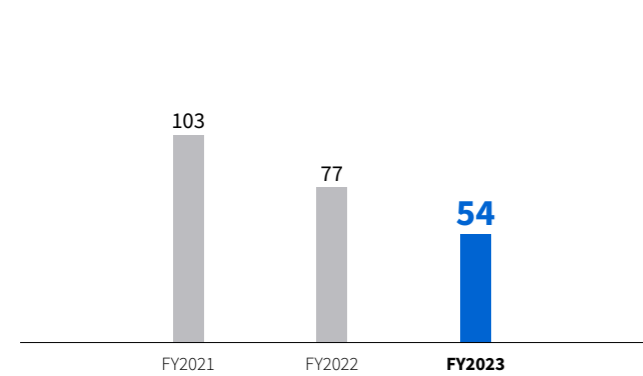


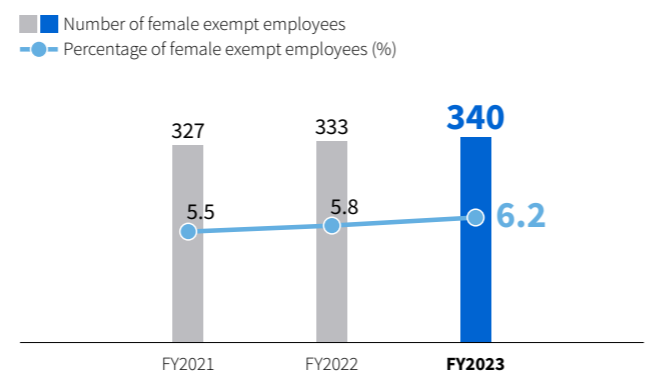
Non-Financial Highlights (Consolidated)

Total GHG Emissions (Scope 1+Scope 2)*1 (10,000t-CO₂)



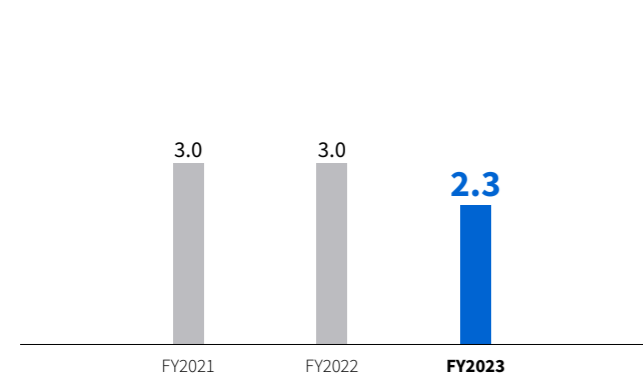
*1 CO₂ emissions from electricity are calculated using emission coefficients provided by power companies.

Number and Percentage of Female Employees in Managerial Positions in Toshiba Corporation and Key Group Companies*5



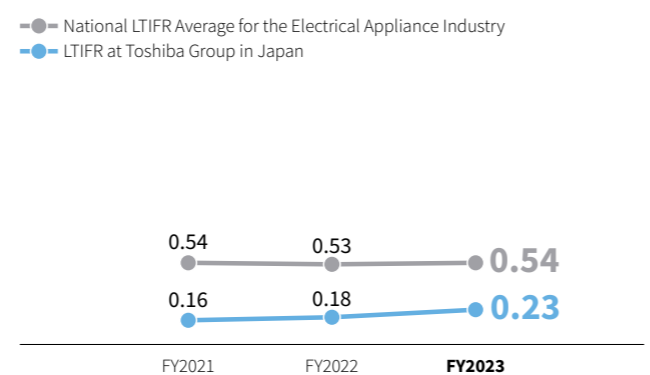
*5 Sum of the figures for Toshiba Corporation, Toshiba Energy Systems & Solutions Corporation, Toshiba Infrastructure Systems & Solutions Corporation, Toshiba Electronic Devices & Storage Corporation, and Toshiba Digital Solutions Corporation

Waste Volume*2 (10,000t)



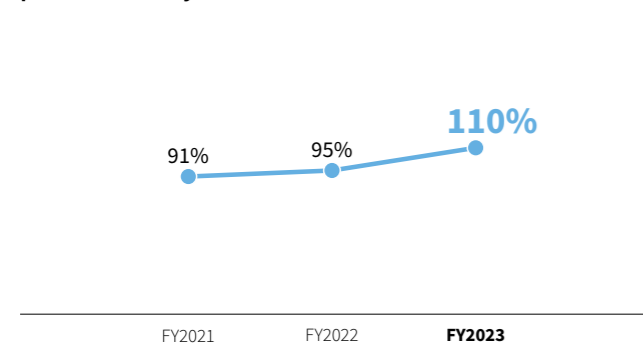
*2 Obtained by deducting the volume of objects with value from the total volume of waste generated (excluding sites engaged in waste treatment and power generation).

Lost Time Injury Frequency Rate (LTIFR)*6 at Toshiba Group in Japan



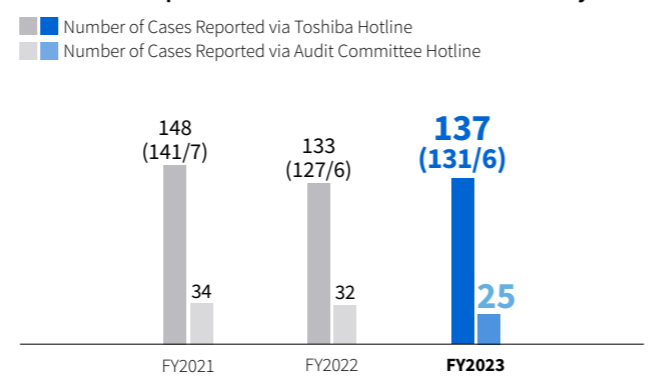
*6 The number of lost time injuries occurring in a workplace per one million man-hours worked. Note: Includes incidents involving part-time, temporary, fixed-term, and dispatched workers.

Rate of Improvement*3 of the Amount of Water Received per Unit Activity*4



*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.

Number of Reports Received via the Whistleblower System



Notes:
- Includes duplicate reports made to the internal secretariat
- Numbers in parentheses (Cases received by the internal secretariat/cases received by the attorney's office)

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.

▶ Energy Business Domain:

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

Infrastructure Systems & Solutions ▶ p. 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.

▶ Social Infrastructure Business Domain:

- Toshiba Infrastructure Systems & Solutions Corporation

Building Solutions ▶ p. 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.

▶ Building Solutions Business Domain:

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

Retail & Printing Solutions

- Toshiba Tec Corporation

Electronic Devices & Storage Solutions ▶ p. 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.

▶ Electronic Devices Business Domain:

- Toshiba Electronic Devices & Storage Corporation
- NuFlareTechnology, Inc.

Digital Solutions ▶ p. 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.

▶ Digital Solutions Business Domain:

- Toshiba Digital Solutions Corporation

Others (Battery Business) ▶ p. 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™ 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 Systems & Solutions

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



■ Signing of Memorandum of Understanding with Indonesia's State Electricity Company Group to Promote the Application of CO₂ Capture Technology in Thermal Power Plants

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.

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 CO₂ 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.

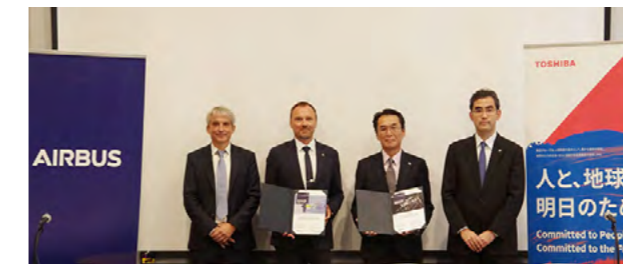


Photo from the signing ceremony

■ 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 CO₂ 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,



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 next-generation technologies in the aerospace sector.

ESS is also exploring carbon recycling that uses an electrolysis-based power-to-chemicals (P2C) process to convert CO₂ 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.

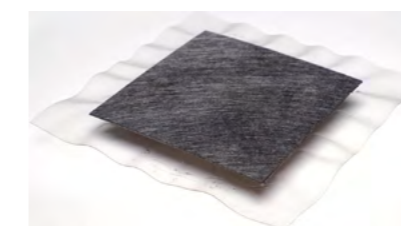


Image of Toshiba's MEA

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



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

*1 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.

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.*² Launched in July 2024, Habuki™ 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™ 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, 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.



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

■ 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®-Enabled Digital Boarding Service Pilot on the JR Chuo Main Line

*1 QR Code® is a registered trademark of DENSO WAVE INCORPORATED.

*2 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.

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,*² 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™ 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™" 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

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

Note: This product is currently available only in Japan.

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 CO₂ 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.

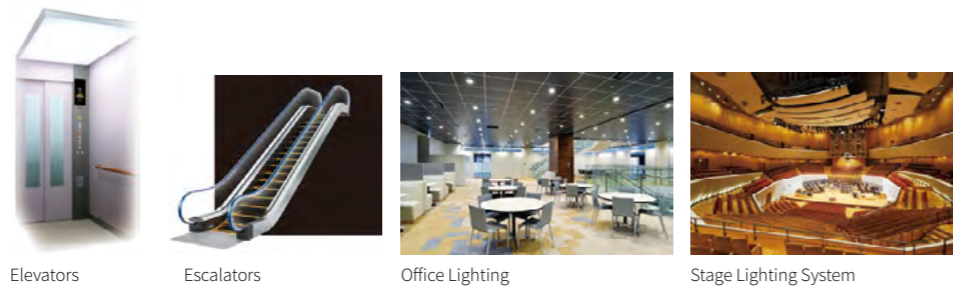


Synchronous Reluctance Motor

Building Solutions

Main Business Areas

- Elevators
- Building Facilities
- Materials for Electrical Construction
- Automotive Light Sources, Industrial Light Sources, UV Module
- Escalators
- Lighting Equipment, Airport Ground Lighting System, Stage and Studio Lighting System
- UV Lighting



Elevators Escalators Office Lighting Stage Lighting System

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

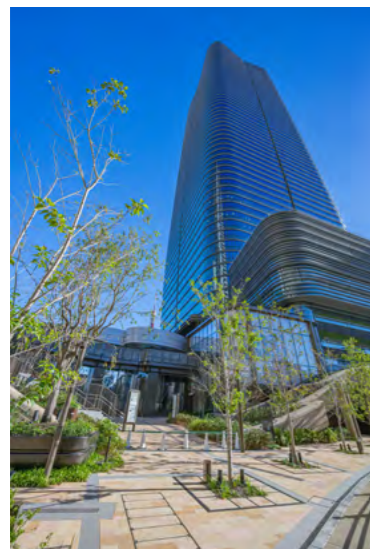
Toshiba Elevator and Building Systems Corporation (Toshiba Elevator) supplied 50 units of elevators, including 23 units of double-deck elevators, to Azabudai Hills Mori JP Tower, which opened on November 24, 2023. The 64-story, 330-meter multi-purpose skyscraper has five basement levels. It offers large-scale 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 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.



External View of Azabudai Hills Mori JP Tower

■ Installed “ELCLOUD” at Eir Mansion Hakozaki Park – Conducting a Pilot Project

Note:
This service is currently available only in Japan.

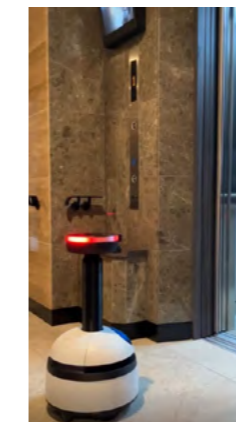
Toshiba Elevator installed a cloud-based service “ELCLOUD,” which enables robot integration and smartphone calling at Eir Mansion Hakozaki Park, a residential building in Fukuoka, Kyushu, developed by Sakushu Shoji Co., Ltd. In this project, the company conducted a proof of concept (PoC), linking the 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.



ELCLOUD's Robot Integration Service

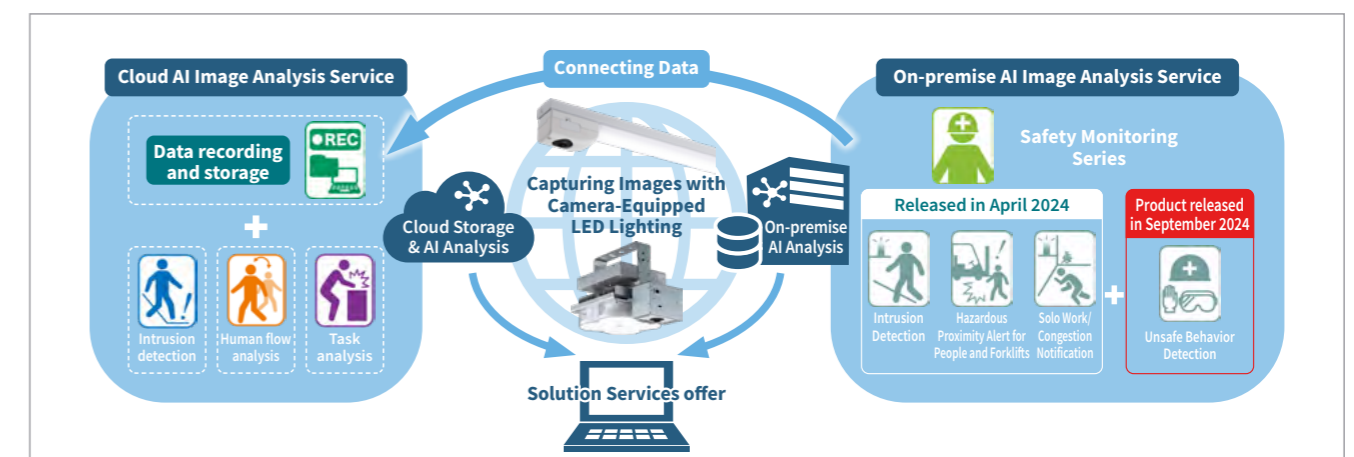
■ AI Image Analysis Service “ViewLED Solution” Expands with New Features to Enhance Workplace Safety

Note:
This service is currently available only in Japan.

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

Microcontroller TXZ+™ Family

HDDs

Electron Beam Mask Writer

Thermal Printheads

Fine Ceramics products

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

■ 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*¹ for low-voltage MOSFETs*² and IGBTs*³ 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-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.



Completed power semiconductor manufacturing facility

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.

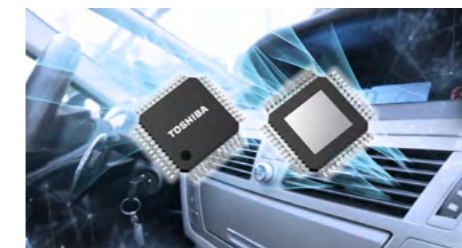
■ Launch of SmartMCD™ Series Gate Driver ICs with Embedded Microcontroller

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

*2 Arm® and Cortex® are registered trademarks of Arm Limited (or its subsidiaries) in the US and other countries.

TDSC started volume shipments of its SmartMCD™*¹ 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® Cortex®-M0*² 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 sine wave control, which reduces microcontroller processing load and software size.



*SmartMCD™ series of microcontroller-embedded gate drivers

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

* FC-MAMR™ is a trademark of Toshiba Electronic Devices & Storage Corporation

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.

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.



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

The new helium-sealed HDDs incorporate TDSC's proprietary FC-MAMR™ (flux control-microwave 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, quantum-inspired optimization solutions)
- IoT/AI
- Security/Blockchain
- Managed Services



Digital Manufacturing Solutions



Human Resource Management Solutions



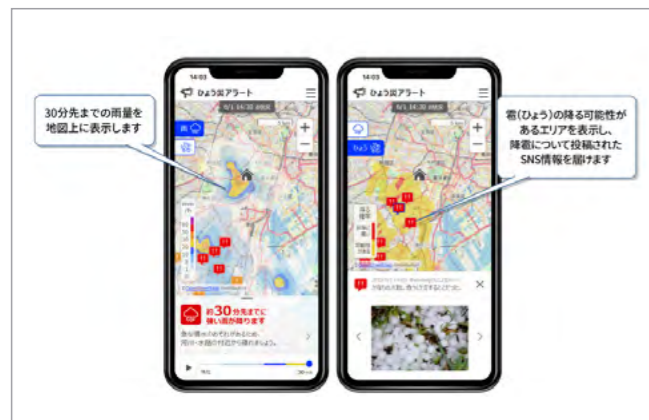
Quantum Key Distribution



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.



At the opening ceremony of the Quantum Technology Centre

"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.

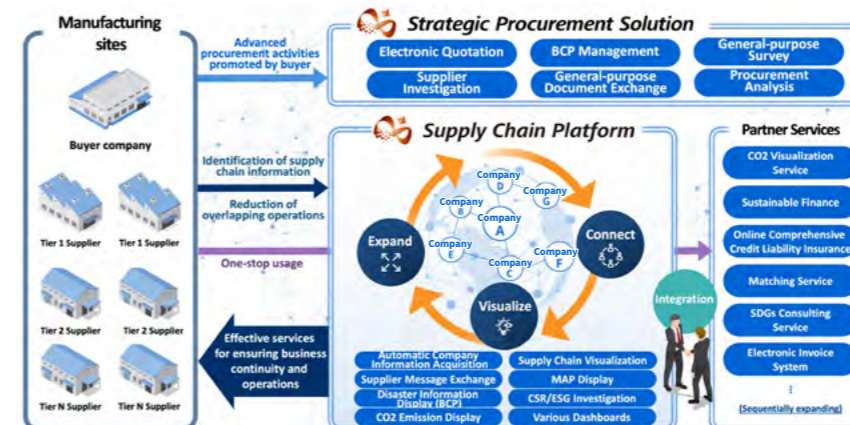
SQBM+ Version 2, launched in November 2023, has expanded capabilities and can handle up to 10 million variables in large-scale optimization problems. It is available through the AWS Marketplace and Azure Marketplace, giving access to a wide range of users. Toshiba is now strengthening partnerships with 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 inter-company 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.

Others

Main Business Areas

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



Next-Generation Lithium-Ion Batteries SCiB™ 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-generation lithium-ion secondary batteries. In Brazil, Toshiba has begun real-world testing of a prototype EV bus equipped with the new SCiB™ 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™ Nb battery is a product of joint technological development by Toshiba, Sojitz Corporation, and CBMM, with commercialization targeted for Spring 2025.

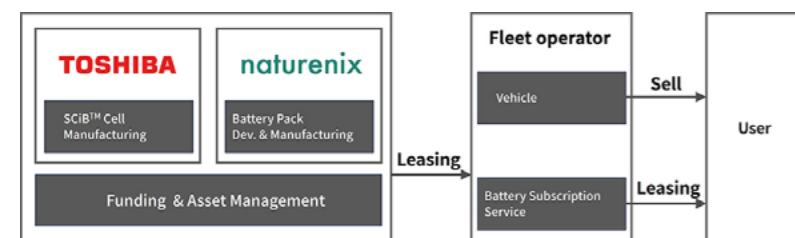


Images of EV buses with Toshiba's battery SCiB™ powered by a pantograph charging system

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™, 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](#).