



**USHIO**

**USHIO**



# *Applying Light to Life*

Ushio Report **2021**

Year ended March 31, 2021

## **USHIO INC.**

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# Applying Light to Life

What is *light*?

Ever since its foundation, Ushio has continued to search for the answer.

Because we know, that *light* has the power to change the future.

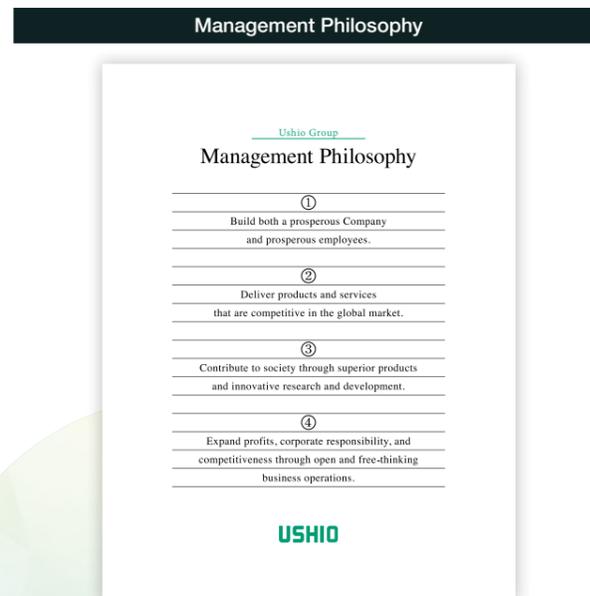
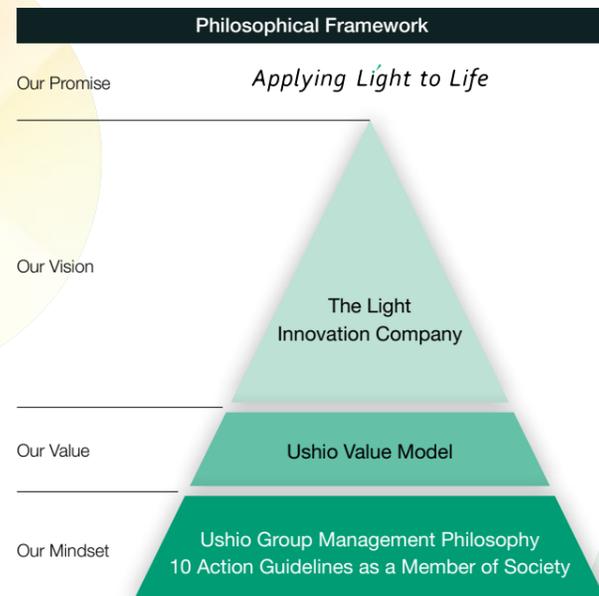
A future where development is sustainable and safe for our planet.

A high-tech future like we've only seen in movies.

A future where lives we couldn't have saved, can be saved.

With *light*, the future can go beyond our imagination.

So today, we continue to believe and challenge the endless possibilities of *light*.



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### Positioning of "Ushio Report"



### Editorial Policy

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, 2021, when no other time period is specifically mentioned. 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.

### Disclaimer

All references to "disinfection" are referring generally to the reduction of pathogenic bioburden and are not intended to refer to any specific definition of the term as may be used for other purposes by the U.S. Food and Drug Administration, the U.S. Environmental Protection Agency or any other government agencies.

# Ushio's Strength— The Power to Control Light



Light has unlimited potential.

The power to decompose and purify without the use of liquids.

The power to raise crops without being affected by the weather.

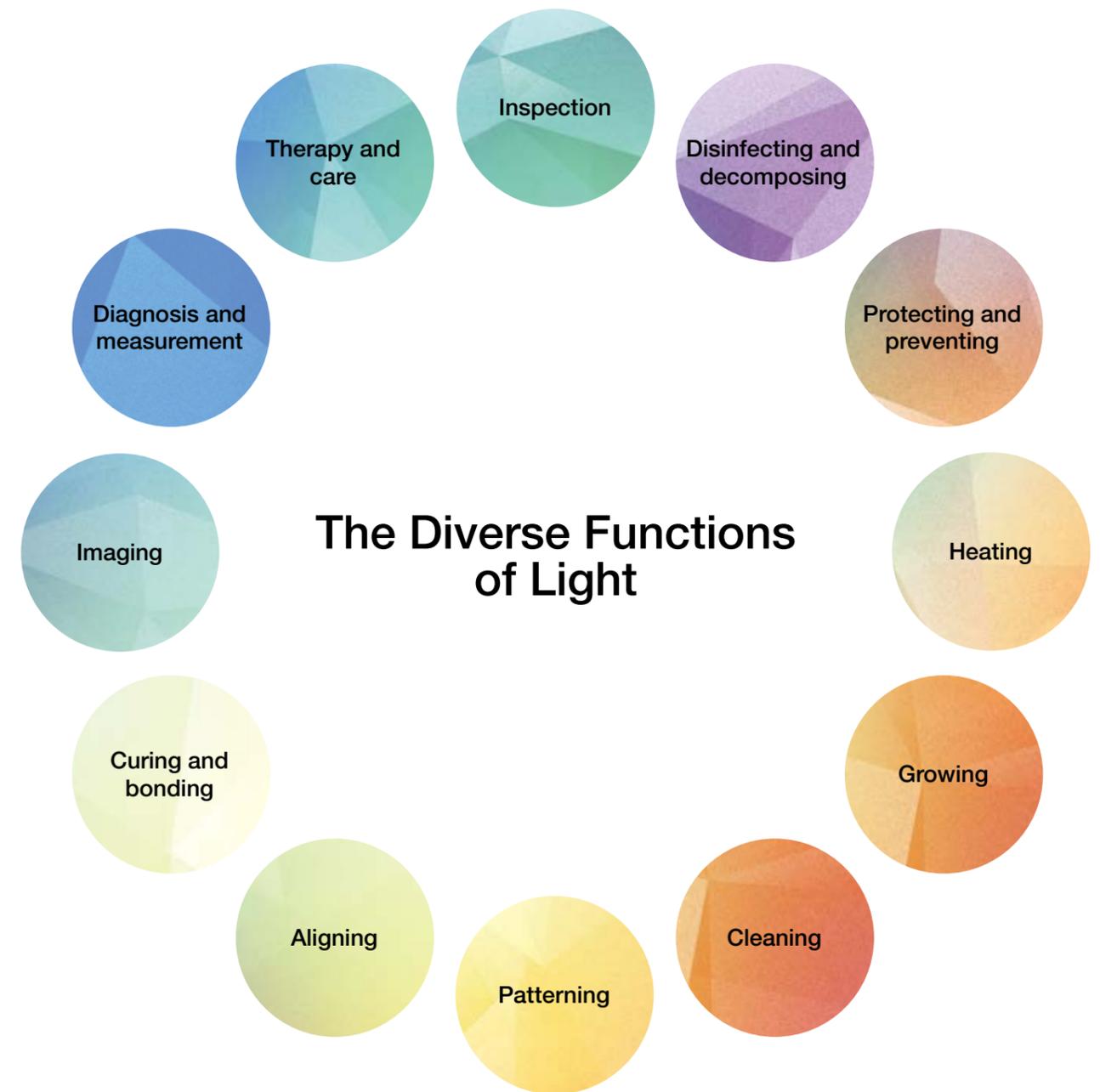
The power to measure someone's health condition without touching them.

The power to deliver breathtaking moving images.

Light, which provides illumination and energy, has the power to support safe and convenient lifestyles and a prosperous society.

By controlling the power of light, Ushio aspires to contribute to a sustainable society.

Guided by this aspiration, we will continue to explore the potential of light going forward.



# Ushio's Technological Capabilities

As a light professional, Ushio has continued to explore the potential of light to resolve issues around the world. By doing so, Ushio has contributed to the development of society.

**1962**

By providing projectors equipped with lamps that cast light closely resembling sunlight, Ushio was able to produce vibrant and colorful pictures that impressed film-makers and helped usher in the new era of color motion picture film.

**1964**

Ushio's halogen lamps helped realize the transition from photocopying machines that used ultraviolet (UV) lights to make so-called "blue copies" to photocopying machines that use plain paper similar to what we see today. By doing so, Ushio established a foothold for promoting the shift to office automation (OA).

**1978**

Ushio developed high-quality lamp products for semiconductor manufacturing that catered to customer needs. These lamps were installed as a standard feature in lithography equipment and helped play a key role in the popularization of PCs and laptops.

**1993**

To replace conventional cleaning processes that use liquids, Ushio became the first company to commercialize products that use UV light, which removes organic substances at the molecular level. These products enabled drycleaning processes. By doing so, these products contributed significantly to the development of home appliances, including being utilized in the process of removing stains on glass substrate surfaces used in liquid-crystal-display (LCD) televisions.

**1998**

The early 1990s saw the launch of data projectors, which can easily support images and video. In 1998, Ushio launched its NSH lamps, which contributed greatly to the expansion of the projector market as a compact point light source.

**2020**

Inspection: Advanced, next-generation semiconductors with even finer circuit lines are crucial for achieving the full potential of AI, IoT, and other new infrastructure of the modern age. EUV (extreme ultraviolet) lithography is attracting attention as a technology for fabricating these semiconductors. EUV lithography on a commercial scale requires EUV light sources for the equipment used to inspect ultra-high-resolution photomasks for defects. To that end, Ushio has developed EUV light sources that meet all the requirements for use in photomask inspection units.

Disinfecting and decomposing: Ushio commercialized a UV irradiation device that can safely inactivate viruses and kill bacteria on surfaces and in the air, even in environments occupied by people, thereby contributing to safe and secure environments.

**1999**

Ushio's large-surface lithography equipment technology, which supports advanced packaging technologies, started to be used in the manufacturing processes of electrical devices and highly integrated printed circuit boards (PCB). In this way, Ushio contributed to the popularization of slim, lightweight laptops.

**2003**

Christie Digital Systems, Inc. (CDS), a leading manufacturer of film-based cinema projectors, became one of the first companies to market digital cinema projectors before the major shift from film to digital cinema. These digital cinema projectors helped promote digitalization and reduce the cost of film production and distribution, thereby leading to the popularization of multiplex theaters and the expansion of the movie market.

**2011**

Ushio's photoalignment technologies contributed greatly to the manufacture of high-resolution liquid crystal panels, which are now being used in smartphones. By improving the productivity and enhancing the performance of such panels, these photoalignment technologies helped meet the demand for smartphones around the world.

Impact on Society

USHIO

1960

1970

1980

1990

2000

2010

2020

Light Technologies

**Imaging**

**1962**

On the set of a movie, video is shot under the sun or with lighting that is similar to sunlight in order to show the human skin and scenery as they really are. The light required to project such images naturally and as they are must be as similar to sunlight as possible. Ushio's xenon lamp, referred to as an "artificial sun," provided such a light source.



Lamps for cinema projectors

**Curing and bonding**

**1964**

Halogen lamps are used as heat source to affix toner on the copy paper. By making use of a chemical reaction referred to as the halogen cycle, Ushio was able to provide a compact, bright, and long-lasting lamp.

Halogen lamps for affixing toner

**Patterning**

**1978**

Ultra-high-pressure UV lamps are used in the exposure process of semiconductor manufacturing. As semiconductors became more integrated, there was also a growing need for UV light with shorter wavelengths and higher intensity. To answer this need, Ushio developed and manufactured a lineup of high-illumination, high-output products in conjunction with the technological trends in lithography equipment.

Ultra-high-pressure UV lamps for semiconductor lithography

**Cleaning**

**1993**

Ushio became the first company to commercialize excimer lamps, which emit high-energy vacuum UV light. Through 172nm of excimer irradiation, these lamps generate ozone and active oxygen to break the molecular bonds of organic substances, thereby decomposing attached organic substances.



Excimer irradiation units for cleaning panels

**Patterning**

**1999**

Developing lithography equipment requires not only equipment design technologies but also many elemental technologies, starting with light source technologies. To that extent, Ushio began to develop major technologies such as light sources and optical components on a completely inhouse basis.

Step & repeat projection lithography tool for high resolution PCB

**Imaging**

**1998**

Lamps for data projectors reach a high temperature when lit, and these lamps require advanced technologies to remove impurities in the production process in order to realize high levels of quality and longer lifespans. Overcoming this and other various development obstacles, Ushio was able to commercialize NSH lamps.

Lamps for data projectors

**Imaging**

**2003**

A high-brightness, high-resolution projector is indispensable for expressing clear, three-dimensional images in a large space such as a movie theater or projection mapping exhibitions. CDS commercialized and marketed such a projector by combining the optical technologies it had cultivated in the cinema industry with Ushio's highly reliable xenon lamps and digital light projectors, which helped promote digitalization.

Digital cinema projector

**Aligning**

**2011**

Methodically aligning liquid crystal molecules is a crucial part of the manufacturing process for liquid crystal panels. Ushio's photoalignment technologies were able to do so using unique UV rays, thereby realizing a non-contact, clean manufacturing process.

Photo-alignment equipment

**Inspection**

**2020**

EUV light sources are used to inspect masks used in EUV lithography. As mask defects have a significant impact on semiconductor wafer yields, confirming the presence of defects in a mask with a high level of precision is essential for realizing EUV lithography on a commercial scale. Through its roughly 20 years of R&D activities on EUV light sources, Ushio was able to realize EUV light sources with excellent brightness and reliability.

EUV light sources used in EUV mask inspection

**Disinfecting and decomposing**

**2020**

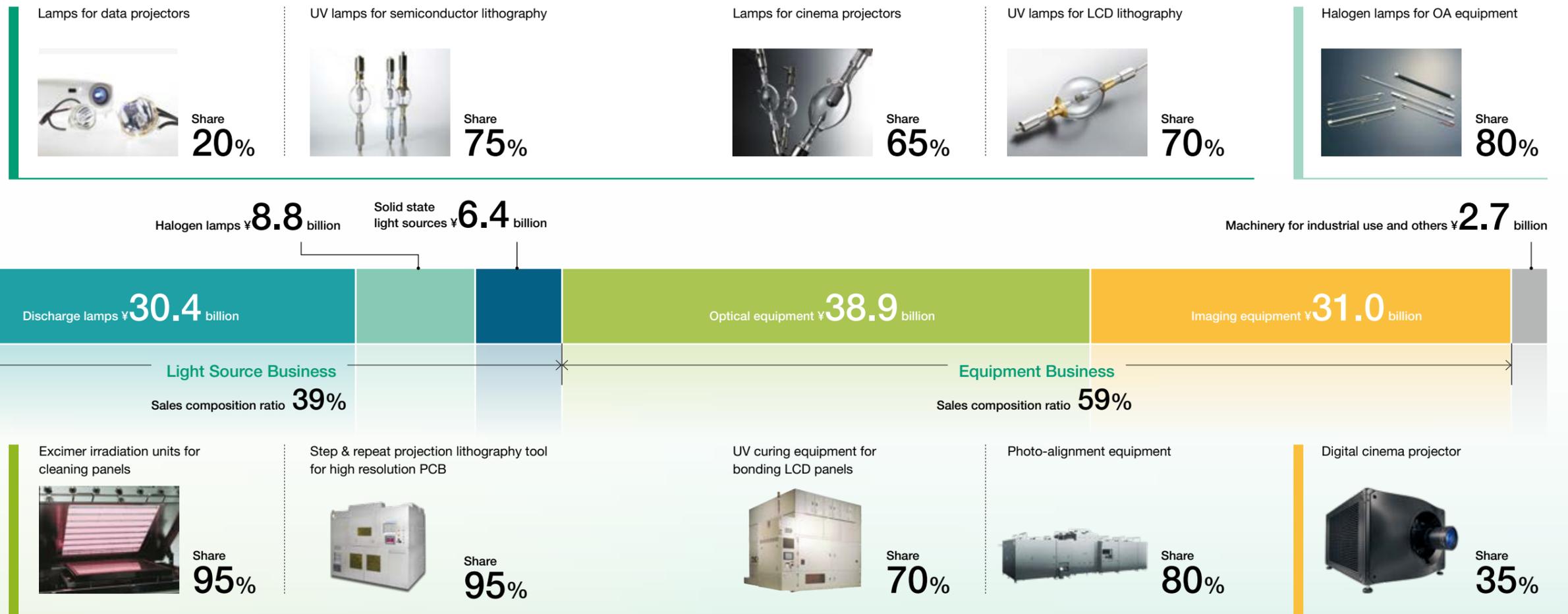
A wavelength of 254nm is generally known to be germicidal but has limited uses as it is hazardous to human beings. To address this issue, Ushio used a combination of special optic filters to narrow down light production to 222nm, which does not negatively impact the human body. By doing so, Ushio made it possible to disinfect viruses on both surfaces and in the air within environments occupied by people.

Care222 Filtered Far UV Technology for antiviral and antibacterial use

# Main Products by Segment / Global Expansion

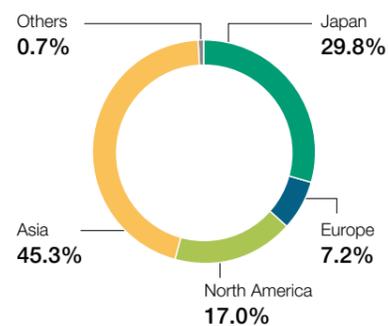
Ushio extends the use of light technology beyond the realm of illumination to use as energy for applications in industry and cutting-edge science, thereby contributing to the birth of many products that have become No.1 in the world market.

Providing just the light required as it becomes necessary to each country and region. Because we're Ushio, we have light we can deliver.

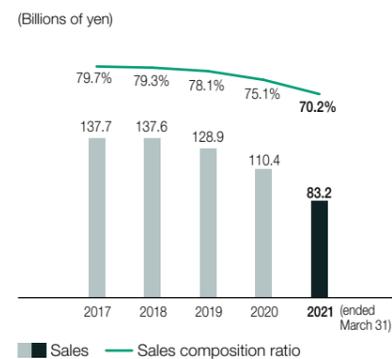


Global market share of our products (as of March 31, 2021, based on Ushio research)

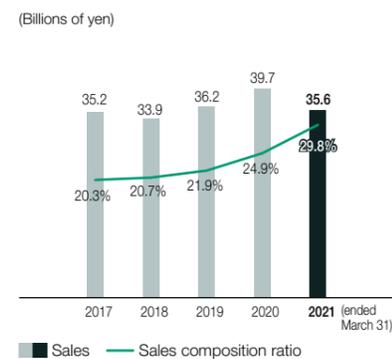
## Sales by Region



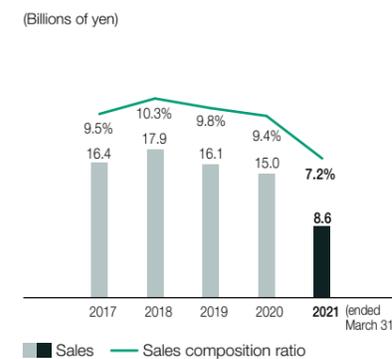
## Overseas



## Japan



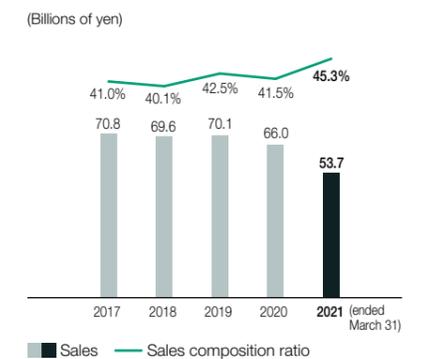
## Europe



## North America



## Asia





Koji Naito

President and Chief Executive Officer

With a strong conviction and determination, we will continue on our path forward to becoming a “light” solutions company.

#### Ushio Amid the Pandemic

### 2020—A Year in which I truly felt the strength of Ushio

The COVID-19 pandemic has brought about significant change to people's lives and to society as a whole. I feel that my personal lifestyle has changed tremendously due to the pandemic, as I no longer make business trips domestically or overseas, now use the Internet to do my shopping, and I now find ways to utilize the time I used to spend going outside in meaningful ways. The workstyles and lifestyles of Ushio employees have changed completely. For example, our employees missed out on the opportunities for team building through face-to-face communication and dining together due to restrictions on coming to work. In addition, due to travel restrictions, employees also lost opportunities to conduct face-to-face sales and go on overseas business trips, and employees positioned overseas did not have the chance to return home temporarily to visit. In these ways, our employees are faced with significant inconveniences. However, through the swift response to the pandemic by our administrative department and the independent efforts of frontline personnel to pursue new workstyles, Ushio has been able to overcome the hardships presented by the current external

environment. Furthermore, by promoting thorough measures to prevent the spread of the virus at our bases around the world and engaging in initiatives to visualize safety in the workplace, we were able to continue our business operations throughout 2020 without interruption, aside from when requested to do so by national and local governments in each country. In this way, we have been fulfilling our important responsibility of product supply as a company with numerous products that boast a high market share.

In terms of our business performance in fiscal 2020 (ended which 31, 2021), although we avoided recording an operating loss for the first time since our establishment, profit declined significantly year on year. However, throughout fiscal 2020 I observed the dedicated efforts of our employees made around the world, and this gave me a real sense of how prepared Ushio is to handle change. At the same time, with the introduction of Care222-related products into the market, among other efforts, I once again recognized the tremendous potential we have as a company to contribute to the resolution of social issues.

#### Issues We Need to Address in Order to Build the Future of Ushio

### Ushio needs to transition from “additive management” to “multiplicative management.”

In July 2020, we announced our new Medium-Term Management Plan, which sets forth the ideal state for Ushio in 2030. By analyzing the differences between this ideal state and the current state of the Company, the new plan breaks down issues we face in achieving that vision and determines the issues we need to address first over the three-year period of the plan. To facilitate an understanding of the direction of the plan, I will explain our awareness of the issues that became the backdrop of the plan's formulation.

Our growth trend changed dramatically in 2008 following the global financial crisis. Although we were able to maintain growth in net sales by entering into new markets through M&A, our operating margin started on a long-term trend of decline. Under our previous

Medium-Term Management Plan, which ran through fiscal 2019, we were unable to stop the decline in profitability of existing businesses nor were we able to create promising new businesses. As a result, we were unable to achieve the targets of the previous plan.

Since the 1990s, we have aimed to transform ourselves into a proposal-oriented company. Guided by that aim, we entered into growth fields via Group companies. At the same time, we began to pursue “Rempo” management under which we flexibly promoted strategies by delegating authority to our business divisions and Group companies. This style of management functioned effectively during the period of rapid market expansion, and at one point we even achieved an operating margin of 18%. However, under Rempo

## President's Message

management, overemphasis was placed on the independence of each division and Group company, and this led to individual optimization that gave rise to various inefficiencies. These included overlapping capital expenditures and other investments due to independent decision-making and insufficient collaboration in terms of resources and infrastructure, including human resources and systems. Furthermore, Rempo management fostered a corporate culture of overly pursuing the achievement of yearly targets and foregoing investment from a long-term perspective.

In other words, Ushio had become caught up in so-called "additive management," which is short-sighted in nature. To address this issue, we decided to boldly transition the focus of Rempo

### Path to Long-Term Growth

#### We will focus on the resolution of social issues as the starting point for all of our ideas.

Founded in 1964, Ushio's first business was the manufacture and sale of lamps. Since then, we have created numerous products within the "light" domain. Light will remain at the core of our sustainable development going forward, and, to that end, we have established "Promote the use of light as illumination and energy to support human well-being and societal growth" as our Mission statement. This Mission will be achieved by refining the technologies we have cultivated since our founding.

To date, we have sought to expand our market share by creating quality products that customers need and continuing to refine the performance and quality of such products. While we have no plans to completely abandon this approach, we need to maintain a humble presence as a manufacturing company going forward. With that said, although we have sometimes had success with promoting product development that is independent and based on the technological idea of considering how a technology will be utilized, such an approach often created businesses that were quite small in scale. As this style of product development was driven by technology, it had very little relevance to the magnitude of social issues. Going forward, we will establish the shared goal to "support human well-being and societal growth" and work to achieve that goal by discovering major social issues that we can help resolve on our own initiative. To ensure the success of this approach, we must transition from focusing on how our technologies will be used to thinking more about how we can resolve social issues through our technologies. Without establishing sales growth as a specific goal, we can bring about the creation of economic value by pursuing major social issues that we can help address through our businesses. In turn, this will lead to the enhancement of our corporate value in a sustainable manner. Based on this belief, we have established "Become a 'light' solutions company" as the Vision for Ushio. As placing too much emphasis on independence will make it difficult to realize our Mission and Vision, we will seek to deepen collaboration with external partners, even with our competitors so long as the empathize with our Vision.

All of Ushio's business domains centered on B2B businesses. To discover social issues that we can help resolve within these

management from "additive management" to "multiplicative management," which seeks to realize overall optimization by strengthening a sense of solidarity across the Company. This transition represents a dramatic endeavor of fundamentally changing the management style we have maintained for approximately 30 years.

To promote strategies in collaboration as one team, the most important thing is first to ensure that the ideal state for Ushio, for which we are aiming over the long term, is shared Companywide. For that reason, we have newly clarified our Mission and Vision for reaching this ideal state in 2030, in conjunction with the announcement of the new Medium-Term Management Plan.

domains, it is essential that all our employees change their awareness so that they are able to constantly consider not only how their work benefits the customer but also how it relates to issues facing consumers and society as a whole. In a similar fashion, the Company's management must shift to an approach under which it can consistently understand social megatrends and issues and incorporate them into management strategies. To that end, we established the "Five Management Focuses," which will lead to the realization of our newly established Mission and Vision for 2030, and identified important issues that relate to each focus. Going forward, we will promote ESG management that incorporates these five focuses.

One of the five focuses is to "Creating Businesses with Greater Social Value." For this focus, we have established Industrial Process, Visual Imaging, and Life Science as the three domains through which we will aim to offer social value as a "light" solutions company. In the Industrial Process domain, we will contribute to the manufacturing activities of our customers, starting with semiconductors, and promote digital transformation (DX) efforts. By doing so, we will help create a society with even greater levels of convenience and comfort. Specifically, we will focus on providing manufacturing solutions for our core businesses of semiconductor packaging processes, thermal processes, and surface treatment and curing (STC).

In the Visual Imaging domain, we will step up efforts toward our core business of imaging equipment and services for cinema and other entertainment fields. Through such efforts, we will pursue high added value that offers people thrilling excitement, emotion, and inspiration. Furthermore, in the Life Science domain, we will help our customers create new services with the aim of creating a safe, secure, and healthy world.

At the moment, we have established pulse spectroscopy inspection systems, organ-on-a-chip (OOC) devices, environmental health solutions, CO<sub>2</sub> decomposition technologies, automated food production plants, and vision aids as important themes in the Life Science domain.

Without limiting ourselves to just these products, we will take steps to create businesses that lead to sustainable growth for both

society and Ushio based on such themes as combating global warming, resolving food issues, and extending people's healthy lifespans, which are all issues that affect humankind as a whole. Particularly, one of the five management focus "Sustainably Reducing Environmental Impact" represents an important obligation for us to fulfill with a view to becoming carbon neutral by 2050.

### The New Medium-Term Management Plan

#### Guided by our Vision, we will promote both a "defensive strategy" and a "proactive strategy."

Under our Vision, we have established goals that target fiscal 2030. Specifically, we are aiming for net sales of ¥250.0 billion and an operating margin of 12% or more. The new Medium-Term Management Plan (fiscal 2020 to fiscal 2022) marks the first step of the long-term road map for achieving our Vision. We position the period of the new plan as a stage in which we will reattempt to solidify our foundation for profit structure transformation, a task we were unable to complete under the previous Medium-Term Management Plan.

In terms of numerical targets, we have thoroughly eliminated any sense of optimism for the business environment going forward and have instead decided to prioritize the optimization of our Companywide performance. We have established commitment levels for our numerical targets that anticipate risk. As a requirement, we are committed to achieving net sales of ¥150.0 billion and operating margin of over 8% by fiscal 2021. At the same time, we have set our sights higher by establishing the more ambitious targets for fiscal 2022, which are net sales ¥170.0 billion and operating margin of over 10%. Among these targets, we have positioned operating margin, which has been on a long-term trend of decline, as an important KPI. By fostering a sense of unity across the Group with a view to achieving these targets, we will lay the groundwork for moving to the next stage of growth while at the same time clarifying the path we will take to realize our goals for fiscal 2030.

We will promote specific initiatives under a two-pronged approach that entails a defensive strategy, which centers on structural reforms, and a proactive strategy, which involves creating new markets and developing and strengthening businesses that can drive future growth with a focus on the post-COVID-19 era.

With our defensive strategy, we will move forward with structural reforms and establish a robust profit structure. We have reduced SG&A expenses from ¥50.0 billion in fiscal 2018 to ¥46.7 billion in fiscal 2019. In fiscal 2020, we were able to further reduce these expenses to ¥39.0 billion through the progress made with structural reforms and the contribution of workstyle reforms that accommodate to the "new normal" era. By fiscal 2022, the final year of the new Medium-Term Management Plan, we aim to curtail SG&A expenses even further through the completion of our structural reforms and the thorough adoption of "new normal" workstyles.

One major theme of our defensive strategy is to promote structural reforms in the Light Source Business. Although this business serves as our largest foundation for profits, it has been on a trend of

We will therefore work to not only meet social demands, such as conserving energy and reducing the amount of water we use, but also create businesses that help reduce environmental burden, which in turn will enhance our corporate value.



declining profitability due to the shift to solid-state light sources (laser light sources and LED light sources), which has progressed at a much faster rate than we anticipated. To that end, we will take steps to reduce fixed costs by expanding overseas production and consolidating our offices. We will also move forward with the withdrawal from unprofitable projects. At the same time, we will introduce highly competitive products in the semiconductor and flat-panel display (FPD) markets, where the shift to solid-state light sources is moving slowly at this time. In tandem with these efforts, we will work to cultivate a market for niche solid-state light source products that do not compete with our existing products, thereby promptly establishing a business structure that is highly profitable even amid the progressing shift to solid-state light sources.

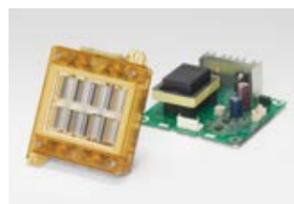
The Imaging Equipment Business has constantly dealt with a low profit margin due to intensifying competition in the volume zone of small to medium-sized screens. Additionally, the business faces an extremely difficult situation with the supply-demand environment in the near term due to structural changes in the market that have occurred against the backdrop of restrictions on movement caused by the COVID-19 pandemic and changes to the style of viewing content. To address these issues, we have promoted structure reforms through such means as optimizing our production structured. Moving ahead, we will also focus management resources on the provision of solutions for high-end entertainment markets where we can leverage our strengths, as movie theaters are once again

## President's Message

expected to attract customers. Through these means, we aim to enhance operational efficiency and improve profitability in the imaging equipment business.

With our proactive strategy, we will strive to create value in the Light Source Business geared toward the environmental health field, where needs are expected to increase globally in the post-COVID-19 era. I have particularly high expectations for our disinfection and virus inactivation Filtered Far UV Technology Care222. We are currently receiving a number of orders regarding this technology from various industries. Moving ahead, to concentrate management resources on Care222 and work to expand sales of the technology overseas. Additionally, we will leverage Care222 to help resolve a broad range of social issues, including the rollout of this technology in the mobility as a service (MaaS) market. In this manner, we will develop environmental health into a core business of the Company.

In the Optical Equipment Business, we have made upfront investments in a lineup of promising products, including EUV light sources for mask inspection and lithography equipment for cutting-edge IC package foundations. These products will play a crucial role in driving growth in the future. By establishing a highly profitable business model, we will expand the Optical Equipment Business into a profit



Care222 Light Source Module



Image of Care222 in use

### Building a Foundation for Long-Term Growth

#### We will build a solid foundation for long-term growth through our “unifying strategy.”

We have made diligent efforts to maintain a robust financial base, including keeping our equity ratio at around the 70% level for a long period of time. In addition, up until fiscal 2018, we had maintained a net positive free cash flow on an actual basis for more than 10 consecutive periods. However, looking at these efforts from the opposite perspective, we had been placing too much emphasis on management stability, and that is why these financial achievements did not lead to meaningful improvement in corporate value. Accordingly, we now understand the need for investments aimed at optimizing our performance on a Companywide basis. To ensure a shared direction and steadily execute our action plan, we need to address and unify our business creation scenarios, which have thus far built up independence but lacked consistency. We must also unify various functions such as IT infrastructure and personnel evaluation and recruitment systems. In recognition of these issues, we will promote a unifying strategy aimed at establishing a structure to promote both our defensive strategy and proactive strategy from the perspective of Companywide optimization.

pillar that can stand alongside the Light Source Business. These kinds of product lineups are in growth fields that have reached the stage of realizing returns, and we are making progress with these products at a far greater rate than anticipated, boosted by robust activity in the semiconductor market occurring against the backdrop of growing 5G and IoT-related markets. We are working to significantly bolster our production capacity for lithography equipment for cutting-edge IC package foundations to respond to the large number of orders we are receiving regarding this equipment. In addition, we have realized profitability for EUV light source products, achieving our targets for these products one year ahead of schedule.

In addition to strengthening existing businesses, we will promote the creation of new businesses from a long-term perspective that will play a key role in the next generation of Ushio. While M&A is an important means of creating such businesses, we will make a dramatic change to the investment stance we have adopted thus far. The main reason why many of the M&A projects we pursued in the 2000s never became profitable was the fact that we did not convey a clear purpose for these projects and placed the main priority on the independence of each business and Group company. To realize our Vision, we will position M&A and various other types of investments as a crucial part of the process for complementing the functions we need to resolve social issues, which includes collaboration with business partners. We have deeply reflected on our past approach to M&A, under which we placed too much emphasis on the pursuit of short-term results and spread small-scale investments across a wide range of domains. Going forward, we will thoroughly adopt a new approach where we concentrate management resources in areas that align with our Vision and work to cultivate businesses over a much longer timespan.

As a specific initiative under this unifying strategy, we established the Corporate Strategy Meeting, of which I am directly in control, to serve a structure for unifying the Company. Through the Corporate Strategy Meeting, managers of each business and division engage in lively discussion, and I believe this shows that we are making progress with aligning our purpose toward realizing our Vision over the long term and with promoting cross-organizational collaboration geared toward Groupwide optimization. We are also moving forward with a project to promote global consolidated business management aimed at monitoring our financial performance. Slated to be completed in fiscal 2022, this project will allow us to monitor our management indicators on a Groupwide basis and in real time.

The sustainable enhancement of our corporate value is realized through the sustainable growth of our individual employees who have a proper understanding of our Vision and work toward its achievement. For that reason, among our Five Management Focuses, we have established two focuses that pertain to people: “Increasing the Quality of Our Human Resources to Move Closer to Our Vision” and

“Creating Working Environments where It Is Easy to Produce Results.”

Guided by these focuses, we are undertaking efforts focused on diversity promotion, workstyle reforms, health, and safety to ensure that all our employees can work enthusiastically and with a sense of pride. To promote these kinds of efforts on a global scale, we must integrate and uniformly manage our personnel systems and infrastructure. Our newly established Global HR Strategy Department is playing a key role in this regard. Over the past year, we prepared the necessary infrastructure for globalizing our compensation, recruitment, personnel development, and employee welfare systems. Moving forward, we will undertake full-scale efforts to integrate these

systems and promote “global personnel mobility.” By doing so, we aim to find the optimized place and position for our diverse group of human resources.

Also, we will pursue the focus “Building a Robust Management Base” through not only ongoing efforts to strengthen our corporate governance but also initiatives to enhance our compliance structure, ensure information security and privacy protection, and promote respect for human rights. Such initiatives are absolutely essential for uniting the Group and realizing sustainable growth. With an awareness of our responsibility as a public institution, we will work ceaselessly to strengthen our management foundation going forward.

### Closing

#### We will pursue reforms with a strong conviction and determination.

Amid the COVID-19 pandemic, certain employees stationed overseas are dealing with a very difficult situation as they are unable to return home. Accordingly, I strongly believe that, in addition to establishing systems and frameworks, it is imperative that we listen closely to the concerns of each employee and promote compassionate management if we are to truly unify the Group. It is times such as these when I truly take this sentence of our Management Philosophy to heart, “Build both a prosperous Company and prosperous employees.”

If all our employees unite together to address major social issues, then Ushio will truly become a “light” solutions company that will continue to be needed by society. Furthermore, we will be able to create both social and economic value and share such value with all of our stakeholders, thereby realizing sustainable growth. In turn, this will naturally allow us to “Build both a prosperous Company and prosperous employees.”

I have a strong belief in the path toward the future that I have discussed in this message. As the person who has been entrusted with the management of the Company, I will work toward achieving such a future with a strong conviction and determination.

I would like to ask all of our stakeholders for their continued support and guidance as we continue on our path forward to becoming a “light” solutions company.

A handwritten signature in black ink, appearing to read 'K. Kuroki'.

President and Chief Executive Officer



# Respond to the COVID-19 Pandemic and the Emerging New Normal

The global COVID-19 pandemic dealt a heavy blow to economic activity, social systems, and people's lifestyles. In response to this pandemic, Ushio prioritized preventing the spread of COVID-19 and ensuring the safety of its customers, business partners, Group employees, and various other stakeholders.



## Initiatives Targeting Employees (Ushio Inc.)

### Major Response Measures in 2020

- Transition to teleworking as a basic principle
- Prohibition of domestic and overseas business trips
- Loosening of certain requirements related to shifts and leave to allow employees increased flexibility in work as needed to accommodate government-requested school closures
- Establishment of COVID-19 emergency response project on March 31, 2020, with protecting the health and safety of employees and their families and monitoring the impacts on business activities as its top priority
- Introduction of mobile work infrastructure to accommodate standardized teleworking
- Establishment of COVID-19 business continuity plan and action standards for preventing COVID-19 infections based on infection levels

### Major Initiatives in 2021

- Ahead-of-schedule implementation of certain measures for "Creating Working Environments where It Is Easy to Produce Results," including the abolishment of core hours provisions of flextime system to allow increased flexibility in work
- Group vaccination drives in workplaces for employees at head office and Yokohama Division, provision of leave should side effects occur after vaccinations, relief payments when receiving vaccinations, and other support for employees seeking vaccination

## Supply Chain Initiatives

Ushio is developing its business with fulfilling its mission as a manufacturer among its top priorities. To this end, we are continually refining and implementing business continuity plans to prepare for unforeseen circumstances such as the COVID-19 pandemic. There were cases in which our operations were impacted in terms of production and supply by lockdowns in countries where we have overseas bases. Nonetheless, we were able to advance our business activities in a manner that avoided inconveniences to the market and to customers through close coordination with domestic bases in accordance with our business continuity plans.

In our equipment businesses, most of the customers we serve are

overseas. We thus took various steps to ensure that we could continue to supply these customers on schedule. Such steps included swift sharing of information and close coordination with suppliers to make adjusted arrangements for procuring components, use of cargo flight routes involving transfers to mitigate the increase in air transportation rates, and using web cameras and coordinating with the staff of overseas Ushio bases when delivering and installing equipment.

Moreover, we are pursuing further reinforcements to our supply chain to ensure that we can cater to increases in demand even amid the COVID-19 pandemic.

## Response to the Emerging New Normal



### Light Source

Rising Environmental Hygiene Awareness—  
Creation of Safe and Secure Spaces

Ushio will utilize its clean optical technologies, which only use light other things that exist in nature, to provide environmental hygiene solutions that contribute to the realization of safer and more secure and hygienic spaces.



### Optical Equipment

Enhancement of Remote Maintenance Support

The COVID-19 pandemic has placed significant restrictions on our ability to dispatch field support engineers. Accordingly, we are enhancing our remote maintenance capabilities, which take advantage of the remote maintenance functions of equipment as well as smart glasses and other network equipment, to provide higher levels of support to customers amid the new normal emerging due to the pandemic.



### Imaging Equipment

Integration of Real and Online Support for  
Sales Promotions and Maintenance Services

Ushio is endeavoring to strengthen relationships with customers and to enhance its sales promotion activities through online exhibitions. As one facet of these efforts, we have built a studio that allows users to control products and cameras. This studio is used for demonstrations of new products and for new product announcements. As for support services, we continue to use a network operation center system to perform remote monitoring and to offer smooth and timely maintenance.



# Ushio's Value Creation Model

Ushio aspires to contribute to society with light through efforts centered on the Ushio Value Creation Model, which is focused on advancing its optical technologies and resolving social issues. At the same time, we are creating value with an eye to the impacts of our products and to the future.

## Mission

Promote the use of light as illumination and energy to support human well-being and societal growth

## Vision

Become a "light" solutions company

## Five Management Focuses

<b>Creating Businesses with Greater Social Value</b> P.26	<b>Increasing the Quality of Our Human Resources to Move Closer to Our Vision</b> P.32	<b>Creating Working Environments where It Is Easy to Produce Results</b> P.34	<b>Sustainably Reducing Environmental Impact</b> P.36	<b>Building a Robust Management Base</b> P.38
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### Ushio's Group Medium-Term Management Plan

## INPUT

### Financial Capital

Unifying strategies and management emphasizing solidarity

- Structural reform investments
- Concentrated investment in growth businesses
- Group financing and infrastructure investments

### Manufactured Capital

Restructuring of supply chain management systems

- Base consolidation for improving production efficiency
- Augmentation of production capacity through construction of new production bases
- Factory automation and digitization

### Human Capital

Global leader cultivation and mind-set reforms

- Cultivation of future management candidates
- Promotion of global human resource education platform
- Fostering of human resources with backcasting capabilities
- Entrenchment of culture emphasizing diversity and inclusion (transition from uniformity to individuality)

### Intellectual Capital

Combination of knowledge for resolving social issues

- Introduction of platform aimed at reintegrating knowledge to address social issues

### Social and Relationship Capital

Innovation through outside-in approach made possible by relationships with customers and society

- Enhancement of partnerships
- Reinforcement of brand power

### Natural Capital

Environmentally and social conscious raw material procurement

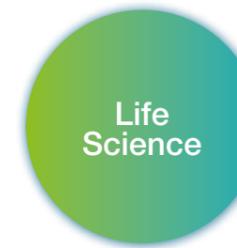
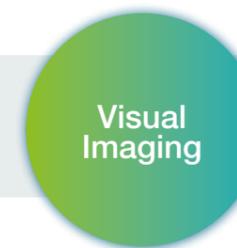
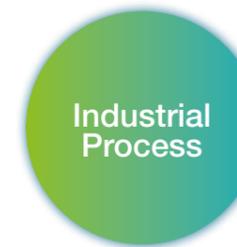
- Use of renewable energy and water

## Ushio's Framework for Creating Value for Addressing Customer Needs and Beyond



### Group Governance Emphasizing Solidarity

## OUTPUT



## OUTCOME

### Customer Value



### Social Value



Vision for 2030  
True "Light"  
Solutions  
Company

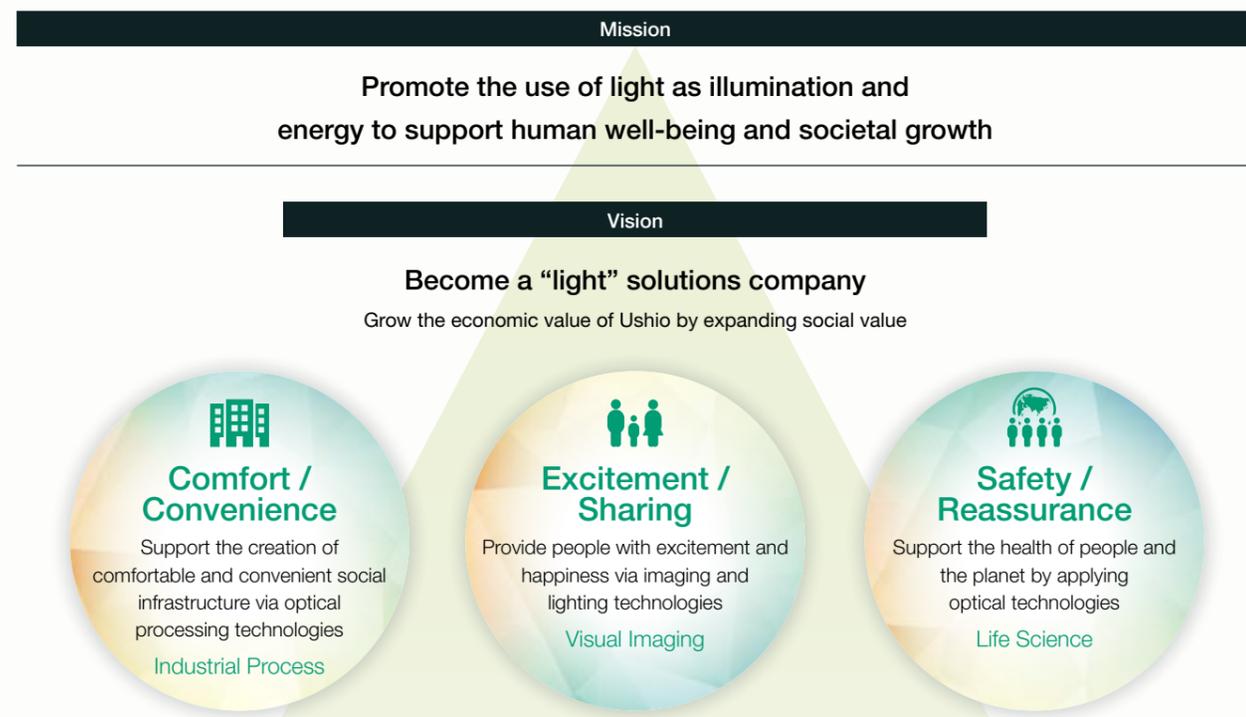
**USHIO**

# Management Policies—Vision for 2030

Seeking to achieve further growth leading up to 2050, Ushio has defined its new Mission and Vision for 2030.

In addition, we formulated a new Medium-Term Management plan to serve as a roadmap toward accomplishing our Vision. This plan is comprised of three pillars—basic policies, shifts in approach, and changes in mind-sets. Also, for the purpose of guiding us toward our long-term Vision for 2030, we have defined priority issues related to ESG management; Five Management Focuses; and KPI targets in relation to these objectives. Fiscal 2021 is the first year in which Ushio has used the word “ESG.” However, even if we have not used the word before now, this does not change the fact that we have been practicing what could be considered ESG management since our founding in 1964 as we have worked to contribute to society and fulfill our social responsibilities as indicated in our Management Philosophy. In other words, ESG management is itself an act of enacting Ushio’s Management Philosophy, and ESG management itself therefore does not represent the pursuit of a new goal. Going forward, we will advance ESG management based on a fresh perspective incorporating our newly revised philosophy and material issues.

## Mission and Vision for 2030



### Management Policies

Shifts in approach	Solidarity-based Rempo management (pursuit of common goals)	Overview of the Medium-Term Management Plan	Management Policies		
			Defensive strategy	Proactive strategy	
Changes in mind-sets	Long-term perspective	Backcasting	Strategy for the Light Source Business	Dramatic structural reform	Post-COVID-19 market development
			Strategy for the Equipment Business	Imaging Equipment Continue / enhance structural reforms	Optical Equipment Cultivate / focus investment on growth businesses
			Strategy for the Creation Business		Visualize / launch new businesses
			Unifying Strategy	Promote optimization of overall performance	

Changes in mind-sets	Long-term perspective	Backcasting	Social impact projection	Outside-in approach	Positioning of ESG as an opportunity
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### Five Management Focuses

Creating Businesses with Greater Social Value	Increasing the Quality of Our Human Resources to Move Closer to Our Vision	Creating Working Environments where It Is Easy to Produce Results	Sustainably Reducing Environmental Impact	Building a Robust Management Base
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Ushio’s business is divided among three fields. We have defined a Vision for Ushio in each of these fields based on which we are providing social value that extends beyond the supply of products.

## Ushio’s Primary Business Fields

<b>Industrial Process</b> Semiconductors, FPD, precision equipment, electronic components, photochemistry, printing, industrial equipment	
<b>Visual Imaging</b> Digital cinema, 3D, virtual reality, simulations, video display systems for surveillance and control, projector light sources, general and commercial lighting, landscape lighting and production, stage and studio lighting and production, office and document products	
<b>Life Science</b> Healthcare, natural environment, basic necessities, security, energy, space development	

**Evolution from light sources to light equipment and ultimately into a leading light solutions company**

## Goals of the Medium-Term Management Plan

The Medium-Term Management Plan is designed to unite the Ushio Group toward a common goal so that we can help resolve major social issues with our light technologies and thereby improve our social and economic value as we advance toward 2030.

**Aim of the New Medium Term Management Plan**

While looking ahead to the next **30** years, **reattempt to solidify the foundation** for profit structure transformation in order to achieve sustainable growth for net sales of **¥250** billion and an operating margin of **12 %** or more in fiscal 2030

# Transformation—Vision for 2030

A major element of the new Medium-Term Management Plan is its focus on shifting the emphasis of Group management from autonomy to solidarity to improve management efficiency. Tasks needing to be addressed to successfully complete this shift mainly include installing IT infrastructure, globalizing human resource and business activities, and enhancing corporate governance. While enacting the newly defined basic policies and the Five Management Focuses, we will manage KPIs to ensure that we can effectively address these tasks.

Furthermore, we intend to promote changes in mind-sets among management and all other employees to guarantee that our plans can contribute to long-term improvements in Ushio's corporate value.

Overview of Rempo “連峰” Management  
Independence for individual optimization → Solidarity for overall optimization

## Concurrent independence and solidarity

- Pursue organizational targets separately based on a common foundation

## Individual optimization: Independence > Solidarity

- Each company deploys individual measures and is not linked
- PDCA (monitoring) implemented for each company separately

Shift

Changes in Mind-Sets

## Overall optimization: Independence < Solidarity

- Aim for unified targets for the entire Group
- Overall understanding across businesses
- Unify PDCA (monitoring)

Changes in Mind-Sets

Rempo “連峰” Management to aim for

Past to Present

Short-term perspective, forecasting, customer-oriented perspective, inside-out approach, positioning of CSR as a cost

Present to Future

### Five Mind-Set Changes and Concrete Measures

<b>Long-term perspective</b>	Identify future risks and opportunities from management perspective
<b>Backcasting</b>	Formulation of new value-creation narrative based on Sustainable Development Goals (SDGs)
<b>Social impact projection</b>	Identification of material issues with consideration of outside perspectives and discussions with experts
<b>Outside-in approach</b>	Establishment of strategies and revision of portfolios with eye to 2030
<b>Positioning of ESG as an opportunity</b>	Establishment of new value creation narrative and ESG plan

Shifts in approach

Past to Present

Amid the rapidly growing and changing operating environment seen beginning in the 1990s, Ushio achieved massive improvements in its profit margins by practicing Rempo management designed to facilitate flexible action by subsidiaries. However, the Company's profit margins took a downturn after the 2008 financial crisis, and our profit margins today are lower than those seen prior to the start of Rempo management. We proceeded to conduct M&A activities in the 2000s while steadily globalizing our operations and entering new markets. However, these efforts failed to halt the decline in profit margins, and M&A activities have yet to catalyze a change in the overall trends affecting the Company.

Present to Future

We will adopt a strategic perspective in efforts to optimize Companywide performance. We have thus decided that our new approach toward Rempo management should focus on multiplicative management to strength solidarity and spur our rapid evolution.

## New Rempo “連峰” Management = multiplicative management

Enhance solidarity for non-continuous evolution

Based on the belief that improvements to the social value of Ushio will contribute to the economic growth of the Company, “Creating Businesses with Greater Social Value” has been positioned as our top focus.

Meanwhile, “Building a Robust Management Base” will be promoted to lay the groundwork for other management focuses as we accelerate initiatives based on our Five Management Focuses.

### Five Management Focuses



# Ushio's Focus Points

## Identification Process and Promotion Structure for the Five Management Focuses

In order to realize our Vision to “Become a light solutions company” that resolves the issues facing society, Ushio has identified Five Management Focuses, centered on ESG management, by conducting a macrotrend analysis regarding issues toward which it should focus its efforts and incorporating objective external perspectives.

### Identification Process of Five Management Focuses



### STEP 3 Meeting with External Experts to Evaluate the Appropriateness of the Five Management Focuses

- Date:** December 2020
- Location:** Head office of Ushio Inc.
- Participants:** Satoshi Ando, OMRON Corporation  
Haruka Sakamoto, University of Tokyo  
Toshihide Arimura, Waseda University



Front row, from left: Haruka Sakamoto, Satoshi Ando, Toshihide Arimura  
Back row, from left: Naoki Kawamura, Koji Naito, Takabumi Asahi

Adopting the theme of “vision for the world in 2030,” we invited experts from the fields of environment, medical treatment, and integrated management to exchange opinions with us regarding their vision for the world and society in the future based on their respective perspectives and in light of climate change and the COVID-19 pandemic.

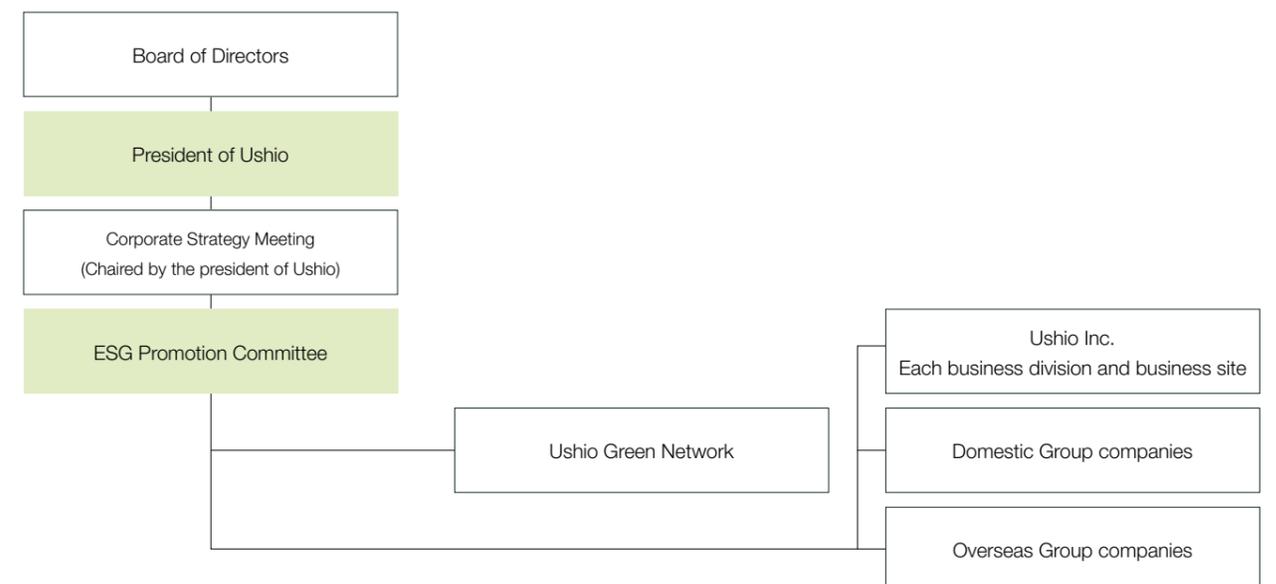
In our dialogue with these experts, we received a wide range of opinions and instruction on such topics as the accelerating trend toward carbon pricing against the backdrop of climate change, the completely new form of medical care expected to be realized in 10 to 20 years, and the ways that corporations should evolve from a long-term perspective amid a rapidly changing society.

### Promotion Structure for the Five Management Focuses

We have established the Corporate Strategy Meeting, chaired by Ushio's representative director and president, comprising not only directors, executive officers, and other members of management but also personnel responsible for promoting the Five Management Focuses. The Corporate Strategy Meeting determines the details and direction of initiatives toward ESG management. In accordance with the direction determined by the meeting, the ESG Promotion

Committee develops relevant plans and measures for each business division, business site, and Group company.

In addition, we disseminate and share relevant information internally through the Ushio Green Network, a platform for sharing the sustainability initiatives of each business site, and individual committees at Group companies. Also, major ESG-related issues are reported to the Board of Directors.



# Overview of the Five Management Focuses and Primary Initiatives and Targets

Ushio has established its Five Management Focuses, which represent important issues for the Company to address in order to improve its value as a corporation on a daily basis by working to resolve social issues over the long term.

Using a backcasting method, which involves establishing a future vision and thinking in reverse on how to achieve that vision, we determined KPIs with a focus on 2030 and are steadily promoting initiatives toward achieving these KPIs.



## 1 Creating Businesses with Greater Social Value

At the moment, there are strong calls for corporations to fulfill their social responsibilities. Under these circumstances, we believe our mission is to put the light technologies that we have cultivated as a “light innovation company” to use in resolving the issues facing society in the future.

For details, [P.26](#)



## 2 Increasing the Quality of Our Human Resources to Move Closer to Our Vision

We establish and provide enhanced human resource development programs in order to support the individual growth of our employees. By doing so, we aim to enhance the quality of our human resources on a Groupwide basis with the goal of moving closer to our Vision.

For details, [P.32](#)



## 3 Creating Working Environments where It Is Easy to Produce Results

To realize our Management Philosophy and achieve our Vision for 2030, we aim to be a highly engaged organization that embraces contributions from and the development of both the Company and its employees.

For details, [P.34](#)



## 4 Sustainably Reducing Environmental Impact

From a long-term perspective, we will pursue efforts to reduce our environmental burden, including within the supply chain.

For details, [P.36](#)



## 5 Building a Robust Management Base

We will work to establish a robust management foundation, which will in turn underpin the four other focus points of management.

For details, [P.38](#)

## Overview of Primary Initiatives and Targets

Initiatives	By 2030, we will aim to have:	Fiscal 2022 targets
<p><b>Creation of and regular revisions to road map for achieving our Vision</b></p>	Identified light-oriented solutions to priority social issues and established a road map for realizing these solutions. In addition, implemented business activities in line with the road map we established	Creation of road map
<ul style="list-style-type: none"> <li>Secure and develop human resources who can devise business models</li> <li>Establish partnerships</li> </ul>	In accordance with the road map, set up a business structure bringing together the leading members of each business and corporate planning personnel who revise the road map based on the market trends they investigate. Furthermore, build strong relationships with partners who help promote our business, thereby establishing a structure where we can promote our business activities on an ongoing basis	Secure human resources
<ul style="list-style-type: none"> <li>Secure and develop human resources as technical experts</li> <li>Develop necessary technologies over the medium-to-long term</li> </ul>	In line with the road map, identified necessary elemental technologies and formulated and implemented plans to develop such technologies over the medium-to-long-term. Moreover, in collaboration with corporate planning teams, established independent technologies essential for fulfilling the goals of our road map with a focus on advanced technologies while conducting periodic reviews of these technological development plans	Secure human resources
<p><b>Human resource development</b></p>	Expanded the scope of programs to develop the next generation of Ushio's management across the entire Group, including overseas subsidiaries. Also, executed periodic investments to cultivate a pool of diverse human resources who can be expected to contribute to the achievement of our Vision for 2030	<ul style="list-style-type: none"> <li>Establish study abroad/training systems, cultivate next-generation managerial personnel, and develop cultivation programs linked with engineer development</li> <li>Establish the direction of the global talent management system and the development process of that system</li> </ul>
<p><b>Human resource management</b></p>	Realized global personnel mobility based on a corporate culture that respects individual attributes and values and encourages the active role of a diverse group of human resources. Also, made progress through global personnel mobility with putting the best person in the best place on a Groupwide basis	<ul style="list-style-type: none"> <li>Establish an operational and management process for determining strategic positions and formulating plans to develop personnel to fill those positions (determine period for establishing strategic positions, review candidates → make assessments → establish and implement development plans)</li> <li>Establish the direction of the global talent management system and the development process of that system</li> </ul>
<p><b>Diversity promotion</b></p>	Created a global workplace culture in which a diverse range of backgrounds, and values, in addition to diverse attributes, are acknowledged and respected	<ul style="list-style-type: none"> <li>Examine and implement measures to raise awareness of diversity among all employees</li> <li>Provide support to female candidates for managerial positions</li> <li>Create a culture where it is easy to take childcare leave, regardless of gender</li> </ul>
<p><b>Promotion of workstyle reforms</b></p>	Created a rewarding workplace environment designed to enhance the motivation of each employee while ensuring their health and well-being. Become a highly engaged organization that embraces contributions from and the development of both the Company and its employee	<ul style="list-style-type: none"> <li>Introduce paid leave on an hourly basis</li> <li>Strengthen health and productivity management (formulate strategic map and implement various initiatives accordingly)</li> <li>Effectively utilize the results of stress checks</li> </ul>
<p><b>Health and safety of employees</b></p>		
<p><b>Climate change</b></p>	Successfully avoided the anticipated risks related to climate change and entered into businesses that present significant opportunities. Reached our targets for reducing CO <sub>2</sub> emissions in accordance with the Science Based Targets, reduced CO <sub>2</sub> emissions from our business sites, and established a structure for developing eco-friendly products with reduced CO <sub>2</sub> emissions and providing them to customers—all of which help to reduce the environmental burden of our business activities	<ul style="list-style-type: none"> <li>Disclose information, such as scenario analysis of climate risks and opportunities and relevant financial impact, in accordance with the TCFD recommendations by fiscal 2023</li> <li>Reduce our CO<sub>2</sub> emissions in Scope 1 and Scope 2 by 13% compared with fiscal 2017</li> <li>In regard to product lineups with high CO<sub>2</sub> emissions, reduce emissions in Scope 3, Category 11 by 10% compared with fiscal 2017</li> </ul>
<p><b>Energy-related issues</b></p>	Reduced amount of energy used and controlled amount of resources used	Reduce per unit energy consumption (domestic business sites) 1% each year compared with previous fiscal year
<p><b>Water resources and water risks</b></p>	Utilized water and resources in a highly effective manner	Reduce water usage amount 1% by fiscal 2022, compared with fiscal 2019
<p><b>Supply chain management</b></p>	Realized a supply chain that has a reduced impact on the environment	Gather information on reducing CO <sub>2</sub> emissions throughout the supply chain
<p><b>Reinforcement of Rempo management</b></p>	Integrated and visualized consistent Groupwide targets and the targets of the managers in each business under a tree-like format. In addition, ensured that the accomplishment of individual targets lead to the accomplishment of Groupwide targets	
<p><b>Establishment of foundation for strengthening business portfolio strategies</b></p>	Made it possible to constantly understand the status of each business (resource allocation, cost structure, etc.) and appropriately control the composition of our business portfolio	<ul style="list-style-type: none"> <li>Monitor consolidated monthly earnings summaries and forecasts based on multiple focuses (products, markets, etc.) and in an integrated, cross-organizational manner</li> <li>Complete a KPI tree that integrates the targets of managers in each business with Groupwide targets and establish a method for evaluating KPI performance</li> </ul>

# Five Management Focuses

# 1

## Creating Businesses with Greater Social Value

### Definition of Management Focus

At the moment, there are strong calls for corporations to fulfill their social responsibilities. Under these circumstances, we believe our mission is to put the light technologies that we have cultivated as a light innovation company to use in resolving the issues facing society in the future.

To date, the criteria we used to determine the direction for the Company centered on the perspectives of profit and whether we are able to reach that direction on our own accord. However, we now understand that social issues have the same level of significance as market scale, and we will therefore change our criteria to focus on how we can contribute to even larger social issues. By doing so, we will support the happiness of people and the development of society.

### Details of Specific Initiatives

#### Creating and Regularly Revising the Road Map for Achieving Our Vision

With the aim of resolving the social issues we anticipate for 2030, we visualized and broke down issues by creating an "issue tree," and used this tree to formulate a road map based on a backcasting approach. In accordance with this road map, we will promote the development and commercialization of the light technologies needed to resolve social issues in 2030.

Additionally, we will enhance the accuracy of the road map through a continuous hypothesis-testing cycle and periodic updates.

#### Securing and Developing Human Resources Who Can Devise Business Models

We will make efforts internally and externally to secure human resources who can determine the social issues we need to address and devise business models and value chains for establishing a business that helps address them. In addition, these people will play a central role in expanding the perspective of our personnel through continuous education.

#### Establishing Partnerships

Major social issues cannot be resolved using Ushio's technologies and products alone. For areas where we are lacking, we will collaborate with business partners, both in Japan and overseas, that share the same goals and values as us to resolve the social issues that we aim to address.

#### Securing and Developing Human Resources as Technical Experts

For areas in which individual employees wish to hone their skills, we conduct activities that give our employees leeway to investigate and pursue R&D activities on their own initiative with the aim of achieving "world firsts and world bests." Through these kinds of activities, we

are enhancing our technological capabilities and cultivating human resources who can take the initiative with new pursuits. Additionally, in fiscal 2021, we are taking steps to significantly strengthen our educational activities on intellectual properties (IP). Specifically, we are offering educational activities from wide-ranging perspectives, which go beyond patent applications to include the formulation of business strategies based on patent analysis, to not only our engineers but also personnel responsible for sales and business management. Through such educational activities, we will cultivate human resources who can devise IP strategies using a backcasting approach. Furthermore, we actively hold conferences not only internally but also at universities in an effort to develop light technicians who will lead the new era.

#### Developing Necessary Technologies over the Medium-to-Long-Term

Centered on our R&D Division, we are working to develop technologies that we need to strengthen or newly introduce in order to resolve social issues. At the moment, we are primarily promoting R&D themes related to social issues in the Life Science domain, including pulse spectroscopy inspection systems, organ-on-a-chip devices, and light-powered medical treatment.

## Vision for 2030

### Provide Light Solutions to Resolve Social Issues

By 2030, we will aim to have:

- Identified light-oriented solutions to priority social issues and established a road map for realizing these solutions. In addition, implemented business activities in line with the road map we established.
- In accordance with the road map, set up a business structure bringing together the leading members of each business and corporate planning personnel who revise the road map based on the market trends they investigate. Furthermore, build strong relationships with partners who help promote our

business, thereby establishing a structure where we can promote our business activities on an ongoing basis.

- In line with the road map, identified necessary elemental technologies and formulated and implemented plans to develop such technologies over Medium-to-long-term. Moreover, in collaboration with corporate planning teams, established independent technologies essential for fulfilling the goals of our road map with a focus on advanced technologies while conducting periodic reviews of these technological development plans

## Achievements and Plans through 2022

### Creating and Regularly Revising the Road Map for Achieving Our Vision

- Identified social issues to be addressed and themes for taking action to address them in the Industrial Process and Life Science domains and commenced projects to promote efforts toward each theme
- Thought in reverse from our Vision for 2030 using a back-casting approach and continuously adopted themes under

which we can leverage our strengths within the pursuit of this vision. Completed our road map by connecting our Vision with these themes.

- Established a Groupwide structure for promoting business leader cultivation and product development in each domain.

## Case Study

### Securing and Developing Human Resources as Technical Experts

Recognizing the importance of laser science, the Science Council of Japan issued a statement entitled "Strengthening of Laser Science Research for the Creation of New Fields and Related Measures" in 2005. Remarkable progress has been made with laser science and research on its application in Europe, the United States, and Asian countries against the backdrop of the advancement of cutting-edge technologies.

Amid this trend, an extremely important issue for Japan has been examining how to systematically cultivate young human resources for the next generation who can play an active international role in the field of advanced laser science, while drawing the accomplishments Japan has made in this field to date.

To that end, Japan established the Consortium on Education and Research on Advanced Laser Science (CORAL), centered on the University of Tokyo, in 2007, with the aim of further educating young talent through educational programs that allow them to systematically acquire the knowledge and technical skill needed on the forefront of advanced laser science. Ushio has been participating in CORAL since the organization's establishment.

Ushio organizes a curriculum as part of CORAL. This curriculum starts with a lecture on the first day that classifies artificial light sources in a broad sense. Among these artificial light sources, gas discharge lamps, especially those emitting light in the UV to vacuum ultraviolet (VUV) range, are discussed in terms of their emission principles. In addition, the key historical points behind the creation of these lamps are explained in detail.

Furthermore, an introduction is given of the industrial applications of not only conventional lamp light sources but also LD/LED and EUV light sources.

The curriculum also involves practical training over the course of three days. In this training, participants gain a hands-on experience regarding UV light spectrometry and photochemical reactions (ozone generation and its benefits).

Former CORAL participants who now serve as engineers at Ushio currently work as supervising instructors in this curriculum.



CORAL participant engaging in practical training



CORAL participants listening to a lecture

# Structure for Promoting New Business Creation

## —Activities of TeamG

Ushio established the organization TeamG in order to realize new value creation models. Drawing on the strengths of TeamG, Ushio will strive to create new businesses with the aim of resolving social issues.

(The “G” in “TeamG” stands for “generation”)

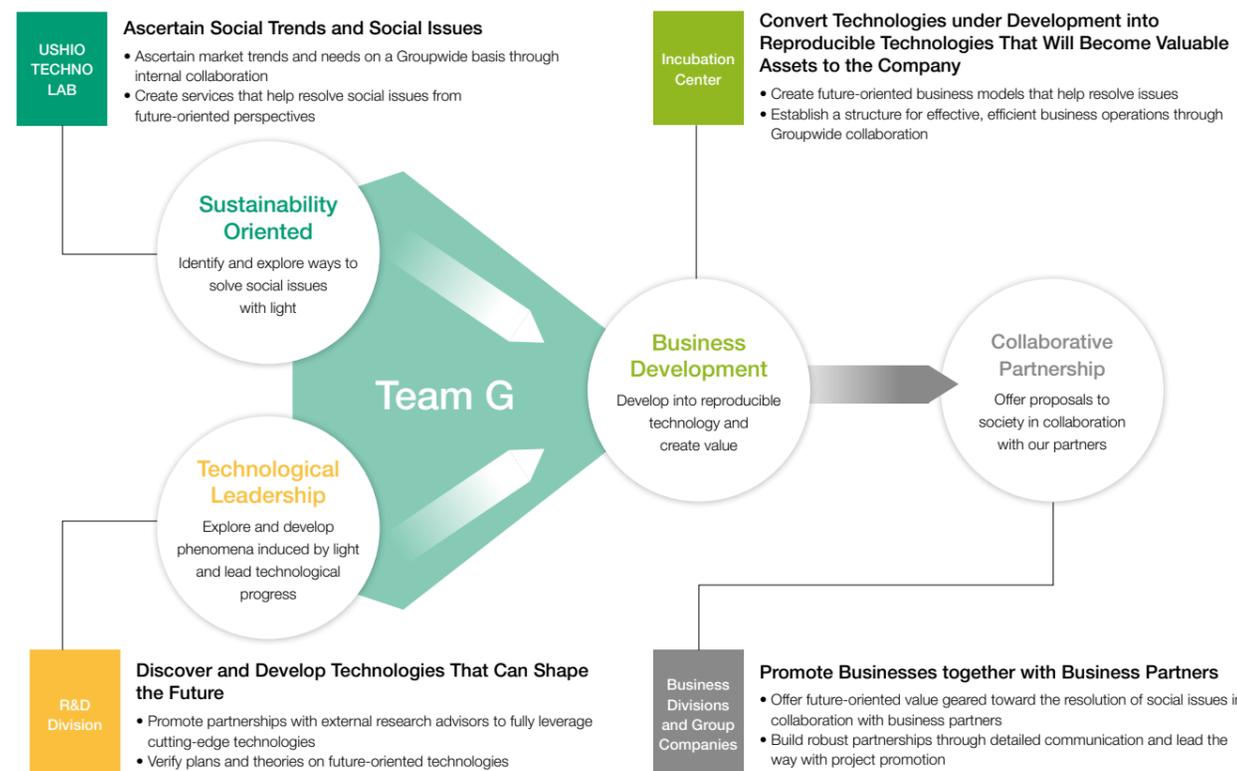
### Establishment of TeamG and Activities to Create New Businesses That Resolve Social Issues

Ushio has faced the following issues in its conventional activities to create new businesses:

- Themes were decided with too much focus on “products” and “in-house ways of thinking.”
- The target for new business creation (social issues to overcome) had been the Japanese market.
- Too much emphasis had been placed on achieving short-term results.
- The divisions that should focus on promoting new business creation were not determined.
- A structure for collaboration was not established (independent management).

To address these issues, we established a structure for pursuing new business creation through collaboration between individual divisions under the following model.

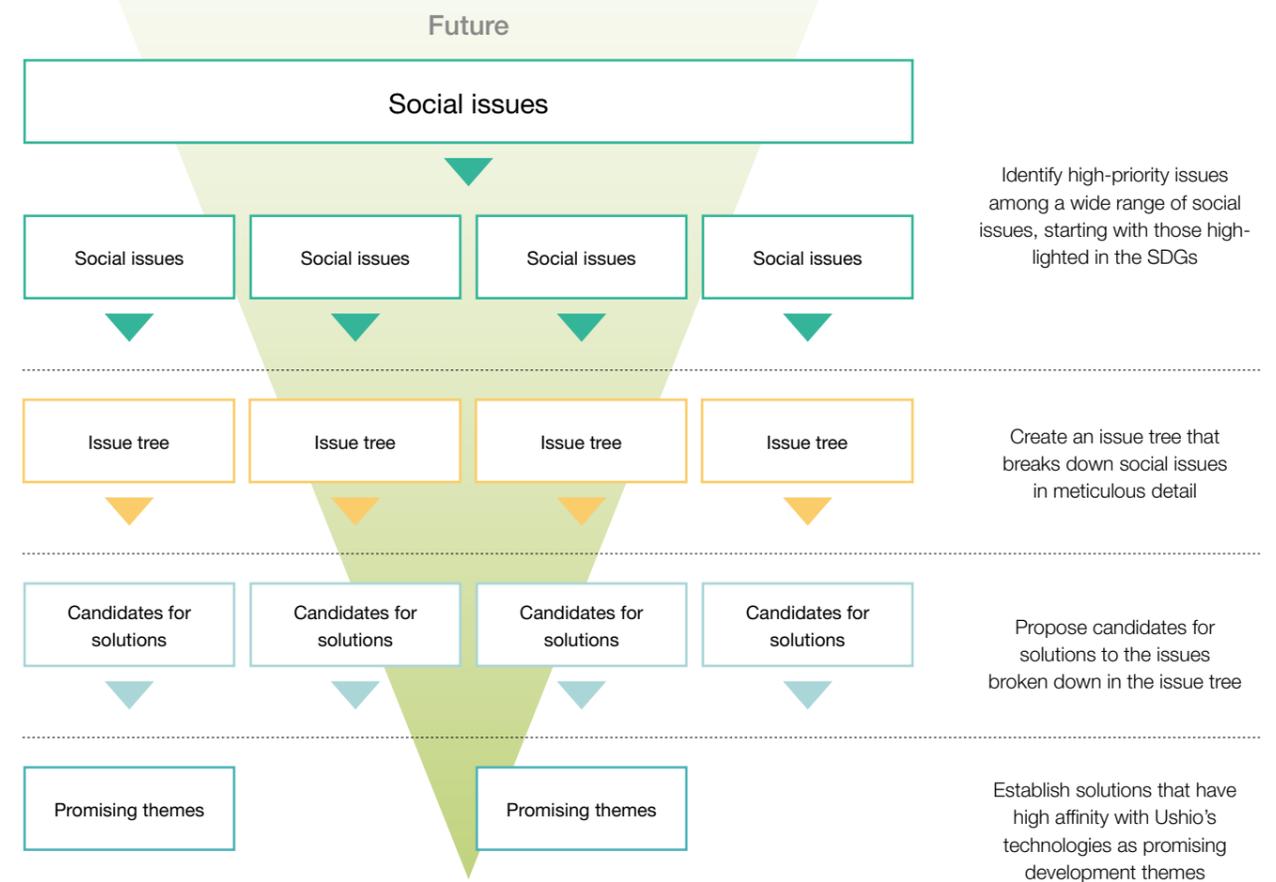
### The Structure and Roles of TeamG



### Implementing New Business Creation Projects Aimed at Resolving Social Issues 10 to 30 Years in the Future



Our new business creation projects begin by first determining the social issues we need to resolve in the future. We then carry out a detailed analysis of these issues to realize a solution and determine themes under which Ushio's light technologies can be leveraged (backcasting approach).



The Life Science and Industrial Process domains are areas that relate closely to the promising development themes we have determined through the above process. In the Life Science domain, we have determined the focus areas of “global warming countermeasures,” which aim to achieve carbon neutrality; “food initiatives,” which aim to eliminate food shortages and starvation across the world; and “healthy lifespan extension,” which includes efforts to

control pandemics. We are creating themes for each of these focus areas on an ongoing basis. In the Industrial Process domain, we have determined the focus areas of “semiconductor thermal processing,” “semiconductor packaging processes,” and “battery manufacturing processes,” and are currently pursuing technological development to realize a DX.

# Four Projects to Tackle Social Issues

**Takanori Samejima**  
General Manager,  
Future Co-Creation Department  
Ushio Technology Laboratory, Ushio Inc.



## Case Study

1

### Global Warming Countermeasures

Promoting Technological Development Aimed at Reducing Greenhouse Gases



The Intergovernmental Panel on Climate Change (IPCC) has pointed out the fact that human activity has contributed to global warming since the start of industrialization. The IPCC has also stated that, with the current rate of industrial advancement, global warming has been intensifying even further. In response to this, Japan has set its sights on achieving a 46% reducing in CO<sub>2</sub> by 2030, and reaching net-zero emissions by 2050. In addition to CO<sub>2</sub>, it is also important to substantially reduce CH<sub>4</sub> and N<sub>2</sub>O (two gases that have even higher global warming potential than CO<sub>2</sub>). For many years, Ushio has maintained advanced light and electrical discharge technologies, electricity power source technologies, and process technologies. We are currently moving forward with technological examinations regarding the application of these technologies in the fields of renewable energy and greenhouse gas (GHG) countermeasures. One such examination involves leveraging electric discharge technologies to promote GHG decomposition and separation technologies and leveraging such technologies to drive contributions to the widespread adoption of renewable energy, which provides the power source for such technologies. GHG decomposition and separation technologies refers to the clarification and establishment of technologies for chemical processes such as decomposing and desorbing GHG using electric discharge and light technologies.

Contributing to the widespread adoption of renewable energy involves the development of technologies that support photovoltaic devices and the development of energy storages systems. These technologies and systems are expected to be introduced in the industrial sector, for example, in the materials industry.

Additionally, we are examining the application of our technologies in storage batteries to curtail the use of fossil fuels and in efforts to isolate GHG in the atmosphere. In these ways, we are moving forward with activities to promote co-creation and discover new applications for our technologies, thereby expanding the fields in which we are active.



(Top) Mounting of cylindrical solar batteries  
(Bottom) Cylindrical solar batteries  
Cylindrical solar batteries have the advantage of being able to only replace a faulty part, unlike regular solar batteries which require full replacement when faulty. In addition, as these batteries do not completely block sunlight, crops can be grown underneath them.

2

### Food Initiatives

Promoting Technological Development to Guarantee Food Safety



The world's population is projected to grow to about 9.7 billion by 2050 and 10.9 billion by 2100.

Following global population increases and the rise of income levels, demand for food, livestock feed, and crops is expected to significantly increase, primarily in emerging countries. Meanwhile, in terms of supply, there are concerns over severe food shortages in the future due to limited farming space and water supply as well as the progression of climate change. Particularly, securing a stable supply of protein-rich food has become a major social issue, and for this reason we believe we will see plant factories, vertical farming, and protected horticulture—which are all highly productive means of growing crops—play an even greater role in the future.

Over its history, Ushio has developed discharge lamps that cover the broad light wavelength range needed to promote photosynthesis and support the growing, cultivation, and harvest of crops. The Company has also developed new light sources and unique light technologies that are widely used as energy to efficiently grow crops. However, in order to secure higher levels of productivity, there is a need to further promote digitalization. Specifically, we believe that remarkable progress is being made in terms of sensing technologies, and will therefore focus our efforts on development in the sensing domain going forward.

3

### Healthy Lifespan Extension

Developing Technologies That Help Improve the Quality of Life



By 2030, the aging of populations around the globe is expected to have progressed even further, and in Japan, in particular, one-third of the population is expected to be age 65 or older. While the average lifespan increases, social issues related to long periods of unhealthy life, including becoming bedridden or needing nursing care, have been emerging. To that end, Ushio aims to extend healthy lifespans by offering solutions that help improve the quality of life.

Specifically, measures toward environmental hygiene, medical care (diagnosis and treatment), nursing care, social welfare, disease prevention, and anti-aging, are essential for extending healthy lifespans, and Ushio already offers a wide lineup of products in these areas. For example, we offer light disinfecting technologies such as Care222 in the environmental hygiene field, UV medical devices and

various medical-use light sources in the medical care field, and medical cosmetics and other products in the anti-aging field.

Through the development of such products, we have conducted research related to the effects of light on the human body, including photoimmunology and the skin penetration level of light. We have also amassed know-how from a pharmaceutical perspective regarding the necessary processes for achieving the practical application of our products in society. By building on this research and know-how, we aim to extend the healthy lifespans of an even greater number of people. Leveraging this know-how, we will promote the development of devices and equipment in the fields of nursing care, social welfare, and disease prevention as well going forward.

4

### Three Focus Areas for Realizing DX



Through the popularization of AI and smart mobility, DX has the potential to provide more comfortable lifestyles to all types of people in society. To realize DX, technological innovation such as the widespread adoption of high-performance semiconductors and automated driving is essential. At Ushio, we adopt a backcasting approach that

considers what kind of technologies will be needed to address these social issues and when. Based on this approach, we are promoting future-oriented technological development in the Industrial Process domain, particularly in the following three focus areas:

#### Semiconductor Thermal Processing

Helping to Establish Advanced Processes in Response to the Downsizing of Semiconductors

Thermal processing is an essential part of various processes involved in the manufacture of semiconductors. Following the downsizing of semiconductors, functional progress is being made in terms of electric furnaces, which require diverse heat control features; rapid temperature control, which is not possible to realize using hot plates; heating only a few nanometers of surface; and localized device heating. At the same time, photoheating is garnering attention as a promising technology in the semiconductor manufacturing process, as greater energy efficiency will be required in the future in order to reduce CO<sub>2</sub> emissions.

With a focus on our future road map for semiconductors, we aim to resolve various issues in the semiconductor manufacturing process through photoheating technologies.

#### Semiconductor Packaging Processes

Contributing to Improved Performance through Integration and 3D Conversion of Multiple Chips

Higher computer performance has become necessary due to the tremendous increase in data volume following the popularization of IoT and 5G. However, at the moment, the downsizing of semiconductors is reaching close to its limit, and it is now necessary to enhance overall semiconductor module performance through the integration of multiple semiconductor chips into a single circuit board and through chiplet and 3D laminating technologies. Forging connections between chips has become an issue as this requires the formation of several μm of microwires, and there is only so much that can be done with conventional wire-forming processes.

To respond to this issue, we aim to not simply enhance the performance of our lithography equipment but rather establish a process for actually forming the necessary microwires. Guided by this aim, we are working to enhance overall semiconductor module performance in collaboration with components and material manufacturers.

#### Battery Manufacturing Processes

Enhancing the Performance of Batteries—The Key to Popularizing Electric Vehicles

The electrification of automobiles is advancing with a view to realizing a carbon-neutral society. The key to popularizing electric vehicles (EV) is increasing the capacity of batteries and lowering their cost. Currently, lithium ion rechargeable batteries are the most common battery used in EVs. However, the future is moving toward the installation of innovative rechargeable batteries with high capacity and light weight, such as solid-state batteries.

Meanwhile, differing interface states between materials have a significant impact on the performance and quality of these rechargeable batteries, and there is therefore a need to form interface states that are suitable for such batteries. Ushio's photo-cleaning and modification technologies have shown significant promise in answering this need.

With our in-depth knowledge of optical processing, we aim to provide solutions that encompass the battery manufacturing process in order to help prevent global warming going forward.

# 2

## Increasing the Quality of Our Human Resources to Move Closer to Our Vision

### Definition of Management Focus

The contributions from each employee are indispensable in achieving Ushio's Vision for 2030. To that end, we establish and provide enhanced human resource development programs in order to support the individual growth of our employees. In this way, we aim to enhance the quality of our human resources on a Groupwide basis with the goal of moving closer to our Vision.

By helping our human resources grow through various educational programs and providing them with an environment in which they can plan an active role in their respective business field, we will help "build a prosperous Company and prosperous employees," which is a key principle of our Management Philosophy.

## Connection between Our Initiatives and Vision for 2030

### Human Resource Development

- Create and implement global human resource development plans

Roughly 70% of the Ushio's net sales come from overseas. Business and social issues differ by country and region, and the business environment is changing on a daily basis. To maintain and expand Groupwide sales amid these circumstances, we need to ensure a wealth of diversity among our human resources. Or, in other words, we must step up our efforts to discover and develop global talent.

As our first step toward creating global human resource development plans, we have defined "diversity management," "management literacy," and "global communication" as three conditions for being an employee of the Ushio Group. To ensure that our employees gain the knowledge and experience required to meet these conditions, we have established the Ushio College, which offers personalized curriculums that provide support to employees in areas where they are lacking to help them grow. With the hopes that all employees can play an active role on a global stage in the future, we will provide support for expanding the viewpoints of employees who will lead Ushio into the next generation.

### Human Resource Management

- Select and define a new "strategic position"
- Select and regularly review personnel candidates
- Assess candidates and formulate and implement development plans for them
- Optimize personnel rotations

The Ushio Group comprises over 50 companies in Japan and overseas, with a large number of employees who possess a wide array of talent. To create a corporate culture that respects individual attributes and values and encourages the active role of a diverse group of human resources, we must first visualize the qualities and characteristics of each individual employee.

To that extent, rather than limit our sights to only a certain type of human resources, we are working to ascertain global talent and establish global talent systems across all Group companies.

In addition, at the end of fiscal 2020, we established a "strategic positioning" strategy for our personnel, which will help establish necessary positions in the near future. Our existing managerial positions will not necessarily be the only positions needed in the future. For that reason, we believed we must anticipate new positions aimed at realizing our Vision for 2030 and take preemptive action to find the right people for such positions if we are to realize the sustainable growth of the Ushio Group going forward. Based on the premise that the details of this positioning strategy will be changed in a flexible manner in accordance with the external environment, we will take steps to select and assess multiple candidates for strategic positions and formulate and implement development plans for these candidates. By doing so, we will contribute to the realization of our Vision for 2030.

## Vision for 2030

By 2030, we will aim to have:

- Expanded the scope of programs to develop the next generation of Ushio's management across the entire Group, including overseas subsidiaries. Also, executed periodic investments to cultivate a pool of diverse human resources who can be expected to contribute to the achievement of our Vision for 2030
- Realized global personnel mobility based on a corporate culture that respects individual attributes and values and encourages the active role of a diverse group of human resources. Also, made progress through global personnel mobility with putting the best person in the best place on a Groupwide basis

## Achievements and Plans through 2022

- We will enhance and expand the programs we offer through Ushio College in order to maximize learning experience for each employee. Also, with a focus on responding to changes in the social environment, such as systems to extend the mandatory retirement age to 70 in the future, with greater flexibility, we have introduced the Ushio Career Progression (UCAP) system for veteran employees. This system provides veteran employees with the opportunity to expand their careers and play a more active role.
- We are reviewing the global talent management system and the direction of the development process of that system with a view to fiscal 2022.

## Case Study

### Promoting Human Resource Development

The training style that we have been implementing for many years, such as new employee training and rank-based training, has shifted to a hybrid style that combines online and offline training, due partly to the impact of the COVID-19 pandemic. Leveraging the benefits of online training, we are carrying out more practical training that incorporates active learning while making use of various IT tools.

For our new employee training, in particular, we will change the training period from the conventional short-term intensive training period immediately after joining the company to a more medium- to long-term period. We will also make enhancements to this training on a regular basis to provide an environment in which new employees can continue to learn at times that best suits them.

Going forward, we will further enhance the content of Ushio College, a learning program we established in fiscal 2020, and implement other programs to support employee learning. We will also provide support for employees who engage actively in global roles. In these ways, we will work to better the lives of our employees. Some examples of the initiatives we are carrying out are listed below.



**Miki Mochizuki**  
Global HR Strategy Section, Global HR Strategy Department, Human Resources & General Affairs Division, Corporate Headquarters, Ushio Inc.

Program name	Details
Ushio College	Ushio College offers multiple programs aimed at strengthening employees' "diversity management," "management literacy," and "global communication," which are essential skills for global human resources. Through Ushio College, we carry out investments to cultivate personnel who can lead the Ushio in the future, regardless of age or experience. Furthermore, the college offers programs to enhance DX-related knowledge and improve practical language skills. In these ways, Ushio College supports learning that helps employees strengthen areas in which they lack experience.
Young Executives	The Young Executives program is a development program that targets young employees in their 20s and 30s (recruitment and selection through recommendation) with the aim of cultivating future managerial personnel. Over the course of a year and half, all participants take part in multiple programs, which aim to foster a sense of ambition and passion among these participants and improve their strategy creation and execution capabilities as well as their global response capabilities.
UCAP (Ushio Career Progression)	UCAP is a program that aims to support the careers of employees age 50 and older. Under UCAP, through initiatives such as the "skill acquisition support system," which provides financial support to employees who wish to independently build their career and invest their own money into acquiring new skills, and the "in-house interdivisional system," which allows employees to work in multiple divisions, we provide employees with the opportunity to play an active role with the Company throughout their lifetimes.
Overseas Study and Trainee Program	The Overseas Study and Trainee program aims to develop employees who can contribute to the Company's business. To that end, the program helps employees obtain the necessary technical knowledge and skills for their work and broadens their international perspectives by having them absorb both Japanese and overseas culture and expertise. The period of the Overseas Study and Trainee program differs from person to person.
Rank-Based Training	Rank-based training is offered to employees in their third and fourth year of employment. It is also offered when employees are promoted or appointed as line chiefs. This training seeks to have employees acquire the necessary knowledge and deepen their understanding at respective milestones in their career.
New Employee Training	New employee training targets new employees and helps them acquire the necessary skills and understanding after being assigned to their respective divisions. From fiscal 2021, we have significantly revised the content of this training and time period. The training is now being conducted over a medium- to long-term time frame, allowing new employees to receive training at times that best suits them. The new employee training features online discussion and presentation sessions once a month to help new employees become more aware of themselves as Ushio employees and further develop their online communication skills.
Sister / Brother Program (Mentorship Program)	Every year, one senior employee (sister/brother) is appointed to a new employee as a mentor to provide on-the-job training. Training is provided to these mentors to help them acquire skills and deepen their understanding regarding the key points involved in teaching and training.

# 3

## Creating Working Environments where It Is Easy to Produce Results

### Definition of Management Focus

At Ushio, we aim to become a highly engaged organization that embraces contributions from both the Company and its employees toward realizing its Management Philosophy and Mission and Vision for 2030. We will create a workplace environment that draws out the full potential of each employee, regardless of age, gender, nationality, or disability, and build a solid foundation conducive to that goal.

## Connection between Our Initiatives and Vision for 2030

In order to establish the necessary workplace environment for realizing our Management Philosophy and accomplishing our Mission and Vision, we are promoting a broad range of coordinated efforts in an integrated manner.

### Working toward the Mutual Growth of the Company and Employees

- Promote the goal evaluation system U&I Growth (UIG) Cycle

At Ushio, we have an evaluation system in place called the UIG Cycle\* designed to nurture and help develop the careers of employees toward their synchronous growth with the Company.

\*The "U" and "I" in "U&I" derive from the first letter "U" in "Ushio" and "I" as in myself, and the "&" connects the two together to realize both the growth of the business and employees.

### Promoting Mutual Respect within Diverse Teams of Employees and Drawing out Their Full Potential

- Promotion of diversity
- Implementation of workstyle reform

Diversity is one of our management strategies and encompasses more than just age, gender, nationality, and other attributes. By fostering workplace cultures and creating frameworks that encourage employees to demonstrate their diverse range of backgrounds, capabilities, and sense of values, Ushio's management and human resource divisions are working closely with all employees to promote diversity in a manner that is optimized for each individual workplace.

### Creating a Foundation for Enhancing Employee Motivation

- Promotion of health and productivity management
- Implementation of health and safety initiatives

At Ushio, we will strategically establish a workplace environment that is rewarding and allows employees to feel a sense of personal growth and ambitiously pursue new challenges from management perspectives while ensuring their health and well-being.



## Our Vision for 2030

- A global workplace culture in which a diverse range of backgrounds and values, in addition to diverse attributes, are acknowledged and respected
- A rewarding workplace environment designed to enhance

the motivation of each employee while ensuring their health and well-being. A highly engaged organization that embraces contributions from and the development of both the Company and its employees

## Achievements and Plans through 2022

- Reform workplace culture and employee awareness by conducting and analyzing the results of engagement surveys (identify hurdles for strengthening engagement and consider possible measures)
- Strengthen health and productivity management (devise a strategic map and implement the necessary measures)

### Case Study

#### Promoting Diversity

In our diversity project, we have been promoting the following activities in order to become a company that is comfortable and rewarding place to work at for all employees. By doing so, we aim to "Build both a prosperous Company and prosperous employees."

- Implementation of diversity management training for line chiefs
- Implementation of seminars for balancing work with nursing care
- Implementation of the "sign language club," where employees learn sign language from other employees with hearing impairment
- Distribution of the "working from home handbook" to support remote work

Moving ahead, we will continue to promote diversity based on a wide range of perspectives.



**Yohei Kubota**  
HR Section, HR Department,  
Human Resources & General Affairs Division  
Corporate Headquarters  
Ushio Inc.

#### Pursuing Workstyle Reforms

Viewing the restrictions on movement due to the COVID-19 pandemic as an opportunity to pursue workstyle reforms, we established and revised a broad range of work-related systems.

- Positioning our work-from-home system as an initiative to enhance productivity, we made it possible for employees to work from home for as many days as they like. By doing so, we reduced the rate of employees coming into the office by 70% (as of August 2021) in areas under the state of emergencies issued by the Japanese government.
- We eliminated the core working hours under our flexible work time system, thereby allowing employees to work in accordance with their professional and personal circumstances.
- We introduced an annual paid-leave system that can be utilized by the hour. In this way, we took steps to help employees, especially those in divisions where the flexible work time system is not applicable, balance their work with visiting the doctor, raising children, and providing nursing care, among other matters.

#### Promoting Health and Productivity Management

We are undertaking various efforts to help employees who are sick or injured focus on treatment and make a smooth return to work once they are healed. These include:

- Systems for ensuring employment continuity, such as the priority use of accumulated paid-leave holidays and leave-of-absence systems
- System under which supervisors, human resource personnel, and occupational health physicians collaborate to help employees balance medical treatment with work in accordance with their individual circumstances
- Issuance of the Work and Healthcare Support Handbook, which aims to eliminate employee concerns
- Provision of support for securing income by offering medical treatment through a group long-term disability (GLTD) insurance program

Additionally, we established the Health and Productivity Management Promotion System in 2021, which aims to have employees continue to work in good mental and physical health. We also adopted the Health Declaration, under which we are promoting various health-related efforts.

# 4

## Sustainably Reducing Environmental Impact

### Definition of Management Focus

We have made diligent efforts to reduce our burden on the global environment. Today, environmental initiatives are essential for surviving as a company from a long-term perspective and for understanding the subtleties of nature and connecting them with our business activities.

Going forward, we will pursue initiatives, including within the supply chain, to identify risks while at the same time ensuring that we do not miss out on opportunities for business expansion and that we reduce our environmental burden.

### Details of Specific Initiatives

#### Climate Change

- Reduce CO<sub>2</sub> emissions from our business sites

We have thus far significantly reduced CO<sub>2</sub> emissions through such means as energy-saving activities and the introduction and establishment of solar power generation. We have now raised our target for overall emission reductions and will work to achieve this target on a Groupwide basis going forward through the further introduction or renewable energy sources and other measures.

- Reduce CO<sub>2</sub> emissions through the development of eco-friendly products

We are promoting the transition to solid-state light sources, as such light sources help reduce CO<sub>2</sub> emitted during product use. In addition, we have incorporated evaluation items for CO<sub>2</sub> emissions within our eco-friendly assessment manuals and are pursuing product development with even less environmental burden.

Going forward, we will continue to promote product development in line with our product development road map, which focuses on CO<sub>2</sub> reductions.

#### Energy Issues

- Respond to issues related to resources and energy

We have been moving forward with efficient production activities to use even less energy in the production process. Some of our facilities, such as clean rooms, consume energy regardless of if they are used for production, and we therefore have been working to conserve energy at such facilities through operational control. Moving ahead, we will work to manage and reduce energy consumption on a per unit basis that better reflects the actual circumstances of our energy use.

#### Water Resources and Water Risk

- Effectively utilize water and resources

To reduce water risks such as droughts and floods, which have been having a greater adverse impact around the globe due to climate change, and water resource shortages, which disrupt the supply of resources to our business activities and to people, we are working to reduce the amount of water we consume, including through recycling, and enhance the efficiency of our water use. Furthermore, with regard to waste water, we fully adhere to relevant laws and regulations and are engaging in activities to prevent the pollution of public waters and underground water.

#### Supply Chain Management

- Promote CSR procurement across the entire Group

With the cooperation of our suppliers, we are promoting CSR procurement on a Groupwide basis. As part of this effort, we ask our

suppliers to reduce the environmental burden of the components they supply. At the same time, we conduct evaluations of suppliers regarding CSR procurement. We also strive to enhance our suppliers' level of CSR procurement through advice and educational activities.

In July 2021, we announced our support for the TCFD recommendations. Based on these recommendations, we will analyze the risks and opportunities that climate change presents on our businesses and work to reflect this analysis in our management strategies. Additionally, we will promote the disclosure of relevant financial and business information.



### Vision for 2030

- Successfully avoided the anticipated risks related to climate change and entered into businesses that present significant opportunities
- Reached our targets for reducing CO<sub>2</sub> emissions in accordance with the Science Based Targets reduced CO<sub>2</sub> emissions from our business sites, and established a structure for developing eco-friendly products with reduced CO<sub>2</sub> emissions
- and providing them to customers—all of which help to reduce the environmental burden of our business activities
- Reduced amount of energy used and controlled amount of resources used
- Utilized water and resources in a highly effective manner
- Realized a supply chain that has a reduced impact on the environment

### Achievement and Plans through 2022

- Announce support for TCFD recommendations and begin scenario analysis and other financial impact estimations
- Reduce CO<sub>2</sub> emissions from our business sites (Scope 1 + Scope 2) 13% by fiscal 2022, compared with fiscal 2017
- Reduce CO<sub>2</sub> emissions 10% by fiscal 2022, compared with fiscal 2017, through the development of eco-friendly products (Scope 3)
- Reduce per unit energy consumption 1% each year to respond to energy issues
- Reduce water usage amount 1% by fiscal 2022, compared with fiscal 2019, in an effort to use water resources more efficiently
- Gather information on reducing CO<sub>2</sub> emissions throughout the supply chain

### Case Study

#### Promoting Energy Conservation and CO<sub>2</sub> Reductions at Our Bases around the World

Reducing CO<sub>2</sub>, including within the supply chain, presents a significant business opportunity but can also lead to increased energy costs. As we need to respond to requests from customers who aim for carbon neutrality, we are accelerating initiatives to conserve energy and reduce CO<sub>2</sub>.

Amid the trend of promoting carbon neutrality, we are first focusing our efforts on changing our awareness and behavior through energy-saving activities. The domestic Ushio Group will strive to achieve the "S Class" ranking under the Business Operator Classification Evaluation System, which was established in accordance with the Act on the Rational Use of Energy. To that end, domestic Group companies are engaging in sustainability-related initiatives and activities, such as assessing the state of their energy use, revising per-unit energy management, and drafting medium-term policies that include proactive investments. Regarding per-unit energy use, we have established an appropriate base unit as a fixed-point observation taking into account the outlook for new business creation going forward. By doing so, we are now able to manage energy in a stable manner, even amid a rapidly changing business environment.

Furthermore, we are building and subsequently increasing the number of solar power generation facilities at Ushio Philippines, Inc. and the Ushio Gotemba Division. By increasing the number of these facilities, solar power generation now provides roughly 5% of the total energy used at the Ushio Gotemba Division. At our head office, we have established a working from home system through the promotion of workstyle reforms and are moving forward with the enhancement of this system and others. We also reduced the total size of our office. These efforts have led to an approximately 30% decrease in CO<sub>2</sub> emissions, thereby reducing our environmental burden.



**Toshio Kaneko**  
Leader, Global Warming Countermeasures Committee Ushio Inc.

# 5

## Building a Robust Management Base

### Definition of Management Focus

Guided by our Management Philosophy, Mission, and Vision for 2030, we will work to establish a robust management foundation, which will in turn underpin the four other management focuses. This management focus will be realized through the establishment of an infrastructure for promoting “solidarity-oriented” management, ensuring management transparency and security, developing next-generation personnel who can engage in sustainable business management, and formulating business portfolio strategies.

## Connection between Our Initiatives and Vision for 2030

### Shifting the Focus of Our Rempo Management from Independence to Solidarity

- Strengthen solidarity-oriented management

For the past 10 years, our management style focused on independence, with our self-reliant subsidiaries making efforts to optimize their individual performance. However, with a view to 2030, if we are to become a socially significant company that can help resolve even greater social issues, it is imperative that we adopt a management

structure focused on eliminating wasteful practices in each division and at each Group company, bringing them together under one shared direction in the pursuit of overall optimization.

To address this situation, we are shifting the focus of our management from independence to solidarity and are putting in place an IT infrastructure in order to integrate our accounting and business target management on a cross-organizational basis.

### Fostering a Highly Sound and Secure Corporate Culture

- Strengthen compliance systems
- Enhance information securing and protect privacy
- Respect human rights

Fostering an awareness of compliance in each employee is a fundamental stepping stone in ensuring sound management.

Furthermore, we believe that enhancing information security and respecting human rights are issues that global corporations need to address in an even more serious manner.

### Aiming for Sustainable Growth

- Establish a foundation for strengthening our business portfolio strategies
- Enhance corporate governance  
(please see [P.66](#))

We are working to strengthen our business portfolio strategies by mapping out such matters as the business lifecycle and our competitive advantages. In this way, we aim to optimize management resource allocation in an effort to realize sustainable growth. Guided by this aim, we will establish infrastructure systems and evaluation criteria that will serve as the foundation for managing these efforts. We will also formulate and subsequently strengthen succession plans for developing next-generation managerial talent who will draft and oversee future business strategies.

## Vision for 2030

### Enhancing Solidarity-Oriented Management and Business Portfolio Strategies

- Integrated and visualized consistent Groupwide targets and the targets of the managers in each business under a tree-like format. In addition, ensured that the accomplishment of individual targets lead to the accomplishment of Groupwide targets
- Made it possible to constantly understand the status of each business (resource allocation, cost structure, etc.) and appropriately control the composition of our business portfolio

## Achievements and Plans through 2022

- Monitor consolidated monthly earnings summaries and forecasts based on multiple focuses (products, markets, etc.) and in an integrated, cross-organizational manner
- Complete a KPI tree that integrates the targets of managers in each business with Groupwide targets and establish a method for evaluating KPI performance

### Case Study

#### Building a Management Foundation for Enhancing Solidarity-Oriented Management and Business Portfolio Strategies

We have commenced efforts to establish all types of infrastructure and frameworks for enhancing solidarity-oriented management and business portfolio strategies. Ushio handles a large number of products that span a wide range of markets and conducts business operations by separating the roles of development, production, and sales on a global scale. Under our conventional independence-oriented management, each business managed its own business portfolio, and the head office would take steps to augment each of these portfolios. This style of management gave rise to various inefficiencies due to overlapping and dispersed investments. Furthermore, there were sometimes cases where individual companies would make decisions using their own limited business environment as the standard, even for matters that should be decided on by the Group as a whole.

The solidarity-oriented management that we aim to promote going forward is a management approach where business portfolios are managed in a cross-organizational manner that brings together each business and in which the Company's management oversees this business portfolio management to ensure that it is optimized as a whole. Through this kind of approach, we will be able to ascertain resource allocation and cost structures for each individual business on a consolidated basis, which in turn will lead to the optimization of overall management decision-making, including in terms of promoting synergies between Group companies that operate similar businesses. Furthermore, we will clarify the connections between the targets of each Group company and each employee and our Groupwide targets and visualize the contributions of employees at all Group companies to the achievement of Groupwide targets. In this way, we will build frameworks for pursuing integrated targets across the Group with the aim of overall optimization.

Also, with our conventional independent-oriented management, business segments and accounting methods varied as each Group company managed its own business portfolio. This meant that business portfolios were managed using systems that were optimized to each particular company. This situation represents a major obstacle for realizing solidarity-oriented management and managing business portfolios on a cross-organizational basis. To overcome this obstacle, in fiscal 2020 we mapped out the differences between the management structures of each Group company and established a consistent definition of what a management structure should be. After doing so, we began undertaking efforts to introduce systems for collecting and visualizing information that had been managed under different systems. At the moment, we have commenced the operation of such systems and are examining methods for utilizing the data we will collect through them. We are also working to develop a Groupwide KPI tree and incorporate it into our performance evaluation process.



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Corporate Headquarters  
Ushio Inc.

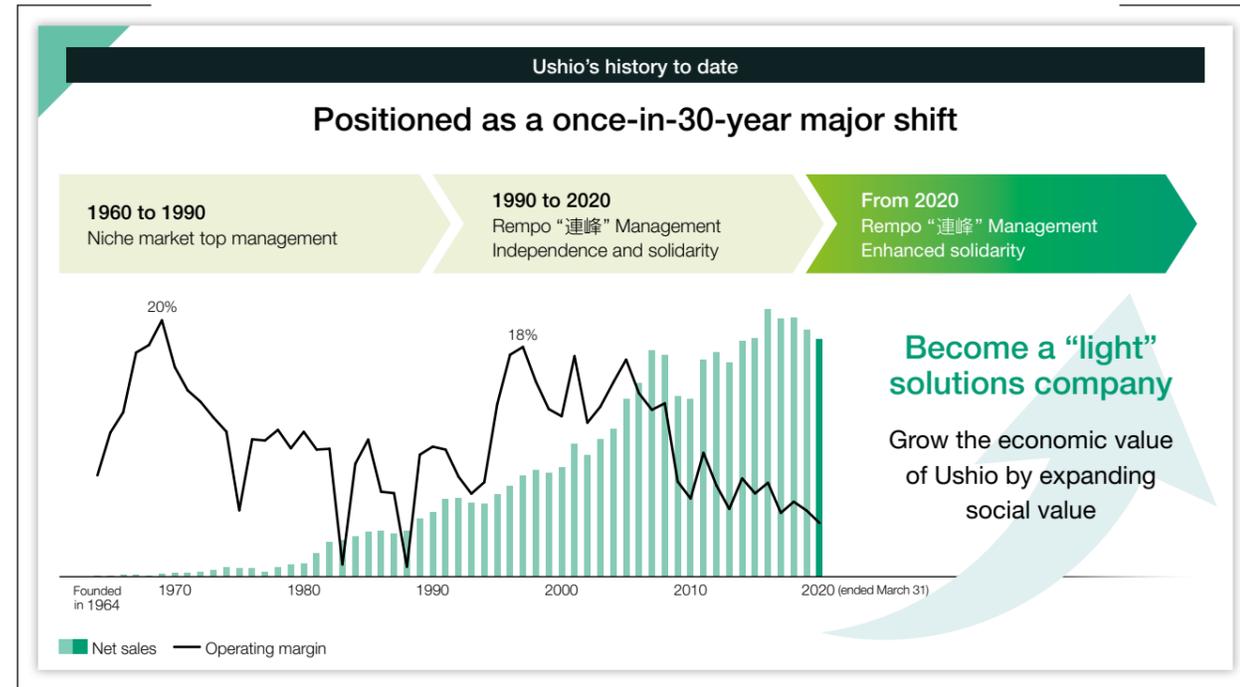
# Reattempt to Solidify the Foundation

Medium-Term Management Plan (Fiscal 2021–2023)

## Ushio Today—Once-in-Three Decades Turning Point

Since the 1990s, Ushio has worked to improve its profit margin by practicing Rempo management designed to facilitate flexible and independent action by subsidiaries in a rapidly growing and changing market. However, the 2008 financial crisis transformed our operating environment, triggering a downward trend in profitability. Changing course, we defined a new mission and vision in July 2020

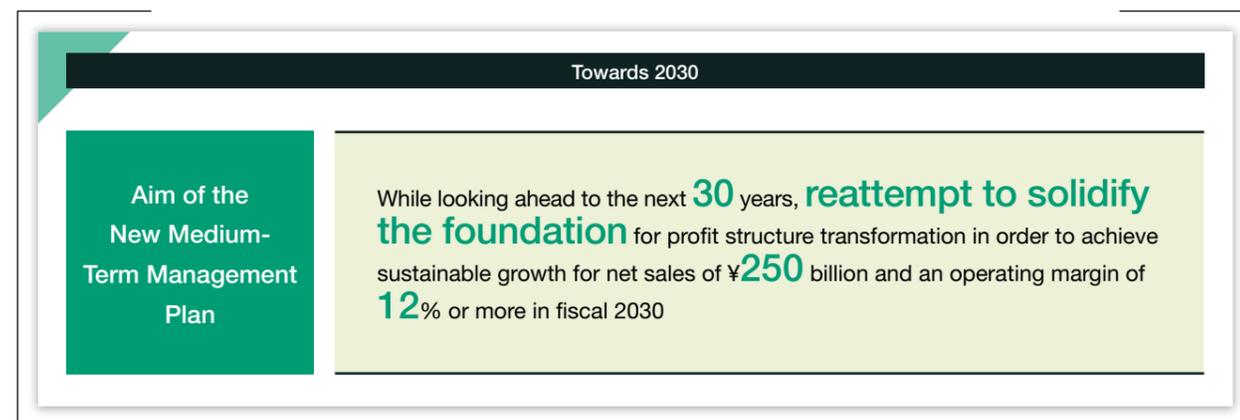
to guide us in developing Ushio into a constantly growing company as we move forward toward 2030. At the same time, we undertook a major shift in management policies, from management emphasizing independence to management focused on solidarity, based on which we are working to grow as a true “light” solutions company.



## Positioning of Medium-Term Management Plan—Reattempt to Solidify the Foundation

The period of the Medium-Term Management Plan has been defined as a time for solidifying the foundations we will use to evolve into a light solutions company.

Under this plan, we will shift our management focus from independence to solidarity as we advance proactive Groupwide strategies, defensive strategies, and unifying strategies to achieve the plan's targets and chart a clear course to be taken toward fiscal 2030.



## Goal of the New Medium Term Management Plan FY2022

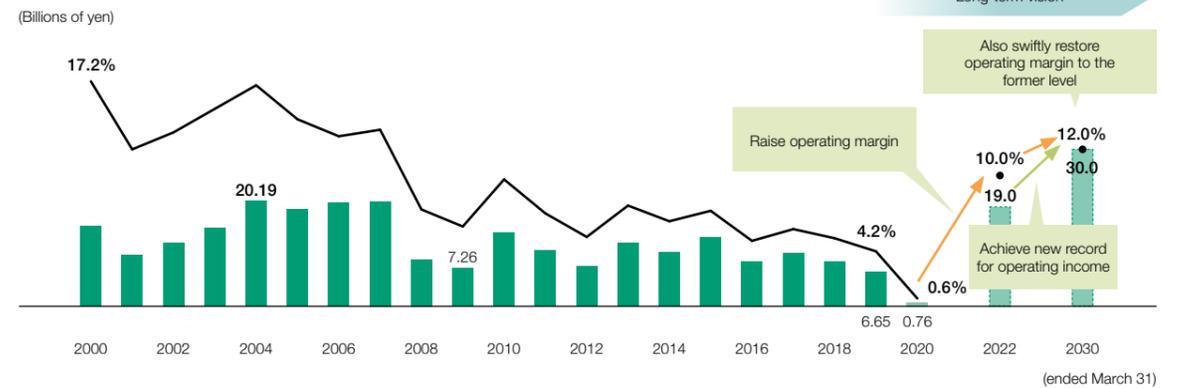
	Required target	Ambitious target	FY2019 actual results
<b>Operating income</b>	¥14 billion	<b>¥19 billion</b>	¥6.6 billion
<b>Operating margin</b>	8%+	<b>10%</b>	4.2%
<b>Net sales</b>	¥170 billion ▶ More than ¥150 billion	<b>¥190 billion</b> ▶ More than ¥170 billion	¥159 billion

\* The sales forecast was revised downward in the first year review and movement onward announced on May 11, 2021.

**+**  
Focus on clarifying route to FY2030

## Operating Margin as a KPI

### Long-term financial results



## Basic Policy

	Defensive strategy	Proactive strategy
<b>Strategy for the Light Source Business</b>	• Dramatic structural reform	• Post-COVID-19 market development
<b>Strategy for the Equipment Business</b>	<Imaging Equipment> • Continue / enhance structural reforms	<Optical Equipment> • Cultivate / focus investment on growth businesses
<b>Strategy for the Creation Business</b>		• Visualize / launch new businesses
<b>Unifying Strategy</b>	• Promote optimization of overall performance Effective allocation of funds for overall optimization	

# Progress of Medium-Term Management Plan

Clarification of the path toward 2030

## Report on Progress of Medium-Term Management Plan

In fiscal 2020, the first year of the Medium-Term Management Plan, sales fell below our forecasts because of the prolongation of the COVID-19 pandemic. Regardless, we implemented various measures and were thereby able to achieve income that surpassed our forecast.

In the second year of the plan, measures for clarifying our route toward our Vision for fiscal 2030 and beyond and for solidifying our foundation have been moving ahead as scheduled, and the Ushio

Group has been making concerted efforts to accomplish the goals of the plan.

For details, please refer to the presentation materials entitled Ushio Group Medium-Term Management Plan—1st year review and movement onward, which were released on May 11, 2021.

 [https://www.ushio.co.jp/en/ir/library/management\\_plan/](https://www.ushio.co.jp/en/ir/library/management_plan/)

### Review of 1st year

Net Sales **¥118.5 billion** (¥125.0–¥135.0 billion)

Operating Income **¥0.7 billion** (–¥5–¥0.5 billion)

The figures in ( ) represent the initially announced targets.

### Review of 1st year

		Defensive Strategy	Proactive Strategy
Better than expected	Business Environment	—	<ul style="list-style-type: none"> <li>Care222: disinfection and virus inactivation demand increased</li> <li>UV lamps: Stay at home demand increased</li> </ul>
	Measures	<ul style="list-style-type: none"> <li>Fixed-cost reduction by improved work methods, etc.</li> <li>Structural reforms push ahead</li> </ul>	<ul style="list-style-type: none"> <li>Fixed-cost reduction by improved work methods, etc.</li> </ul>
Worse than expected	Business Environment	<ul style="list-style-type: none"> <li>Market recovery delayed due to prolonged COVID 19 (Imaging-related business)</li> </ul>	—

## Restructuring of Supply Chain Management System

### 1. Expansion of Production Areas to Boost Production Capacity of Projection Lithography Systems for Cutting-Edge Package Substrates and Direct Imaging Lithography Systems

#### Augmentation of Production Capacity for Projection Lithography Systems for Cutting-Edge IC Package Substrates

Ushio is augmenting its production capacity for its UX-5 series of divided projection lithography systems to accommodate rising demand for cutting-edge IC package substrates.

Investments for this purpose have continued since 2019 based on the decision that there is a need to invest in increased production capacity for lithography systems for producing IC package substrates. This decision was made in response to ever more demanding requirements for such substrates, which need high resolution and overlay accuracy production processes, a trend that itself is a result of expectation exceeding growth in demand for data center services to meet the need for fast, high-volume data processing stimulated by progress in IoT technologies.



Gotemba Division



Large field stepper (UX-5 Series)

 Please refer to the following website for more details.  
<https://www.ushio.co.jp/en/news/1001/2021-2021/500793.html>

#### Production Capacity Increase for Direct Imaging Lithography Systems

We are witnessing rapid growth in demand for ICT infrastructure, as seen in the progress of IoT technologies and evolution of smart devices as well as the increases in online services and data traffic spurred by the practical application of 5G networks. This trend is expected to drive growth in demand for semiconductors, PCB, and package substrates along with innovation in related technologies.

These developments are anticipated to stimulate a global increase in demand for lithography systems that are compatible with evolving circuit writing technologies, which can be quite diverse given their range of applications regarding PCB, package substrates, and other aspects of back-end semiconductor production processes. There is also a need to address the development of large-scale lithography systems. Accordingly, Ushio has decided to increase its production capacity for fully automatic direct imaging lithography systems by 40%. This production capacity increase will take the form of a ¥2.0 billion investment for expanding the production area at the Nagaoka location of Group company ADTEC Engineering Co., Ltd., (the aforementioned amount includes a portion of the investments for shifting to in-house production for core components of EUV light sources for photomask inspection described on the following page).

 Please refer to the following website for more details.  
<https://www.ushio.co.jp/en/news/1001/2020-2020/500735.html>

### Results of Priority Measures and Initiatives in Second Year of Medium-Term Management Plan and Beyond

	Results of Priority Measures	Initiatives in Second Year of Medium-Term Management Plan and Beyond
Light Source Business	<ul style="list-style-type: none"> <li>Reconstruction and strengthening of global sales systems                             <ul style="list-style-type: none"> <li>Adoption of global business unit system and simultaneous enhancement of manufacturing and sales</li> </ul> </li> <li>Allocation of resources to growth businesses (environmental hygiene lamps, semiconductor heating lamps, etc.)                             <ul style="list-style-type: none"> <li>Ahead-of-schedule launch of Care222 and on-schedule progress in production system development</li> </ul> </li> </ul>	<p><b>Proactive Strategies</b></p> <ul style="list-style-type: none"> <li>Accelerated promotion of businesses catering to antiviral and disinfection demand</li> </ul> <p><b>Defensive Strategies</b></p> <ul style="list-style-type: none"> <li>Steady advancement of structural reforms (implementation in 2021 → benefits in 2022)</li> <li>Production optimization</li> </ul>
Optical Equipment Business	<ul style="list-style-type: none"> <li>Capitalization on earnings of promising products and maintenance of share</li> <li>Expansion of maintenance services                             <ul style="list-style-type: none"> <li>Sales in line with plan, maintenance of market share</li> <li>Decisions to boost production capacity (see preceding page)</li> <li>Full-fledged launch of EUV light source maintenance services</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Enhancement of production systems and productivity for bolstering promising products</li> <li>Expansion of EUV light source maintenance business</li> <li>Aggressive R&amp;D based on demand and technology trends</li> <li>Revision of supply chains to reduce costs</li> </ul>
Imaging Equipment Business	<ul style="list-style-type: none"> <li>Selection and concentration of businesses and management efficiency improvement with eye to post-COVID-19 pandemic                             <ul style="list-style-type: none"> <li>Revision of portfolios centered on general visual imaging products and other high-end, high-value products</li> <li>Structural reforms exceeding scope of original plans</li> </ul> </li> <li>Optimization of productions and sales systems</li> </ul>	<ul style="list-style-type: none"> <li>Selection and concentration of business scope</li> <li>Ongoing management streamlining (Reorganization of bases, optimization of working capital, etc.)</li> </ul>
Unifying Strategy	<ul style="list-style-type: none"> <li>Ongoing monitoring of COVID-19 impacts                             <ul style="list-style-type: none"> <li>Responsive structural reforms, and strategic investments</li> </ul> </li> <li>Examination of ESG management issues</li> <li>Development of frameworks for creating businesses that help resolve social issues</li> <li>Introduction of IT infrastructure for enhancing consolidated managerial accounting</li> <li>Updating of Group management regulations</li> <li>Creation of Ushio College</li> <li>Sharing of Group personnel information</li> </ul>	<ul style="list-style-type: none"> <li>Continuous monitoring of operating environment and impacts</li> <li>Structural reforms, strategic investment, and progress monitoring</li> <li>Full-fledged launch of ESG management</li> <li>Implementation of creation business roadmap</li> <li>Introduction of Group management target indicators and enhancement of related management</li> <li>Refinement of business portfolio management</li> <li>Enhancement of Group human resource management</li> </ul>

### 2. In-House Production to Achieve Stable Supply of Core Components for EUV Light Sources for Photomask Inspection

Ushio is focusing its attention on EUV light source operations to support next-generation semiconductor production processes, and the Company is turning to in-house production for core components in these operations to stabilize its supply chain and ensure consistent levels of quality. To perform this in-house production, a new factory will be built within the premise of one of the locations of Group company ADTEC Engineering to take advantage of this company's specialty precision processing technologies.

#### Overview of New Factory (To be constructed within premises of ADTEC Engineering)

##### Details of Location (Land, Structure)

- Total floor space of new structure (tentative): 2,500 m<sup>2</sup>
- Scheduled completion: Fall 2022
- Floor space of existing structure: 4,410 m<sup>2</sup>
- Product to be manufactured: Core components for EUV light sources for photomask inspection, etc.



We will provide strong support for our defensive, proactive, and unifying strategies from a financial perspective

**Takabumi Asahi**

Director and Senior Executive Officer  
General Manager, Corporate Headquarters,  
Ushio Inc.

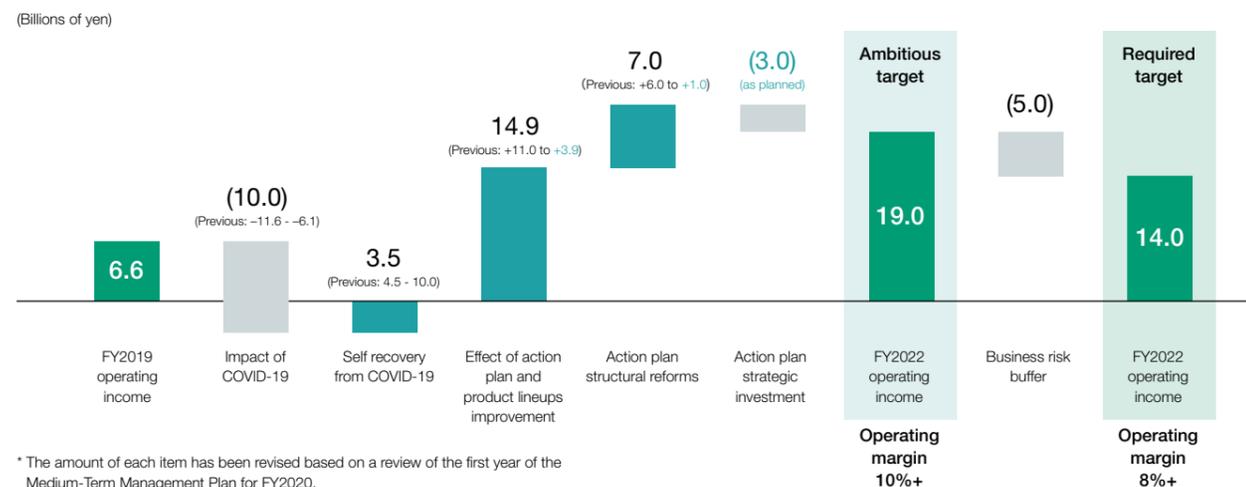
**Reattempting to Solidify the Foundation for Profit Structure Transformation**

Under the previous Medium-Term Management Plan, we were unable to make sufficient progress toward “solidifying the foundation to make the next leap forward,” an important theme of the plan. We were also unable to break free of the long-term trend of declining profitability. In light of this, we positioned the new Ushio Group First Medium-Term Management Plan (fiscal 2020–2022), which was announced in July 2020, as a stage in which we will reattempt to solidify the foundation for profit structure transformation, and have established operating margin as a KPI for this endeavor.

With our “proactive strategy”, we will work to increase sales through aggressive investment in promising product lineups and realizing returns on such investments. We will also promote dramatic

structural reforms under our defensive strategy. Through these two strategies, we will reinforce our earnings structure and aim to amass approximately ¥7.0 billion in operating income and achieve an operating margin of over 10%. In the Light Source Business, we plan on generating roughly ¥3.7 billion in profits by expanding overseas production, consolidating our production bases, boosting productivity, and withdrawing from unprofitable projects. In the Imaging Equipment Business, we will strive to generate ¥2.8 billion in profits by optimizing our production and sales structure and reducing quality loss and manufacturing costs. Through these efforts, we will increase operating margin from 4.2% in fiscal 2019 to around 8% to 10% by fiscal 2022. By doing so, we will solidify the foundation for

**Operating Income Decrease / Increase Scenario (FY2019 ⇒ FY2022)**



\* The amount of each item has been revised based on a review of the first year of the Medium-Term Management Plan for FY2020.

improving operating margin to 12% by fiscal 2030 and establish a robust profit structure that does not rely on market fluctuations.

In fiscal 2020, the first year of the new Medium-Term Management Plan, we were faced with declines in demand for lamps for cinema and data projectors in the Light Source Business and image-related products in the Image Equipment Business that were much greater than expected due to the prolonged COVID-19 pandemic. Amid these circumstances, although consolidated net sales declined 25% year on year, we were able to avoid recording the operating loss we had forecasted at the start of the period and secure operating income thanks to our efforts to reduce fixed costs and carry out structural reforms ahead of schedule. In these ways, we were able to minimize the negative impact of the pandemic to the greatest extent possible.

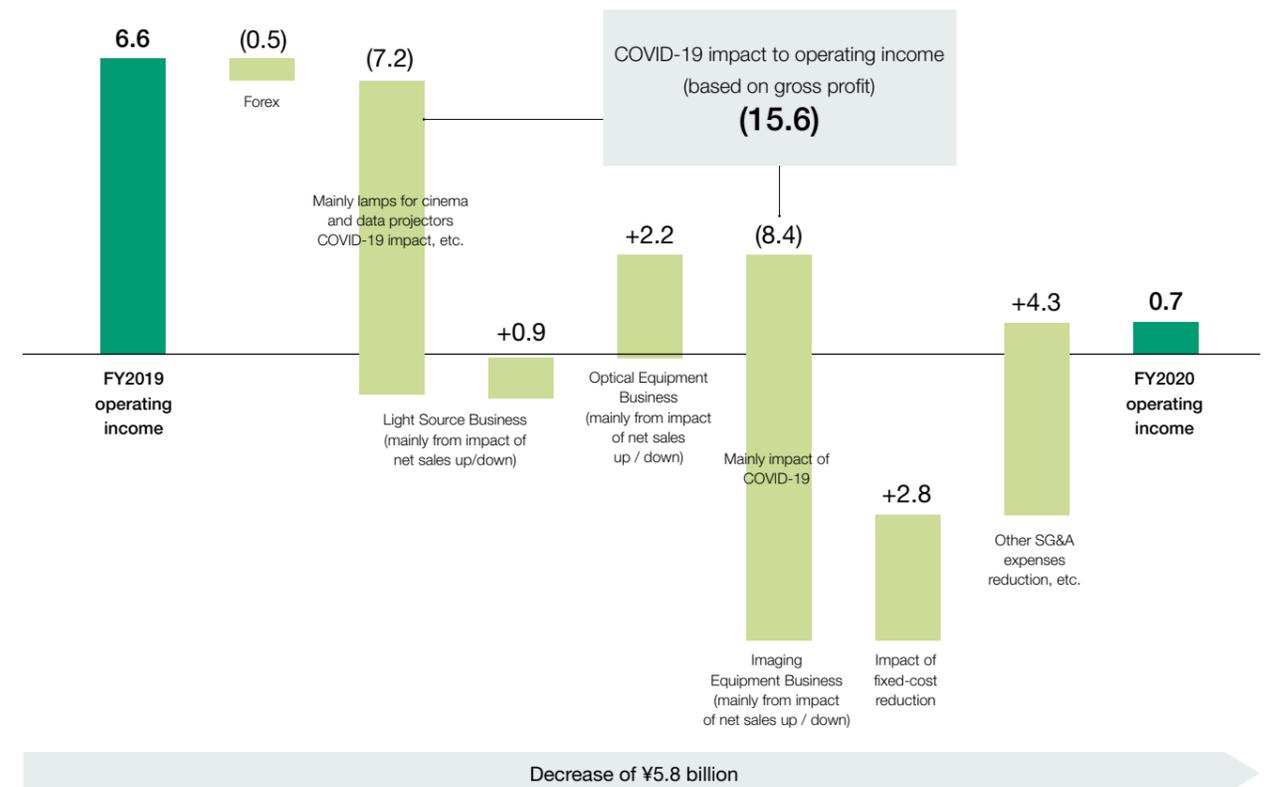
To respond to the changes in the business environment during the year under review, which were brought about by the length of the COVID-19 pandemic, we reduced fixed costs by roughly ¥2.8 billion through such efforts as implementing structural reforms ahead of

schedule and promoting additional cost-cutting measures. SG&A expenses decreased nearly ¥4.3 billion due to the progress we made curtailing fixed costs, which included the active promotion of work-style reforms to respond to new lifestyles under the pandemic.

Through the adoption of “new normal” workstyles, we will keep fixed costs under control even after the pandemic comes to an end and strengthen our cost control measures to ensure that SG&A expenses do not return to the level that they were before the pandemic. Meanwhile, we will proactively invest in businesses with robust demand and where we can maintain and establish a strong market position, centered on the semiconductor and environmental sanitation fields, with a view to expanding future cash flow. Through these initiatives, we will steadily push forward with our reattempt at solidifying the foundation for profit structure transformation with a focus on realizing sustainable growth well after the Medium-Term Management Plan’s completion.

**Analysis of Changes in Operating Income for FY2020**

(Billions of yen)



Note: Amounts exclude the impacts of foreign exchange rate fluctuations on sales fluctuations in the light sources business and the reduction of SG&A expenses.

## Pursuing the Enhancement of Capital Efficiency Based on the “Unifying Strategy”

In addition to improving operating margin, we will promote proactive investment to turn the cash generated from our existing businesses and the financial assets we possess into business assets in order to realize sustainable growth in the future. At the same time, we will seek to enhance capital efficiency through stable dividend payments and share buybacks.

During the period of the Medium-Term Management Plan, we expect to achieve a sales cash flow of between ¥25.0 billion and ¥35.0 billion. This, along with cash on hand, will be used to execute proactive investment toward the promotion of our proactive, defensive, and unifying strategies throughout the period of the plan, while taking into consideration the uncertainty in the business environment due to the pandemic as well as the level of liquidity on hand we maintained in fiscal 2020. In our defensive strategy, we will invest a total of ¥15.0 billion primarily to cover costs associated with structural reforms. In our proactive strategy, we will invest a total of around ¥20.0 billion toward strengthening existing businesses and creating new businesses in growth markets.

The current Medium-Term Management Plan focuses on improving our profit structure, and, as such, we do not intend to carry out

large-scale investments and M&A. However, we do plan on implementing the necessary investment for new business creation in order to lay the groundwork for the next stage of growth. We will change the period in which we expect to realize returns from around one to three years, as we have set in the past, to the more long-term time frame of around five to 10 years. Under this new time frame, we will concentrate investments primarily in growth fields that have a closer relationship with the resolution of social issues, including component examination equipment, OOC devices, and infection-prevention solutions—all of which represent areas where we can draw on the Ushio Group’s core value and business model. In the past, many of our M&A projects did not help us strengthen profitability due to insufficiencies in the inspection process of investment targets, specifically in terms of generating synergies and post-merger integration (PMI). For that reason, when investing in new business creation, including through M&A, our business divisions will carefully select investment targets from a Groupwide perspective in collaboration with organizations such as our R&D departments, the Incubation Center, and the USHIO TECHNO LAB, and carry out investments accordingly.

## Promote Optimization of Overall Performance

Incorporate the concept of Rempo Management: Shifting from Independence to Solidarity and build a system oriented toward overall optimization IT infrastructure maintenance, function globalization, and new business scenario design

### Company wide issues

- Robust financial structure not utilized to improve corporate value
- Actual FCF has maintained profitability for the past more than 10 years, and we have not started all out investment

### Robust financial base

D/E Ratio **11.1%**

Net Cash **¥42.6 billion**

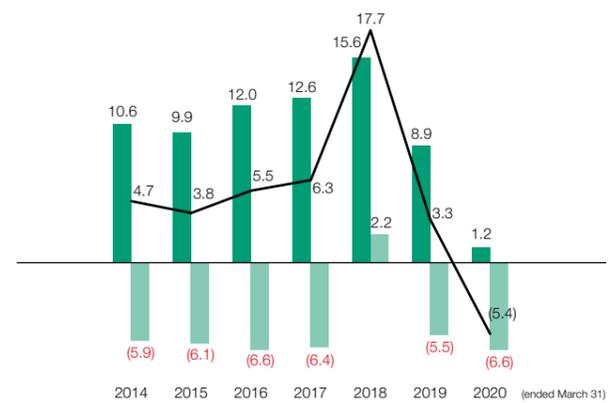
### Low asset efficiency

Asset turnover rate **0.55 times**

Inventory turnover rate **1.77 times**

### Cash Flows

(Billions of yen)



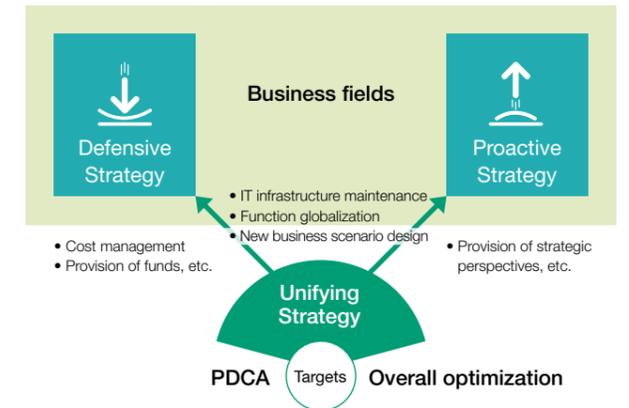
■ Cash flows from operating activities ■ Cash flows used in/from investing activities — Free cash flows

\* Excluding the impact of variation in fixed deposits and the sale of investment securities

To support the steady execution of management strategies aimed at shifting the focus of our Rempo Management from independence to solidarity, we will significantly shift gears with our cash management approach to incorporate consolidated Groupwide perspectives. With this new approach, Ushio will gather together the cash it generates on a Companywide basis and allocate such cash in a manner that considers Groupwide optimization. As part of this effort, we will leverage approximately ¥20.0 billion within Group financing activities in an effort to enhance capital efficiency.

Regarding shareholder returns, we will maintain a minimum dividend of ¥26 per share, with a total minimum dividend of ¥3.3 billion per year and ¥10.0 billion over three years of the plan. Furthermore, we will flexibly carry out share buybacks to respond to the changes in the business environment, retiring 5% or more of the total shares we issue each year.

## The Cornerstone of Defensive Strategy and Proactive Strategy



### Cash Allocation Policy (current Medium-Term-Management Plan)

Actively utilize cash as funds for achieving our defensive, proactive, and unifying strategies, including our spare investment capacity

(Before)  
Management safety valve function  
Capital for shareholder return



### Shareholder return policy (this Medium Term Management Plan period)

- Annual dividends** Maintain minimum dividends of 26 yen per share annually (minimum total dividends: 3.3 billion yen per year)
- Share buyback** Respond to changes in the business climate, and implement with agility. Cancel 5% or more of total issued shares each year.

## Striving to Ensure the Steady Execution of the Medium-Term Management Plan

In fiscal 2021, we expect demand to gradually recover in the imaging-related market, which has been significantly impacted by the COVID-19 pandemic. However, due to the prolonged nature of the pandemic, this recovery will likely be less than we initially anticipated, resulting in the continuation of sluggish demand. Meanwhile, we forecast an increase in new demand brought about by such trends as changing lifestyles, the progression in cutting-edge technologies following advancements in IoT and 5G, and a rising awareness of the environment and health. To respond to this demand, we will invest in the technologies and products that we have cultivated to date. Based on these assumptions, we anticipate a year-on-year increase of 26.5% in consolidated net sales in fiscal 2021, to ¥150.0 billion. We also forecast operating

income of ¥9.0 billion, up ¥8.2 billion year on year, and profit attributable to owners of parent of ¥8.0 billion, recovering from the loss attributable to owners of parent of ¥0.6 billion in the previous fiscal year.

Ushio has embarked on a self-transformation journey to become a “light” solutions company that can continuously link the creation of social value to the sustainable enhancement of corporate value. From the position of an executive officer responsible for overseeing overall management, I will promote management strategies and finance and capital strategies in an integrated manner and engage in active dialogue with our shareholders and other investors, thereby fulfilling the responsibilities of my role. I would like to ask our stakeholders for their continued support going forward.

# Research and Development

Solving social problems through the co-creation and creation of a cross-organizational research and development / R&D system.

**Hiroki Kodaka**  
General Manager,  
Corporate R&D Division,  
Ushio Inc.



## R&D Expenses / Ratio to Net Sales



### Q What are Ushio's policies regarding R&D?

Product design for existing businesses and short-term development of future technology is conducted at technology departments within the division, whereas Medium-to-long-term development, as well as R&D that does not fall within the parameters of existing businesses, is conducted at the Corporate R&D Division. Furthermore, the Ushio

Techno Lab is responsible for technological infrastructure that enables sharing knowledge and methods, such as verifying the principle of technology for the creation business and simulations and analysis.

### Q What are Ushio's core technologies? What kind of products does this technology produce, and how are they differentiated from other products?

Our knowledge of materials, particularly glass, our thermo fluid and stress analysis technology, and technology for sealing glass, have resulted in our main product, the lamp, which remains competitive in terms of illuminance and lifespan. Additionally, by illuminating materials with light sources of various wavelengths, we can change the nature of materials, such as by solidifying the entire material or just modifying the surface on an atomic level. Our strength lies in the fact that we are able to offer our customers solutions based on our accumulated knowledge of such lighting processes. For example, by illuminating resin and inorganic materials with excimer irradiation it is possible to completely remove any dirt stuck to the surface of materials and join pieces without any adhesive. Sterilization and photo-therapy are also extensions of the lighting process.

Regarding optical equipment, our lens design and assembly technologies, which simultaneously achieve large apertures and high

focal depth with a resolution of a few microns, differentiate us in the field of lithography tools, and in recent years we have secured a near 100% share of the market, as there is an increased demand for high performance package substrates. Furthermore, by internally manufacturing special optical components with a nano-level structure, realizing the overwhelming performance of photo-alignment equipment has become an essential process in the manufacturing of high-definition displays. It would not be an exaggeration to say that current smartphones and tablet PCs are supported by Ushio's photo-alignment technology.

At the R&D level, we are exploring the many possibilities of light, such as developing lighting processes essential for the manufacture of special light sources and future devices, verifying the connection between light and biology, and establishing new optical testing methods that maintain safety and security.

### Q Going forward, what kind of measures will you strengthen over the course of creating social and economic value?

The theme of the Life Science field is building a safe and secure society, but how do you make people feel safe? 100% safety does not exist, but we believe that it is possible to correctly assess the current situation and predict the future. Non-invasive, light-based inspection and measurement is an area where the advantages of light can be demonstrated and will become more and more important in the future. Ushio has been growing as a light source

manufacturer, but in the future we believe that detecting light and processing the data obtained during this detection is important and is an area that should be reinforced.

Another important area is expanding the scope of the lighting process. UV light that is used in manufacturing processes, such as for semiconductors and displays, can break down greenhouse gases, such as CO<sub>2</sub> and methane, and is also used in sterilization,

deodorization, and medical treatment. Plant growth also depends on the characteristics of light. We will continue to pursue the possibilities of lighting processes, including those mentioned above, however we believe that there will be strong demand for evidence at the scientific level in the future. We need to strengthen our analytical technologies, as well as our understanding of phenomena at an atomic level.

Additionally, whether in inspection and measurement or in lighting processes, the way light looks and reacts depends on the combination of wavelength and object. I believe our mission as a light source manufacturer is to expand wavelength in order to further increase the possibility of light, and we will continue to carry out R&D to achieve this goal.

### Q As Ushio's direction changes to create value by addressing social issues, how do you think Ushio's R&D will change?

We believe that our light technology is an extremely powerful method for resolving social issues. However, since we face many difficult situations when resolving these issues directly by ourselves, it's important to approach the resolution of these issues through co-creation, working together with our partners who recognize the same issues. In our limited market, we have promoted businesses that have obtained an overwhelming share of the market by providing products based on the requirements of our excellent customers, but we have been told that the scope of our points of contact with customers and society is narrow. While increasing technological capability is important, it's also important to reinforce other measures, such as holding academic conferences and publishing scientific papers to raise

awareness of Ushio's technology and participating in consortiums.

Furthermore, the issues of recent years have to be understood on a global scale, but unfortunately the awareness and level of these issues is higher overseas. Currently, Ushio puts emphasis on its subsidiaries' independence through an independent Rempo management style. Going forward, however, we need a R&D system that spans the entire Group amid our move toward a solidarity management style. Despite business planning and research and development planning continuing to be Japan-focused, implementation will take place in optimum locations, including Japan.

### Q As you shift to management and business activities from a long-term standpoint, what are your R&D policies?

Since the bigger the social issue we address, the longer R&D takes, it is important to know how we make predictions even further into the future. As there are targets that have been established in each country for global issues, including global warming and food security, one approach is to backcast from these targets, carry out planning, and then steadily implement them. Naturally, it is necessary to share these plans with our partners. Meanwhile, we develop our products based on the requirements of our current customers, but by discovering what kind of value our product will ultimately provide to society we can see the demands of society and the direction in which it is moving. Another approach is to make predictions about when and what kinds of products will be necessary, carry out advanced development, and then propose these to the customer. Due to these two

approaches, we have created and implemented a road map for development with an eye to 10 years in the future. However, a prediction is just a prediction. Once we understand that our prediction or story has deviated, we flexibly review our plan.

Furthermore, we believe that it is important to share these plans, including the background with management as we move forward. We are making improvements, but previously there had been a distance between management and the R&D divisions, which has prevented us from taking a long-term view. Since taking a long-term view means looking at assets, such as people, goods, and money, from a long-term perspective, we will continue to share all this information with management through methods, including the newly established Corporate Strategy Meeting.

## Research and Development

Solving social problems through the co-creation and creation of a cross-organizational research and development / R&D system

### Q What are issues for Ushio going forward?

Since we are transitioning to a different style of R&D from before, we have faced many issues, the most significant of which is employee training programs. The source of Ushio's strength is our engineers, who are skilled, diligent, and have the ability to work hard to resolve issues and realize solutions when technical issues come to light. Meanwhile, there is room for improvement in our ability to identify issues with an awareness of society and overall concept of how to

link these issues to our business.

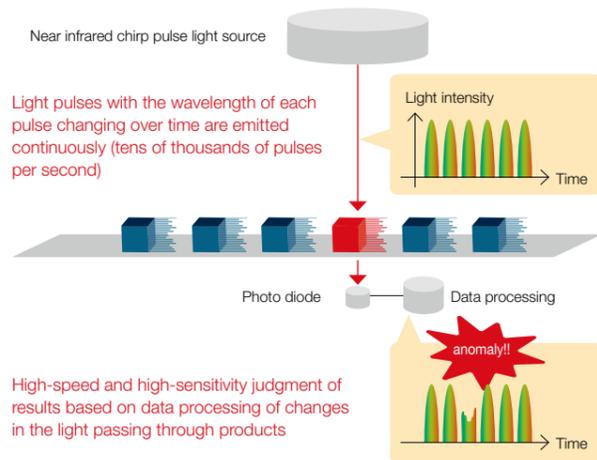
In today's society that is extremely dependent on technology, we believe that engineers need to be at the heart of achieving value creation by resolving social issues. To realize this, we believe it's also necessary to provide opportunities to be exposed to world-class environments, including Japan, and systematically provide job experience in a variety of positions, not just R&D.

### Main Theme Conduct Blanket Inspections of All Products for Safety and Security—Pulse Spectroscopy Inspection System



**Takuma Yokoyama**  
Optical Measurement Technology  
Development Department  
System Group,  
R&D Division, Ushio Inc.

Manufacturers of food, cosmetics, pharmaceuticals, and many other products usually perform production lines by using a sampling process to assure quality. However, this method does not provide 100% certainty. When a defect is discovered, a company frequently has to discard a large volume of products, and suspend production until the cause has been determined and corrected. The cost is enormous. Ideally, in-line real-time measurements and inspections of all products should be performed. However, this requires technologies for non-destructive and high-speed measurements. There are various methods for measuring the composition of materials. Ushio is aiming to develop technology that uses various wavelengths, including near infrared chirp pulse light. Specifically, we are aiming to develop a measurement technology that is 1,000 times faster than was previously possible by using a light source with pulses at a rate in the tens of thousands of times per second. At this speed, more than 100 products can be inspected every second, which will help reduce expenses, optimize production processes and facilitate the use of automation.



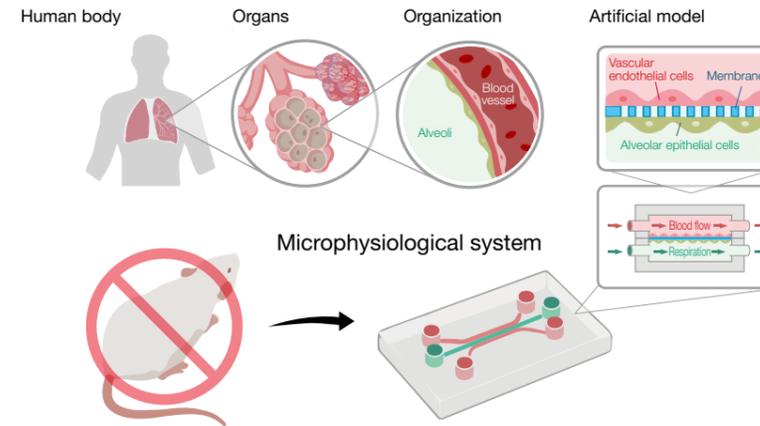
### Main Theme Provide a Platform that Realizes Accelerated Drug Development—Organs on Chip (OoC)

Due to the intensity of global competition on the front line of drug development, there is increasing demand for even faster development of new drugs that have therapeutic value and a high level of safety. Meanwhile, there are current circumstances that we must respond to, such as a reduction in animal testing. Amid these circumstances, there has been a strong demand for achieving extrapolation to humans to obtain data close to that of the human body and the highly effective realization of drug development technology, instead of the traditional animal testing and cellular testing methods. One issue that has drawn attention is the microphysiological system OoC, which combines regenerative medical technology and micro machine sensor technology, and reproduces the biological environment of the human body outside the body.

By irradiating resins with 172-nm vacuum ultraviolet radiation, which Ushio has the largest share of, the molecular structure of the surface changes and the resins are bonded together through a clean method that does not use adhesives, solvents, and other products that would have an adverse effect on the test. With this technology as a foundation, we have achieved product development based on the drug development testing needs of pharmaceutical manufacturers. Furthermore, we are also considering utilizing microfabrication technology on a macro-to-nano level, which was cultivated through the development of optical components, to meet the needs for reproducing even more diverse human functions.

We have already shown results through joint research with leading academics and we have begun to provide numerous pharmaceutical

manufacturers with prototype products. Going forward, we will continue with joint development with even more of a focus on commercialization, including cell culture protocol. By providing the full environment for drug development, not just the biometric chips, we aim to create a society where anyone can receive the latest medical care, in addition to promoting the safety and security of pharmaceuticals.



**Kenji Hatakeyama**  
Project Leader,  
Organ-on-a-Chip  
Ushio Inc.

### Main Theme Improve the Quality of Life (QOL) of Patients—Photodynamic Therapy (PDT)

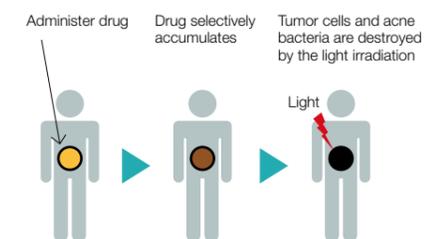
Ushio has adopted the theme of extending healthy life expectancy through optical technology. Amid these circumstances, we are promoting the R&D of PDT for dermatologists from the perspective of improving the QOL of patients in the dermatological field. PDT is a treatment in which the drug (photosensitizers) prescribed to patients are specifically taken up by sebaceous glands or cancer cells and then irradiated with light of a wavelength that eases absorption of the drug. This destroys the disease-causing target tissue on which the drug has selectively accumulated.

While extensive R&D has been carried out for PDT as a treatment for cancer and it has been partially applied in real world clinical practice, PDT has also been reported to be highly effective at the research level for other diseases. In particular, we believe that severe acne poses a major issue in terms of significantly reducing patients QOL. Additionally, there is a clinical issue in that there is currently no effective treatment. As such, PDT is expected to be developed to resolve this issue.

Through our development of dermatological treatment equipment, we have gained academic knowledge of the effect of light on the human body. We have continued to carry out joint research on PDT with Professor Akimichi Morita of Nagoya City University, and have been able to discover a significant antitumor effect by utilizing flexible light sources and irradiating the tissue with a combination of two wavelengths, 405-nm and 505-nm\*. Based on these results, last year we launched development of treatment for severe acne together with domestic pharmaceutical manufacturers in 2020.

Since PDT treatment equipment for dermatologists are in a new medical devices category, a large amount of data is needed to approve safety and effectiveness. We will continue R&D to further deepen cooperation with medical institutions, such as the Pharmaceuticals and Medical Devices Agency (PDMA), and partner companies. By quickly establishing new treatments for intractable skin diseases and delivering effective medical treatment even slightly faster to affected patients we can improve their QOL, which leads to the further extension of healthy life expectancy.

\* J Dermatol Sci. 2019 Feb; 93 (2):109-115



**Tomohiko Kio**  
Life Science Group,  
R&D Division, Ushio Inc.

# Light Source Business

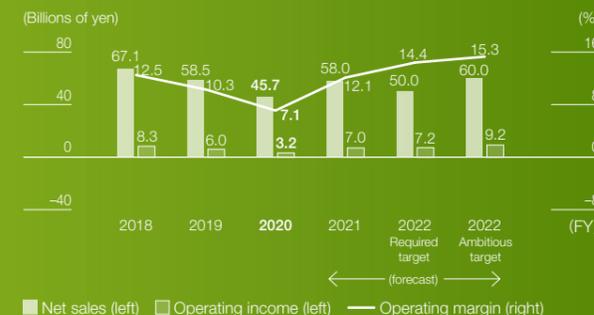


We will create new customer value through a complex combination of components centered on light.

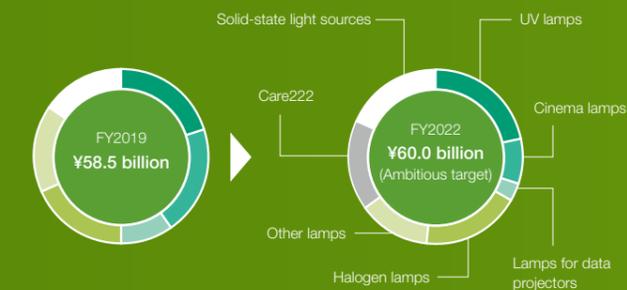
**Tetsuo Nakano**  
General Manager,  
Light Source Business Division,  
Ushio Inc.



## Net Sales, Operating Income/ Operating Margin



## Sales Composition



### 1 Review of Fiscal 2020 (the First Year of the Current Medium-Term Management Plan)

In the first year of the current Medium-Term Management Plan, net sales were ¥45.7 billion, down 21.9% compared to the previous fiscal year, operating income was down 46.7% to ¥3.2 billion, and there was a significant fall in both sales and earnings due to the global spread of COVID-19.

Particularly in the visual market, in addition to a decrease in demand for lamps due to a shift to solid-state light sources, there was a significant decrease in demand for xenon short arc lamps for cinema projectors and lamps for data projectors as a result of the large impact of cinema closures around the world due to COVID-19.

In the OA market, since there was a slowdown in demand for OA

equipment for businesses due to COVID-19, along with the move toward paperless, the demand for halogen lamps decreased.

Conversely, due to a strong market for semiconductors and electronic devices, against a backdrop of 5G implementation and progress in the development of IoT and AI, and a rise in demand for LCD panels for mobile devices and monitors, demand for UV lamps for lithography increased. Furthermore, because of the increased need for virus countermeasures in light of COVID-19, we successfully launched devices equipped with Care222, Filtered Far UV Technology for disinfection and virus inactivation, which contributed to sales and earnings.

### 2 Key Measures and Progress toward Achieving the Medium-Term Management Plan

For achieving the Medium-Term Management Plan, we are promoting our business on three levels: core business, growth business, and creation business. In the core business, which is centered on the lamp business such as xenon short arc lamps for cinema projectors and UV lamps for lithography, there is a focus on how we can maximize earnings in a sustainable way. Specifically, we will rebuild our global sales system, expand overseas production, promote automation of the manufacturing process, and reduce raw material costs. We are making good progress with structural reform as a key action plan.

Next, in the growth business Life Science field, we will continue to provide a safe and secure space in line with market needs, centered on module in the two main areas of 172nm light used to break down harmful substances and 222nm light used for virus countermeasures (Care222). In this field, while promoting cooperation within the Group, we are actively promoting collaboration with other businesses, including for sales and production, and will increase profitability and create a supply system.

In thermal processing\*, we are strengthening technology to take advantage of opportunities offered by changes in the semiconductor process, which are increasing the number of processes that require heating, and providing value.

In solid-state light sources, we will supply high-value-added products, from devices to systems, leveraging our core competence as a specialist light manufacturer in UV light for lithography tools and in infrared light for use in imaging, medical, sensors, and other life science applications.

Finally, in the creation business we believe that the future is an era of collaboration between businesses, not just competition. We will maintain an advantage in business by reinforcing the core competence in the growth business and promoting M&As and business partnerships.

\* Thermal processing is a heat treatment process. In the manufacturing process for semiconductors, by heating the wafer, silicon oxide on the surface forms a membrane which reinforces its quality.



### 3 Vision for 2030 and Value Provision

In the past, our Light Source Business was mainly an original equipment manufacturing (OEM) style business, where we developed and supplied light sources to meet the specifications required by our customers and to gain their trust. However, to continue our sustainable growth in the future, we wish to evolve into a true solutions company that is capable of using Ushio's light technology to

determine not just specifications from customers but also a wide range of their issues, for which we will propose solutions. In addition, we will create new customer value as a process solution company by accumulating new core competence through M&As and business partnerships, as well as complex combination of components centered on light.

### 4 Current Measures and Action Plans for Five Management Focuses

We are focusing our efforts particularly on employee training programs and the creation of a comfortable working environment. In Ushio's Light Source Business, we launched a project in 2019 to promote awareness and employee training programs, including at management level. We are also promoting the utilization and development of each employee through customized training, with an awareness of diversity.

Furthermore, a large amount of Ushio's net sales are attributable to overseas customers. As such, we wish to carry out global human resource utilization and employee training programs and accelerate consistent global business unit management for each business unit.

### 5 Awareness of Opportunities and Risks

COVID-19 sparked a global pandemic, which was both a risk and an opportunity for us. With the key phrase of safety and security, we aim to further increase our contribution to society and expand our business by accelerating our participation in the environmental hygiene field with the light technology we have cultivated so far.

Additionally, the shift to solid-state light sources is also both a risk and an opportunity for us. There is a trend toward solidification, in particular the low power areas in the visible light range and lithography field, and demand for lamps is expected to fall in the future. To respond to this risk, we are working together with manufacturing and sales to promote structural reforms in our fundamental business, with the aim of maintaining and enhancing sustainable profitability.

Meanwhile, demand for lamps used in projectors is increasing as the market reopens after an unprecedented slump due to COVID-19 and as the life of lamps used in projectors is extended.

Additionally, we have continued to provide high-value-added products for niche markets since Ushio's foundation. Regarding business development for solid-state light sources, in addition to providing distinctive light devices, from UV to infrared light, we will provide solid-state light source modules combined with various optics to new fields. We believe that the key to the future is whether or not we can participate in these new fields by discovering new fields in which Ushio's solid-state light sources are used to create earnings.

## Light Source Business

We will create new customer value through a complex combination of components centered on light

Growth business

### New Disinfection Technology Based on 222nm Light—Care222

Care  
222



We developed the Care222 technology for disinfection and virus inactivation in occupied environments that removes wavelengths that are harmful to the human body by combining excimer lamps with a main wavelength of 222nm and special optical filters. In the new normal era, Ushio is focusing on developing environmental hygiene solutions through light to realize safe and secure environments.

#### 1 What is the business environment and recent circumstances surrounding Ushio?

Due to the increasing need for virus countermeasures, we will steadily roll out units equipped with Care222 domestically mainly to medical institutions, but also to offices, sports facilities, and educational institutions. Additionally, we licensed Care222 technology to numerous partner companies both in Japan and overseas, and they have begun to launch Care222-equipped products.

#### 2 What are Ushio's measures and outlook for future business expansion?

In the new normal era, the expectations for virus countermeasures are increasing around the world. Amid these circumstances, the team at Ushio will work together to make Care222 and other environmental hygiene solutions the de facto standard for adding a safe and secure environment based on the significant advantage of being able to provide disinfection and virus inactivation of the air and surfaces in occupied environments. Specifically, going forward we will further enhance brand value and continue to develop business partnerships to enable the use of Care222 technology in numerous lighting equipment, air conditioning equipment, and other equipment, as well as the expansion of adoption in a variety of applications.



**Satoko Umezaki**

XEFL Business Unit, Sales Department,  
Section One, Light Source Business Division,  
Ushio Inc.

Main existing  
businesses

### Super-High Pressure UV Lamps that Support Electronics

Super-high pressure UV lamps are used as a light source for equipment (lithography tools) used in circuit formation for semiconductors and PCB and pattern formation for LCD and color filters. These lamps are used around the world mainly in semiconductor and LCD panel manufacturing plants, and enhance productivity, as well as improve the yield rate.

#### Business Environment

- With the progress in technologies such as the IoT, 5G, and AI, investment in semiconductor devices has increased. This has led to a record number of new installations for devices using i-line lithography tools in Ushio's UV lamp domain.
- In the FPD market, there has been a shift from the LCD system to the organic light-emitting diode (OLED) system, and capital investment is expected to continue.



#### Future Outlook

In addition to holding onto a high market position, we are actively engaging in development of solid-state light source products that are eco-friendly and have high added value. Specifically, we aim to achieve further improvements to performance, have a product lineup that surpasses other competitors in the lamp market, and contribute to enhancing our customers' productivity by focusing on continuous development of component technologies and stabilizing quality. We also aim to provide solutions from a customer perspective through cooperation with affiliated companies based on Groupwide management, since many of our customers are not just in Japan but overseas, mainly in Asia. In addition, by strengthening the competitive capabilities of products in the solid-state Light Source Business, which is expected to grow even further, we will flexibly respond to changes in lithography light sources and establish a permanent position as a leading light source manufacturer.



**Mei Takio**

SH Business Unit, Sales Department,  
Section One, Light Source Business  
Division, Ushio Inc.

Growth business

### Provision of High Added Value in Niche Markets—Solid-State Light Sources (LED, LD, and Modules)

Recently, there has been a shift toward solid-state light sources, producing new added value, such as improved lifespan, expansion of color gamut, and enhanced light utilization efficiency, that exceeds the existing lamp light sources. Ushio will leverage advanced optical technology, our core competence as a specialist light manufacturer, and introduce high-value-added products from devices to systems in solid-state light sources.

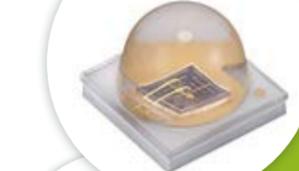
#### 1 What is the business environment and recent circumstances surrounding Ushio?

The solid-state light source market is expected to expand in the future. In the laser business, we are expanding into the science and medical fields, in addition to the traditional visual imaging, printing, leveling, and sensor fields, with a focus on red to infrared lasers, and are continuing to develop the blue laser manufacturing process. Regarding the LED business, we are expanding sales of shortwave infrared (SWIR) LEDs, as a follow-up product to UV and visible/IR, centered on the solar simulator and optical sorting fields.

#### 2 What are Ushio's measures and outlook for future business expansion?

In the laser business, we are using our red laser, which has achieved the world's highest output power and conversion efficiency, for the AR/VR/MR market, where significant market growth is expected for gaming, virtual reality, and automotive applications. Additionally, in the expanding semiconductor market, driven by a trend for DX, the blue-violet laser market for direct imaging lithography tools is also expected to increase.

In the LED business, we believe that SWIR-related market will significantly expand following the development of the InGaAs camera, and are aiming to extend into the smartphone and advanced driver-assistance systems (ADAS) markets. In addition to these device businesses, we plan to expand the high-added-value product and technology lineup of the module business, with a focus on reinforcing cooperation and collaboration with Group companies, such as Nescel Intellectual Property.



**Ikuko Kanazawa**

Solid-State Light Source One Team, Sales  
Department, Section One, Light Source  
Business Division, Ushio Inc.

Main existing  
businesses

### Xenon Lamps that Support the Movie Industry

At movie filming locations, people are filmed in the sun or under near-sunlight conditions, in order to show their skin or scenery as it actually appears. The light used to produce these images must be as close to that of the sun as possible, so that they appear as natural as possible. These are xenon lamps, which are known as artificial sunlight. The lamps are used for screening large-scale images, such as at amusement parks or concerts.

#### Business Environment

- Due to the impact of COVID-19 in fiscal 2020, xenon short arc lamps for cinema projectors suffered a significant impact as a result of cinema closures around the world.
- Despite progress in the shift to solid-state light source technology, an alternative to conventional lamps, xenon lamps are still a key item and we have maintained a high market share.



#### Future Outlook

In this unprecedented pandemic, one industry that experienced severe damage was the entertainment industry, starting with cinemas. Ushio's xenon lamps have been used in cinemas around the world for a long time. Ushio will continue to contribute to the prosperity of the movie industry and film culture by continuing to supply high-quality and reasonably priced products to cinemas that are experiencing difficult business conditions and are unable carrying out capital investment as planned. Going forward, in addition to continuing developing technology to enhance performances, with ease of use for customers as the highest priority, we will reduce costs by expanding overseas production while further pursuing the high quality that is one of the characteristics of Ushio's products.



**Kaoru Oshiba**

Projection Business Unit,  
Light Source Business Division,  
Ushio Inc.

We will develop a supply chain and service structure that focuses on employee training programs and technology development through a backcasting approach.

**Naoki Kawamura**  
General Manager, Business Management  
Headquarters and General Manager,  
System Solution Division,  
Ushio Inc.



## Net Sales, Operating Income/ Operating Margin



## Sales Composition



### 1 Review of Fiscal 2020 (The First Year of the Current Medium-Term Management Plan)

The Optical Equipment Business has experienced a favorable market environment, with soaring sales and earnings due to continuously high demand. As a result, the improvement of quality and productivity that we engaged in during the previous fiscal year also paid off with increased sales and earnings. Net sales increased ¥2.8 billion year on year to ¥38.9 billion and operating income increased ¥1.4 billion to ¥0.8 billion.

Specifically, there have been increased sales of lithography tools for cutting-edge IC package substrates and direct imaging lithography tools for PCB as a result of an increase in capital investment due

to the implementation of 5G and developments in IoT and other technologies. Furthermore, due to progress in EUV lithography technology the need for mass production of next-generation semiconductors has increased and sales have grown for Ushio's EUV light sources used in EUV lithography mask inspection.

In addition to these, FPD-related equipment exceeded expectations because of the increased demand for PCs and tablets. This was caused by the increase in online meetings and stay-at-home lifestyles due to the COVID-19 pandemic.

### 2 Key Measures and Progress Toward Achieving the Medium-Term Management Plan

During fiscal 2021, we will focus on seven areas in order to achieve the Medium-Term Management Plan. The first area is to further increase quality and stability, establish a supply chain, and reduce costs to achieve the business plan for EUV light sources used in mask inspections. Regarding the establishment of a supply chain, we are continuing to work together with overseas Group companies, as well as shifting to in-house production of main components at Ushio's Harima Division and the Group company ADTEC Engineering's Nagaoka Plant.

The second area involves increasing production of lithography tools, ensuring quality, and developing the next generation of lithography tools. At Ushio's Gotemba Division, by expanding the production space we aim to increase production by over 1.3 times and will strive to develop the next generation of lithography tools.

The third area is the revival of the STC business. We launched the STC project to investigate the use of plasma and lasers in addition to UV-LED, UV lamps, and excimer lamps. We will promote cross-organizational activities and contribute to the technological innovation of the global manufacturing of products such as semiconductors, vehicles, batteries, PCB, optical film, and building materials.

The fourth area involves further improving productivity, making the shift to DX, and reducing the environmental impact at Ushio's Gotemba Division. At the Gotemba Division,

which is responsible for the manufacture of optical equipment, we have worked to improve productivity and have achieved results. We will actively utilize our IT capabilities to further increase productivity in the future. Furthermore, we will reduce the environmental load by improving productivity and promoting the further utilization of renewable energy.

The fifth area is the creation of a global CS system. Going forward, we will further expand the global roll out of optical equipment. We will create a structure to increase customer satisfaction through smooth startups and maintenance services in local areas, which leads to increased customer satisfaction and earnings.

The sixth area is the development of miniaturization, increase in production, and cost reduction of direct imaging lithography tools. Regarding the increase in production, through the expansion of the production space that is currently ongoing at ADTEC Engineering's Nagaoka Plant, we plan to increase production by approximately 1.4 times. Furthermore, we will continue to reduce costs by reviewing our supply chain, such as expanding the overseas procurement rate.

The seventh area is cooperation within the Ushio Group. We have already launched cooperation within the Ushio Group, such as the supply of EUV light source components, the global CS system, and the EUV service structure, which we will further accelerate.

### 3 Vision for 2030 and Value Provision

Going forward, it will become even more important to address SDGs and other social issues, such as global environmental and poverty issues. In this context, we wish to support the technological innovation of our customers' manufacturing, which contributes to society. Through our customers we want to contribute to the increased efficiency and sustainable growth of society, for example by creating

semiconductors and electronic components with high performance and low power consumption. To achieve this, looking ahead to 2030 we will develop a supply chain and service structure with a focus on employee training programs and technology development through a backcasting approach.

### 4 Current Measures and Action Plans for Five Management Focuses

#### 1. Creating businesses with greater social value

Our focus is not just on developing devices but on solving our customers' issues based on a thorough understanding of light. To achieve this, we will focus on activities that enable us to deeply understand our customers' manufacturing and propose solutions to their issues.

multifunctional manufacturing, as well as implementing measures that enable our employees to understand the social value of their work.

#### 2. Increasing the quality of our human resources to move closer to our Vision

In addition to globalization, we are systematically recruiting and developing interdisciplinary human resources. Specifically, this means recruiting and training people in the fields of optics, machines, electricity, and software & electronic design, as well as training people in chemistry and material science who understand our customers manufacturing processes, and field service engineers for maintenance.

#### 4. Sustainably reducing environmental impact

We are working to reduce the environmental impact of our manufacturing process and logistics (such as enhancing productivity, adopting solar power, optimizing the size of delivery trucks, and making delivery routes more efficient), reduce the power consumption of optical equipment (such as developing energy-efficient optical devices and actively adopting solid-state light sources), and develop products that contribute to reducing the environmental impact (such as lithography tools and EUV inspection light sources for semiconductors with high performance and low power consumption).

#### 3. Creating working environments where it is easy to produce results

The Optical Equipment Business is one that is subject to extreme economic fluctuations. Under these circumstances, we are implementing labor management with a focus on work-life balance. Specifically, we are equalizing production by promoting standardized designs and

#### 5. Building a robust management base

We are always aiming to optimize our product portfolio. In addition to the development of sustainable products with an eye on social issues, we focus on a balance between equipment sales and maintenance services, so that our portfolio can grow and develop sustainably while achieving customer satisfaction.

### 5 Awareness of Opportunities and Risks

Semiconductors, similar to energy and food, are strategic national commodities and are subject to political influence.

While this presents a growth opportunity for the semiconductor industry, even today there are also risks, such as that some exports

to China will face restrictions.

There are also currently procurement risks regarding semiconductors and related components.

## Optical Equipment Business

We will develop a supply chain and service structure that focuses on employee training programs and technology development through a backcasting approach.

### Growth business Towards the Practical Application of Next-Generation Semiconductor Manufacturing Process—EUV Light Sources Used in Mask Inspection

The EUV lithography process is expected to be the technology for manufacturing next-generation semiconductors that help to realize new infrastructure, such as AI, IoT, and autonomous driving. Ushio specializes in producing light sources for mask inspections used in this process, providing everything from the development of EUV light sources to their manufacture, operation, and after-sales service.

#### 1 What are the business environment and recent circumstances surrounding Ushio?

Semiconductors are now so embedded in everyday life and support us in numerous ways, not only in PCs and smart phones but also in cloud technology and AI data processing, that if we are not aware of them we do not know where they are used. Due to COVID-19 in 2020, working from home, online meetings, and games drove the demand for advanced semiconductors that fill the requirement for AI and high-performance servers. EUV lithography technology is contributing to the spread of these cutting-edge

semiconductors. This is still new technology, but Ushio's EUV light sources used in mask inspections are contributing to the establishment of mass production for EUV lithography. As EUV lithography becomes more widespread in the future, the applications for Ushio's EUV light sources will further expand, supporting the world's semiconductor processes.

#### 2 What are the future initiatives and outlook for maintaining your competitive advantage?

Ushio's EUV light source is the only one used in mask inspections that has already achieved the required capacity utilization rates in the early stages of mass production for EUV lithography. Building on this result, we aim to achieve further advances in performance and operational stability, and contribute to the mass production process and gain even greater market confidence. Additionally, we will continue to develop and improve our advanced and high-precision inspections. Through these activities, we will contribute to the entire ecosystem of EUV lithography.



**Kazuya Aoki**  
Deputy General Manager,  
EUV Business Unit, Business  
Management Department,  
System Solution Division,  
Ushio Inc.

### Growth business High-Resolution x High-Productivity Projection Lenses—Large Field Stepper for Latest IC Package Substrates

Lithography tools that respond to advancing package substrate technology, such as high-resolution capable of responding to miniaturization, large-area lithography that realizes high productivity, and high focal depth that is capable of responding to warped circuit boards. In-house, we develop not only light sources equipped with these technologies but also main technologies, such as optical components including lenses and mirrors, material handling, electrical power, and software.

#### 1 What are the business environment and recent circumstances surrounding Ushio?

The era of big data that has accompanied the advancement of technologies including AI, 5G, and IoT has begun, and there is increasing demand for data center servers for high-capacity and high-speed data processing. For many years, we have received numerous orders for UX-5 series lithography tools for cutting-edge IC package substrates following the increasing demand from data centers. Accordingly, we have decided to increase our production capabilities by more than 1.3 times during the first half of fiscal 2022.

#### 2 What are the future initiatives and outlook for maintaining your competitive advantage?

The UX-5 series is differentiated from its competitors by its wide shot area (the exposure field) and high productivity, and maintains a high market share as a large field stepper for mass production of cutting-edge package substrates in the back-end process.

Recently, demand has been increasing for not only the miniaturization of IC chips in the front-end process but also micro-wiring technology in package substrates in the back-end process. We are continuing to develop next-generation equipment through close communication with our customers, with whom we have built up a relationship over time, and plan to introduce these equipment into the market in the future.



**Yuri Habuto**  
Photon Process Business Unit  
Section One,  
System Solution Division,  
Ushio Inc.

### Growth business Balance Between High-Definition Images and High-Speed Lithography—Direct Imaging Lithography Tools for PCB and Package Substrates

Fully automated direct imaging lithography tools that enable the balance between high-resolution capability and the world's fastest high productivity. Our unique technology has enabled us to realize the quality, speed, and stability of the world's best system balance, and we have a proven track record of stable operation on the mass production lines of the world's leading circuit board manufacturers.

#### 1 What are the business environment and recent circumstances surrounding Ushio?

The production of package substrates is increasing in line with rising demand for semiconductors, and sales of direct imaging lithography equipment for package substrates have been strong. Furthermore, as the miniaturization of semiconductors becomes more and more difficult every year, companies are developing new technologies to mount multiple semiconductor chips in a single package substrate. There is a strong affinity between these technologies and direct imaging lithography tools, and the market for high-definition DI lithography equipment is expected to expand. Production is also increasing for the main circuit boards for smart-phones and high density interconnector circuit boards used in servers. Under such a market environment, we released the world's fastest twin stage machine for HDI circuit boards in fiscal 2020 and a high-definition machine for cutting-edge semiconductor FO package substrates in fiscal 2021. We also acquired new land and buildings and expanded our production space by approximately 1.4 times to meet the increasing demand for direct imaging lithography equipment.

#### 2 What are the future initiatives and outlook for maintaining your competitive advantage?

For high-end machines, we will continue to develop higher resolution necessary for the advancement of package substrates, and for mid-range machines, we will develop equipment to improve productivity and reduce costs by applying our proven overseas procurement methods for low-end machines. In customer service, we will strive to improve customer satisfaction by ensuring stable operations through rapid maintenance response.

### Growth strategy Revive the STC Business

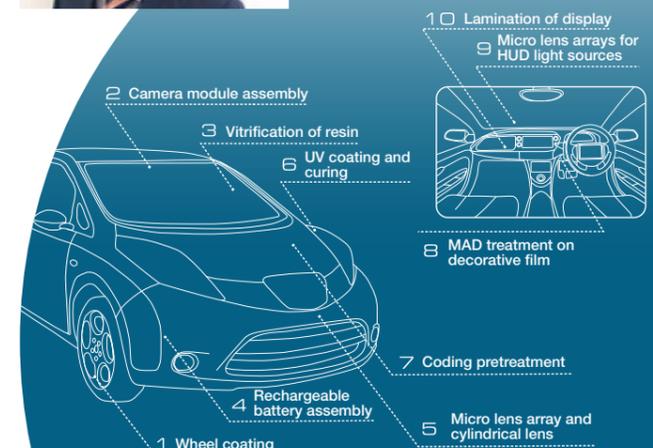
We want to use Ushio's lights to resolve customers' issues in surface treatment, bonding, and joining processes.

We have dealt with these issues in the FPD market and have built up a lot of experience, but we have been trying to expand into other markets for many years and are starting to see results. For example, in the battery market, by carrying out surface treatment of components with light we improve the safety of our customers' products and by shifting from thermal bonding to optical bonding of components, we contribute to increasing our customers' productivity. In addition to this, we are increasing performance and demand in the semiconductors, PCB, vehicles, optical components, and building materials industries. New possibilities have also emerged in the printing market.

We are committed to helping our customers improve their productivity, make their products more stable, safer, more efficient, and lighter, and reduce their environmental impact through their production and products.



**Yuma Yamaguchi**  
Manager, Photon Process Business Unit  
Section Two,  
System Solution Division,  
Ushio Inc.



**Koichiro Takeda**  
Managing Executive Officer and  
General Manager of the  
Lithography Tool Business,  
ADTEC Engineering Co., Ltd.

# Imaging Equipment Business



We will foster a culture that offers excitement and experiences and enables us to rapidly provide solutions for customer issues.

**Kazuhisa Kamiyama**  
Chairman and CEO,  
Christie Digital Systems, Inc.



## Net Sales, Operating Income / Operating Margin



## Sales Composition



## 1 Review of Fiscal 2020 (the First Year of the Current Medium-Term Management Plan)

The spread of COVID-19 had a significant impact on the entertainment industry, and Christie Digital Systems, Inc. (CDS), the main company in the Imaging Equipment Business, was no exception. Initially, we were on the path to improving earnings due to the positive effects of reducing fixed costs as a result of the return to core business implemented in the previous Medium-Term Management Plan, as well as an upturn in the external market, with the start of projector replacements in cinemas. However, the impact of COVID-19 showed signs of postponement and restraint in investments in cinema. Restrictions for events and prolonged closure of many facilities, including cinemas, amusement parks, and commercial facilities, has continued in some regions. This trend began to impact performance from March 2020 and has continued having an impact.

Accordingly, we adjusted the expected period for starting projector replacements at cinemas around the world from 2020 to 2023 and established a plan that takes into account the impact on COVID-19 and puts emphasis on improving management efficiency rather than

business growth through sales expansion. Specifically, at the same time as continuing to select and concentrate our businesses and relocating resources accordingly, we have started to optimize working capital, further reduce costs of products, and reduce expenses. However, due to the significant impact following the unprecedented longevity of the pandemic, we were forced to carry out structural reform, including a review and reduction of a large workforce and offices.

Conversely, there have been a number of positive effects for future growth, such as diversification of workstyles, establishment of a business decision-making criteria based on cash flow, and a change in mind-set toward operational efficiency. These are structural reforms that will be highly effective in the medium-to-long term, and the fact that we have been able to lay the foundations for them is a major achievement of the first year of our current Medium-Term Management Plan.

## 2 Key Measures and Progress Toward Achieving the Medium-Term Management Plan

Going forward, we will focus on the following two areas in the second year of our current Medium-Term Management Plan, while improving management efficiency and engaging in the selection and concentration of business scope.

### 1. Become a solutions company

Since its establishment until now, and going forward, CDS has and will continue to consistently focus on providing social value at large spaces where people can gather and share excitement and experiences. The experience of the pandemic has made us once again realize the magnitude of this value. Accordingly, we will contribute to the maximization of this social value by providing not only hardware, but also distinctive value-added solutions that are unique to CDS in both the cinema and general imaging fields. For this reason, we will expand the product range to satisfy customers in terms of both

function and cost, achieve appealing and simple imaging systems, and work to reinforce after-sales services to ensure that our customers can operate in a stable and efficient manner.

### 2. Optimize working capital

We prioritize optimization of our inventory. By selling long-term retained inventory and reviewing the value chain process and product design itself, we are working to optimize our inventory level. We will also efficiently invest in the development of products and services necessary for creating solutions by further improving cash flow. In addition, we will create a robust and stable financial base that enables us to consistently conduct business, even when unexpected circumstances emerge, such as the pandemic.

## 3 Vision for 2030 and Value Provision

Since CDS launched production of film projectors in 1929, Ushio's Imaging Equipment Business has supported many business partners in creating and sharing great experiences for audiences, from places of worship to Hollywood, control rooms to classrooms, and beyond. We will continue to support our business partners by understanding the needs of the end user and continue to deliver new imaging excitement and experiences that many people are looking for. As we look toward 2030, we are considering two directions, vertically and horizontally, to enhance the value we provide and become a light solutions company, which is Ushio's Vision.

First, we are moving to become a solutions company in the Imaging Equipment Business. The concept that a product with cutting-edge technology will sell is reaching its limits, and it is important to accurately understand the needs of our business partners and their customers, how quickly we can resolve their issues, and how much additional value that is unique to CDS we can share with the

end user. Rather than relying solely on products that boast advanced technology, our business activities will focus on developing and providing products and services that resolve customers' issues.

Second is the diversification of our businesses. As a core company of the Imaging Equipment Business, to date we have focused on the visible light domain. Going forward, we will also actively utilize UV light and infrared light. The foothold for this is CounterAct™, the fixture system for environmental hygiene that is equipped with Care222, Filtered Far UV Technology for disinfection and virus inactivation. CounterAct™ will not only include the technology to systemize light but also the knowledge and business assets that we have cultivated over the years, such as fixture management that utilizes a remote monitoring system for projectors. Through CounterAct™ and imaging-related products, we are capable of offering the two values of a safe and secure environment and shared excitement and experiences that customers require. This leads to solutions that are unique to CDS.

## 4 Current Measures and Action Plans for Five Management Focuses

In the Imaging Equipment Business, we are focusing on creating a workplace environment that makes it easy for employees to succeed, one of our Five Management Focuses, which is the foundation for maintaining the sustainability of our business and supporting all of our stakeholders.

As we work to stabilize the earnings necessary for the sustainable circulation of the business ecosystem, we will shift to becoming a solutions company that is at the core of achieving this goal. To that end, we believe that it is vital that we have a workplace environment

that is comfortable for all of our employees and in which they can fully demonstrate their skills.

Currently at CDS, we are steadily working towards a new corporate culture based on the phrase "OneChristie". We hold quarterly town halls for all our employees around the world to explain business policies and management issues, as well as hold Q&A sessions to instill a new corporate culture and goals in each employee, and to foster a culture in which all employees are united in taking the necessary actions to achieve our Vision.

## 5 Awareness of Opportunities and Risks

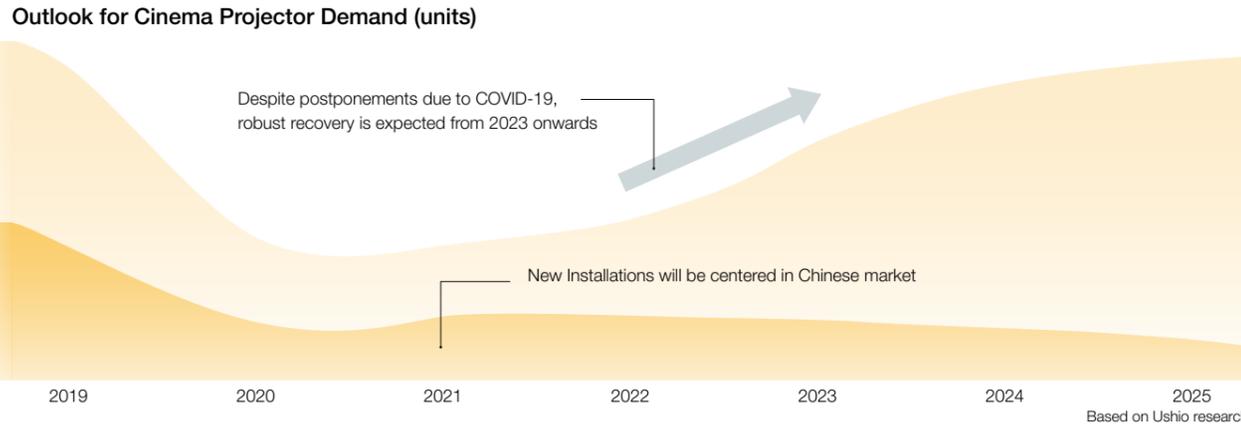
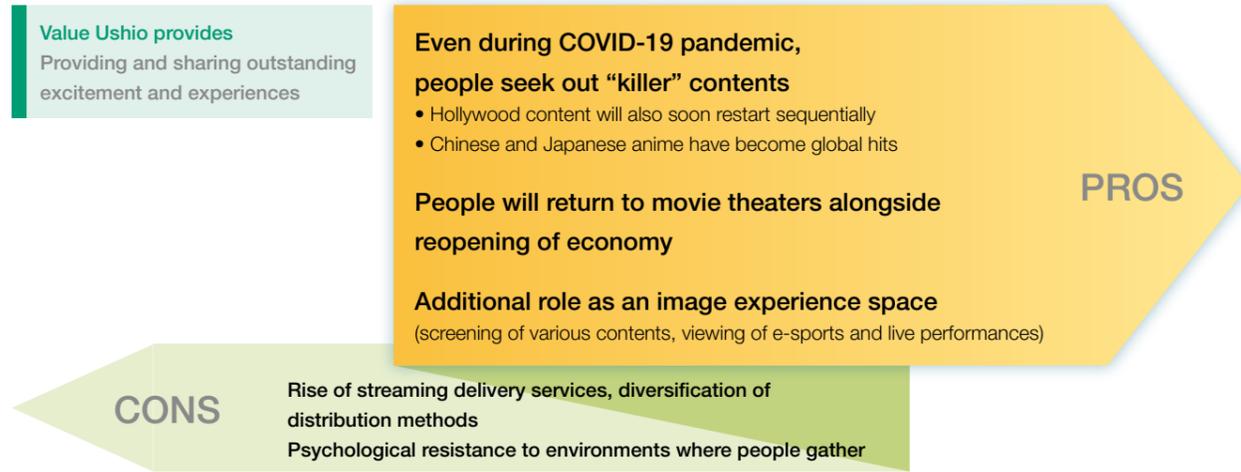
In the field of imaging equipment, there have been technological innovations in the way large images are displayed, with a shift from projection to direct display. In the medium-to-long term, this is a risk for CDS, whose mainstay product is projectors, but it is also an

opportunity in terms of increased sales of LED video walls and other products. In addition, the ability to respond to the above technological innovation and strengthen our capability to provide solutions is a major motivation for CDS to increase its presence and added value.

We will foster a culture that offers excitement and experiences and enables us to rapidly provide solutions for customer issues.

**Cinema** Enhance the Unique Appeal of Movie Theaters and Support the Renewal and Stable Operation of Video Equipment

► The Medium- to Long-Term Outlook for Cinema



**Interview** New Initiatives for Responding to the New Normal

**Q** What will the industry trends and your responses be in the post-COVID-19 era?  
Even before the pandemic, streaming services were becoming popular as a new method for enjoying cinema content, and cinemas have been investing in new technologies to improve people’s experience beyond just enjoying the images. This investment has covered various aspects, such as the food and beverage menu and VIP seating, as well as immersive audio and visual technologies.  
Due to the pandemic, the diversification of methods for delivering content has accelerated, but people’s desire to experience the richness offered by the presentation of a compelling story together, will not change. Cinema will continue to be at the heart of an experience where peoples of every background gather to share a moment together and experience a story conveyed with fantastic image and sound like no other. The ability of cinemas to create a place for a shared group experience is how cinemas continued to prosper even when TV and VCR technology was viewed as a threat in previous times.

**Q** What are the mid- to long-term predictions of the market and strategy of your business?  
As people become more active again, cinemas have begun to reopen. However, it may be some time before cinemas recover from the impact of the pandemic and begin to actively carry out capital investments. We will engage in increasing the appeal of cinemas by pursuing the latest audio and visual technologies and support the continued renewal of equipment in order to continue providing superior experiences.



**Brian Claypool**  
Executive Vice President of Cinema  
Christie Digital Systems, Inc.

**General imaging** We Support the Construction and Operation of Systems for Video Production That Will Attract Customers to the Facility

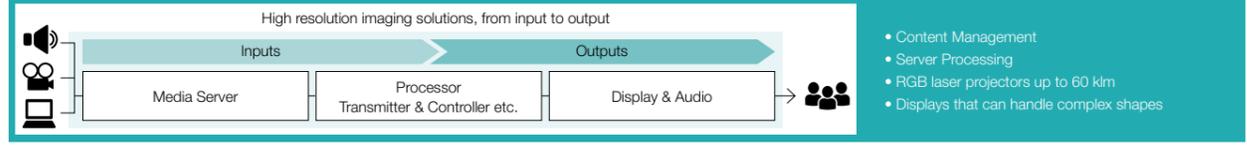
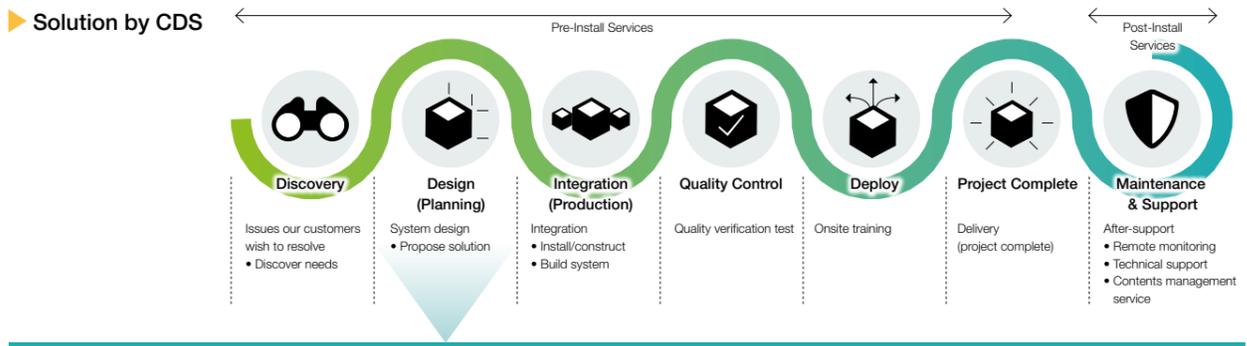
**Interview** The Shift to Becoming a Solutions Business

**Q** What will the industry trends and your responses to these trends be the post-COVID-19 era?  
The pandemic impacted numerous projects in locations including tourism facilities, amusement parks, meeting rooms, and convention centers, leading to a temporary halt in investment around the world. Despite this, many commercial facilities and event organizers are planning to upgrade their establishments to provide new experiences, in preparation for the full-scale recovery of leisure and business. In order to support these plans, we are keeping in mind customers’ total cost of ownership (TCO), not just through sales of products with high resolution and superior performance in a wide color gamut but by beginning to provide solutions for customers that guarantee the use of our products for longer and in better condition.

**Q** What are the mid- to long-term predictions of the market and general strategy of your business?  
As restrictions on movement are being relaxed, we expect investments in establishments where people gather to increase. We aim to create added-value for our customers’ businesses through Christie’s services. We will continue to provide turnkey solutions that meet the requirements of our customers, comprising of the design of effective and simple visual display systems utilizing projectors, LED video walls, and content management software. In this way, we will enable our customers to create appealing and symbolic productions that, in turn, will attract larger audiences to their publicly staged events.



**Michael Bosworth**  
Executive Vice President,  
Enterprise  
Christie Digital Systems



**Example of solution**

**Lotte World Magic Castle 3D projection mapping show | Seoul, South Korea**

We have created dynamic 3D projection mapping shows on the 41-meter-tall castle that has become the symbol of the amusement park. By transmitting a large size of video and sound signals from a server, and by precisely calibrating the images of multiple laser projectors, we achieve overwhelming visual beauty.



## Directors (as of June 29, 2021)



**Koji Naito**  
President and Chief Executive Officer

Apr. 1986 Joined Ushio Inc.  
Oct. 2014 Executive Officer  
Apr. 2015 Senior Executive Officer  
General Manager, Light Source Business Division  
Apr. 2016 Managing Executive Officer  
Apr. 2019 Chief Executive Officer  
Jun. 2019 President and Chief Executive Officer (incumbent)



**Naoki Kawamura**  
Representative Director and Senior Managing Executive Officer

Apr. 1986 Joined Ushio Inc.  
Apr. 2015 Executive Officer  
General Manager, Biomedical Division  
Nov. 2016 General Manager, System Solution Division  
Apr. 2017 Senior Executive Officer  
Apr. 2018 Managing Executive Officer  
Apr. 2019 Senior Managing Executive Officer  
General Manager, Business Management Headquarters and General Manager, System Solution Division, Business Management Headquarters  
May 2019 General Manager, Business Management Headquarters and General Manager, System Solution Division, Business Management Headquarters and General Manager, Business Development Division, Business Management Headquarters  
Jun. 2019 Director and Senior Managing Executive Officer  
Apr. 2020 General Manager, Business Management Headquarters and General Manager, System Solution Division, Business Management Headquarters and General Manager, Incubation Center, Business Management Headquarters (incumbent)  
May 2020 Representative Director and Senior Managing Executive Officer (incumbent)



**Kazuhisa Kamiyama**  
Director and Group Senior Executive Officer

Sep. 1995 Joined Ushio Inc.  
Apr. 2016 Executive Officer  
General Manager, Corporate Headquarters and General Manager, Corporate Strategy Division, Corporate Headquarters  
Apr. 2018 General Manager, Corporate Headquarters  
Jul. 2018 Group Executive Officer  
Chief Financial Officer, Christie Digital Systems, Inc.  
Apr. 2019 Group Senior Executive Officer  
President, Christie Digital Systems, Inc. (incumbent)  
Chairman and Chief Executive Officer, Christie Digital Systems USA, Inc. (incumbent)  
Chairman and Chief Executive Officer, Christie Digital Systems CANADA, Inc. (incumbent)  
Jun. 2019 Director and Group Senior Executive Officer (incumbent)



**Yoshinari Hara**  
Outside Director

Apr. 1967 Joined Daiwa Securities Co., Ltd.  
Jun. 1991 Director, Daiwa Securities Co., Ltd.  
Sep. 1995 Managing Director, Daiwa Securities Co., Ltd.  
Oct. 1997 President and Representative Director, Daiwa Securities Co., Ltd.  
Apr. 1999 President and Representative Director and CEO, Daiwa Securities Group Inc.  
President and Representative Director, Daiwa Securities Co., Ltd.  
Jun. 2004 Chairman of the Board and Director, Daiwa Securities Group Inc.  
Jun. 2008 Chief Corporate Advisor, Daiwa Securities Group Inc. (incumbent)  
Jun. 2012 Honorary Advisor, Daiwa Securities Group Inc. (incumbent)  
Jun. 2014 Outside Director (incumbent)



**Yasufumi Kanemaru**  
Outside Director

Apr. 1979 Joined TKC Corporation  
Apr. 1982 Joined Logic Systems International, Inc.  
Sep. 1985 Director,  
NTT PC Communications Incorporated  
Nov. 1989 Established Future System Consulting Corp. (currently Future Corporation) and served as President and Chief Executive Officer  
Mar. 2006 Chairman, President and Chief Executive Officer, Future System Consulting Corp.  
Jan. 2007 Chairman and Chief Executive Officer, Future Architect, Inc. (currently Future Corporation)  
Mar. 2011 Chairman, President and Chief Executive Officer, Future Architect, Inc.  
Jun. 2015 Outside Director (incumbent)  
Jul. 2015 Chairman, Future Architect, Inc.  
Apr. 2016 Chairman, President and Group Chief Executive Officer, Future Corporation (incumbent) and Chairman, Future Architect, Inc. (incumbent)



**Sakie T. Fukushima**  
Outside Director

Jun. 1980 Joined Braxton International  
Sep. 1987 Joined Bain & Company, Inc.  
Aug. 1991 Joined Korn/Ferry International-Japan  
May 1995 Director, Korn/Ferry International  
Sep. 2000 Regional Managing Director, Korn/Ferry International-Japan  
Jul. 2001 President and Representative Director, Korn/Ferry International-Japan  
May 2009 Chairman & Representative Director, Korn/Ferry International-Japan  
Jul. 2010 President & Representative Director, G&S Global Advisors Inc. (incumbent)  
Jun. 2016 Outside Director (incumbent)  
Jun. 2019 Outside Director, KONICA MINOLTA, INC. (incumbent)  
Jun. 2020 Outside Director, Kyushu Electric Power Company, Incorporated (incumbent)



**Takabumi Asahi**  
Director and Senior Executive Officer

Apr. 2017 Joined Ushio Inc.  
Jul. 2017 Deputy General Manager, Corporate Headquarters  
Oct. 2017 Deputy General Manager, Corporate Headquarters and General Manager, Corporate Planning Department, Corporate Strategy Division, Corporate Headquarters  
Apr. 2018 Executive Officer Deputy General Manager, Corporate Headquarters and General Manager, Corporate Strategy Division, Corporate Headquarters and General Manager, Corporate Planning Department, Corporate Strategy Division  
Jul. 2018 General Manager, Corporate Strategy Division and General Manager, Corporate Planning Department, Corporate Strategy Division  
Apr. 2019 Senior Executive Officer  
General Manager, Corporate Headquarters and General Manager, Corporate Strategy Division, Corporate Headquarters, and General Manager, Corporate Planning Department, Corporate Strategy Division, Corporate Headquarters  
Jul. 2019 General Manager, Corporate Headquarters (incumbent)  
Jun. 2021 Director and Senior Executive Officer (incumbent)



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

Apr. 1982 Joined Ushio Inc.  
Apr. 2007 Executive Officer  
Jul. 2011 Senior Executive Officer  
Jun. 2013 Director and Managing Executive Officer  
Apr. 2014 General Manager, Corporate Management Division  
Apr. 2016 In charge of Corporate Headquarters  
Jun. 2016 Director (Full-time Audit & Supervisory Committee Member) (incumbent)



**Toyonari Sasaki**  
Outside Director

Apr. 1976 Joined the Ministry of Finance  
Jul. 2003 Deputy Director, General of the Budget Bureau  
Jul. 2007 First Deputy Commissioner, National Tax Agency  
Jul. 2008 Director, General of the Financial Bureau  
Jan. 2010 Assistant Chief Cabinet Secretary, Cabinet Secretariat  
Apr. 2013 Chief Domestic Coordinator, Governmental Headquarters for the Trans-Pacific Strategic Economic Partnership Agreement (TPP), Cabinet Secretariat  
Jul. 2016 Vice Chairman, the Life Insurance Association of Japan (incumbent)  
Jun. 2019 Outside Director (incumbent)



**Rei Sugihara**  
Outside Director  
(Audit & Supervisory Committee Member)

Apr. 1986 Judge  
Apr. 1995 Attorney-at-law (incumbent)  
Jan. 1996 Joined Koga Sogo Law Office (currently Kasumi Sogo Law Office)  
Oct. 2004 Partner Lawyer, Kasumi Sogo Law Office (incumbent)  
Mar. 2015 Outside Audit & Supervisory Board Member, TACHIKAWA CORPORATION (incumbent)  
Jun. 2020 Outside Director (Audit & Supervisory Committee Member) (incumbent)



**Akemi Sunaga**  
Outside Director  
(Audit & Supervisory Committee Member)

Oct. 1989 Joined Auditing Department of Aoyama Audit Corporation (currently PricewaterhouseCoopers Aarata LLC)  
Feb. 1991 Joined Auditing Department of Chuo Audit Corporation  
Aug. 1993 Certified Public Accountant (incumbent)  
Oct. 1994 Certified Public Tax Accountant (incumbent)  
Nov. 1994 Established Sunaga CPA Firm and served as Representative Director (incumbent)  
Nov. 1996 Established Marunouchi Business Consulting Ltd. and served as Representative Director (incumbent)  
Jan. 2012 Established Marunouchi Business Consulting Tax Co. and served as Senior Partner (incumbent)  
Jun. 2017 Established Marunouchi Audit Corporation and served as Senior Partner (incumbent)  
Jun. 2020 Outside Director (Audit & Supervisory Committee Member) (incumbent)  
Outside Director (Audit & Supervisory Committee Member), YOMEISHU SEIZO CO., LTD. (incumbent)  
Jun. 2021 Outside Audit & Supervisory Board Member, Prima Meat Packers, Ltd. (incumbent)

## Corporate Governance

Ushio recognizes that realizing the Vision set forth in its Management Philosophy, as well as promoting the sustainable growth of Ushio and increasing corporate value over the medium-to-long term, will bring satisfaction to all stakeholders. To achieve this goal, Ushio strives to ensure the transparency and efficiency of corporate management and to reinforce corporate governance to realize speedy and resolute decision-making.

### Corporate Governance System

Ushio uses an Audit & Supervisory Committee system, which fosters prompt decision-making by delegating decisions for certain important business matters from the Board of Directors to the executive directors. It has also strengthened the supervisory function of the Board of Directors by ensuring that the majority of its members are outside directors. The system has also been reinforcing audit and 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.

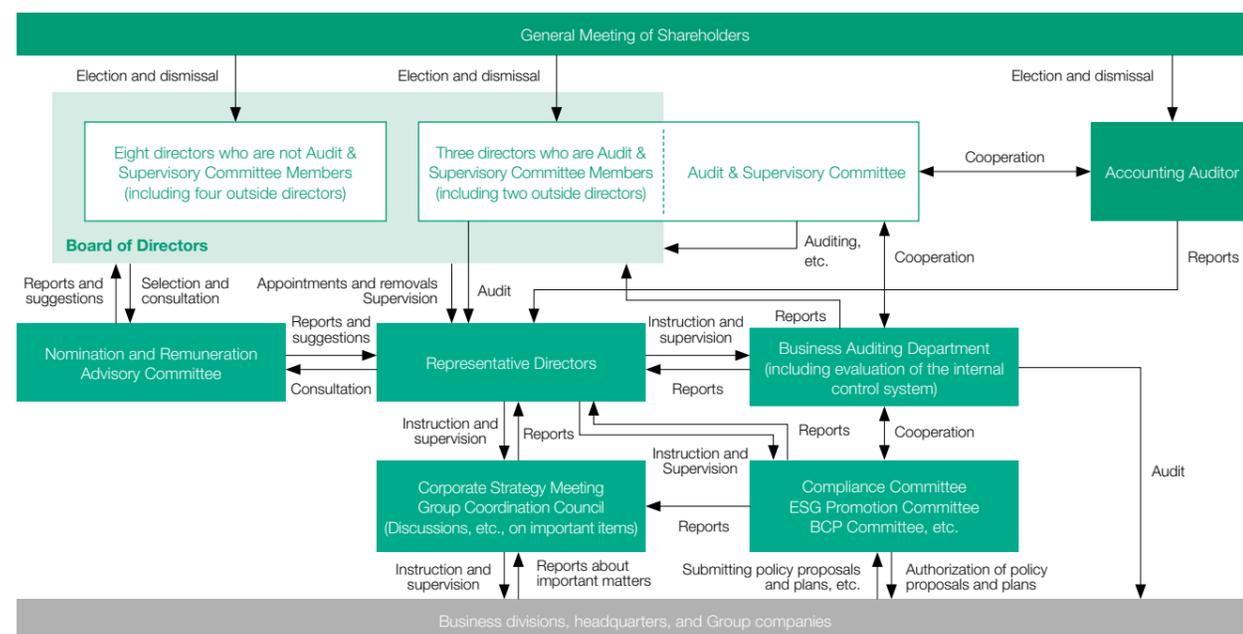
Furthermore, there is a Nomination and Remuneration Advisory Committee for the purpose of ensuring the fairness and appropriateness of the nominations and remuneration of directors.

The Board of Directors comprises 11 directors (as of June 29, 2021). Eight are not Audit & Supervisory Committee members (including four outside directors), and three are Audit & Supervisory Committee members (including two outside directors). The Board of Directors makes decisions on top priority issues, including basic management policies, and oversees business execution. Delegating decisions on the execution of certain important operations to directors who manage these operations has accelerated decision-making. At the same time, the executive officer system has led to more accurate and prompt business execution. In addition, Ushio established the Corporate Strategy Meeting and Group Coordination

Council to discuss and report on business execution priorities.

The Audit & Supervisory Committee comprises three members (including two outside directors). The committee audits and oversees the directors' performance of duties in line with its own audit and supervising standards. Ushio 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 internal audit department and Accounting Auditor.

The Nomination and Remuneration Advisory Committee comprises five members (including four outside directors). The responsibilities of the Nomination and Remuneration Advisory Committee, as advisors to the Board of Directors and the representative directors, consist of advice and recommendations concerning the structure and level of remuneration for directors, evaluations of the contributions of individual directors to business performance, and nominations of director candidates. All the members of the Nomination and Remuneration Advisory Committee are directors: Koji Naito, Yoshinari Hara (outside director), Yasufumi Kanemaru (outside director), Sakie T. Fukushima (outside director), and Rei Sugihara (outside director). The committee is chaired by Sakie T. Fukushima (outside director).



## Audits

### Audits by the Audit & Supervisory Committee

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 full-time member Nobuyuki Kobayashi has experience working in the finance departments of the Company, and therefore possesses a high level of expertise regarding finance and accounting. The outside member Akemi Sunaga is a certified public

accountant and certified public tax accountant and also possesses a high level of expertise pertaining to finance and accounting.

The Audit & Supervisory Committee meets once a month, in principle, to supervise the management of the Company and conduct audits on the appropriateness of business execution by the directors. In fiscal 2020, the committee met 13 times, and the attendance rate of each individual members is as listed in the table below.

Name	Full-time/Part-time	Inside/Outside	Number of meetings held	Number of meetings attended
Nobuyuki Kobayashi	Full-time	Inside	13	13
Rei Sugihara	Part-time	Outside	13	10
Akemi Sunaga	Part-time	Outside	13	10

Note: Part-time committee members Rei Sugihara and Akemi Sunaga were appointed to the Audit & Supervisory Committee at the 57th Annual General Meeting of Shareholders held on June 26, 2020.

The main items for examination by the Audit & Supervisory Committee are the status and appropriateness of the implementation of the Medium-Term Management Plan and related measures, the status and appropriateness of accounting audits and internal control audits in accordance with audit plans, the establishment and operational status of internal control systems, the monitoring of the management status of Group companies, and the status of the Company's compliance and risk management, in addition to other key audit matters (KAM). Furthermore, as part of their activities, the full-time committee member attends important meetings and, when necessary, receives reports from personnel in divisions responsible for

business execution. In this way, committee members gather information related to the status of business execution of both Ushio and the Ushio Group. The committee members also actively exchange opinions and share information with the Accounting Auditor regarding accounting audits and internal control audits, and with the internal audit department regarding internal control audits. Part-time committee members receive reports on the status of such audits at meetings of the Audit & Supervisory Committee. Additionally, these members meet with the Company's management and the Accounting Auditor to exchange opinions and present their valued opinions based on their expertise and from a multifaceted and objective standpoint.

### Internal Audits

The internal audit department performs on-site and written audits to check the appropriateness of operational controls and procedures. The department reports as necessary to the committee on the results of internal audits to the representative directors, the Board of Directors, and the Audit & Supervisory Committee. The Accounting Auditor submits an annual audit plan to the Audit & Supervisory

Committee and explains its specific auditing policies. It also prepares summary reports for the quarterly and year-end reviews and accounting audits. The Audit & Supervisory Committee, internal audit department, and Accounting Auditor exchange information and opinions as necessary and cooperate with each other.

## Evaluation of the Effectiveness of the Board of Directors

Ushio 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, 2021, the Company judges that the effectiveness of the Board of Directors has been generally secured. At the same time, the Company has identified the following as issues that it must

continue to address going forward: further expand the scope of discussion at Board meetings, in order to receive greater contributions from the directors; and continue efforts to innovate the Board's operation, in order to further enhance the content of discussion. These issues have been shared with and confirmed by the Board of Directors, and the Company will continue to work toward making these improvements moving forward.

## Stance on Corporate Governance Code

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

Compliance

Ushio 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's standards for behavior and other guidelines and the internal audit department performs audits of the Group companies.

Risk Management

Under its risk management regulations, Ushio has determined the divisions responsible for each type of risks, including risks related to compliance, the environment, quality, finance, legal affairs, natural disasters, information security, and export control. Each division formulates regulations and guidelines for managing the risks for which they are responsible. Based on these regulations and guidelines,

these divisions implement training activities and create and distribute manuals. In the event a new type of risk occurs, the Company promptly places a director or executive officer in charge of responding to said risk. Additionally, in the event a risk materializes and significant damage is expected to occur as a result, the responsible director or executive officer swiftly makes a report to the Board of Directors.

Status of Outside Directors (as of June 29, 2021)

Name	Audit & Supervisory Committee	Independent Director	Reasons for electing as a Director	Attendance of the fiscal year ended March 31, 2021	
				Board of Directors	Audit & Supervisory Committee
Yoshinari Hara		○	Mr. Yoshinari Hara possesses a wealth of experience as a manager in a securities company and a deep knowledge of the capital markets. With these strengths, he provides advice and supervision for management from a fair and neutral position that is independent from the members of the Company's management in charge of business execution. Although Mr. Hara was formerly the representative director of a securities company with which the Company has business transactions, the percentage of such transactions against consolidated net sales of the securities company and of the Company is less than one percent (1%), and there are no transactions that have an impact on the decision-making of the Company. Excluding the 2,800 shares he holds in Ushio Inc., there are no special interests between Mr. Hara and the Company. In addition, more than 12 years have passed since Mr. Hara resigned as the executive officer of the securities company and of its group. Based on the above, the Company has determined that Mr. Hara is an independent officer with no conflict of interests with ordinary shareholders.	7/7	—
Yasufumi Kanemaru		○	Mr. Yasufumi Kanemaru has extensive experience and profound knowledge from his career as the founder and manager of a telecommunications and IT consulting company. With these strengths, he provides advice and supervision for management from a fair and neutral position that is independent from the members of the Company's management in charge of business execution. There is no business relationship between the company Mr. Kanemaru represents and the Company. Excluding the 9,800 shares he holds in Ushio Inc., there are no special interests between Mr. Kanemaru and the Company. Based on the above, the Company has determined that Mr. Kanemaru is an independent officer with no conflict of interests with ordinary shareholders.	7/7	—
Sakie T. Fukushima		○	Ms. Sakie T. Fukushima has acquired great insight into matters relating to human resources from a global perspective, and also has a wealth of knowledge and experience regarding international corporate management. With these strengths, she provides advice and supervision for management from a fair and neutral position that is independent from the members of the Company's management in charge of business execution. There is no business relationship between the firm Ms. Fukushima represents and the Company. Excluding the 800 shares she owns in Ushio Inc., there are also no special interests between Ms. Fukushima and the Company. Based on the above, the Company has determined that Ms. Fukushima is an independent officer with no conflict of interests with ordinary shareholders.	7/7	—
Toyonari Sasaki		○	Mr. Toyonari Sasaki has abundant experience and a deep knowledge of developments in global business such as the promotion of free trade. With these strengths, he provides advice and supervision for management from a fair and neutral position that is independent from the members of the Company's management in charge of business execution. Excluding the 700 shares he owns in Ushio Inc., there are no special interests between Mr. Sasaki and the Company. Based on the above, the Company has determined that Mr. Sasaki is an independent officer with no conflict of interests with ordinary shareholders.	7/7	—

Rei Sugihara	○	○	Ms. Rei Sugihara, as a lawyer specializing in corporate legal affairs, has in-depth specialized knowledge of laws, considerable insights into corporate management, and supervisory capabilities. With these strengths, she conducts audits and supervises management from a fair and neutral position that is independent from the members of the Company's management in charge of business execution. Excluding the 200 shares she holds in Ushio Inc., there are no special interests between Ms. Sugihara and the Company. Based on the above, the Company has determined that Ms. Sugihara is an independent officer with no conflict of interests with ordinary shareholders.	5/5	10/10
Akemi Sunaga	○	○	Ms. Akemi Sunaga, as certified public accountant and certified public tax accountant, has in-depth specialized knowledge of financial affairs, accounting, and taxes, as well as considerable insights into corporate management and supervisory capabilities. With these strengths, she conducts audits and supervises management from a fair and neutral position that is independent from the members of the Company's management in charge of business execution. There is no business relationship between the firm that Ms. Sunaga represents and the Company. Furthermore, excluding the 200 shares she holds in Ushio Inc., there are no special interests between Ms. Sunaga and the Company. Based on the above, the Company has determined that Ms. Sunaga is an independent officer with no conflict of interests with ordinary shareholders.	5/5	10/10



Executive Officers (As of April 1, 2021)

Chief Executive Officer	Koji Naito	
Senior Managing Executive Officer	Naoki Kawamura	General Manager, Business Management Headquarters; General Manager, System Solution Division, Business Management Headquarters; and General Manager, Incubation Center, Business Management Headquarters
Managing Executive Officer	Tetsuo Nakano	Deputy General Manager, Business Management Headquarters and General Manager, Light Source Business Division, Business Management Headquarters
Senior Executive Officers	Takabumi Asahi	General Manager, Corporate Headquarters
	Nobuhiro Inosako	General Manager, EUV Business Unit, System Solution Division, Business Management Headquarters
Executive Officers	Masato Jikihara	General Manager, Customer Service Center, System Solution Division, Business Management Headquarters
	Hiroki Kodaka	General Manager, R&D Division
	Masato Kawamoto	Deputy General Manager, Light Source Business Division, Business Management Headquarters

Group Executive Officers (As of April 1, 2021)

Group Senior Managing Executive Officer	Keizo Tokuhiro	Director Chairman, ADTEC Engineering Co., Ltd.
Group Senior Executive Officer	Kazuhisa Kamiyama	President, Christie Digital Systems, Inc. Chairman & CEO, Christie Digital Systems, USA, Inc. and Christie Digital Systems Canada, Inc.
Group Executive Officer	William F Mackenzie	President and CEO, Ushio America, Inc.

## Directors' Remuneration

### Policy on Determining Officer Remuneration Amounts and Remuneration Calculation Method

At a meeting held on June 29, 2021, Ushio's Board of Directors decided on a policy for determining the content of individual remuneration for directors (excluding directors who are Audit & Supervisory Committee members). When making this decision, the Board of Directors consulted with and received reports in advance from the Nomination and Remuneration Advisory Committee. Also, remuneration for directors who are Audit & Supervisory Committee members has been determined through discussions among such members.

The details of the policy for determining the content of individual remuneration for directors (excluding directors who serve concurrently as Audit & Supervisory Committee members; the same shall apply hereinafter) is as follows:

#### 1. Basic Policy on Remuneration

- (1) Remuneration should increase motivation for realizing the Mission & Vision for 2030 and the targets of the Medium-Term Management Plan, commenced in fiscal 2020.
- (2) Remuneration should lead to continuous improvement in business performance and corporate value over the medium-to-long term.
- (3) Remuneration should be closely linked with the Company's performance as well as highly transparent and objective
- (4) Remuneration levels should be appropriate in comparison with those of companies in the same industry and of the same scale.
- (5) Remuneration should be determined through a fair and appropriate process to ensure the trust and support of the stakeholders.

In accordance with this basic policy, remuneration for directors (excluding outside directors) comprises fixed monetary compensation, performance-linked monetary compensation, and performance-linked stock compensation. The remuneration for outside directors is solely fixed monetary compensation.

#### 2. Policy for Performance-Linked Monetary Compensation

Performance-linked monetary compensation is determined based on director role and performance evaluation (consolidated performance evaluation and performance evaluation of the division that each director oversees) during the previous consolidated fiscal year, in accordance with the Company's basic policy on remuneration. Return on equity (ROE) and consolidated operating margin are used as the evaluation indicators for consolidated performance, and the ratio of achievement of business targets (operating margin of the respective division) is used as the evaluation indicator for division-specific performance. The amount paid to directors is calculated by multiplying the basic amount of remuneration set in accordance with director position by a coefficient determined in accordance with degree of accomplishment for each indicator. The coefficient for ROE and consolidated operating margin is set in the range of 0 to 2.5, and the coefficient for the ratio of achievement of business targets (operating margin of the respective division) is set in the range of 0 and 2.

#### 3. Policy for Non-Monetary Compensation

The Company has introduced stock compensation for directors and

executive officers through resolutions of the 52nd Annual General Meeting of Shareholders, held on June 26, 2015, and the 53rd Annual General Meeting of Shareholders, held on June 29, 2016 (in accordance with resolutions passed at Board of Directors' meetings held on June 28, 2018, and June 29, 2021, the Company has decided to extend the applicable period of this compensation to the fiscal year ending March 31, 2024).

Under the performance-linked monetary compensation, shares are granted to directors through a trust based on their position and level of performance in the previous consolidated fiscal year, in accordance with the Company's basic policy on remuneration. ROE and the ratio of achievement of business targets are used as the evaluation indicators for level of performance. The share points awarded to directors are calculated by multiplying the base number of shares determined based on director position by a coefficient set in accordance with the degree of accomplishment for each indicator. The coefficient is set in the range of 0 to 2.

#### 4. Policy on the Ratio of Remuneration

The percentage of fixed monetary compensation, the base amount of performance-linked monetary compensation, and the base number of shares of performance-linked stock compensation within the total amount of compensation paid to directors, excluding outside directors, is as follows:

Type of compensation	Percentage within the total amount of compensation
Fixed monetary compensation	50%–57%
Base amount of performance-linked monetary compensation	27%–30%
Base number of shares of performance-linked stock compensation (converted to an equivalent cash value at the time of contribution to the trust)	13%–23%

#### 5. Policy on the Period and Conditions for Granting Compensation

Performance-linked monetary compensation is paid as a fixed monthly amount during the following fiscal year, together with fixed monetary compensation.

For performance-linked stock compensation, share points are granted to directors on the last day of May each year. Upon retirement, directors are eligible to receive a number of shares equivalent to the cumulative number of points they received during their time in office, with one point equaling one share.

#### 6. Items Pertaining to Delegating Authority for Decision-Making on Remuneration

With the aim of ensuring fairness and appropriateness within the process for determining director remuneration, the Company established the Nomination and Remuneration Advisory Committee whose chairperson and the majority of members are outside directors. As advisors to the Board of Directors and representative directors, the Nomination and Remuneration Advisory Committee provide advice

and recommendations concerning the structure and level of remuneration for directors.

Based on the authority delegated to it from the Board of Directors, the Nomination and Remuneration Advisory Committee determines the amount of fixed monetary compensation and performance-linked monetary compensation for individual directors after evaluating the

performance of each director.

For stock compensation, after retirement directors are provided with a number of shares that corresponds to the cumulative number of share points they were awarded on an individual basis, in accordance with the share delivery regulations determined by the Board of Directors.

## Total Remuneration for Director Categories, Total Amount by Type of Remuneration, and Number of Eligible Directors

Director category	Total amount of remuneration (millions of yen)	Total amount by type of remuneration (millions of yen)			Number of eligible directors
		Fixed compensation (monetary compensation)	Performance-linked compensation (monetary compensation)	Performance-linked compensation (stock)	
Directors (excluding directors who are Audit & Supervisory Committee members or outside directors)	123	105	18	—	5
Directors who are Audit & Supervisory Committee members (excluding outside directors)	24	24	—	—	1
Outside directors	59	59	—	—	8

(Note 1) Performance-linked compensation (stock) is the amount recorded as expenses in the fiscal year ended March 2021 according to Japanese GAAP.

(Note 2) The remuneration for directors (excluding directors who are outside directors or Audit & Supervisory Committee members) comprises fixed monetary compensation, performance-linked monetary compensation, and performance-linked stock compensation. The remuneration for outside directors and directors who are Audit & Supervisory Committee members is solely fixed monetary compensation.

(Note 3) At the Annual General Meeting of Shareholders held on June 29, 2016, shareholders approved a resolution to limit the remunerations for directors (excluding directors who are Audit & Supervisory Committee members) to ¥540 million per year (of which the portion for outside directors is up to ¥84 million). In addition, the Articles of Incorporation limit the number of directors (excluding directors who are Audit & Supervisory Committee members) to 12.

(Note 4) At the Annual General Meeting of Shareholders held on June 29, 2016, shareholders approved a resolution to limit the remunerations for directors who are Audit & Supervisory Committee members to ¥84 million per year. In addition, the Articles of Incorporation limit the number of directors who are Audit & Supervisory Committee members to 5.

(Note 5) The stock compensation system for executives was established by resolutions passed at the Annual General Meeting of Shareholders held on June 26, 2015 and the Annual General Meeting of Shareholders held on June 29, 2016. Directors (excluding directors who are Audit & Supervisory Committee members and outside directors) and executive officers who have entered into an engagement agreement with the Company (excluding non-residents of Japan) are eligible to receive this compensation. During the three consecutive years (initially, the three fiscal years starting from the fiscal year that ends on March 31, 2016, up to the end of March 31, 2018), a maximum of ¥620 million is contributed to the stock compensation trust and the trust acquires up to 330,000 shares of the Company's stock. Eligible individuals can receive up to 110,000 points per year (one point is equivalent to one share of the Company's shares). On June 28, 2018, and June 29, 2021, the Board of Directors passed a resolution to extend the applicable period of this compensation to the fiscal year ending March 31, 2024.

(Note 6) With the aim of better clarifying the connection between director compensation and business performance and of enhancing directors' motivation toward improving business performance and enhancing corporate value, performance-linked monetary compensation is determined based on the director's position and performance evaluation (consolidated performance evaluation and performance evaluation of the division that each director oversees) in the previous consolidated fiscal year. ROE and consolidated operating margin are used as the evaluation indicators for consolidated performance, and the ratio of achievement of business targets (operating margin of the respective division) is used as the evaluation indicator for division-specific performance. The ROE and consolidated operating margin for fiscal 2019 was used as the evaluation indicator for the performance-linked monetary compensation paid in fiscal 2020, as this compensation is paid as a fixed monthly amount together with fixed monetary compensation. These indicators targeted ROE of 5.4% and consolidated operating margin of 5.9%, and the Company's actual results were ROE of 4.3% and consolidated operating margin of 4.2%. In addition, with the aim of better clarifying the connection between director compensation and business performance and of enhancing directors' motivation toward improving business performance and enhancing corporate value over the medium-to-long term, performance-linked stock compensation is determined based on the director's position and level of performance in the previous consolidated fiscal year. ROE and the ratio of achievement of business targets (consolidated operating income) are used as the evaluation indicators for level of performance. The actual results for these evaluation indicators in fiscal 2020 were ROE of -0.3% and consolidated operating income of ¥764 million. Also, during the fiscal year under review, it was difficult to logically calculate the level of impact that the COVID-19 would have on our business activities. As a result, we were unable to establish targets for these evaluation indicators at the beginning of the fiscal year. On July 31, 2020, we were able to forecast our consolidated performance using a range of amounts. When calculating performance-linked stock compensation during the fiscal year under review, the Company comprehensively took into consideration the business environment during the fiscal year under review, the numerical values of the consolidated performance forecasts that were made using a range of amounts, and the actual results of -0.3% in ROE and ¥764 million in consolidated operating income, which were used as evaluation indicators. For these reasons, and after deliberations by the Nomination and Remuneration Advisory Committee and reports of these deliberations by the committee to the Board of Directors, the Board of Directors decided not to grant points to directors during the fiscal year under review.

(Note 7) The specific amount of monetary compensation paid to individual directors (excluding directors who are Audit & Supervisory Committee members) in fiscal 2020 was determined by President and Chief Executive Officer Koji Naito based on the authority delegated to him by the Board of Directors. To ensure the fairness and validity of the decision-making process for these specific amounts, the Board of Directors enacted measures to ensure that such decisions based on the delegated authority were made appropriately by requiring that the content of discussions by the Nomination and Remuneration Advisory Committee regarding compensation systems, compensation levels, and the process for evaluating each director's level of contribution be respected throughout the decision-making process. Accordingly, the Company deems that the decision-making process was carried out in accordance with the Policy on Determining Officer Remuneration Amounts and Remuneration Calculation Method. In addition, due to the fact that the Board of Directors enacted such measures, the relevant delegation of authority was made so that the decision on specific monetary compensation amounts for individual directors could be made in a highly flexible manner.

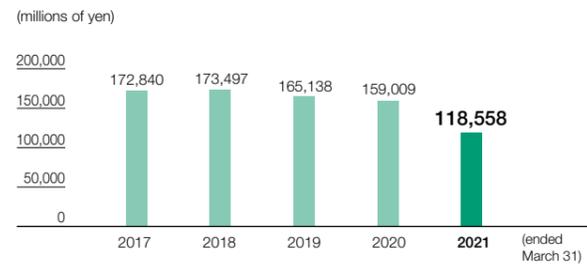
(Note 8) Taking into account the COVID-19 pandemic's impact on business performance, the Company's two representative directors voluntarily requested that a portion (5% to 10%) of their monthly compensation (fixed monetary compensation and performance-linked monetary compensation) be returned to the Company during the period from July 2020 to March 2021. Ushio Inc. accepted this request.

(Note 9) Remuneration for directors who are Audit & Supervisory Committee members for fiscal 2020 was determined through discussions among such members.

# Financial and Non-Financial Highlights

## Financial Highlights

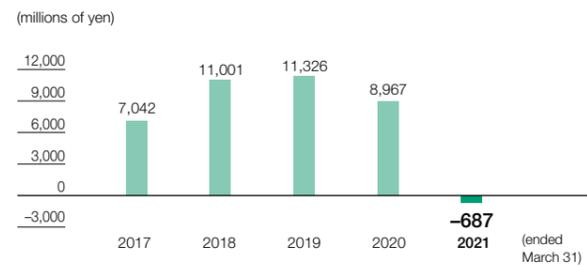
### Net Sales



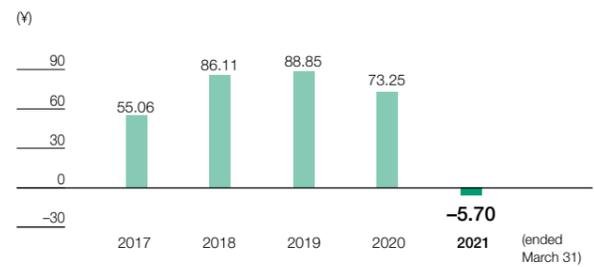
### Operating Income / Operating Margin



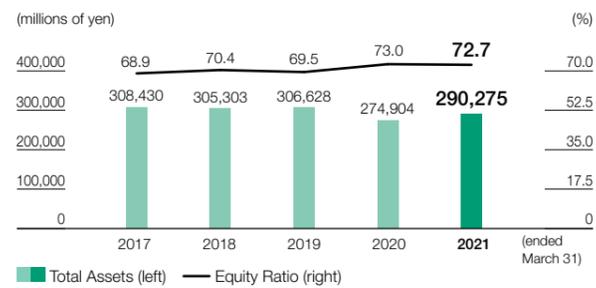
### Profit Attributable to Owners of Parent



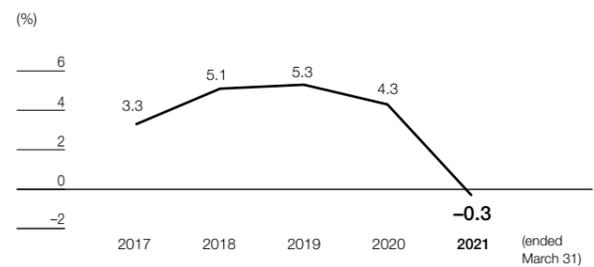
### Net Income per Share



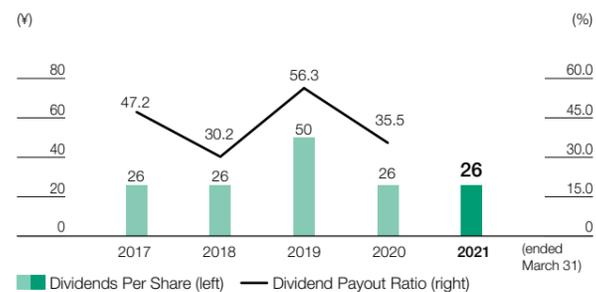
### Total Assets / Equity Ratio



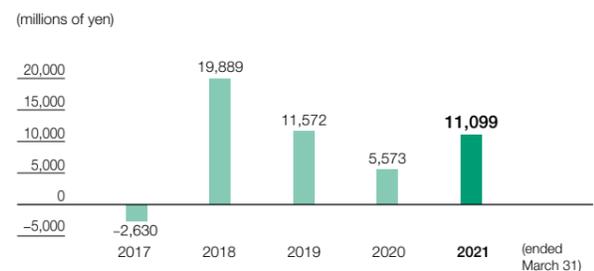
### ROE



### Dividends Per Share / Dividend Payout Ratio



### Free Cash Flow

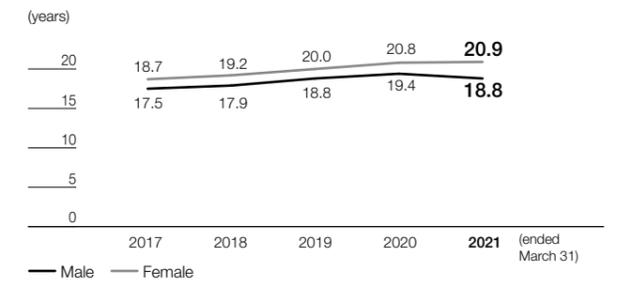


## Non-Financial Highlights

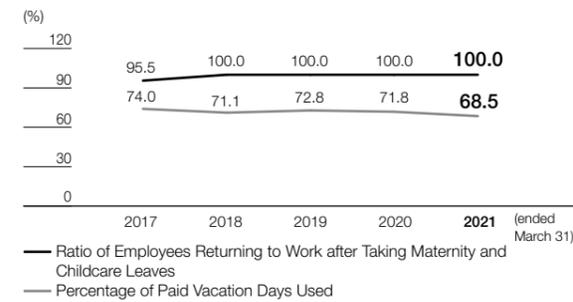
### Number of Employees (Non-Consolidated)



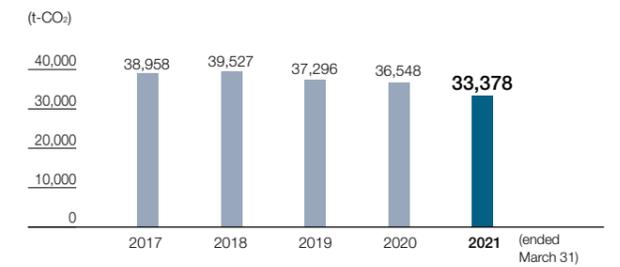
### Average Length of Service (Non-Consolidated)



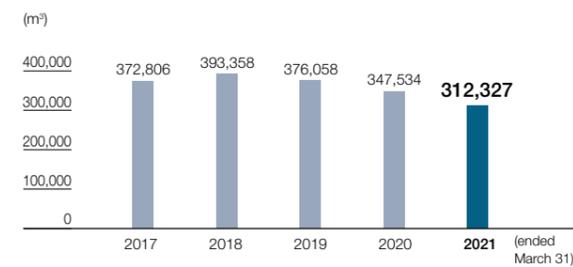
### Ratio of Employees Returning to Work after Taking Maternity and Childcare Leaves (Non-Consolidated) / Percentage of Paid Vacation Days Used (Non-Consolidated)



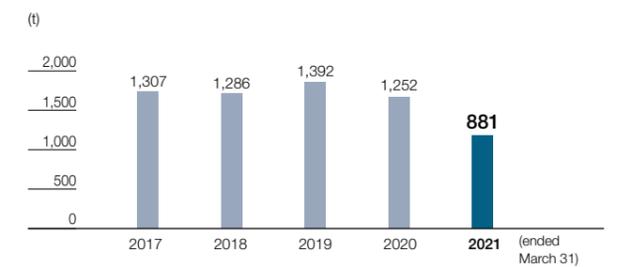
### CO<sub>2</sub> Emissions (Consolidated\*)



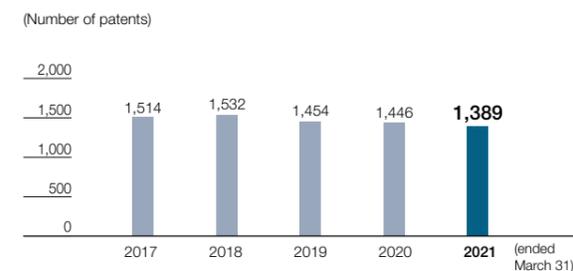
### Use of Water Resources (Consolidated\*)



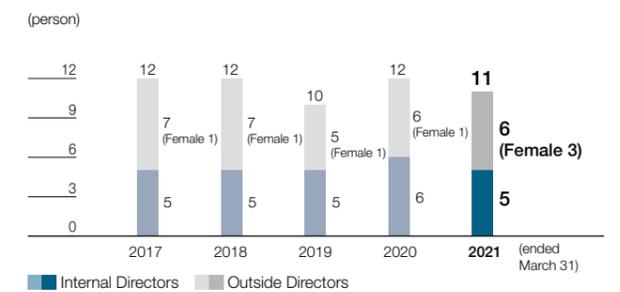
### Total Waste Output (Consolidated\*)



### Number of Patents Held (Non-Consolidated)



### Number of Directors



\* The water resources and total waste output are the consolidated environmental management range established by the Company.

# Financial Data

	Mar. 2011	Mar. 2012	Mar. 2013	Mar. 2014	Mar. 2015	Mar. 2016	Mar. 2017	Mar. 2018	Mar. 2019	Mar. 2020	Mar. 2021
<b>Earnings Data</b>											
Net sales (millions of yen)	145,125	150,087	143,461	157,800	159,365	179,121	172,840	173,497	165,138	159,009	118,558
Cost of sales (millions of yen)	96,962	101,635	95,196	101,809	98,030	110,717	112,383	111,350	106,611	105,580	78,719
Gross profit (millions of yen)	48,163	48,451	48,264	55,991	61,335	68,403	60,456	62,146	58,526	53,428	39,839
Selling, general and administrative expenses (millions of yen)	34,129	37,755	40,682	43,881	50,977	55,273	51,854	51,995	50,008	46,769	39,074
Operating income (millions of yen)	14,034	10,696	7,582	12,110	10,357	13,130	8,602	10,151	8,517	6,659	764
Ordinary income (millions of yen)	17,362	13,112	10,539	15,904	13,708	14,633	11,001	12,050	11,439	8,738	3,407
Profit attributable to owners of parent (millions of yen)	9,577	8,748	7,155	10,770	11,279	11,105	7,042	11,001	11,326	8,967	(687)
Operating margin (%)	9.7	7.1	5.3	7.7	6.5	7.3	5.0	5.9	5.2	4.2	0.6
Ordinary margin (%)	12.0	8.7	7.3	10.1	8.6	8.2	6.4	6.9	6.9	5.5	2.9
Net margin (%)	6.6	5.8	5.0	6.8	7.1	6.2	4.1	6.3	6.9	5.6	(0.6)
<b>Dividends / Per Share Data</b>											
Net income per share (yen)	71.72	66.26	54.57	82.19	86.4	85.83	55.06	86.11	88.85	73.25	(5.70)
Net assets per share (yen)	1,169	1,212	1,324	1,441	1,654	1,622	1,664	1,683	1,691	1,664	1,750
Total dividends (millions of yen)	2,937	2,884	2,884	3,388	3,139	3,353	3,329	3,329	6,316	3,141	3,141
Dividends per share (yen)	22.0	22.0	22.0	26.0	24.0	26.0	26.0	26.0	50.0	26.0	26
Payout ratio (%)	30.7	33.2	40.3	31.6	27.8	30.3	47.2	30.2	56.3	35.5	—
Ratio of dividends to net asset (%)	1.9	1.8	1.7	1.9	1.5	1.6	1.6	1.6	3.0	1.5	1.5
<b>Balance Sheet Data</b>											
Total assets (millions of yen)	217,292	224,412	228,657	255,338	294,542	294,525	308,430	305,303	306,628	274,904	290,275
Current assets (millions of yen)	130,730	143,120	140,646	153,004	178,774	170,173	180,334	184,940	200,119	170,835	176,359
Property, plant and equipment, net (millions of yen)	36,457	37,827	36,776	39,126	40,014	42,310	44,809	41,578	43,050	44,242	44,822
Investments and other assets (millions of yen)	47,064	39,564	48,371	59,048	68,655	71,256	74,062	72,473	58,815	56,079	65,682
Current liabilities (millions of yen)	41,458	40,634	37,950	39,957	44,886	49,463	54,592	54,174	69,572	47,729	48,007
Interest-bearing debt (millions of yen)	12,283	12,864	9,427	8,258	14,063	14,512	27,771	26,823	28,938	22,255	24,634
Net assets (millions of yen)	157,867	162,048	176,784	191,246	218,723	211,296	213,289	215,306	213,254	200,705	211,180
Shareholders' equity (millions of yen)	155,544	158,341	162,609	169,482	178,891	183,057	185,658	193,332	199,408	194,218	190,676
Total assets turnover ratio (times)	0.69	0.68	0.63	0.65	0.57	0.61	0.57	0.57	0.54	0.55	0.42
Current ratio (%)	315.3	352.2	370.6	382.9	398.3	344	330.3	341.4	287.6	357.9	367.4
Equity ratio (%)	71.9	70.8	75.9	73.5	73.3	70.9	68.9	70.4	69.5	73.0	72.7
ROE (%)	6.2	5.6	4.3	6.0	5.6	5.2	3.3	5.1	5.3	4.3	(0.3)
ROA (%)	4.6	3.9	3.2	4.4	4.0	3.8	2.3	3.6	3.7	3.0	1.2
Interest coverage ratio (times)	39.3	61.1	68.5	48.7	51	48.1	41.9	26.5	15.1	1.8	33.2
D/E ratio (%)	7.9	8.1	5.8	4.9	7.9	7.9	15.0	13.9	14.5	11.5	12.9
Fixed assets to long-term capital ratio (%)	49.9	45.1	49.9	52.9	55.2	57.4	56.6	52.5	47.7	47.2	51.4
<b>Cash Flow Data</b>											
Cash flows from operating activities (millions of yen)	8,390	12,382	14,443	10,622	9,876	12,031	12,624	15,567	8,853	1,179	14,517
Depreciation and amortization (millions of yen)	6,476	7,139	6,741	5,021	5,919	6,495	6,587	6,790	6,775	7,182	6,988
Cash flows from investing activities (millions of yen)	(1,679)	1,911	(8,649)	(4,476)	(3,710)	(10,367)	(15,254)	4,322	2,719	4,394	(3,418)
Cash flows from financing activities (millions of yen)	1,081	(7,615)	(7,092)	(6,670)	1,210	(7,849)	6,864	(3,613)	(3,916)	(20,363)	(784)
Free cash flow (millions of yen)	6,711	14,293	5,794	6,146	6,166	1,664	(2,630)	19,889	11,572	5,573	11,099
Net increase (decrease) in cash and cash equivalents (millions of yen)	6,359	6,630	1,676	2,080	11,646	(9,176)	3,161	15,061	8,586	(15,576)	11,890
Cash and cash equivalents at end of year (millions of yen)	34,954	41,585	43,261	45,342	56,989	47,813	50,974	66,035	74,622	59,046	70,418
Debt repayment ratio (years)	1.5	1.0	0.7	0.8	1.4	1.2	2.2	1.7	3.3	18.9	1.7
Depreciation to sales ratio (%)	4.5	4.8	4.7	3.2	3.7	3.6	3.8	3.9	4.1	4.5	5.9

## Non-Financial Data

ESG	Item	Scope	Mar. 2017	Mar. 2018	Mar. 2019	Mar. 2020	Mar. 2021
E	Energy (GJ)	Japan	483,208	486,231	476,883	507,142	<b>516,995</b>
		Asia (Excluding Japan)	145,009	153,039	164,649	152,798	<b>94,207</b>
		North America	108,441	104,934	105,401	105,556	<b>85,092</b>
		Europe	35,303	39,656	35,031	42,338	<b>43,227</b>
	Water (m³)	Japan	188,505	224,197	226,099	228,977	<b>222,829</b>
		Asia (Excluding Japan)	150,493	139,628	118,373	93,598	<b>66,148</b>
		North America	28,132	24,667	26,999	19,995	<b>17,536</b>
		Europe	5,675	4,866	4,587	4,964	<b>5,815</b>
	Total waste output (t)	Japan	654	695	776	754	<b>712</b>
		Asia (Excluding Japan)	163	125	195	164	<b>44</b>
		North America	444	396	333	304	<b>84</b>
		Europe	46	69	87	31	<b>41</b>
GHG (CO <sub>2</sub> ) emissions (t-CO <sub>2</sub> )	SCOPE1	Japan	2,675	2,884	2,579	2,588	<b>2,529</b>
		Asia (Excluding Japan)	308	305	435	334	<b>202</b>
		North America	441	566	638	568	<b>450</b>
		Europe	386	328	341	402	<b>398</b>
	SCOPE2	Japan	22,715	22,429	20,199	19,679	<b>19,860</b>
		Asia (Excluding Japan)	8,252	8,772	9,170	8,557	<b>5,988</b>
		North America	2,845	2,641	2,607	2,641	<b>2,047</b>
		Europe	1,337	1,601	1,330	1,779	<b>1,902</b>
	SCOPE3	Consolidated	1,114,880	1,346,960	1,337,903	956,226	<b>578,477</b>
	Number of employees	Japan	2,572	2,463	2,480	2,466	<b>2,446</b>
Asia (Excluding Japan)		1,213	1,368	1,383	1,388	<b>1,251</b>	
North and South America		1,882	1,791	1,607	1,500	<b>1,107</b>	
Europe		296	225	233	236	<b>249</b>	
Three-year retention rate for new graduate recruits (%)	Non-consolidated	Male	100	95	83	86	<b>100</b>
		Female	100	83	100	100	<b>100</b>
Average length of service (years)	Non-consolidated	Male	17.5	17.9	18.8	19.4	<b>18.8</b>
		Female	18.7	19.2	20.0	20.8	<b>20.9</b>
Statutory monthly overtime hours (hours/employee)	Non-consolidated	12.0	12.3	10.6	9.4	<b>10.4</b>	
Percentage of paid vacation days used (%)	Non-consolidated	74.0	71.1	72.8	71.8	<b>68.5</b>	
Number of maternity leaves taken	Non-consolidated	22	27	21	21	<b>18</b>	
Number of childcare leaves taken	Non-consolidated	Male	6	3	10	8	<b>8</b>
		Female	22	27	21	21	<b>18</b>
Number of nursing care leaves taken	Non-consolidated	0	2	0	0	<b>0</b>	
Ratio of employees returning to work after taking maternity and childcare leaves (%)	Non-consolidated	95.5	100	100	100	<b>100</b>	
Frequency of work-related accidents (%) (Number of work-related injuries or deaths ÷ Total number of work hours x 1 million)	Non-consolidated	0	0	0.61	0.61	<b>0</b>	
Severity of work-related accidents (%) (Number of lost work days ÷ Total number of work hours x 1,000)	Non-consolidated	0	0	0.02	0.02	<b>0</b>	
Number of patents held	Non-consolidated	1,514	1,532	1,454	1,446	<b>1,389</b>	

(Notes)

- GHG other than CO<sub>2</sub> are not emitted.
- 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. However, USHIO POLAND Sp. z o.o. was added to the scope in fiscal 2017. In fiscal 2018, MAXRAY Inc., was removed from the scope and Ushio Asia Pacific Vietnam Co., Ltd. was added.
- Please see the "Non-Financial Highlights" section of our corporate website for values in each category of Scope 3. <https://www.ushio.co.jp/en/csr/eco/ecodata.html>
- The electric power to CO<sub>2</sub> conversion factor uses the following:  
In Japan: Emission factor for each specific electricity provider in the previous fiscal year  
Overseas: "CO<sub>2</sub> Emissions from Fuel Combustion 2013" by the International Energy Agency (IEA)
- 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 fiscal 2020 is based on the number of employees as of April 2021 who had joined the Company in 2018.)

## External Evaluation

Ushio has been selected for inclusion in all four ESG indices that are used by the Government Pension Investment Fund of Japan, the world's largest pension fund. These indices are the MSCI Japan ESG Select Leaders Index, the MSCI Japan Empowering Women Index (WIN), the FTSE Blossom Japan Index and the S&P/JPX Carbon Efficient Index.

The contribution of ESG investments to increasing risk-adjusted

returns is believed to increase as the holding period of investments become longer. Ushio's inclusion in these indices demonstrates the widespread recognition of its commitment to the environment, society, and governance.

Inclusion in ESG Management Indices	
	<p>Ushio has been selected for 18 consecutive years for inclusion in the FTSE-Russell FTSE4Good Index Series of socially responsible companies worldwide. Furthermore, for five consecutive years, Ushio has been part of the FTSE Blossom Japan Index of Japanese companies with outstanding ESG programs.</p> <p>Note: FTSE Russell (a registered trademark of FTSE International Limited and Frank Russell Company) has certified that Ushio meets the requirements of the FTSE Blossom Japan Index based on a third-party assessment. Produced by the global index firm FTSE Russell, this index is designed to measure the performance of Japanese companies with outstanding ESG programs. The index is used as a benchmark for the establishment and evaluation of investment funds and other financial products focused on sustainable investment.</p>
	<p>The MSCI Japan ESG Select Leaders Index consists of companies with strong commitments to ESG that is based on the MSCI Japan IMI Top 700 Index. The MSCI Japan Empowering Women Index (WIN) consists of companies in this top 700 index that have excellent gender diversity within their respective industries in accordance with a gender diversity score newly developed by MSCI. Ushio has been selected for the WIN for five consecutive years.</p> <p>Note: The inclusion of Ushio in an MSCI index and the use by Ushio of the MSCI logo, trademark, and service marks do not imply that MSCI or its affiliated companies are supporting Ushio or its advertising and sales activities. MSCI has exclusive rights to the MSCI indices and the MSCI name, MSCI indices and their logos are trademarks and service marks of MSCI and its affiliated companies, and other financial products focused on sustainable investment.</p>
	<p>The S&amp;P/JPX Carbon Efficient Index is designed to measure the performance of companies in TOPIX, an index calculated and provided by the Tokyo Stock Exchange. Ushio is included in this global environmental stock index that evaluates carbon emissions in relation to each company's sales.</p>
	<p>Ushio has been selected for inclusion in the 2021 SNAM Sustainability Index, which was created by Sampo Japan Nipponkoa Asset Management Co., Ltd. The SNAM Sustainability Index is used for SNAM Sustainable Investments, an asset management product for pension funds and institutional investors that targets about 300 companies with superior ESG performance. Ushio has been included in this index for 10 consecutive years beginning in 2012.</p>
	<p>Ushio was included in the Wall Street Journal's list of "The 100 Most Sustainably Managed Companies in the World" (ranked 56), which was announced on October 14, 2020.</p>

Ushio was included in the "Change the World List" of the U.S. business magazine FORTUNE. Every year, FORTUNE magazine ranks global corporations that have an important social and environmental impact. Ushio's inclusion in list for 2020

was due to the high evaluation of Care222, Ushio's 222nm UV virus inactivation and disinfection technology that can be installed and used as-is within environments occupied by people, such as schools and commercial facilities.

## Consistency with International Initiatives



For more information on consistency with International Initiatives, please visit the URL: <https://www.ushio.co.jp/en/sustainability/initiative.html>

# Stock Information

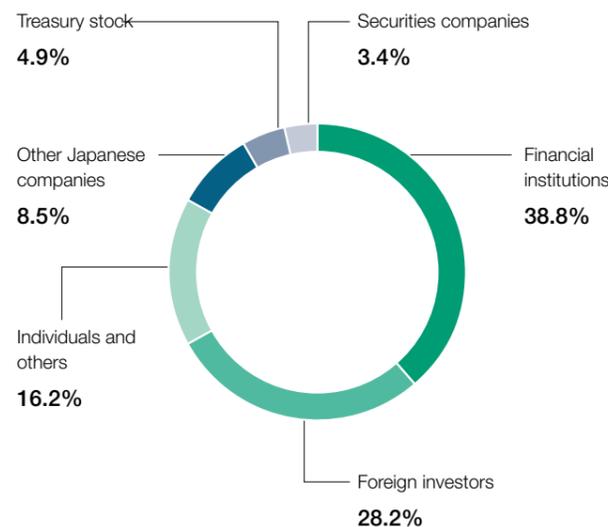
Total number of shares issued	127,000,000
Number of shareholders	22,617

## Major Ten Shareholders

Name	Number of shares (1,000 shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	11,530	9.54
Resona Bank, Limited	6,031	4.99
Custody Bank of Japan, Ltd. (Trust Account)	5,544	4.58
BBH (LUX) FOR FIDELITY FUNDS-GLOBAL TECHNOLOGY POOL	4,558	3.77
Aioi Nissay Dowa Insurance Co., Ltd.	4,274	3.53
MUFG Bank, Ltd.	4,248	3.51
Asahi Mutual Life Insurance Co.	3,305	2.73
Jiro Ushio	2,665	2.20
Ushio Foundation	2,400	1.98
Custody Bank of Japan, Ltd. (Trust Account 5)	2,331	1.92

\* In addition to the above, Ushio owns 6,171 thousand shares of treasury stock. These 6,171 thousand shares of treasury stock do not include 279 thousand shares of Ushio's stock held in a trust account in connection with a stock remuneration plan for executives.  
 \* Shareholding ratio is calculated after deducting 6,171 thousand shares of treasury stock.  
 \* Each of the investment banks listed in the upper portion of the major shareholders table manages securities held primarily by Japanese institutional investors and is also the nominee of these investors. Trust accounts denote accounts that receive trusts such as pension trusts, investment trusts, and designated monies in the trust from the institutional investors concerned.

## Composition of Shareholders



## Stock Price Movement and Stock Turnover



# Corporate Data

Established	March 1964
Capital	¥19,556,326,316
Listed	Tokyo Stock Exchange First Section
Fiscal year	From April 1 to March 31
Ordinary general shareholders' meeting	Every June
Shareholder registry administrator	Sumitomo Mitsui Trust Bank, Limited

## Divisions and Major Group Companies

<b>Parent company</b>	Head Office	Chiyoda, Tokyo	
	Harima Division	Himeji, Hyogo Prefecture	
	Gotemba Division	Gotemba, Shizuoka Prefecture	
	Yokohama Division	Yokohama, Kanagawa Prefecture	
	Osaka Branch	Osaka, Osaka Prefecture	
<b>Japanese subsidiaries</b>	Kyoto Division	Kyoto, Kyoto Prefecture	
	USHIO LIGHTING, INC.		
	XEBEX Inc.		
	ADTEC Engineering Co., Ltd.		
<b>Overseas subsidiaries</b>	6 other companies		
	<b>North America</b>	USHIO AMERICA, INC.	
		Christie Digital Systems USA, Inc.	
		Christie Digital Systems CANADA Inc. 12 other companies	
	<b>Europe</b>	USHIO EUROPE B.V.	
		USHIO GERMANY GmbH 7 other companies	
	<b>Asia</b>	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			

### 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. The copyright to this Ushio Report is held by Ushio Inc. Unauthorized reproduction or conversion is strictly prohibited.