

TEL
TM

Cover photo: Bluebonnet (Texas, U.S.)

The cover photo shows flowers of the countries and regions in which we do business.

TEL
TM

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PR56-137



Corporate Philosophy

We strive to contribute to the development of a dream-inspiring society through our leading-edge technologies and reliable service and support.



Editorial policy

The purpose of this report is to communicate the roles and responsibilities of Tokyo Electron (TEL) in promoting a sustainable society and specific activities toward achieving this goal.

This fiscal year, for each material issue, we describe priority themes, short- and medium-term goals, relevant SDGs (Sustainable Development Goals), and specific activities that will lead to the resolution of social issues.

The activities have been arranged in terms of investment capital and the value chain and explain how TEL creates value for customers and society.

For more details, please visit our website.

URL www.tel.com/csr/

TEL remains committed to disclosing information in a timely and transparent manner. Your honest feedback on this report is highly appreciated.

Scope

This report covers the entire TEL Group (34 consolidated companies), with some exceptions (indicated in the content).

In April 2014, the status of Tokyo Electron Device changed from a consolidated subsidiary to an equity-method affiliate.

Reference guidelines

Global Reporting Initiative (GRI): Sustainability reporting standards
Environmental Reporting Guideline 2012, Ministry of the Environment, Government of Japan

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Period covered

This report principally covers fiscal year 2018 (April 1, 2017 to March 31, 2018), although some content covers fiscal year 2019.

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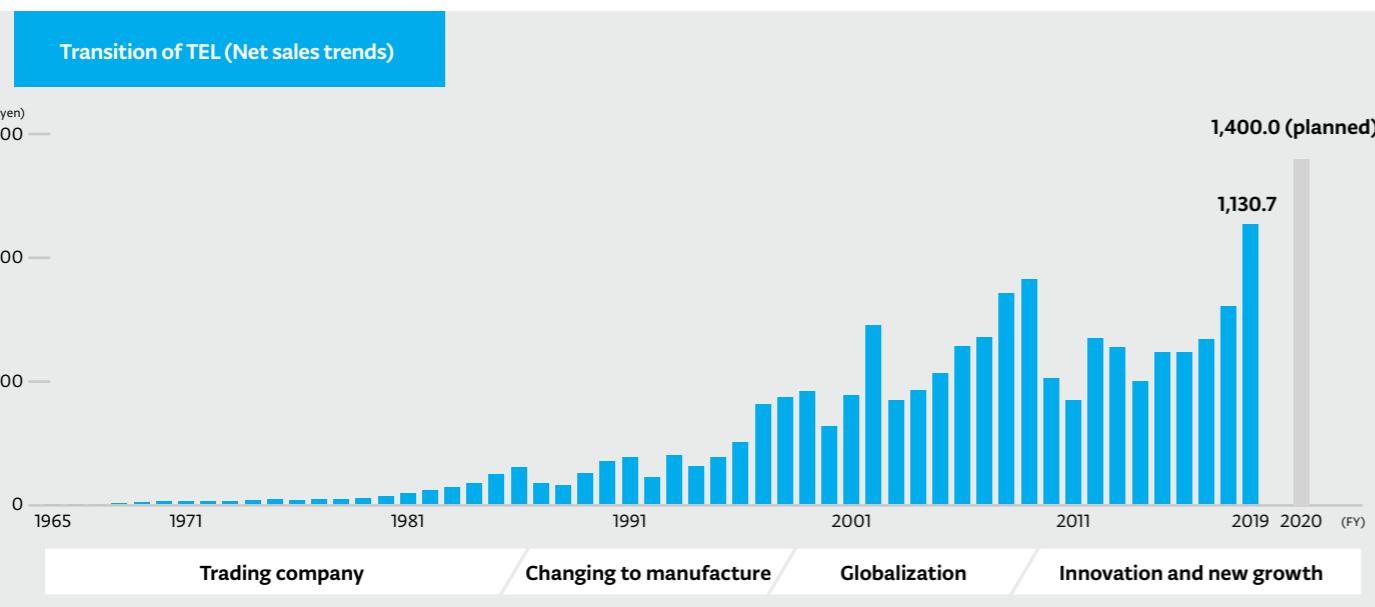
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Tokyo Electron operates on the world stage

Tokyo Electron (TEL) operates worldwide as a leading company in semiconductor and flat panel display (FPD) production equipment. We strive to contribute to the development of a dream-inspiring society through technological innovation achieved in our pursuit of leading-edge technologies.





On behalf of Tokyo Electron (TEL), I would first like to express my sincere gratitude to all stakeholders for their continued support and patronage.

In recent years, efforts for building a sustainable society have unfolded on a global level, such as enforcement of the Paris Agreement, as well as the United Nations Sustainable Development Goals (SDGs) and Environmental, Social and Governance (ESG). To help build a sustainable society from a medium- to long-term perspective, companies are required to create and provide diverse value through their products and services, utilizing their management resources effectively.

On the social front, as we enter an age of the Internet of Things (IoT), where almost everything is connected to the internet, it is expected that new business models and lifestyles will develop resultant of big data, new applications such as augmented reality (AR) and virtual reality (VR), as well as artificial intelligence (AI) and other technologies are put to practical use. In addition, on the back of the planned introduction of 5G—the next-generation telecommunications standard—progress is also being made in the development of associated infrastructures. Supporting all these trends are semiconductors. In the area of flat panel displays (FPD) too, in addition to growing demand for small- and medium-sized panels, there also appears to be a shift to larger screens and higher resolution, as well as a widespread adoption of organic electroluminescent displays,* and a broadening of design characteristics and their applications. Semiconductors and FPDs are in a new growth phase, playing a key role in our social infrastructure, and raising the expectation of further development attributable to technological innovation.

Our Corporate Philosophy urges us to “contribute to the development of a dream-inspiring society through our leading-edge technologies and reliable service and support.” We see sustainability as an important focus for management, and in addition to steadily promoting effective governance and compliance, we believe it is vital that we improve our corporate value in the medium- to long-term by contributing through business to the resolution of social issues. We will strive to create value for society through our high-value-added, strongly competitive products and services, maximizing the effective use of precious management resources, such as the funds generated by our business activities, the know-how along the value chain, our world-class personnel, and our trust-based relationships with customers and suppliers. In fiscal year 2017, we redefined the issues that are material in the sustainable growth of TEL, such as enhancing product competitiveness, reinforcing responsiveness to customers and improving productivity. This fiscal year, we will again join together in engaging in various activities aimed at achieving our short-term, medium-term and long-term goals related to these material issues. By continuing to promote sustainability-focused management, our aim is to remain a company which is loved and needed by the community, and in which our employees take pride.

To promote sustainability management in line with international frameworks, we became a signatory to the UN Global Compact in 2013, and have since implemented initiatives for SDGs on a company-wide basis.

Your continued support and patronage is very much appreciated by all of us at TEL.

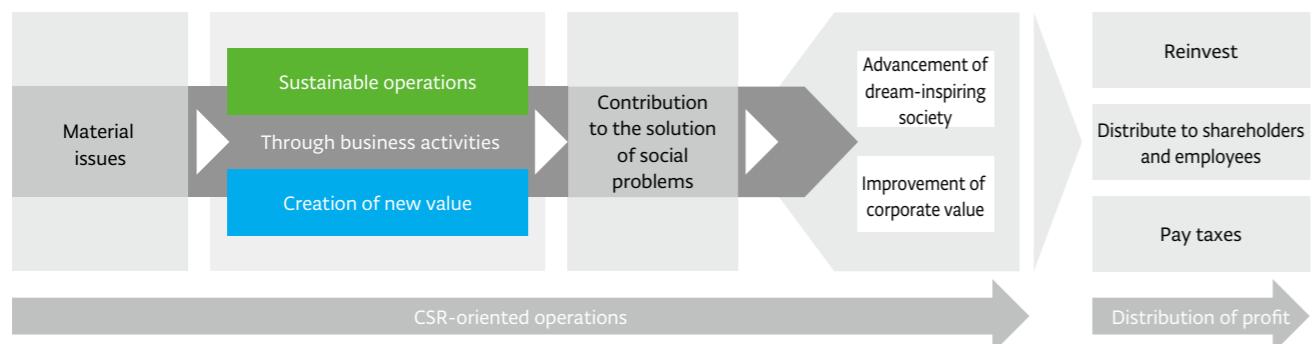
Toshiki Kawai
Representative Director, President & CEO
Tokyo Electron Limited

* Organic electroluminescent display: The phenomenon of light being emitted from specific organic compounds when voltage is applied.

CSR-oriented operations

CSR policy

The CSR operations of Tokyo Electron (TEL) are initiatives that realize TEL's Corporate Philosophy. We pursue sustainable operations from the viewpoints of corporate governance, legal and regulatory compliance, and business ethics while creating new value through our products and services. Based on these efforts, we implement CSR activities to help address social issues. We will continue to pursue CSR activities to build stakeholder trust, improve corporate value and, by doing so, promote the growth of a sustainable and dream-inspiring society.



CSR promotion framework

TEL implements sustainability management which is integrated into management strategy from a medium- to long-term perspective. Company-wide CSR policies are set at the CSR management council with the participation of management. The CSR global promotion conference then sets CSR targets and company-wide initiatives based on these policies. The progress and day-to-day CSR activities are shared at the CSR monthly meeting as we build cooperative systems across the company.

Conference name	Participants	Function	Meeting frequency
CSR Management Council	• Chairman of the Board • President and CEO • Directors and Managers	• Decide company-wide CSR policy • Discuss important matters	Twice annually
CSR Global Promotion Committee	• Chief CSR Director • Heads of related departments • CSR officers of affiliates and overseas companies	• Set CSR targets • Implement global projects	Twice annually
CSR Monthly Meeting	• Person in charge of CSR at each division	• Share information on CSR activities • Discuss cross-division CSR initiatives	Monthly

Participation in initiatives

UN Global Compact

The UN Global Compact (UNGC) is a global initiative to encourage businesses and other organizations to act in a socially responsible manner in order to realize sustainable growth. It requires participating organizations to exercise responsible and creative leadership in the four issue areas of human rights, labor, environment and anti-corruption. TEL declared its endorsement in 2013, supporting the UNGC's Ten Principles.



Responsible Business Alliance (RBA)

RBA consists of leading electronics companies dedicated to promoting CSR in their supply chains. The RBA has a common Code of Conduct governing such areas as labor, environment, safety and health, and ethics. TEL joined the alliance in 2015, and has been taking measures to improve sustainability of its supply chain ever since.



Stakeholder engagement

Continued dialogue and collaboration with stakeholders is important in order for TEL to provide new value through our business and to build trusting relationships. We will disclose information with a high degree of transparency in a timely manner and reflect the opinions and wishes of our stakeholders in business activities as we endeavor to improve our corporate value.

Stakeholders	Communication opportunities	Key opinions and requests	Relevant material issues
Shareholders/investors	• Earnings announcement • ESG surveys • Interviews	• Measures for increasing corporate value over the medium- to long-term • Corporate governance initiatives • Medium- to long-term stance on reducing environmental impact	• Product competitiveness • Higher productivity • Management foundation
Customers	• Technology conference • Customer satisfaction survey • Individual technology collaboration	• Accurate understanding of customer needs • Proposal of high-value-added solutions • Strengthening engagement from an earlier stage	• Product competitiveness • Responsiveness to customers • Higher productivity
Suppliers	• Production update briefing • Partners day • STQA* audit	• Greater promotion of collaborative systems • Increased opportunities for communication	• Higher productivity • Management foundation
Employees	• Employee meetings • Global engagement survey • Career interest survey (Japan)	• Development of systems leading to motivation and job satisfaction • Support for medium- to long-term career planning • Initiatives for higher productivity	• People and workplaces • Management foundation
Local communities	• Community contribution activities • Tours of factories and offices	• Community revitalization • Creation of employment opportunities • Environmentally friendly operations	• People and workplaces • Management foundation
Governments/associations	• Industry group activities • Collaboration with various initiatives	• Creation of innovation leading to the resolution of social issues • Initiatives for respect for human rights • Responsible procurement	• Product competitiveness • People and workplaces • Management foundation

* STQA: Supplier Total Quality Assessment

Third-party evaluation

TEL's CSR activities have been evaluated as medium- to long-term initiatives to increase its corporate value and have been selected as a constituent stock index under leading global CSR and ESG investment bodies.

Following from fiscal year 2017, in fiscal year 2018, TEL was again selected as constituent stock under DJSI¹ Asia Pacific 2017, and under the FTSE4 Good² and MSCI World ESG Leaders Index. Furthermore, we were also selected for the FTSE Blossom Japan Index and MSCI Japan ESG Select Leaders Index, which are ESG indices designated by GPIF.³



2018 Constituent
MSCI ESG
Leaders Indexes

¹ DJSI (Dow Jones Sustainability Index): Environmental, social and governance (ESG) investment indices developed by U.S.-based S&P Dow Jones Indices LLC and Switzerland-based RobecoSAM AG. The Asia Pacific index covers companies in that region.

² FTSE4Good: An index related to environmental performance and corporate social responsibility developed by the UK-based FTSE Group

³ GPIF (Government Pension Investment Fund): An independent administrative agency for pension reserve fund management in Japan, which operates one of the world's largest public pension reserve funds

Internal initiatives—CSR Promotion Award

In order to promote CSR initiatives within the company, we invite contributions from employees worldwide of cases of CSR in the workplace that contribute to resolving issues in the industry and society. We assess these in terms of their alignment with SDGs, resolution of social issues, contribution to corporate value and other aspects, and confer one CSR Promotion Award and four CSR Merit Awards.



Identifying material issues

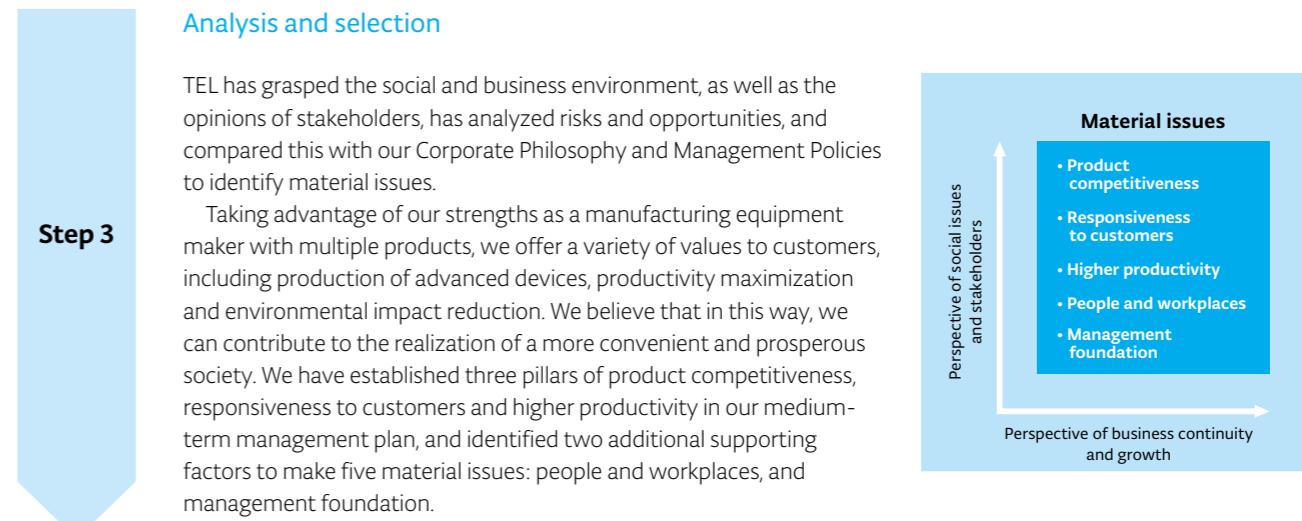
Tokyo Electron (TEL) identifies material issues that are important for further improving its corporate value over the medium- to long-term, taking into account social issues, the business environment, stakeholder expectations, and the company's circumstances. For each material issue, we set medium-term and annual goals, and implement various projects aimed at achieving those goals.



Social trends	Risks for TEL	Opportunities
Environmental issues including climate change	<ul style="list-style-type: none"> Legal violations and non-compliance with industry codes of conduct Increases in business costs 	<ul style="list-style-type: none"> Reduction of operational costs Improvement of product environmental performance and creation of business opportunities
Evolution of technology	<ul style="list-style-type: none"> Reduction in product dominance Reduction in customer satisfaction 	<ul style="list-style-type: none"> Generating innovative products and services Maintaining competitive advantage
Changes in population trends	<ul style="list-style-type: none"> Securing human resources Decline in development and support capability 	<ul style="list-style-type: none"> Enhancing corporate competitiveness
Sustainable business management	<ul style="list-style-type: none"> Ethics and compliance violations Weakening of monitoring and checking functions 	<ul style="list-style-type: none"> Highly effective governance Sound and highly transparent business management that builds solid relationships of trust with stakeholders
Supply chain management	<ul style="list-style-type: none"> Weakening of supply system Worsened relations with suppliers 	<ul style="list-style-type: none"> Creation of new value through collaboration Establishment of sustainable procurement

Step 2

Issues considered from the stakeholder perspective
TEL considers the importance of the issues it faces based upon opinions and expectations gained through communication with its stakeholders. → Stakeholder engagement, p. 8



CSR goals and results

Tokyo Electron (TEL) establishes annual goals and medium-term goals, based on material issues and their priority themes. Initiatives aimed at the achievement of goals are promoted throughout TEL, and the results are linked to evaluation and improvement with the aim of increasing corporate value further.

FY2018

Material issues	Priority themes	Annual goals	Results
Enhancing product competitiveness	Technological innovation aimed at creating value	<ul style="list-style-type: none"> Ensure that 5% or more (three-year moving average) of all equipment models are new products for next-generation technologies 	<ul style="list-style-type: none"> Achieved 9.2%
		<ul style="list-style-type: none"> Maintain the previous year's global patent application rate 	<ul style="list-style-type: none"> Achieved 76.0% (maintained programs at the level of the previous fiscal year)
	Environmental contribution of products	<ul style="list-style-type: none"> Reduce per-wafer consumption of energy and pure water by 10% by fiscal year 2019 (as compared with fiscal year 2014) 	<ul style="list-style-type: none"> Achieved for the four models
Reinforcing responsiveness to customers	Accurate grasp of customer needs	<ul style="list-style-type: none"> Get 3 points ("Satisfied") or more on 100% of customer satisfaction survey items 	<ul style="list-style-type: none"> Achieved 64.9%
	Solutions that create value for customers	<ul style="list-style-type: none"> Increase TEL's value to customers 	<ul style="list-style-type: none"> Achieved increased adoption of TEL equipment by major customers against the background of vigorous demand for memory
		<ul style="list-style-type: none"> Increase field solutions business sales from the fiscal year 2017 level 	<ul style="list-style-type: none"> Increase of 31.4% from the fiscal year 2017 level
Strengthening earnings power	High quality products	<ul style="list-style-type: none"> Reduce quality improvement costs from the fiscal year 2017 level 	<ul style="list-style-type: none"> Reduction of 9.8% from the fiscal year 2017 level
	Increase added value of processes	<ul style="list-style-type: none"> Revise business processes to reduce man-hours used for sales operations from the fiscal year 2017 level 	<ul style="list-style-type: none"> Partially introduced systems to support sales operations
Invigorating people and workplaces	Human rights and diversity		
	Work-life balance	<ul style="list-style-type: none"> Retain 100% of new employees for the first three years Reach 70% of take-up rate of annual paid leave Increase the use of the company's "Pep Up" healthcare platform from the fiscal year 2017 level 	<ul style="list-style-type: none"> Increased from 92.9% to 93.4% Implemented initiatives such as Step-up Activity Training for employees in their second year Increased from 64.1% to 64.3% (increase of 0.2 points from the fiscal year 2017 level) Communicate the policy for overtime reduction at the start of the period 20% increase (from 47.1% to 67.2%) Distribute activity monitors to promote health awareness
	Human resource development		
	Health		
Establishing a sustainable management foundation	Corporate governance	<ul style="list-style-type: none"> Improve on issues identified in evaluations of the effectiveness of the Board of Directors Revise the internal reporting system (set up new external hotlines, revise range of persons covered, etc.) 	<ul style="list-style-type: none"> In response to the issue of increasing discussion time, hold a two-day one-night off-site conference to provide more discussion time to consider management policies and strategies such as medium- to long-term growth strategies. Established external reporting system for group companies in Japan and set up hotlines for supplies
	Safety management	<ul style="list-style-type: none"> Ensure that the number of workplace injuries per 200,000 work hours (the total case incident rate) is less than 0.5 	<ul style="list-style-type: none"> Achieved 0.38
	Environmental management	<ul style="list-style-type: none"> Reduce energy consumption by 1% from the fiscal year 2017 level (on a per-unit basis) Maintain water consumption at the fiscal year 2012 level (on a per-unit basis) 	<ul style="list-style-type: none"> Achieved at 6 out of 11 factories or offices* Achieved 11 out of 14 goals * According to new per-unit basis after revision
	Supply chain management	<ul style="list-style-type: none"> Implement supply chain CSR assessments for 80% or more of suppliers (procurement volume basis) 	<ul style="list-style-type: none"> Assessed key suppliers accounting for more than 80% of our procurement spend

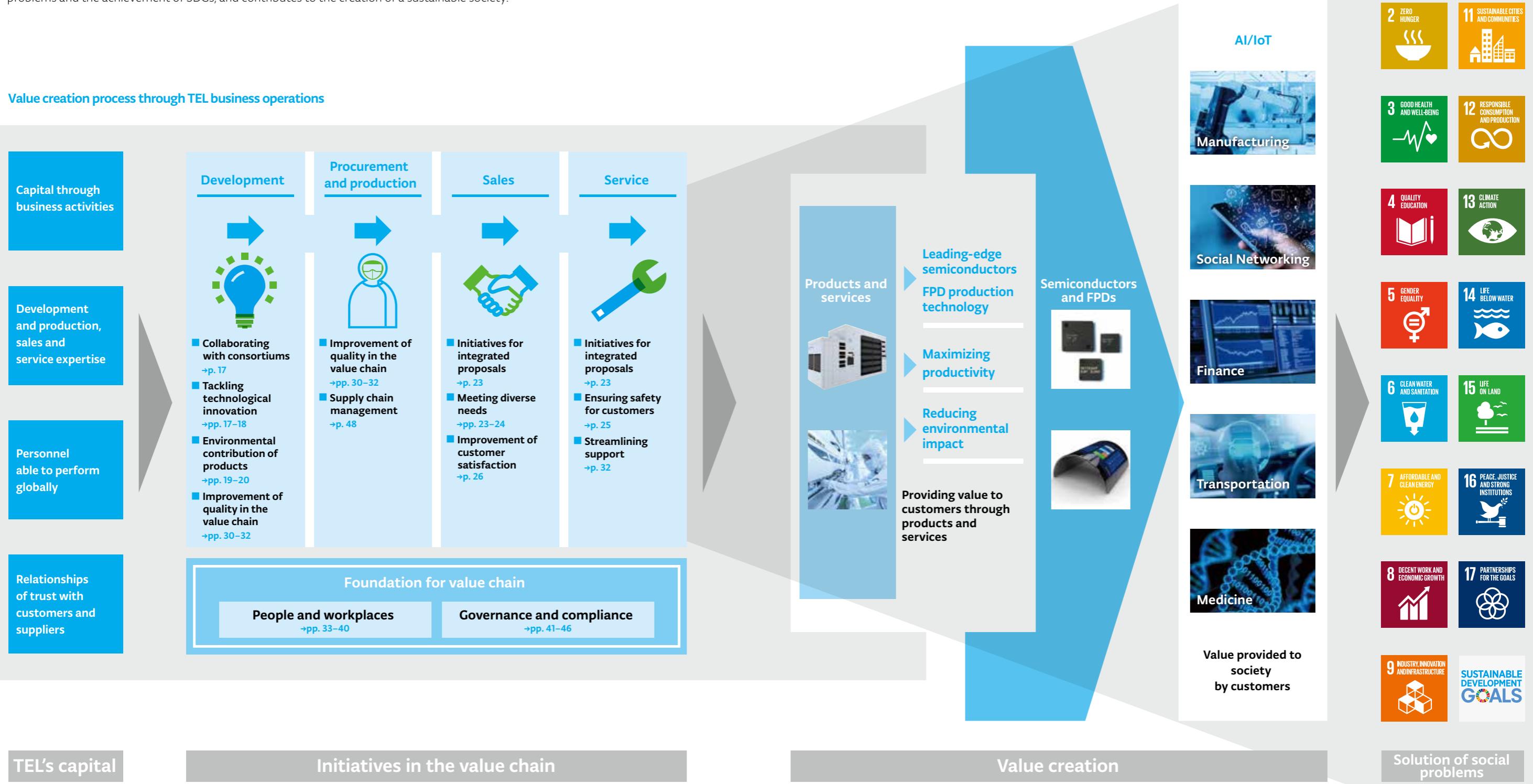
FY2019

Material issues	Priority themes	Annual goals	Medium-term goals	Relevant SDGs
Product competitiveness	Tackling technological innovation	<ul style="list-style-type: none"> Ensure that 20% or more (three-year moving average) of all equipment models are new products for next-generation technologies 	Create strong next-generation products	 9 INDUSTRY INNOVATION AND INFRASTRUCTURE
		<ul style="list-style-type: none"> Maintain the previous year's global patent application rate 		
	Environmental contribution of products	<ul style="list-style-type: none"> Reduce per-wafer consumption of energy and pure water by 10% by fiscal year 2019 (as compared with fiscal year 2014) 		
Responsiveness to customers	Solutions that create value for customers	<ul style="list-style-type: none"> Increase TEL's value to customers 	Become the best and sole strategic partner	 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
		<ul style="list-style-type: none"> Increase field solutions business sales from the fiscal year 2018 level 		
	Improvement of customer satisfaction	<ul style="list-style-type: none"> Get 3 points ("Satisfied") or more on 100% of customer satisfaction survey items 		
Higher productivity	Quality management	<ul style="list-style-type: none"> Reduce quality improvement costs from the fiscal year 2018 level 	Constantly pursue higher management efficiency	 8 DECENT WORK AND ECONOMIC GROWTH
	Improvement of quality in the value chain	<ul style="list-style-type: none"> Revise business processes to reduce man-hours used for sales operations from the fiscal year 2018 level 		
	Diversity	<ul style="list-style-type: none"> Double percentage of female managers by fiscal year 2021 (as compared with fiscal year 2018) 		
People and workplaces	Career development	<ul style="list-style-type: none"> Increase number of training sessions attended per person by 10% from the fiscal year 2018 level 	Maximize dreams and drive	 17 PARTNERSHIPS FOR THE GOALS
	Work-life balance	<ul style="list-style-type: none"> Reach 70% of take-up rate of annual paid leave 		
	Health and safety	<ul style="list-style-type: none"> Reduce gap between health age* and actual age by 1.5 points by fiscal year 2021 (as compared with fiscal year 2018) * An indication of the risk of lifestyle diseases by age based on the results of health checkups 		
		<ul style="list-style-type: none"> Ensure that the number of workplace injuries per 200,000 work hours (the total case incident rate) is less than 0.5 		
Management foundation	Governance and compliance	<ul style="list-style-type: none"> Improve on issues identified in evaluations of the effectiveness of the Board of Directors Establishment of external hotline overseas and reorganize internal hotline 	Build a management foundation for increasing value	 8 DECENT WORK AND ECONOMIC GROWTH
	Human rights	<ul style="list-style-type: none"> 100% participation in human rights training 		
	Environmental management	<ul style="list-style-type: none"> Reduce energy consumption by 1% from the fiscal year 2017 level (per-unit basis*) at each factory or office * Per-unit basis: Calculated using complex weighting of the number of developed evaluation machines, units produced, floor area, and labor-hours for each district 		
	Supply chain management	<ul style="list-style-type: none"> Maintain water consumption at the fiscal year 2012 level according to per-unit basis* set at each factory or office * Per-unit basis: Calculated based on floor area and labor-hours, etc. for each district 		
		<ul style="list-style-type: none"> Implement supply chain CSR assessments for 80% or more of suppliers (procurement volume basis) 		

Value creation through business

With its business of semiconductor and FPD production equipment and sales and service support, Tokyo Electron (TEL) contributes to value creation for its customers, through the manufacture of devices using advanced technology, productivity maximization and environmental impact reduction. Manufactured semiconductors and FPDs are supplied to the market in various products, including mobile devices, AV equipment and data servers, to realize a more convenient and abundant society amidst developments in fields such as IoT, big data, and AI. Through its business, TEL contributes to the resolution of industrial and social problems and the achievement of SDGs, and contributes to the creation of a sustainable society.

Value creation process through TEL business operations



Product competitiveness

Create strong next-generation products

In the era of the Internet of Things (IoT), when a variety of objects can connect to the internet, semiconductor and flat panel display technologies support the expansion of new business models and lifestyles. In such circumstances, it is important to deliver high added-value and competitive products in a timely fashion in order to ensure continuous business expansion. Tokyo Electron engages in cutting-edge development to produce next-generation products featuring innovative technology. Furthermore, we are conscious of the importance of global environmental issues such as climate change and resource depletion and we strive to implement measures to reduce the environmental burden of our products. Through innovative technology and environmentally conscious products that will support the next generation, we contribute to the building of a sustainable society.

Priority themes



Tackling
technological
innovation



Environmental
contribution of
products

Relevant SDGs



Industry, innovation
and infrastructure



Climate action

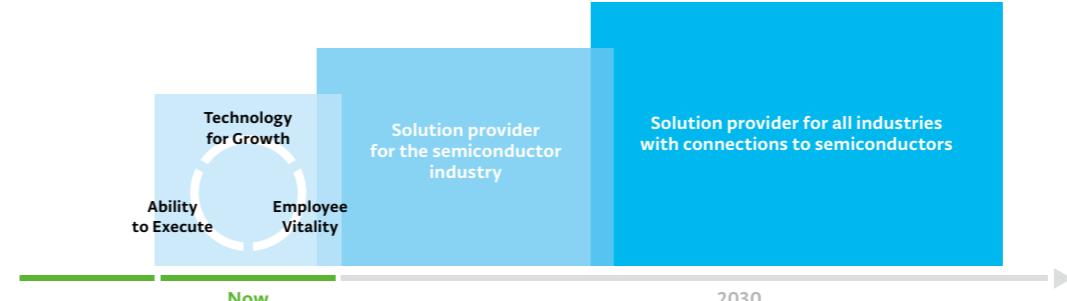
SUSTAINABLE
DEVELOPMENT GOALS

Research and development

Research and development for the future

As lifestyles and business models undergo dramatic changes in the era of the Internet of Things (IoT), it is anticipated that the use of semiconductors will expand in all industries, and there will be demands for even more advanced technologies. As electronics become even familiar for people, semiconductors become a larger part of everyday life. Tokyo Electron (TEL) has settled on the TEL Technology Vision 2030 from a medium- to long-term perspective, and is holding lively discussions regarding technology for the future as well as its contribution.

TEL Technology Vision 2030



Development system

TEL has a system, which promotes technology development and technology innovation for the next generation, in collaboration with the Development & Production Division and business divisions to bring high-value-added products to market in a timely fashion. In fiscal year 2018, Tokyo Electron Technology Solutions was established, merging the factories in Yamanashi and Tohoku. As a result, resources relating to deposition technologies—one of our strengths—were centralized, and our process integration functions were strengthened. Also, in Tokyo Electron Miyagi, construction of a new R&D building has begun to accelerate the technology innovation of etch systems. We are creating one of the foremost development environments in the industry.

* Global patent application rates:
Percentage of invention applications filed in multiple countries

Intellectual property management

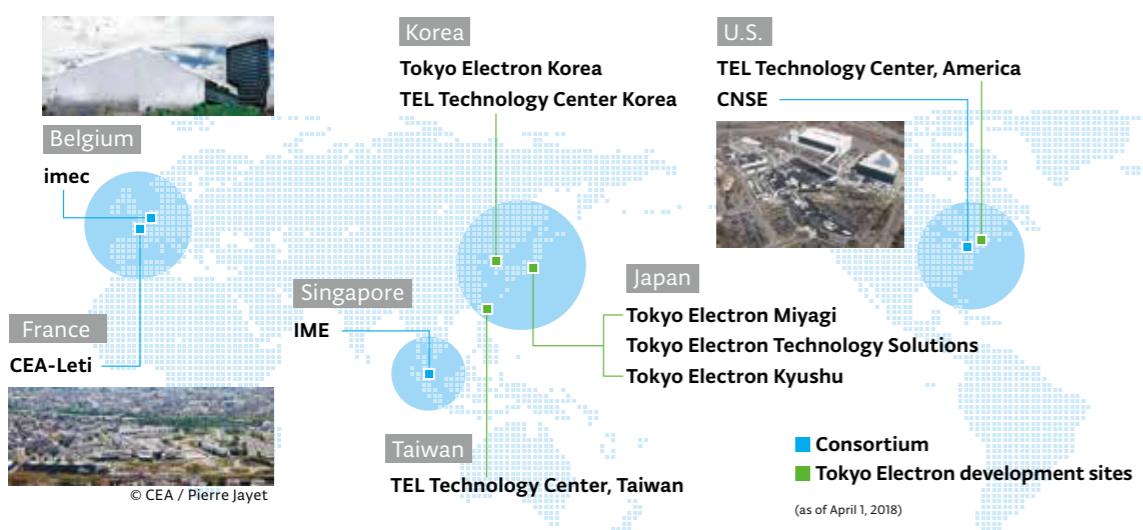
TEL's basic policy is to increase corporate revenues by supporting business through intellectual property (IP) protection. IP personnel are assigned at R&D/manufacturing facilities and at the headquarters. In order to boost competitiveness of TEL's products, they build IP portfolios that go well with technology and product strategies through assessment of R&D and marketing activities from various angles including R&D and marketing viewpoints.

In fiscal year 2018, TEL introduced an integrated IT platform for managing TEL's worldwide intellectual properties. This platform is accessible from any employees involved in IP activities, and strongly supports worldwide R&D activities. We have maintained global patent application rates* around 70% in the last seven years. In 2017, we maintained high patent application success rates: 71.5% in Japan and 78.0% in the United States. To increase IP awareness, we continuously educate engineers, who are the foundation of TEL's R&D strategy; in total around 3,900 engineers have become inventors.

Collaborating with consortiums

Along with enhancing its own research and development capabilities, TEL is also engaged in the development of cutting-edge technologies in collaboration with international and domestic consortiums.

In the U.S. state of New York, we have participated in the Albany NanoTech megaplex since its establishment in 2003. Here, global device manufacturers and makers of semiconductor production equipment have participated to build a comprehensive semiconductor production line, where we can verify integrated process development and its effectiveness. Taking advantage of an environment close to the actual device manufacturing, we also conduct joint research projects aimed at resolving specific issues faced by customers. Based in a world-class development environment, our team of more than 100 engineers are advancing efficient development, committed to researching next-generation semiconductor production equipment and processes directly linked to business.



Tackling technological innovation

Integrating logic and memory

In this era of IoT, data centers are processing massive amounts of data such as in information and image analysis, and as the increasing power consumption of semiconductor devices proves to be an issue, attention is being drawn to neuromorphic devices inspired by the neural circuits of humans. Computers in data centers consume power in the order of several tens of kilowatts, but the human brain consumes only about 20W when doing the same processing. Similarly, whereas the operating frequency¹ of today's semiconductor devices is 5 GHz, the human brain runs at just several tens of hertz. Neuromorphic devices use synaptic connections² to integrate the processing function and the memory function, which had previously been divided between logic and memory of a conventional microprocessor. This enables a higher degree of information processing with less power consumption like the human brain.

Leveraging its strengths in deposition technologies and pattern technologies, Tokyo Electron (TEL) has initiated research efforts into new materials needed for next-generation computing, such as neuromorphic devices, quantum computers, as well as manufacturing processes for utilizing these materials.

1 Operating frequency (or clock speed): The number of signals per second to adjust the pace of processing of multiple electronic circuits. Indicates the processing performance of the computer. The higher the frequency, the more power is consumed.

2 Synaptic connection: A junction formed between neurons (cells making up the nervous system of an animal) regarded as having an important role in learning and memory.

Use of AI technologies

TEL is promoting the use of AI¹ in order to achieve more efficient and stable equipment operation. In addition to strengthening the training of experts in machine learning, such as through study programs at overseas universities, in 2017, we established a division responsible for technological innovation utilizing AI, as well as a division responsible for planning the interdivisional use of data. Thus, we are putting in place an organizational structure that promotes planning, marketing and development activities on a company-wide basis.

With this structure, we are driving our efforts using AI to analyze the vast amounts of data coming out of our equipment, to help us predict and control the condition of the equipment. By monitoring the operating status of our semiconductor production equipment in real time via the internet, and using AI to analyze that data, we target to meet the demands of our customers, namely, maintaining equipment performance, achieving wafer process uniformity, and avoiding unexpected downtime.

1 AI: Artificial Intelligence

Addressing advancements in display

Flat panel display (FPD) has evolved along with advancements in liquid crystal technology to a high resolution that cannot be identified by the human retina. In recent years, there has been greater adoption, particularly for smartphones, of organic EL display, which can produce a brighter screen with less power. These advancements have been supported by technology for forming minute electronic circuits on glass substrates, for which our equipment is widely used in the etch process.

TEL adopted the industry's first high-density plasma generation technology, known as ICP,² and developed PICPTM³ that advanced this technology further. PICPTM creates even more uniform plasma compared with conventional ICP, enabling fine etch and achieving formation of a uniform fine circuit over the whole substrate. In addition, this technology provides stable quality, improved productivity, and extends the replacement cycle of consumable parts, thus reducing environmental burden.

In the future, it is expected that demands on the display market will progressively increase for features such as high definition, low power consumption, Free Form,⁴ Flexible⁵ and Touch UI⁶ on the display market. Therefore even finer circuit formation is essential to achieve these. TEL will make significant contributions to the future advancement and development of displays by enabling production of fine, uniform circuits required for leading-edge displays.

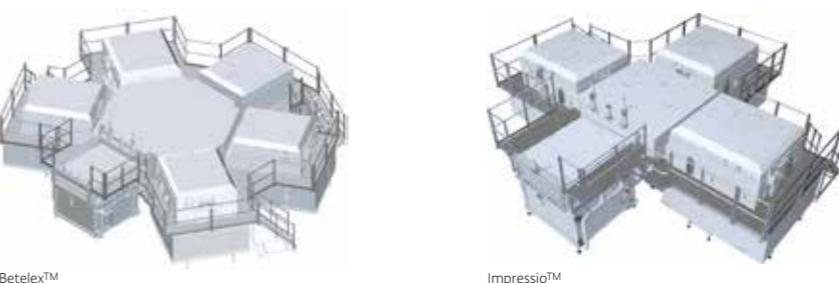
2 ICP: Inductively Coupled Plasma

3 PICPTM: Planar Inductively Coupled PlasmaTM, which describes the creation of extremely uniform high density plasma on a panel substrate

4 Free Form: Non-rectangular shaped display

5 Flexible: Bendable and freely deformable display

6 Touch UI: Touch User Interface is a computer-pointing technology based upon the sense of touch



Executive message

The semiconductor and FPD industry is evolving more and more with the dawning era of the Internet of Things (IoT). In response, we will create customer value, developing competitive new technologies and products at a rate faster than the industry evolves.

We will continue our efforts to create new value by combining and integrating our various technologies with those of universities, business partners and other external parties. With challenges though comes failure. Our view is that constructive failure heralds future success. We believe that repeated challenges revitalize the organization, nurture human resources and produce innovative technologies and products, which in turn, will help create value for customers in the future.



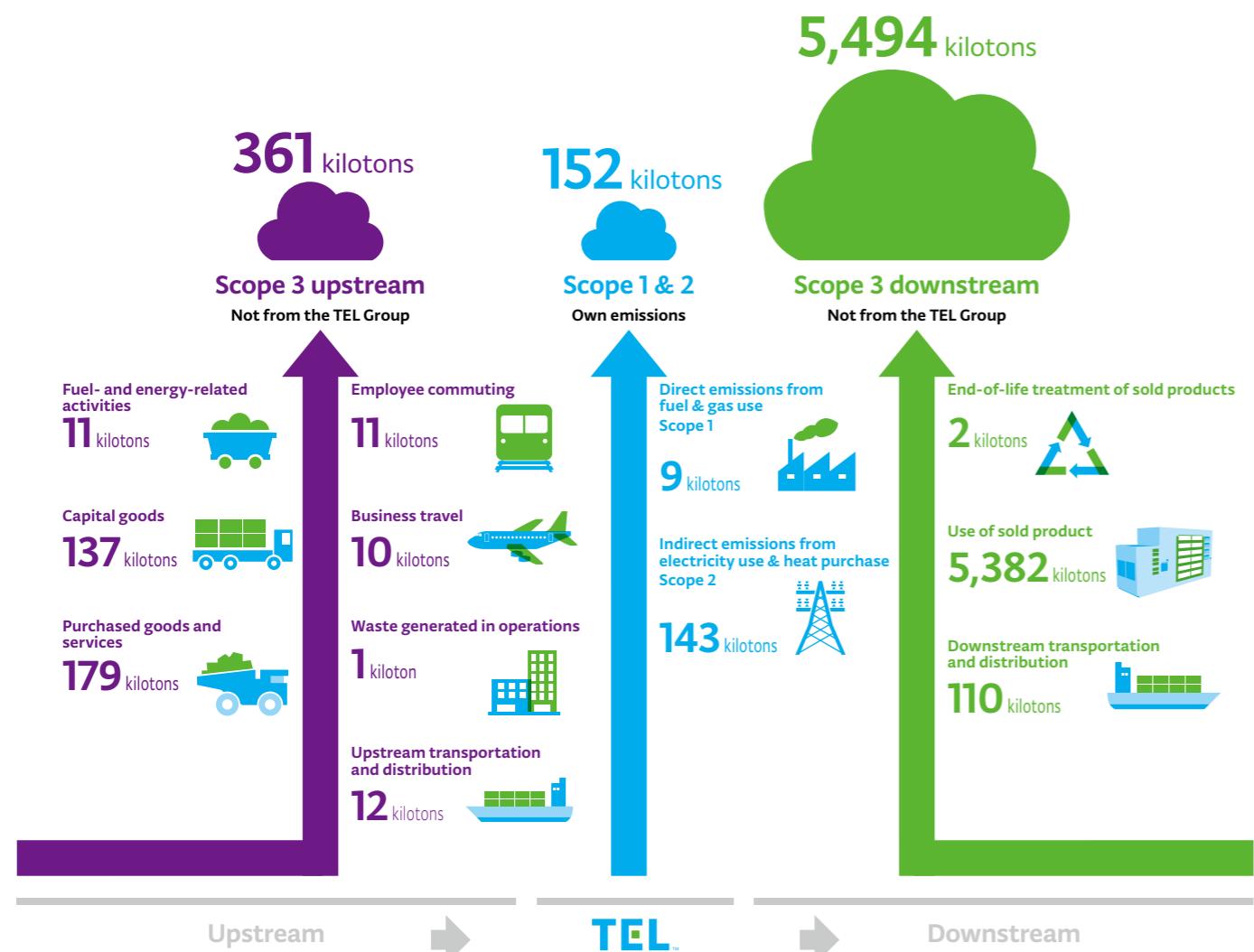
Yoshifumi Tahara
Senior Vice President and General Manager,
Development & Production 4th Division

Product competitiveness

Environmental contribution of products

CO₂ emissions across the value chain

Tokyo Electron (TEL) believes it is important to recognize environmental impact throughout the value chain in conducting its business activities. We aim to resolve environmental problems through leading technology and reliable services, in line with our environmental slogan "Technology for Eco Life."



Scope 1: Direct GHG emissions from use of fuel and gas owned or controlled by TEL
 Scope 2: Indirect GHG emissions from use of electricity, steam and heat purchased by TEL
 Scope 3: Emissions from corporate value chains (excluding scope 1 and 2 emissions), such as product transportation, employee business travel, and major outsourced production processes

* Scope 3 is divided into upstream activities, which include emissions associated with purchased or procured products and services, and downstream activities, which include emissions associated with sold products and services

The total of Scope 1 and Scope 2 of the TEL Group is 152 kilotonnes, while Scope 3 accounts for a total of 5,855 kilotonnes, which is approximately 97% of the total. We believe that it is particularly important to develop products with low CO₂ emissions during operation, as CO₂ emissions from the use of products sold amount to 5,382 kilotonnes, which is 90% of the overall total.

Products that contribute to a sustainable society

Of the total CO₂ emissions from the TEL value chain, emissions arising from product use account for 90% of our total CO₂ emissions. For this reason, we have made it a key corporate objective to promote environmentally friendly product design, and lower the energy consumption of our products.

In fiscal year 2015, we established a goal to reduce energy and pure water consumption by 10% by fiscal year 2019, using fiscal year 2014 consumption as the baseline. To achieve this goal, we are working to reduce energy use and improve overall throughput. As a result, we achieved the goal for one model in fiscal year 2016 and three models in fiscal year 2017 ahead of schedule. Moreover, even after achieving the goal, we have maintained our efforts for these models. For instance, in fiscal year 2017 we achieved our 10% reduction goal for the Precio™ XL test system. Then in fiscal year 2018, by switching to energy-efficient motors, we were able to reduce power consumption per wafer by a further 20%. In addition, in fiscal year 2018, the percentage of sales from energy-saving models based on in-house standards was 92.8% of total product sales.

To further reduce the overall environmental impact of our products, we must examine our primary equipment, peripherals, associated facilities, and management at our customers' factories. Going forward, it will become increasingly important to improve the operational efficiency of our equipment and encourage overall energy-efficient operations at our customers' factories.



Initiatives for product environmental laws and regulations

In order to comply with each country's environmental laws and regulations pertaining to products, TEL proactively collects information and takes appropriate action as required. An example of our efforts for EU REACH¹ regulations is that we investigate the presence of any substances of very high concern (SVHC) in articles, and disclose information appropriately. As for efforts for GHS² requirements, we provide safety data sheets (SDS) when selling chemical goods.

In fiscal year 2018, we established a new environmental IT system, making it possible to share information more efficiently with our supply chain. In addition, we have also continued to offer "web based training for Product Environment Compliance" to all employees, providing a description of the frequently revised environmental laws and regulations and product compliance. We also provide suppliers with information on the relevant environmental laws and regulations. We had no violations of environmental laws and regulations during fiscal year 2018.

We will continue to rapidly monitor each country's environmental laws and regulations, and strive to take appropriate action.

¹ EU REACH: An EU regulation pertaining to the registration, evaluation, authorisation, and restriction of chemicals

² GHS: Globally Harmonized System of classification and labelling of chemicals

Logistics initiatives

URL www.tel.com/csr/environment/product/

As logistics regulations have become more stringent in recent years and the demand for a lower impact on the environment rises, TEL has been promoting modal shifts³ and other activities designed to reduce the environmental burden of its logistics.

³ Modal shift: Switch of transportation means from truck or aircraft to one that has a lower impact on the environment, such as rail or ships

Responsiveness to customers

Become the best and sole strategic partner

With the coming of the Fourth Industrial Revolution, a variety of objects are connected to the internet, and analysis and utilization of big data through AI is advancing. Applications for semiconductors and flat panel displays are expanding and customer needs for semiconductor production equipment are diversifying and increasing in complexity. Against this background, it is essential to accurately grasp customer needs in order to provide optimal products and services. Since the establishment of Tokyo Electron (TEL), we have positioned customer satisfaction as a key management theme, and have endeavored to build firm relationships of trust with our customers. Furthermore, TEL proposes integrated solutions as a manufacturing equipment company deploying multi-products. We continue to aim to contribute to value creation for our customers so that they will see us as an irreplaceable strategic partner.

Priority themes



Solutions that
create value for
customers



Improvement of
customer
satisfaction

Relevant SDGs



Industry, innovation
and infrastructure



Responsible consumption
and production

SUSTAINABLE
DEVELOPMENT GOALS

Solutions that create value for customers

Systems for creating value for customers

By developing and strengthening close relationships with customers through a customer account system, Tokyo Electron (TEL) is promoting a deeper understanding of customer needs and linking this to the creation of product development and service businesses in the seamless collaboration with its business divisions and development divisions. Moreover, in order to take a more comprehensive and inclusive approach to meeting customer needs, in cooperation with our corporate divisions we are also promoting development activities on common themes across the multiple products and functions.

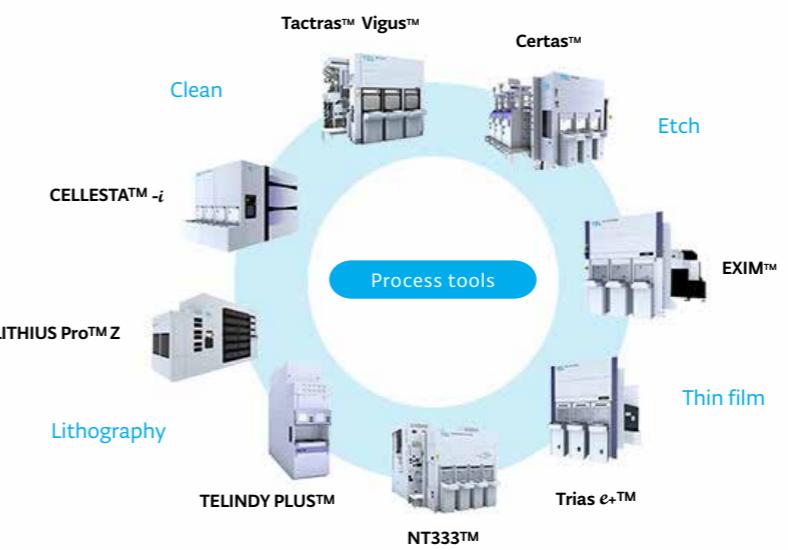
To promote these activities and to improve their efficiency, we are working to build globally unified systems and operations. For the service division in particular, we have established the Global Service Committee. Service leaders from each business unit and each overseas subsidiary regularly gather to promote One-TEL service activities. Discussions by the Global Service Committee cover all manner of subjects, including improving the technical skills and interpersonal skills of the more than 3,000 field engineers worldwide, the localization of start-ups, improving work efficiency using the work-time management system, and the concept of the Total Support Center. Based on these discussions, the Global Field Division takes a central role in promoting the sharing of information and knowledge between accounts and between overseas subsidiaries, and in the development of optimal operational methods.

In addition to helping create value for customers by improving our ability to make proposals and solve problems to meet customer needs, we are also contributing to create value for TEL by improving the speed and efficiency of our business.

Development capabilities beyond product fields

Along with the advancement of scaling and performance of semiconductors, innovative solutions to optimize overall manufacturing processes at customer sites are highly required. TEL has been working on the challenge by taking the advantage of high technological competency as an equipment manufacturer deploying a product lineup featuring a variety of products.

During fiscal year 2018, we have established a Process Integration Center (PIC). In response to the growing technological requirements essential for building a more enriched and prospective society—such as AI and automated driving, widely spread of IoT solutions—PIC is engaged in extensive research on innovation by integrated process technologies based on a combination of multiple processes, leading-edge equipment, and novel materials. The semiconductor trend to 3D structure is one of those innovations. 3D structure is micro-fabricated with complex elements built in a vertical direction on a wafer, enabled by numerous repetition of multiple processes such as thin film deposition, lithography, etch, and cleaning. Utilizing our comprehensive strength with an extensive product lineup featuring a variety of products, we are contributing to the evolution of overall semiconductor manufacturing technology.



Initiatives for integrated proposals

Knowledge management

TEL promotes company-wide knowledge management.¹ By sharing knowledge and connecting different divisions and overseas sites, we are working to share best practices to deliver high-quality services to our customers. In the area of field service, we have built a system that centralizes information on past equipment issues and allows users to search that information on demand. The system has made it easier to retrieve knowledge on issues, and causes of issues can be predicted with greater accuracy. This has enabled us to respond to customers more quickly and more efficiently.

¹ Knowledge management:
Management approach to promote internal company sharing of tacit knowledge held by individuals, in order to encourage innovation and to improve overall productivity

Work-time management

We have adopted a global timesheet covering about 3,000 field engineers worldwide. Under this system, work involved in starting up equipment, repair work and other tasks are managed by entering the type of task performed and the time required for that task in accordance with certain rules. Introducing this system has allowed us to visualize services. By analyzing the work data accumulated through the global timesheets, we are intent on improving the efficiency of our work and the quality of our service.

Skills management

With a goal of upgrading the skills of field engineers and improving the competitiveness of our services, we built a company-wide skills management system in accordance with standards established by SEMATECH (a U.S. consortium for the joint development of semiconductors). The system became operational in fiscal year 2018. By understanding the individual skills of our field engineers, we have been able to systematically upgrade the skills of our company as a whole. Moreover, since the skills of each engineer can be ascertained objectively, we are able to place our human resources to match the needs of our customers.

Meeting diverse needs

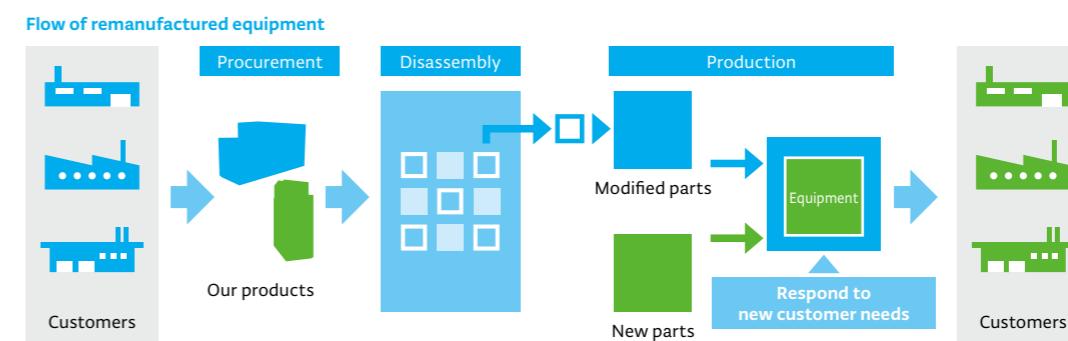
With the dawning era of the Internet of Things (IoT), demand for semiconductors is becoming progressively polarized. Amid advances to miniaturize semiconductors and to further increase their density for MPU² and DRAM,³ demand is also increasing for general-purpose semiconductors in a wide range of fields, such as medicine, finance, transportation and manufacturing. Extending the life cycle of products is another challenge, evidenced by demand for the long-term stable operation of semiconductors for automobiles and industry.

In view of these trends, TEL has developed an organizational structure focused on the aftermarket. We have developed systems to better understand the needs of our customers, and to share them internally as feedback so they can be reflected in product development.

Based on these systems, a major pillar of our business expansion has been the supply of equipment, centering on 200 mm equipment. Leveraging our strength in having delivered more than 66,000 machines as one of the largest suppliers in the industry, we procure equipment from end users or from the used equipment market and sell them as TEL-certified used equipment. We are also putting a great deal of effort into remanufactured equipment. Remanufactured equipment refers to equipment build by taking the TEL used equipment we have procured and disassembling them into modules, modifying those parts that are still usable, and adding new parts where they are needed. Doing so enables us to provide equipment according to customer demand.

For certain equipment that customers want to purchase even though it may have been released 20 or more years ago, we offer remodeled equipment. Without changing the function of the equipment and by replacing old units and parts with the latest components, we can meet the demands of customers who want to continue using their equipment for a long time, while maintaining compatibility with existing processes.

We also offer a new upgrade kit, whereby the functions of latest 300 mm equipment are added to refurbished equipment. Doing so has enabled us to make productivity and other performance improvements that outstrip existing models.



Executive message

The era of the Internet of Things (IoT) has broadened the range of semiconductor applications, and has further diversified the demands on manufacturing equipment. In response to such needs, we have developed our field solutions business based on more than 60,000 delivered equipment. Our service commitment is to provide service that all customers can use our equipment with peace of mind. We will enhance infrastructure that maximizes the performance of equipment, and through the reuse and recycling of products and through high-value-added maintenance services, we will support the stable operation of equipment for all generation utilized in a variety of applications. This business is critical for TEL's medium- to long-term growth, and I am confident it can also be of benefit to society by reducing environmental impact.



Kiyoshi Sunohara
Senior Vice President and General Manager,
Field Solutions Business Division

Ensuring safety for customers

Information provision

Tokyo Electron (TEL) is committed to providing relevant safety information to customers to enable the safe handling of products.

All products purchased by customers come with a standard TEL Safety and Environmental Guidelines manual. This manual describes the potential risks associated with the use of our products together with the methods for averting those risks, divided into such categories as chemical, electrical, mechanical and ergonomic. It also describes safety measures applied to products and recommended methods for product disposal. The manual has been translated into 10 languages to ensure that our customers around the world can accurately understand the information and use our products safely. To assist customers in using TEL equipment safely, we also provide a manual detailing the procedures for avoiding risks associated with the relevant equipment and for ensuring its correct operation and maintenance.

Close attention must also be paid to safety when delivering TEL products that involve the use of hazardous chemicals or high voltage electricity. Particularly when delivering our products to a customer's new production line, we check their facilities, equipment and workplace safety standards beforehand according to our internal rules to ensure a safe environment.

Training

TEL provides its customers with training on equipment operation and maintenance procedures to ensure they are able to handle TEL products correctly and safely. Centered around our manufacturing sites, we have established training centers worldwide, with approximately 80 instructors conducting practical training courses using actual TEL equipment. So that the training we provide is always of the highest quality, we use our own certification system for instructors to ensure that training is delivered by personnel recognized as having the necessary skills. In addition to practical training, we also provide web-based training and on-site training at customer sites. In fiscal year 2018, we provided customers with a total of approximately 9,500 days' worth of training.

At the end of a training course, TEL also surveys participants to collect and analyze their feedback on our training programs and equipment. Based on the survey results, we implement improvements in an effort to develop an enriched training environment.



* 10 languages: Japanese, English, German, French, Italian, Dutch, Russian, Korean, Traditional Chinese, and Simplified Chinese

Improvement of customer satisfaction

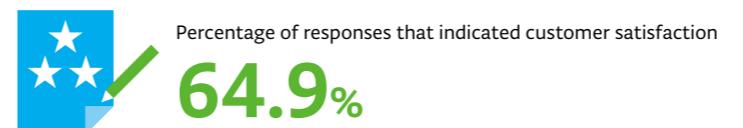
Customer Satisfaction Survey

Tokyo Electron (TEL) conducts a Customer Satisfaction Survey (TEL CS Survey) every year, with the goal of making continual improvements based on customer feedback. The survey started in 2003, aimed at just a limited number of departments. It was expanded to include all semiconductor production equipment departments in 2014, and later the FPD production equipment division and overseas subsidiaries in 2016, making it into a company-wide undertaking.

Once a year, customers are sent a questionnaire with specific questions designed to lead to practical improvements. Results from the survey are given as feedback to customers. In addition, results analyzed by product, account (customer) and function (software, development, etc.) are shared with the relevant divisions for action to be taken, thus leading to interdivisional improvement activities. Improvements are also constantly made to all aspects of the actual survey method, from the questions asked, to the analytical methods and overall operation of the survey activities.

In the customer satisfaction survey for fiscal year 2018, responses were received from approximately 1,300 individual customers which is 62.1% of all customers. We received 3 points* or higher on 64.9% of all questions asked. Based on this valuable feedback and analytical results, our entire company will work to drive improvements initiated from the customer perspective.

* On a 4-point scale, 3 points or higher represents "Very Satisfied or Satisfied"



Improvement example

Results of the Customer Satisfaction Survey brought to light a certain issue that would not have ordinarily been identified. In response, the relevant departments and overseas subsidiary took the lead in implementing improvements, backed by the cooperation of all TEL departments. We responded to inquiries with greater accuracy and speed, we delivered products and got it up and running more quickly, and we revised our allocation of field engineers. These efforts were reflected in the improved evaluation given by the customer the following year. A request received from another customer suggested that they wanted more enhanced support for software operated across multiple pieces of equipment. We implemented a variety of measures, and consequently, the evaluation score received from that customer also improved.

Higher productivity

Constantly pursue higher management efficiency

In corporate business activities, efforts to improve productivity will achieve greater efficiency in operations and will boost revenue. Tokyo Electron is reviewing and optimizing its current business processes across the company as a whole, in development and manufacturing divisions as well as in sales and management divisions, and we are promoting quality management throughout the value chain. We are aware of our corporate social responsibilities in the field of manufacturing, and therefore pursue greater productivity company-wide, with an awareness of high quality. In addition to in-house efforts, we also work with our business partners to continually improve the supply chain. Through these initiatives, we will endeavor to improve corporate value and contribute to the creation of a sustainable society.

Priority themes

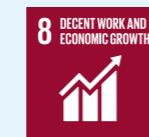


Quality management



Improvement of quality in the value chain

Relevant SDGs



Decent work and economic growth



Responsible consumption and production

SUSTAINABLE DEVELOPMENT GOALS

Quality management

Quality policy

Tokyo Electron (TEL) has a quality policy shared by all group companies which it has developed and is rolling out.

1. Quality Focus

Focusing on quality to satisfy customers, meet production schedules, and reduce required maintenance even with temporary cost increases.

2. Quality Design and Assurance

Building quality into products and assure in-process quality control, from the design and development phase throughout every process.

3. Quality and Trust

When a quality-related problem occurs, working as a team to perform thorough root cause analysis and resolve problems as quickly as possible.

4. Continual Improvement

Ensuring customer satisfaction and trust by establishing quality goals and performance indicators and by implementing continual improvement using the PDCA cycle.

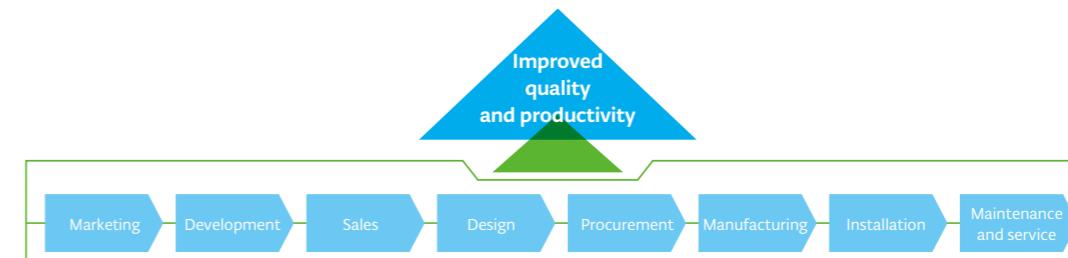
5. Stakeholder Communication

Listening to stakeholder expectations, providing timely product quality information, and making adjustments as needed.

In fiscal year 2018, we are displaying quality promotion posters at all our bases and have distributed quality commitment (code of conduct) cards to all employees in order to increase awareness of the policy.

Quality management throughout the value chain

TEL believes that continuous improvement, not only of products and services but also of all work processes, contributes to improved quality and productivity. We strive to improve operations throughout the value chain, while strengthening collaboration within the company and externally, reflecting the needs of customers.



Management system

TEL is building quality assurance systems under the leadership of the Representative Director, President & CEO. To provide consistent, high quality products, TEL has been acquiring ISO 9001 quality management system certification at various sites since 1994, and to date, nine of the group's manufacturing companies have successfully obtained certification.

ISO 9001 certified factories and offices

Company name	Factory/Office name	Certification date
Tokyo Electron Technology Solutions	Yamanashi Office (Fujii/Hosaka)	September 1994
	Tohoku Office	December 1994
Tokyo Electron Kyushu	Koshi Office	March 1997
TEL Magnetic Solutions	—	November 2009
Tokyo Electron Korea	Balan Factory	September 2011
Tokyo Electron Miyagi	Taiwa Office	September 2012
TEL FSI	—	March 2013
TEL Epion	—	May 2014
TEL NEXX	—	—
Tokyo Electron (Kunshan)	—	May 2018

Education

TEL believes that every employee needs to have a high awareness and understanding of quality and conducts various educational programs to this end.

In addition to the fundamental quality education that all new employees receive, we focus on PDCA education for all employees including those overseas. Through e-learning courses, employees learn the need for continuous improvement using the iterative four steps of the PDCA cycle. As of March 2018, 87% of our employees had completed the courses.

In addition, we promote an education program called TEL 6-Step, a problem-solving model for serious problems aimed at employees in production and service divisions. This is a customized version of the eight discipline (8D) problem-solving method¹ widely used in quality control. The TEL 6-step program enables systematic and reliable analysis of problems to determine the root cause, leading to quick implementation of countermeasures and prevention of similar problems. We currently use e-learning training for delivery, and as of March 2018, approximately 5,000 employees had completed the program. Since 2015, we have conducted not only online education but also group training aimed at overseas subsidiaries and development teams to provide opportunities for practical learning about resolution of quality issues.

Moreover, to enable employees to improve their knowledge and skills in the area of quality control, and to improve the quality of their work, we encourage them to obtain external QC certification² through the QM/QC Exam (Quality Management and Quality Control Examination). Since fiscal year 2012, the number of certified employees has increased each year to approximately 2,000 as of March 2018.



Streamlining business operations

As one of the key issues in the medium-term management plan, TEL is working to improve productivity and efficiency in its operations. To do this, we are innovating and redesigning business processes across the entire company. By standardizing and optimizing the business processes of each division and site, we are endeavoring to build a structure where important information for management decisions and business operations can be acquired and utilized more quickly.

We have gathered experts from across our production, sales, logistics, service, accounting, and business management divisions around the world. Together, we are conducting a multifaceted review of our cross-functional, cross-division business processes, including customer processes such as ordering, production, shipping, and acceptance. By incorporating the results of this review into new core systems and other IT infrastructure, and by utilizing the vast amount of business-related information, we plan to realize highly productive operations.



Improvement of quality in the value chain

Initiatives at the development and design stage

In order to improve the quality of products, it is important to avoid contamination by defects in upstream processes, and to ensure quality in each process so that defective products are not allowed to flow into later processes. From this perspective, Tokyo Electron (TEL) is promoting front-loading and self-process assurance systems. In order to raise the degree of product quality at an early stage, we implement thorough risk detection and mitigation measures (FMEA¹) from the initial stages of product design in an effort to suppress the occurrence or outflow of defects. We also conduct thorough inspections in each process and verification using simulation in the self-process assurance system. Furthermore, these measures are implemented continuously and effectively in order to prevent similar problems, including using TEL 6 Step to discover the root cause of defects which occur at customer sites or internally.

■ Response to safety laws and regulations

TEL regularly checks the safety regulations and guidelines concerning equipment, and has the established responding systems. Equipment is checked by a third party inspection company before shipment to ensure that the equipment complies with international safety standard and the guidelines like SEMI S2.² Also, regarding the Machinery Directive and EMC Directive,³ we obtain certificates of conformity from the Notified Bodies in Europe.

¹ FMEA: Failure Mode and Effects Analysis. Method to grasp risks in advance, prevent and mitigate.

² SEMI S2: This is a set of environmental, health, and safety guidelines for semiconductor manufacturing equipment

³ EMC Directive: This is one of the New Approach Directives that apply to the EU member states

Example initiative

At Tokyo Electron Kyushu, the Quality Assurance Division takes the initiative and implements their own method of quality control. They grouped their whole process in the factory by four phases (development, preparation for mass production, mass production and critical parts management) and make proposals with a different perspective from the developers by leveraging knowledge accumulated by the Quality Assurance Division. In these four phases, they identify quality risks with consideration of irregular work, equipment with new specifications and so on. They also conduct strict checks taking customer operations into consideration and propose measures that are effective for quality improvement and ensure thorough implementation of those measures. In this way, they aim to eradicate defects that occur after shipment of their products.

Executive message

In order to deliver high-quality products and services, as is the responsibility of a manufacturer, it is important for each and every employee to behave in a responsible manner with a high level of awareness in all business processes. We believe that continuous improvement of product and business process quality leads to meeting customers' expectations and achieving productivity (quality and efficiency) enhancements across all operations. By pursuing the world's best quality, we will build greater solid long-term trust with stakeholders and contribute to society through aiming for sustainable growth.



Hirofumi Kitayama
Executive Vice President and General Manager,
EHS, Quality, Procurement, Production
Technology

Streamlining software development

TEL is promoting greater efficiency by using its own common platform software across its diverse lineup of semiconductor production equipment.

By introducing common platform software that we have developed in-house, we are able to reduce the hours we spend on developing duplicate functions for each type of equipment. We have also achieved improvements in development efficiency when adding specific operations to individual pieces of equipment, by reducing the workload and amount of modification required. Design errors have also decreased in frequency, contributing to an improvement in software quality.

Furthermore, we are also working to share development know-how across multiple factories and offices. By periodically exchanging information on improvement efforts being undertaken by each department and the introduction of new development techniques, each department is achieving better activity outcomes. These activities have been ongoing for more than 10 years now, and play an important part in making our software development more efficient.

Initiatives with suppliers

Developing strong partnerships with suppliers is essential to improve product quality. Since 2000, TEL has regularly conducted Supplier Total Quality Assessments (STQA) to clarify what is expected of suppliers in terms of maintaining and improving quality.

Before starting business with new suppliers, an STQA is conducted via self-assessment to evaluate their product quality, costs, and information security. The assessment also includes CSR issues, including human rights, ethics, safety, and the environment. If any risks to quality are found, we visit the supplier on-site to explain the problems, our expectations for improvement, and the level of quality we require. After the supplier understands the issues, we ask that they plan and implement improvement measures. We also offer continual support to suppliers until all necessary improvements have been made. We conduct on-site audits once every three years at suppliers who manufacture important components and at suppliers where quality issues have been found.

We focus on the change control education with our suppliers. We aim to reduce the number of quality issues that occur as a result of changes to the design or manufacturing of equipment components and modules. We also aim to reduce the cost of quality improvements. We conduct briefings for suppliers to explain matters such as the importance of change control, and have conducted online training since fiscal year 2016.

Example initiative

Aside from the assessment program described above, Tokyo Electron Kyushu cooperates with suppliers to implement initiatives to reduce the occurrence of defective goods. We visit the production sites of suppliers to learn about their production environment whereby they are able to provide effective improvement proposals. We conduct process analysis together with suppliers to build better processes whereby we promote steady reduction of defects, creating win-win relationships for improved productivity.

Streamlining support

To provide customers with efficient support, TEL has introduced the TELeMetrics™ remote diagnostic service. This service connects us with installed equipment via the internet, enabling us to monitor the operating status of the equipment.

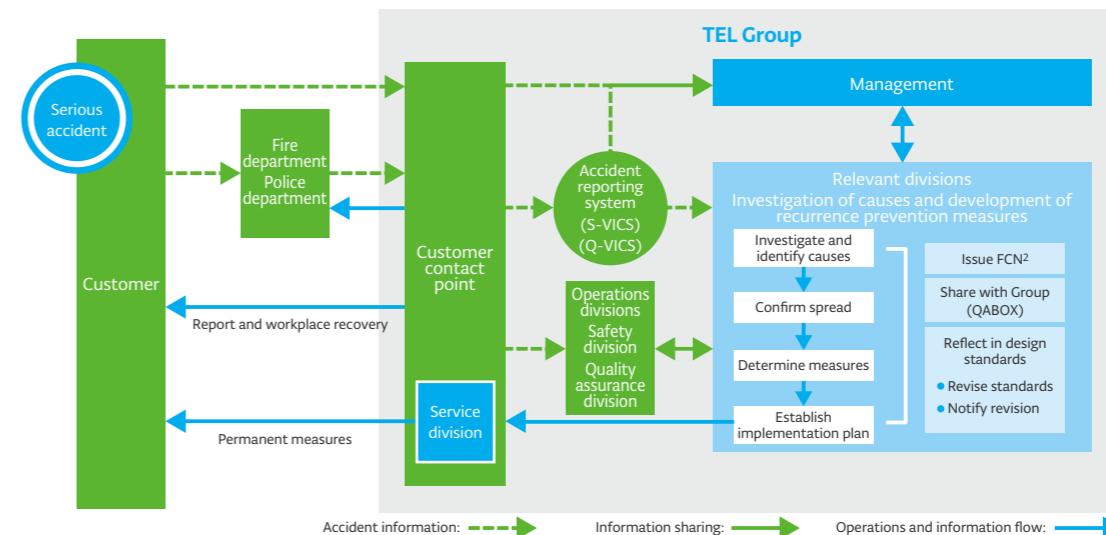
Previously when an equipment problem arose, field engineers would go onsite to the customer's plant, get the relevant equipment data, and bring it back for analysis and troubleshooting. With the introduction of the TELeMetrics™ service, we can now carry out checks at our office on the equipment screens for customers that share data with us, and we can download alarm logs and specify the cause of the problem. By having our specialist engineers analyze the data, we can quickly identify the cause. Narrowing down the parts and work necessary to address the issue with a high degree of reliability, also means we can reduce the time needed to resolve the problem.

Response to quality problems

In addition to compliance with ISO and EN safety standards, TEL establishes design rules applicable to its own equipment to achieve the highest level of safety possible.

In addition to developing systems to manufacture safe products, we fulfill our mission as an equipment manufacturer by establishing systems for responding to design- or manufacturing-related issues or accidents arising from operation-related problems. If an accident occurs, we use our S-VICS accident reporting system to report and share information with all levels of management, from safety and quality personnel in each division all the way to senior management. We immediately conduct an accident investigation to identify the cause and plan preventive measures. In addition to implementing the measures on the problem equipment, we use a proprietary system called QABOX¹ to quickly implement the measures on equipment operated by other customers and reflect those measures in design standards in operation.

Response to serious workplace accidents



¹ QABOX: TEL Group internal information sharing and horizontal deployment tool

² FCN: Field Change Notice (general recall notice)

People and workplaces



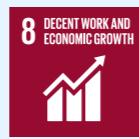
Maximize dreams and drive

The business environment is changing significantly, with the acceleration of globalization and diversification of needs, and shrinkage of the productive population caused by changes to the population structure. In these circumstances, companies must hire, maintain and utilize outstanding human resources to realize sustainable growth. For this reason, Tokyo Electron is creating a workplace where a diversity of talent can flourish regardless of gender, age or value system, through fair employment, promotion, evaluation and remuneration, and promotion of work-life balance. At the same time, we are promoting career path development and nurturing human resources able to think and act independently. Employees who feel motivated to work and who are proud of the company will create new value and contribute to resolving society's problems.

Priority themes



Relevant SDGs



Decent work and economic growth



Reduced inequalities

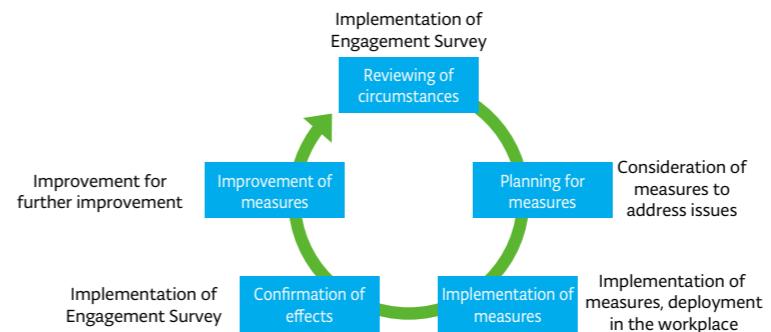
SUSTAINABLE DEVELOPMENT GOALS

Human resource management

Human resource management system

Tokyo Electron (TEL) regularly conducts a global engagement survey which aims to enhance employee work satisfaction and motivation, achieving growth for both the company and its employees. Questions on issues such as pride in the company and work, and awareness and evaluation of the work environment help us to grasp the current situation. We use a continuous improvement cycle based on the characteristics of each region and workplace. We thereby aim to improve the workplace environment so that employees can work more actively.

In fiscal year 2018, we introduced a global human resources system that forms the basis of employee work styles. In fiscal year 2019, we will focus on the four topics of diversity, career development, work-life balance, and health and safety, driving initiatives to these ends.



Diversity

Approach to diversity

Our business extends globally, with overseas sales accounting for over 80% of total sales, placing us in circumstances requiring extremely fast technological innovation. Furthermore, it is essential that diverse talent plays an active role for a company to generate innovation and continue to grow. By developing a workplace where anyone, irrespective of gender, nationality, age, background or ability, can work easily and feel motivated, we will promote creation of an environment where the diversity of talent leads to greater competitiveness.

Systems and initiatives

At Tokyo Electron (TEL), the corporate director in charge of human resources is responsible for promoting diversity activities. In fiscal year 2018, we started operation of a global human resources system where employees can clarify the roles and responsibilities expected by the company, and whereby evaluation and remuneration correspond with the level of achievement of targets. We have established an environment which promotes diversity where everyone receives fair assessment and opportunities to grow and which realizes a global work approach.

Furthermore, we are putting greater effort into harassment prevention education in order to realize a workplace where diverse employees can have greater mutual understanding. We are implementing e-learning for all executives and employees concerning matters including power, sexual and maternity harassment and LGBT issues, and seminars are being conducted by occupational physicians aimed at management. Prevention of harassment in the workplace is one of the goals of our action plan based on Japan's Act on Promotion of Women's Participation and Advancement in the Workplace.

We are establishing an environment where employees with disabilities can work with peace of mind, and are driving efforts to hire such people. In fiscal year 2018, people with disabilities accounted for 1.91% of employees in Japan operations overall.

In addition, in an effort to increase the ratio of women in management positions, we have set a target to double the number of women in management roles by fiscal year 2021 based on fiscal year 2018 levels, and we are striving to achieve this with our global human resources system.

Conference for Women Engineers

In February 2018, we held our Second Conference for Women Engineers, linking our Akasaka headquarters with offices throughout Japan via a video conferencing system. Women engineers discussed their respective field of specialty and work style as well as activities to promote women's participation. Group discussions were also conducted on topics including "How does a female engineer work?" and "What must be done to accelerate and promote creation of an environment where all employees can work more actively?" On this occasion, 104 employees, including men, participated. Lively discussions were held, and feedback was received to the effect that the active participation of men allowed them to understand and realize women's situation and feelings.

Voice | Participation at the Conference for Women Engineers

Following on from last year, I took part in the Second Conference for Women Engineers. At this conference, we were able to share a variety of examples and concerns, whereby we were able to reconsider our own careers. It provided a reference for developing work styles for women in the future. We also managed to build a network with those engaged in promotion activities at each of our bases. Through this conference, we hope for the opportunity to consider for ourselves how to boost the number of women engineers and promote participation, and to be well prepared to engage in activities that transcended barriers within the workplace.



Nanako Shinoda
1st Group, PF Engineering Department
Tokyo Electron Technology Solutions Limited

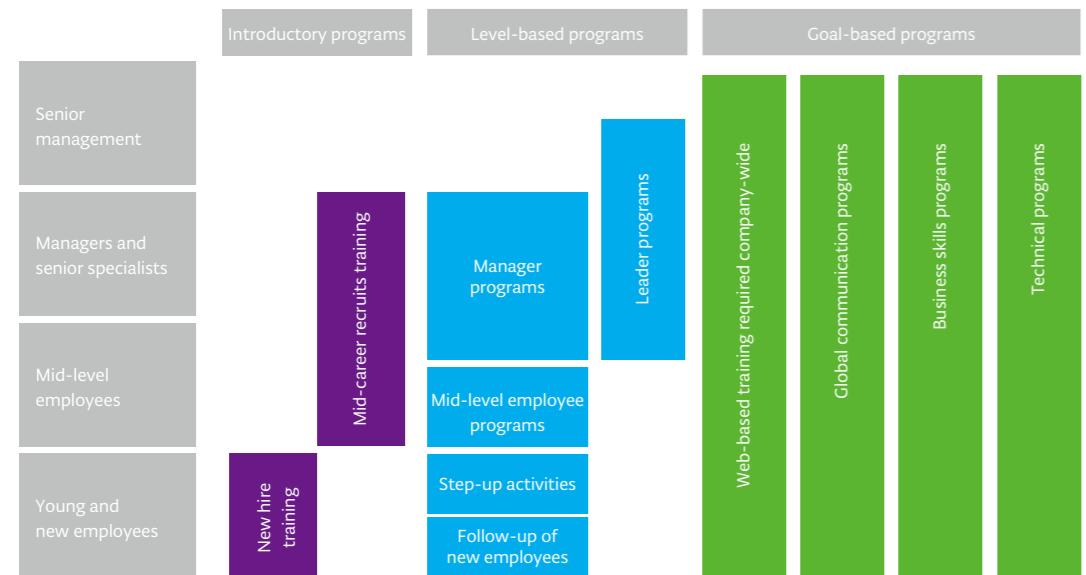
Career development

Human resource development system

Tokyo Electron (TEL) has established TEL UNIVERSITY as an educational facility for all the company with the aim of helping employees to independently develop their career and realize their personal goals. The curriculum of TEL UNIVERSITY includes courses that provide world-class knowledge and skills, with training programs adapted to different levels and goals.



Corporate education system (TEL UNIVERSITY)



Human resource development initiatives

Leader programs

TEL conducts programs to discover and systematically nurture people who will advance into management to realize medium- to long-term improvement of corporate value. In fiscal year 2018, TEL conducted training in the basic management skills required of leaders for selected mid-level employees. We also organized networking with internal and external business leaders, and proposed solutions to business problems. In the future, we are also planning a practical program to improve their perspective as management executives.

Manager programs

The role of managers is important to enable value creation by each individual. In fiscal year 2018, in order to nurture managers, we conducted training that helps trainees to understand managerial roles and responsibilities, required behavior, how to utilize managerial organization and nurture employees, together with practical workshops.

Step-up activities

TEL is implementing step-up activities for about half a year from the summer of employees' second year in company with the aim of encouraging autonomous young employees. The young employees set their own topics and targets in the workplace, and plan activities, which they advance, involving their superior and colleagues, providing opportunities to develop awareness of learning and growth.

Voice | Step-up activities

I tackled the activities with the aim of acquiring certification that usually take three to four years in just two. I experienced repeated failure in the challenging tasks, but by sharing the goals within the department, I received support from my boss and was able to achieve the goal and much more. Through these activities, I learned that we cannot grow unless we continue to take on challenges.

(Tomohiro Ajiki, Tokai FE Department, Tokyo Electron FE)



Feedback from an executive who participated in the activity presentation

- It was an opportunity to realize that people grow by working in the field, by tackling work with topics themes and issues in mind, and by taking on challenges.
- I was surprised to see the young employees identify problems and focus on action with such keen insight, and that they were in just their second year career since joining the company. I look forward to their future success.

Life design seminar

Each year, TEL provides career development support to employees appropriate to their age. Within Japan, for employees aged 51 or above, we conduct a life design seminar every year to provide necessary knowledge and information for retirement. We also conduct programs to help with the next step in career and life planning, such as financial planning.

Visionary Talk

We have presented a Visionary Talk since fiscal year 2016, encouraging experts in various fields to talk about the future with the aim of nurturing the vision and creativity of employees. In December 2017, the lectures were presented by leading experts in the technology, design and management fields. Approximately 800 employees took part worldwide, providing them with great stimulation and making a deep impression. It was a good opportunity for them to assess themselves and gain new ideas.



Work-life balance

Work-life balance concept and systems

Tokyo Electron (TEL) believes that harmony between work and life for each employee produces a synergistic growth effect both of employees and the company, and we are building structures for this.

Our vision is to realize a truly global company that creates high added value and profit. We recognize that in order to achieve this, it is necessary to reduce overtime through efficient work techniques and to have mechanisms in place to evaluate the outcomes. In fiscal year 2018, we began global operation of a new unified human resources system. It clarifies the roles and responsibilities for each employee, sets appropriate targets and challenging targets, provides absolute evaluation of degree of achievement, awards performance bonuses and provides further career opportunities. We aim to encourage greater engagement by evaluating the proactiveness of employees. Furthermore, we will realize creative work styles through awareness of more efficient working, where time gained can be used for learning opportunities and can provide further benefit to our business.

Features of the global human resources system

- Rating system
The system clarifies duties (the roles and responsibilities required of the employee) supporting a global way of working
- Evaluation system
The system is designed to establish performance goals appropriate to employee level and stretch goals designed to develop the employee, and it assesses the employee based on achievement of (or contribution to) those goals
- Remuneration system
In addition to a level of remuneration that is competitive in the market, the system provides the employee with career opportunities as well as a productivity-linked bonus proportionate to their degree of achievement (contribution)

Supporting flexible work styles

TEL is implementing various initiatives to allow each employee to adopt a flexible approach to work according to their individual lifestyle and stage in life.

Leave-related systems

We are endeavoring to increase annual paid leave take-up rate among employees in order to realize a comfortable workplace environment for all employees. Regular monitoring of leave and efforts to raise awareness for planned use of leave resulted in a domestic take-up rate of 64.3% in fiscal year 2018. In fiscal year 2019, we aim for a take-up rate of 70%, and are therefore promoting management to improve this rate, such as planned of 5 days paid leave each half year.

In addition, we have introduced a unique refreshment leave system. Refreshment leave aims to provide refreshment for employees and to thereby boost their motivation to work. The system grants special (paid) leave from two weeks to one month for each five years of service to employees who have worked for more than 10 years. In fiscal year 2018, 639 employees in Japan took refreshment leave.



Take-up rate of annual paid leave (Japan)

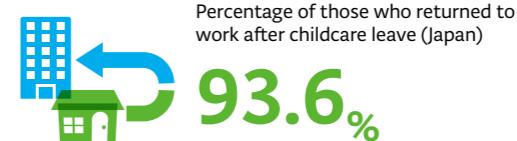
64.3%

Childcare and nursing systems

TEL has established a support system, in addition to that which is legally defined. In Japan in particular, we are working to enhance work styles for employees dealing with childcare and nursing.

In addition to allowing extension of the childcare leave period until the child reaches three years of age, we also expanded measures to reduce working hours for childcare to employees raising children until their graduation from elementary school. We have also established leave to care for a sick or injured child and childcare support leave. As a result, in Japan, we have achieved a return to work rate of 93.6% and 40% of female TEL employees are working mothers.

Furthermore, in addition to allowing paid nursing care leave up to the fifth day, we are also improving the nursing care system to make it possible to take nursing care leave three times per person requiring care and to allow nursing care leave of a total of one year.



Flexible work styles

We are actively seeking new work styles for employees. In addition to introducing flextime system from fiscal year 2018, in some sales and administrative divisions we tested a teleworking system that allows employees to utilize time more effectively by eliminating commuting time.

Leave and other support systems for childcare and nursing care

System	Overview	Eligible employees	Notes
Relief for commuting difficulties	Allows work start times and finishing times to be moved forward or back by a maximum of one hour each day	Pregnant female employees who are under instruction from their doctor	As per the legal requirement
Childcare leave	(1) Allows leave to be taken up until a requested date but no later than the end of April after the child turns 18 months of age (2) If the child cannot gain admission into a nursery school, leave may be extended from the end of April after the child turns 18 months of age until the child turns three years of age (i.e. the day before their third birthday)	Employees with a child who will be less than 18 months of age at the end of the following April	More than the legal requirement (up to a maximum of three years of age)
Childcare time	Allows an employee to request time to care for their infant for two 30-minute periods per day, in addition to prescribed rest periods (treated as paid leave)	Female employees with an infant under one year of age	More than the legal requirement (paid component)
Flextime for childcare and nursing care	Allows work start times and finishing times to be moved forward or back by a maximum of 90 minutes per day	Employees with a child who has not graduated elementary school, or who are caring for a family member requiring nursing care	More than the legal requirement (up until the child finishes elementary school)
Leave to care for a sick/injured child	Allows leave to be taken for up to a maximum of five days for employees with one child, and 10 days for employees with two or more children, per business year (up to five days treated as paid leave)	Employees with a child not old enough to commence elementary school	More than the legal requirement (paid component)
Childcare support leave	Special leave to care for a child for up to a maximum of five days per business year (unpaid)	Employees with a child not old enough to commence junior high school	Unique system
Short nursing care leave	Allows leave to be taken for up to a maximum of five days for employees with one family member requiring nursing care, and 10 days for employees with two or more family members requiring nursing care, per business year (up to five days treated as paid leave)	Employees with a family member requiring nursing care	More than the legal requirement (paid component)
Extended nursing care leave	Allows an extended period of leave to be taken for up to three times per person requiring care, up to a maximum of one year in aggregate	Employees with a family member requiring nursing care	More than the legal requirement (up to one year of leave)



Tatsuya Nagakubo
Senior Vice President and General Manager,
Human Resources, General Affairs,
CSR Division

Executive message

Since its founding, TEL has consistently valued employee motivation. In order for employees to go about their daily work with a positive attitude, it is important that: (1) they have hope for the company's future, (2) they see their career taking shape within the company, and (3) the workplace environment allows them to make the most of their talents. TEL has put effort into cultivating cheerful and open workplaces, such as through a points-based personnel system focused on roles, responsibilities and contribution, as well as through providing opportunities for employees to challenge themselves in new jobs, with colleagues who support each other in developing personal careers and achieving goals, and supervisors who understand different work styles. We will continue to step up efforts to ensure that TEL remains a company full of dreams and vitality.

Health and safety

Tokyo Electron (TEL) clearly states in its Management Policies that the highest consideration is given to the health and safety of every person connected with its business activities. Based on these policies, we are increasing our global efforts to improve the health and safety of our employees.

Philosophy for health

So that employees can realize a fulfilling life's work, and at the same time, contribute to the advancement of TEL's business by harnessing their full capacity, it is important that each and every employee can maintain their health and dynamism while at work. By putting systems in place, we have built an environment where employees can work with peace of mind. We also believe that to maintain health, it is important that employees are aware of their own state of health and take self-directed steps for improving it. Based on our wellness declaration announced in February 2012, we have conducted a number of ongoing initiatives to support employees in this pursuit.

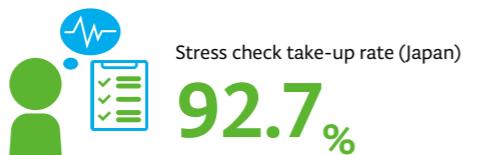
Systems and initiatives for health

Support systems for health

We have built systems that are mindful of employee health. Besides conducting various medical checkups in accordance with the law, we also offer face-to-face consultations by doctors for employees who work long hours. We have also set up health help desks supported by doctors so that employees and their families can seek advice if they have any health concerns. We also offer counselling services supported by external industrial counselors if requested by an employee. Regular "line-care"¹ seminars are also held, targeted at line managers.

Stress checks

Within Japan, we have implemented comprehensive measures for mental health. Using a questionnaire recommended by the Ministry of Health, Labour and Welfare, employees complete a stress check once a year, and if determined to be under high stress, they are put in contact with a public health nurse or occupational health physician for in-depth face-to-face support. During fiscal year 2018, the stress check was taken by 92.7% of employees in Japan.



Wellness declaration

Based on the wellness declaration announced in 2012, we have promoted the improvement of employees' exercise habits based on a program of Eat-Rest-Walk-Talk. At nine of our factories and offices in Japan, we offer activities that allow employees to stay healthy every day, by giving employees small reminders in their day-to-day life, such as healthy food choices at company cafeterias and body composition measurement sessions.

Self-care platform

We have introduced the Pep Up personal healthcare platform, enabling employees to get healthier by monitoring their own state of health. The platform allows employees to easily check the results of their medical checkups, and to record their daily health management data, such as weight, blood pressure and body fat ratio. Other functions of Pep Up include offering employees information and suggesting activities suited to their state of health. Health age² is also displayed, incentivizing employees to improve their own health.

Making the most of the platform, during fiscal year 2018, as well as holding walking events, we distributed an activity tracker to help employees in managing their diet and exercise.

Example initiative

WELLatTEL, a Tokyo Electron U.S. program, provides resources for employees and their families to improve their health. Employees are provided a tracking device to increase awareness of their physical activity. Multiple locations have access to onsite gym equipment. Access to online financial education resources increases understanding of financial security. Rewards are provided for physical challenges, such as Step into Spring, and for completing sections of the financial awareness training. The WELLatTEL program contributes to the "Good health and well-being" for all employees and aligns with SDGs.



Barry Mayer
Senior Vice President and General Manager,
Global Strategy, Chairman, Tokyo Electron U.S.
Holdings, Inc.

Executive message

A key ingredient to TEL's success has been to instill a spirit of challenge and pride in the hearts and minds of our employees. This comes to life in our workplace in many facets. We strive to create an environment where employees feel free to challenge new ideas while taking on new and bold projects. We recognize employees for their success and their willingness to explore new horizons. We view development as a shared responsibility. We accomplish this through an open door policy allowing employees to seek guidance from management on their career aspirations and partner with them to grow their knowledge, skills, and abilities. All of these actions lead to a vibrant and productive working environment.

Safety management framework

Based on a culture of "Safety First," TEL carries out ongoing activities for safety promotion. Safety and occupational health are managed using a management system based on OHSMS.¹ We also strive to raise the overall level of safety and occupational health by following the PDCA cycle to reduce the potential risk of work-related accidents. Moreover, by sharing information of any issues with the EHS council and the manufacturing company presidents' council, we promote safety management as a company-wide initiative.

¹ Occupational Health and Safety Management System (OHSMS): A management system to improve the overall level of safety and occupational health

Initiatives for safety

Safety and health committee meetings, and safety inspections

At each factory and office, monthly safety and health committee meetings are held to discuss measures for any workplace safety or employee health issues and to conduct safety inspections. TEL has also set up a system for autonomous problem-solving at manufacturing sites, with safety inspections by representatives from appropriate departments at least once per month.

Support the security operations

Increasing the safety awareness of individual workers is crucial for providing worksites where all workers can work safely. Therefore, before starting work at TEL manufacturing sites, all workers discuss the details of the job and the risks involved in an effort to prevent accidents. In addition, effort is also being directed to safety managers giving advice on how to manage hazards, as well as to the Stop Work Authority (SWA) program designed to compel workers to stop work and take corrective action in the event of an unforeseen incident while on the job.

Safety education

TEL promotes the creation of safe work environments by implementing two education programs globally. Our program on basic safety targets all employees and is provided as introductory training for new hires as well as refresher training every third year of employment. In total, more than 40,000 employees have completed this program. Our other program, advanced safety, targets employees working in clean rooms and on production lines, and must be completed every year. To eliminate accidents, we also provide risk assessment training and web-based training at offices and factories in Japan and overseas. Finally, we also provide safety information to suppliers as part of our support for initiatives to prevent accidents.

As a result of having maintained a high priority on creating safe work environments, TCIR² has been maintained at or below our target of 0.5, with 0.38 in fiscal year 2018.



² Total Case Incident Rate (TCIR): The number of workplace accidents per 200,000 work hours

Management foundation

Build a management foundation for increasing value

The role played by companies in the realization of a sustainable society is growing. Tokyo Electron (TEL) recognizes the challenges in our social and business environments, and our role, and will build a strong management foundation that supports business activities. We recognize that corporate governance is essential to sustainable growth for companies, and we strive not only to comply with laws and implement compliance, but also to build a world-class governance structure and to operate an effective Board of Directors. In recent years, climate change and abnormal weather conditions have become more serious on a global scale, therefore we are also trying to further reduce the environmental impact of our operations. TEL is promoting initiatives based on global standards to realize sustainable operations not only within our company but also in our supply chain.

Priority themes



Relevant SDGs



SUSTAINABLE DEVELOPMENT GOALS

Corporate governance

Governance framework

In order to become a truly global company that realizes sustainable growth, Tokyo Electron (TEL) takes into consideration medium- to long-term perspectives on matters including the ESG and strives to strengthen its management and technology base to establish a global level of profitability. Furthermore, we believe that it is important to build a governance structure to achieve this.

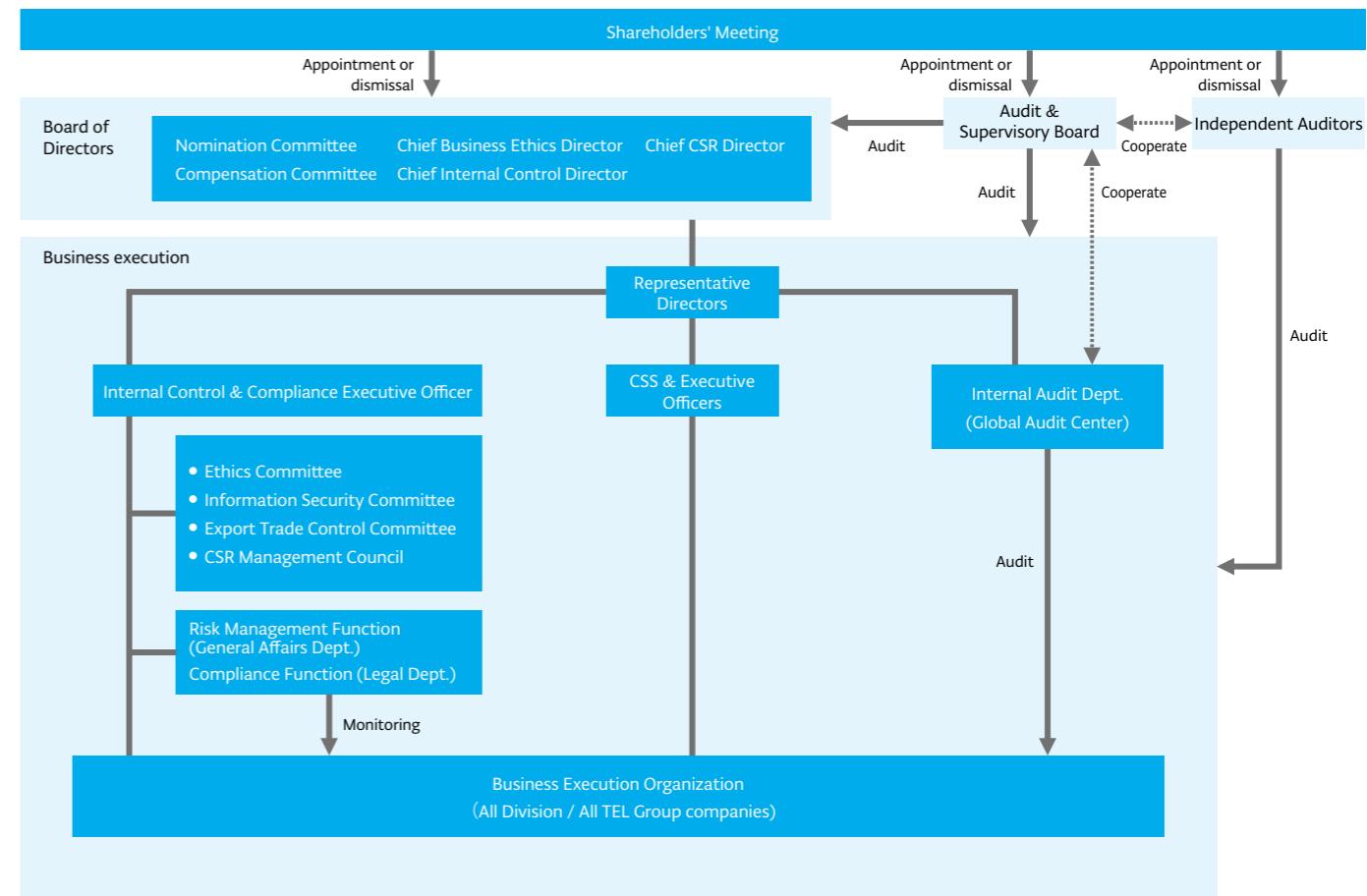
TEL adopts the Audit & Supervisory Board System, consisting of a Board of Directors and an Audit & Supervisory Board. The Board of Directors works to achieve sustainable growth and increase corporate value over the medium- to long-term based on their fiduciary responsibility to shareholders. The current Board of Directors meetings achieve an appropriate sense of productive tension and constructive debate due to the presence of executive directors, essential for making operational decisions, and outside members, who provide objectivity.

The Audit & Supervisory Board is part of a structure that enables its board members to obtain sufficient information necessary for audits by collecting information through on-site surveys conducted by full-time Audit & Supervisory Board members, and by maintaining appropriate coordination with the Internal Audit Department and Independent Auditors. In addition, the balanced composition of Audit & Supervisory Board members provides the knowledge required for operational audits and accounting audits, and we believe these board members are able to perform the company's auditing functions effectively.

Initiatives to strengthen systems

Our Board of Directors strives proactively to resolve various issues related to sustainability with the aim of enhancing corporate value. As one aspect of this, in addition to anti-corruption and compliance education for members of the Board of Directors, we significantly increased the description of ESG initiatives as key non-financial information in the Notice of Convocation for the Fiscal Year 2018 Annual General Meeting of Shareholders.

Diagram of the corporate governance framework, internal control system and risk management system



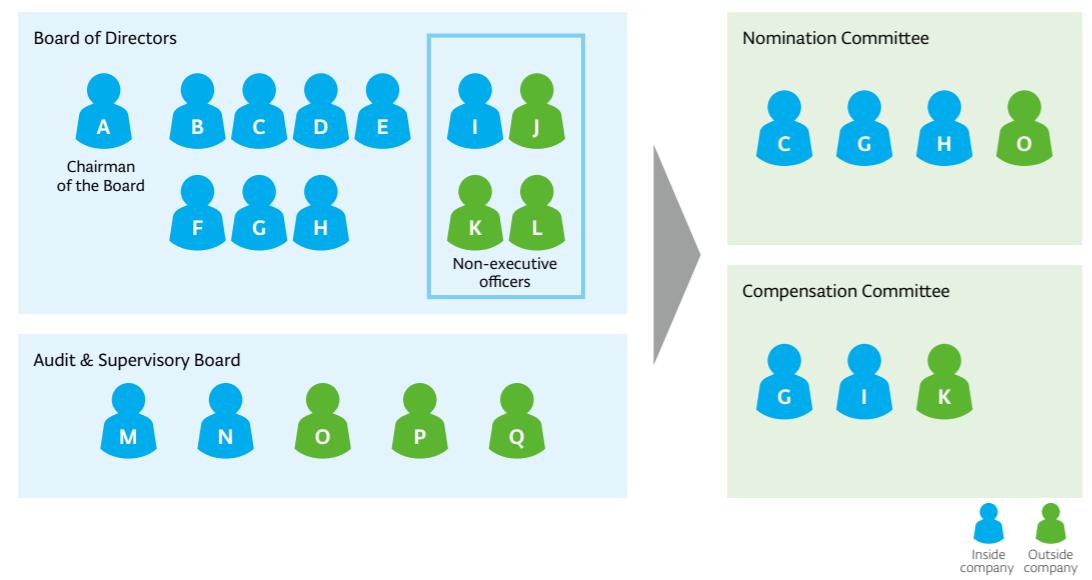
Board of Directors

The roles and responsibilities of TEL's Board of Directors are "to demonstrate the management strategy and vision," "to make decisions concerning important business administration based upon strategic orientation," and "to undertake open and constructive debate." Members of the Board of Directors are selected with emphasis placed upon diversity together with a balance of knowledge, experience and capabilities within the Board overall. The 17 participants in the Board of Directors meetings, which consist of 12 Corporate Directors and 5 members of the Audit & Supervisory Board, is comprised of 6 members, or over 30%, independent outside directors or outside Audit & Supervisory Board members, in order to support strong governance.

In the selection of executive directors, we seek people with outstanding execution capabilities backed by experience, knowledge and achievements as a manager. They must also possess high sensitivity and the ability to accurately analyze and judge all risks. Furthermore, they are required to believe in themselves and to be able to express their opinions directly in meetings.

With regards to independent outside directors or outside Audit & Supervisory Board members, they are expected to express frank opinions from an independent standpoint and to guide discussion within the Board of Directors in an appropriate direction so that the company can be competitive and succeed globally. In making these selections, we aim to assemble talented people with a balance of expertise in global business, a wide range of knowledge concerning related industries, a diverse personal network, an objective perspective in relation to society and capital markets, knowledge of finance, accounting and the law in general. In addition to requirements under the Company Act, TEL has established separate criteria to avoid conflicts of interest with general shareholders, and to ensure the independence of outside directors and outside Audit & Supervisory Board members.

Formation of structure of directors and auditors



Executive message

In corporate management, I see creating and maintaining an appropriate system of governance as key to sustaining and maximizing corporate value. True corporate governance, I believe, entails the building of a system which verifies that all review processes and decision-making processes related to management policy and business strategy contribute to the sustained improvement of corporate value, and which also monitors the implementation of these processes and provides feedback and feedforward for a better direction. It is also important that, in addition to compliance, globally accepted standards of fairness and transparency, and a high level of business ethics be established as part of the corporate culture. Going forward, we will continue working over the medium- to long-term to ensure a world-class governance framework is created and that the Board of Directors operates effectively.



Tetsuo Tsuneishi
Representative Director
Chairman of the Board

Evaluating the effectiveness of the Board of Directors

TEL discusses and evaluates the effectiveness of the Board of Directors every year in accordance with the TEL Corporate Governance Guidelines. This fiscal year, we again conducted a questionnaire of all directors and Audit & Supervisory Board members regarding the effectiveness of the Board of Directors, the Nomination Committee, and the Compensation Committee, covering June 2017 to April 2018. In addition to the results of this questionnaire, exchange of opinion and deliberation was held, mainly among outside directors and outside Audit & Supervisory Board members, which was shared with the whole Board of Directors in order to evaluate the effectiveness of the Board of Directors.

The Board of Directors undertakes vigorous discussion by directors and Audit & Supervisory Board members with a diversity of opinions and experience. Regarding important matters, we also undertake close examination from the viewpoint of risk, and conduct frank discussion and careful consideration. Aside from the official Board of Directors meetings, we held off-site meetings, where we undertook deliberations focused on topics related to management strategy and vision. In addition, the Board of Directors has internal committees—the Nomination Committee reports to the Board of Directors on activities based on the succession plan, and the Compensation Committee makes proposals to the Board of Directors regarding the compensation system to enhance correlation with medium-term performance.

Based upon this, we believe that the Board of Directors, including the Nomination Committee and Compensation Committee, is functioning effectively and fulfilling its role as stipulated in the TEL Corporate Governance Guidelines "to demonstrate the management strategy and vision" and "to make decisions concerning important business administration based upon strategic orientation."

Compensation policy

TEL emphasizes the following points in its compensation policy.

- (1) Composition and levels of compensation with global competitiveness
- (2) Link with business performance in the short term, sustainable growth, and medium- to long-term increase of corporate value
- (3) Securement of transparency and fairness in management and appropriateness of compensation

Based on the above policies, TEL has adapted a director compensation system that is closely linked to performance and shareholder value. However, we have introduced a new medium-term performance-based compensation from August 2018 in order to better link director compensation to medium-term performance and thereby achieve further growth. As a result of this, director compensation will consist of fixed basic compensation, annual performance-linked compensation, and medium-term performance-linked compensation. Audit & Supervisory Board members' compensation consists only of a basic fixed compensation to maintain independence from management. Payment of retirement allowances, which constituted a significant portion of fixed compensation to Corporate Directors and Audit & Supervisory Board members, was abolished in and after year-ended March 2006.

Tax policy

In March 2018, TEL established its global tax policy. We are working hard to ensure transparency in our tax affairs, by maintaining and improving our compliance structure, responding appropriately to changes in the environment surrounding our international tax affairs.

As specific measures for our tax policy, we are working on the following:

1. Building of a tax risk management system, headed by the Chief Executive Officer (CEO)
2. Payment of appropriate taxes in regions where value is created based on business strategies and business activities, specifically without the purpose of tax avoidance
3. Building of relationships of trust with the tax authorities of each country

Risk management

Approach to risk management

Along with changes to society and the business environment, the risks facing businesses have become increasingly complicated and diversified. At Tokyo Electron (TEL), as we conduct our business, we understand the risks that we may face as well as their impact and we manage them appropriately, which we consider to be a crucial factor in a company's sustainable growth.

Risk management system

In order to promote more effective risk management, TEL is working to strengthen its systems throughout the entire company. TEL has established a dedicated risk management organization within the General Affairs Department at our headquarters to promote enterprise risk management. This organization identifies key risks by analyzing various risks in our business activities such as compliance risk, human resource and labor risk and business continuity risks. Once critical risks have been specified, it can monitor the respective departments responsible and support risk management activities. Their status is regularly reported to the Board of Directors and the Audit & Supervisory Board.

Auditing by the internal audit department

The Global Audit Center, which is the internal audit department for the entire company, implements auditing based on the audit plan. With issues discovered through audits, they give instruction for making improvements, follow up the state of improvements and provide support. For fiscal year 2018, we received assessment from the accounting auditors that internal control evaluation related to financial reports was effective.

Initiatives for risk

In fiscal year 2018, we monitored risk management activities focusing on the following risks, and encouraged improvement.

Business Continuity Plans (BCP)

Following the experience of the Kumamoto Earthquake, reinforcement work was conducted for buildings at bases in Japan to improve their seismic resistance above the Japanese standards. We are also working to establish an alternative production structure using the company's network and developing a multi-source system for suppliers of important parts.

Mental health, long work hours and harassment

TEL is promoting measures to address employee mental health and long work hours. We are also conducting harassment education and building mechanisms to manage mental health. Furthermore, we have introduced a mechanism to check excessive workloads that lead to health risks, and we will continue their implementation.

Compliance

Approach to compliance

Stakeholder trust is essential to business activities. In order to maintain this trust, it is essential to continuously implement compliance and enhance corporate ethics. The Fundamental Policies concerning Internal Controls within the Tokyo Electron (TEL) Group also stipulate that all TEL Group executives and employees must act with high ethical standards and awareness of compliance.

Compliance systems and initiatives

Internal control & compliance system

TEL has appointed an Internal Control and Compliance Executive Officer as we strive to further boost compliance awareness and implementation throughout the company. From April 2018, the Legal Department operates as the main department overseeing compliance within the company and is working to further strengthen the compliance system under the guidance of the Internal Control and Compliance Executive Officer.

Corporate ethics

TEL has established our Code of Ethics as the standard which employees should abide by, and has produced booklets in Japanese, English, Korean and Chinese for distribution to employees in order to ensure awareness. We revise the content when necessary in response to the changing demands of society. TEL has also appointed a Chief Business Ethics Director and has established an Ethics Committee in order to spread corporate ethics throughout the operations of our organization.

Compliance regulations

Based upon our Code of Ethics, TEL has established compliance regulations within the company in Japan and abroad to raise awareness of compliance. The compliance regulations are intended to ensure that all individuals who take part in the business activities of the company clearly understand the pertinent laws and regulations, international standards and internal company rules, and consistently apply these rules in all of their activities.

Compliance education

We conduct online education for all employees concerning topics including the basics of compliance, export compliance and the Subcontract Act. In addition, with the worldwide strengthening of enforcement of anti-corruption laws in recent years, in fiscal year 2018, we incorporated anti-corruption and anti-bribery aspects and implemented testing to check the degree of understanding among employees. Furthermore, we conducted face-to-face training focused on the prevention of bribery of foreign public officials for department heads, and another training emphasizing overseas subsidiary management for directors and executive officers in order to deepen their understanding.

Internal reporting system

An ethics hotline and a compliance hotline have been established to receive internal reports from the company. From fiscal year 2018, we established an external contact point and another contact point which suppliers can use, to create a system where it is easier to make a report. All of these hotlines accept anonymous reports and guarantee that the caller will not suffer disadvantage from reporting.

The result of these initiatives is that there have been no reports or cases of noncompliance with laws, regulations, or the Code of Ethics that could have had a material impact on the company's business or local communities.

Respect for human rights

Our stance on human rights

Conscious of its corporate social responsibility, Tokyo Electron (TEL) recognizes that it is important to conduct itself with a strong sense of integrity. Based on this recognition, we have firmly upheld human rights since our founding as reflected in the spirit of our Corporate Philosophy and Management Policies. For us, respecting human rights means a significant undertaking, not only to fulfill our responsibility for eliminating adverse impacts on people caused through our business activities, but to respect those people who support our business activities, and contribute to the realization of a sustainable dream-inspiring society. We incorporate the concept of respect into every aspect of our business activities, and strive to nurture a dynamic corporate culture where each person can realize his or her full potential.

Human Rights Policy

Amid growing demand for companies to respect human rights as a corporate social responsibility, we published our Human Rights Policy in September 2017 as a summary of our approach to human rights in business. With reference to the United Nations' Guiding Principles on Business and Human Rights in addition to the International Bill of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work, we have specified the human rights we believe are particularly important in our business activities as: Freedom, Equality & Non-Discrimination; Freely Chosen Employment; Product Safety & Workplace Health and Safety; Freedom of Association; and Appropriate Working Hours & Breaks/Holidays/Vacations. We will establish assessment and remediation processes for dealing practically with human rights issues, such as identifying and assessing human rights risks and impacts, responding to those risks and impacts, and reviewing the effectiveness of those responses. In addition, we will also operate a whistle-blowing system, and establish effective human rights initiatives at the operational level.

In March 2018, we also implemented a human rights e-learning program targeting all TEL executives and employees in an effort to facilitate communication on the basic principles and initiatives related to respect for human rights. Moreover, we believe it is essential for our suppliers to also conduct their business activities with respect for human rights, and so ask them to comply not with only laws and regulations but also with the RBA Code of Conduct.



Source: United Nations Human Rights Office of the High Commissioner

Executive message

Tokyo Electron Group's Management Policies and Code of Ethics reflect the group's commitment to acting ethically, with integrity and respecting human rights in all our business relationships. In recent years, because of the emerging concern within the various industries for better treatment of workers in supply chains, we publicly announced in June 2015 that it joined the RBA® (Responsible Business Alliance formerly the EICC) and committed that we will be fully compliant with the RBA Code of Conduct. Our European operation in line with our global standards is committed to pursuing socially responsible practices and advocating respect for human rights in our operation and in our supply chains with a continuous improvement approach.



David Brough
Senior Vice President and General Manager,
Global Strategy, President and Managing
Director, Tokyo Electron Europe Ltd.

Supply chain management

Procurement principles and system

The high-value manufacturing that Tokyo Electron (TEL) strives for is based on the functions of all materials and components that make up the products and the pursuit of high quality. We value communications with suppliers and seek to grow manufacturing on a global scale with our suppliers based on ongoing trusting relationships.

We engage in procurement activities in line with a procurement policy which we formulated based on the laws, regulations, and social norms of each country as well as the RBA code of conduct, and which we have disseminated internally and to our suppliers. Under the leadership of the TEL Representative Director, President & CEO as the top of the procurement system, issues identified during procurement activities are shared with the manufacturing company presidents' council and the purchasing department manager council for consideration of specific improvements.

Procurement initiatives

CSR procurement

With an aim of keeping track of its suppliers' engagement in CSR activities, TEL has conducted a CSR Survey since fiscal year 2014. The survey we conduct is in accordance with the RBA code of conduct. We analyze the responses and provide feedback to suppliers in an effort to build on improvements. During fiscal year 2018, we surveyed key suppliers accounting for more than 80% of our procurement spend. Improvements in overall rating level were observed at 21% of suppliers and improvements in overall raw scores were seen at 62%. No suppliers were engaged in any of the practices given particular emphasis in the RBA code of conduct, namely child labor, forced labor, bonded labor, inhumane treatment, false reports, falsification of records, or bribery. Neither were any suppliers of a sufficient size¹ to be considered high risk in terms of compliance. Our endeavors also included strengthening partnerships by providing training programs on the RBA code of conduct and confirming supplier agreement.



Conflict minerals

TEL regards taking action against conflict minerals (3TG²) obtained through illegal exploitation, including sources with human rights violations or poor working conditions, an important part of corporate social responsibility. Our resolute goal is to eliminate the use of raw materials made from these conflict minerals as well as any parts or components containing them.

In fiscal year 2018, we conducted our fourth annual survey on countries of origin and smelters of potential conflict minerals, using the reporting template (CMRT³) developed by the RMI.⁴ As a result, we identified 249 RMAP⁵ conformant smelters, providing us confidence that 3TG sourced from these smelters were conflict-free. None of the materials procured were found to contain conflict-affected 3TG.

Procurement BCP

As part of its Business Continuity Plan (BCP), TEL collaborates with suppliers for disaster preparation. We maintain a database of suppliers' production sites so that if a crisis arises, we can promptly identify impacted suppliers and quickly collaborate in recovery efforts. During fiscal year 2018, about 17,000 supplier sites were registered, and post-disaster impact surveys were conducted six times.

We also conduct a BCP survey of key suppliers accounting for more than 80% of our procurement spend. We analyze their responses and the results are given as feedback to suppliers to promote further improvement. In the fiscal year 2018 survey, as well as the regular questions on earthquake countermeasures, questions on fire prevention measures were also set. Improvements in overall rating level were observed at 21% of suppliers and improvements in the overall raw score were seen at 48%.

¹ 500 employees or more

² 3TG: Tantalum, tin, tungsten and gold

³ CMRT: Conflict Minerals Reporting Template

⁴ Responsible Minerals Initiative (RMI): An organization that inspects 3TG smelters to certify they do not have conflict minerals

⁵ Responsible Minerals Assurance Process (RMAP): A program promoted and led by the RMI for auditing smelters/refiners that do not use conflict minerals

Environmental management

Environmental risks and opportunities

Climate change and other environmental issues require action by humanity as a whole. Physical risks, such as rising temperatures, increased heavy rains and water shortages caused by abnormal weather, heighten the risks to business, such as damage to assets, increased operating costs and impacts on the supply chain. In terms of legal risks, tougher environmental laws and regulations require action at business sites and with products. At the same time, promoting environmental initiatives leads to more opportunities to provide outstanding environmentally friendly products, reductions in operating costs, and further improvements in corporate reputation. Based on the requirements of ISO 14001, Tokyo Electron (TEL) identified and analyzed internal and external issues in relation to the environment, namely, its relationship with the climate, air quality and water quality. We also identified the environmental needs and expectations of customers, suppliers, governments and employees, as well as the company's compliance obligations. From this information, we have set the following as our risks and opportunities to address: (1) environmental management by reducing the environmental impact of our business activities, (2) compliance with applicable laws, and (3) enhancing product competitiveness with the environmental contribution of products.

Environmental management system

To continuously improve its environmental activities, TEL has operated an environmental management system based on ISO 14001 since 1997, primarily at its manufacturing subsidiaries. In March 2017, we acquired multi-site ISO 14001 certification for our factories and offices in Japan that had previously acquired certification separately. Coinciding with the multi-site certification, we have developed a standardized company format for environmental impact assessments, the identification of useful environmental aspects, environmental management programs and internal audit checklists. During fiscal year 2018, we established approximately 100 environmental goals for different levels across the entire company and carried out these improvement activities. We also set up a system at our Head Office for confirming the progress of activities at each of our sites in Asia. Progress of activities and compliance with laws and regulations are confirmed through internal audits and third-party audits. In May 2018, we obtained ISO 14001 certification for our TEL Epion and TEL NEXX sites in Massachusetts in the United States. The issues identified through these activities are reviewed by the EHS Council, reported to the Manufacturing Company Presidents' Council, and used in promoting environmental activities across the entire TEL Group. Under such a management system, fiscal year 2018 was again free from environmental incidents, accidents, violations and associated legal proceedings.

ISO 14001 certified factories and offices

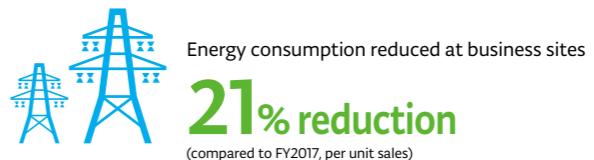
Company name	Factory/Office name	Certification date
TEL	Q-EHS Promotion Center (Fuchu Technology Center)	May 1998
TEL	Yamanashi Office (Fujii/Hosaka), Tohoku Office	
TEL	Koshi/Ozu Office	
TEL	Taiwa Office	March 2013
TEL	—	March 2013
TEL FSI	—	March 2013
TEL	Balan Factory	July 2014
TEL Epion	—	May 2018
TEL NEXX	—	

Initiatives to prevent global warming and save energy

Each TEL factory and office has an established goal of reducing energy consumption by at least 1% year-over-year. Initiatives to achieve this goal include energy-saving clean room operation, appropriate temperature settings for office cooling and heating, the introduction of highly energy-efficient equipment, and the adoption of renewable energies.

As a result of these initiatives, in fiscal year 2018, we reduced energy consumption per unit sales at our factories and offices by 21% year-over-year. However, an increase in our volume of production and an increase in energy consumption associated with product development and evaluation resulted in power consumption of 282 GWh in fiscal year 2018, up 11% year-over-year; and energy-derived CO₂ emissions* of 152 kiloton, up 8% year-over-year. Based on the correlation between business operations and energy use, we changed to an appropriate metric at factories and offices in Japan, and standardized it across the company. Specifically, we adopted a metric calculated using a complex weighting of data from each area on the number of evaluation units used in development, the number of units produced, total floor area and man-hours. Of all 11 of our factories and offices, both those overseas plus those in Japan that had set goals based on this method, goals were achieved at 6 of them.

* In calculating CO₂ emissions, the emission factor for TEL's electricity consumption in Japan in fiscal year 2018 was substituted by adjusted emission factors for the electrical power providers concerned. The emission factor for TEL's overseas electricity consumption was substituted by estimated factors calculated by the Federation of Electric Power Companies of Japan based on values published by the International Energy Agency (IEA).



Example initiative

As a way of conserving energy and combatting global warming, we are proceeding to switch to LED lighting. During fiscal year 2018, we progressively replaced the lighting at our factories and offices in Japan. As a result, we estimate that this has a reduction effect equivalent to power consumption of 1,350 MWh each year, or approximately 600 t-CO₂ of energy-derived CO₂ emissions.

Renewable energy initiatives

We promote the use of renewable energies. At the Taiwa and Yamanashi Offices, renewable energy generated from solar panels is used to power the factories, and monitors displaying their energy profile have been set up at the entrances to the factories. At our Koshi Office, generated energy is sold, helping to prevent global warming. In fiscal year 2018, we generated a total of 4,414 MWh of renewable energy in Japan.

In addition, Tokyo Electron U.S. Holdings has continued to purchase green power, 3,458 MWh in fiscal year 2018.

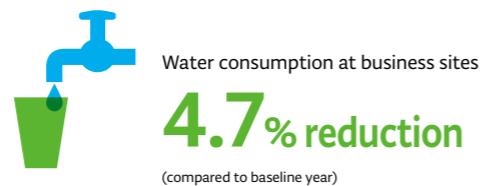


Yamanashi Office

Initiatives to reduce water consumption

Recognizing that the preservation of water resources is a social issue, TEL has established a goal of keeping water consumption at the same level or below that of the baseline year (fiscal year 2012 for factories and offices in Japan and a fiscal year of their choosing for each overseas operation). Our ongoing efforts to achieve these goals include reusing pure water from our manufacturing operations, installing water-saving devices, watering lawns with rainwater, and implementing intermittent operation of cafeteria faucets.

During fiscal year 2018, an increase in our volume of production and an increase in water consumption associated with product development and evaluation resulted in water consumption of 1,135,000 m³, up 7.6% year-over-year. Compared to the baseline year, though, this represents a 4.7% decrease. Moreover, we achieve 11 of the 14 goals at our sites worldwide. We also discharged an estimated 905,000 m³ of wastewater.



Example initiative

A cooling tower is utilized to remove heat from coolant used in a turbo refrigerator, which is used to air-condition clean rooms. At the Tokyo Electron Kyushu Koshi factory, we have promoted a reduction in blow-off water¹ by installing a system in the cooling tower to prevent scale² from building up. It is estimated that introducing this system has had a reduction effect equivalent to about 5,000 m³ per year. Added benefits of the system are that it also lengthens the life of pipes by preventing corrosion, and it reduces time spent cleaning by controlling algae.

Initiatives to reduce waste

In an effort to curb the amount of waste generated and to recycle it wherever possible, TEL promotes initiatives for reducing waste. In addition to participating in the electronic manifest system³ to ensure proper waste management, we are also engaged in maintaining an appropriate amount of parts inventory and in reusing cushioning material. We are also achieving lower waste processing costs, by promoting waste sorting activities and by modifying and increasing the capacity of space used for storing waste so as to reduce the frequency that it is collected. In fiscal year 2018, we generated 133 tons of incinerated and landfill waste in Japan. As a result of our waste-reduction initiatives, the recycling rate⁴ at sites in Japan in fiscal year 2018 was 99.0%, achieving our goal of maintaining a recycling rate of 97% or higher for the 12th consecutive year since fiscal year 2007. We have also maintained a high level of recycling at our overseas factories and offices of 87.7%.

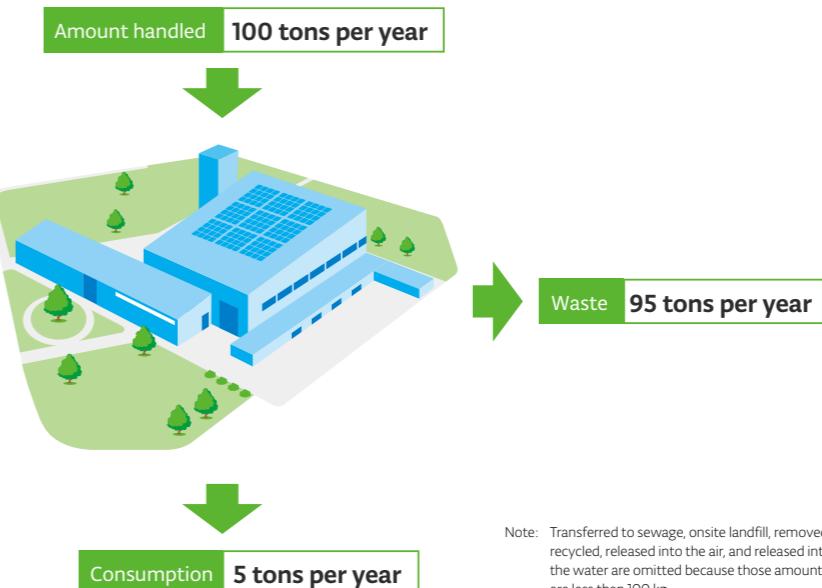


Management of chemical substances

TEL uses chemical substances in its product development and manufacturing phases. The use and release of chemical substances subject to the Japanese PRTR* law are constantly monitored and managed. Whenever we introduce a new chemical substance or change the way an existing substance is used, we check for environmental, health, and safety risks beforehand. We dispose of substances properly after use, either through expert waste disposal contractors or by using in-house processing equipment. In response to the Act on Rational Use and Proper Management of Fluorocarbons, we conduct simple, regular inspections based on the law in an effort to monitor the amount of fluorocarbons used and recovered. During fiscal year 2018, no TEL factories or offices exceeded the level of fluorocarbon leakage that requires reporting.

* Pollutant Release and Transfer Register (PRTR): A framework for tracking, tabulating, and disclosing quantitative data on chemical substances that may be hazardous to human health and the ecosystem, including the amounts used and discharged into the environment and the amounts transferred (as part of waste) off the original business's premises

Material balance of substances regulated under the PRTR Law



Biodiversity

In a global environment, a wide variety of organisms exist, interacting and engaging with each other. In carrying out its business activities, the TEL Group has a not insignificant impact on biodiversity, and yet without the benefits yielded from biodiversity, the company could not sustain its activities. In recognition of this, we will develop a framework for promoting initiatives in an effort to conserve biodiversity.

URL www.tel.com/csr/environment/office/

Environmental communication

TEL's environmental policy requires that, based on a shared understanding with a broad range of stakeholders, we promote cooperative partnerships with them, and we take appropriate steps to live up to their expectations. In promoting initiatives for the environment, we will maintain close communication with all our stakeholders.

URL www.tel.com/csr/environment/office/

Green procurement

In cooperation with our suppliers, TEL promotes green procurement, prioritizing the purchase of environmentally friendly parts, products and materials.

URL www.tel.com/csr/environment/green-procurement/

Social contribution activities

Approach to social contribution activities

The aim of social contribution activities by Tokyo Electron (TEL), are to contribute to the development of local communities and the resolution of social issues through various initiatives while deepening stakeholder trust. With Innovation and Technology, Education, Environment, and Community Involvement as our four focus areas, we conduct activities according to the United Nations SDGs.*



TEL FOR GOOD is the new brand name that represents TEL's social contribution activities. From fiscal year 2019, we are using it as a collective term for social contribution events and various programs, donations and volunteer activities sponsored by our company around the world.

4 focus areas and relevant SDGs



Innovation and Technology



Education



Environment



Community involvement



SPECIAL TOPIC | Support for areas affected by the Kumamoto Earthquake

Support activities provided by Tokyo Electron Kyushu in response to the April 2016 Kumamoto Earthquake include matching donations collected from TEL Group employees and donating emergency supplies to nearby municipalities. At the request of local governments, we donated and distributed some 8,000 disaster protection hoods to nearby elementary schools, with advice to children on the importance of always being prepared for emergencies. Other activities included donating 5,000 emergency medical information kits for people requiring evacuation assistance, and helping to set up container storage facilities for evacuees living in temporary housing to store their household possessions.

In February 2017, we also initiated support for construction of a well to assist residents of Minamiaso-mura in rebuilding their lives. After drilling a deep well, an aquifer containing drinking-water was reached in May, and a suite of necessary equipment was donated in July 2017, including a pump capable of drawing 300 tons of groundwater per day.



Initiatives around the world



Tokyo
(Head office)

Tohoku Forum for Creativity at Tohoku University

The Tohoku Forum for Creativity (TFC) is an international visitor research institute located within Tohoku University. TEL has been providing comprehensive support to the TFC ever since the House of Creativity was established in 2013. At the TFC, specific strategic themes are selected from various scientific disciplines by weighing the challenges facing mankind and the trends in world affairs. Nobel laureates and other globally prestigious researchers are then invited, and students and junior researchers are provided with an opportunity to deepen their research over a period of one to three months.



Tokyo
(Head office)

Tobitate! (Leap for Tomorrow) Study Abroad Initiative

The Tobitate! (Leap for Tomorrow) Study Abroad Initiative is a collaborative project between the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the private sector with a goal of sending 10,000 high-school and university students abroad to study by 2020. TEL has been supporting this initiative from its launch in 2013, based on the belief that nurturing talented people over the long term is a source of momentum to business and society.



Tokyo Electron Forest

Tokyo Electron Technology Solutions' Yamanashi Office conducts tree-planting activities at the Tokyo Electron Forest. In July 2017, 135 people including the employees and their families banded together to plant some 1,200 konara oak and maple saplings. This ongoing event has been held since 2010 as an initiative to both respect biodiversity and to pass on the rich natural and cultural resources of the forest to future generations.



Crawley Christmas charity days

At Tokyo Electron Europe's Crawley Headquarters, the proceeds from its 2017 Christmas raffle were used to support the charity, Home Start CHAMS. Home Start CHAMS helps parents of socially excluded children to provide the children with opportunities to change their life. We also support Christmas Jumper Day,¹ an event planned by Save the Children.²



¹ Christmas Jumper Day: an event in which employees donate 2 pounds and wear their Christmas jumper to work.

² Save the Children: a global, non-governmental charity which provides healthcare, education, protection and food to millions of children around the world.



U.S.

SEMI High Tech U

Tokyo Electron America has sponsored and partnered with SEMI High Tech U for many years. Over 30 students from high schools around the area are invited to Austin campus, where they participate in a 3-day program of presentations, laboratory work and other events. Through hands-on learning, students are given the opportunity to think about careers in high-tech.



Korean Conference on Semiconductors

Looking to contribute to development of new technologies and growth of the semiconductor industry, Tokyo Electron Korea has been sponsoring and participating in the Korean Conference on Semiconductors—the country's largest industry event—since 2015. Attracting about 1,300 researchers and students every year, the conference features presentations on the latest studies and encourages the exchange of information.



Beach cleanup for preserving a beautiful coastline

In June 2017, Tokyo Electron Taiwan held a charity event to coincide with its beach cleanup in Hsinchu City, pledging to make a donation proportionate to the number of participants and the volume of waste collected. On the day of the event, many ordinary residents who happened to be at the beach joined with the more than 150 employees and volunteers, collecting over 300 kg of waste. This resulted in a donation of TWD 450,000, which was given to the National Nantou Special School.



Liver Transplant Program for Children

The Liver Transplant Program for Children aims to help children with liver disease and to increase awareness of this area. In 2017, Tokyo Electron (Shanghai) donated 20,000 CNY to the program. Since the start of the program, the associated foundation has helped 170 children to receive an operation and begin a new life.



Performance summary (Social)

Composition of employees

	FY2014	FY2015	FY2016	FY2017	FY2018
Regular employees (Region/Group)	Number of employees	11,035	10,531	10,306	10,920
	Japan	6,985	6,853	6,737	6,967
	Rest of Asia	1,443	1,386	1,543	1,850
	Europe and Middle East	955	670	440	448
	North America	1,652	1,622	1,586	1,655
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Employees (Employment type/Japan)	FY2014	FY2015	FY2016	FY2017	FY2018
	Number of employees	7,271	7,166	7,060	7,288
	Regular employees	6,985	6,853	6,737	6,967
	Men	6,100	5,982	5,874	6,079
	Women	885	871	863	888
	Non-regular employees	286	313	323	321
	Men	162	183	201	209
<hr/>					
Recruitment/employment (Japan)					
New graduates hired	FY2014	FY2015	FY2016	FY2017	FY2018
	Number hired	157	73	25	72
	Under 30 yrs old	154	73	24	72
	Men	132	65	20	70
	Women	22	8	4	2
	30–49 yrs old	3	0	1	0
	Men	3	0	1	0
	Women	0	0	0	0
	Over 50 yrs old	0	0	0	0
	Men	0	0	0	0
	Women	0	0	0	0
	Percentage of women	14.0	11.0	16.0	2.8
Career-track recruits	Number hired	34	62	66	279
	Under 30 yrs old	5	11	17	102
	Men	0	3	13	85
	Women	5	8	4	17
	30–49 yrs old	27	45	47	170
	Men	16	29	31	155
	Women	11	16	16	15
	Over 50 yrs old	2	6	2	7
	Men	2	4	2	6
	Women	0	2	0	1
	Percentage of women	47.1	41.9	30.3	11.8
Employees with disabilities	Percentage hired (TEL)	1.80	2.00	1.96	2.13
	Percentage hired (Group)	1.90	1.94	1.98	1.98
	Number of people	30	32	39	42
Female managers (Group)	Percentage	1.2	1.3	1.5	1.6
	Number of users	68	74	101	125
Reemployment system	Men	68	74	98	123
	Women	0	0	3	2
	Number of users	82	69	49	34
Second career support system	Men	68	59	43	30
	Women	14	10	6	4
	Percentage of regular employees who received regular performance and career evaluations	100.0	100.0	100.0	100.0

* Grade resetting through global human resources system

Employee retention (Japan)

	FY2014	FY2015	FY2016	FY2017	FY2018
Employee retention	Retention after three years of joining TEL*	95.0	94.2	93.6	92.9
	Men	95.8	95.0	94.1	94.3
	Women	91.3	90.3	90.2	85.2
	Average service years	15 yrs.7 mos.	16 yrs.4 mos.	17 yrs.0 mos.	17 yrs.1 mos.
	Men	15 yrs.9 mos.	16 yrs.6 mos.	17 yrs.2 mos.	17 yrs.4 mos.
Turnover	Women	14 yrs.3 mos.	15 yrs.3 mos.	16 yrs.0 mos.	15 yrs.5 mos.
	Employee turnover	122	198	131	102
	Men	89	164	94	82
Turnover	Women	33	34	37	20
	Turnover percentage	1.6	2.7	1.8	1.4

* Average in recent five years

Work-life balance (Japan)

	FY2014	FY2015	FY2016	FY2017	FY2018
Annual paid leave	Take-up rate	59.6	61.8	62.6	64.1
Refreshment leave	Number of those who took leave	772	1,285	1,045	586
Paternity leave	Men	663	1,091	926	499
Childcare leave	Women	109	194	119	87
Shorter working hour system	Number of those who took leave	211	192	172	179
Leave to care for a sick/injured child	Number of those who took leave	70	52	42	41
Childcare support leave	Men	3	3	2	2
Extended nursing care leave	Women (percentage who took leave)	67 (94.6)	49 (94.5)	40 (93.3)	42 (95.7) (93.2)
Short nursing care leave	Number of those who returned to work after leave	53	46	46	44
Shorter working hour system for nursing care	Men	3	2	1	2
Safety	Women	50	44	45	42
Percentage reinstated	93.0	88.5	85.2	93.6	93.6
Retention rate	97.4	94.3	91.3	95.7	90.0
Number of those who used	159	183	188	170	176
Number of those who used	8	11	13	23	24
Number of those who used	151	172	175	147	152
Number of those who used	435	460	453	464	455
Number of those who took leave	Men	240	246	245	263
Number of those who took leave	Women	195	214	208	201
Number of those who took leave	Men	92	96	103	106
Number of those who took leave	Women	17	24	15	16
Number of those who took leave	75	72	88	90	101
Number of those who took leave	Men	2	2	0	2
Number of those who took leave	Women	2	2	0	1
Number of those who took leave	Men	22	20	31	50
Number of those who took leave	Women	13	11	10	25
Number of those who took leave	Women	9	9	21	19
Number of those who used	Men	1	1	0	0
Number of those who used	Women	0	0	0	0

Safety

	FY2014	FY2015	FY2016	FY2017	FY2018
Percentage of employees who received training on basic safety	100	100	100	100	100
Percentage of employees who received training on advanced safety	100	100	100	100	100
Lost time incident rate (LTIR)	0.82	0.53	0.42	0.46	0.77
Number of workplace injuries per 200,000 work hours (TCIR)	0.37	0.24	0.21	0.28	0.38

Performance summary (Social)

Products/Innovation

	FY2014	FY2015	FY2016	FY2017	FY2018
Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services	0	0	0	0	0
Active issued patents (country)	Number of active issued patents	16,376	16,421	16,300	16,023
	Japan	5,227	5,288	5,172	4,984
	North America	4,299	4,326	4,361	4,224
	Europe	439	354	241	199
	Korea	2,875	2,847	2,784	2,672
	Taiwan	1,889	1,983	2,131	2,387
	China	1,647	1,623	1,611	1,557
CY2012 CY2013 CY2014 CY2015 CY2016*					
Global patent application rate	70.3	69.5	68.0	70.0	76.1
Patent application success rate	Japan	78.0	74.0	78.0	66.5
Patent application success rate	North America	66.8	62.8	71.2	72.3
					* Calendar year when patents were filed/granted

Customers

	FY2014	FY2015	FY2016	FY2017	FY2018
Percentage of customers who said they were satisfied in the customer satisfaction survey	—	80.5	81.1	82.6	81.2

Governance

	FY2014	FY2015	FY2016	FY2017	FY2018
Total number of critical incidents notified to Board of Directors	—	—	—	1	0
Total number of incidents subject to legal action on the basis of anti-competitive conduct, anti-trust activity, or monopolistic practices where the governance body's involvement was revealed	0	0	0	0	0
Number of executive officers who received training on anti-corruption*	—	—	—	12	13
Total number (percentage) of directors who provided instructions on the body's policies and procedures in relation to anti-corruption*	—	—	—	11 (100)	12 (100)
Total number (percentage) of directors who received training on anti-corruption*	—	—	—	9 (81.8)	9 (75.0)
Payment to industry groups, etc. (thousand yen)	—	—	—	—	16,616
Payment to political affiliated organizations (yen)	—	—	—	—	0
Average tenure of directors	—	—	—	—	8.04
Average rate of attendance for board meetings	—	—	—	—	99.46

Compliance

	FY2014	FY2015	FY2016	FY2017	FY2018
Percentage of employees who have received web-based training on business ethics and compliance	100	99.7	98.4	98.0	99.4
Percentage of employees who have consented to the information security agreement	100	100	99.9	99.9	99.9
Significant fines and non-monetary sanctions for non-compliance with laws and regulations in the social and economic area	0	0	0	0	0

Procurement

	FY2014	FY2015	FY2016	FY2017	FY2018
Percentage of new important suppliers screened using social criteria	—	—	100	100	100
Rate of improvement after supply chain CSR assessment (including green procurement survey from fiscal year 2016)	—	25.3	33.8	16.9	20.7
Rate of improvement after supply chain BCP assessment	—	41.2	26.5	32.3	21.2
Number of identified RMAP conformant smelters	—	117	204	237	249

Social contribution

	FY2014	FY2015	FY2016	FY2017	FY2018
Spending on social contribution (million yen)	259	184	277	242	238
Charity donations (providing donations/relief supplies to charity organizations)	5	2	14	17	13
Cash donations breakdown	Community investment (charitable expenses for long-term cause for community)	38	47	52	43
Commercial initiatives (charitable expenses with anticipated effects on business growth)	57	51	34	40	49

Performance summary (Environment)

Energy consumption/generation

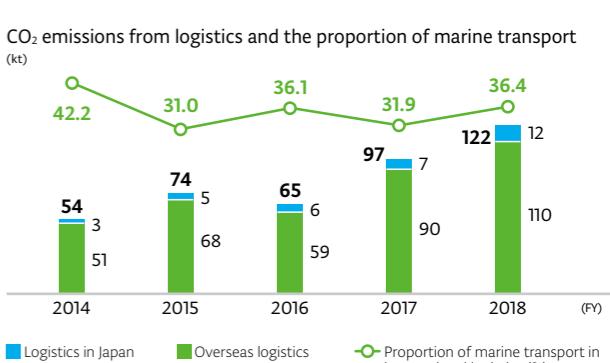
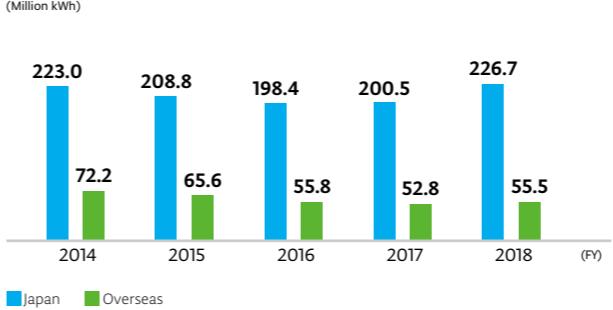
	FY2014	FY2015	FY2016	FY2017	FY2018
Energy	Consumption metric (energy consumption/sales) (kL/billion yen)	1.30	1.20	1.02	0.84
	Consumption (crude oil equivalent) (kL)	79,359	73,421	67,499	67,457
	Japan	58,927	54,973	52,002	52,676
	Overseas	20,432	18,448	15,497	14,781
	Consumption (MWh)	295,215	274,368	254,201	253,300
	Japan	222,976	208,753	198,404	200,547
	Overseas	72,239	65,615	55,797	52,753
Electricity	Consumption (crude oil equivalent) (kL)	3,877	3,501	2,748	2,877
	Japan	2,027	1,929	1,602	1,666
	Overseas	1,850	1,572	1,146	1,211
	Consumption (crude oil equivalent) (kL)	1,160	871	706	797
	Japan	1,156	870	706	796
	Overseas	4	1	0	1
	Purchase (MWh)	2,618	2,405	3,833	3,334
Gas	Japan	0	0	0	0
	Overseas	2,618	2,405	3,833	3,334
	Consumption (crude oil equivalent) (kL)	4,724	4,559	4,486	4,436
	Japan	4,698	4,536	4,486	4,436
	Overseas	26	23	0	0
	Power generation (MWh)	1,439	1,337	1,331	1,346
	Japan	1,439	1,337	1,331	1,346
Fuel	Overseas	0	0	0	0
	Purchase (MWh)	2,618	2,405	3,833	3,334
	Japan	0	0	0	0
	Overseas	4	1	0	1
	Power sales (MWh)*	1,439	1,337	1,331	1,346
	Japan	1,439	1,337	1,331	1,346
	Overseas	0	0	0	0

* Heating, cooling and steam not sold

Environmental impact of logistics

	FY2014	FY2015	FY2016	FY2017	FY2018
CO ₂	Emissions (kt)	54	74	65	97
	Japan	3	5	6	7
	Overseas	51	68	59	90
Proportion of marine transport (international)	42.2	31.0	36.1	31.9	36.4

Electricity consumption (Million kWh)



Performance summary (Environment)

Greenhouse gas consumption/emissions

	FY2014	FY2015	FY2016	FY2017	FY2018	
CO ₂ from energy consumption	Emissions metric (sales) (t/billion yen)	2.57	2.61	2.22	1.77	1.34
	Emissions (kt)	157	160	148	141	152
	Japan	121	126	115	110	119
	Overseas	36	35	33	31	33
CO ₂ by scope	Scope 1 ¹ emissions (kt)	11	10	8	8	9
	Japan	8	7	6	6	7
	Overseas	4	3	2	2	2
	Scope 2 ² emissions (kt)	146	151	140	133	143
Non-energy-derived greenhouse gas	Japan	113	119	109	104	112
	Overseas	33	31	30	29	31
	Scope 3 ³ emissions (kt)	3,651	3,566	3,491	4,028	5,855
	Emissions (kt) (Japan)	21	22	33	28	26
	HFCs	3	2	1	3	3
	PFCs	7	6	8	8	11
	SF ₆	11	14	17	9	4
	Other	0.01	0.01	6	8	8

1 Scope 1: Direct GHG emissions from use of fuel and gas owned or controlled by TEL

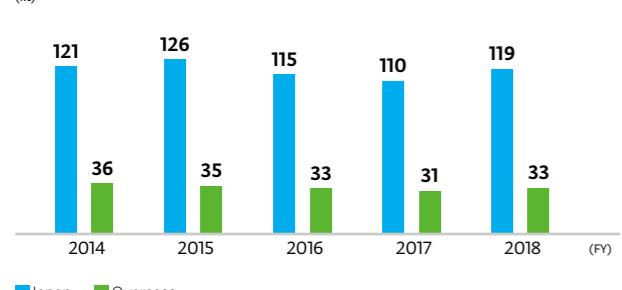
2 Scope 2: Indirect GHG emissions from use of electricity, steam and heat purchased by TEL

3 Scope 3: Emissions from corporate value chains (excluding scope 1 and 2 emissions), such as product transportation, employee business travel, and major outsourced production processes

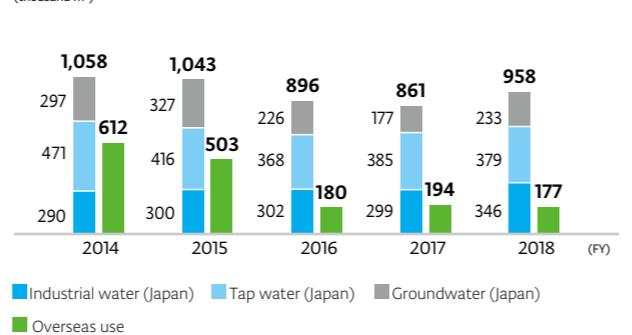
Resource consumption

	FY2014	FY2015	FY2016	FY2017	FY2018	
Water	Consumption (thousand m ³)	1,670	1,546	1,076	1,055	1,135
	Japan	1,058	1,043	896	861	958
	Groundwater	297	327	226	177	233
	Tap water	471	416	368	385	379
	Industrial water	290	300	302	299	346
Copier paper	Overseas	612	503	180	194	177
Copier paper	Use (t) (Japan)	116	162	128	157	194

CO₂ emissions from energy consumption



Water consumption



Amount of waste generated

	FY2014	FY2015	FY2016	FY2017	FY2018
Waste	Amount generated (t)	9,965	10,064	8,384	12,318
	Japan	8,780	8,858	7,721	11,393
Specially controlled industrial waste	Overseas	1,185	1,206	663	741
	Amount generated (t) (Japan)	2,627	2,842	2,125	3,683
Recycling	Recycled amount (t)	9,421	9,828	8,182	12,128
	Japan	8,608	8,764	7,599	11,281
Incinerated and landfill waste	Overseas	813	1,064	583	847
	Amount of waste (t)	544	236	202	190
Water discharges	Japan	172	94	122	133
	Overseas	372	142	80	78
Water discharge volume (thousand m ³)	—	—	904	874	905
	Japan	—	—	750	709
Water discharges	Overseas	—	—	154	165
	—	—	—	146	146

Chemical substances consumption/emissions (Japan)

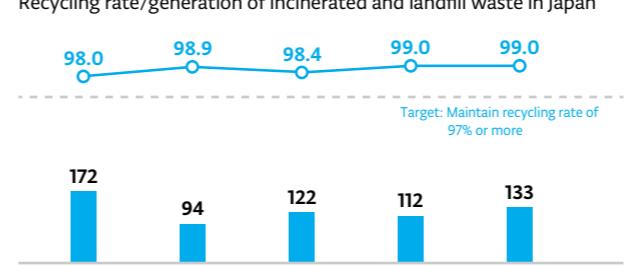
	FY2014	FY2015	FY2016	FY2017	FY2018
PRTR Class I designated chemical substances	Volume handled (t)	94	48	35	64
	Ferric chloride	82	38	21	33
	Hydrogen fluoride and its water-soluble salts	6	7	9	25
	Methylnaphthalene	4	2	4	5
	Other	2	1	1	1
	Amount transported (waste amount) (t)	90	46	31	59
NOx	Consumption (t)	4	2	4	5
	Emissions (t)	9.7	12	7.5	7.9
SOx	Emissions (t)	2.8	2.7	2.2	2.5

Other

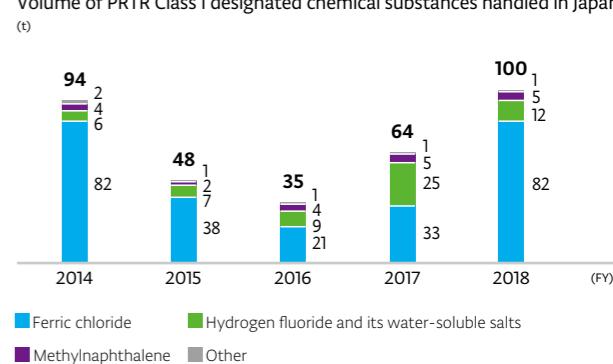
	FY2014	FY2015	FY2016	FY2017	FY2018
ISO 14001	Number of certified offices	10	8	7	8
	Japan	7	4	4	5
	Overseas	3	4	3	4
Biodiversity	Number of ecosystem tours*	16	13	15	18
	Number of ecosystem tour participants*	42	69	281	396
Environmental laws and regulations	Number of breaches of environmental laws and regulations	0	0	0	0
	Amount of fines on legal breaches	0	0	0	0
	Total product shipment (t)*	16,331	13,596	17,342	20,445

* Scope: Japan

Recycling rate/generation of incinerated and landfill waste in Japan



Volume of PRTR Class I designated chemical substances handled in Japan



Corporate profile

Company name:	Tokyo Electron Limited	Main business:	Semiconductor production equipment business, flat panel display (FPD) production equipment business
Address:	Akasaka Biz Tower 3-1 Akasaka 5-chome, Minato-ku, Tokyo 107-6325, Japan	Capital:	54,961 million yen
Established:	November 11, 1963	Number of employees:	12,373 (consolidated) 1,455 (non-consolidated)
Representative:	Toshiki Kawai Representative Director, President & CEO	Number of locations:	Japan: 7 companies at 27 locations Outside Japan: 27 companies at 49 locations in 15 countries and regions Worldwide total: 34 companies at 76 locations in 16 countries and regions

(as of April 1, 2018)

Financial data

Earnings Release:

URL www.tel.com/ir/library/report/

Securities Report:

URL www.tel.co.jp/ir/library/fs/

Tokyo Electron's logo

Our logo was created as a symbol for Tokyo Electron's next stage of growth, based on our corporate philosophy and vision.

This simple design represents our reliability and the engaging presence we bring to a competitive industry. The green square at the center of the logo signifies the core of innovation supporting development in industry; the translucent blue expresses Tokyo Electron's leading-edge advanced technology.

We contribute to the development of a dream-inspiring society through our leading-edge advanced technology and reliable service and support.

