

[www.ushio.co.jp/en](http://www.ushio.co.jp/en)

Lighting — Edge Technologies



# Cleaning Curing & Bonding

## Lighting — Edge Technologies

It has been 120 years since Edison invented incandescent light bulbs.  
It is less than 50 years since light began to be used as energy.  
Light is said to have a vast amount of unexplored potential.

“Using light as illumination and as energy, we create a new market for light.”  
Under this business policy, we have continuously worked to realize  
the possibilities of light as “light professionals,” from the Company’s founding in  
1964 to today.

As we discover these uses of the unique properties of light,  
we may be able to realize safe, secure, comfortable and  
prosperous societies, and create settings that are yet to be seen.

This is what we believe, and we will continue to give form to light in the future.

# Patterning Treating & Caring Imaging

## CONTENTS

- 1 Lighting Edge Technologies
- 3 Corporate History
- 5 Current Business and Future Potential
- 7 Performance Highlights
- 9 Globally Expanding USHIO
- 11 Message from the President
- 15 Value Creation Model
- 17 Medium-Term Management Plan (FY17–FY19)
- 19 Light Sources Business
- 21 Equipment Business
- 23 New Businesses
- 25 Solutions to Social Issues and Lighting Edge Technologies
- 27 USHIO’s CSR
- 31 Environmental Vision and Environmental Action Plan
- 33 Directors
- 34 Corporate Governance
- 37 Human Resource Development
- 39 Promotion of Diversity
- 41 Relationship with Society
- 43 Financial Data
- 45 Non-Financial Data
- 47 Stock Information
- 48 Corporate Data
- 49 Publishing USHIO Report 2018

### Management Philosophy

USHIO GROUP

### Management Philosophy

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①  
Build both a prosperous Company  
and prosperous employees.

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②  
Deliver products and services  
that are competitive in the global market.

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③  
Contribute to society through superior products  
and innovative research and development.

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④  
Expand profits, corporate responsibility, and  
competitiveness through open and free-thinking  
business operations.

USHIO

### Editorial Policy

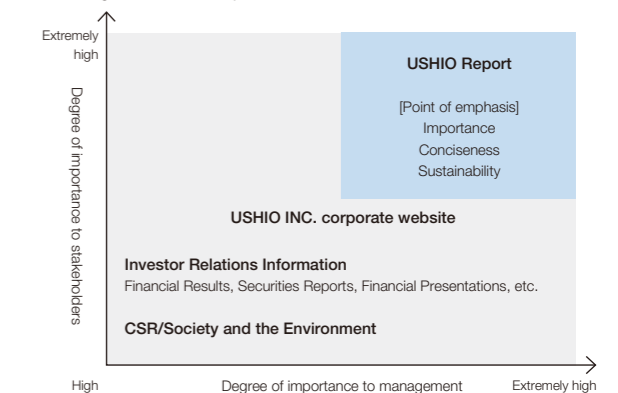
USHIO had previously reported its business strategies and financial information in the form of an Annual Report, and its initiatives concerning the environment and society in the form of a Sustainability Report. However, from the fiscal year ended March 31, 2018, USHIO has started publishing the USHIO Report so that all of these information categories are reported in an integrated manner.

The USHIO Report describes the unique business development model of USHIO that has grown through discovering the functions of light and giving them form. The report concisely summarizes the information needed for understanding the possibilities of improving the long-term and sustainable corporate value of the Company.

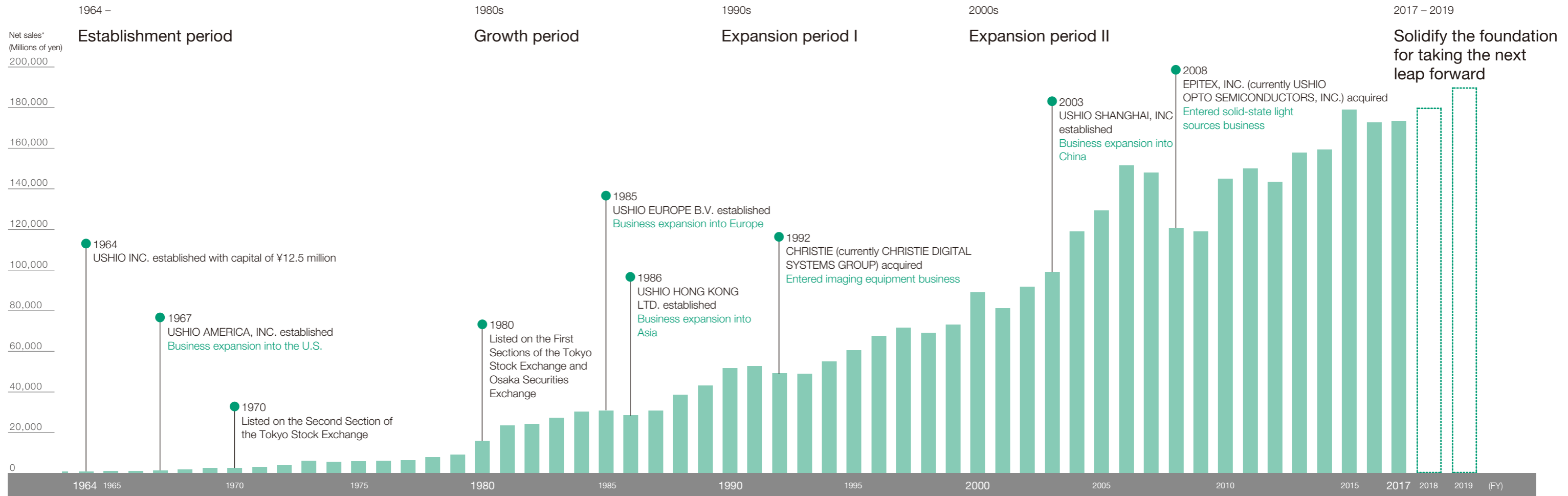
We hope that this report will enable all of our many stakeholders to understand the appeal of USHIO.

In this report, all of the information presented refers to the fiscal year ended March 31, 2018 when no other time period is specifically mentioned. We use the style “fiscal 2017” and so forth in this report where “fiscal 2017” refers to the fiscal year ended March 31, 2018. In addition, when the name “USHIO” appears in the report, it refers to the entire Ushio Group, whereas the name “USHIO INC.” refers to the non-consolidated company Ushio Inc.

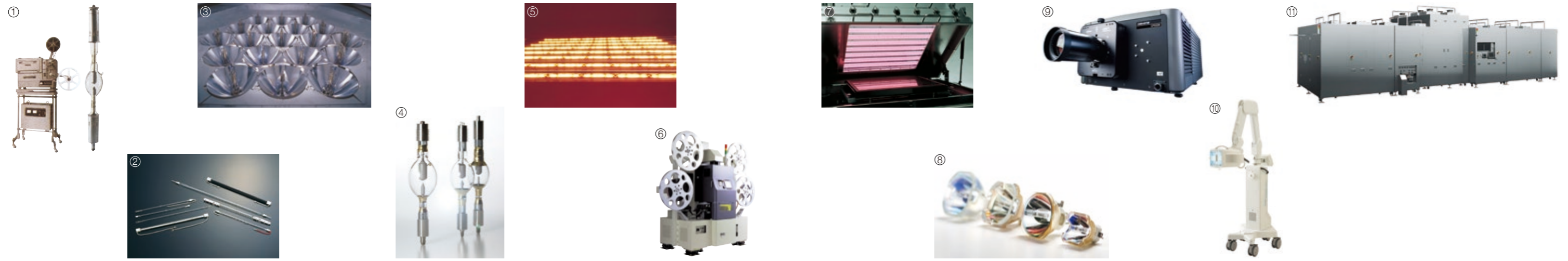
### Positioning of the USHIO Report



# Corporate History



\* Until 1979, net sales are for USHIO INC. alone



- 1962 ① Xenon short arc lamps for cinema projectors (USHIO KOGYO INC.)  
Contributed to the transition from black-and-white to color movies
- 1964 ② Halogen heater lamps for OA equipment  
Contributed to the spread of plain-paper copiers amid expanding office automation  
A pioneer in using the "energy" of light

- 1975 ③ Light sources for the large solar simulators used in artificial satellite testing  
Participated in the space development plan (a national project)
- 1979 ④ Super high-pressure UV lamps for semiconductor lithography  
Increasing applications of industrial-use light
- 1982 ⑤ Halogen heater lamps for semiconductors  
Used in semiconductor manufacturing equipment
- 1988 ⑥ Lithography tools for TAB tape  
Contributed to the spread of laptop computers

- 1993 ⑦ Excimer irradiation unit for cleaning LCD panels  
Contributed to the spread of LCD TVs
- 1998 ⑧ Lamps for data projectors  
Contributed to the spread of data projectors
- 1999 Step & repeat projection lithography tool for high resolution printed circuit boards
- 2000 ODF for bonding panels of LCD

- 2003 ⑨ Digital cinema projector CP2000 series  
Contributed to the increasing digitalization of movies
- 2006 ⑩ TheraBeam® UV308 excimer light phototherapy device  
Entered medical businesses
- 2011 ⑪ Photo-alignment equipment  
Contributed to the spread of higher resolution LCD panels

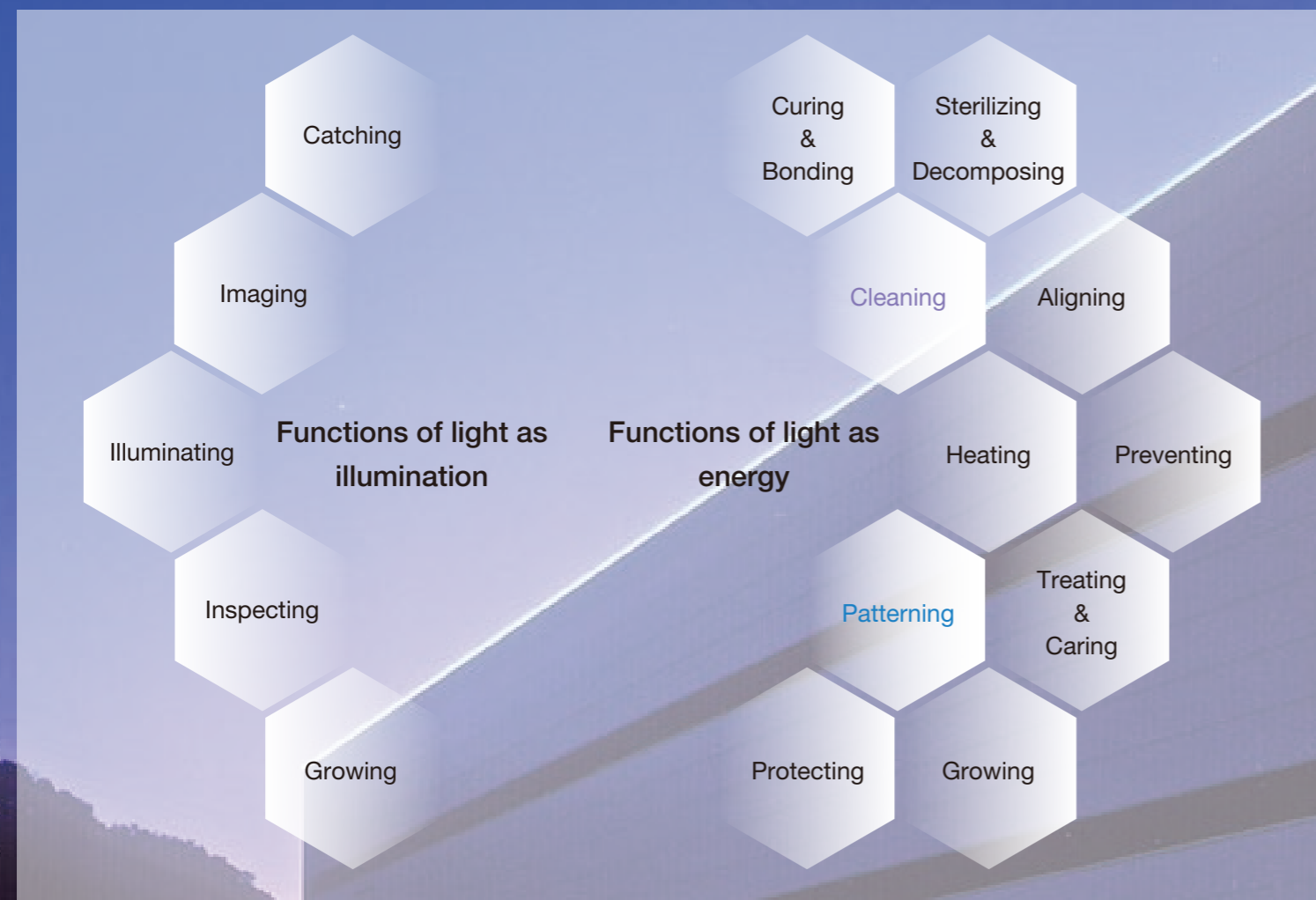
# USHIO is dedicated to unlocking the potential of light.

Humankind has discovered only a fraction of the potential functions of light. USHIO will continue striving to create new "light markets."

## Scope of USHIO's Light Technology



## Discovered Functions of Light



USHIO's Unique Technologies Give Form to Light



### Existing Business Domains

USHIO gives form to various kinds of light using its unique technologies. We have expanded our business fields, focusing mainly on the electronics and the visual imaging fields.

Visual imaging		
Electronics		

### Expansion into New Business Domains

Looking forward, USHIO will expand these functions of light into new business fields, such as life sciences, aiming to further expand its great dream of contributing to society with light.

Life sciences		
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## Examples of Functions of Light That Has Been Given Form

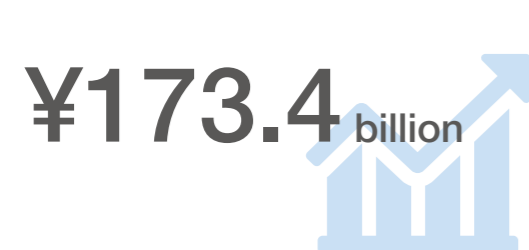
### Cleaning with light

In the manufacturing process for semiconductors, LCD panels, and other equipment, dust particles at the molecular level can affect function and quality. Therefore, in the ultrafine processing of semiconductors at the micron and nano level, as much as one-third of the process can be spent on cleaning. Invisible dirt is removed using invisible light in a unique cleansing method using USHIO's light technologies.

### Patterning with light

Semiconductors are used in various devices, including smartphones, game consoles, PCs, home appliances, and automobiles. In the semiconductor manufacturing process, the most important part is considered to be photolithography, a technology that creates delicate circuit patterns. USHIO's light technologies play an important role in this tiny, nanoscale environment.

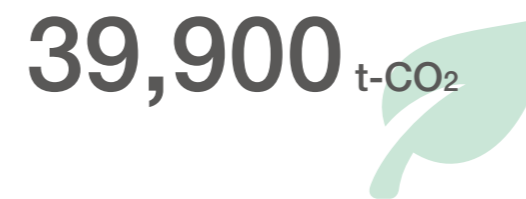
Net Sales



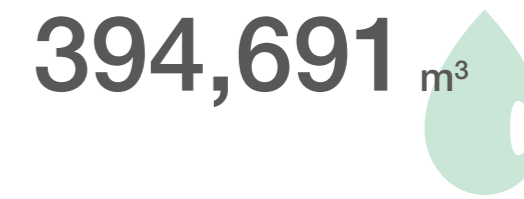
Operating Income/Operating Margin



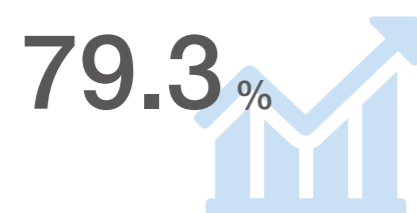
CO<sub>2</sub> Emissions



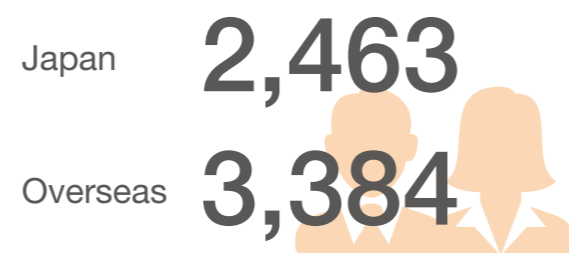
Use of Water Resources



Foreign Sales Ratio



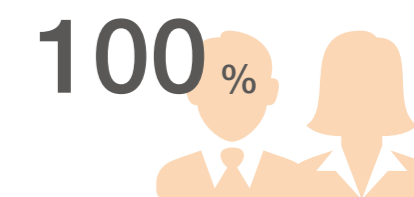
Number of Employees



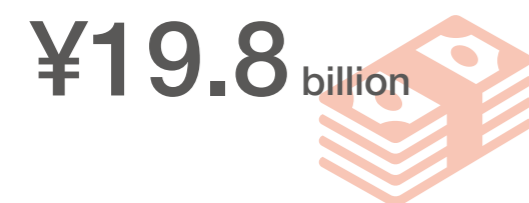
Total Waste Output



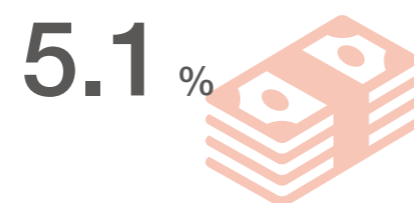
Ratio of Employees Returning to Work after Taking Maternity and Childcare Leaves\*



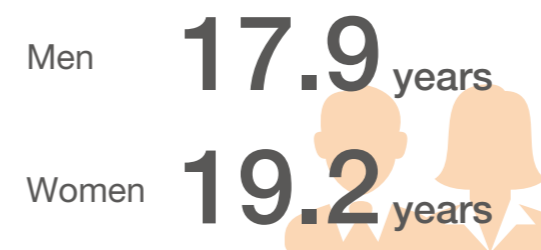
Free Cash Flow



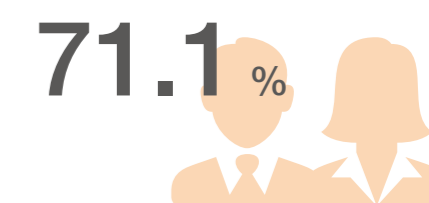
Return on Equity (ROE)



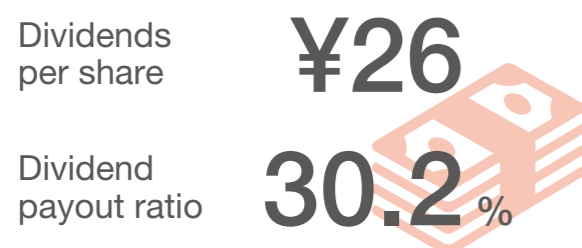
Average Length of Service\*



Percentage of Paid Vacation Days Used\*



Dividends per Share/Dividend Payout Ratio



Earnings per Share (EPS)



Statutory Monthly Overtime Hours\*

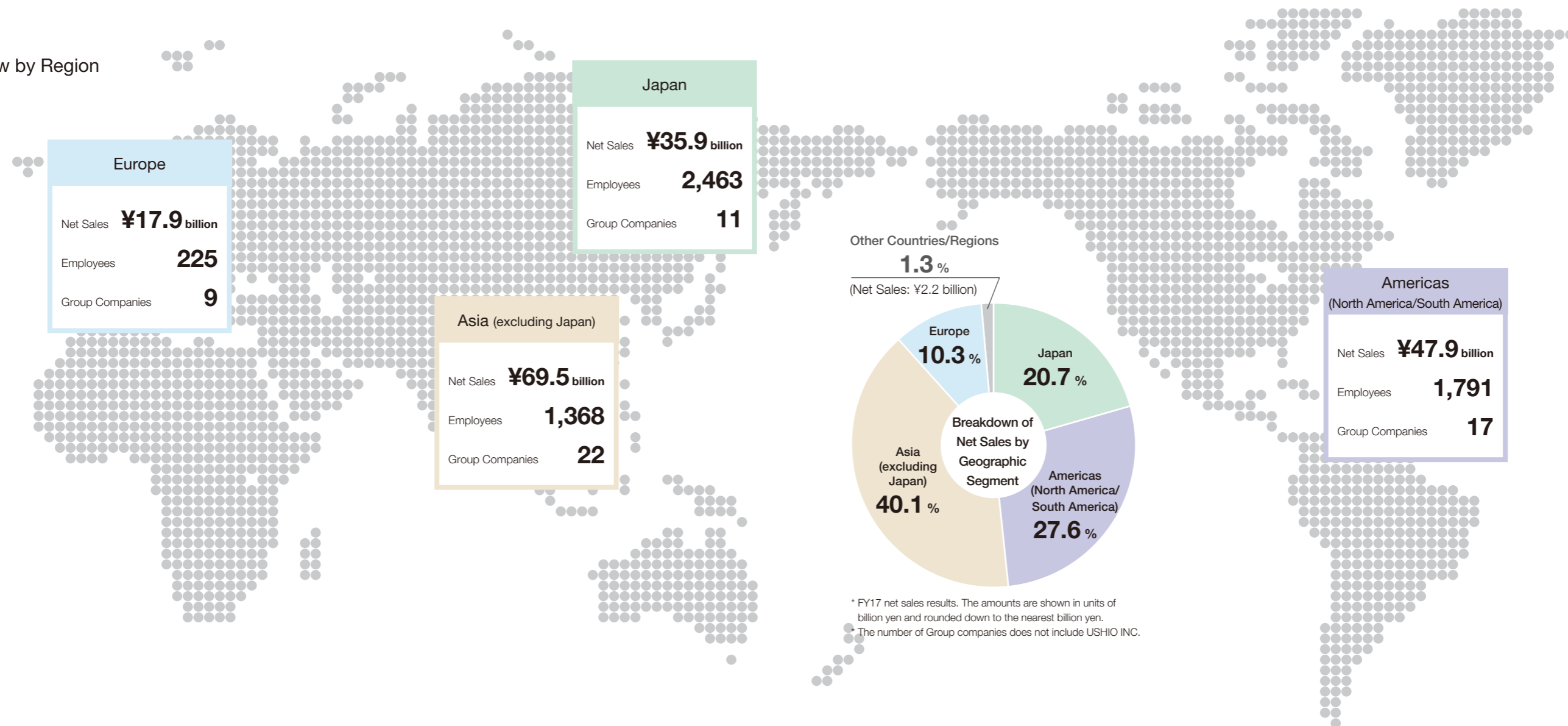


Number of Directors (including Audit and Supervisory Committee Members)\*

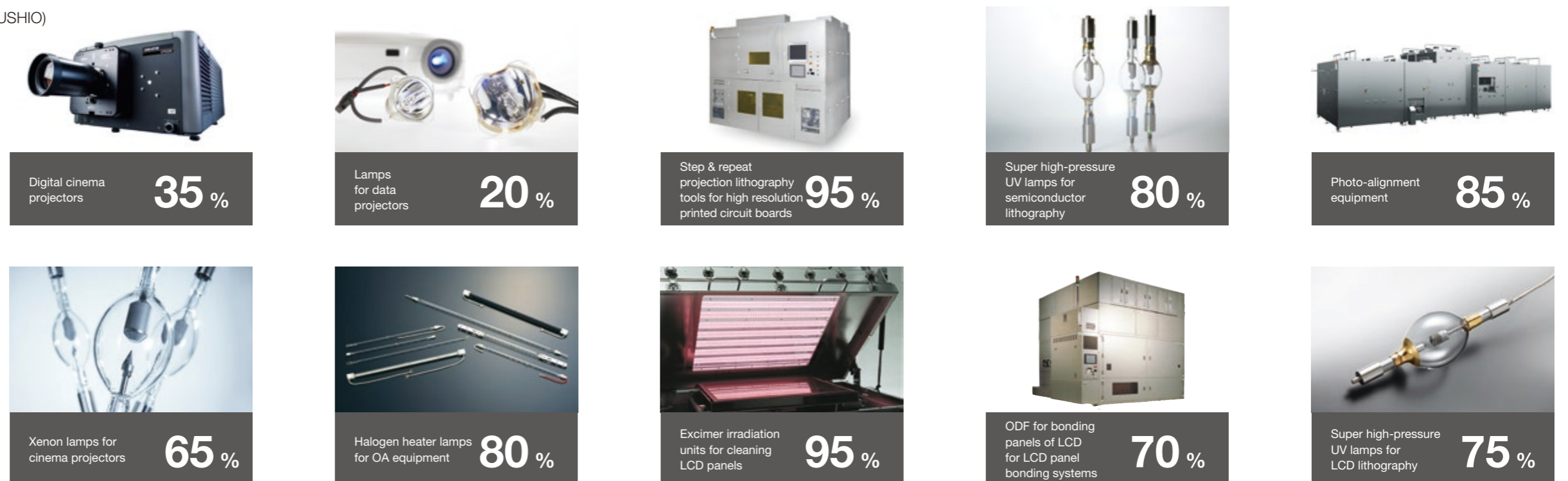


\* USHIO INC. non-consolidated

## Overview by Region



## Main Market Shares (Research by USHIO)





## USHIO will contribute to society through “light” as we initiate a transformation to drive sustained growth.

Kenji Hamashima  
President and Chief Executive Officer

**We believe that products and services supported by thriving employees are bound to satisfy and delight our customers. That is why our Management Philosophy begins with a call “to build both a prosperous Company and prosperous employees.”**

Since its founding, USHIO has been working tirelessly “to become a global medium-sized company by enhancing the specialized optical technologies that only we can provide.” To this end, USHIO has embraced a niche-market leader strategy, where it seeks to capture the No.1 or No.2 position in niche markets around the world as a specialized manufacturer of optical products. By rigorously pursuing and achieving the quality and performance sought by customers, we have developed numerous products that hold high shares of the global market. Our employees have “the ability to see things through to the very end,” as embodied by their determination to relentlessly pursue and achieve their goals. I firmly believe that this ability has been the driving force of our growth over the years.

Today, we are positioning ourselves as being in our second founding, so to speak, in response to changes in the market environment and in preparation of making our next leap forward. Our operating results have been growing steadily. However, in order to continue to grow, we must boldly seize

the global market as a challenger, rather than merely retain the top niche-market positions we have established to date. To accomplish this ambitious initiative, the strength of each and every employee will be a crucial factor as before. Apart from this, we will also need “creativity and proactive execution” and “challenging spirit.” I believe that my mission as president is to foster these principles in every employee.

To make this happen, I’ve created opportunities to hold open discussions with employees at Group companies in Japan as well as overseas. While listening closely to the honest opinions of employees, I’d like to repeatedly convey my views directly to employees. Rather than merely requesting employees to take the correct action, I’d like to emphasize the importance of sharing your views with others, learning from others and thinking things through together, and then taking action. In parallel with this engagement with employees, we will create a human resource development system as part of efforts to build an organization that encourages employees to tackle ambitious initiatives. [Page 37: Human Resource Development](#)

**“Light” offers infinite possibilities.**

**I firmly believe that the boundless possibilities of**

**“light” provide USHIO with further potential for growth.**

**Guided by the slogan, “Lighting Edge Technologies,” we remain committed to doing our utmost to create a safe, secure, comfortable and prosperous society.**

We have entered the second year of our three-year Medium-term Management Plan announced in May 2017. The plan's main theme is to “solidify the foundation for taking the next leap forward.” To “maintain and improve earnings capability in existing businesses” and “pursue new growth opportunities,” we are working intensively to solve internal issues. [Page 17: Medium-term Management Plan](#) Our next leap forward embodies our aspirations to create a safe, secure, comfortable and prosperous society by serving as a “light professional.” Guided by our slogan of “Lighting Edge Technologies,” we will pursue the full potential of light and contribute to society by giving it form.

USHIO has solved various social issues by giving form to the diverse functions of light. Notably, USHIO has realized the “Patterning” function of light by applying it to lithography tools and the light sources for this equipment. We have realized the “Cleaning” function of light by using it in excimer irradiation units and light sources. This has sparked innovation in the electronics field, thereby contributing to the development of IT and other digital technologies. USHIO has put the “Imaging” function of light to work in cinema projectors and light sources. Doing so has contributed to the widespread adoption of 3D movies, projection mapping and other advances, thereby providing new entertainment experiences for people around the world. Looking ahead, we will proactively pursue the development of new products and related priorities in order to drive technological innovation in the electronics and visual imaging fields.

**USHIO has earned positive recognition from ESG indexes based on the accomplishments of its CSR activities to date.**

**In the years ahead, we will focus on making an even greater contribution to society through our businesses.**

USHIO has formulated a medium-term CSR plan. Guided by this plan, we have been focusing on CSR activities since 2010. During those years, we have taken actions such as regularly holding study sessions led by external guest experts. As a result, USHIO has been selected for inclusion in the FTSE and

At the same time, as part of our next leap forward, we intend to continue to strive to create businesses that will realize a safe, secure, comfortable and prosperous society through “light.”

We are currently focused on two functions of light: “Treating & Caring” and “Sterilizing & Decomposing.” To make the most of these functions, we are working on initiatives ranging from those verifying the sterilization and decomposition effects of UV light to those developing products using these functions. UV light can have a negative effect on people and objects. However, depending on the wavelength, there are many forms of UV light that can benefit people by curing diseases or providing sterilization. Focusing on these new possibilities of light, we are working on a daily basis to develop new businesses. [Page 23: New Businesses](#)

In the process of creating new businesses, we are pursuing research and development internally as a matter of course, but we are also considering M&A deals as an effective means of creating new businesses. The basic principle underlying USHIO's M&A strategy is to invest in companies that offer prospects for generating synergies. In the M&A deals executed so far, we have executed deals that have paved the way for strengthening and expanding the solid-state light sources business and generated business synergies by upgrading and expanding our lineup of lithography tools. Going forward, we will make investment decisions by carefully analyzing the synergies expected from M&A deals.

MSCI indexes. [Page 28: Evaluations of USHIO's CSR](#) Looking ahead, we will continue to implement CSR activities to fulfill our obligations to society. In parallel, we will use USHIO's optical technologies to solve issues faced by the public and contribute to the realization of a sustainable society.

Currently, we are considering eight fields where USHIO has the potential to contribute to the achievement of the UN's Sustainable Development Goals (SDGs) by leveraging its optical technologies. I believe that we should make a Group-wide effort to address the SDGs by conducting repeated discussions and studies and narrowing down our targets.

[Page 30: Relationship with Sustainable Development Goals](#)

To achieve sustainable growth, it is essential that we enhance our governance structure. We have been working to ensure the transparency of management by reshaping the composition of the Board of Directors, as well as developing internal control, compliance and risk management systems. In addition, we have also been proactively holding training seminars and study sessions in recognition of the importance of imparting awareness to every board member and employee, in addition to merely developing systems. The primary focus of USHIO's group management is to respect the autonomy of its subsidiaries. However, this does not mean taking a hands-off approach. We are able to respect the autonomy of our subsidiaries because we have built relationships of

trust between the parent and each subsidiary. Flexible but firm decision-making is implemented by passing resolutions on major management decisions in meetings of the parent's Board of Directors. In addition to seeking to avoid risks as a matter of course, if there is any incidence of misconduct, we will always provide disclosure to the public and deal with the issue promptly, including third parties. To this end, we have set up an internal reporting system covering the entire Group, including overseas subsidiaries, in order to publicly disclose any incidents of internal misconduct or harassment. This is a crucial system for rapidly identifying and dealing with problems without allowing them to be covered up, along with ensuring that whistleblowers are able to report incidents with peace of mind by making the third-party offices of lawyers and other professionals accessible through the system. Through these systems and the awareness of officers and employees, we will not only seek to avoid risk, but will also strive to effectively deal with any incidents that may occur.

[Page 34: Corporate Governance](#)

**We are currently in the midst of a transformation to solve social issues through our “light technology.”**

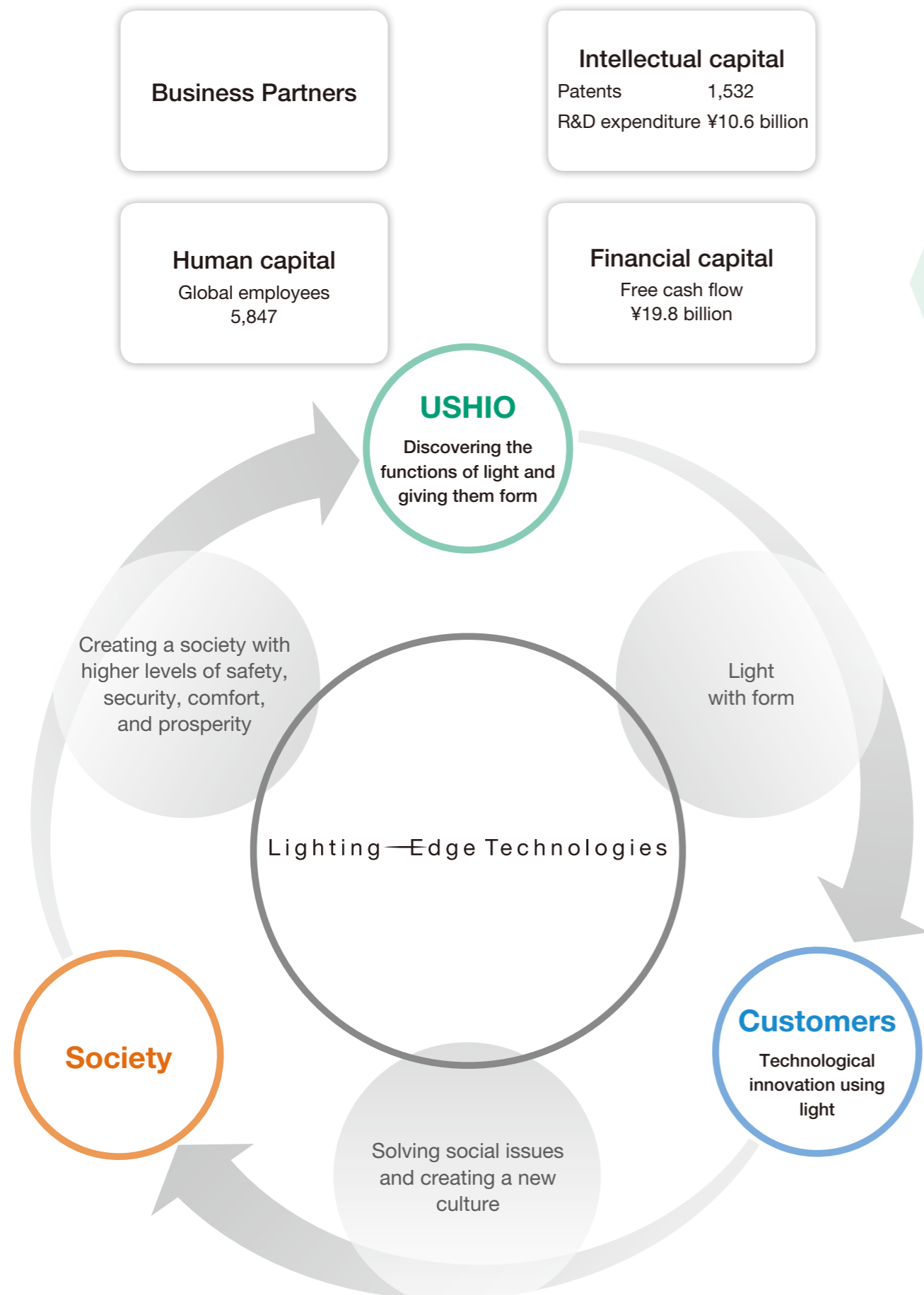
**We will march forward on a daily basis to ensure that investors can appreciate our potential and growth prospects as a “light professional.”**

USHIO's optical technologies have the potential to solve a variety of issues faced by people around the world. However, we have not yet been able to realize the full potential of our optical technologies in terms of our financial results. To do so, we must transform USHIO into a lean company that is able to take on new initiatives with agility and persistence by stripping out inefficiencies through measures to enhance our profitability and efficiency. Under the current Medium-term Management Plan, we are in the midst of making Group-wide efforts to solidify the foundation for transforming into a lean company. We are confident that achieving the goals of the Medium-term Management Plan will be the first step toward ensuring that investors are able to appreciate USHIO's potential and growth prospects.

We aim to become a company that is valued by stakeholders around the world by realizing the promise of our slogan, “Lighting Edge Technologies.” The entire USHIO will continue working tirelessly to remain an enterprise that provides “light” to all stakeholders and society as a whole.







# Input

## Capital Supporting Sustainable Growth

### Business Partners

Collaboration between industry, academia, and government, such as universities and research institutions, is essential to our goal of discovering the various functions of light and giving them form. USHIO will pursue such collaborative research to provide light that contributes to society.

### Human capital

Part of USHIO's Management Philosophy is to "build both a prosperous company and prosperous employees." To realize this, we continue to include diverse human resources and produce various innovations. Human resources are a powerful driving force that supports USHIO's sustainable growth.

For details, please see pages 37–40.

### Intellectual capital

To secure the competitive advantage of our technologies created to discover the functions of light and give them form, we pay special attention to the number and the quality of our patents. We will continue to invest R&D expenditure and secure patents for investigating and exploring the possibilities of light, with a view to supporting USHIO's sustainable growth.

### Financial capital

We will continue generating stable free cash flow through our niche-market leader strategy\* and the creation of high-value-added products, using this to fund continuous growth investments for supporting our sustainable growth in the future.

\* Niche-market leader strategy: Quickly identify domains where light can provide solutions and be the first to solve those issues

# Outcome

## Toward Creating Social Value

Light is said to have a vast amount of unexplored potential. USHIO will investigate, explore, and discover the functions of light, giving form to even more types of it with a view to solving social problems affecting the world and contributing to safe, secure, comfortable and prosperous societies.

For example, in the field of electronics, we have been supplying light that supports the world's most advanced manufacturing for the creation of new cultures and societies.

Meanwhile, in the field of visual imaging, we are contributing to the evolution of the cinema industry by providing light sources with higher brightness that are as close to sunlight as possible.

In addition, light created by USHIO is providing enchantment for people at events and in cityscapes around the world.

USHIO's technologies for giving form to light have been developed over many years, and recently we have been using them to support safe, secure, and comfortable societies by contributing to the health of people and the global environment. There is also the possibility that light can be used in health management that results in no sickness and disease prevention, as well as holding the answers for therapeutic treatments with less pain and fewer side effects, thereby limiting damage to the body and offering ways to treat illnesses that have so far eluded a cure. Moreover, initiatives that will help to solve environmental issues on a global scale have begun.

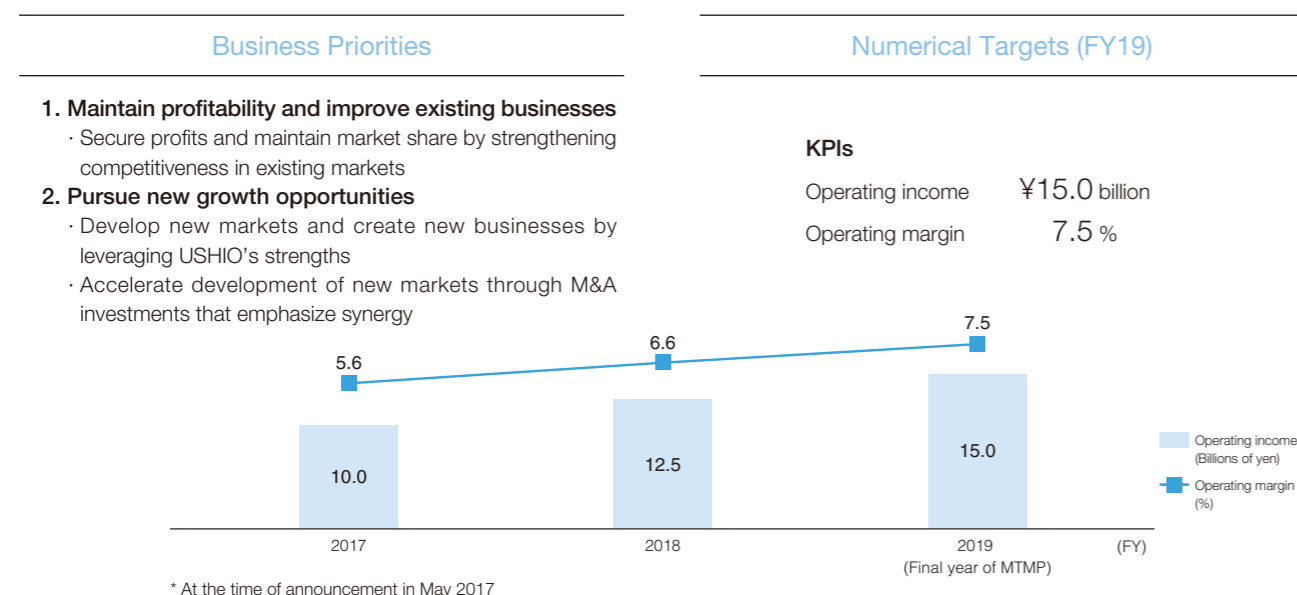
Going forward, USHIO must build relationships with business partners and customers if it is to provide value sustainably. We will carefully maintain these relationships, cooperating with business partners and customers to solve social issues and create new cultures.

# Medium-Term Management Plan (FY17–FY19)

In May 2017, USHIO formulated a three-year Medium-term Management Plan (“MTMP”) with FY19 as the final fiscal year. We will describe the MTMP’s outline and report on the progress of its first fiscal year, FY17.

## Theme

Guided by the key concept of “solidify the foundation for taking the next leap forward,” we will engage in the following two business priorities and aim to achieve the key performance indicators (KPIs).

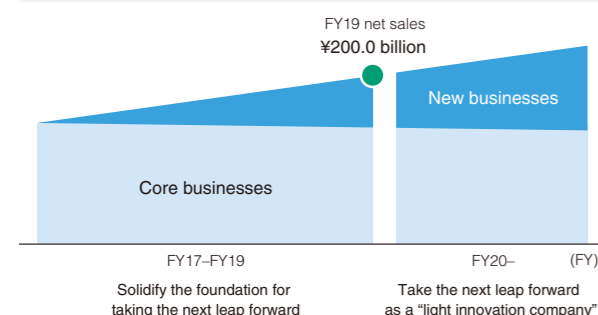


## Formulating the Current MTMP



In previous MTMPs, USHIO adopted a rolling targets system because of the significant impact of external factors such as foreign exchange fluctuations. In the current MTMP however, we switched to fixed three-year targets to build a system that encourages USHIO to grow into a lean company which is not influenced by external factors, and to clarify our commitment to achieving the announced numerical targets.

USHIO recognizes that the period of market expansion for lamps has passed, and that its business growth is slowing in the medium to long term. Therefore, we must create new businesses so USHIO itself may grow sustainably. “Light” possesses many functions that are as yet unknown. If we discover these functions and use “light” to solve social issues, USHIO will still be able to grow.



\* At the time of announcement in May 2017

For details, please refer to the Medium-term Management Plan announced on May 11, 2017.

[https://www.ushio.co.jp/documents/ir/library/plan/ushio\\_plan2017\\_e.pdf](https://www.ushio.co.jp/documents/ir/library/plan/ushio_plan2017_e.pdf)



## Progress of FY17 (MTMP’s First Fiscal Year)

### Achievements

#### Progress in structural reform

In optical equipment (in the equipment business), there were profitability issues, and USHIO advanced various structural improvement initiatives. We improved profitability drastically due to initiatives such as measures focused on profit (taking orders at appropriate prices and standardization of products) and reviewing the production processes (going fablite, production innovations utilizing IT, etc.).

In the light sources business, we continued to maintain market share in each market by ensuring reliable quality and competitive strength, and to secure stable profitability, we advanced initiatives in IT and robotization at manufacturing sites. As a result, we improved productivity by lowering defect rates and shortening lead times.

### Challenges

#### Sluggish imaging equipment earnings

In imaging equipment (in the equipment business), competition intensified, including the expanded use of projectors using phosphor laser light sources, instead of lamp-type projectors, resulting in weak business results. In response to this situation, we will implement a fundamental earnings structural reform, including reducing fixed costs, aiming to improve profitability.

#### Insufficient speed

Although there were potential new businesses and M&A activities and other initiatives in the field of optical equipment, speeds were slower than expected. Looking beyond the current MTMP, we will further improve “quality” and “speed” from now on in preparation of taking the next leap forward as a “light innovation company.”

### Initiatives from the Second Year Onwards

#### Numerical targets

KPIs	First year of MTMP	Second year of MTMP	Final year of MTMP
	FY17 (Results)	FY18	FY19
Operating income (Billions of yen)	10.1	12.5	15.0
Operating margin (%)	5.9	6.6 → 6.9*	7.5 → 7.9*

\* The “operating margin” has been changed in line with the change in the plan’s figure for “net sales.”

The actual result for operating income for FY17 was ¥10.1 billion (1.5% higher than the initial plan), thereby achieving the target of ¥10.0 billion set as a KPI for the MTMP’s first year. Furthermore, we aim to achieve the target of ¥15.0 billion for operating income for the final year of the MTMP (FY19).

## Taking the Next Leap Forward as a “Light Innovation Company”

### M&A Strategy

USHIO has positioned M&A as the key to future growth, and we will actively work on M&A projects that fully promise synergistic effects such as leading to opening up new markets for “light.”

To this end, we will prepare an investment framework of approximately ¥40–50 billion for carrying out large M&As, and we will also consider selling investment securities in the case of implementing a large M&A.

#### M&As focused on synergies

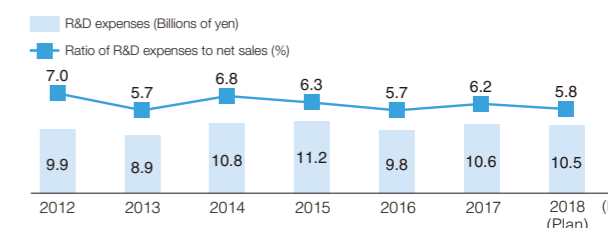
- Acquisitions to respond faster to new light sources (solid-state light sources)
- Acquisitions to accelerate entry into new markets leveraging existing technology and products
- M&As to acquire sales channels and technology USHIO lacks, targeting a business model shift to a solutions provider
- Acquisitions to speed up development of high-value-added products

### R&D Strategies

To underpin USHIO’s high-value-added products, it will expand the scope of use for existing “light” technology and actively engage in R&D activities tied to sustainable growth.

#### USHIO’s R&D investment

- Implementation of research activities with an eye to launching high-value-added products
- Exploration of new wavelength needs via collaboration with industry, academia, and government (joint research)
- Cultivation of new markets via advancement and application of core technology
- Development of products matching customer needs, a strength



For details, please refer to “FY2017 Financial Results” (released May 10, 2018).

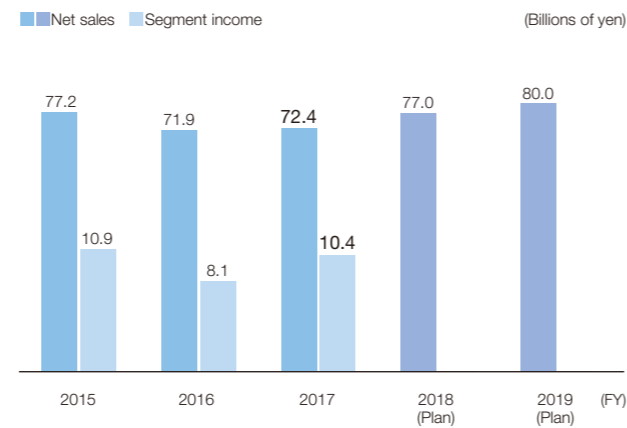
[https://www.ushio.co.jp/documents/ir/library/presentation/2017/presentation\\_en\\_pdf\\_20180510.pdf](https://www.ushio.co.jp/documents/ir/library/presentation/2017/presentation_en_pdf_20180510.pdf)



## Business Overview (Fiscal Year Ended March 31, 2018)

In the electronics field, replacement demand was firm for super high-pressure UV lamps used in various manufacturing processes, due to growing capital investment in markets related to semiconductors, electronic components, and flat panel displays (FPD). In the visual imaging field, demand for xenon short arc lamps installed in cinema projectors has been contracting in step with progress on the adoption of solid-state light sources such as LEDs and laser diodes (LDs) in the cinema market. This trend mirrors the adoption of LEDs in the lighting field.

With these movements, there has been gradual progress on the adoption of solid-state light sources for industrial applications. USHIO's lamps have been gradually impacted by this trend. In response, USHIO has been strengthening and expanding the solid-state light sources business through M&As and other initiatives. In the fiscal year ending March 31, 2020, USHIO expects to increase net sales to ¥17.0 billion, compared with ¥11.0 billion in the fiscal year ended March 31, 2016.



## Major Products and Market Share

### Visual Imaging

#### Xenon short arc lamps

Xenon short arc lamps have characteristics that are very similar to sunlight and offer outstanding color rendering properties. Therefore, these lamps are used widely as light sources for high-intensity projectors and related applications.

Notably, USHIO's xenon short arc lamps for digital cinema projectors boast the industry's highest level of quality and have been adopted for use in movie theaters around the world. USHIO holds a worldwide share of 65% for its xenon short arc lamps for digital cinema projectors (based on internal research).



#### Halogen heater lamps

The light from halogen lamps can be used as heat. Halogen heater lamps are thus used in a wide range of fields as heat sources for applications such as heating, sintering and drying.

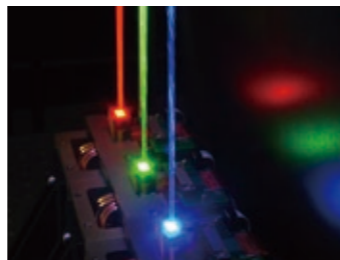
USHIO's halogen lamp heaters are chosen by customers as their preferred toner fixing light sources in copiers and laser beam printers (LBPs). USHIO holds a worldwide share of 80% for halogen heaters for toner fixing (based on internal research).



#### Laser modules and laser diodes (LDs)

These products are high-power laser light sources used in projectors, remote lighting systems and other applications.

Notably, the Necsel Laser Solution and high output power red LDs developed, manufactured and sold by an USHIO subsidiary are chosen by many projector manufacturers as their preferred light source for digital cinema projectors, which are increasingly shifting to solid-state light sources.



### Electronics

#### Super high-pressure UV lamps

USHIO's super high-pressure UV lamps are used as light sources in the most critical lithography processes, primarily in the production of semiconductors, electronic components, and flat panel displays. These lamps have contributed to the advancement of cutting-edge technologies in the electronics field. Supported by joint development projects with equipment manufacturers, USHIO has gained a strong reputation and trust from its manufacturing partners by fulfilling various customer needs. USHIO holds a worldwide share of 80% and 75% for its super high-pressure UV lamps for semiconductor lithography and for LCD lithography, respectively (based on internal research).



### Life Sciences

#### Various light sources

Xenon short arc lamps and super high-pressure UV lamps are also used in the life sciences field. These lamps are smaller versions of the xenon short arc lamps and super high-pressure UV lamps that play vital roles in the visual imaging and the electronics fields. Leveraging the characteristics of each type of lamp, the lamps for the life sciences field are used widely as light sources in solar simulators, microscopes, optical experimental apparatuses and related equipment.



## Business Strategies

USHIO has earned strong trust in various markets. This trust is the result of USHIO's niche-market leader strategy, where it focuses on supplying specialty light sources mainly to the visual imaging and the electronics industries, and its customer-centric approach of rapidly fulfilling customer needs in terms of Quality, Cost and Delivery (QCD). Since its founding, USHIO has been advancing business expansion initiatives with a global perspective. As a result, USHIO's products have captured high shares of the worldwide market.

In the past few years, there has been gradual progress on the adoption of solid-state light sources (LEDs, LDs, etc.) in industrial fields. In response to these trends, USHIO has launched the solid-state light source business through M&A activities and other initiatives, thereby developing an extensive product lineup for a variety of applications as a specialist "light" manufacturer. Through these measures, USHIO will continue to expand its business as the world's No.1 industrial light source manufacturer capable of proposing solutions that meet customer needs.

## Opportunities

In lamps, USHIO has launched new business expansion initiatives in unconventional fields such as medicine and environmental hygiene, where it is difficult to adopt solid-state light sources.

In the area of solid-state light sources, USHIO will enter new fields in addition to existing fields. This will be done by providing high-value-added solutions that take full advantage of the unique characteristics of solid-state light sources.

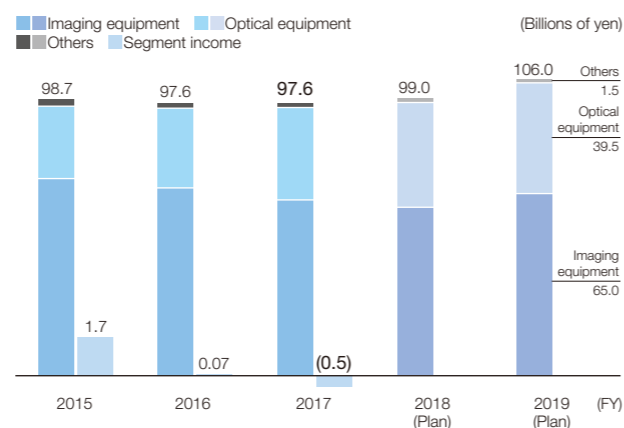
## Risks

Demand for conventional lamps could decrease as a result of the adoption of solid-state light sources in industrial fields. There is also the risk of encountering difficulties in procuring raw materials and parts unique to lamps. In order to minimize these risks, USHIO will make every effort to secure a stable supply of parts and materials.

## Business Overview (Fiscal Year Ended March 31, 2018)

In the equipment business, digital cinema projectors are the core product in imaging equipment. Although China has become the primary market for digital cinema projectors, demand for digital cinema projectors was sluggish due to intensified competition in the Chinese market. In response, since March 2018, USHIO has started sales of high-value-added laser projectors to address market needs for adopting solid-state light sources, with the aim of increasing its market share in China.

Meanwhile, in the optical equipment field, demand for a variety of optical equipment has been increasing, supported by growth in capital investment in various related markets against the backdrop of megatrends such as the Internet of Things (IoT) and 5G technologies.



## Main Products and Market Share

### Visual Imaging

#### Digital cinema projectors

USHIO's digital cinema projectors are used to show movies at movie theaters. USHIO's xenon short arc lamps or lasers are installed in these projectors as light sources.

CHRISTIE DIGITAL SYSTEMS, a subsidiary of USHIO, is a long-standing manufacturer of cinema projectors in the cinema industry, with a history of approximately 90 years. The company has earned a strong reputation and trust from the markets over many years. USHIO holds a worldwide share of 35% for its digital cinema projectors (based on internal research).



### Electronics

#### Lithography tools

In lithography tools, USHIO develops and manufactures projection lithography tools and direct imaging exposure systems. This equipment is used mainly in manufacturing processes for semiconductors, printed circuit boards (PCB) and various electronic devices. USHIO's super high-pressure UV lamps or lasers are installed in these lithography tools as light sources. In the past few years, advances in cutting-edge technologies have been seen in a variety of fields, such as the evolution of smartphones. USHIO's lithography tools have earned a strong reputation in the markets for contributing to advances such as higher energy efficiency and the miniaturization of various electronic devices installed in smartphones and other products. Notably, USHIO holds a worldwide share of 95% for its step & repeat projection lithography tools for high resolution printed circuit boards (based on internal research).



#### Photo-alignment equipment

Photo-alignment equipment is used in the process of aligning liquid crystal molecules in a certain direction (alignment control) during the LCD manufacturing process. USHIO's UV lamps are installed in this equipment as light sources. This photo-alignment equipment enables alignment control to be performed in a contact-free, clean environment, thereby contributing to improved production yields and reduced costs in the LCD manufacturing process, as well as to improved picture quality (higher resolution) in LCD panels. USHIO holds a worldwide share of 85% for its photo-alignment equipment (based on internal research).



### Life Sciences

#### TheraBeam® UV308 excimer light phototherapy device

This medical device makes use of the immunosuppressive effect of ultraviolet light. This device realizes highly therapeutic benefits and reduced side effects through the use of USHIO's excimer lamp and proprietary excimer filter. It is mainly used in the field of dermatology.



## Business Strategies

### Imaging Equipment

USHIO's imaging equipment has earned a strong reputation in the cinema industry under the CHRISTIE brand. This reputation is based on USHIO's relationships of trust with customers and its advanced technological capabilities developed over the years. USHIO's imaging equipment has driven the cinema industry's adoption of digital technology, which began in earnest in the 2000s, through an innovative financing scheme known as the Virtual Print Fee (VPF).

In addition, USHIO has continued to spark innovation in order to realize visual experiences that fascinate people not only in the cinema industry, but also in various other settings where visual imaging is needed. Going forward, USHIO will expand business by developing the imaging solution business, a field that goes beyond merely supplying equipment. To this end, USHIO will sell new products such as RGB laser projectors, which project clearer and sharper images than before in a variety of environments, and LED video wall displays, which use micro LEDs. USHIO will also enhance content management systems that integrate multiple images.

## Opportunities

### Imaging Equipment

In the entertainment field, there have been an increasing number of scenes that require the use of visual imaging, such as various entertainment events and amusement facilities. The pursuit of highly realistic visual experiences presents USHIO with business opportunities that are likely to drive future growth in its imaging equipment business, given that USHIO excels in high dynamic range (HDR), high frame rate (HFR) and large visual images. Growth of demand is anticipated for solution projects encompassing not only projectors but also LED video wall displays, content management systems, software and other products and services.

## Risks

### Imaging Equipment

International political trends, particularly growing protectionism, are one type of risk faced by USHIO in the field of imaging equipment. To minimize this risk, USHIO is accelerating the diversification and localization of its supply chains.

### Optical Equipment

USHIO started out in business as a manufacturer of industrial light sources. In the 1970s, USHIO established optical lighting technology and optical projection technology, which are the fundamental technologies that underpin optical equipment. By doing so, USHIO evolved from a manufacturer of light sources to a manufacturer of optical systems. Through these steps, USHIO has become the world's only manufacturer that is able to independently supply a full range of optical products and services, from the light sources essential to lithography equipment to peripheral technologies and support.

In addition, USHIO has earned strong trust from customers by delivering proposals that fit their needs. For example, USHIO has enhanced customers' productivity by enabling semiconductor manufacturing through large-area, full-wafer projection exposure. Moreover, USHIO has captured a large market share by realizing both high profitability and customer satisfaction through the niche-market leader strategy. Under this strategy, USHIO has specialized in semiconductor back-end processes and products for various devices where it is able to maintain a competitive edge. In the past few years, investment in the electronics field has been expanding to Asia and various countries in Europe and the Americas. In response, USHIO has been pushing ahead with global strategies to conduct marketing, sales and services leveraging USHIO global sites.

### Optical Equipment

Demand for USHIO's wide range of projection lithography equipment, direct imaging exposure systems and related products could increase as investment picks up in related industries, in response to growing needs for a variety of electronic devices. These needs will be driven by advances in megatrends in the electronics field led by IoT and 5G technologies. There are also plans for the adoption of EUV light source units for photo mask inspection used in cutting-edge semiconductors. Moreover, USHIO is also working to advance into other fields, such as medical devices, by developing functional optical parts based on optical technologies gained through the aforementioned initiatives.

### Optical Equipment

In the field of optical equipment, USHIO could see unstable business performance given the difficulty in maintaining sustained growth in a market environment that is structurally subject to highly volatile fluctuations in investment cycles. In addition, as a result of advances in megatrends such as IoT and 5G technologies, there is the risk that USHIO may find it difficult to secure engineers and procure parts and materials, among other challenges. Accordingly, USHIO will continue to closely monitor changes in demand in the market.

The theme of the current Medium-term Management Plan is to “solidify the foundation for taking the next leap forward.” To do so, USHIO is making steady strides on a daily basis to “pursue new growth opportunities.” At the same time, in anticipation of the period after the current Medium-term Management Plan (fiscal year ending March 31, 2021 onward), USHIO is ambitiously developing new business fields to take its next leap forward as a “light innovation company.”

Solidify the foundation for taking the next leap forward

Take the next leap forward as a “light innovation company”

## Successfully “pursue new growth opportunities” by exploring and realizing the functions of light

Based on strengths nurtured in existing businesses, USHIO is developing solid-state light sources, EUV light source units for photo mask inspection, and high-end imaging-related equipment for the short to medium-term.

USHIO will harness its proprietary technologies to refine and realize the functions of light it has uncovered so far, thereby contributing to society.

## Develop new business fields to take the next leap forward as a “light innovation company”

In order to take its next leap forward as a “light innovation company” from the fiscal year ending March 31, 2021 onward, USHIO is developing new business fields from a medium- to long-term perspective. USHIO is focusing on two fields in particular: environmental hygiene and cutting-edge preventive medicine. In these two fields, USHIO is tackling ambitious initiatives on a daily basis in order to provide people with safe, secure, healthy and prosperous lifestyles.

### Solid-state Light Sources

In markets shifting from lamps to solid-state light sources, USHIO will stay on top of changes by expanding and upgrading its lineup of solid-state light sources. In the process, USHIO will make the most of its relationships with customers developed through lamps. In addition, USHIO will enter fields where solid-state light sources have been used previously, such as the fields of sensing, measurement and sorting, and will create new business opportunities in each of those fields.



### Environment and Sanitation

USHIO is developing new functions of light by using light to create a hygienic environment. USHIO seeks to clean air and water using light that can only be generated from lamps, and to prevent infections through the use of ultraviolet light that is harmless to the human body. In these and other ways, USHIO will contribute to a safe, secure and comfortable society.



### EUV Light Source Units for Photo Mask Inspection

Amid continuing miniaturization of semiconductors, EUV lithography technologies have attracted interest in the manufacturing process for next-generation semiconductors. To establish EUV lithography technologies as a mass production technology, USHIO will focus on developing light sources for the inspection of photo masks and patterns. From the standpoint of inspection applications, USHIO will contribute to innovation in EUV lithography technologies, thereby contributing to an important area of technological innovation for society as a whole.



### Cutting-edge Preventive Medicine

USHIO is exploring ways to use light to identify and treat illnesses at an early stage. USHIO will repurpose the microfabrication technology it has developed in the electronics field by using it to manufacture biochips and functional optical parts. In doing so, USHIO aims to contribute to the realization of a society where people can lead even healthier lives.



### High-End Imaging-related Equipment

The entertainment field, including cinema and theme parks, continues to evolve in order to provide people with attractive entertainment. Going forward, USHIO will remain focused on the development of imaging-related equipment and the display of high-end video images, with the aim of delivering entertainment experiences that thrill and amaze people.



# World's First Successful Bacterial Disinfection of Pressure Ulcers Using 222 nm UV Light Harmless to the Human Body

USHIO regards creating new business in fields such as medicine and hygiene as something more than a key management task. To illustrate this, we introduce some of the ways we are helping solve social issues through our operations.

## A Ray of Light for the Bedridden

A medical term for bedsores is pressure ulcers. Both terms allude to how the injuries come about.

When people are bedridden for a long time, constant pressure against the skin in contact with the bed limits blood flow and can lead to skin, hypodermis, and muscle death. In serious cases, these pressure ulcers can bring about bacterial infections of the hypodermis, bone, and so forth, and even complications leading to death.

Many patients are now suffering from pressure ulcers. In the United States, it costs some three trillion yen a year to treat the numerous patients with pressure ulcers, diabetic leg ulcers, and the like. As life expectancy increases in the future, that cost may rise. In addition, chronic wounds are at risk of infection. While antibiotics and antibacterial creams are used accordingly for prevention and treatment, multi-drug resistant bacteria such as MRSA (methicillin-resistant *Staphylococcus aureus*) that cannot be eliminated with such drugs are on the rise of late. Moreover, using antibiotics entails a risk of creating new strains of drug resistant bacteria.

A desire to use USHIO's "light" to help suffering patients is what fueled the R&D that gave rise to USHIO's 222 nm ultra-violet sterilization system. What started with the conclusion of exclusive license and research agreements with Columbia University in the United States led to a collaborative project with the National University Hospital of Singapore (NUHS) and the world's first successful method of ridding pressure ulcers of bacteria without otherwise affecting patients' bodies.



Our 222 nm UV sterilization system (left) and its light source (right)



## UV Sterilization Has Great Potential

Sterilization and disinfection that harnesses UV light's powerful energy has immense potential. Basic research is already underway in the United States and Japan to put it to use in disinfecting surgical sites during surgery, and applications for disinfection and sterilization abound in the field of hygiene. We believe it is our mission to wield the power of light to ease the pain and suffering of patients worldwide.

### Potential applications for our 222 nm UV sterilization system

- Treatment of infected chronic wounds
- Disinfection of surgical sites during surgery
- Curbing airborne transmission and infection through contact of SARS-CoV (SARS coronavirus), MERS-CoV (MERS coronavirus), dengue fever, and the Ebola virus
- Hand disinfection
- Equipping appliances like hand dryers with a sterilization function
- Spore fungus and norovirus sterilization

## USHIO's Light Technology and SDGs

Of the Sustainable Development Goals (SDGs), we are especially focusing on "Good Health and Well-being" as it is deeply connected to our business. Our 222 nm UV sterilization system is one example. USHIO is contributing toward the achievement of SDGs via light technology.



### "Good Health and Well-being" is a particularly relevant target for USHIO

By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

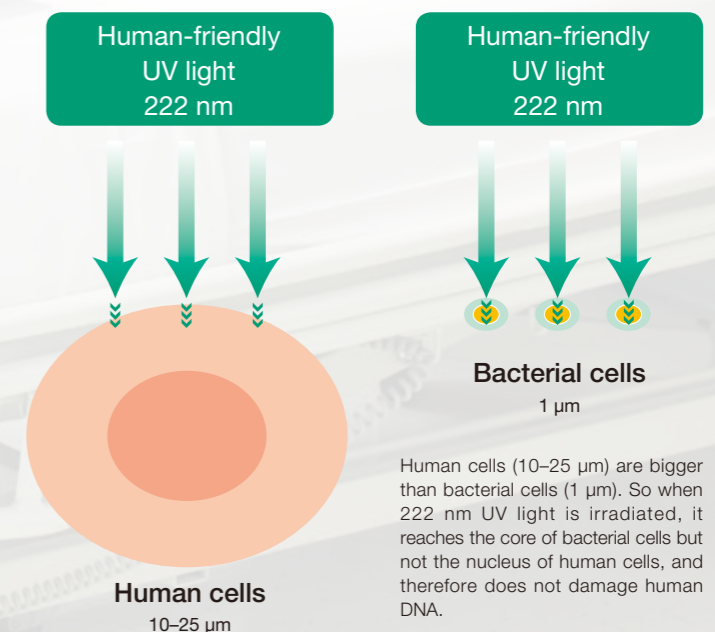
## Why the 222 nm Wavelength of UV Light Is Harmless to the Human Body

UV light causes things like tanning and photo-aging such as wrinkles and sunspots. While it is generally thought of as being harmful to the human body, that is not always the case. The effects of UV light depend on the wavelength.

UV light around 260 nm is actually the most effective for disinfection, but that wavelength is very harmful to the human body.

On the other hand, 222 nm UV light reaches the core of bacterial cells but not the nucleus of human cells, so it does not damage human DNA or bring about carcinogens or otherwise harm the human body.

222 nm is the best wavelength of UV light for sterilization and disinfection since shorter wavelengths are not only less effective but also require use in a vacuum environment and secondary equipment.



## USHIO's Management Philosophy and CSR Management

USHIO aims to solve social issues and realize a sustainable society through products and services that use its light technology. CSR activities are the management foundation of our business activities; we will conduct a diverse range of activities and build good relationships with all of our stakeholders through communication, which will serve as one of the driving forces for achieving sustainable development alongside communities and societies. In addition, we are developing concepts for our Management Philosophy and Action Guidelines to ensure that each employee is conscious of fulfilling their responsibilities as a member of society.

USHIO GROUP

### Management Philosophy

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①

Build both a prosperous Company  
and prosperous employees.

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②

Deliver products and services  
that are competitive in the global market.

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③

Contribute to society through superior products  
and innovative research and development.

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④

Expand profits, corporate responsibility, and  
competitiveness through open and free-thinking  
business operations.

USHIO

USHIO GROUP

### 10 Action Guidelines as a Member of Society

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1. We shall aim to be a company that accepts diverse individual qualities and values and where people work together and pursue self-learning and self-improvement.
2. We shall strive for the company's sustainable growth through our innovative, proactive and prompt management.
3. We shall respect all the internationally recognized basic human rights relating to our business activities, and endeavor to create bright, safe and pleasant working environments.
4. We shall provide high-quality, safe products and services at appropriate prices and carry out fair and equitable business transactions.
5. We shall work to earn the understanding and trust of society.
6. We shall comply with laws and regulations and carry out fair business activities in accordance with socially accepted practices.
7. We shall fulfill our duties to the best of our abilities in conformity with internal regulations and standards.
8. We shall promote environmental protection and the efficient use of resources.
9. We shall carry out proactive public relations activities while respecting the value of information and intellectual property rights of third parties.
10. We shall contribute to the development of respective regions where we conduct business as a member of the international community.

USHIO

## Support for United Nations Global Compact's Ten Principles

USHIO has declared its support for the United Nations Global Compact's Ten Principles, which are universal principles concerning human rights, labor standards, the environment and anti-corruption.

In September 2015, the UN adopted the Sustainable Development Goals (SDGs), and amid rising interest in social issues, we are working to promote all facets of CSR among the many other participating companies and NGOs. To this end, we are continuing to play an active role in sectional activities for sharing information on necessary specific measures and enhancing the activities of each company.



## Evaluations of USHIO's CSR

USHIO has been selected for three Environment, Governance, and Society (ESG) indexes—the MSCI Japan ESG Select Leaders Index, the MSCI Japan Empowering Women (WIN) Select Index, and the FTSE Blossom Japan Index—which were adopted by the Government Pension Investment Fund (GPIF), the world's largest pension fund management institution. USHIO was highly evaluated on its initiatives for environment, society, and governance in terms of ESG investment that is expected to enhance risk-adjusted returns the longer it is invested.

Going forward, USHIO will proactively advance its initiatives, working to improve its corporate value while contributing to the realization of a sustainable society.

### Evaluations of CSR Management

USHIO was selected as a constituent of the FTSE4Good Index Series, a socially responsible investment (SRI) index provided by FTSE Russell, for the 15th consecutive year. USHIO was also selected for the second consecutive year for the FTSE Blossom Japan Index, which includes performance indicators of Japanese companies with outstanding ESG practices.



USHIO was selected as a constituent for both the MSCI Japan ESG Select Leaders Index and the MSCI Japan Empowering Women (WIN) Select Index for the second consecutive year. The MSCI Japan ESG Select Leaders Index is based on the MSCI Japan IMI Top 500 Index, and includes companies with highly -evaluated ESG initiatives. The MSCI Japan Empowering Women (WIN) Select Index is also based on the MSCI Japan IMI Top 500 Index and includes companies with a high level of gender diversity among their workforce, indicated by a "gender diversity score" that was newly developed by MSCI.



USHIO was also selected for inclusion in the 2018 SNAM Sustainability Index managed by Sompo Japan Nipponkoa Asset Management Co., Ltd. (SNAM, pronounced "S-NAM"), an index used in the SNAM Sustainable Investment Fund project that allows pension trusts and institutional investors to invest in about 300 listed brands with excellent ESG performance. This is the 7th consecutive year that we have been highly evaluated for our ESG initiatives since this index's establishment in 2012.



### Evaluation of Reports

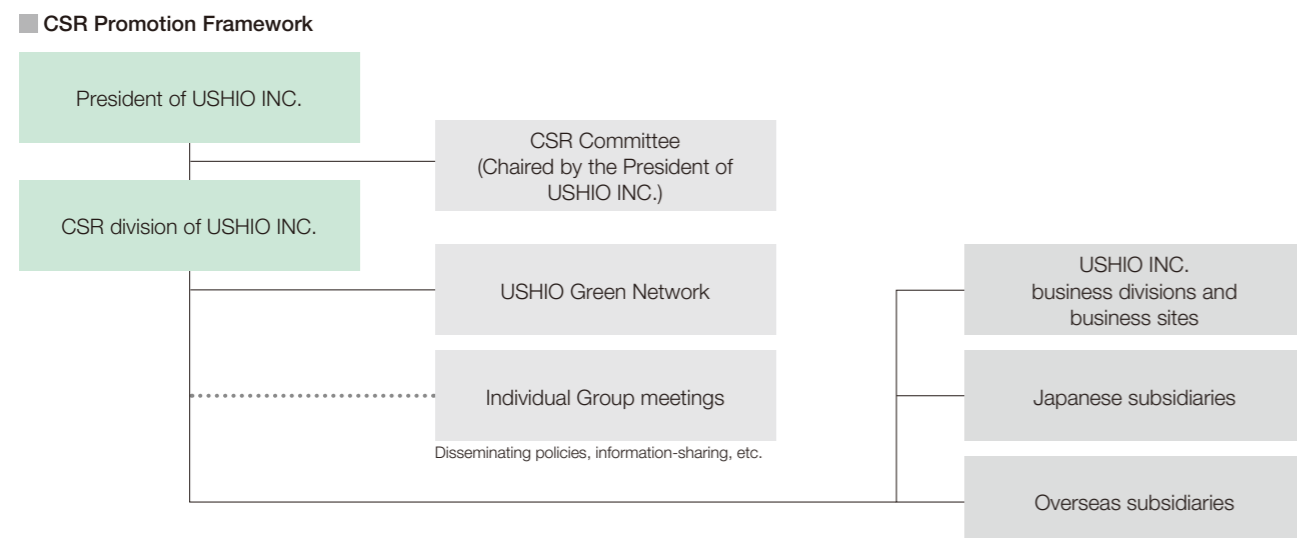
USHIO received an Award for Excellence in the Environmental Report category of the 21st Environmental Communication Awards; our Sustainability Report was highly evaluated for content and target-setting methods.



## CSR Management

### CSR Promotion Framework

USHIO has established a CSR Committee, which is chaired by the president. The committee decides on the Group's policies relating to CSR initiatives. The separate subcommittees for each initiative and Ushio Inc.'s CSR manager are developing plans for business divisions, business sites, and Group companies in accordance with these policies. In addition, USHIO is disseminating policies and sharing information through individual Group meetings and the USHIO Green Network.

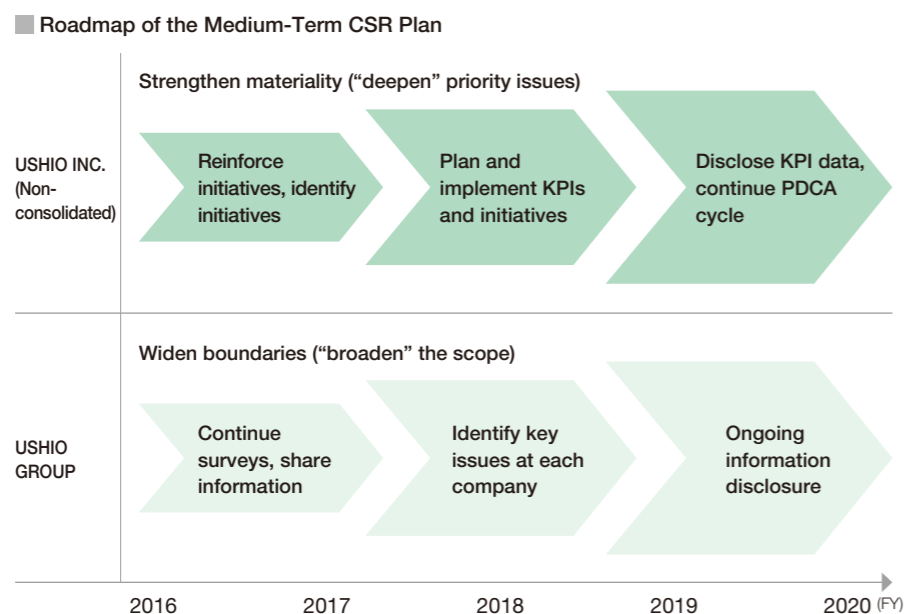


### Medium-Term CSR Plan

In the fiscal year ended March 31, 2017, we created a framework for the new medium-term CSR plan in order to advance our CSR activities one step further while aiming to develop as a company and improve the social aspects of our business at the same time.

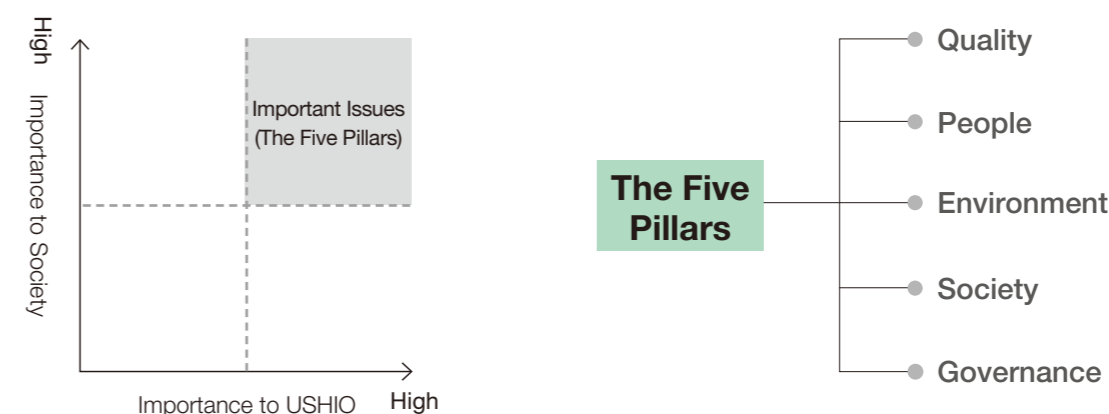
Targeting 2020, our new medium-term CSR plan seeks to “deepen” our stance by focusing on priority matters for both business and social contributions, as well as “broaden” our CSR activity framework for the Group as a whole, instead of focusing mostly on the parent company.

While continuing to strengthen the initiatives we have implemented to date, we will focus more on activities that contribute to society in addition to our own development. We believe sustainable development would not be possible without CSR management that suits the USHIO Group amid globalization.



## Selection of Materiality

Since the fiscal year ended March 31, 2011, we have emphasized discussions and reviews on important issues (materiality) for improving corporate value in the Environmental Committee (presently the CSR Committee). USHIO has decided on five pillars of materiality at present, stemming from items such as dialogues with suppliers, interviews with employees, trends for the ISO 26000 standard, and the importance of company businesses.



## Relationship with Sustainable Development Goals

The United Nations Sustainable Development Summit adopted the Sustainable Development Goals (SDGs) in September 2015. These SDGs describe goals for 2030 that aim to realize a sustainable world without poverty, inequality and economic disparity, and climate change.

At USHIO, we are examining eight possible areas in which we can contribute to achievements among the 17 targets in the SDGs. We will utilize the knowledge we have cultivated as professionals in light technology to conduct activities that are linked to the resolution of social issues.

In particular, we believe we can utilize many special features of light technology in the fields of medical care and sanitation, thus focusing most of our attention on Goal 3 “Good Health and Well-being.”



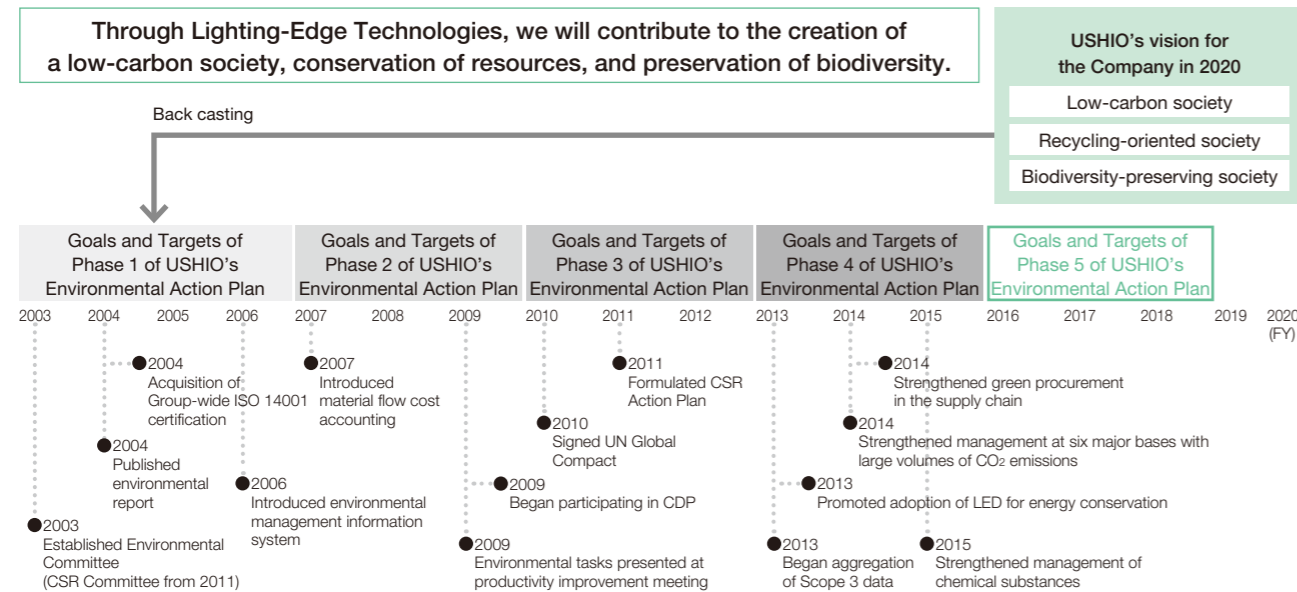


# Environmental Vision and Environmental Action Plan

## 2020 Environmental Vision

USHIO is working to realize a low-carbon, recycling-oriented, biodiversity-preserving society by the year 2020. We have set these three goals as our 2020 Environmental Vision, and we have formulated an Environmental Action Plan to achieve them through our business activities. In the fiscal year ended March 31, 2017, USHIO started implementing Phase Five of the Environmental Action Plan, which continues through to the final year of the 2020 Environmental Vision. USHIO has also begun considering its new vision for the year 2030.

### 2020 Environmental Vision



### Phase Five of the Environmental Action Plan

Phase Five of the Environmental Action Plan was drafted by back-casting from the 2020 Environmental Vision and considering the issues under Phase Four, data analysis, and many other elements. Phase Five of the Environmental Action Plan will continue to focus on the key areas of green products, reducing CO<sub>2</sub> emissions at business sites, CSR procurement, and resource recycling. In addition, as an initiative to shift to the 2015 version of ISO 14001, the Company is taking measures to prevent these efforts from losing their significance and ensure they are implemented in an efficient and businesslike manner. In particular, with regard to green products, USHIO is planning to increase corporate value by adding social demand aspects such as safety and security in addition to environmental considerations.

#### Five Themes of Phase Five of the Environmental Action Plan

ISO 14001 Environmental Management System	Develop products that contribute to the environment and society	Reduce the volume of CO <sub>2</sub> emissions in business activities	CSR procurement	Management of chemical substances, resource recycling, and preservation of biodiversity
<p>Objective: Complete transition to the 2015 version of the ISO 14001 Environmental Management System</p> <p>(1) Share information about regulations</p> <p>(2) Work on issues to improve ISO compliance at each Group company (prevent substance loss, improve effectiveness, conduct rigorous internal audits, etc.)</p>	<p>Objective: Provide safe, secure and environmentally conscious solutions</p> <p>(1) Develop benchmarks and implement evaluations based on both environmental and social contribution of products</p> <p>(2) RoHS compliance for equipment and LEF products</p>	<p>Objective: Reduce CO<sub>2</sub> emission by 3% from the fiscal year ended March 31, 2015, levels on a sales unit basis</p> <p>(1) Manage measures at main sites</p> <p>(2) Visualize conditions after responding to business change</p> <p>(3) Autonomous reductions (other sites)</p>	<p>Objective: Advance CSR procurement as a group</p> <p>(1) Conduct and analyze CSR surveys</p> <p>(2) Administer according to USHIO Green Procurement Standards</p> <p>(3) Share information about harmful chemical substances in products</p> <p>* Efficiently conduct CSR procurement surveys</p>	<p>Objective: Strengthen chemical substance management</p> <p>(1) Reinforce management from ingress to egress of chemical substances</p> <p>(2) Share information about laws and regulations</p> <p>(3) Reduce the volume of water resources used and evaluate water risks</p> <p>(4) Implement biodiversity preservation initiatives under each theme</p>

Promote activities centered on committees and business sites



\* 3R: Derived from the three initial R's of Reduce (reduce the waste generated), Reuse (reuse waste), and Recycle (recycle waste)

### Implementation Status of Phase Five of the Environmental Action Plan

We have completed the second year of Phase Five of the Environmental Action Plan and although we are steadily progressing, many issues remain concerning the reduction of CO<sub>2</sub> emissions generated by business activities. Regarding the reduction of CO<sub>2</sub> emissions, USHIO is also considering setting a target in line with a SBT (Science-Based Target),\* as well as reducing them on a per unit basis.

\* A reduction target in line with current scientific knowledge, aimed at a "2°C target" to keep the increase of global temperature below 2°C compared to pre-industrial revolution temperatures, as specified in the Paris Agreement. The advocacy of this target is a joint initiative conducted by the WWF (World Wildlife Fund), the CDP (Carbon Disclosure Project), the WRI (World Resources Institute), and the United Nations Global Compact.

For further information, please refer to the "Environmental Action Plan" webpage on the Company website.

<https://www.ushio.co.jp/en/csr/eco/manage/plan.html>

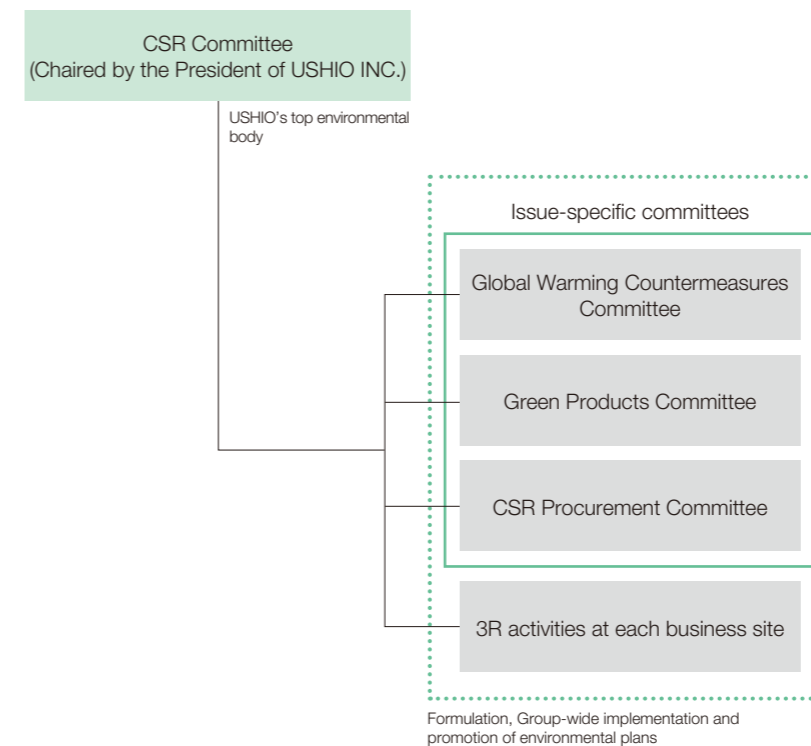


## System for Promoting Environmental Management

Ushio Inc.'s CSR Committee, chaired by the Company president, is the top decision-making body for environmental activities at USHIO. Under the CSR Committee are issue-specific committees, and each department, business division and Group company determine the trajectory of activities at the worksite level.

By carrying out these environmental activities independently, we are working to advance Phase Five of the Environmental Action Plan.

### System for Promoting Environmental Management



**Jiro Ushio**  
Chairman and USHIO Group Representative



**Kenji Hamashima**  
President and Chief Executive Officer



**Shiro Ushio**  
Director



**Hiroaki Banno**  
Director



**Yoshinari Hara**  
Outside Director



**Yasufumi Kanemaru**  
Outside Director



**Sakie T. Fukushima**  
Outside Director



**Nobuyuki Kobayashi**  
Director (Full-time Audit & Supervisory Committee Member)



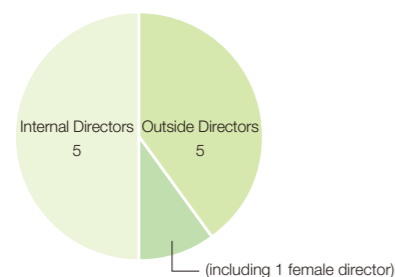
**Masanori Yoneda**  
Outside Director (Audit & Supervisory Committee Member)



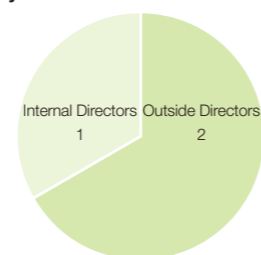
**Nobuyoshi Yamaguchi**  
Outside Director (Audit & Supervisory Committee Member)



■ Board of Directors



■ Audit & Supervisory Committee



USHIO INC. recognizes that realizing the vision set forth in its Management Philosophy, and promoting the sustainable growth of USHIO INC. and increasing corporate value over the medium to long term, will bring satisfaction to all stakeholders.

To achieve this goal, USHIO INC. strives to ensure the transparency and efficiency of corporate management and to reinforce corporate governance to realize speedy and resolute decision-making.

### Corporate Governance Framework

USHIO INC. has transitioned to a Company with Audit & Supervisory Committee and been functioning under this system.

This system has been fostering speedy decision-making by delegating decisions for certain important business matters from the Board of Directors to executive directors. It has also strengthened the supervisory function of the Board of Directors by ensuring that most of its members are outside directors. The system has also been reinforcing audit & supervisory functions by having established an Audit & Supervisory Committee with the authority to assess the legality and validity of board members in performing their duties.

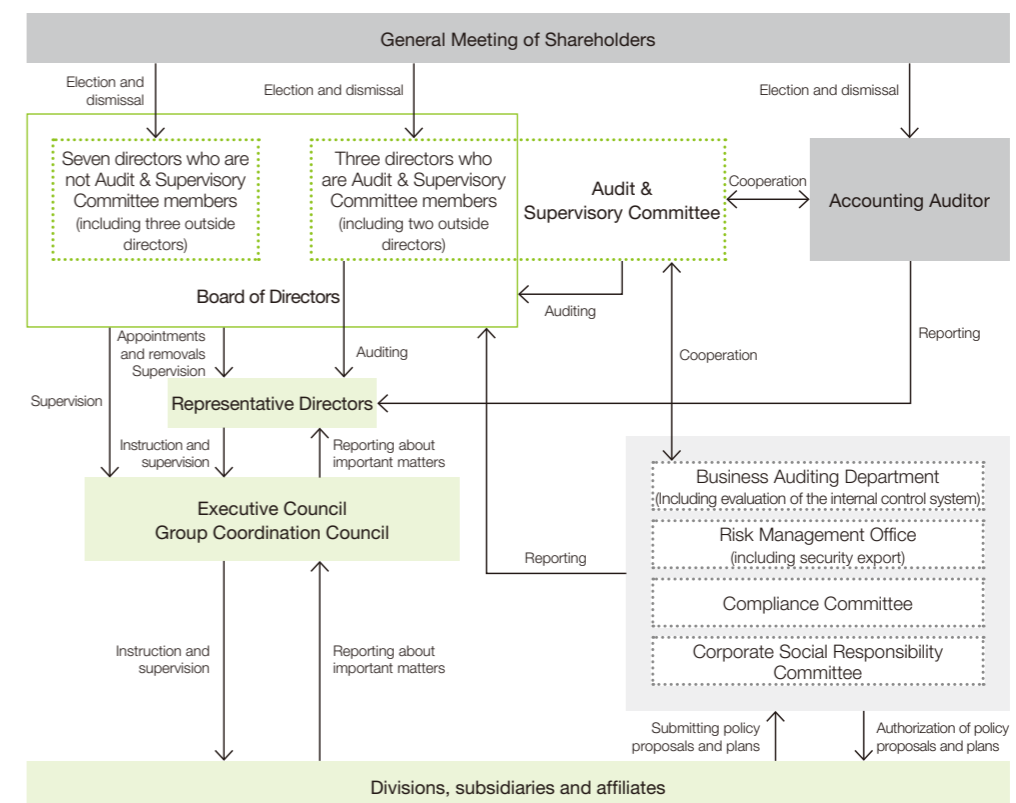
The Board of Directors comprises 10 directors. Seven are not Audit & Supervisory Committee members (consisting of six Japanese men and one Japanese woman, and including three outside directors), and three are Audit & Supervisory Committee members (all consisting of Japanese men and including two outside directors). The Board of Directors oversees decision-making

and business execution for top priority issues, including basic management policy.

Delegating decisions on certain important business execution to overseeing directors has accelerated decision-making. At the same time, the executive officer system has led to more accurate and speedier business execution. USHIO INC. established the Executive Council and Group Coordination Council to discuss and report on priorities in business execution.

The Audit & Supervisory Committee audits and oversees directors' performance of duties in line with its own audit and supervising standards. USHIO INC. appointed a Full-time Audit & Supervisory Committee member to enhance the efficacy of audits by collecting information from directors (excluding those who are also Audit & Supervisory Committee members) and employees and coordinating smoothly with the Business Auditing Department and Accounting Auditor.

### USHIO INC.'s Internal Control Framework



## Stance on Corporate Governance Code

USHIO INC. is implementing its corporate governance in line with all the principles of the Corporate Governance Code of the Tokyo Stock Exchange.

See the "Corporate Governance Report" on the USHIO corporate website for more details.

<https://www.ushio.co.jp/en/ir/library/governance/>



## Evaluation of the Effectiveness of the Board of Directors

USHIO INC. conducts questionnaires and interviews regarding individual directors concerning the composition of the Board of Directors, the status of operations, matters discussed and more, and analyzes and evaluates the effectiveness of the Board of Directors. As a result of the analysis and evaluations conducted in the fiscal year ended March 31, 2018, the Company judges that the effectiveness of the Board of Directors has been generally secured.

At the same time, USHIO INC. will continue to further reinforce information provision and discussions as challenges that must be tackled, and it has been confirmed and shared by the Board of Directors. USHIO INC. will continue to work on these improvements.

## Stance on Directors Remuneration

The remuneration system comprises monetary compensation and stock-based compensation consisting of a basic amount based on position and an amount determined based on operating performance and performance evaluation.

Resolutions by the Board of Directors regarding remuneration are reached based on deliberation conducted in advance by the Remuneration Advisory Committee, which consists of a chairperson and a majority of outside director members. This composition is from the perspective of ensuring fairness and appropriateness regarding the remuneration system and standards and the assessment of contribution to operating performance.

### Total Remuneration and Other Payments by Director Category, Total Amounts by Type of Remuneration, and Number of Eligible Directors

Director categories	Total remuneration and other payments (millions of yen)	Total amounts by type of remuneration (millions of yen)					Number of eligible directors
		Basic compensation	Stock options	Bonuses	Stock-based compensation for directors	Retirement benefits	
Directors (excluding Audit and Supervisory Committee members) (excluding outside directors)	257	207	—	—	50	—	4
Directors (Audit & Supervisory Committee members) (excluding outside directors)	27	27	—	—	—	—	1
Outside directors	56	56	—	—	—	—	7

Note: Stock-based compensation for directors is based on expenses recorded in the consolidated financial results for the fiscal year ended March 31, 2018, under Japanese GAAP.

## Internal Auditing and the Audit & Supervisory Committee Audits

The Audit & Supervisory Committee comprises three members, including one Full-time Audit & Supervisory Committee member, and has been established to oversee the directors' performance of duties.

The Business Auditing Department, which conducts USHIO INC.'s internal auditing functions, performs on-site audits to check the appropriateness of operational controls and procedures. The department submits an annual audit plan to the Audit & Supervisory Committee and explains its specific auditing policies. It also reports as necessary to the committee on the results of internal audits.

The Accounting Auditor submits annual plans to the Audit & Supervisory Committee and explains its specific auditing policies. It also presents reports summarizing reviews and audit results for quarterly reviews and accounting audits for quarterly and year-end results.

The Audit & Supervisory Committee, Business Auditing Department and Accounting Auditor exchange information and opinions and cooperate with each other.

## Compliance

USHIO INC. has established "10 Action Guidelines" to define standards for behavior that require everyone at the Group to comply with laws, regulations, the Articles of Incorporation, and Management Philosophy. The Compliance Committee is responsible for ensuring that employees observe these guidelines. The Business Auditing Department and Compliance Committee jointly perform audits to monitor the status of compliance and submit audit reports as necessary to the Board of Directors and Audit & Supervisory Committee. Furthermore, information involving the performance of directors' duties is recorded, stored, and managed, in documentary and electronic formats. This enables the directors and Audit & Supervisory Committee members to view the information at any time and take timely and appropriate action as required.

To reinforce awareness of the importance of compliance, all Group companies use USHIO INC.'s standards for behavior and other guidelines and the Business Auditing Department performs audits of the Group companies.

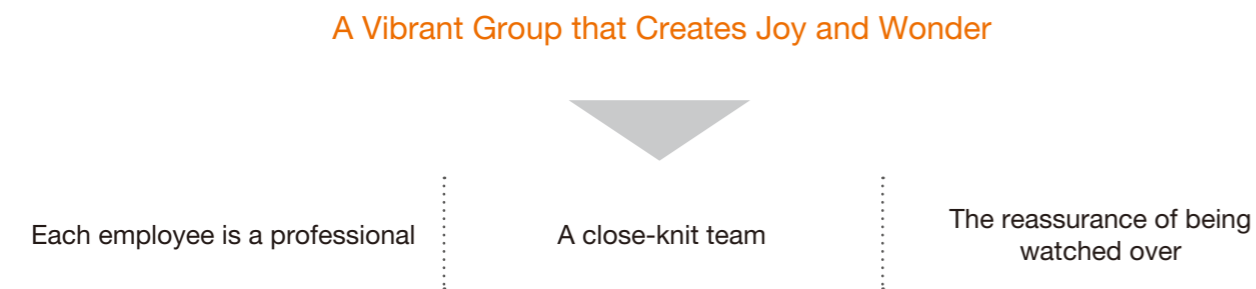
## Risk Management

In its risk management regulations, USHIO INC. has specified departments responsible for respective risk categories, including compliance, the environment, product quality, finance, legal matters, natural and other disasters, information management, and export controls. Each responsible department is to establish rules and guidelines, conduct training, and produce and distribute manuals and so forth. When a new risk emerges, a director or an executive officer is to be promptly appointed to take responsibility for handling it. Furthermore, if a risk materializes and is expected to incur significant damage, the responsible director or executive officer is to report it promptly to the Board of Directors.

USHIO's Management Philosophy is to "build both a prosperous company and prosperous employees." To realize this philosophy, Ushio Inc. has set out a Human Resources Vision.

Moreover, we have documented the image of human resources required by Ushio Inc. and the requirements for the human resources in order to realize the vision. We have also established initiatives to provide systematic education to accelerate the growth of each employee.

## Human Resources Vision



## Image and Requirements of Human Resources

**Professional human resources who have "will" and "passion," respect diverse values, and continue to collaborate and take on challenges**

### Conduct

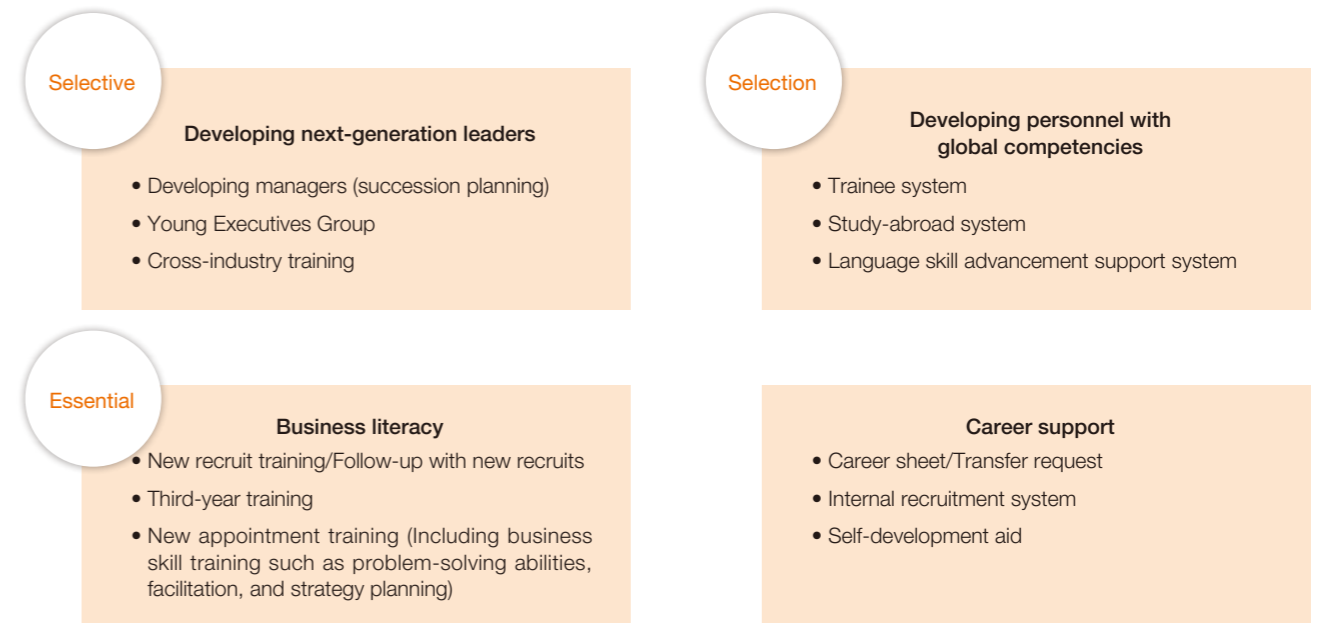
- **Customer service**  
Ability to provide real value that exceeds customers' needs
- **Issue identification**  
Ability to grasp situations correctly, identify essential tasks, and establish resolution strategies
- **Target achievement**  
Ability to organize and execute processes for realizing targets
- **Active engagement**  
Ability to engage other people and execute strategies with synergy and speed
- **Learning**  
Ability to drive own growth, support (educate) others, and learn together

### Good Attitude

- **Tenacity**  
Commitment to take risks as necessary and to persist to the end without quitting
- **Flexible thinking**  
Commitment to question established ideas and accept change and diversity without being bound to conventional practices
- **Ambition**  
Commitment to take on challenges with an awareness of the people involved, and without fearing failure
- **Respect**  
Commitment to have a spirit of altruism, consider others and build relationships of trust

## Ushio Inc.'s Education and Training Systems

Ushio Inc. has established an education system based on our image of and requirements for human resources premised on employees growing through their work. In addition to essential training such as new recruit training and new appointment training, we offer cross-industry training, an internal recruitment system, and other opportunities for employees to voluntarily learn and take on challenges.



## Developing Management Personnel

USHIO is concentrating on fostering management for the next generation to realize sustainable growth.

In October 2017, we launched the Nomination and Education Advisory Committee to increase the effectiveness and value of development measures.

We will systematically and continually develop future leaders by selecting candidates, establishing and executing training plans, and conducting assessments, all centered on the requirements for management positions.

Specific initiatives include transfers and assignments that take into account leadership candidates' training plans, involving employees in important internal decision-making organizations, implementation of a mentor system, and dispatching employees to external training to gain business literacy and engage in cross-industry networking.

Management Human Resource Requirements



## Young Executives Group

This is one of our systems for nurturing future management personnel.

Members of the group are chosen from an openly canvassed pool of applicants, typically young employees in their 20s and 30s from Group companies. There are four target criteria: aspiration and passion, a strategy construction ability, an ability to act, and an ability to work in a global setting. The participants tackle specific initiatives, including acquiring business skills such as management strategy, and grasping and proposing measures for current management issues. They undertake these activities while exchanging opinions with upper management, external executives, and experts, among others. Through this system, USHIO provides these highly motivated young employees with opportunities to think about their career paths.



Ushio Inc. is focusing on the promotion of diversity to realize the creation of value by diverse human resources. Moreover, Ushio Inc. aims to Create Joy and Wonder and Continue to Grow by means of implementing a variety of initiatives, including promoting a good work-life balance, utilizing global human resources, employing people with disabilities, implementing a re-employment system, and encouraging the active participation of women.



## Basic Policy on Diversity

The meaning of diversity at Ushio Inc. is Creating Joy and Wonder (New Value) and Continuing to Grow. We have defined establishing management that is focused on each individual employee as the basic policy for realizing that.

We believe it is important for each employee to express their thinking and beliefs and deepen mutual understanding by accepting and respecting others' views. Moreover, as business and workplace conditions evolve together with the diversity of our employees, we are implementing concrete measures and initiatives that reflect our primary consideration for what is ideal for the organization and our employees, rather than simply adhering to uniform rules.

## Creating Joy and Wonder and Continuing to Grow

### Increase Competitive Advantage in Business

- New value created through cooperation from human resources of diverse values and backgrounds
- Ability to achieve efficient and highly productive operational management

### Boost Employee Motivation

- Individual creativity is enhanced, enabling employees to reach their full potential
- Employees can strive with confidence in an environment where people accept differences and respect one another

### Our Mission in Society

- Continue being a company that coexists with society and has its respect

## Promoting Diversity

In July 2017, Ushio Inc. launched the Diversity Promotion Project with the aim of further promoting "management focused on each individual employee." For the project, we sought out employees who were interested in diversity in Ushio Inc., and are conducting activities that unify management, HR personnel, and other employees. By engaging employees in diversity promotion, we think we can implement activities that incorporate the opinions of the relevant parties and that possess a sense of the front-lines. This initiative also provides training for management human resources.

### Specifics of Initiatives

#### Work-style Reforms

##### More flexible work styles

We aim to enhance productivity and bring about innovation with work styles that are speedy, efficient, and effective, and work styles that increase diverse thinking and imagination. Furthermore, we look to link that to improving employee self-management and motivation. We are starting with a trial to examine the introduction of a telecommuting system.



#### Supporting Work/Caregiving Balance

##### Seminar on balancing work and caregiving

An internal survey when we rolled out the Diversity Promotion Project found that about 80% of employees had concerns about balancing work and caregiving.

We held a seminar in hopes of easing the employees' anxieties about caregiving and about balancing it with work.

A post-seminar survey indicated many employees are capable of balancing caregiving and work. We are taking various ongoing steps to promote a good work/caregiving balance.



#### Support for Working Women

##### Round table discussions

Each division held round table discussions to provide a forum for employees to share their current concerns and facilitate the creation of future career plans through exchanges with women with management experience working in other divisions, Diversity Promotion Project members, and so on.

Participants said the round table discussions enabled them to discuss problems they do not normally have an opportunity to share and left them feeling positive.

We intend to put the feedback we received from round table discussions to use in future initiatives.



#### Promoting the Employment of People with Disabilities

##### Sign language workshop

An employee with a hearing impairment working at the Harima Division had difficulty communicating with supervisors and colleagues using sign language.

As a part of efforts to promote communication, we held a sign language workshop.

This workshop has spurred us to work to make more employees familiar with sign language going forward.



As a member of the international community and a good corporate citizen, USHIO implements measures to contribute to each local community where it does business.

## Backing the Building of a New Community in Onagawa Town through “Images, Music, and Light”

Lending a hand by supplying equipment for a projection mapping project by junior high school students

Ushio Entertainment Holdings, Inc. (hereinafter “UEH”), Ushio Inc.’s wholly owned subsidiary, lent a hand by supplying a high brightness projector, lighting system, and other equipment for junior high school students at CollaboSchool Onagawa Kougakukan, helping them to create and put on a projection mapping show. The show was held in front of JR Onagawa Station in Onagawa Town, Miyagi Prefecture on March 17, 2018.

CollaboSchool Onagawa Kougakukan opened four months after the Great East Japan Earthquake, providing educational support and emotional care to students. The school provides a project-based “discovery class” to encourage students to discover their interests and think about their futures. This projection mapping event was undertaken as part of this class.

Seven eighth graders at CollaboSchool Onagawa Kougakukan were split into three teams responsible for video production, music production and public relations and media. The students produced all aspects of the event by themselves, including coding the computer program needed for the projection mapping and

creating posters to draw local residents to the event.

Various images were presented based on the theme of the “Four Seasons of Onagawa Town,” featuring the students’ hometown where they were born and raised. These included images of the sea and sky, cherry blossoms, snow crystals, fireworks, and scenes of the area in front of the train station during the daytime. The presentation was received with a tremendous round of applause and cheers from an audience of about 200 people.

UEH’s slogan is “Beyond.” This slogan embodies UEH’s corporate message, specifically its aspirations to transcend existing modes of expression through light, sound, and images. The junior high school students of Onagawa Town are strongly determined to overcome the struggles and hardships caused by the Great East Japan Earthquake. Their stance resonated with the spirit of UEH’s “Beyond” slogan, leading to the company’s cooperation with this project.

Going forward, USHIO will continue to contribute to regional development and the education of children.



Event digest video



Roadster HD20K-J



VAYA Flood MP RGB

- Organizer: CollaboSchool Onagawa Kougakukan operated by the approved specified nonprofit corporation Katariba
- Projection mapping production support: Itnav Ishinomaki Association
- Equipment support: Ushio Entertainment Holdings, Inc.
- Sponsor: Onagawa Town Board of Education

## A Growing Circle of Support

USHIO supports scholarship students in Japan, China and the Philippines.

### The USHIO Foundation

The USHIO Foundation (the former USHIO Foundation for Culture and Learning) was established in 1994 to commemorate the 30th anniversary of the founding of Ushio Inc.. As globalization progresses, the foundation will contribute to society by assisting the development of the next generation of human resources, including overseas students, who will be responsible for leading the world in the future, and promote further interaction and mutual understanding between Japan and other countries.

So far, 580 scholarship students have been supported. In the fiscal year ended March 31, 2018, the foundation provided scholarships to 60 graduate students (including overseas students).



### USHIO (SUZHOU) CO., LTD.

USHIO (SUZHOU) CO., LTD. signed an agreement in January 2009 with China’s Suzhou University to establish the Suzhou University USHIO Scholarship Fund. Every year, a number of students are awarded scholarships. As of the close of the fiscal year ended March 31, 2018, a total of 265 students have benefited from the Suzhou University USHIO Scholarship Fund.



### USHIO PHILIPPINES, INC.

In the Philippines, students often have no choice but to discontinue their education, regardless of their academic ability, due to financial reasons. Even if they are fortunate enough to graduate, they often face a very challenging employment environment. As a result, large numbers of graduating students and others go abroad to find work. In light of these conditions, USHIO PHILIPPINES, INC. started a scholarship program in the fiscal year ended March 31, 2018. In the first year, USHIO provided scholarship support to three students.



# Financial Data

		FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY17
													Unit: Thousands of U.S. dollars <sup>*1</sup>
Earnings Data	Net sales (millions of yen)	¥ 148,148	¥ 120,846	¥ 119,079	¥ 145,125	¥ 150,087	¥ 143,461	¥ 157,800	¥ 159,365	¥ 179,121	¥ 172,840	¥ 173,497	\$1,633,072
	Cost of sales (millions of yen)	98,020	81,644	82,666	96,962	101,635	95,196	101,809	98,030	110,717	112,383	111,350	1,048,105
	Gross profit (millions of yen)	50,127	39,202	36,413	48,163	48,451	48,264	55,991	61,335	68,403	60,456	62,146	584,966
	Selling, general and administrative expenses (millions of yen)	30,076	30,238	29,150	34,129	37,755	40,682	43,881	50,977	55,273	51,854	51,995	489,415
	Operating income (millions of yen)	20,050	8,963	7,262	14,034	10,696	7,582	12,110	10,357	13,130	8,602	10,151	95,551
	Ordinary income (millions of yen)	23,319	9,991	9,290	17,362	13,112	10,539	15,904	13,708	14,633	11,001	12,050	113,429
	Profit attributable to owners of parent (millions of yen)	15,486	3,481	7,071	9,577	8,748	7,155	10,770	11,279	11,105	7,042	11,001	103,557
	Operating margin (%)	13.5	7.4	6.1	9.7	7.1	5.3	7.7	6.5	7.3	5.0	5.9	
	Ordinary margin (%)	15.7	8.3	7.8	12.0	8.7	7.3	10.1	8.6	8.2	6.4	6.9	
	Net margin (%)	10.5	2.9	5.9	6.6	5.8	5.0	6.8	7.1	6.2	4.1	6.3	
Dividends/Per Share Data	Net income per share (yen)	112.96	25.76	52.95	71.72	66.26	54.57	82.19	86.40	85.83	55.06	86.11	0.81 <sup>*2</sup>
	Net assets per share (yen)	1,177.77	1,083.63	1,162.26	1,169.42	1,211.51	1,324.13	1,440.94	1,653.88	1,621.97	1,664.40	1,683.42	15.85 <sup>*2</sup>
	Total dividends (millions of yen)	3,279	2,671	2,670	2,937	2,884	2,884	3,388	3,139	3,353	3,329	3,329	31,340
	Dividends per share (yen)	24.00	20.00	20.00	22.00	22.00	22.00	26.00	24.00	26.00	26.00	26.00	0.24 <sup>*2</sup>
	Payout ratio (%)	21.2	77.7	37.8	30.7	33.2	40.3	31.6	27.8	30.3	47.2	30.2	
	Ratio of dividends to net assets (%)	2.0	1.8	1.8	1.9	1.8	1.7	1.9	1.5	1.6	1.6	1.6	
Balance Sheet Data	Total assets (millions of yen)	216,659	184,401	202,119	217,292	224,412	228,657	255,338	294,542	294,525	308,430	307,265	2,892,181
	Current assets (millions of yen)	111,914	102,706	112,722	130,730	143,120	140,646	153,004	178,774	170,173	180,334	188,230	1,771,749
	Property, plant and equipment, net (millions of yen)	38,227	36,850	36,151	36,457	37,827	36,776	39,126	40,014	42,310	44,809	41,578	391,361
	Investments and other assets (millions of yen)	63,522	42,303	50,217	47,064	39,564	48,371	59,048	68,655	71,256	74,062	71,144	669,662
	Current liabilities (millions of yen)	38,159	26,744	32,035	41,458	40,634	37,950	39,957	44,886	49,463	54,592	54,793	515,754
	Interest-bearing debt (millions of yen)	11,688	11,122	9,122	12,283	12,864	9,427	8,258	14,063	14,512	27,771	26,823	252,485
	Net assets (millions of yen)	162,092	145,774	156,685	157,867	162,048	176,784	191,246	218,723	211,296	213,289	215,306	2,026,602
	Shareholders' equity (millions of yen)	148,122	144,250	148,643	155,544	158,341	162,609	169,482	178,891	183,057	185,658	193,332	1,819,770
	Total assets turnover ratio (times)	0.65	0.60	0.62	0.69	0.68	0.63	0.65	0.58	0.61	0.57	0.56	
	Current ratio (%)	293.3	384.0	351.9	315.3	352.2	370.6	382.9	398.3	344.0	330.3	343.5	
	Equity ratio (%)	74.3	78.5	76.8	71.9	70.8	75.9	73.5	73.3	70.9	68.9	70.0	
	ROE (%)	9.4	2.3	4.7	6.2	5.6	4.3	6.0	5.6	5.2	3.3	5.1	
	ROA (%)	6.8	1.7	3.7	4.6	4.0	3.2	4.5	4.1	3.8	2.3	3.6	
	Interest coverage ratio (times)	41.7	31.7	77.1	39.3	61.1	68.5	48.7	51.0	48.1	41.9	26.5	
D/E ratio (%)	7.9	7.7	6.1	7.9	8.1	5.8	4.9	7.9	7.9	15.0	13.9		
Fixed assets to long-term capital ratio (%)	63.7	52.3	55.2	49.9	45.1	49.9	52.9	55.2	57.4	56.6	51.6		
Cash Flow Data	Cash flows from operating activities (millions of yen)	15,237	11,873	18,999	8,390	12,382	14,443	10,622	9,876	12,031	12,624	15,567	146,529
	Depreciation and amortization (millions of yen)	5,834	6,280	6,219	6,476	7,139	6,741	5,021	5,919	6,495	6,587	6,790	63,912
	Cash flows from investing activities (millions of yen)	(10,041)	(3,194)	(12,714)	(1,679)	1,911	(8,649)	(4,476)	(3,710)	(10,367)	(15,254)	4,322	40,684
	Cash flows from financing activities (millions of yen)	(85)	(7,588)	(4,760)	1,081	(7,615)	(7,092)	(6,670)	1,210	(7,849)	6,864	(3,613)	(34,011)
	Free cash flow (millions of yen)	5,196	8,679	6,285	6,711	14,293	5,794	6,146	6,166	1,664	(2,630)	19,889	187,213
	Net increase (decrease) in cash and cash equivalents (millions of yen)	2,578	(371)	1,265	6,264	6,630	1,676	2,080	11,646	(9,176)	3,161	15,061	141,765
	Cash and cash equivalents at end of year (millions of yen)	27,700	27,329	28,595	34,954	41,585	43,261	45,342	56,989	47,813	50,974	66,035	621,568
	Debt repayment ratio (years)	0.8	0.9	0.5	1.5	1.0	0.7	0.8	1.4	1.2	2.2	1.7	
Depreciation to sales ratio (%)	3.9	5.2	5.2	4.5	4.8	4.7	3.2	3.7	3.6	3.8	3.9		

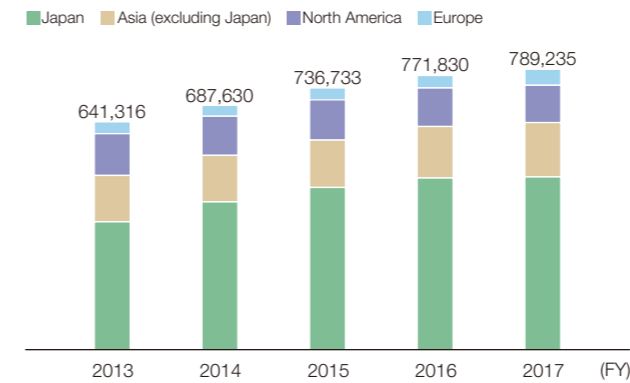
Notes: \*1 U.S. dollar amounts are calculated at the foreign exchange rate on March 31, 2018 of ¥106.24 to the U.S. dollar.  
\*2 U.S. dollars

# Non-Financial Data

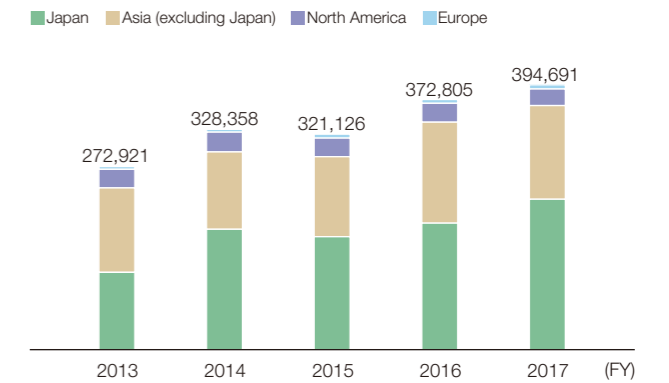
Item	Scope	FY13	FY14	FY15	FY16	FY17	
Energy (GJ)	Japan	359,783	415,928	456,607	483,208	486,231	
	Asia (excluding Japan)	130,670	131,039	133,406	144,971	153,004	
	North America	117,552	110,142	113,337	108,441	104,934	
	Europe	33,311	30,521	33,383	35,210	45,066	
Water (m³)	Japan	115,242	179,398	168,338	188,505	224,145	
	Asia (excluding Japan)	125,811	115,291	119,249	150,493	139,628	
	North America	27,715	29,440	27,656	28,132	24,667	
	Europe	4,153	4,229	5,883	5,675	6,251	
Total waste output (t)	Japan	517	520	865	679	637	
	Asia (excluding Japan)	140	127	158	164	125	
	North America	518	457	438	444	396	
	Europe	47	46	62	46	69	
GHG (CO <sub>2</sub> ) emissions (t-CO <sub>2</sub> )	Scope 1	Japan	1,313	1,851	2,429	2,675	2,884
		Asia (excluding Japan)	360	363	363	306	303
		North America	542	499	434	441	566
		Europe	542	314	317	380	375
	Scope 2	Japan	15,941	18,372	22,250	22,715	22,429
		Asia (excluding Japan)	7,244	7,696	7,574	8,281	8,803
		North America	2,153	1,919	2,943	2,845	2,593
		Europe	1,040	935	1,308	1,337	1,947
	Scope 3	Consolidated	343,969	1,521,467	994,618	1,509,281	1,346,960
	Number of employees	Japan	2,381	2,460	2,596	2,572	2,463
		Asia (excluding Japan)	1,324	1,066	1,127	1,213	1,368
		North America/ South America	1,519	1,758	1,886	1,882	1,791
Europe		246	256	277	296	225	
Number of new graduate recruits	Non-consolidated	Male	8	19	12	7	9
		Female	3	6	5	3	6
Three-year retention rate for new graduate recruits (%)	Non-consolidated	Male	94	97	96	100	95
		Female	100	100	88	100	83
Average length of service (years)	Non-consolidated	Male	15.4	16.1	16.7	17.5	17.9
		Female	16.0	16.9	17.8	18.7	19.2
Statutory monthly overtime hours (hours/employee)	Non-consolidated	14.9	13.5	15.2	12.0	12.3	
Percentage of paid vacation days used (%)	Non-consolidated	68.5	68.3	72.8	74.0	71.1	
Number of maternity leaves taken	Non-consolidated	29	28	19	22	27	
Number of childcare leaves taken	Non-consolidated	Male	4	3	5	6	3
		Female	29	25	22	22	27
Number of nursing care leaves taken	Non-consolidated	0	0	0	0	2	
Ratio of employees returning to work after taking maternity and childcare leaves (%)	Non-consolidated	100	100	100	95.50	100	
Frequency of work-related accidents (%) (Number of work-related injuries or deaths ÷ Total number of work hours x 1 million)	Non-consolidated	0.00	0.00	0.26	0.00	0.00	
Severity of work-related accidents (%) (Number of lost work days ÷ Total number of work hours x 1,000)	Non-consolidated	0.00	0.00	0.00	0.00	0.00	
Number of patents held	Non-consolidated	1,374	1,339	1,425	1,514	1,532	

Notes: - The scope of aggregation for energy consumed, water used, total waste output, Scope 1, and Scope 2 is the scope of consolidated environmental management formulated by Ushio Inc..  
 For details, please see the "Environmental Data" section of Ushio Inc.'s corporate website.  
<https://www.ushio.co.jp/en/csr/eco/ecodata.html>  
 - The scope of aggregation for Scope 3 differs by category. For details, please see the "Global Warming Mitigation" section of Ushio Inc.'s corporate website.  
<https://www.ushio.co.jp/en/csr/eco/effect.html>  
 - The electric power to CO<sub>2</sub> conversion factor uses the following: In Japan: Applied separately for each electricity provider based on actual results in FY16; Overseas: "CO<sub>2</sub> Emissions from Fuel Combustion 2013" by the International Energy Agency (IEA)  
 - No greenhouse gases other than CO<sub>2</sub> were emitted.  
 - The three-year retention rate for new graduate recruits represents the number of employees who reach their third year with the Company in April of the relevant fiscal year. (Example: Data in the column for FY13 is based on the number of employees as of April 2013 who had joined the Company in 2010.)

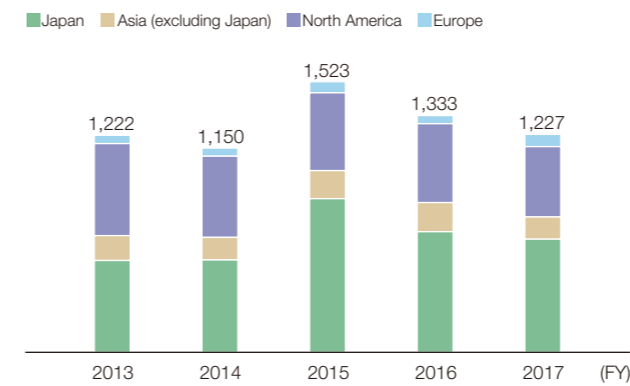
Energy (GJ)



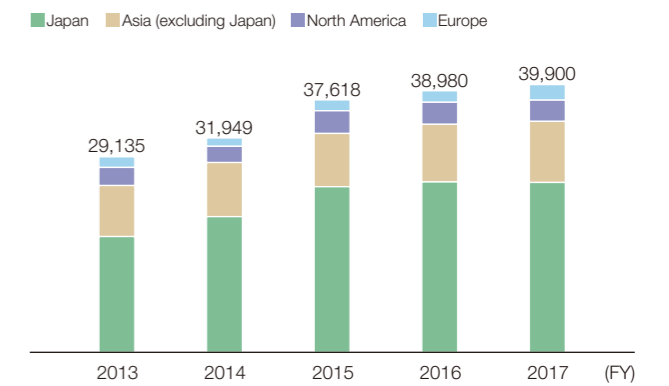
Water (m³)



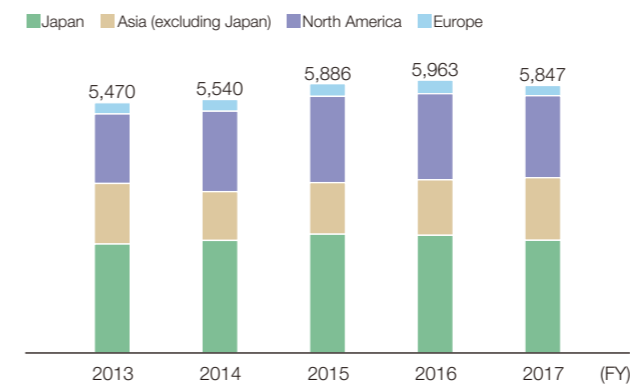
Total Waste Output (t)



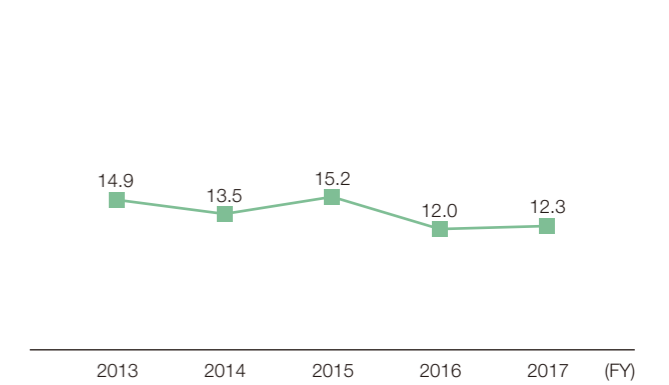
CO<sub>2</sub> Emissions (Scope 1+2) (t-CO<sub>2</sub>)



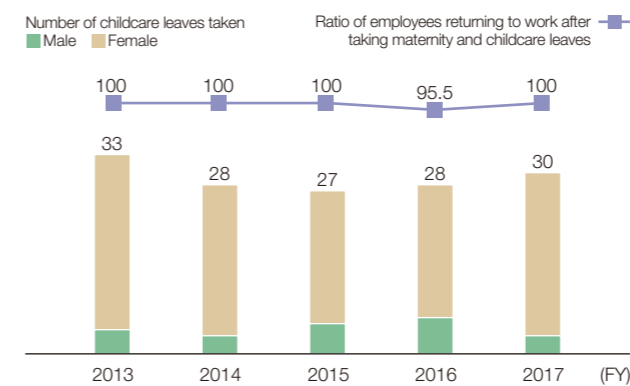
Number of Employees



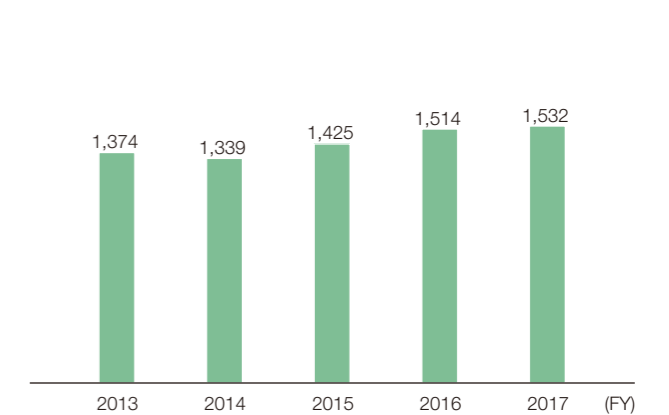
Statutory Monthly Overtime Hours (hours/employee)



Number of Childcare Leaves Taken and Ratio of Employees Returning to Work after Taking Maternity and Childcare Leaves (%)



Number of Patents Held





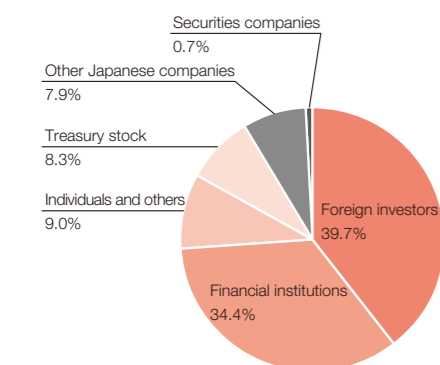
Total number of shares issued	139,628,721
Number of shareholders	10,907

**Major Shareholders** (Holding 2 million shares or more)

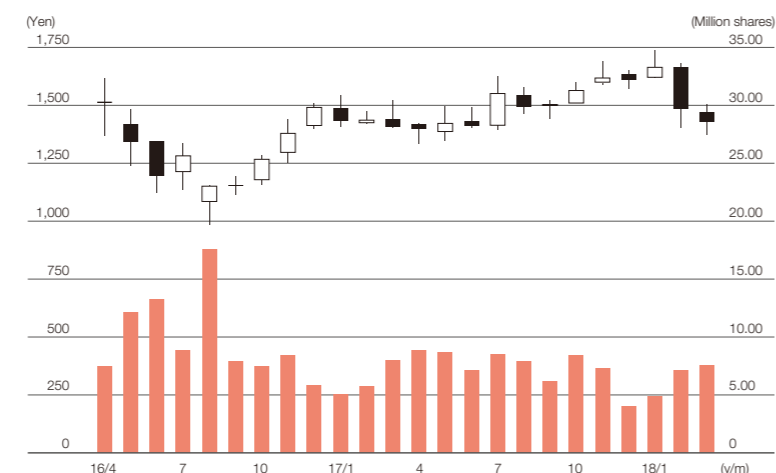
Name	Number of shares (1,000 shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	9,544	6.83
Resona Bank, Limited	6,319	4.52
NORTHERN TRUST CO. (AVFC) RE SILCHESTER INTERNATIONAL INVESTORS INTERNATIONAL VALUE EQUITY TRUST	6,016	4.30
Japan Trustee Services Bank, Ltd. (Trust Account)	5,369	3.84
NORTHERN TRUST CO. (AVFC) RE U.S. TAX EXEMPTED PENSION FUNDS	5,366	3.84
Aioi Nissay Dowa Insurance Co., Ltd.	4,274	3.06
The Bank of Tokyo-Mitsubishi UFJ, Ltd.	4,248	3.04
Asahi Mutual Life Insurance Co.	3,305	2.36
NORTHERN TRUST CO. (AVFC) RE SSD00	2,906	2.08
Jiro Ushio	2,836	2.03
THE USHIO FOUNDATION	2,400	1.71
Japan Trustee Services Bank, Ltd. (Trust Account 5)	2,319	1.66
NORTHERN TRUST CO. (AVFC) ACCOUNT NON TREATY	2,318	1.66
STATE STREET BANK AND TRUST COMPANY 505103	2,212	1.58
STATE STREET BANK AND TRUST COMPANY 505001	2,186	1.56

\* In addition to the above, Ushio Inc. owns 11,573 thousand shares of treasury stock. These 11,573 thousand shares of treasury stock do not include 292 thousand shares of Ushio Inc.'s stock held in a trust account in connection with a stock remuneration plan for executives.

**Composition of Shareholders**



**Stock Price Movement and Stock Turnover**



Established	March 1964	
Capital	¥19,556,326,316	
Employees	Parent company	1,590
	Japanese subsidiaries	873
	Overseas subsidiaries	3,384
	Total	5,847
Fiscal year	From April 1 to March 31 of the following year	
Ordinary general shareholders' meeting	Every June	
Shareholder registry administrator	Sumitomo Mitsui Trust Bank, Limited	

**Divisions and Major Group Companies**

Category	Company/Location	Count
Parent company	Head Office	Chiyoda, Tokyo
	Harima Division	Himeji, Hyogo Prefecture
	Gotemba Division	Gotemba, Shizuoka Prefecture
	Yokohama Division	Yokohama, Kanagawa Prefecture
	Osaka Branch	Osaka, Osaka Prefecture
	Kawasaki Bio Lab	Kawasaki, Kanagawa Prefecture
Japanese subsidiaries	USHIO LIGHTING, INC.	
	XEBEX INC.	
	ADTEC Engineering Co., Ltd.	
	USHIO OPTO SEMICONDUCTORS, INC.	7 other companies
Overseas subsidiaries	North America	
	USHIO AMERICA, INC.	
	CHRISTIE DIGITAL SYSTEMS USA, INC.	
	CHRISTIE DIGITAL SYSTEMS CANADA INC.	14 other companies
	Europe	
	USHIO EUROPE B.V.	
	BLV Licht-und Vakuumtechnik GmbH	7 other companies
	Asia	
	USHIO HONG KONG LTD.	
	USHIO TAIWAN, INC.	
	USHIO PHILIPPINES, INC.	
	USHIO (SUZHOU) CO., LTD.	
	USHIO ASIA PACIFIC PTE. LTD.	
	USHIO KOREA, INC.	
USHIO SHANGHAI, INC.		
USHIO SHENZHEN, INC.	14 other companies	

## Third-Party Opinion on the Integrated Report

USHIO has published the USHIO Report for the fiscal year under review for the first time. The report has integrated USHIO's financial and non-financial information. I would like to state my opinion from the standpoint of a third-party in regard to this report, a publication to showcase the Group's sustainable growth to various stakeholders, including shareholders and investors.

In explaining USHIO's value creation model and Medium-term Management Plan which show the Group's core sustainable growth, the report exhibits the Group's strength of an axis revolving around the unshakable principle of "light," its history and vision for the future speaking through the Message from the President and schematics under the slogan of Lighting Edge Technologies. In particular, the report shows an active approach to new business by making it an independent segment, raising expectations of development in the future.

The report covers the implementation framework, specific results, evaluation of the investment market and

action plan for the future for CSR, ESG and SDGs, stating a strategy that will tie to business growth and resolve social issues in the long term. The report provides a balanced view of diverse stakeholders including corporate governance, human resources and local communities, as well as has a spread that links to individual materials.

There is also significant coverage of final qualitative data that includes past results.

Looking ahead, I expect further substantiation of current trends, growth in new businesses, expansion of examples of resolving social issues and work toward enhanced references through links to various CSR, ESG and SDG activities to convey to various stakeholders the Lighting Edge Technologies.

### Takeshi Kawana

Strategist and Chief Manager of the ESG Solutions Team  
FISCO IR Ltd.

## More Detailed Information

### IR Information (Financial Information)

Please refer to "Investor Relations Information" section of the USHIO INC. website.



### CSR Information (Non-Financial Information)

Please refer to "CSR / Society and the Environment" section of the USHIO INC. website.



## Publishing USHIO Report 2018

USHIO has published this integrated report, unifying what had previously been the separate Annual Report and Sustainability Report, and creating a single publication containing information about USHIO's financial and non-financial aspects. The USHIO Report has been produced with an emphasis on what the Company considers to be "importance," "conciseness" and "sustainability" to enable it to become a new communication tool for the wide array of stakeholders the USHIO Group encompasses.

Since its founding in 1964, USHIO has been focusing on the key concept of Lighting Edge Technologies and on the characteristics of "light." We use light not only as illumination but also as energy through ultraviolet rays and infrared rays, contributing to innovative technologies being used widely throughout society. We hope that you can feel the attractiveness of USHIO which has achieved growth through its unique value creation model, the source of USHIO's innovative technologies. Moreover, we would be delighted to raise further expectations of USHIO

going forward.

This is the Company's first try at an integrated report and thus there will probably be areas that may not suffice in some ways, but we will further strive to obtain the reader's understanding of USHIO's story of sustainable growth. We would be delighted to receive your frank thoughts and opinions of the report.

October 2018

Takafumi Asahi  
Executive Officer,  
General Manager of the  
Management Strategy Division



The following reference materials are available.

- Medium-Term Management Plan
- Financial Presentations
- Financial Results



<https://www.ushio.co.jp/en/ir/#library>

The following reference materials are available.

- Environmental Activities
- Green Procurement
- CSR Procurement Policy
- Consistency with International Initiatives



<https://www.ushio.co.jp/en/csr/>

### Disclaimer

The plans, strategies, and other statements related to the outlook for future results in this USHIO Report reflect the assumptions and beliefs of management based on currently available information. However, it should be noted that there is a possibility for actual results to differ significantly owing to such factors as changing social and economic conditions.

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