiba Group ensures that its overseas subsidiaries receive region-appropriate intellectual property education.

#### For Intellectual Property Employees

Employees working in intellectual property follow a basic training program designed to ensure they can perform practical tasks within two years. This includes acquiring knowledge of intellectual property rights in Japan and overseas, learning to draft patent specifications, and on-the-job training and intermediate processing exercises.

#### **Toshiba Group Patent Conference**

Toshiba Group hosts the Toshiba Group Patent Conference annually, recognizing outstanding inventions with the "Excellent Invention Awards." In 2023, the conference awarded:

- Five Business Contribution Prizes to honor inventions that made significant contributions to the company's business.
- Two Future Value Creation Prizes for inventions expected to contribute to business growth or provide value to society in the future.



Representatives of the award winners

The final stage of the conference featured a special lecture by an external guest speaker and multiple webinars under the theme "Connecting Intellectual Property, Bridging Industries." These sessions aimed to foster an intellectual property mindset and discover new perspectives on intellectual property activities. Moving forward, we will continue to enhance the environment to facilitate invention and strive to further motivate employees to innovate.

Strategies

Sustainability

### **Global Patent Portfolio**

Reflecting our global expansion, more than half of our patent applications are filed internationally, with a particular focus on the United States and China. In each business domain, we carefully select and file patents to build an optimal portfolio aligned with our intellectual property strategy.

The number of patent applications filed over the past three years is detailed below.

Number and Breakdown of Patents Filed (April 2021-March 2024)



#### Number and Breakdown of Patents Owned (as of March 2024)

Each year, we conduct a comprehensive evaluation of all registered patents and create an optimized portfolio for each business domain based on the results.



#### **Intellectual Property**

#### **Protection of Toshiba Brand**

The Toshiba brand represents the corporate value of Toshiba Group, as well as the quality and reliability of the products and services we provide. To ensure the protection of the Toshiba brand, we actively manage trademark rights and take measures to eliminate counterfeit products.

Failure to address counterfeit Toshiba products not only undermines our brand value and public trust, but also poses risks to customers who may mistakenly purchase counterfeits that do not meet expected quality standards. Additionally, counterfeit products increase the risk of accidents.

To combat this issue, we actively work to eradicate counterfeit products, collaborating with anti-counterfeit organizations in Japan and internationally and engaging with local government agencies to advocate for stronger enforcement measures.





#### Breakdown of Incidents of Counterfeit Products by Country and Region in FY2023



#### **Evaluation by External Parties**

Toshiba Group's state-of-the-art technologies and the Toshiba brand are widely recognized and highly valued by society. Below is a list of key awards and recognitions we have received in the field of intellectual property.

#### Selected for Clarivate Top 100 Global Innovators<sup>™</sup> 2024

Clarivate, a global information services company, has selected Toshiba for 13 years running as one of the Clarivate Top 100 Global Innovators<sup>™</sup>, a list of the best 100 innovative companies and institutions around the world, based on Clarivate's patent data analyses.

### Top 100 Global Innovator 2024 Clarivate

#### "High-Safety Battery Module and Energy Storage System" Wins the Kanto Region Invention Encouragement Award for FY 2023

Our high-safety battery module and energy storage system has been recognized by the Japan Institute of Invention and Innovation (JIII) in its program to honor outstanding inventions. This system was awarded the Invention Encouragement Prize. Equipped with enhanced fail-safe mechanisms, the system achieves the high safety standards required for mass transportation fields, such as railways.

The system's protection mechanism features multiple independent circuits for detecting over-temperature and over-voltage. These circuits monitor for abnormalities within their respective systems, preventing fault propagation from one system to another and significantly improving reliability.

Battery Module Type-S and component products, which incorporate this invention, employ a configuration of two parallel and 12 serial battery cells. They have achieved Safety Integrity Level 4 (SIL4) of the RAMS (Reliability, Availability, Maintainability, and Safety) standard, the highest safety level. These products are now being deployed both in Japan and international markets.

(Yen in billions)

Sustainability

# **Financial Highlights (Consolidated)**

#### Performance Trends Over the Past 5 Years

Net sales



Net sales for Retail & Printing and Infrastructure Systems increased due to higher volumes; however, overall net sales decreased year-on-year, primarily due to the impact of the sale of Toshiba Carrier Corporation (-94.9 billion yen), resulting in total net sales of 3,285.8 billion yen.



Net income resulted in a net loss of 74.8 billion yen, due to the equity losses from Kioxia Holdings Corporation (-87.3 billion yen), booked tax expenses, etc.



Operating profit was positively impacted by strong performances in Public Infrastructure, Transmission & Distribution Systems, and Power Generation Systems. On the other hand, it was negatively impacted by losses, such as provisions for product warranties in HDDs and Power Generation Systems (-36.8 billion yen), cost reassessments in projects (-30.8 billion yen), and goodwill impairment in the Printing business (-11.5 billion yen), resulting in total operating income of 39.9 billion yen.



Free cash flow improved due to better working capital management, resulting in cash inflow of 109.6 billion yen.



Business performance in the first half of FY2024 saw a significant improvement over the same period last year, driven by strong performances in HDDs, Power Generation Systems, and Retail & Printing. Additionally, the Building Solutions segment, which posted a loss last year, showed improvement.

Operating income of 70.5 billion yen was 3.2 times higher than for the same period last year, and marked the highest record since its business portfolio was changed in fiscal year 2018 to exclude the memory business. This was largely due to the result of management reforms, such as pricing strategies and fixed cost reduction. Net income also increased significantly year-on-year, driven by improved equity earnings from Kioxia Holdings Corporation.

### First-Half Results for FY2024: Year-on-Year Comparison

# Non-Financial Highlights (Consolidated)

(10,000t-CO<sub>2</sub>)

(10,000t)



Total GHG Emissions (Scope 1+Scope 2)\*1

\*1 CO<sub>2</sub> emissions from electricity are calculated using emission coefficients provided by power companies.

#### Number and Percentage of Female Employees in Managerial Positions in Toshiba Corporation and Key Group Companies<sup>\*5</sup>



\*5 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

FY2022

FY2023

# Lost Time Injury Frequency Rate (LTIFR)\*<sup>6</sup> at Toshiba Group in Japan

National LTIFR Average for the Electrical Appliance Industry
 LTIFR at Toshiba Group in Japan

FY2021



\*2 Obtained by deducting the volume of objects with value from the total volume of waste generated (excluding sites engaged in waste treatment and power generation).

Rate of Improvement\*<sup>3</sup> of the Amount of Water Received

# LIFR at Toshiba Group in Japan



\*6 The number of lost time injuries occurring in a workplace per one million man-hours worked Note: Includes incidents involving part-time, temporary, fixed-term, and dispatched workers.

#### Number of Reports Received via the Whistleblower System





\*3 The rate of improvement per unit activity of output with FY2020 as 100%

\*4 Basic-unit uses values such as production output, the number of products manufactured, the number of people, the total floor area, etc., that are related to the amount of water received associated with manufacturing.



Notes:

- Includes duplicate reports made to the internal secretariat

per Unit Activity\*4

Waste Volume\*<sup>2</sup>

<sup>-</sup> Numbers in parentheses (Cases received by the internal secretariat/cases received by the attorney's office)  $% \left( {{\mathcal{T}}_{{\rm{s}}}^{\rm{T}}} \right)$ 

# **Business Domains**

### Energy Systems & Solutions >p.29

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 plants (VPPs) for the efficient utilization of distributed energy sources, and green hydrogen energy systems that harness renewable energy.

### Infrastructure Systems & Solutions **Pp.31**

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.

### Building Solutions **Pp.33**

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.

### **Retail & Printing Solutions**

### Electronic Devices & Storage Solutions **Pp. 35**

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.

### Digital Solutions **Pp. 37**

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.

### Others (Battery Business) **Pp. 39**

We develop, manufacture, and sell the "SCiB™," a rechargeable lithium-ion battery that is highly safe, has a long lifetime, recharges fast, and operates in low temperatures. The SCiB™ is used in many fields—in automobiles, railways, industrial equipment like automated guided vehicles, and even in large-scale stationary power storage system, where it regulates the frequency of renewable energy generation.

We are expanding our business by bringing the SCiB<sup>™</sup> into markets where its unique characteristics make a difference, whether it be a reduction of the carbon footprint and operating costs through the electrification of systems, or improved reliability from the establishment of an emergency battery system.

#### Energy Business Domain:

• Toshiba Energy Systems & Solutions Corporation

Sustainability

• Toshiba Plant Systems & Services Corporation

#### Social Infrastructure Business Domain:

• Toshiba Infrastructure Systems & Solutions Corporation

#### Building Solutions Business Domain:

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

#### Toshiba Tec Corporation

#### Electronic Devices Business Domain:

Toshiba Electronic Devices & Storage Corporation
NuFlareTechnology, Inc.

#### Digital Solutions Business Domain:

Toshiba Digital Solutions Corporation

# **Energy Systems & Solutions**

T&D

#### **Main Business Areas**

- Power Generation Systems (Nuclear Power, Thermal Energy and Renewable Energy)
- Power Generation Business (Renewable Energy)
- Transmission and Distribution Systems
- Virtual Power Plant (VPP)
- Hydrogen Energy Systems
- Energy Digital Service
- Heavy-ion Therapy System



Nuclear Power/Thermal Power





Failure Prediction/Performance

Monitoring Service for Power

Plant and Power Grid System



Geothermal Power Wind Power Photovoltaic



Heavy-ion Therapy System (Yonsei University Health System)

#### Signing of Memorandum of Understanding with Indonesia's State Electricity Company Group to Promote the Application of CO<sub>2</sub> Capture Technology in Thermal Power Plants

Fukushima Hydrogen Energy

Research Field (FH2R)

In August 2024, Toshiba Energy Systems & Solutions Corporation (ESS) signed a memorandum of understanding (MOU) with PLN Nusantara Power (PLN), a subholding company of Indonesia's state electricity company, to explore the application of Toshiba's carbon capture technology in thermal power plants owned by PLN. Based on this MOU, both companies will study the feasibility of introducing small- and large-scale CCS equipment for thermal power plants over the medium to long term.

More than 80% of Indonesia's electricity supply depends on thermal power generation, and the Indonesian government has set a goal of achieving carbon neutrality by 2060. As the introduction of low-carbon technologies for fossil fuel use, particularly CCS technology, is gaining importance, the study will focus on the deployment of CCS equipment at power generation facilities directly owned and operated by PLN, including the Paiton coal-fired power plant Units 1 and 2, which are located in Indonesia's largest power plant complex and where Toshiba has delivered key equipment such as turbines and generators.



Photo from the signing ceremony

ESS will leverage its expertise in minimizing energy consumption in CCS equipment and its extensive know-how gained from long-term supply and maintenance of power generation equipment, using operational data provided by PLN to evaluate CO<sub>2</sub> capture technologies, and conduct feasibility studies. Additionally, the company will support the development of PLN's technical personnel.

To date, ESS has delivered 32 steam turbines (totaling 8,263MW) for thermal and geothermal power plants in Indonesia, including 9 turbines (totaling 1,845MW) for power plants operated by PLN. This MoU represents a collaborative effort that combines Toshiba's knowledge of CCS technology and the network we have built up in Indonesia with PLN's operational know-how to promote the deployment of CCS equipment, thereby contributing to Indonesia's goal of achieving carbon neutrality.

#### Partnering with Airbus on Superconducting Technology for Future Hydrogen-Powered Aircraft

In October 2024, ESS and Airbus UpNext, a wholly owned subsidiary of Airbus, initiated joint research to realize superconducting technologies for hydrogen-powered aircraft. Superconducting technologies offer a unique advantage for the aircraft, using -253°C liquid hydrogen as a fuel but also to efficiently cool the electric propulsion systems, and hydrogen-powered aircraft are seen as a promising solution for realizing net-zero CO<sub>2</sub> emissions by 2050, while superconducting technologies are an innovative approach enhancing energy efficiency and performance.

ESS has been conducting research and development of superconducting technology applications for almost 50 years. In June 2022, it unveiled a prototype 2 MW-class superconducting motor designed for mobility applications. Less than a tenth of the size and weight of conventional motors with the same level of output,

**Business Results** 

Sustainability



The signing ceremony

the new motor has the potential to contribute to large mobility applications, including aircraft. Through their collaboration, ESS and Airbus will combine their expertise to accelerate development of superconducting motor technology and the adoption of nextgeneration technologies in the aerospace sector.

ESS is also exploring carbon recycling that uses an electrolysis-based power-to-chemicals (P2C) process to covert CO<sub>2</sub> in exhaust gases into sustainable aviation fuel (SAF). Through these efforts, Toshiba seeks to bring diverse solutions to the mobility industry and to contribute to the realization of a carbon-neutral society.

#### Investment of 20 Billion Yen to Expand Production Capacity for Power Transmission & Distribution Equipment

Increased use of renewable energy is driving global demand for power transmission and distribution (T&D) equipment. ESS is responding robustly, and from FY2024 to FY2026 it will invest approximately 200 billion yen in enhanced production capabilities. It will boost capacity by approximately 1.5 times (against FY2023) at Hamakawasaki Operations in Kanagawa Prefecture, Japan, and at Toshiba Transmission & Distribution Systems (India) Pvt. Ltd. (TTDI), in India.

Hamakawasaki Operations will reinforce assembly lines for switchgears and transformers. TTDI will improve assembly and testing lines for distribution and power transformers, and establish a new manufacturing facility for surge arresters in the first half of FY2024, ready to start sales in the second half.

Toshiba has manufactured highly reliable T&D equipment for global markets for over a century. Today, it uses digital technologies to strengthen operation and maintenance services, realizing more efficient equipment operation and extended product lifespans.

In Japan, demand for T&D is increasing with the wider use of renewables, the need to replace aging infrastructure and the rapid growth of data centers. Toshiba recognizes T&D as a key business and is committed to expanding manufacturing capabilities, advancing new technologies, and realizing innovations that contribute to carbon neutrality and enhanced social infrastructure.

#### Partnering with Bekaert on MEA technology for PEM electrolyzers to accelerate the advance towards green hydrogen production

In February 2024, Toshiba Energy Systems and Solutions Corporation and Bekaert, a Belgian company, entered into a global partnership which includes a strategic cooperation agreement, and a manufacturing technology license for Membrane Electrode Assemblies (MEA), a key component for Proton Exchange Membrane (PEM) electrolyzers. This partnership aims to accelerate progress in green hydrogen production, and formalizes the recent collaboration to leverage technological, manufacturing and commercial strengths of both companies since signing a Memorandum of Understanding in September 2023.

PEM electrolyzers use electricity to split water into its component elements of oxygen and hydrogen. When the electricity is from a renewable energy source, the hydrogen is produced without any greenhouse gas emissions. The catalyst in PEM anode electrodes uses iridium, one of the scarcest traded metals. Consequently, solutions that reduce iridium content present a significant break-through towards the scale adoption of these technologies.



Image of Toshiba's MEA

Under the agreement, Bekaert's leading expertise in Porous Transport Layers (PTL), a key component in the MEA of water electrolyzers, will be coupled with Toshiba's innovative iridium-saving technology for MEA, which will enable a 90% reduction in iridium usage in the production of PEM electrolyzers. This reduction in iridium will enable a more stable supply of MEA and support the scale expansion of green hydrogen production.

Toshiba's advanced iridium-saving MEA technology, coupled with Bekaert's longstanding expertise in PTL, forms a promising partnership that will effectively meet the rapid growth in demand and contribute significantly to the realization of a green hydrogen society.

# Infrastructure Systems & Solutions

#### Main Business Areas

- Water & Wastewater Treatment Systems
- Traffic Control Systems
- Broadcasting Systems
- Security & Automation Systems
- Industrial Systems
- Substation Systems
- Disaster Management Solutions & Telecommunications Systems
- Defense & Electronic Systems
- Railway Systems
- Industrial Computers



Water & Wastewater Treatment Systems



Broadcasting Systems

Security & Automation Systems

(De-palletizer)



Substation Systems (UPS)



Defense & Electronic Systems (Air defense system)







Industrial Systems (Motor/Drive)



Disaster Management Systems (Radio Transmission System)

Security & Automation Systems

First-ever implementation in Japan for sewage treatment facilities, based on research by TISS.

#### \*2

The Oxidation Ditch (OD) process is a wastewater . treatment method that uses a continuous-loop channel as a reaction tank, where activated sludge treats sewage, and solids are separated from treated water in a final sedimentation tank.

#### ■ Launching Habuki™, a Pretreatment System for Oxidation Ditch Sewage Treatment

Railway Systems

Toshiba Infrastructure Systems & Solutions Corporation (TISS) has achieved a notable first\*1 in sewage treatment: the combination of a rotating fiber unit with the Oxidation ditch (OD) process.\*<sup>2</sup> Launched in July 2024, Habuki<sup>™</sup> delivers an innovative pretreatment system using rotating fiber unit. It is expressly designed for sewage treatment facilities that employ the OD process, which currently applied around 1,000 in Japan alone. Installed upstream of OD facilities, Habuki<sup>™</sup> conduct low-power, highly efficient pretreatment that significantly reduces the pollution load on the reaction tanks that decompose and remove contaminants from wastewater.

In a comprehensive development process, TISS carried out joint research with the Japan Sewage Works Agency. Full-scale demonstration testing at the Ujiie Water Treatment Center in Sakura City, Tochigi Prefecture,



"Habuki™" – A pretreatment system for the oxidation ditch (OD) process utilizing a rotating fiber unit

from April 2022 to December 2023, confirmed that Habuki™ enhanced treatment capacity

and improved energy efficiency, opening the way to official commercialization.

Sewage treatment facilities face many issues, including fluctuating inflow patterns from demographic shifts, facility optimization and expansion through regional consolidation, measures to promote energy efficiency and carbon neutrality, and aging infrastructure.

TISS is determined to leverage its extensive expertise in infrastructure solutions, including water treatment technologies and innovative wastewater management systems, to meet global challenges such as carbon neutrality and infrastructure resilience.

#### Order Received for Water Treatment Projects Under Trinidad and Tobago's National Water Sector Transformation Program

In November 2024, Toshiba Water Solutions America Inc. (TWSA), a subsidiary of Toshiba Water Solutions (TWS)—the Indian-based arm of TISS—announced the contracts from the Republic of Trinidad and Tobago. The scope covers the construction of a new water treatment plant, expansion of another, and the rehabilitation and refurbishment of three facilities.

TWSA has been active in the Caribbean basin since 2001, and has constructed 39 water and sewage treatment facilities and also provided operation and maintenance (O&M) services to support safe and reliable water supply systems. This extensive experience in engineering, procurement, and construction (EPC) has given it a deep understanding of the region and its needs that was instrumental in securing the contracts.

TISS is working with TWS to expand its EPC and O&M services for municipal water and sewage plants and industrial water treatment facilities across India, Central Asia, the Middle East, Southeast Asia, North America, and Latin America. Its ultimate goal is to establish sustainable water recycling systems and develop environmentally advanced communities worldwide.

#### Participation in QR Code<sup>®</sup>-Enabled Digital Boarding Service Pilot on the JR Chuo Main Line

TISS participated in a pilot project to test the viability of a QR Code®\*1-enabled digital boarding service for train and bus services. The project was carried out by two operators of rail services, Central Japan Railway Company (JR Central) and Nagoya Railroad Co., Ltd. (Meitetsu), and a bus company, Kitaena Kotsu Co., Ltd. (Kitaena Kotsu), along two sections of the JR Chuo Main Line,\*<sup>2</sup> Nagoya Station to Nakatsugawa Station and Tajimi Station to Nakatsugawa Station. It ran from September 20 to December 8, 2024, and TISS provided its "Doco-Tick™" QR code ticketing platform and an external QR code reader system for automatic ticket gates.

Meitetsu contributed to the project with CentX, its regional mobility-as-a-service app, which integrated support for the Doco-Tick<sup>™</sup> platform and two tickets: the Magome Excursion Ticket covering train routes, and the Magome Free Ticket for the Magome bus route operated by Kitaena Kotsu. The aim was to evaluate the feasibility and convenience of integrating urban rail and regional bus services into a unified digital boarding system.

TISS proactively collaborates with railway operators to promote digital boarding services, and has provided "Doco-Tick<sup>™</sup>" and external QR code reader systems for ticket gates to a number of pilot projects. The company continues to develop new rail services and contribute to more convenient and secure public services.

#### Product Launch of Synchronous Reluctance Motor and Its Dedicated Inverter

Toshiba Industrial Products & Systems Corporation's (TIPS) synchronous reluctance motor and dedicated inverter, launched in October 2023, achieves IE5 efficiency standards (IEC/TS 60034-30-2:2016\*) and contributes to resource conservation with a magnet-free design.

As companies worldwide bring the SDGs into their corporate strategies, tackling climate change by reducing greenhouse gas emissions has become a priority. TIPS's synchronous reluctance motor is designed for easy

interchangeability with standard three-phase induction motors with the same frame size, while delivering IE5-level\* ultra-high efficiency, reducing energy consumption and CO<sub>2</sub> emissions. It is an environmentally friendly solution that also eliminates the use of rare-earth magnets in the rotor.

TIPS is advancing carbon neutrality by bringing energy-efficient solutions to the market, addressing the challenges of climate change, promoting initiatives for a circular economy, and anticipating customer needs.

#### \*1

QR Code<sup>®</sup> is a registered trademark of DENSO WAVE INCORPORATED.

#### \*:

The main trunk line running between Tokyo and Nagoya. The area covered by the project serves the city and its suburbs.

Note:

This service is currently available only in Japan.

#### \*

The highest energy efficiency standard currently defined by the International Electrotechnical Commission.

Note: This product is currently available only in Japan.



Synchronous Reluctance Motor

# **Building Solutions**

#### **Main Business Areas**

- Elevators
- Building Facilities
- Materials for Electrical Construction
- Automotive Light Sources, Industrial Light Sources, UV Module
- Escalators

UV Lighting

Lighting Equipment, Airport Ground Lighting System, Stage and Studio Lighting System









Office Lighting



#### Delivery of 50 Elevators, Including 23 Units of Double-Deck Elevators, to Azabudai Hills Mori JP Tower in Tokyo

Toshiba Elevator and Building Systems Corporation (Toshiba Elevator) supplied 50 units of elevators, including 23 units of double-deck elevators, to Azabudai Hills Mori JP Tower, which opened on November 24, 2023. The 64-story, 330-meter multi-purpose skyscraper has five basement levels. It offers large-scale office spaces, and is home to Aman Residences Tokyo in collaboration with Aman, the world-renowned luxury resort brand, the Keio University Center for Preventive Medicine, and The British School in Tokyo. It also houses an expansive



External View of Azabudai Hills Mori JP Tower

commercial facility.

8 units of high-capacity, high-speed double-deck elevators with a capacity of 68 passengers (34 per cabin) and a speed of 360 meters per minute are at the heart of the tower's main vertical transportation system.

Double-deck elevators enhance transportation efficiency in large skyscrapers with two vertically stacked cars within a single hoistway, a configuration that significantly increases passenger capacity and optimizes space utilization with more efficient and compact elevator installation area.

The entrance floors of many high-rise buildings have higher ceilings, and floor heights can vary throughout the structure. The adjustable floor height system of Toshiba's double-deck elevators automatically adjusts the vertical distance between the upper and lower cars to match the floor height, a feature that provides greater architectural flexibility and seamless integration into diverse building designs.

With more and more high-rise buildings constructed especially in urban areas, high-capacity, high-speed elevators are essential for efficient transportation of passengers within buildings. Toshiba Elevator's advanced elevator technology create more comfortable and efficient vertical transportation solutions for urban environments.

Note: This service is currently available only in Japan.



ELCLOUD's Robot Integration Service

Note: This service is currently available only in Japan.

#### Installed "ELCLOUD" at Eir Mansion Hakozaki Park – Conducting a Pilot Project

Toshiba Elevator installed a cloud-based service "ELCLOUD," which enables robot integration and smartphone calling at Eir Mansion Hakozaki Park, a residential building in Fukuoka, Kyushu, developed by Sakushu Shoji Co., Ltd. In this project, the company conducted a proof of concept (PoC), linking the elevator and robot via ELCLOUD. This service tested series of operations where a robot boarded and exited the elevator without human intervention.

Through this PoC, Toshiba Elevator aims to offer an environment in which robots can move autonomously between the upper and lower floors of residential buildings, improving the efficiency of building management operations, and verify a robot-friendly environment.

In the Eir Mansion Hakozaki Park's project, Toshiba Elevator collaborated with ugo, Inc., using their robot "ugo mini" and robot integration interface "LCI" provided by Octa Robotics, Inc.

The ELCLOUD includes the Smartphone Calling Service, which allows passengers to call an elevator and select their destination floor with their smartphones in advance. The Robot Integration Service enables various robots to operate in tandem with elevators, while the Management Support Service supports management work by monitoring the elevator's operation status from PCs and tablets.

Toshiba Elevator is improving elevator convenience, expanding its data service business, and contributing to smart residential environments and a more connected society.

#### AI Image Analysis Service "ViewLED Solution" Expands with New Features to Enhance Workplace Safety

ViewLED Solution, an innovative AI image analysis service developed by Toshiba Lighting & Technology Corporation, integrates LED lighting and cameras into a single unit, ViewLED. AI analyzes images captured by these ceiling-mounted units, realizing a tool that enhances safety and productivity in manufacturing environments.

Toshiba Lighting & Technology Corporation continues to refine ViewLED. On its launch in April 2024, it offered intrusion alerts for designated areas, forklift proximity detection, and solo work monitoring. Four more unsafe behavior detection functions were added in September: failure to wear gloves, helmets, or protective eyewear, and walking with hands in pockets, enhancements that add to efficient safety management and overall workplace improvement.

The service delivers impressive capabilities. On-premises AI analysis delivers real-time alerts, while cloud integration enables behavior tracking before and after detection, allowing analysis of root causes and promotion of awareness initiatives. Combining lighting and cameras in ViewLED provides wide area coverage with fewer blind spots, and helps to reduce workplace accidents and enhance safety awareness at manufacturing sites.



# **Electronic Devices & Storage Solutions**

#### **Main Business Areas**

- Discrete Semiconductors (Power Semiconductors, Small Signal Semiconductors, Photocouplers, etc.)
- System LSI (Analog ICs, Microcontrollers, Automotive ICs, etc.)
- Storage Products (Large-capacity HDD for data centers, etc.)
- Semiconductor Manufacturing Equipment (Electron Beam Mask Writer, etc.)
- Devices (Thermal Printheads, Magnetron, etc.) Materials
- (Fine ceramics products, etc.)



Power semiconductors



Electron Beam Mask Writer



Microcontroller TXZ+™ Family \*TXZ+™ is a trademark of Toshiba Electronic Devices & Storage Corporation.



Thermal Printheads



HDDs



Fine Ceramics products

#### Completion of New 300mm Wafer Power Semiconductor Manufacturing Facility

#### \*1

Production capacity of 200mm and 300mm wafer lines (converted to 200mm wafer equivalent)

\*2 MOSFET: Metal oxide semiconductor field-effect transistor

\*3 IGBT: Insulated gate bipolar transistor Toshiba Electronic Devices & Storage Corporation (TDSC) held a completion ceremony in May 2024 for a new 300mm wafer power semiconductor facility and office building at its group company, Kaga Toshiba Electronics Corporation in Nomi, Ishikawa Prefecture. That set the scene for the installation of manufacturing equipment, in readiness for the start of full-scale production in the second half of fiscal 2024. Once fully operational, the new facility will boost production capacity<sup>\*1</sup> for low-voltage MOSFETs<sup>\*2</sup> and IGBTs<sup>\*3</sup> to 2.5 times that of FY2021, the year TDSC decided to green light the construction. Plans for the facility's second phase will be based on market demand and trends.

The new facility is built to be resilient, with seismic isolation technology to reduce impacts from tremors and dual power supply systems. It will strengthen TDSC's business continuity plan (BCP) and ensure stable operations even in the event of disaster, while deployment of advanced technologies, such as AI, will enhance both product quality and production efficiency. The facility's electricity is 100% renewable, supported by on-



Completed power semiconductor manufacturing facility

site solar power generation under a power purchase agreement (PPA) model. Part of the facility investment is expected to be subsidized by the Ministry of Economy, Trade and Industry (METI) under Japan's Supply Chain Resilience Initiative for Semiconductors.

Power semiconductors play a critical role in the supply and control of electric power, and are essential for improving the energy efficiency of electronic devices. Demand for them is growing with advances in vehicle electrification and high-efficiency industrial equipment, and TDSC is ready for this. The company has produced power semiconductors on a 300mm wafer line at the Kaga plant since the second half of FY2022, and the increased production capacity of the new facility will further contribute to the realization of carbon-neutrality.
#### ■ Launch of SmartMCD<sup>™</sup> Series Gate Driver ICs with Embedded Microcontroller

\*1

SmartMCD™ is a trademark of Toshiba Electronic Devices & Storage Corporation.

\*2

Arm<sup>®</sup> and Cortex<sup>®</sup> are registered trademarks of Arm Limited (or its subsidiaries) in the US and other countries.



"SmartMCD™" series of microcontroller-embedded gate drivers

TDSC started volume shipments of its SmartMCD<sup>™\*1</sup> Series of gate driver ICs with embedded microcontrollers (MCUs), in March 2024. The first product in this series, TB9M003FG, is well-suited for sensorless control of three-phase brushless DC motors used in automotive applications, including electric water pumps, electric oil pumps, fans, and blowers.

TB9M003FG combines an Arm<sup>®</sup> Cortex<sup>®</sup>-M0<sup>+2</sup> microcontroller, flash memory, power control and communications interface functions into a gate driver for N-channel power MOSFETs used in three-phase

brushless DC motor drives. Its highly integrated design supports system miniaturization, a lower component count, and advanced motor control, making it ideal for a wide range of automotive motor applications. It also features Toshiba's proprietary vector engine, dedicated hardware for sensorless sinewave control, which reduces microcontroller processing load and software size.

The expanding electric vehicle market demands greater electrification, component integration, downsized electronic control units (ECUs), and quieter motors. Integration of the microcontroller into the gate driver contributes to ECU downsizing, while vector control enhances motor efficiency and reduces noise, addressing key needs in next-generation automotive systems.

#### Sample Shipments Begin for High-Capacity 3.5-inch Nearline HDDs for Data Centers

TDSC has launched sample shipments of its new Mx11 family of helium-sealed high-capacity hard disk drives (HDDs) designed for data centers, cloud service providers, servers, and storage systems. The lineup includes the MG11 Series offering capacities of up to 24TB using conventional magnetic recording (CMR). Additionally, the MA11 Series, utilizing Shingled Magnetic Recording (SMR) for a maximum capacity of 28TB, has completed functional verification, and sample shipments will commence in Q4 2024.

FC-MAMR<sup>™</sup> is a trademark of Toshiba Electronic Devices & Storage Corporation



High-Capacity 3.5-inch Nearline HDD MG11 series / MA11 series

With constant growth in demand for cloud services, video streaming, AI, and data science, data generation and storage is growing at an unprecedented rate worldwide. It is also driving demand for higher-capacity HDDs that support more efficient data center architectures.

> The new helium-sealed HDDs incorporate TDSC's proprietary FC-MAMR<sup>™</sup> (flux controlmicrowave assisted magnetic recording)\* technology, which realizes higher capacities while maintaining reliability. Engineered for 24/7 operation, the drives offer a workload rating of 550TB per year, an MTTF/MTBF of 2.5 million hours, and an annualized failure rate (AFR) of 0.35%, indicating high performance and long-term durability.

> TDSC will continue to expand its lineup of high capacity nearline HDDs that improve cost efficiency for customers (lower TCO) while contributing to advances in digital infrastructure.

## Digital Solutions

#### Main Business Areas

- Solutions for Industries (Manufacturing, retail & logistics, finance, media, national and local government, social infrastructure, etc.)
- Solutions for Businesses (Smart manufacturing, supply chain management, human resource management, customer service management, etc.)
- Quantum-Related Technologies Quantum key distribution, quantuminspired optimization solutions)
- IoT/AI
- Security/Blockchain
- Managed Services



Digital Manufacturing Solutions



Human Resource Management Solutions



Quantum Key Distribution



IoT Platform

#### Toshiba Digital Solutions Corporation Enhances Disaster Prevention with **High-Accuracy Rainfall and Hailfall Prediction Services**

Toshiba Digital Solutions Corporation's (TDSL) recent offering, "Weather Data Service," brings proprietary technology to highly accurate, real-time analysis of weather radar data. The first phase of this was realized in May 2023, when TDSL introduced a "Rainfall Prediction Service" that accurately forecast localized heavy rain, "guerilla rainstorms" as it is known in Japan. February 2024 saw the launch of a "Hailfall Prediction Service," which predicts hailstorms by classifying particles in rain clouds.



Demo Screen of Hail Forecasting Service \*The displayed screen is for illustrative purposes only.

Hailfall Prediction Service is fast gaining traction. It was adopted by Mitsui Sumitomo Insurance Co., Ltd. in June 2024 and Tokio Marine & Nichido Fire Insurance Co., Ltd. in October 2024, and provides their policyholders with hail alert services. It detects hail formation in the atmosphere, predicts when and where it will fall, and issues advance alerts that give policyholders time to act and to minimize hail damage. TDSL is now promoting global expansion of Weather Data Service, including a strategic collaboration with MyDIGITAL, a government agency under Malaysia's Ministry of Digital Communications.

TDSL's ability to precisely forecast what is happening, and what will happen in the sky, is contributing to disaster prevention and mitigation. By bringing the service to diverse industries, the company aims to foster safer, more resilient communities and to enhance quality of life.

#### Advancing Quantum-Related Businesses with QKD and SQBM+

TDSL is driving the development of quantum-related businesses, including Quantum Key Distribution (QKD) and "SQBM+™," the quantum-inspired optimization solution, leveraging cutting-edge quantum know-how to enhance cybersecurity and optimization capabilities in diverse sectors. QKD, an advanced cryptographic technology that securely distributes encryption keys, offers a theoretically eavesdropping-proof solution to protect highly confidential data, and plays a vital role in defending against cyber threats and ensuring secure data communications.

In the UK, Toshiba Europe Limited collaborated with BT Group in the launch of a commercial QKD metro network trial in London in April 2022. Major global organizations such as EY, HSBC, and Equinix have joined the trial to evaluate how quantum-secure communications can strengthen cybersecurity across diverse sectors. Toshiba further reinforced its leadership in quantum communication technologies with the September 2023 establishment of the Quantum Technology Centre in Cambridge. The Center promotes commercialization of quantum technology, and supports the development of quantum-secure networks and the manufacture of QKD equipment.

In Japan, Toshiba is collaborating with SoftBank to develop quantum-secure networks for the Beyond 5G and 6G eras. The successful demonstration of QKD-based inter-site VPN communications in September 2023 was followed by a successful proof-of-concept in March 2024 that integrated QKD with both free-space optical and

fiber-optic communications. These advances highlight the potential for rapid QKD deployment in regions where fiber-optic installation is challenging, and pave the way for broader adoption of quantum-secure networks in Japan.

"SQBM+" is a quantum-inspired optimization solution built on a proprietary algorithm developed through Toshiba's quantum computing research. It realizes ultra-fast optimization by efficiently identifying optimal solutions from massive datasets, allowing it to take on challenges in financial trading, plotting the movement of robots, transportation and energy grid optimization, and molecular design for drug discovery.

SQBM+ Version 2, launched in November 2023, has expanded capabilities and can handle up to 10 million variables in large-scale optimization problems. It is available through the AWS Marketplace and Azure Marketplace, giving access to a wide range of users. Toshiba is now strengthening partnerships with global quantum technology startups, fostering innovation and supporting businesses in developing advanced applications utilizing SQBM+.

#### Advancing Smart Manufacturing and Digital Transformation in the Manufacturing Industry

TDSL is driving the digital transformation of manufacturing by extending the smart factory concept beyond individual factories to the entire value chain while addressing challenges such as carbon neutrality and energy management. TDSL's Digital Manufacturing Solutions provide comprehensive manufacturing solutions that integrate industrial computers and operational technologies from Toshiba Infrastructure Systems Corporation, plus advanced production technologies developed by Toshiba's Corporate Manufacturing Engineering Center.

For instance, TDSL responded to the growing demand for semiconductors with the launch of the Process Improvement Assist Package for SMT Lines in October 2024. This solution enhances SMT line production processes, contributing to the optimization and digitization of manufacturing operations. TDSL continues to support digital transformation and improved manufacturing operations.

To take another example, resilient supply chains able to overcome unexpected disasters are a critical need. Manufacturing companies must now strengthen not only their direct suppliers (Tier 1) but also Tier 2 and beyond. TDSL addressed this in November 2023 by introducing a Business Continuity Planning (BCP) service within the supply chain platform for manufacturers. The service enhances supply chain visibility and preemptive risk management, allowing businesses to efficiently assess the impact of disruptions on their suppliers.



Concept diagram of the supply chain platform for the manufacturing industry

Further expanding its solutions, TDSL launched a platform with a cross-supply chain CSR and ESG assessment service in June 2024. This initiative enhances intercompany communications and improves end-to-end transparency in the supply chain, supporting businesses in fulfilling their social responsibilities and promoting responsible manufacturing practices.

Through these initiatives, TDSL is driving innovation in manufacturing, supporting sustainable supply chain management, and contributing to a more resilient and responsible industrial ecosystem.



At the opening ceremony of the Quantum Technology Centre

## Others

#### **Main Business Areas**

Development, manufacturing, and sale of battery cells, modules, and packs









SCiB™ Module

SCiB<sup>™</sup> Industrial Pack Series

#### ■ Next-Generation Lithium-Ion Batteries SCiB<sup>™</sup> Nb Power Ultra-Fast Charging EV Buses in Japan and Brazil

Toshiba Corporation is advancing demonstration projects for ultra-fast charging EV buses utilizing its next-





Images of EV buses with Toshiba's battery SCiB™ powered by a pantograph charging system

generation lithium-ion secondary batteries. In Brazil, Toshiba has begun real-world testing of a prototype EV bus equipped with the new SCiB<sup>™</sup> Nb. This lithium-ion battery uses niobium titanium oxide (NTO) in the anode, enabling ultra-fast charge time of around 10 minutes. NTO offers twice the theoretical volume density of conventional graphite-based anodes, significantly enhancing charging performance and durability. The SCiB<sup>™</sup> Nb battery is a product of joint technological development by Toshiba, Sojitz Corporation, and CBMM, with commercialization targeted for Spring 2025.

In Japan, Toshiba has partnered with Kawasaki Tsurumi Rinko Bus Co., Ltd. and Drive Electro Technology Co., Ltd., to jointly demonstrate the feasibility of commercial EV bus operations using a pantograph charging system. The project includes converting an existing diesel bus into an EV bus and testing its performance in urban areas where charging space and facilities are limited. Toshiba's rechargeable battery, SCiB™ is renowned for its minimal degradation even after repeated charge and discharge cycles, as well as its ultra-rapid charging capability. When paired with a high-capacity pantograph charger capable of delivering large amounts of power in a short time, the system aims to improve operational efficiency and reduce the burden of charging procedures for buses. Through these initiatives, Toshiba seeks to leverage its advanced technologies to contribute to decarbonization and the realization of sustainable mobility society.

### Demonstration Test of Battery Subscription Service for Electric Motorcycle Taxis Begins in Bangkok

Toshiba Corporation, in collaboration with battery-tech startup Naturenix Inc., began a demonstration test of a battery subscription service for electric motorcycle taxi drivers in Bangkok, Thailand, on September 30, 2024. This test utilizes Toshiba's SCiB<sup>™</sup>, which is known for its long life and durability in high-temperature environments, to ensure stable operation and reduce operating costs.



Business scheme of the battery subscription model

Toshiba and Naturenix are exploring the launch of a subscription-based battery business model through local partners in Thailand. This subscription model aims to lower the initial cost of battery adoption while establishing a new business framework that ensures sustainable revenue. Through this initiative, the companies aim to reduce environmental impact and contribute to a sustainable mobility society in emerging markets.

## **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, the Board of Directors established the Toshiba Group Sustainability Policy. Toshiba Group promotes sustainability management to enhance its corporate value.

### **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 environmental (E), social (S), and corporate governance (G) initiatives 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.

To take this initiative a step further and strengthen integrated management with the management policy and strategy, the functions of the Sustainability Management Division were transferred to the Strategic Planning Division in April 2024. We convene the Sustainability Strategy Committee twice a year to discuss and decide on policies and strategies related to the sustainability of Toshiba Group and to set the direction of key issues. The Committee is chaired by the President and CEO, and its members include the executives in charge of sustainability-related matters, the business managers of Toshiba Corporation and key Group companies,<sup>\*1</sup> the presidents of listed subsidiaries and some Group companies,<sup>\*2</sup> and the corporate staff division managers with responsibilities related to sustainability. Positioned under the Sustainability Strategy Committee is the Sustainability Promotion Committee. This committee considers specific measures and prepares action plans for the matters decided by the Sustainability Strategy Committee in April 2024) deliberates and decides on important environmental measures and policies, such as Toshiba Group's Basic Policy for the Environment. The Nonfinancial Information Disclosure Committee approves the disclosure of ESG information included in our Integrated Report and Sustainability Report. The Sustainability Promotion Committee is chaired by the executive in charge of sustainability, while the Toshiba Group Environmental Management Committee is chaired by the executive in charge of sustainability, while the Toshiba Group Environmental Management Committee is chaired by the executive in charge of sustainability, while the Toshiba Group Environmental Management Committee is chaired by the executive in charge of sustainability, while the Toshiba Group Environmental Management Committee is chaired by the executive in charge of sustainability.

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

\*1 Key Group companies: Toshiba Energy Systems & Solutions Corporation, Toshiba Infrastructure Systems & Solutions Corporation, Toshiba Electronic Devices & Storage Corporation, and Toshiba Digital Solutions Corporation

\*2 Listed subsidiaries and some Group companies: Toshiba Tec Corporation, Toshiba Elevator and Building Systems Corporation, Toshiba Lighting & Technology Corporation, Toshiba Plant Systems & Services Corporation, and NuFlare Technology, Inc.



#### Sustainability Management Structure

The main details of the initiatives undertaken at each committee meeting in FY2023 are as follows:

#### Sustainability Strategy Committee

FY2022 summary, FY2023 key themes, KPIs linked to material issues, human rights due diligence, supplier human rights risk survey, environmental management, ESG evaluation agency evaluation results, response to the UK and Australian Modern Slavery Acts, Toshiba Group DEIB policy

#### **Sustainability Promotion Committee**

FY2022 summary, FY2023 plan and key themes, KPIs linked to material issues, ESG evaluation agency evaluation results, human rights due diligence, sustainability surveys from customers, key environmental measures

#### Corporate Environmental Management Committee (former name)

FY2022 activity results and FY2023 activity plans, formulation of the Eighth Environmental Action Plan promotion items and KPIs, reports related to environmental risk compliance

#### 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 receive supervision and advice.

## Monitoring

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

For more information: Material Issues and KPIs

## **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 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 FY2023, the President and CEO stated, "For Toshiba Group, which is contributing to the realization of carbon neutrality and a circular economy through digitalization, the realization of a sustainable society is the most important management strategy. Each and every person working at Toshiba Group should think about what we can do with regard to "Committed to people, Committed to the Future." Speak freely, and take concrete action, which will lead to technological diversity and provide a path to solving global issues." During this period, we broadcast a lecture by Director Hashimoto on the corporate activities and individual actions that should be taken to achieve the ideal form of sustainability 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 FY2023, an annually-held Toshiba Group Volunteer Days event took place at the beginning of December, which is around 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.

For more information: Social Contribution Activities (Toshiba Group Volunteer Days)

## **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 longterm 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.	<ul><li>Respond to climate change</li><li>Respond to the circular economy</li><li>Consider ecosystems</li></ul>
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.	<ul> <li>Secure, retain and train human resources</li> <li>Ensure employee health and safety</li> <li>Promote respect for human rights</li> <li>Promote sustainable procurement</li> <li>Strengthen R&amp;D to stimulate innovation</li> </ul>
For further strengthening thorough governance	Practice transparent corporate governance and optimal internal controls and execute management with integrity, trusted by stakeholders.	<ul><li>Strengthen governance</li><li>Strengthen cyber resilience</li></ul>

By addressing these material issues, we will push forward with the strengthening of ESG in order to achieve our vision for 2030. In the area of the environment (E), we are working to achieve carbon neutrality and a circular economy while promoting activities that give consideration to ecosystems, such as responding to water risks and conserving biodiversity. In the area of society (S), we are working to realize a culture of respect for human rights as a prerequisite for nurturing people and technologies that create abundant value and give back to society. In the area of governance (G), we are working to strengthen governance and improve cyber resilience in order to achieve honest management.

### **KPIs**

The Sustainability Strategy Committee decides on KPIs in line with material issues and we work on them. For FY2024, we revised some of the KPIs and introduced qualitative targets.

The Sustainability Promotion Committee monitors efforts related to these items to strengthen future initiatives.

## For the Irreplaceable Global Environment in Which We Live

Environment: For the irreplaceable global environment in which we live

#### **Response to Climate Change** FY2022 FY2023 FY2024 KPIs Achievements Targets Achievements Targets Total GHG emissions from business and production sites\*1 0.77 million t-CO<sub>2</sub> 0.98 million t-CO<sub>2</sub> 0.54 million t-CO<sub>2</sub> Reduction rate of GHG emissions (Scopes 1\*2+2\*3) 32% reduction (compared to FY2019) Reduction rate of GHG emissions (Scope 3\*4) 59% reduction \_ \_ \_ (compared to FY2019) Reduction rate of GHG emissions from products and services 70.4% reduction 13.6% reduction 62.5% reduction associated with power supply (compared to FY2019)\*5 Avoided GHG emissions through the use of products and services associated with renewable energy supply 50.33 million t-CO<sub>2</sub> 43.00 million t-CO<sub>2</sub> 60.74 million t-CO<sub>2</sub> (cumulative total from FY2021)\* Avoided GHG emissions through the use of products and services 37.79 million t-CO<sub>2</sub> 57.00 million t-CO<sub>2</sub> associated with energy consumption 49.47 million t-CO2 (cumulative total from FY2021)\*7 Avoided GHG emissions through the use of products and services associated with energy consumption 108.00 million t-CO<sub>2</sub> (cumulative total from FY2019)

\*1 CO2 emissions from electricity are calculated using emission coefficients provided by power companies

\*2 GHG emissions through fuel use and industrial process at Toshiba Group (direct emissions)

\*3 GHG emissions through use of electricity, heat, etc., purchased by Toshiba Group (indirect emissions)

\*4 GHG emissions generated by Toshiba Group's value chain (raw materials procurement, distribution/logistics, sales, disposal, etc.) outside Scope 1 and 2 (indirect emissions)

\*5 The reduction rate of GHG emissions from products and services associated with power supply (such as thermal power generation; compared to FY2019). The calculation method is as follows: GHG emissions from power generation for FY2021 onward due to newly installed or upgraded facilities are calculated to derive the reduction rate versus FY2019 emissions. The arithmetic mean for the results during the period of the Seventh Environmental Action Plan is used.

\*6 Avoided GHG emissions by products and services associated with power supply (such as water, geothermal, and solar power generation). The calculation method is as follows: Obtain the difference between average GHG emissions per unit of all thermal power generation (coal, gas, and oil) and GHG emissions per unit of renewable energy generation and multiply it by output, operation rate, facility utilization rate, expected service life, etc. Aggregate the cumulative total volume of avoided GHG emissions due to power generation in FY2021 onward attributable to newly installed or upgraded facilities.

\*7 Avoided GHG emissions by products and services associated with power consumption (such as social infrastructure products). The calculation method is as follows: Obtain the difference (for one year) between the total GHG emissions of assumed substitute products and the total GHG emissions of shipped products and multiply it by the expected service life.

See below for details of achievements and initiatives.

#### Response to Climate Change

#### **Response to the Circular Economy**



KDIe	FY2022	FY2	FY2023							
KFIS	Achievements	Targets	Achievements	Targets						
Volume of waste from business and production sites*1	0.30 million t	0.25 million t	0.23 million t	_						
Reduction of total waste volume from business and production sites (per unit improvement) * <sup>2</sup>	_	_	_	2% reduction compared to FY2022						
Amount of plastic resources recycled in products and services (cumulative total from FY2021)* <sup>3</sup>	1,552 t	1,800 t	2,353 t	_						
Amount of resources saved in products and services (cumulative total from FY2021)*4	0.2 million t	0.4 million t	0.29 million t	_						

1 Obtained by deducting the volume of objects with value from the total volume of waste generated (excluding sites engaged in waste treatment and power generation).

\*2 Basic-unit goals: Activities are assessed using indicators such as nominal output, the number of products manufactured, the number of persons, and the total floor area

\*3 Cumulative total volume of recycled plastics and bioplastics used over the three-year period.

\*4 Cumulative total volume of eight resources conserved due to lighter product weights and longer product service lives over the three-year period. The calculation method is as follows: [Total volume of input materials for assumed substitute products – Total volume of input materials for shipped products]

See below for details of achievements and initiatives.

#### Response to the Circular Economy

#### **Consider Ecosystems**

-					
KDIc	FY2022	FY2	.023	FY2024	
NF15	Achievements	Targets	Achievements	Targets	
Reduction of the total amount of chemical substances emitted from business and production sites (per unit improvement)*1	Compared to FY2021 9% improvement	Compared to FY2022 1% improvement	Compared to FY2022 1.1% improvement	_	
Reduction of the amount of water received at business and production sites (per unit improvement)*1	Compared to FY2021 Deterioration by 4%	Compared to FY2022 1% improvement	Compared to FY2022 Deterioration by 16%	Compared to FY2022 2% improvement	
Expanded contributions to the "7 GBF Targets" of focus in biodiversity conservation activities* <sup>2</sup>	_	_	_	Set by location	

\*1 Basic-unit goals: Activities are assessed using indicators such as nominal output, the number of products manufactured, the number of persons, and the total floor area.

\*2 GBF (Global Biodiversity Framework) refers to the "Kunming-Montreal Global Biodiversity Framework" formulated in the 15th Conference of the Parties to the Convention on Biological Diversity (COP15) held in December 2022.

This is a set of global goals for biodiversity conservation that consists of a 2050 vision, a 2030 mission, 2050 goals, and 2030 targets (consisting of 23 activity targets and other elements). The seven targets are seven targets among the "2030 targets" for achieving "Nature Positive"-specifically, "Target 3: 30 by 30," "Target 4: Species and gene conservation," "Target 6: Invasive species control," "Target 7: Pollution prevention/reduction," "Target 8: Climate change measures," "Target 11: Utilization of nature's regulatory functions," and "Target 12: Securing green and water-friendly spaces" and Toshiba Group aims to contribute to achieving these at its approximately 60 sites in Japan and overseas.

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<sup>\*1</sup> 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, water resources, biodiversity conservation, and marine plastics 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<sup>\*2</sup> 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

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society, and a society in harmony with nature. Under the same concept of backcasting,<sup>\*3</sup> 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, to realize the ideal situation in 2050.

- \*1 The Partis 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 We partially revised our vision in November 2021 and set a target to reduce GHG emissions across the entire value chain by 70% compared to FY2019 by 2030.
- \*3 Backcasting is a method that defines a desired goal and works back through the series of actions necessary for its achievement



# For Respect of Human Rights, to Nurture People and Technology, and Giving Back to Society

Social: For respecting human rights, to nurture people and technology, and to give back to society

#### Secure, Retain and Train Human Resources



1/Dia	FY2022	FY2	FY2024					
NPIS	Achievements	Targets	Achievements	Targets				
Percentage of female employees in executive and in managerial	5.8%	6.5%	6.2%	7.2%				
positions (Percentage of female exempt employees)*1	Set a target of 8% for FY2025							
Engagement score*2	57 points	57 points	57 points	58 points				
Number of AI experts* <sup>3</sup>	2,100	2,200	2,300	_				
Percentage of employees using AI*4	_	_	_	30%				

\*1 For full-time employees at Toshiba, Toshiba Energy Systems & Solutions Corporation, Toshiba Infrastructure Systems & Solutions Corporation, Toshiba Electronic Devices & Storage Corporation, and Toshiba Digital Solutions Corporation

\*2 All Group companies participating in the survey are included. (Reference: In FY2022, 87 Toshiba Group companies in Japan and overseas, and in FY2023, 95 Toshiba Group companies in Japan and overseas participated.)

\*3 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, Toshiba Lighting & Technology Corporation

\*4 Employees throughout the entire Toshiba Group in Japan who use PCs in their daily work.

See below for details of achievements and initiatives.

- **Fair Evaluation and Talent Development**
- Promotion of DEIB (Diversity, Equity, Inclusion, Belonging)

#### **Ensure Employee Health and Safety**



I/Dia	FY2022	FY2	FY2024	
KPIS	Achievements	Targets	Achievements	Targets
Fatalities due to work-related accidents	1	Zero (no accidents)	3	Zero (no accidents)
Severity rate of work-related accidents*1	0.005	0.010*2 or less	0.103	0.010*2 or less
Ratio of employees with metabolic syndrome*1	34.6%	Same as the previous fiscal year or less	34.6%	Same as the previous fiscal year or less
		28.6% or less* <sup>3</sup> by	the end of EY2025	

\*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**

1/01-	FY2022	FY2	FY2024	
KPIS	Achievements	Targets	Achievements	Targets
Rate of human rights-related seminars and workshops for sustainability leaders held	100%*1	100%*1+*2	100%*1+*2	_
Participation rate in human rights education programs (e-learning) under the Standards of Conduct for Toshiba Group	99%	100%	99.6%	100%
Human rights due diligence initiatives (a) Implementation rate of human rights impact assessments in our own company's businesses	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%*2	N/A* <sup>3</sup>	
Human rights due diligence initiatives Percentage of companies monitoring the actual status using the Risk Assessment Program (RAP) for Group companies* <sup>4</sup>	_	_	_	100%

\*1 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, Toshiba Lighting & Technology Corporation, and Toshiba Plant Systems & Services Corporation

\*2 Group companies identified as high risk in human rights impact assessments

\*3 The implementation rate is difficult to quantify, so it is N/A (for the actual initiatives, see the "Respect for Human Rights" page).

\*4 Companies covered by RAP (80% of Toshiba Group companies)

See below for details of achievements and initiatives.

#### Respect for Human Rights

#### **Promote Sustainable Procurement**

Promote Sustainable Procurement			8 555 566 12 5 6 C	
1/Dic	FY2022	FY2	2023	FY2024
NPIS	Achievements	Targets	Achievements	Targets
Obtaining consent for the Toshiba Group Procurement Policy from new suppliers	100%	100%	100%	100%
Number of companies where we conducted our Sustainable Procurement Survey <sup>*1</sup>	12,622	13,000	13,014	13,000
Implementation rate of sustainable procurement training for Group procurement employees <sup>*2</sup>	41%	100%	100%	100%

\*1 Sustainable Procurement Survey: a survey to evaluate suppliers' CSR initiatives. Conducted 100% at key suppliers.

\*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

See below for details of achievements and initiatives.

#### Strengthen R&D to Stimulate Innovation

▶ <u>Technologies</u>

## For Further Strengthening Thorough Governance

#### **•** Governance: For further strengthening thorough governance

#### **Strengthen Governance**

KDIc	FY2022	FY2	FY2024	
NPIS	Achievements	Targets	Achievements	Targets
Percentage of outside directors on Toshiba's Nomination Committee, Audit Committee, and Compensation Committee*	100%	100%	100%	_
Establishment and strengthening of governance systems under the new management structure	_	_	_	(Qualitative)
Compliance score in the employee engagement survey	(67 points)	(67 points)	_	68 points

\*Toshiba Corporation. Until December 2023 (The committees were abolished due to a change in the system.)



#### **Strengthen Cyber Resilience**



1/Dia	FY2022	FY2	FY2024	
KPIS	Achievements	Targets	Achievements	Targets
Self-assessment of cyber security management maturity*	3.4	Higher than previous fiscal year (upon reaching 4, remain at 4 or higher)	3.58	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.

#### <u>Cyber Security Report</u>

#### Cyber Security

## **Material Issues Identification Process**

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 in 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 following month, the re-identified issues were reported to the Executive Session of the Board, as it was then known. Today, the Sustainability Strategy Committee continues to monitor progress on the issues, and regularly reports on them to the Board of Directors for oversight and guidance.

#### **Material Issues Identification Process**



#### Sustainability Management

## Response to Climate Change (Information Disclosure Based on the TCFD Recommendations)

Toshiba Group has identified "Response to climate change" as one of its materiality issues and has positioned achieving carbon neutrality as a key management issue. As part of our Environmental Future Vision 2050, we are working to achieve carbon neutrality throughout our value chain by FY2050 by promoting initiatives at our business and production sites as well as initiatives for our products and services.

To reduce Scope 1<sup>\*1</sup> and 2<sup>\*2</sup> emissions, we focus on reducing the energy used in production processes, promoting the introduction of energy-efficient processes and equipment, expanding the utilization of renewable energy, and so on.

For Scope 3,<sup>\*3</sup> we focus on reducing emissions in categories 1<sup>\*4</sup> and 11,<sup>\*5</sup> which have particularly high emissions, and we work to encourage suppliers to act by conducting surveys and evaluating their initiatives as well as to develop products and technologies that contribute to achieving carbon neutrality.

In addition to "mitigation measures" to reduce greenhouse gas (GHG) emissions, as "adaptation measures" to prepare for the impacts of climate change, we are also promoting the development of related products and services, such as business continuity plan (BCP) measures for production and business sites as well as disaster prevention solutions.

\*1 GHG emissions through fuel use and industrial process at Toshiba Group (direct emissions)

\*2 GHG emissions through use of electricity, heat, etc., purchased by Toshiba Group (indirect emissions)

- \*3 GHG emissions generated by Toshiba Group's value chain (raw materials procurement, distribution/logistics, sales, disposal, etc.) outside Scope 1 and 2 (indirect emissions)
- \*4 GHG emissions from purchased goods and services
- \*5 GHG emissions from the use of products and services sold

#### Response to Climate Change at Our Sites

- Response to Climate Change in Products and Services
- Material Issues and KPIs
- Environmental Future Vision 2050
- Greenhouse Gas Emissions Across the Value Chain
- Toshiba Group Green Procurement Guidelines

#### Information Disclosure Based on the TCFD Recommendations

We have endorsed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which was established by the Financial Stability Board, regarding the disclosure of climate change information. We are also a member of the TCFD Consortium, which was established to promote actions by organizations in Japan in support of the TCFD recommendations. In accordance with the TCFD recommendations, Toshiba Group will continue to disclose information on the risks and opportunities climate change poses for our business, and will promote initiatives to reduce such risks and maximize such opportunities.

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Toshiba Group has established an environmental management structure and is promoting group-wide initiatives to respond to climate change. Items of the Environmental Action Plan and priority measures related to climate change are formulated and progress is checked at Toshiba Group Environmental Management Committee, and the content is reported to Sustainability Strategy Committee and the Board of Directors.

#### Environmental Management Structure

## Strategy

As global warming continues and temperatures rise, we are likely to experience more natural disasters including typhoons and floods, which seriously affect people's daily lives and society. Other concerns include sea level rise and droughts due to low precipitation. To respond to these impacts, the world is accelerating the movement toward achieving carbon neutrality by lowering GHG emissions to net zero.

Toshiba Group has been driving responses to climate change, aiming to achieve carbon neutrality throughout its value chain. In addition to reducing GHG emissions within the Group, we are actively implementing measures in each stage of the value chain, including creating more products and services that contribute to reducing GHG emissions in society and cooperating with suppliers to reduce upstream emissions.

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 related to climate change facing Toshiba Group.

Under Sustainability Strategy Committee chaired by the President and CEO, we conduct scenario analyses for each business domain to grasp and consider countermeasures for climate change-related risks and opportunities.

#### Setting scenarios

In scenario analyses, 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 above scope. First, each business division identifies transition and physical risks and opportunities that climate change would pose to their respective business in line with

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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

Opportunities

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

#### **Risks and Opportunities Common to Toshiba Group**

Cat	egory	Main Risks	Importance	Main Countermeasures
	Policy and Legal	<ul> <li>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</li> <li>Increase in requests for the introduction of renewable energy due to GHG emissions reduction targets and policies of countries</li> <li>Increase in response costs due to stricter energy saving related laws and regulations and information disclosure related laws and regulations</li> </ul>	Medium	<ul> <li>Introduction of the Internal Carbon Pricing system for suppressing increase in future energy costs and certificate and credit related costs</li> <li>Expanding the introduction of renewable energy</li> <li>Promotion of the development of environmentally conscious products with high energy saving performance &lt;<u>Response to Climate Change in Products and Services</u>&gt;</li> </ul>
Transition Risks	Technology	•Missing out on sales opportunities due to delayed development in response to growing demand for products and services that contribute to carbon neutrality	Medium	Investment in the research and development of renewable energy related technologies and products and services with high energy saving performance < <u>Strengthen R&amp;D to stimulate innovation</u> >
	Market	<ul> <li>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</li> <li>Increase in prices of procured items due to accelerated decarbonization initiatives at suppliers</li> </ul>	Medium	<ul> <li>Appropriate and quick response to requests from markets and customers</li> <li><u>Our philosophy and strategy</u>&gt;</li> <li>Formulation of a procurement plan for business continuity including securing multiple suppliers</li> <li><u>Risk Management Using the Business Continuity Plan (BCP)</u>&gt;</li> </ul>
	Reputation	<ul> <li>Increase in business continuity risk as a result of lost trust from stakeholders due to delayed response to climate change</li> </ul>	Small	Promotion of initiatives and strengthening of information disclosure in light of requirements from outside the company < <u>Evaluation by External Parties</u> >
Physic	cal Risks	<ul> <li>Suspended operations and increased response costs due to the impacts of natural disasters such as typhoons and floods (listed below)</li> <li>Damage to production equipment</li> <li>Impact on component procurement due to damage to suppliers</li> <li>Impact on logistics and sales capabilities</li> <li>Impact on employees</li> </ul>	Medium	<ul> <li>Strengthening of business continuity plan (BCP)</li> <li>Securing multiple suppliers         &lt;<u>Risk Management Using the Business Continuity</u> <u>Plan (BCP)</u>&gt;     </li> </ul>
Cat	egory	Main Opportunities	Importance	Main Countermeasures
		Increase in demand for technologies, products, and services		<ul> <li>Provision of products and services that contribute to carbon neutrality</li> <li>Provision of green transformation (GX) consulting service &lt;<u>Toshiba's GX Service</u> (Japanese only)&gt;</li> </ul>

\* "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.

that contribute to carbon neutrality

\* "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

Large

Development and provision of renewable energy related

technologies, VPP, hydrogen solutions, CO2 separation

< Initiatives for Carbon Neutral (Toshiba Energy Systems

and capture technology

& Solutions Corporation)>

#### Toshiba Group's Risks and Opportunities by Business

Risks and opportunities for each business domain also have been identified. Please refer to the following for details.

#### Toshiba Group's Risks and Opportunities by Business

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 above 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 has declared that it regards the social trend toward carbon neutrality as an opportunity and will contribute to achieving carbon neutrality by building infrastructure and a data society through business activities. To increase this policy's effectiveness, we first launched a Group-wide project in FY2022 to formulate a GHG emissions reduction roadmap that incorporates specific measures toward achieving carbon neutrality at our own business and production sites, and we are now promoting implementation. In addition, to contribute to carbon neutrality for society as a whole, we have established a structure to promote our business quickly and effectively by making organizational changes to strengthen our energy aggregation business in FY2022.

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 philosophy and strategy
- Response to Climate Change at Our Sites
- Response to Climate Change in Products and Services
- ▶ 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. 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

Business Results

## **Metrics and Targets**

Under our 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.

Toshiba Group's GHG reduction targets have been approved by the Science Based Targets<sup>\*1</sup> initiative (SBTi) as "net zero targets" that are consistent with the goals of the Paris Agreement.<sup>\*2</sup>



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(SDTI) as Thet zero targets - that are consistent with the goals of the Paris Agreement.

(For all items below, the base year is FY2019.)
Long-term target
Reduce GHG emissions throughout the value chain to net zero\*<sup>3</sup> by FY2050.

Near-term targets

- Reduce Scope 1 and Scope 2 GHG emissions by 70% by FY2030.
- Reduce Scope 3 GHG emissions by 70% by FY2030.

\*1 SBTs are scientifically grounded GHG reduction targets set by companies on a medium- to long-term basis, in order to keep the global average temperature rise well below 2 °C above pre-industrial levels, and to pursue efforts to limit the temperature rise to 1.5 °C. Science-based targets are validated by SBTi.

\*2 An international framework adopted at the twenty-first session of the Conference of the Parties (COP21) that seeks to reduce GHG emissions.

\*3 90% reduction in gross emissions by 2050 at a rate consistent with a 1.5°C level reduction pathway, with the remaining carbon emissions removed from the atmosphere and permanently stored.

In addition, in order to monitor the progress made toward the above targets each year, we have set and are managing targets through to FY2026 in Toshiba Group's Environmental Action Plan. As of FY2023, reduction is progressing smoothly in all of Scope 1, 2, and 3 toward the achievement of the targets. We will continue to promote GHG reduction measures at each stage of the value chain.

Greenhouse Gas Emissions Across the Value Chain

#### The Eighth Environmental Action Plan (2024-2026)

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

#### Third-party Verification

## **Consideration of Ecosystems**

Toshiba Group's business activities are deeply interrelated with the existence of natural capital, as we have sites located in areas with high water risks and sites which use and emit large volumes of water and chemical substances during production. Therefore, we have identified "Consideration of ecosystems" as one of our material issues and conduct activities that contribute to realizing a "nature positive world,"<sup>\*1</sup> helping create a society in which people live in harmony with nature and continue to enjoy the blessings of the ecosystems under Environmental Future Vision 2050.

\*1 To halt and reverse biodiversity loss to put nature back on the path to recovery.

## Assessment of Dependencies and Impacts on Natural Capital and Extraction of Priority Sites

To evaluate both the "impact of nature on our business activities" and "impact of our business activities on nature" from the perspective of "double materiality," Toshiba Group is assessing the dependencies and impacts of our business activities on nature based on the LEAP approach,\*<sup>2</sup> identifying nature-related risks and opportunities that may arise in the future, and considering countermeasures, by referring to the final recommendations issued by the Task Force on Nature-related Financial Disclosures (TNFD) in September 2023.

\*2 A comprehensive approach to assessing nature-related issues such as points of contact with nature, dependencies on nature, impacts, risks, and opportunities consisting of four steps of Locate, Evaluate, Assess, and Prepare that are recommended by the TNFD.

#### (1) Assessing the dependencies and impacts on nature capital

Focusing primarily on approximately 60 production sites in Japan and overseas, we used the external tool ENCORE<sup>\*3</sup> to conduct scoring to clarify the dependencies and impacts within each site's business activities. Heat maps, as shown in Table 1 and Table 2, were created based on this analysis.

High Medium Low

Business domain		Energy Systems & Solutions		Infrastructure Systems & Solutions			Buil Solu	ding tions	Electronic Devices & Storage Solutions			Retail & Printing Solutions		Other (Battery Business, etc.)		
Business operated		Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)	Infrastructure construction	Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)	Recycling	Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)	Manufacturing (electronics)	Manufacturing (semiconductors)	Manufacturing (machinery, parts, etc.)	Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)	Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)
	Animal-based energy															
Direct physical input	Fibers and other materials															
	Genetic substances															
	Water supply															
	Maintaining habitats for juvenile fish, etc.															
	Pollinating service															
Product process	Maintaining soil fertility															
	Maintaining a healthy water flow (drought control, etc.)															
	Water quality															
	Solid waste remediation															
Deduction	Dilution by atmosphere and ecosystems															
Reduction of direct impact	Air filtration															
	Attenuation of noise pollution															
	Attenuation of pollution other than noise															

#### Heat map related to "dependencies" (Table 1)

\*3 A tool for assessing exposure to nature-related risks and understand dependencies and impacts on nature. Assessment is conducted using the latest database updated in July 2024. ENCORE. (UN Environment Programme (UNEP))

													High	Me	dium	Low
	Business domain	Ener	Energy Systems & Solutions		Infrastructure Systems & Solutions		Building Solutions		Electronic Devices & Storage Solutions			Retail & Printing Solutions		Other (Battery Business, etc.)		
Business operated		Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)	Infrastructure construction	Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)	Recycling	Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)	Manufacturing (electronics)	Manufacturing (semiconductors)	Manufacturing (machinery, parts, etc.)	Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)	Manufacturing (electronics)	Manufacturing (machinery, parts, etc.)
	Soil erosion and sediment movement regulation															
Ductostica	Global climate regulation															
	Local climate regulation															
from	Biological control															
	Natural disaster mitigation (flood)															
	Natural disaster mitigation (storms)															
	Rainfall pattern regulation															
	Recreation-related services															
Culture	Visual amenity services															
aspect	Education, scientific, and research services															
	Spiritual, artistic, and symbolic services															

#### Heat map related to "impacts" (Table 2)

Retail & Printing Other (Battery Energy Systems & Infrastructure Systems Building Electronic Devices & Business domain Solutions & Solutions Solutions Storage Solutions Solutions Business, etc.) Infrastructure construction Manufacturing (electronics) Manufacturing (electronics) Manufacturing (electronics) Manufacturing (electronics) Manufacturing Manufacturing (machinery, parts, etc.) (machinery, parts, etc.) Manufacturing Manufacturing (machinery, parts, etc.) Manufacturing Manufacturing (machinery, parts, Manufacturing (machinery, parts, etc.) Manufacturing (machinery, parts, etc.) Manufacturing Recycling (electronics) (semiconductors) (electronics) Business operated , etc.) Area of land use Change in land, Area of freshwater use water and sea use Area of seabed use Use of water resources Use of Other abiotic resource extraction resources Other biotic resource extraction (fish, timber, etc. Climate change Emissions of GHG Emissions of non-GHG air pollutants Emissions of toxic pollutants to soil and water Pollution Emissions of nutrient pollutants to soil and water Generation and release of solid waste Disturbances (noise, light, etc.) Other Introduction of invasive species

Based on the results, we recognized again that our production sites are "dependent" on "provisioning services" such as water supply and "regulating and maintenance services" such as solid waste remediation, dilution by atmosphere and ecosystems, and rainfall pattern regulation, and that there are potential "impacts" on the state of nature, such as use of water resources at factories, emissions of GHG and non-GHG air pollutants, emissions of toxic pollutants to soil and water, generation and release of waste, and noise disturbances.

🔜 High 🔛 Medium 📃 Low

#### (2) Extracting priority sites

For items with a high degree of "dependencies" or "impacts" identified in the assessment in (1), we assessed the locations of activities (sites' addresses) using relevant tools and indicators, and extracted priority sites based on the business scale and relevant environmental data.

The following are the items and number of sites within Toshiba Group that should receive priority consideration with regard to "dependencies" and "impacts" on nature, as extracted through the assessment. Based on these results, we will work to organize future risks and opportunities according to the LEAP approach, and strive to discover new insights and set new indicators and targets in the future.

#### Dependencies on Nature

Items	Number of sites that should receive priority consideration (priority sites)	Countries where the priority sites are located
Water supply	2 sites	Japan
Solid waste remediation*4	3 sites	Japan, Thailand
Dilution by atmosphere and ecosystems*5	1 site	Japan
Rainfall pattern regulation*6	1 site	Japan

#### Impacts on Nature

Items	Number of sites that should receive priority consideration (priority sites)	Countries where the priority sites are located
Use of water resources	4 sites	Japan, Thailand
Emissions of non-GHG air pollutants	3 sites	Japan, U.S., China
Emissions of toxic pollutants to soil and water	13 sites	Japan, U.S., China, India, Vietnam
Generation and release of solid waste	2 sites	Japan

The above results indicate sites that were extracted as those that should receive priority consideration for possible future risks, and do not represent locations where risks currently occur. Toshiba Group is thoroughly implementing activities for risk reduction at its sites around the world, including Japan, such as setting and managing voluntary control standards to prevent pollution.

\*4 The natural process of environmental pollution remediation by degrading, reducing, or detoxifying pollutants by microorganisms, plants, algae, etc.

\*5 The process of diluting gas, liquid and solid waste generated by business activities with water (fresh water and salt water) and atmosphere.

\*6 The effect of vegetation, especially forests, on maintaining rainfall patterns through evapotranspiration on a subcontinental scale.

For details on the assessment methods related to dependencies on and impacts on natural capital, as well as priority sites, please refer to the following:

#### Towards the Realization of a Society in Harmony with Nature

## Water Risk Assessment

Toshiba Group, encompassing many businesses, has businesses with large impacts on water resources among natural capital.<sup>\*7</sup> In addition, since our sites are located in various regions around the world, response to "water risks" is an important issue in our environmental management. Therefore, we assess and analyze "water risks" that affect corporate activities and are working to strengthen water risk management.

In the 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 production output, then finally extracted sites with high water risks.

\*7 Using a tool (ENCORE) to assess companies' impacts on nature and the extent of their dependencies on nature, the impacts on land, freshwater and ocean use change; resource use; climate change; pollution, etc. are assessed for each business area.



Toshiba Group focuses on minimizing water risks at sites identified as high-risk through this assessment. Additionally, we contribute to resolving water issues in each region by providing products and services designed to mitigate water risks.

For details on the assessment methods and results related to water risks, please refer to the following:

Response to Water Risk

## Contribution to the "30by30 target"

The Kunming-Montreal Global Biodiversity Framework includes a target that aims to effectively conserve at least 30% of land and sea areas as sound ecosystems by 2030, commonly known as the "30by30 target" (Target 3). Since Toshiba Group has sites around the world and recognizes the sustainable use of land to be an important issue, we participate in the "30by30 Alliance for Biodiversity" established by the Ministry of the Environment as a first step toward directly contributing to the achievement of the "30by30 target." Against this backdrop, Toshiba Lighting & Technology Corporation's Imabari Complex in Ehime Prefecture is working with the local community to preserve Odagahama Beach, and in October 2023, the beach was certified as one of Nationally Certified Sustainably Managed Natural Sites,<sup>\*8</sup> then registered in the World Database on OECMs in August 2024 as an internationally important area for biodiversity conservation. Going forward, we will aim to contribute to expanding the number of such sites through nature conservation activities inside the premises and in the neighborhood in Japan, as well as collect information and consider how we can contribute to the target through our sites abroad.



#### Conservation of Biodiversity

- Case studies "Community-based biodiversity conservation activities at beaches and rivers" (Toshiba Lighting & Technology Corporation Imabari Complex)
- Odagahama Beach, where Toshiba Lighting & Technology Corporation's Imabari Operations is conducting conservation activities in cooperation with the local community, has been registered in the World Database on OECMs (Other Effective area-based Conservation Measures)

\*8 Areas certified by the government as a place where biodiversity is conserved through private-sector initiatives. Certified areas, excluding those that overlap with protected areas, are registered in the World Database on OECMs (Other Effective area-based Conservation Measures; locations other than protected areas that contribute to biodiversity conservation).

## **Corporate Governance**

## **Corporate Governance Structure**

The basic policy and purpose of Toshiba's corporate governance are to realize sustainable growth and enhance enterprise value of the Group over the medium-to-long term, and to contribute to the interests of all stakeholders, including its shareholder, employees, customers, business partners, creditors, and local communities. Under this policy, the Company strengthens corporate governance.

The Company transitioned from a company with three statutory committees, including the nominating committee, to a company with a board of directors that has statutory auditors in December 2023. The Company's corporate governance structure is shown as follows:



## **Directors and Executives**

Directors		As of January 1, 2025
Representative Director:	Taro SHIMADA Corporate Officer, President and Chief Executive Officer	
Directors:	Hidemi MOUE Chairperson of the Board of Directors	
	Shinichi INAGAKI	
	Koji IKEYA Corporate Officer, Corporate Senior Executive Vice President	
	Katsu HARASHIMA	
	Satoru KATSUNO	
	Akikazu IDA	

Data Section

Corporate Auditors	As of January 1, 2025
Corporate Auditors:	Yuko HIRAI
	Ayumi WADA
	Kazuya KOBAYASHI
Corporate Officers	As of January 1, 2025
Corporate Officer, President and Chief Executive Officer:	Taro SHIMADA President and CEO, Toshiba Corporation Representative Director, President and CEO of: Toshiba Energy Systems & Solutions Corporation; Toshiba Infrastructure Systems & Solutions Corporation; Toshiba Electronic Devices & Storage Corporation Director, President and CEO, Toshiba Digital Solutions Corporation
Corporate Officer, Corporate Senior Executive Vice President:	Koji IKEYA Senior Executive, Management Transformation Project Team, Strategic Planning Div., DX, Design & Communications Div., Finance & Accounting Control Div., Legal & Compliance Div., and Human Resources and Administration Div. Toshiba Corporation
Corporate Officer, Corporate Executive Vice President:	Fumiharu KOZUKA General Executive, Internal Audit Div., Toshiba Corporation
Corporate Officer, Corporate Senior Vice Presidents:	Shunsuke OKADA Senior Executive, Information Systems Div., General Executive, Next Business Development Div., DX, Design & Communications Div., and Digital Innovation Technology Center, Toshiba Corporation
	Takamasa MIHARA
	General Executive, Legal & Compliance Div., and Human Resources and Administration Div., Toshiba Corporation
	Yutaka SATA
	General Executive, Research & Development Center and Corporate Manufacturing Engineering Center, Assistant to Shunsuke OKADA, Corporate Officer, Corporate Senior Vice President (for Next Business Development Div. and Digital Innovation Technology Center), Assistant to Iwao TSUJI Corporate Officer, Corporate Vice President (for Corporate Technology Planning Div.), Toshiba Corporation
	Masaki HARUYAMA
	General Executive, Strategic Planning Div., Battery business, Building Solutions business, Energy System business (for Toshiba Plant Systems & Services Corporation), and Electronic Devices & Storage business (for NuFlare Technology, Inc.), Toshiba Corporation
Corporate Officer,	Yasuhiro MATSUNAGA
Corporate Vice President and Chief Financial Officer:	General Executive, Finance & Accounting Control Div., Toshiba Corporation
Corporate Officer,	Iwao TSUJI
Corporate Vice Presidents:	General Executive, Corporate Technology Planning Div., and Infrastructure Systems business, Assistant to Masaki HARUYAMA, Corporate Officer, Corporate Senior Vice President (oversees Toshiba Plant Systems & Services Corporation), Toshiba Corporation Director, Vice President, Toshiba Infrastructure Systems & Solutions Corporation Vice President, Security & Automation Systems Div., Toshiba Infrastructure Systems & Solutions Corporation
	Hiroshi TSUKINO
	General Executive, Digital Solutions business, Toshiba Corporation Director, Vice President, Toshiba Digital Solutions Corporation Vice President, ICT Solutions Div., Toshiba Digital Solutions Corporation
	Hiroshi KANETA
	General Executive, WEC Div., and Energy System business, Toshiba Corporation Director, Vice President, Toshiba Energy Systems & Solutions Corporation Vice President, Grid Solution Div., Toshiba Energy Systems & Solutions Corporation
	Noriyasu KURIHARA
	General Executive, Electronic Devices & Storage business, Toshiba Corporation Director, Vice President, Toshiba Electronic Devices & Storage Corporation Vice President, Semiconductor Div., Toshiba Electronic Devices & Storage Corporation

## **Corporate Officers**

Corporate Officer, Corporate Vice Presidents:	Hirofumi YOSHINO Responsible for Railway Systems business, Toshiba Corporation Director, Vice President, Toshiba Infrastructure Systems & Solutions Corporation Vice President, Railway Systems Div., Toshiba Infrastructure Systems & Solutions Corporation
	Shinya FU IITSUKA
	General Executive, Management Transformation Project Team and Process Transformation Div., Assistant to Yutaka SATA, Corporate Officer, Corporate Senior Vice President (for Corporate Manufacturing Engineering Center), Toshiba Corporation
Corporate Officers:	Kazuya SAKAGUCHI
	Responsible for Social Systems business, Toshiba Corporation Director, Toshiba Infrastructure Systems & Solutions Corporation Vice President, Social Systems Div., Toshiba Infrastructure Systems & Solutions Corporation
	Koichi YANABE Responsible for Industrial Systems business, Toshiba Corporation Director, Toshiba Infrastructure Systems & Solutions Corporation Vice President, Industrial Systems Div., Toshiba Infrastructure Systems & Solutions Corporation
	Kenji KOBAYASHI
	Responsible for Defense & Electronic Systems business, Toshiba Corporation Director, Toshiba Infrastructure Systems & Solutions Corporation Vice President, Defense & Electronic Systems Div., Toshiba Infrastructure Systems & Solutions Corporation
	Shigehiro KAWAHARA
	Responsible for Energy Aggregation business, Toshiba Corporation Director, Toshiba Energy Systems & Solutions Corporation Vice President, Energy Aggregation Div., Toshiba Energy Systems & Solutions Corporation
	Takehiro KAI
	Responsible for Smart Manufacturing business, Toshiba Corporation Director, Toshiba Digital Solutions Corporation Vice President, Smart Manufacturing Div., Toshiba Digital Solutions Corporation Director, Toshiba Infrastructure Systems & Solutions Corporation Vice President, Smart Manufacturing Div., Toshiba Infrastructure Systems & Solutions Corporation
	Toshihiko TAKAOKA
	Responsible for Battery Div., Vice President, Battery Div., Toshiba Corporation
	Shin KUROSAWA
	Responsible for Storage Products business, Toshiba Corporation Director, Toshiba Electronic Devices & Storage Corporation Vice President, Storage Products Div., Toshiba Electronic Devices & Storage Corporation
	Kazuhiko NISHIKAWA
	General Executive, Information Systems Div., Toshiba Corporation
	Tsutomu TAKEUCHI
	Responsible for Power Systems business, Toshiba Corporation Director, Toshiba Energy Systems & Solutions Corporation Vice President, Power Systems Div., Toshiba Energy Systems & Solutions Corporation
	Takahide YOSHIDA
	General Executive, Marketing Div., and Branch Offices, Assistant to Shinya FUJITSUKA, Corporate Officer, Corporate Vice President (for Management Transformation Project Team), Toshiba Corporation
	Minoru MUKAI
	Vice President, Corporate Research & Development Center, Toshiba Corporation
	Takao YAGI President, TOSHIBA CHINA CO., LTD.

## **Policy on Risk Management and Compliance**

Toshiba Group has set up three lines of internal control system, with the business divisions as the front line, the administrative divisions as the second, and the audit divisions as the third. This system effectively manages risks by assigning to each line a clearly defined role and requiring each line to adequately perform their duties through check and balances. Through this, Toshiba realizes effective risk management for coping with various risks in the changing business environment.

Toshiba was once designated as a "security on alert" due to the inappropriate accounting issues in 2015, but thereafter worked to improve its internal management system<sup>\*</sup> and was reinstated to the first sections of Tokyo and Nagoya Stock exchanges in January 2021. While Toshiba became delisted from the stock exchanges on December 20, 2023, Toshiba will continue to maintain and reinforce our internal management system. Toshiba Group defines and works toward for thorough deployment of "Standards of Conduct for Toshiba Group (SOC)" as a concrete code of conduct and guidelines for fair, sincere and transparent business activities and for being an enterprise that contributes to realization of a sustainable society. Each Toshiba Group Company adopts their own SOC to be instilled within themselves.

Toshiba Group's top management continuingly issues messages to communicate their commitment towards compliance and to foster a culture where compliance is top prioritized across the entire Group.

\* For information on Toshiba's efforts to improve its internal management system, please refer to the Report on Improvements of Internal Management System dated October 20, 2017 and the Progress Report on Improvements of Internal Management System dated July 25, 2018.

https://www.global.toshiba/content/dam/toshiba/migration/corp/irAssets/about/ir/jp/news/20171020\_1.pdf

https://www.global.toshiba/content/dam/toshiba/migration/corp/irAssets/about/ir/jp/news/20180725\_1.pdf

#### **Response to Fraud**

Toshiba Group maintains a policy of "zero tolerance" against fraud.

As a preventative action against fraud, every year we systematically organize scenarios of fraud risks in each particular business, including fraud risks in financial reporting and accounting. Then we conduct inspections on each Group company to ascertain the actual situation and strengthen guidance for improvement. In FY2023, we conducted inspections of fraud risks related to cash management, purchasing, and fixed asset management.

If fraud is uncovered, we conduct investigation for precisely finding the facts and identifying the root causes, seriously consider the facts, implement thorough recurrence prevention, and disclose information in a proper, timely manner as necessary. Employees involved in fraud will be subject to rigorous treatment, including disciplinary actions.

#### **Structure of Risk Management and Compliance**

Toshiba has risk management systems for compliance risks, as well as for business risks (uncertain factors in strategic decision-making and execution of business activities, that may prevent the achievement of business purpose and project objectives.)

To address compliance risks, we appoint a Chief Risk & Compliance Officer (CRO) who will oversee risk management and compliance for the entire Group. The executive officer in charge of Legal & Compliance Division serves as the CRO. Under the CRO, the Legal & Compliance Division responds to misconduct reports, works for global compliance and aims at strengthening Toshiba's internal management system, promoting efficient risk management and compliance activities.

The CRO chairs the Risk Compliance Committee, which is attended by relevant executive officers, including the President & CEO. The Committee deliberates matters related to accounting compliance in response to the inappropriate accounting in 2015, and analyzes misconduct reports and incidents, both internal and external. At the Committee held in beginning of each fiscal year, the Committee evaluates impacts of risks and the status of risk control in accordance with the risk table that covers compliance risks based on the SOC, and then determines priority measures of that fiscal year. The Risk Compliance Committee is a second-line organization, but the Corporate Auditors and the head of the Internal Audit Division also attend at the Committee for sharing information and opinion with the the third line. The matters discussed at the Committee are reported to the Board of Directors.

In response to the inappropriate accounting in 2015, Toshiba has worked to strengthen accounting compliance by establishing a special accounting compliance system. In order to further strengthen the overall compliance system, from FY2021, Toshiba evolved a system into one that encompasses accounting compliance and other compliance issues, and began promoting centralized management.

Toshiba operates a risk management system (RMS) incorporating a PDCA cycle<sup>\*</sup> led by administrative divisions at the second line, for centralizing the status of compliance risk management at Toshiba Group Companies. In the RMS, we implement a Risk Assessment Program (RAP) to assess risks of Toshiba Group companies. Risks identified through the assessment are mitigated through the instructions of the administrative divisions, and are grasped and further mitigated by self-disciplined actions by the relevant business Divisions at the first line.

\* 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

Furthermore, since FY2020, we have systematically organized fraud risk scenarios related to financial reporting and accounting, and conducted inspections at 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, Corporate Senior Executive Vice President (SEV), CRO, Corporate Auditors among others, through the reporting system.

Under these systems, the relevant in-house committees, etc. promptly evaluate and implement countermeasures.

As for business risks, Toshiba makes management decisions for business execution by setting a clear management decision criteria aiming at Toshiba Group's sustainable growth and corporate value increase, permissible risk limits and corporate policy on business withdrawal. For each management decision case, the Business Risk Review Committee conducts risk checks, identifies the maximum risk, and establishes items for monitoring. In the future, we aim to build a system (ERM: Enterprise Risk Management) that integrates and centrally manages business risks and compliance risks.

#### **Risk Management and Compliance Structure**



\*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).

#### Points of Contact for Whistleblowing, Consultation and Remedy

Toshiba Group creates an open work environment by stimulating day-to-day communication in each workplace thereby preventing risks, and on the other hand, enhances its misconduct reporting (whistleblowing) system.

For reporting and consultation, we have established the Toshiba Hotline, the Toshiba Group Overseas Hotline, and the Corporate Auditor Hotline for our employees as well as the Clean Partner Line for business partners. In addition, we use the Engagement and Remedy Platform of the Japan Center for Engagement and Remedy on Business and Human Rights (JaCER) for receiving grievances/reports and consultation on human rights issues from all stakeholders.

The reporting system provides prompt, appropriate responses at all points of contact while giving due consideration to privacy. Specifically, each Group company has stipulated in its regulations a confidentiality obligation and a prohibition on unfavorable treatment of whistleblowers; has prepared manuals for persons in charge of misconduct reporting responses to ensure the same; and has continued to make improvements through periodic audits. We also provide training on the structure of the reporting system and make employees aware of its existence through e-learning and websites for employees. Toshiba Group in Japan maintains and operates a response system that complies with the amended Whistleblower Protection Act.

#### Toshiba's Whistleblower System



#### **Export Control Policy**

As indicated in Standards of Conduct for Toshiba Group, Toshiba Group's basic export policy is to refrain from any transaction that could potentially undermine international peace and security. We comply with all applicable export control laws and regulations of the countries and regions where we operate, for example Foreign Exchange and Foreign Trade Law in the case of Japan and U.S. export control laws and regulations with respect to transactions involving items of U.S. origin.

In accordance with the policy, Toshiba Group has established the Export Control Compliance Program (ECCP). Based on the program, we classify the goods and technology and screen transactions. In addition to periodic export control audits and education for all executives and employees, key Group companies and corporate staff divisions provide instructions and support to the Group companies they supervise.

## **SASB Reference Table**

Торіс	Accounting Metric	Category	Unit of Measure	Code	
Energy Management	<ol> <li>(1) Total energy consumed</li> <li>(2) Percentage grid electricity</li> <li>(3) Percentage renewable</li> </ol>	Quantitative	Gigajoules (GJ), Percentage (%)	RT-EE-130a.1	
Hazardous Waste	Amount of hazardous waste generated, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	RT-EE-150a.1	
Management	Number and aggregate quantity of reportable spills, quantity recovered	Quantitative	Number, Kilograms (kg)	RT-EE-150a.2	
	Number of recalls issued, total units recalled	Quantitative	Number	RT-EE-250a.1	
Product Safety	Total amount of monetary losses as a result of legal proceedings associated with product safety	Quantitative	Reporting currency	RT-EE-250a.2	
	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	Percentage (%) by revenue	RT-EE-410a.1	
Product Lifecycle Management	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) anti-competitive behavior	Discussion and Analysis	n/a	RT-EE-510a.1	
	Total amount of monetary loses as a result of legal proceedings associated with bribery or corruption	Quantitative	Reporting currency	RT-EE-510a.2	
	Total amount of monetary loses as a result of legal proceedings associated with anti-competitive behavior regulations	Quantitative	Reporting currency	RT-EE-510a.3	
	A shirik . Maksis	Catagory	Linit of Monouro	Cada	

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) 21,471,000 GJ	► Environmental Data
(2) 74% (3) 38% <sup>*1</sup>	<ul> <li>Response to Climate Change at Our Sites</li> </ul>
Total amount of hazardous waste: 4,200 t <sup>*2</sup> Percentage recycled: 94% <sup>*3</sup> Percentage incinerated: 8.7% <sup>*4</sup>	Environmental Data
Number of substances: 25*5 Amount of chemical substances released: 2,170 kg*5 No reportable chemical substances were released into the soil	Response to Climate Change at Our Sites
Number of recalls started from FY 2023: 1 voluntary recall Number of units recalled: 84,496 units across 11 models	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.	<ul> <li>Toshiba Group Green Procurement Guideline</li> <li>Green Procurement / Green Purchase</li> </ul>
Only a limited number of Toshiba Group products are eligible for ENERGY STAR <sup>®</sup> . Among them, certain multifunction peripherals (MFPs) manufactured and sold by Toshiba Tec Corporation meet the ENERGY STAR <sup>®</sup> criteria. However, their revenue accounts for only a small percentage of Toshiba Group's total 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 audits, etc. To prevent violations and detect situations leading to violations at an early stage, 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	
Diedosura	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

#### 105,331\*6

\*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, 2024

Corporate Data

## Organization Chart (As of January 1, 2025)



### **TOSHIBA CORPORATION**

(As of March 31, 2024)

(As of March 31, 2024)

Data Section

## **Consolidated Subsidiaries and Affiliated Companies**

Strategies

#### **Consolidated Subsidiaries**

#### 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.

#### **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 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 France Imaging Systems S.A.
- 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

TMEIC Corporation

• WingArc1st Inc.

#### Affiliated Companies Accounted for by the Equity Method

#### Domestic

- EREX New Energy Saiki Co., Ltd.
- Kioxia Holdings Corporation
- KK6 Safety Measures Joint Venture Corporation
- SBS Toshiba Logistics Corporation

#### **Overseas**

- 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

## **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 U.Sbased 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. 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.
Dec.	2023	Delisted from the Prime Market of the Tokyo Stock Exchange, Inc. and the Premier Market of the Nagoya Stock Exchange, Inc.

Business Results

Sustainability

## Corporate Data (As of March 31, 2024)

#### **Toshiba Corporation**

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

Founded	July 1875
Common Stock	¥201,449 million
Number of Employees	Approx. 105,000 (consolidated)
Fiscal Year	April 1 to March 31

- 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**

This report aims to serve as an effective communication tool, providing stakeholders with a comprehensive understanding of the Toshiba Group. It integrates financial and non-financial information, presenting our strategies and results in a cohesive manner.

The report aligns with the integrated reporting frameworks recommended by the International Integrated Reporting Council and the Guidance for Collaborative Value Creation issued by Japan's Ministry of Economy, Trade and Industry.

#### Reporting period: April 1, 2023–March 31, 2024, with some information extending beyond April 2024. Reporting scope: Toshiba Corporation and Toshiba Group.

Environment Social Governance Guidance for Collaborative Value Creation

For more detailed financial and non-financial information, please visit our website.

#### Reports

#### Financial and non-financial information



#### **Integrated Report**

Financial reports (main), non-financial outlines

#### Website

Sources of timely information.



**Financial Information Page** Financial information

# TOSHIBA Sustainability Report 2024

**Sustainability Report** 

Sustainability achievements and initiatives

#### Non-financial information

**Financial information** 



#### Sustainability website

Sustainability infomation

#### Details of cyber security enhancement activities



#### **Cyber Security Report**

Overview of cyber security activities
Strategies

**Business Results** 

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Committed to People, Committed to the Future.

## **Toshiba Corporation**

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