



**IBIDEN Co.,Ltd.**

# **Integrated Report 2019**

**Year Ended March 31, 2019**







Visions That Have Continued Since Establishment and Spirit Being Passed Down / Mission

Over 100 years of overcoming many adversities.  
We have fostered ways to overcome with the power to anticipate the next generation,  
DNA that does not oppose change, and wisdom and vitality.



1912

Ibigawa Electric Power Co., Ltd. was established with an inaugural meeting held at Yoshioka-ro, Ogaki-cho.  
Yujiro Tachikawa was appointed the first President.

1951

Overcoming the turbulent period after the war, carbide production resumed.  
Expanded the electric furnace operation, which formed the foundation for carbon products.

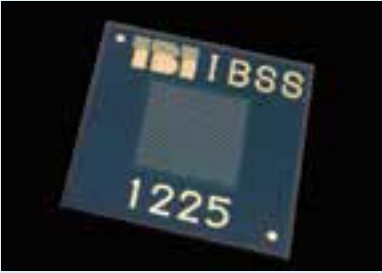


1974

Having been exploring a change in operations due to the impact of the oil crisis, we expanded into the IT field in anticipation of changes in the times.  
In 1974, first printed substrate plant was established.

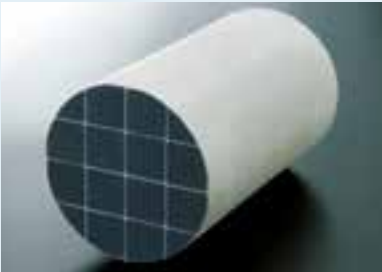
1995

The spread of personal computers and mobile devices accelerated the advancement of an information society.  
The Company achieved further leaps after the 1990s, including the start of transactions with the largest mobile-device manufacturer in the United States.



2000

Nations around the world face environmental problems, such as global warming and the destruction of the ozone layer.  
In these circumstances, silicon carbide diesel particulate filters were introduced to a major French automobile manufacturer.  
It was later adopted by other automobile manufacturers, and has grown into a main operation, second only to the Electronics Operation.



MISISON

We contribute to the progression of society through innovative technology, with respect for both individuals and the global environment.

IBIDEN WAY

The power that has enabled IBIDEN “to overcome many adversities with all our employees and to continue to exist,” and “the wisdom and vitality that have achieved dramatic growth in recent years” - these have persisted throughout IBIDEN’s long history. The systematization that carries this on, transcending borders, is the “IBIDEN WAY.”

SPIRIT

Trust through Integrity	Gaining customer and societal trust through “Genchi Genbutsu.” ※Genchi Genbutsu: Go and See for yourself to thoroughly understand the situation
“Wa” Teamwork and Synergy	Integrating knowledge and wisdom from the employee involvement for greater power.
Challenge with Passion	Anticipating change, and acting boldly to create new value.
IBI-TECHNO Innovation	Evolving by overcoming hurdles through creativity and ingenuity.



IBIDEN's DNA

Ogaki City, where IBIDEN is located, used to flourish as a commercial city of water transport, connected by the Ibi River to Kuwana, which was an important hub on the Tokaido. Eventually, responding to the city’s decline after the Meiji Restoration, the Company’s predecessor, Ibigawa Electric Power Co., Ltd., was established in order to find a way toward survival through attracting industries with a hydroelectric power generation business utilizing the abundant water source of the Ibi River. Ibigawa Electric Power Co., Ltd. symbolized the revival of Ogaki and contributed to its development through attracting factories of large enterprises. Later, the Company started its history as a manufacturer by expanding into electrochemical manufacturing, applying technologies on electronic furnaces fostered in electric power operations.

Since then, the Company has created new technologies and products that apply its accumulated elements and technologies by astutely sensing needs for the next generations from customers that are always the leading companies in each industry at the time even amid external environments that may jeopardize the Company’s continued existence such as the energy reform from coal to oil, the period of high economic growth, and the shift toward an information society.

Despite these changes, great power to overcome hardships came from our personnel who worked to achieve high targets under a corporate culture to implement “Genchi (actual site),” “Genbutsu (actual thing),” and “Jigakari (on-site solution of problems),” as well as each employee having a sense of ownership. In addition, the “blessings of nature” were always essential to IBIDEN’s operations, which began in hydroelectric power generation. The 106 years IBIDEN has accumulated also represent a history of appreciating the blessings of nature and being aware of cohabitation.

The spirit of our predecessors has been passed onto the present as the IBIDEN WAY, IBIDEN’s treasured values. The baton will be passed onto the generation in charge of the future.

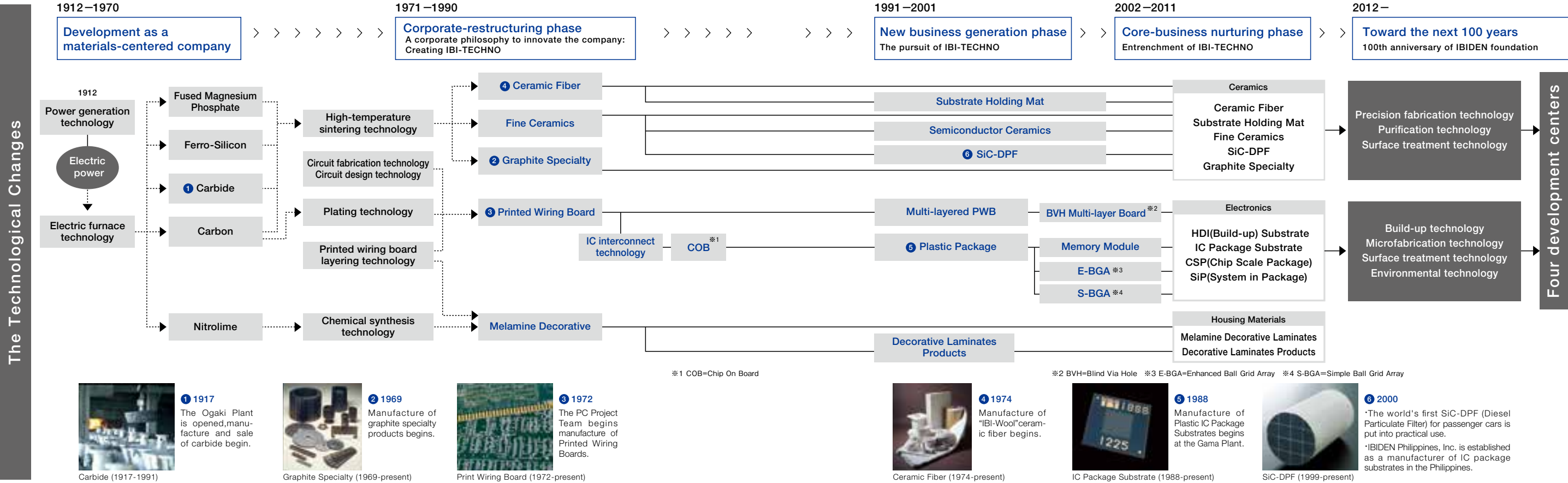
IBIDEN and the SDGs

In September 2015, the “Transforming our world: 2030 Agenda for Sustainable Development” was adopted by the United Nations General Assembly. In this agenda, the “SDGs: Sustainable Development Goals,” which comprise 17 goals and 169 targets, were formulated. Upholding the realization of harmony with the natural environment and an affluent society as its corporate philosophy, IBIDEN has continued to develop by creating products that lead to solving social issues with its innovative technologies. We believe that to positively contribute to achieving the SDGs through its businesses is a mission that IBIDEN should fulfill for society based on the IBIDEN WAY.



Changes in Creating Value

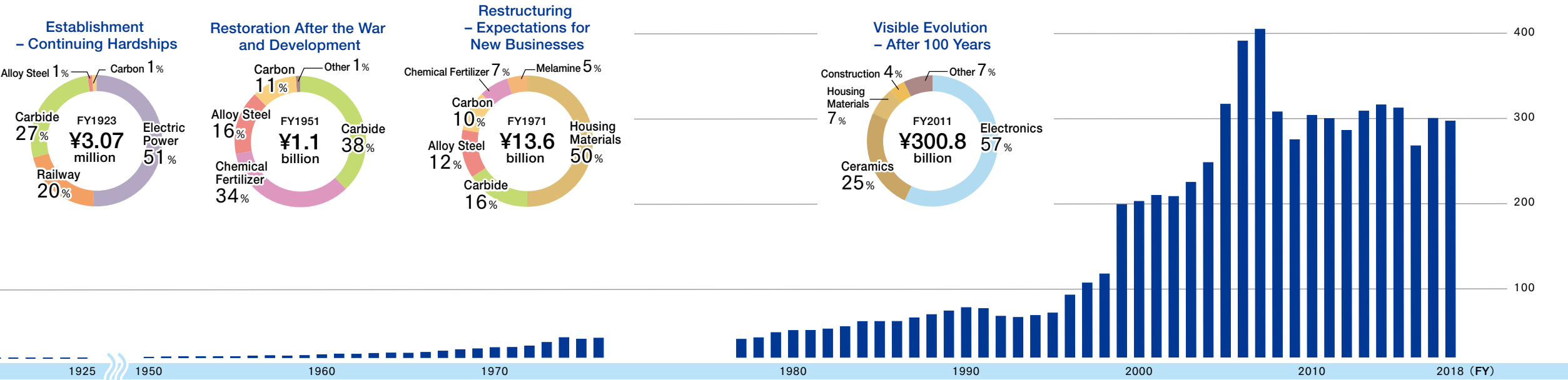
IBIDEN's technology stems from hydroelectric power generation. The Company has expanded into the electrochemical business with the aim of utilizing electric power efficiently and has incorporated a variety of technologies such as high-temperature sintering technology, chemical synthesis technology, and printed wiring board layering technology. Changes in our technologies have been steadily inherited by the current Electronics Operation and Ceramics Operation.



Trends in Net Sales and Changes in Portfolio

The Company had continued gradual growth since its establishment, but net sales began to increase rapidly from the late 1990s. Products being adopted by world-class manufacturers in both Electronics and Ceramics Operations resulted in dramatic growth.

Our main operations have changed according to changes of the times. Transitions in our main operations can be understood by examining the net sales portfolio.





## Enriched Life and Core Technology Created by IBIDEN ①

### Electronics

We lead the global electronics field with state-of-the-art technology such as IC package substrates and printed wiring boards.

■ FY2018 ratio of net sales

39.8%

Contributing SDGs



### Data Center

A large number of microprocessors are used at data centers that process huge quantities of data. The demand for IC packaging substrates used in data centers is on the rise as more and more services are handling big data. IBIDEN supports the superior reliability of data centers with IC packaging featuring high-functionality and high-reliability.



### Computer & Smartphone

At the heart of computers, semiconductors are small chips with a size of only a few millimeters to a few dozen millimeters. IC package substrates are used to implement these semiconductors with techniques that allow the chips to function at 100% performance. Various electronic devices and peripheral equipment are incorporated in smartphones featuring a variety of functions. Thin printed wiring boards with many layers are used to bring out the capabilities of multiple electronic devices within limits on size and thickness.



### Car Electronics

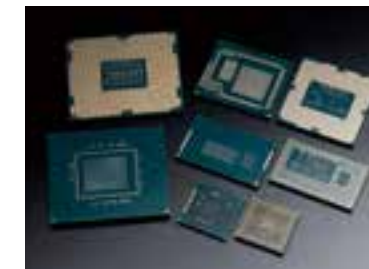
The number of electronic components and sensors installed on automobiles have dramatically increased against a backdrop of advancements in analysis using big data and high-speed communication networks. Semiconductors used on all systems that control automobiles, IC package substrates to which these are installed, as well as motherboards on which those packages are implemented, are used widely as components for automobiles that require strict reliability.



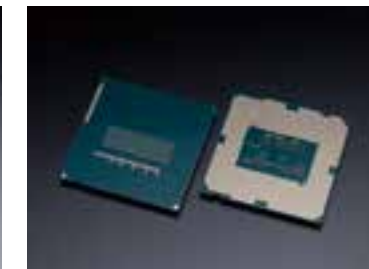
### Core Technologies in Electronics

#### IC Package Substrate

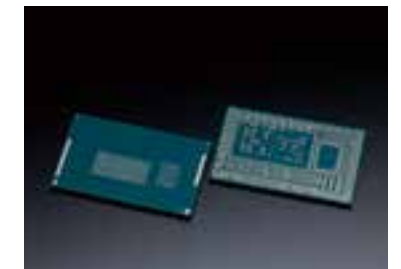
Focusing on MPUs (micro processor unit) for personal computers and the Data Center, and GPUs (graphic processor unit) for AI and vehicle-mounted applications, we provide state-of-the-art IC packaging substrates. IC packaging substrate is an important component that functions together with IC chips. IBIDEN has always enhanced added values along with IC chip evolution.



IC package substrates



IC Package Substrate for desktop PC



IC Package Substrate for mobile PC



Printed Wiring Board for Smartphones

#### Printed Wiring Board

Focusing on high-end smartphones, we provide high-function and high-density printed circuit boards. A printed circuit board is an important component that supports the manufacturing of small and high-function products in line with the full-fledged dissemination of 5G. IBIDEN meets its customers' needs using Modified Semi Additive Process (MSAP) which enables free circuit design and high-density wiring.



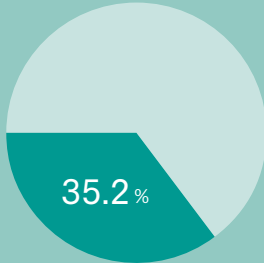
Enriched Life and Core Technology Created by IBIDEN ②

Ceramics

Through the evolution of core technologies that have been fostered over the years, including SiC-DPF (diesel particulate filter) and graphite specialty (graphite), we are pioneering new possibilities in ceramics.

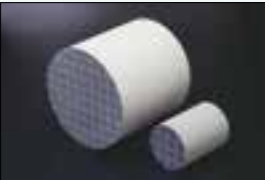


FY2018 ratio of net sales



Automobile

Many products are being used, including SiC-DPF, which removes the black smoke emitted by diesel engines, catalysts for cleaning exhaust gases installed in exhaust pipes, and felt-like ceramic fibers (alumina fibers) that prevent leakage of exhaust gas by stabilizing catalysts. We will continue developing high-performance products for the next generation, contributing to reducing the environmental burden of automobiles.



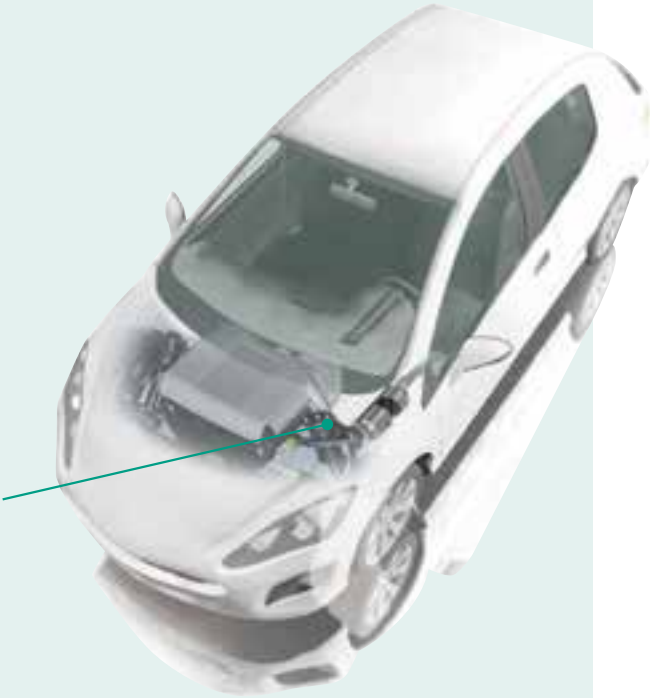
SiC-DPF



Substrate Holding Mat

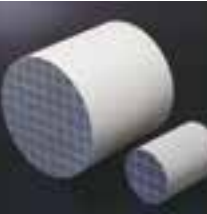


Graphite Specialty



Core Technologies in Ceramics

SiC-DPF



By collecting over 99% of black smoke emitted from diesel engines, SiC-DPF greatly contributes to cleaning exhaust gas. Having the advantages of SiC (silicon carbide), which have high thermal conductivity, high strength, and high heat resistance, the product is designed to withstand high thermal stresses via a segmented assembly method, making it easy to adapt to a variety of shapes.

Substrate Holding Mat (MAT)



FLECS® series are high-quality products widely used in automobiles helping to improve environment, utilizing ceramic fibers (alumina fiber) due to their high retaining, sealing and insulating properties for catalytic substrate (used for catalyst, DPF, etc).

※FLECS: FLEXible Ceramic Sheet

SCR Catalyst



Our SCR catalysts are used as a key component of systems to effectively and efficiently reduce the NOx content of exhaust gas, helping to improve the global environment. That are used in many industrial applications like coal fired power plant and diesel automotive application due to the tighten NOx regulations.

Ceramic honeycomb



The ceramic honeycomb, using extrusion molding technology, is designed to fit a variety of purposes such as heating medium and casting molding filters with excellent heat resistance and durability. Heat catalysts, which are applications for the ceramic honeycomb, are used inside RTO (regenerative thermal oxidizer) mainly at pharmaceutical, chemical, and electronics components factories.

Graphite Specialty (FGM)



Specialty graphite (graphite) has fine ingredient characteristics, combining characteristics of both metals and ceramics including high strength, high purity, and high durability. It meets the various needs of industrial fields from general purpose materials to high-grade materials, including high-grade materials for semiconductor manufacturing machinery, electrode materials for electrical discharge machining, and materials for machinery manufacturing solar panels.

High Temperature Insulation Wool



Offering excellent heat resistance and insulating performance, this is widely used in various industries such as sintering equipment, fuel cells, non-ferrous metals, and aircraft. Besides, this is a green procurement product, which is exempt from carcinogenicity classifications and regulations related to man-made amorphous fiber.

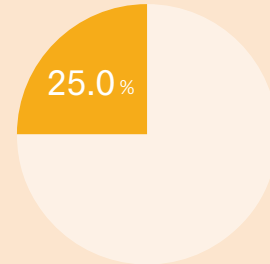
Other

Uniquely competitive products provided by each of our domestic group companies have been successful in a variety of fields.

Contributing SDGs



FY2018 ratio of net sales



Wall greenification system  
(Photo: Toyosu Foresia)  
※ Awarded the Minister of Land, Infrastructure, Transport and Tourism Prize of the Organization for Landscape and Urban Green Infrastructure  
[IBIDEN Greentec Co., Ltd.]



DOMA LONE"BinO"  
[IBIKEN Co., Ltd.]



Development and production of dehydrated food  
[IBIDEN Bussan Co., Ltd.]



Retect Viruhael:high pressure laminates with antiviral effect/wall surface  
Monde Booth/toilet booth  
Stylish Counter/counter  
[IBIKEN Co.,Ltd]

Electric Power Business

The Company, which began with hydroelectric power generation, still owns three hydroelectric power plants today, including the Higashi Yokoyama Power Plant. In 2016, renovations were conducted to support the renewable energy feed-in tariff (FIT), establishing a system to sell all of the generated power to external parties. The power plants continue to support the Company's business as stable sources of revenue over the medium to long term.

The technologies fostered in hydroelectric power generation have been inherited by group company IBIDEN Engineering Co., Ltd., which now conducts a variety of power generation operations including solar power. These operations also contribute to providing renewable energy that puts little stress on the environment.



Higashi-Yokoyama Power Plant



Kinuura Plant Water floating solar power generation plant

## IBIDEN's Global Support Structure

Since establishing IBIDEN U.S.A. Corp. in the United States as a foothold for overseas expansion in 1987, the Company has achieved full-blown expansion in overseas areas. Maintaining technology and quality fostered in Japan, we have established a global support structure by adapting to business environments, customer needs, and geographical risk.



IBIDEN Electronics (Beijing) Co., Ltd.  
(Printed Wiring Board)



IBIDEN Philippines, Inc.  
(IC Package)



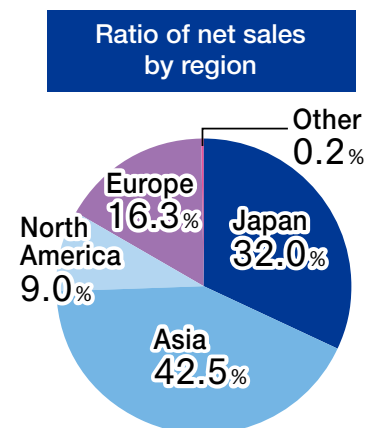
IBIDEN Hungary Kft.  
(SiC-DPF, Substrate Holding Mat)



IBIDEN U.S.A. Corp.

### Establishing a Global Mass Production Structure on the Back of Excellent Manufacturing Capabilities

When launching new products and changing to new models, a pilot process line is developed in Japan. The finished line is deployed in overseas manufacturing bases in the same manner, establishing a structure to implement a speedy vertical launch. In addition, we establish structures to ensure the stable supply of products by selecting appropriate manufacturing bases in consideration of geographical risk.

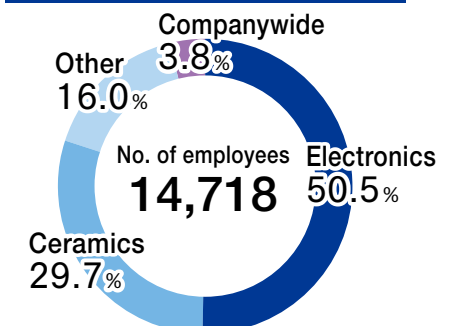


\*Net sales have been categorized by country or region based on customer location.

### The Ratio of Overseas Employees Is Higher Than 60%. Stronger Production Structure by Flexibly Utilizing Human Resources

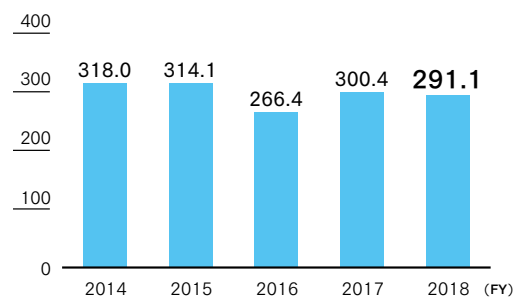
We have global bases in Asia, Europe, and North and Central America, in addition to Japan. The ratio of overseas employees now exceeds 60%, with many successful global personnel. While the Electronics Operation comprises more than 50% of the number of employees by business, the Company allocates resources appropriately by changing personnel assignments according to the business environment.

### Ratio of number of employees by business (The Group)

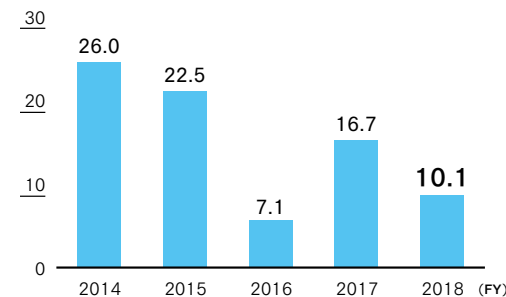


## Financial Highlights

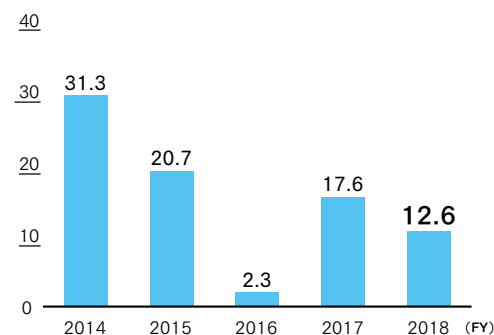
Net sales (billion yen) **291.1 billion yen**



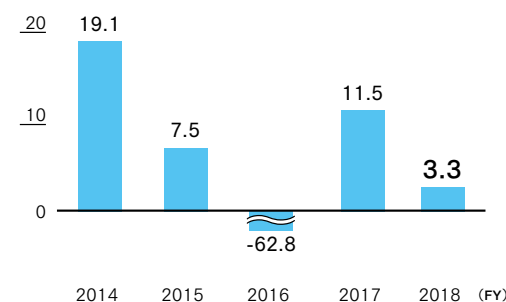
Operating income (billion yen) **10.1 billion yen**



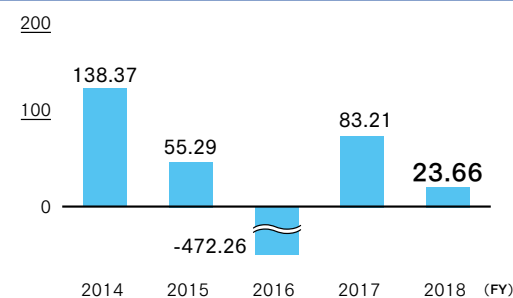
Ordinary profit (billion yen) **12.6 billion yen**



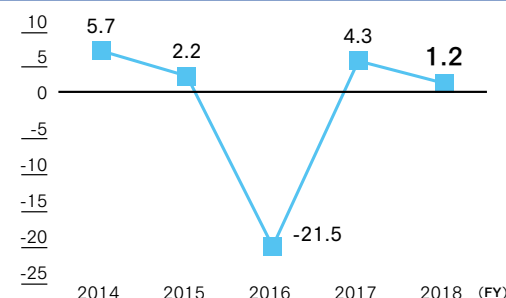
Profit attributable to owners of parent (billion yen) **3.3 billion yen**



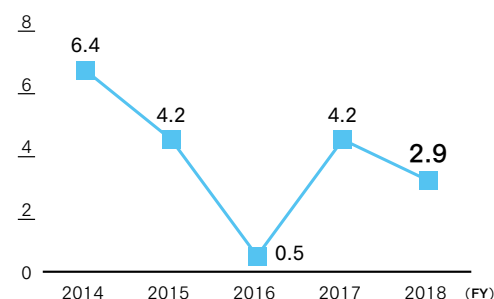
Basic earnings per share(yen) **23.66yen**



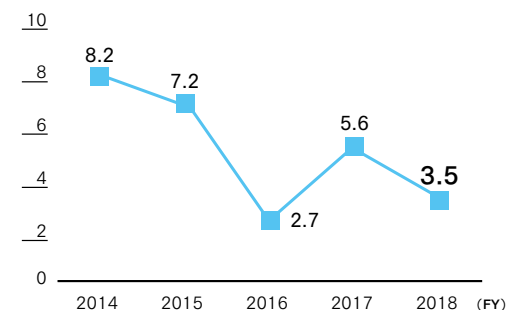
Rate of return on equity(%) **1.2%**



Ordinary profit to total assets ratio(%) **2.9%**



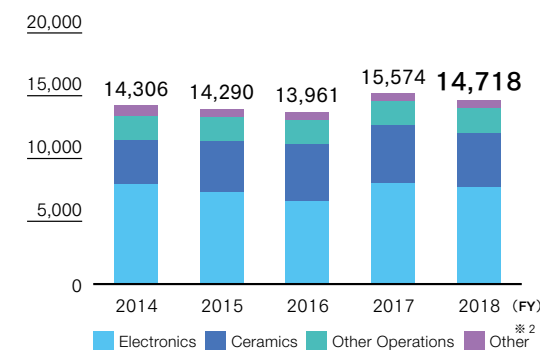
Operating income to net sales ratio(%) **3.5%**



## Non-financial Highlights

Number of consolidated employees by business<sup>\*1</sup> (persons)

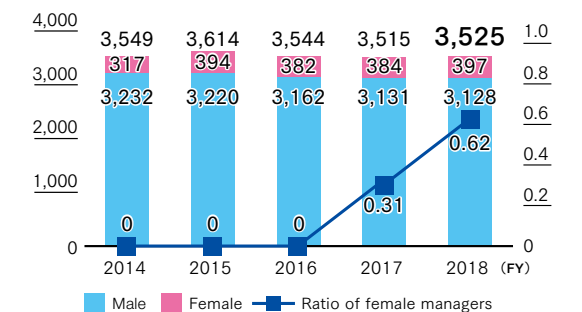
**14,718**



<sup>\*1</sup> This indicates the number of persons in employment, and does not include temporary employees.  
<sup>\*2</sup> This indicates employees of the Management Division.

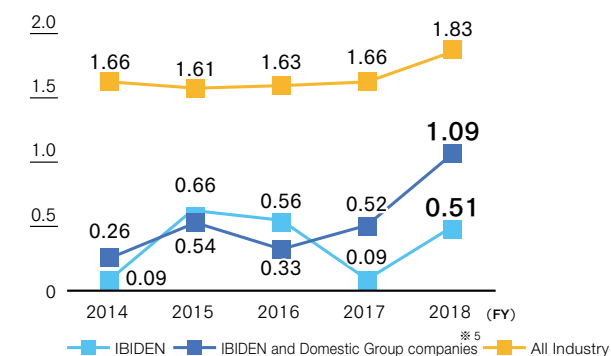
Number of non-consolidated employees by gender<sup>\*3</sup> (persons) and ratio of female managers(%)

**0.62%**



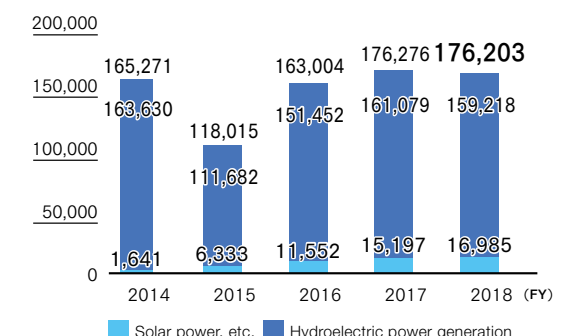
<sup>\*3</sup> This indicates the number of persons in employment, and does not include temporary employees. Also, the number of non-consolidated employees does not include seconded employees.

Occupational accident frequency rate<sup>\*4</sup> **0.51**

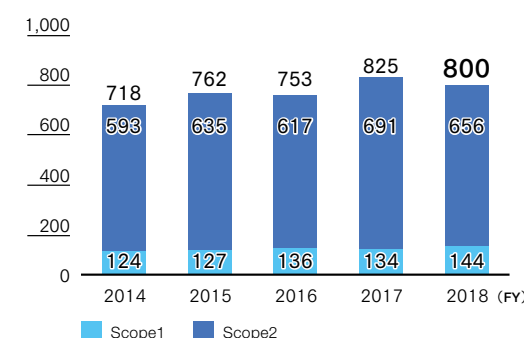


<sup>\*4</sup> This indicates the number of work-related injury or death cases (equivalent to or more serious than cases of occupational accidents resulting in lost workdays) among a total of 1 million actual working hours.  
<sup>\*5</sup> The data in or before 2017 include a part of Domestic Group companies.

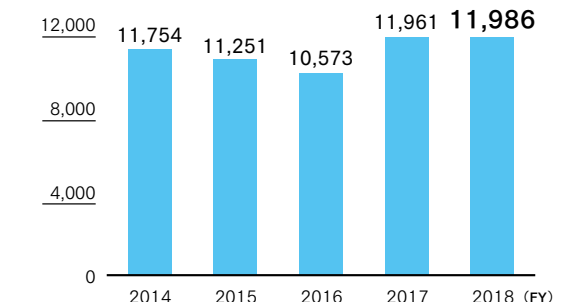
Renewable energy generation<sup>\*6</sup> (MWh) **176,203MWh**



GHG emissions<sup>\*6</sup> (thousand tons of CO<sub>2</sub>) **800 thousand tons of CO<sub>2</sub>**

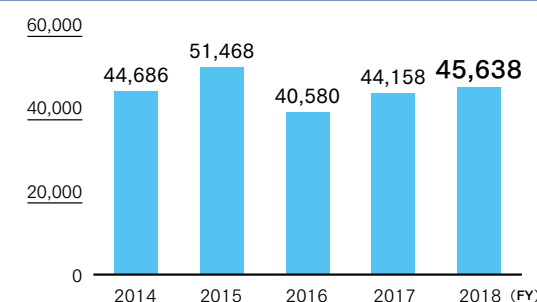


Water withdrawal<sup>\*6</sup> (thousands of m<sup>3</sup>) **11,986 thousands of m<sup>3</sup>**



<sup>\*6</sup> Figures are for IBIDEN and major manufacturing companies.

Solid waste<sup>\*6</sup> (t) **45,638t**

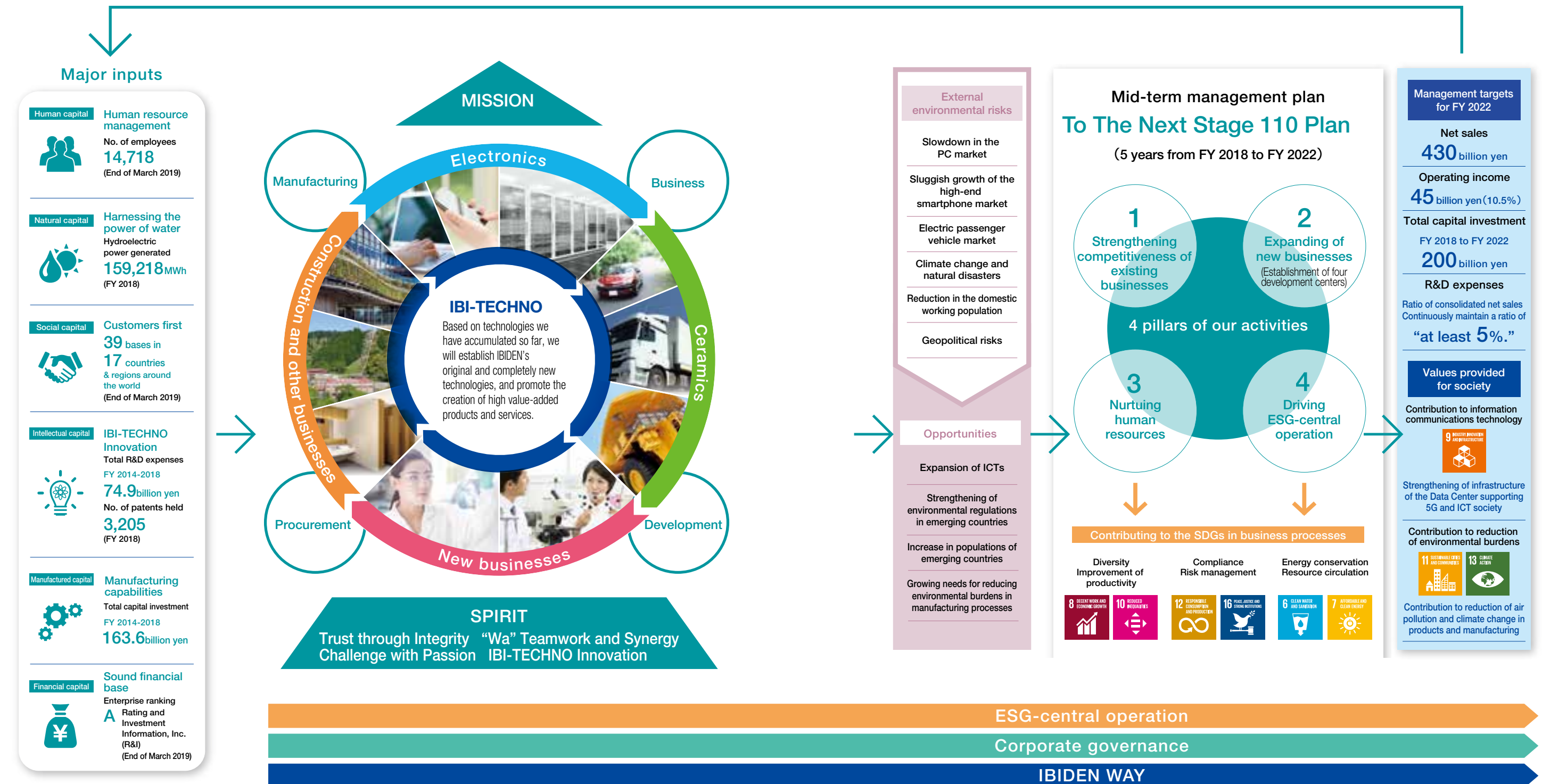




## Value Creation Story

We will realize sustainable value creation through innovating “IBI-TECHNO”, with respect for both “individuals” and “the global environment”.

Our company, which was founded as a hydroelectric power generation company intended to promote the regional economy, has long valued people and the global environment, and as a technology development company has contributed to society's development with its state-of-the-art technologies. From now, we will also continue to take up challenges in new value creation by continuously innovating “IBI-TECHNO,” which is to develop new technologies by evolving and uniting our original technologies.



Looking Back on Previous Medium-Term Management Plan and Changes in Business Environment under Current Medium-Term Management Plan

Summary of Measures and Issues in the Previous Medium-Term Management Plan

Business results and issues accumulated from the past have influenced the current medium-term management plan. In order to clearly convey the issues and outlook for the current medium-term management plan, we now look back on the results and remaining issues of the previous medium-term management plan.

	Challenge IBI-Techno 105 Plan FY2013 – FY2017
Background	<ul style="list-style-type: none"><li>•Contraction in the PC market and commoditization of the smartphone market</li><li>•Higher demand in the large vehicle market in developing countries</li></ul>
Outline of Plan	<p>① <b>Reconstruct and enhance competitiveness of core operations</b></p> <p>Vitalize TPM activities on a global scale with the aim of increasing worksite capabilities, and work on creating revolutionary technologies in materials, facilities, and manufacturing processes.</p> <p>② <b>Work on the creation of new business</b></p> <p>In addition to developing new products in the electronics and ceramics fields, commercialize product development in new fields.</p> <p>③ <b>Develop and promote CSR management globally</b></p> <p>Focus on nurturing human resources who will be successful globally.</p>
Results	<p>〈Electronics〉</p> <ul style="list-style-type: none"><li>•Established a structure that can flexibly accommodate user needs by integrating product operations for IoT, in-vehicle, and data centers.</li></ul> <p>〈Ceramics〉</p> <ul style="list-style-type: none"><li>•Established a global supply structure in order to support markets in developing countries, where strong demand for DPF is expected.</li></ul>
CAGR (Compound Annual Growth Rate)	Net sales 1.6% Operating income 9.8%
Remaining Issues	<p>〈Electronics〉</p> <ul style="list-style-type: none"><li>•Mitigate high dependency on specific large-scale users.</li><li>•Select and concentrate on manufacturing structures and product lineups in response to changes in the market.</li></ul> <p>〈Ceramics〉</p> <ul style="list-style-type: none"><li>•Develop products with new materials that can support weight reduction and comfort toward the proliferation of EVs.</li></ul>

Medium-Term Management Plan:

Changes in the Business Environment from Macro Perspective

Digital innovation



CASE



Climate change



International affairs



Decrease in domestic working population



To The Next Stage 110 Plan (FY2018 – FY2022) Changes in the Business Environment and Risks and Opportunities

External environmental risks

Slowdown in the PC market

Sluggish growth of the high-end smartphone market

Electric passenger vehicle market

Climate change and natural disasters

Geopolitical risks

Reduction in the domestic working population

Opportunities

Expansion of ICTs

Strengthening of environmental regulations in emerging countries

Increase in populations of emerging countries

Growing needs for reducing environmental burdens in manufacturing processes

Specific Impact on IBIDEN

Decline in product needs in the PC and smartphone markets due to a deteriorating worldwide economic situation and rapid changes in the product market

Expected risk duration short-term – medium-term

Decreasing demand for DPF mainly due to deferring or postponement of strengthening environmental regulations for exhaust gas, faster than expected spread of hybrid vehicles, and development of alternative energies replacing oil

Expected risk duration long-term

Increase in energy and resource costs due to climate change such as global warming and natural disasters

Expected risk duration short-term – long-term

Impact on business results and financial situation of the Group due to political and economic factors caused by sudden changes in systems, laws, or regulations in China, which is an important manufacturing base of printed wiring boards

Expected risk duration short-term – medium-term

Shortage of human resources due to a decline in the domestic working population

Expected risk duration medium-term – long-term

Increase in demand for finer cutting-edge, next-generation packages with better functions following the expansion of AI and in-vehicle markets, in addition to the expansion of the data center market due to spread of 5G and IoT

Expected duration short-term – long-term

Increase in demand for DPF in large vehicle markets in developing countries due to stricter exhaust gas regulations

Expected duration short-term – medium-term

Responding to requests from customers who wish to operate businesses with clean energy, as well as codes of conduct set by industry organizations

Expected duration short-term – long-term

Responsive Measures for Specific Impact

Allocating resources such as personnel into growth fields by withdrawing from CSP operations due to a decrease in demand for CSP caused by the market launch of new technology (FOWLP) by a competitor

Responding to changes in the market by deciding to dissolve IBIDEN DPF France S.A.S. following a slowdown in the European diesel passenger vehicle market

Utilizing in-house power generation systems with high energy efficiency to contribute to the reduction of greenhouse gas by creating clean energy through hydroelectric power plants

Establishing production structures that will generate stable revenues by primarily producing motherboards for smartphones in China and modular substrates for servers in Malaysia while limiting the production of products that fluctuate by season as much as possible

Improving efficiency by promoting work automation and utilization of IT tools. Securing diverse human resources by supporting active participation of women and people with disabilities

Promoting enhancement of production capabilities by building factories with a total budget of ¥70 billion in order to respond to demand for next-generation packages with high functionality

Responding to demand by concentrating resources on DPF, AFP, and next-generation products with high functionality at IBIDEN México, S.A. de C.V., established in 2013 as a base for developing countries

With a unified supply chain, promoting activities such as reduction of environmental risk, energy conservation, and circulating resources by utilizing renewable energy such as hydroelectric power and solar power

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## Message from the President



President&CEO  
Takeshi Aoki

## Message from the President

**IBIDEN aims to achieve the medium-term management plan in FY2022 by reforming operational structures in anticipation of changes in the external environment and accumulating new operations that generate further revenues.**

### DNA that Responds to Changes in Society

IBIDEN was established in 1912 as a hydroelectric power plant company named Ibigawa Electric Power Co., Ltd. that utilized the abundant water source of the Ibi River, and it has since changed its business structure according to changes in the needs of the times in order to overcome countless adversities such as the period during and after the war, high economic growth, the oil crisis, and collapse of the bubble economy. At our foundation lies IBIDEN's DNA to "create what will be needed by the society in the future based on core technologies." Specifically, it was the power to continuously connect and develop fundamental technologies derived from the original business of power generation, expanding into the electrochemical industry by utilizing electric power in electric furnaces, and advancing into veneers using chemicals and printed wiring boards. This DNA and development of technologies have led to the Company's current main operations.

In addition to the connection of technologies, an essential factor in the Company's development is that we have built close relationships with customers that are the leading companies in the respective industries at that time. It is the "customer first" business cycle in which our customers' requests, issues, and future road maps are shared, responses are made with innovations utilizing accumulated core technologies, and connections with our customers are further strengthened. The essence of IBI-TECHNO is understanding changes in society through connections with our customers, and pioneering the next steps by fearlessly changing its main operations based on core technologies.

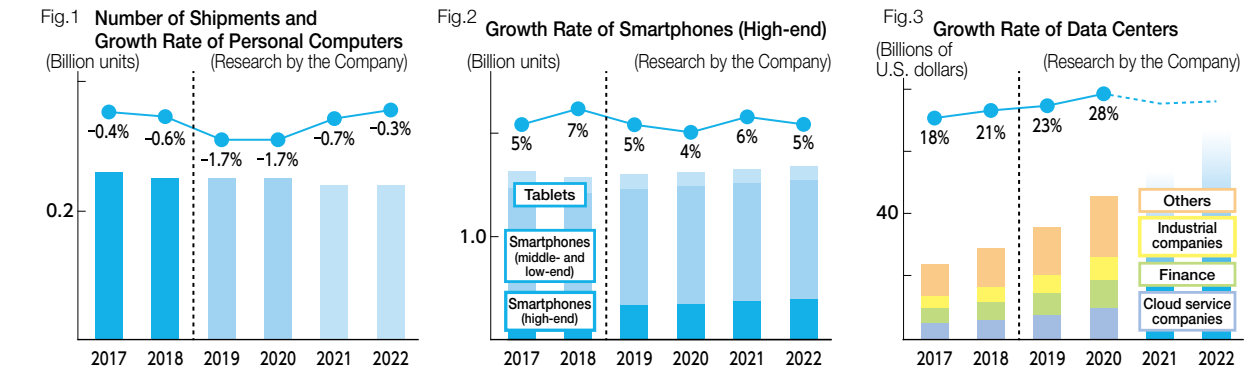
### Awareness of External Environment in Main Operations

In the Company's business portfolio, the Electronics Operation comprises 39.8% and the Ceramics Operation comprises 35.2% of the most recent net sales of ¥291.1 billion. The Electronics Operation has achieved growth by incorporating demand for electronic components used in mobile devices that entered a period of full-scale adoption in the 2000s, with the use of IC package substrates (PKG) by major semiconductor manufacturers in the 1990s as a turning point. Currently, the personal computer market is declining and the commoditization of the smartphone market is progressing, intensifying price competition with competitors amid contracting markets (P.21 Fig.1, Fig.2).

In response to such changes in the market environment, from the perspective of selecting and concentrating, we have reorganized unnecessary facilities and operations from which revenues cannot be expected in order to advance reforms in operational structure to concentrate resources on markets where growth can be expected and core technologies can be utilized.

With regard to the medium- to long-term outlook of the market for the Company's Electronics Operation, the next-generation 5G telecommunications standard is a growth opportunity, a theme to which we can proactively contribute with digital innovations that will transform society with enriched lives, industries, and financial services. The spread of 5G telecommunications will dramatically increase the amount of data being transferred, increasing the use of high-function microprocessors for 5G base stations and data centers that function as infrastructure supporting such data transfers. This is expected to result in new demand (P.21 Fig.3) for high-end IC package substrates, which are one of the Company's strengths. In addition, the impact of 5G is expected to spread to the networking of digital electronics and self-driving, and is hoped to further expand business opportunities. In phases of such paradigm shift, new entries of domestic and foreign competitors can pose a risk, while there are also growth opportunities to be found. The Company maintains one of the highest shares in the world of the high-end IC package substrate market, and is well positioned to overcome issues by closely coordinating with customers through sharing development plans amid the progression of refinement in IC package substrates. These connections with our customers and the technological development capabilities that respond to such connections will become one of our advantages so that we can further improve our high market share and put the Electronics Operation on a strong growth trajectory with the IC package substrate operation as its driver.

The Ceramics Operation has grown into the second pillar with the DPF operation as its driver amid progress in strengthening environmental regulations led by developed countries mainly in Europe against a backdrop of environmental issues caused primarily by exhaust gases from diesel vehicles. In the process, the Company has established a structure to supply our products from four locations in the world: Japan, Hungary, France, and Mexico, in order to respond to strong demand for DPF mainly in the passenger vehicle market in Europe. Going forward, we expect an increase in demand for DPF in developing countries not only for passenger vehicles but also for buses, trucks, and construction equipment. Meanwhile, we are beginning to see changes in the market



environment for the passenger vehicle market in developed countries such as a shift away from diesel vehicles and a shift toward EVs. However, the timing at which the impact will materialize is expected to be after 2040, when the number of passenger vehicles with combustion engines is expected to decrease due to electrification. Until then, we expect the number of passenger vehicles with combustion engines, including hybrid vehicles, to continue increasing.

Five-Year Medium-Term Management Plan for the Next Stage

With the Company's history and external environment described here in mind, we are working on a five-year medium-term management plan (To The Next Stage 110 Plan) for moving onto the next stage by developing new operations toward the next generation, while strengthening the competitiveness that will become the source of earnings capabilities for existing operations nurtured by our predecessors.

In the medium-term management plan, we are aiming for net sales of ¥430 billion (CAGR 6.8%), operating income of ¥45 billion (CAGR 20.1%), and an operating income ratio of 10.5% in FY2022, the last fiscal year of the plan, by structuring a balanced business income which adds new operations that provide new revenue sources to steady growth in existing businesses over the five years. While the fiscal year under review, which is the first fiscal year of the plan, has seen disappointing results in the form of decreased revenue and decreased profit, I will explain the details of measures being taken by the Company by each pillar of activities with the aim of ensuring the achievement of the plan amid a significantly changing management environment.

Strengthening Competitiveness of Existing Businesses – Structural Reform of the Electronics Operation

As stated above, in the Electronics Operation comprised of PKG, motherboard printed wiring boards (PWB), and thin compact substrates for smartphones and tablets (CSP), we have advanced bold reforms in operational structure since the latter part of the previous medium-term management plan based on changes in the competitive environment. While the Company's Electronics Operation has grown by closely coordinating with certain major customers from the development stage, this also meant taking the risk of the entire business being easily affected by the customers' development trends. In order to reduce such risk, the Company is proactively working on development of new users and product areas which are expected to advance in the growing market. In addition, barriers between operations are disappearing in technologies that have been accumulated by operations in PKG, PWB, and CSP, such as multi-layering, refined wiring, and miniaturization. We have reorganized these three operations into a structure that can flexibly respond to users' requests for new use cases, such as usage environments and required specs.

Furthermore, as a stepping stone toward future growth, we have decided to invest a total of ¥70 billion in the Ogaki Central Plant and Ogaki Plant based on expectations for further growth in demand for a high-function, next-generation PKG mainly for data centers. Through this investment, the production capacity of main domestic bases for the PKG operation, which is the main operation of the Company's Electronics Operation and has generated stable revenue, will be significantly enhanced. In doing so, we will establish a supply structure that allows us to continue having the highest share of the growing



market. In addition, during the process of considering the investment, we have carefully deliberated the possibility of recouping the investment at internal meetings and the Board of Directors meetings by directly confirming our customers' strong requests through information exchanges and matching details and reasoning with objective market data. Risks for the Company include responding to increased technological difficulties demanded by customers, which we believe can be controlled with the technological capabilities we have fostered thus far. As well, we also plan to shift personnel resources from CSP, which we plan to scale down in the operational restructuring.

With regard to PWB, we plan to structure our operations by limiting products with seasonal fluctuations as much as possible and focus on products from which stable orders and revenues can be expected, mainly through production of motherboards for smartphones at the Beijing plant for the Chinese market, where the demand is strong, and production of modular substrates for servers at the Malaysia plant. There is concern for U.S.-China trade friction in products for smartphones, but we will adopt a flexible production structure between Beijing and Malaysia while observing the situation, with the possibility of transferring production to Malaysia in the worst-case scenario.

As such, with the effects of restructuring the three operations and progressing the shift toward high value-added products such as next-generation PKG, business results for the Electronics Operation in FY2022 is expected to register net sales of ¥200 billion with a five-year CAGR of 14% expected for 2018-2022.

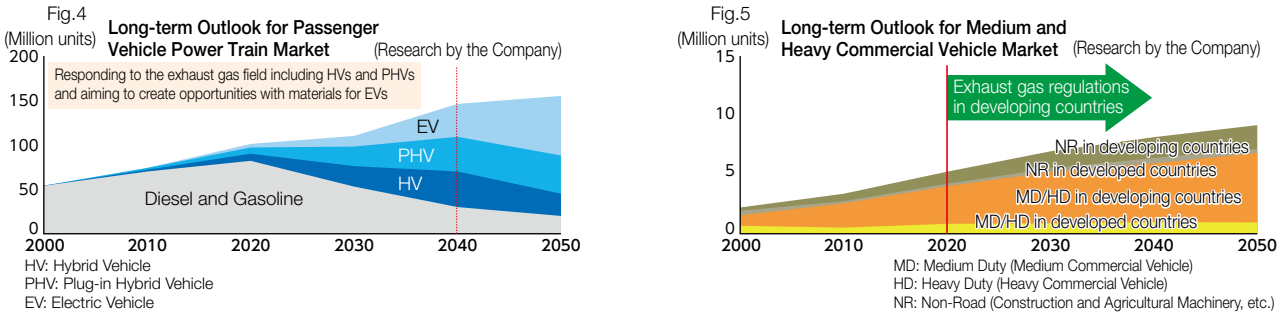
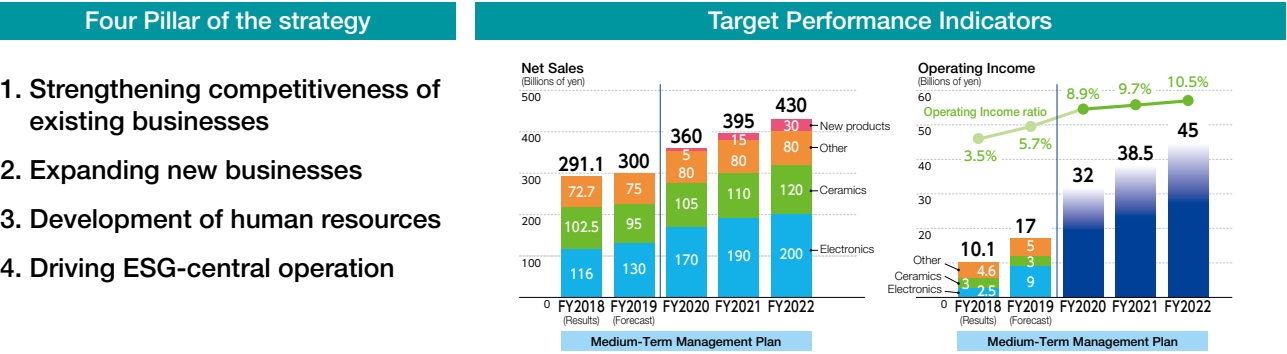
Strengthening Competitiveness of Existing Businesses – DPF Demand Shifting to Developing Countries

With regard to DPF, which is the main product of the Ceramics Operation, the effects of the shift toward EVs by countries in Europe (➡ Fig.4) and shift away from diesel are starting to materialize. Meanwhile, an increase in demand (➡ Fig.5) is expected in the overall heavy commercial vehicle (HD) market in developing countries with growth potential, including construction machinery in addition to buses and trucks starting around 2020 against a backdrop of strong development demand that will follow tighter environmental regulations and an increase in population.

In order to respond to these changes in the markets, we are pursuing optimization and streamlining of the global production structure by deciding to dissolve the DPF production plant in France last fiscal year and concentrating DPF production for Europe at the plant in Hungary. Meanwhile, we will make sure to incorporate the increasing demand in the heavy commercial vehicle market in developing countries with a focus on our Mexico plant. Furthermore, we will concentrate our resources on growing markets by advancing promotion activities for AFP, in which stable growth can be expected due to demand regardless of gasoline or diesel vehicle.

Through these initiatives, we believe stable growth is possible despite the market being in a transitional period. For business results for the Ceramics Operation in FY2022, we expect net sales of ¥120 billion and a five-year CAGR of 4.0% for 2018-2022.

Mid-Term Management Plan To The Next Stage 110 Plan





Expanding New Businesses

IBIDEN launched four development centers in FY2017 in order to develop our unique foundational technology we have fostered into new products for fields in which significant growth is expected. At each respective center, we are conducting R&D with the aim of achieving visions such as “to make the air on the Earth cleaner,” “to realize future vehicles we dreamed of as kids,” and “to extend healthy life expectancy of people.”

Among the themes we are currently pursuing, we expect the field of automobile functional products, which involves developing high-efficiency and high-function intake and exhaust systems to achieve cleaner exhaust gas, to come to fruition first. The project is based on technology extrapolated from existing ceramic molding and sintering technology as its core technology, and we are conducting development in cooperation with DENSO CORPORATION, with which we executed a capital and business alliance agreement in 2017. In terms of the developmental stage, we have completed the first prototype and received high praise from our customers. The field of biomaterial products will come next, which is developing materials that contribute to improving the safety and security of foods and living spaces. We have completed verifying the effects of plant activators for crops that realize high productivity and high functionality, and we are making preparations for commercialization.

In future mobility products, we are developing several projects in order to address existing issues for EVs such as weight reduction and comfort. These include improving the capabilities of batteries utilizing our technology to control the physical properties of materials we have fostered in our existing operations, components to control heat and sound, and high-strength, lightweight plastic windows with SiC coating using our coating technology. We are performing evaluations with customers toward market launch. Advanced ceramics will take some time until commercialization as they are for aircraft, which require reliability. However, we have already established technologies to

manufacture lightweight and highly heat resistant ceramic composite components that will significantly improve fuel efficiency, and we are at the stage of receiving durability evaluations. The aircraft business is booming, and while reliability evaluations take time, we can expect sustained revenue contribution over the long term.

I am in charge of monitoring R&D including these four themes, and I conduct reviews by theme each month. In addition, I visit worksites as necessary to interview persons in charge while reviewing the actual products. I focus on confirming the direction of development because it is of utmost importance to have the perspective of “customer-in,” which is to address customers’ issues and connect to value, as opposed to the perspective of “product-out.”

**Human Resource Development That Supports IBI-TECHNO’s Innovation**

The mindset fostered with the awareness that people are the foundation of supporting technology and business, and that each of us must take on new challenges and continue changing in order to survive, has supported our technological transformations in the past. We believe human resource development is the lifeline of IBIDEN’s sustainable growth, and we are implementing a variety of initiatives.

In order to successfully implement the medium-term management plan and realize sustainable growth, it is essential to develop managerial talent who can strongly promote IBIDEN’s management and business. Therefore, within the general training, we have established training systems in which the required skills and concepts can be learned according to each job grade. In addition, we are promoting initiatives to appoint new leaders to take on the challenge of setting up businesses based on themes of development centers.

In promoting diversity, we have achieved certain results in promoting active participation of women. Within Japan, we started promoting women’s participation and advancement in FY2010 in order to establish an environment in which employees’ capabilities can be fully

utilized while respecting work-life balance amid a declining working population. Since FY2017, we have made efforts based on the Act on Promotion for Women’s Empowerment, namely a training program for female employees selected from each department and their immediate supervisors. The number of female managers and manager candidates has steadily increased as a result of transforming awareness of not only female employees but also supervisors at the workplace. We will continue establishing working environments in which each employee’s capabilities can be fully utilized so that diverse human resources with motivation including female employees, foreign employees, senior employees, as well as employees with disabilities can receive fair opportunities.

Meanwhile, the Human Resource Development Center takes on the role of refining expert skills. For engineers engaged in development, experience at worksites and skills developed through field experience are essential. Even if we improve efficiency by using AI in the future, we still need manufacturing technologies to make full use of such capability. Thus, we send our engineers to actual worksites, allowing them to see with their own eyes, and train in equipment designs by starting with design drawings. We will promote effective utilization of our Human Resource Development Center as our technology bank and hand down technical skills of our forebears and seasoned employees to the next generation so as to improve efficiency and productivity of the entire organization.

**Promoting ESG Management – Strengthening Corporate Governance with the Aim of Achieving Highly Transparent Management**

Based on our mission, we are promoting ESG management with an understanding that activities to enhance reliability and transparency of management as well as becoming a company trusted by all stakeholders will serve as the foundation for sustainable growth.

Considering corporate governance as a key management mechanism for transparent, fair, prompt and resolute decision-making, all Group companies are actively committed to improving corporate governance. We are enhancing internal control by proactively undertaking activities to advance compliance and risk management, in addition to expanding/strengthening the management oversight functions of our highly effective Board of Directors, consisting of the optimal number of members, and the audit functions of our Audit and Supervisory Committee.

To inspect the effectiveness of the Board of Directors, we conduct evaluations by questionnaires given to all Directors including Outside Directors, and intensively deliberate at the Board of Directors on items that received poor evaluation or those that showed varied evaluation results. One of the issues from the past fiscal year recognized by the Board of Directors was “supervision of succession planning of the Chief Executive Officer, etc.” To address such issues, we will continue to ceaselessly strive for strengthening corporate governance via measures such as implementing activities to develop next-generation management candidates.

IBIDEN has origins in supplying clean energy through hydroelectric power, we have proactively worked on power generation through a variety of clean energies including hydroelectric power and solar power, as well as production activities utilizing in-house power generation through gas turbine co-generation which puts a low burden on the environment. The reduction of the environmental burden in the manufacturing processes is in response to the expectations of our customers and codes of conduct determined by industry associations. With regard to contributions through our products, the Ceramics Operation, which started with a vision “to clean up the world’s skies,” has produced a group of products that contribute to the environment in the exhaust gas field using our unique technology. We will continue to make contributions through our products and strive to obtain support not only from the market but also from society by developing products that address social issues and capture changes in the mobility environment expected in the future.

**Toward Improving Shareholder Value**

IBIDEN has conducted management with a technology-first model, valuing core technologies while achieving growth by changing the technologies derived from our core technologies according to the needs of the times. Even though we are not optimistic toward the management environments of each operation, we strongly believe that the future market potential and management environments are hopeful, as seen in our decision to invest ¥70 billion in our main Electronics Operation, which is the largest investment since our establishment. We believe the complete execution of this investment, which will become a foothold for growth in the next generation or the generation after, is the key to successfully implementing the medium-term management plan.

Furthermore, we are focusing on forward-looking development of new businesses in addition to enhancing the competitiveness of our existing businesses. In R&D investment, for which we have set a target R&D expense to net sales ratio at 5%, we are even willing to press forward with making investments for the next generation, even if it means temporarily reducing the equity ratio to a certain degree, which we have maintained at over 60%, depending on the progress of development and circumstances in business opportunities.

In terms of return to shareholders, we plan to pay out stable dividends based on a dividend payout ratio of approximately 30% while expanding operations and improving profitability by conducting growth investments within cash flows generated from our operations. In addition, we will conduct further returns to shareholders as appropriate, including purchase of treasury stock, based on our earnings status and situation in the stock market. We would like to ask shareholders and investors for continued support of the Group going forward.

September 2019  
President&CEO  


**Promoting ESG Management – Social Contribution Through Practicing Our Mission**

In recent years, SDGs (Sustainable Development Goals) have garnered much attention, and a circle is forming with companies attempting to contribute towards solving social issues on a global scale. Because

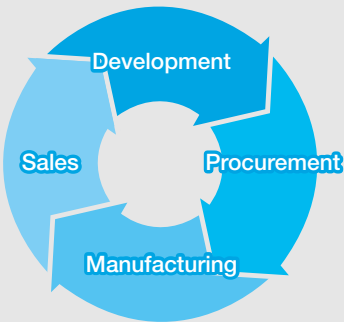


# Growth Strategies for Main Operations

(Electronics Operation and Ceramics Operation)

## Value Chain That Improves Growth Potential in Electronics Operation and Ceramics Operation

At IBIDEN, we have established a value chain from development to procurement, manufacturing, and sales in order to respond to our customers' needs by creating high-value added products. With the synergistic effects of each process, we create highly competitive products and achieve sustainable growth.



## Factors That Add Competitive Advantages

### Development

We address issues experienced by our customers with accumulated technologies fostered in the 100 years of our history. Based on close relationships with our customers, we seize their needs quickly and reflect them in our development.

### Procurement

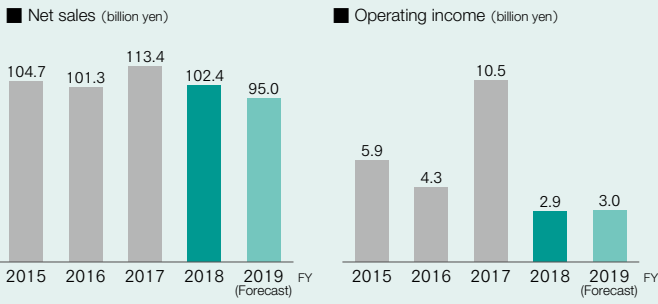
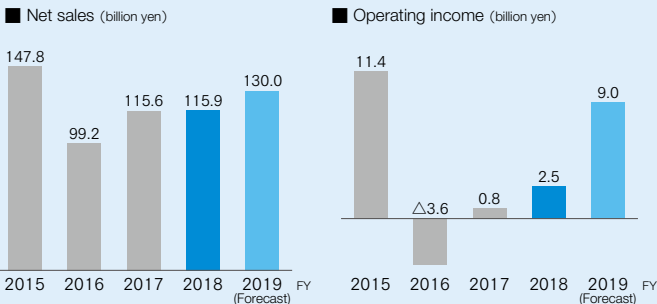
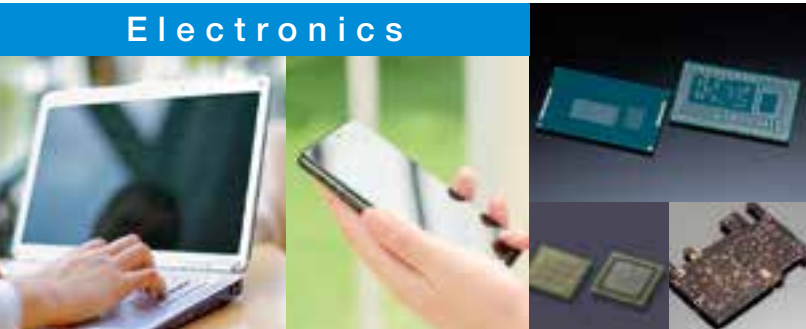
We pursue procurement at the optimal cost, with fairness and honesty at the forefront. Having established the "IBIDEN Group Green Procurement Guidelines", we conduct procurement of parts and materials that feature reduced environmental impacts.

### Manufacturing

We have established manufacturing bases in Japan, Asia, Europe, and North and Central America. We respond to our customers' needs in a timely manner with the expertise to launch products in a short period of time and put mass production systems on the right trajectory.

### Sales

By establishing a global sales structure, we respond to expanding demand in cutting-edge fields, which are among IBIDEN's strengths. In addition, our highly competitive products enable us to acquire new customers.



## Business Overview and Growth Strategies



President of PKG Operation  
Koji KAWASHIMA



President of MLB Operation  
Kozo KODAMA

## Business Overview and Results for FY2018

### Net sales increased from expanding sales into new fields

Looking back on the business environment in FY2018 for the package (PKG) operation for personal computers, the overall PC market continued to shrink year-on-year. Amid this environment, sales grew in new fields and to new customers due to utilization of the Company's strengths such as multi-layering, ultra-fine wiring, and miniaturization, as well as expanding sales mainly of PKG for servers. As a result, net sales increased compared to the previous fiscal year.

The motherboard and printed wiring board (MLB) operation supplies high-function, high-density printed wiring boards mainly for high-end smartphones. Although the smartphone market in FY2018 continued shrinking as with the PC market, the server market for data centers trended on a high level. As a result, net sales increased compared to the previous fiscal year due to strong sales of substrates for servers.

## Growth Strategies for FY2019

### Respond to new demand with proactive investment

While growth in the PC and smartphone markets, which have supported the Electronics Operation, are slowing down, we can expect future growth in the data center market as well as AI and in-vehicle markets due to the spread of 5G and ICT. In these two markets, we expect demand for high-function, fine electronic components, which are the Company's strengths, to increase.

We will make a ¥70 billion capital investment between FY2019 and FY2021 in order to respond to new demand and manufacture IC package substrates for the next generation and in new fields. With this capital investment, we will support technologies that will be the focus in the next generation, such as self-driving and next-generation telecommunications systems, and proactively expand into fields where we can expect growth.

Going forward, we will continue proactively contributing to digital innovations that will enrich society while promoting selection and concentration of manufacturing systems and product lineup according to changes in the markets.

### Plants that Manufacture IC Package Substrates for Next Generation and New Fields



2nd Building, Ogaki Central Plant



Ogaki Plant

## Business Overview and Growth Strategies



President of  
Ceramics Operation  
Sotaro ITO

## Business Overview and Results for FY2018

### Decrease in ratio of diesel passenger vehicles impacted business results

Diesel particulate filters (DPF), which are the main product of the Ceramics Operation, met a harsh market environment due to a decrease in the ratio of diesel passenger vehicles primarily in Europe. As a result, net sales decreased year-on-year. With regard to other products, net sales increased year-on-year for substrate holding mats (AFP), which continued to expand sales in developing countries, NOx reduction catalysts(SCR), of which automotive products performed strongly, and graphite specialty products (FGM), for which promotion activities were conducted in new fields amid solid performance of the semiconductor market.

As a result, although sales increased in some fields, both net sales and operating income in the Ceramics Operation decreased compared to the previous fiscal year due to the heavy impact of the decrease in sales for DPF.

## Growth Strategies for FY2019

### Enhance competitiveness by selecting and concentrating resources

The DPF market, which is at our core, is expected to continue the diversification of power trains, primarily in passenger vehicle markets in developed countries. We are promoting restructuring of the production structure in order to tightly grasp this trend, one of which is the dissolution of IBIDEN DPF France S.A.S., our consolidated subsidiary. While IBIDEN DPF France used to manufacture DPF for European automakers, it is being dissolved in order to optimize and streamline the global production structure, in response to changes in the market environment such as the decrease in the ratio of diesel passenger vehicles mainly in Europe, as well as an increase in the ratio of new specification products that comply with stricter exhaust gas regulations (EU6d-Temp and EU6d). Meanwhile, demand is expected to grow going forward in the large vehicle market in developing countries due to stricter exhaust gas regulations. By concentrating our resources on growing markets, we will advance structural reforms of our operation.

With the aim of achieving further growth, we are planning to provide products for EVs that address the issues of weight reduction and comfort with materials, utilizing IBIDEN's core technologies. In addition, we will create products that will become new growth drivers while utilizing IBIDEN's technology, such as by developing lightweight and high-heat resistant ceramic composite material products for aircraft engines in addition to automobiles.



Future IBIDEN Creates

IBIDEN Group's technologies are utilized everywhere in everyday life. In the technological world, where stunning progress is being made, the IBIDEN Group continuously develops new technologies, and creates products that will be useful in lives of tomorrow.



Supporting the Future Based on Technological Capabilities

The Electronics Operation and Ceramics Operation comprise a large portion of the sales of the Company. Thus, creating new technologies and products based on existing technologies we have refined over the years is one of the important managerial issues.

The Company is currently looking forward to the world of digital innovation, with which society, including peoples' lives, industry, and finance will be further enriched. We expect increases in networked devices and data capacity due to IoT, AI, ICT, and sophistication of in-vehicle telecommunications, as well as new demand for products used in 5G base stations and data centers to support such increases as infrastructure. To meet such demands, we will create new products including highly functional, next-generation IC package substrates, and help advance the digital innovation.

In addition, we will create products that can contribute to the better lives of people, such as aircraft engine components that improve the fuel efficiency of aircraft engines with high-temperature ceramic deposition technology and graphite technology at the core.

Developing High-Function, Next-Generation IC Package Substrates Mainly for 5G Base Stations and Data Centers

5G base stations and data centers provide support for technologies indispensable to daily life going forward, such as cashless payments, AI speakers, and connected cars. We are manufacturing and producing next-generation IC package substrates used for 5G base stations and data centers.



Lightweight and Highly Heat Resistant Ceramic Composite Turbine Components That Improve Fuel Efficiency of Aircraft Engines

Due to concerns for depletion of fossil fuels and environmental conservation, technologies to improve fuel efficiency are in demand. The Company is conducting research in order to establish manufacturing technologies for lightweight and highly heat resistant ceramic composite components which will contribute to improving fuel efficiency and reducing exhaust gases from aircraft engines.

Providing Plant Activators and Functional Nutrient Ingredients for Cosmetics and Health Foods Created by Unique Bio-Technology

In order to address the issue of food shortages caused by a future increase in the world population, as well as the issue of improving the years of good health in an aging Japanese society, we are developing biomaterial products by utilizing material handling technology on a nano-scale and water processing technology fostered in the Electronics Operation.



Innovation Strategy ①

Four Development Centers

The four development centers have been established to create the third and fourth pillars that will follow the Electronics and Ceramics Operations. We are conducting research here on a daily basis with the aim of creating new products.



President of R&D Operation  
Syuichi KUBO

Message from the Operation Manager, Technological Development Division

The four development centers were established in April 2017 within the Technological Development Division. We are developing new products that support new markets and purposes by evolving existing core technologies and proactively utilizing open innovation.

Because projects in development have been grouped together per product, it has become easier to formulate marketing strategies. Furthermore, the grouping has generated synergistic effects among our engineers, making speedy development possible. I believe this stance of “market-in” is important when developing products as well as the attitude of always being on the lookout for market trends without losing ourselves in development projects at hand. We will keep our eyes open for various kinds of information and create new business pillars by developing products with an acute sense of market needs.

Sales target for new products in FY2022 : Net sales of ¥30 billion

Four Development Centers

<p><b>Automotive Functional Product Development Center</b></p>  <p>〈Development Domain〉 Develops highly efficient and highly capable intake/exhaust systems based on our ceramic molding and firing technology which aim for cleaner emissions.</p> <p>〈Status of Initiatives〉 We have completed introducing a pilot line for the mass production of a new ceramic product that supports a variety of power trains, and we have begun shipping samples to our customers.</p>	<p><b>Future Mobility Product Development Center</b></p>  <p>〈Development Domain〉 Develops materials and components to control electric power, heat, and sound based on the technology to control the physical properties of materials we have fostered over the years in order to achieve more comfortable electric vehicles.</p> <p>〈Status of Initiatives〉 We have developed new technologies that will contribute to weight reduction and improvements in safety and battery capacity using an innovative solution. We have begun evaluations for a market launch with our customers.</p>
<p><b>Advanced Ceramics Development Center</b></p>  <p>〈Development Domain〉 Develops components for aircraft engines based on high-temperature ceramic disposition technology and graphite manufacturing technology in order to improve the fuel efficiency of aircraft engines.</p> <p>〈Status of Initiatives〉 We have established technology to manufacture lightweight, highly heat resistant ceramic composite components that will dramatically improve fuel efficiency. We have begun promotional activities in preparation for market launch.</p>	<p><b>Biomaterial Product Development Center</b></p>  <p>〈Development Domain〉 Develops plant activators and functional nutrient ingredients for cosmetics and health foods based on our unique biotechnology in order to improve the safety, security, and quality of foods and living spaces.</p> <p>〈Status of Initiatives〉 We have completed a domestic verification of the effects of a plant activator that will achieve high productivity and high functionality in crops. We have begun to prepare for commercialization and international deployment.</p>

IBIDEN's Source	Basin of Providing Value	River of Creating Value	Governance Structure Embodying the IBIDEN WAY	Financial and Corporate Data
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Existing Technologies Associated with and Products (Technologies)  
Created at the Four Development Centers

	<b>Automotive Functional Product Development Center</b>	<b>Future Mobility Product Development Center</b>	<b>Advanced Ceramics Development Center</b>	<b>Biomaterial Product Development Center</b>
<b>Associated Existing Technologies</b>	<ul style="list-style-type: none"><li>•Technology to extrude ceramic ingredients</li><li>•Technology to sinter ceramic ingredients</li><li>•Technology to create porous ceramic</li></ul>	<ul style="list-style-type: none"><li>•Technology to control physical properties of organic materials</li><li>•Technology to control physical properties of inorganic materials</li><li>•Technology to apply coating to a variety of items</li></ul>	<ul style="list-style-type: none"><li>•SiC sintering and graphite manufacturing technology</li><li>•SiC and graphite processing technology</li><li>•CVD (chemical vapor deposition) surface treatment technology</li></ul>	<ul style="list-style-type: none"><li>•Biotreatment technology that utilizes useful bacteria</li><li>•Technology to break down organic macromolecules into smaller molecules<ul style="list-style-type: none"><li>•Material handling technology on a nano-scale</li></ul></li></ul>
	▼	▼	▼	▼
<b>Products (Technologies) Created</b>	<ul style="list-style-type: none"><li>•Technology to control fine porous structures</li><li>•Ultra-high heat conducting ceramic structure</li></ul>	<ul style="list-style-type: none"><li>•Surface reforming technology</li><li>•Technology to control battery reactions</li><li>•Heat-controlling ceramic<ul style="list-style-type: none"><li>•Sound/heat-controlling plastic</li></ul></li></ul>	<ul style="list-style-type: none"><li>•CMC (ceramic matrix composites)</li><li>•High-function graphite materials</li></ul>	<ul style="list-style-type: none"><li>•Catalyst reaction controlling technology</li><li>•Genome analysis technology</li><li>•Catalysts that function at room temperature</li></ul>
	▼	▼	▼	▼
<b>Development for Next Generation</b>	Develop products that will clean the Earth's air	Develop products that will achieve “future vehicles” we dreamed about as kids	Develop ceramic products that are unbreakable, lightweight, and withstand high temperatures	Improve safety, security, and quality of foods and living spaces

TOPICS

Developing next-generation exhaust system mainly for HV and PHV in cooperation with DENSO CORPORATION

The Company formed a capital and business alliance with DENSO CORPORATION in April 2017. We are developing a highly effective yet simple and low-cost exhaust system by creating synergistic effects between highly effective ceramic materials, which are the Company's strength, and product development capabilities from the systems perspective, which are DENSO's strength as they develop and provide products throughout the processes of intake, ignition, and exhaust. We have completed our first prototype and received high praise from our customers.

Participation in National Projects

The Company is proactively working on technological development by receiving grants from the government in order to conduct advance development. One example is “NEDO: Next-Generation Structural Material Creation and Processing Technology Development – “Technological Development of Lightweight, Heat-Resistant Composite Material CMC (High-Performance Material Development),” which utilizes ceramic technology. We are developing CMC (ceramic matrix composites) components for aircraft engines in cooperation with Kawasaki Heavy Industries, Ltd., Toyota Industries Corporation, Tokyo University of Technology, and JAXA (Japan Aerospace Exploration Agency). We are developing new products while advancing several other projects.



Innovation Strategy ②

Human Resource Development to Create Innovation

Human resources is the source of IBIDEN's 100 years of history and also what will build the next century of our development. The Company has established human resource training systems in an aim to develop the human resources necessary to accurately grasp changes in the business environment and create new products and technologies.



Establishing a Human Resource Development System That Looks Toward the Next 100 Years

Since establishment, the Company has transformed its core operations in various ways. The driving force behind these changes is “the power to overcome many adversities with all our employees and to continue to exist.” It is not easy to overcome turbulent times without the power of each and every employee, which is part of the reason “human resource development” is among the four activity pillars in the current medium-term management plan. The Company aims to put in place a human resource developing system that strengthens its corporate structure in order to continue developing for the next 100 years. Furthermore, we established the Human Resource Development Center within the Technological Development Division in FY2017. Here, we aim to develop the next generation of talent by offering a wide range of training from the fundamental education required for engineers to specialized fields. Both the human resource development system and the Human Resource Development Center are indispensable for creating the future of IBIDEN. With these two types of human resource training as the foundation, we will nurture the ability for sustainable growth.

Development of Global Human Resources

The IBIDEN Group aims to put in place a human resource development system that strengthens its corporate structure and enables it to achieve consistent progress and growth. To this end, we nurture employees who can contribute to strengthening competitiveness and those who are capable of cross-cultural management.

Especially we provide cross-cultural programs to improve communication skills with overseas staff and strengthen their local response while make efforts to upgrade their practical language skills. We also focus on nurturing the core staff of our overseas entities by inviting them to participate in training programs in Japan.



Practical English program



Cross-cultural adaption program

Encouraging Career Development

We adopt a system that encourages personalized career development. We support career development through discussions in an interview with a superior concerning skills an employee wants to improve now and in the future and a superior's expectations and a support policy. We launched a self-development correspondence course enrollment assistance system to help employees develop their abilities.



50-year-old career training

Equitable Evaluation and Treatment

To enhance business competitiveness, we believe it is important for each employee to challenge himself/herself to meet his/her own high expectations, achieve these expectations, and raise his/her organizational capabilities. The Company has in place a results-oriented target management assessment system. Challenge goals closely related to the Company's business results are first established, and the results as well as the process for reaching those results are then evaluated fairly and equitably. Finally, individual results are directly reflected in their compensation. Also, we promote communications between supervisors and subordinates when setting goals and in evaluation interviews in order to develop the subordinates.

The Company adopts a job-based grade system, which helps revitalize all employees, under which work is evaluated into grades based on the volume and importance of job results and job grades are set accordingly. Furthermore, the relationship between positions available according to qualifications and job grades is clarified. Employees in the same evaluation rank in the same job grade are equitably treated, regardless of attributes such as their sex, age and race and nationality.

IBIDEN's Source	Basin of Providing Value	River of Creating Value	Governance Structure Embodying the IBIDEN WAY	Financial and Corporate Data
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Human Resource Development Center for Improving Technical Skills

We have established the Human Resource Development Center within the Technological Development Division solely for the purpose of training engineers to continue to inherit and pass on our technologies for the next hundred years.

As a Source to Continue Creating IBI-TECHNO

The Human Resource Development Center trains engineers who work at our four development centers, as well as those involved in the Electronics Operation and Ceramics Operation. The Center also provides development support and guidance. Training ranges from the fundamental education required for engineers to training in specialized fields. Nurturing people to be well equipped with skills for the next-generation developments will lead to enhanced technological strengths for IBIDEN. Furthermore, in addition to these human resource development efforts, the Center is tasked with the role of a transactive memory that incorporates the technology and expertise held by each division with the aim of achieving efficient R&D and creating new innovation. It plays an important part as a source to continue creating the IBI-TECHNO of the future.

Fundamental Policy for Human Resource Training

The four activity standards for this Center are the four components of the IBIDEN WAY:  
Trust through Integrity, "Wa" Teamwork and Synergy, Challenge with Passion, IBI-TECHNO Innovation.

Our aim is to train people to be able to learn, think, and act by themselves to deliver results. We encourage an upward spiral process of self-improvement from mind to skill, then opportunity, and finally, self confidence, so that people can build competency independently.

The Human Resource Development Center's Activity Guidelines Based on the IBIDEN WAY

Trust through Integrity

Train skills, expertise, and minds that will produce results at worksites

"Wa" Teamwork and Synergy

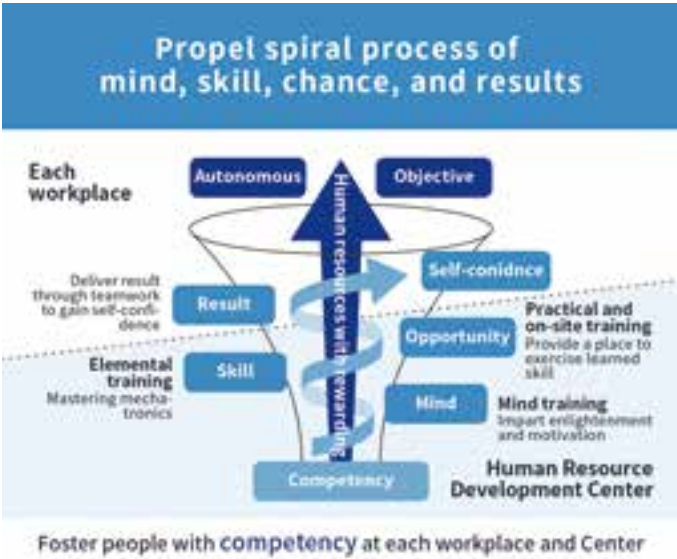
Practice a valuable and original training curriculum

Challenge with Passion

Achieve training corresponding to speed and change

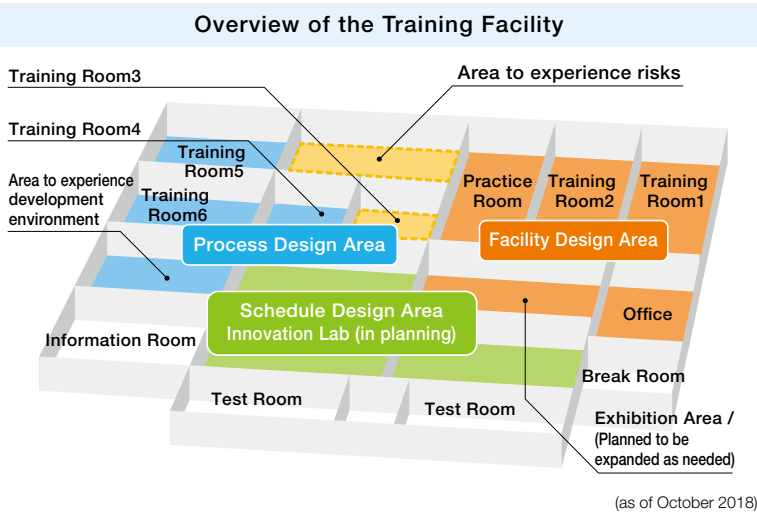
IBI-TECHNO Innovation

Consistent development of IBIDEN's original experience-based training tools



Concentrate Consistent Training to the Human Resource Development Center

- The Human Resource Development Center is a facility where we can consistently implement training related to “process design,” “facility design,” and “schedule design,” which are elements necessary for a manufacturing company.
- Within the facility, we have put in place an area specialized in “safety,” which is a basis for everything. By offering education utilizing an exclusive training kit, we instill the awareness of “safety first” in all employees of the IBIDEN Group.
- In the future, we plan to establish an innovation lab in order to activate “open innovation,” which is an important factor for a company's development.



(as of October 2018)



With Respect for Both Individuals  
and the Global Environment

## Human Resource Management

Contributing SDGs



### Basic Approach

Employees are the driving force that enables us to run our business and provide the public with valued service. We aim to create vibrant workplaces in which each individual employee derives a sense of satisfaction and achievement from gaining a thorough understanding of the Company's management policies and business strategies, and from having a role to play that enables each employee to contribute to both the Company and society.

### Respect for Diversity

Our Group aims to realize a work environment and climate in which diverse human resources can exercise their individual abilities and can feel reasons for living and job satisfaction amidst a trend of advancing globalization and diversification of values.

#### Supporting Work Life Balance

The Company considers it part of its social responsibility to create an environment in which children, our future leaders, can grow up healthy and safe. To this end, we actively encourage work-life balance by, for example, helping our employees to achieve a balance between work and child rearing. Our company, obtained "Kurumin" Certification from the Minister of Health, Labor and Welfare in 2012 as a company that achieved the planned target and met certain standards among companies that formulated an action plan to support employees for their child-rearing based on the Law on the Promotion of Measures to Support Development of the Next Generation, which took effect in 2005.

#### Promotion of Female Advancement

We started promoting women's participation and advancement in the workplace in fiscal year 2010 and conducted various activities, such as improving the work-life balance system and offering training to female employees and managers for awareness-raising.

We are currently promoting efforts by announcing that we will proactively develop and appoint female employees in career positions. We will continue to appoint more female leaders with the purpose of revitalizing the corporate culture by promoting more female employees with expanded functions to play active roles in the workplace.

#### Promoting the Employment of Persons with Disabilities

In order to realize a society where persons with disabilities can live together as members of local communities, it is important to encourage their independence through work, and employees with disabilities are playing an active role in the Company.

We established IBIDEN Oasis Co., Ltd. in October 2018, and it has been certified as a special subsidiary company in April 2019. Through stable hiring of persons with disabilities who are eager to work, we provide support for their professional independence through establishment of a safe working environment and ability development. Going forward, we will aim to achieve a working environment and culture in which diverse human resources can demonstrate individual abilities and feel rewarded to live and to work.



IBIDEN Oasis Co., Ltd., Announcement ceremony

### TOPICS

#### Positive Action to Support Active Participation of Women

In line with the IBIDEN WAY, the Group values a corporate culture in which diverse human resources can fully demonstrate their wisdom and abilities. The diverse sensitivities and thoughts of employees being reflected in operations will result in expansion of business, which in turn will lead to growth and development of the overall IBIDEN Group. As one of these initiatives, we are promoting positive actions, through which we actively develop and appoint women in career positions within Japan and create an environment where women can work at highest levels. We have produced actual results, such as companywide improvements made from women's perspectives.



Positive action report meeting

IBIDEN's Source

Basin of Providing Value

River of Creating Value

Governance Structure  
Embodying the IBIDEN WAYFinancial and  
Corporate Data

### Measures for Occupational Health and Safety

We conduct the health and safety activity done with all concerned people under IBIDEN WAY, and aim to harmonize "health and safety" and "operation" with the fundamental rule to minimize the risk that may affect the life and health of person participating to IBIDEN's operations.

#### Organization of Occupational Health and Safety Management

As a means to minimize the risks and adverse health effects on people participating in the Company's business activities, we have established a health and safety management system and received certification. In FY2014, we merged our entire management system including the environment, health and safety, and quality management systems as the IBIDEN Management System (IMS) and began its operations. Under the IMS, initiatives are deployed to each employee from various meeting bodies and acting organizations.

The Company-wide Environment/Health and Safety Committee meetings are held with the participation of the President, officers, directors, the presidents of affiliated companies, and the chairperson of the labor union, aiming to confirm the purposes of company-wide activities and the progress for the goals. Meetings of the Company-wide Zero Accident Committee, held monthly, are attended by each Plant Manager and management persons responsible for promoting health and safety at affiliated companies. The Committee functions as a place for establishing common ground in order to implement the Plan-Do-Check-Act (PDCA) cycle of activities of the entire IBIDEN Group. The information of these committees is disseminated from committee meetings held at each plant to safety circles of workplaces (small group activities) in which all employees participate.

#### Promoting Health and Productivity Management <sup>※1</sup>

The Group believes the physical and mental health of each and every employee is the foundation for competitiveness. We announced the "IBIDEN Group Health and Productivity Management Declaration"<sup>※2</sup> in June 2017, and we are proactively supporting employees to promote health with measures in which they can enjoy participating.

As a promoting structure, we have organized the "IBIDEN Group Health Subcommittee", mainly with representatives from the Health Management Promotion Center (industrial physicians, public health nurses), Human Resources, Environment & Safety, IBIDEN Health Insurance Society, and IBIDEN Labor Union. By utilizing the strength of each participant, we promote health management and health promotion activities for the entire domestic group, such as walking events in which employees can participate.

<sup>※1</sup> "Health and Productivity Management" is a registered trademark of the Workshop for the Management of Health on Company and Employee.

<sup>※2</sup> For IBIDEN Group Health and Productivity Management Declaration, please see "About IBIDEN – Human Resource Management" on IBIDEN's website.

#### Basic activities and Specialized activities of Occupational Health and Safety

As part of the basic activities intended to develop a corporate climate in which the top priority is always placed on health & safety and compliance with laws and regulations, we have continued to engage in "Workplace Safety Circles' Activities," "Safety Patrol," and "Raising Awareness through Safety Education."

We are providing safety education in a systematic way, so that all employees can take the relevant training. As an example of safety education, the introduction of our hazard-simulation safety education has led to employees raising their safety awareness and acquiring the ability to avoid risks.



Safety training for engineers

#### Occurrence of work-related accidents

We are working on occupational health and safety activities so that all employees of the entire IBIDEN Group can establish safe and comfortable workplaces and work vigorously with an awareness of "safety first" by putting in place four pillars of activities: "recurrence prevention," "accident/incident prevention," "health management," and "disaster prevention." The Company's occupational accident frequency rate is at 0.51, which is lower than the national average of manufacturing companies. However, because the number of work-related accidents increased to five cases in FY2018 (equivalent to or more serious than cases of occupational accidents resulting in lost workdays), we are striving to strengthen management with the aim of preventing similar accidents by analyzing the cause of accidents that occurred and putting in place fundamental measures.

### TOPICS

#### Acquired Recognition for "the Certified Health & Productivity Management Outstanding Organization – White 500"

The Group's efforts to value physical and mental health of each employee are highly recognized by external parties. The Company as well as TAK Co., Ltd. and IBIDEN Engineering Co., Ltd.\*, which are our group companies, have received recognition as a "2019 Certified Health & Productivity Management Outstanding Organization" by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi as companies that practice employee health management from a management perspective.

<sup>※</sup> Recognized in the small and medium enterprise category



2019  
健康経営優良法人  
Health and productivity  
ホワイト500



With Respect for Both Individuals and the Global Environment

Harmony with Nature

Contributing SDGs



Basic Policy

We conduct the environmental load reduction activity with all concerned people under IBIDEN way, aim "Harmony with nature" by reducing the bad effect on global environment generated in our business operation, and fulfill the role as enduring company."



●Energy (climate change):

Aim for zero CO<sub>2</sub> emissions with the energy conservation and the use of renewable energy, and business contributions.

●Blessing of water:

Value the blessing of water and reduce the impact on water resources to the minimum.

●Waste (resources):

Reduce waste by minimizing the use of resources and maximizing recycling.

●Chemical substances:

Thoroughly control chemical substances contained in raw materials on a global basis.

Actions to Climate Change Issues

Measures to Supply Clean Energy

IBIDEN owns three hydroelectric power plants in the upstream section of Ibigawa River in Gifu Prefecture. Hydraulic power generation uses the potential energy of water to create clean energy without greenhouse gas emissions. To maintain and increase its power output, IBIDEN implements repair work at its three hydroelectric power plants (Higashi Yokoyama Power Plant, Hirose Power Plant, and Kawakami Power Plant) systematically by repairing water supply tunnels\* and updating generators to the latest models.

\* Water supply tunnels: Tunnels for providing water to power plants



Higashi-Yokoyama Power Plant

Energy Conservation

As the Group consumes a large amount of energy through its production activities—whether it is the temperature control during the manufacturing process of electronics or the electric furnaces used for ceramics—energy conservation is an important issue for us.

We are making a company-wide effort to perform the energy-saving management cycle in line with the Energy Conservation Meeting, which is held monthly by the production divisions and related functional divisions. We also monitor risk factors, such as energy cost increases, and work on improvements based on the idea that enhancing energy efficiency is linked directly to strengthening the Company's competitiveness.

Trends of GHG emissions

Energy-saving activities are conducive to reducing emissions of CO<sub>2</sub>, a greenhouse gas (GHG). The Group's GHG emissions in FY2018 were 800,000 tons, most of which were energy-induced. As a medium-term target for reducing CO<sub>2</sub> emissions, during the period from FY2018 through FY2022, we are aiming to reduce the basic unit per converted production volume\* by 5% compared to FY2017.

\* Converted production volume is used to calculate production volume.

IBIDEN's Source	Basin of Providing Value	River of Creating Value	Governance Structure Embodying the IBIDEN WAY	Financial and Corporate Data
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Resource Circulation, Chemical Control

Resource Circulating Activities

IBIDEN believes that it is an important responsibility of businesses to make effective use of the world's scarce resources and to take part in a global effort to conserve resources. We promote the so-called 3R activity, which consists of initiatives to Reduce, Reuse and Recycle the resources we consume. In doing so, we aim to improve the resources efficiency.

Blessing of water (Water Conservation Efforts)

A large amount of water resources is used in the manufacturing process of electronic products, particularly for cleansing. Ogaki City in Gifu Prefecture, where our domestic production bases are concentrated, is rich in underground water thanks to the Ibigawa River system. However, water shortages are a serious problem in the world today. Based on the principle of so-called 3R activity—initiatives to reduce, reuse, and recycle resources—the Group carries out business activities by integrating environmental technologies into manufacturing technologies, which has reduced the amount of industrial water use.

Responding to the Regulations on Chemical Substances by Controlling Substances to be Contained in Products and in Manufacturing Processes

IBIDEN uses various chemical substances in the manufacturing process. Since chemical substances may cause environmental pollution and human health hazards, the management of chemical substances is one of the risk factors. As the laws and regulations on chemical substances in each country are increasingly rigorous, the management of chemical substances is one of the key issues for the Group from a compliance perspective. To prevent these risks posed by chemical substances, we practice appropriate chemical control by defining the target chemical substances for complete elimination and reduction.

Environmental Contribution through Business and Products

In addition to automobile exhaust parts that purify exhaust gas, the Company utilizes its accumulated technologies to provide products and services that reduce the environmental burden.

Projects to Promote Renewable Energy

IBIDEN Engineering Co., Ltd., a member of the IBIDEN Group, has initiated projects in the field of energy solution by making optimal use of the Company's technologies to maintain hydroelectric power plants as well as manage co-generation systems. Established an integrated approach, in which its business includes design proposal, construction and maintenance, IBIDEN Engineering has a track record in many power generation business such as ranging from equipment for hydroelectric power plants and power substations to systems for solar power generation plants and small hydroelectric power plants. We will continue to promote business solutions for the energy problems.



Water floating solar power generation plant (Certificated output:1.99 MW)

Projects That Contribute to Both Disaster Prevention and Environmental Protection

In Japan, which is a mountainous country, in order to boost the protection of slopes in difficult weather and soil conditions and to ultimately prevent the loss of life in landslide disasters, practices for securing artificial slopes have undergone many changes over the years with many improvements based on the testing of various methods and technologies through trial-and-error. Currently, in addition to a disaster prevention function, an environmentally-friendly "greener" construction method is expected for artificial slopes. IBIDEN Greentec Co., Ltd., a member of the IBIDEN Group, which has continued to provide new construction methods that achieve both disaster prevention and environmental protection, such as the "Totally Green" method, will create an environment where everyone can live safely and peacefully.



Slope constructed using the GT frame®

Responsible Procurement Practices



Supply Chain Management Policy

To earn the trust of international community while operating business globally, both the Group and the entire supply chain must responsibly take actions that respond to social demands.

**Basic Procurement Policy**

- ① We will comply with laws, regulations and customs and build relationships based on mutual cooperation and trust with suppliers.
- ② We will offer fair trading opportunities to suppliers.
- ③ We will fulfill our human rights, environmental and other social responsibilities through our procurement activities.

IBIDEN Group Supplier CSR Guidelines

In order to lead globally developing operations into sustainable growth with our suppliers, we published the “IBIDEN Group Green Procurement Guidelines” in 2009, which are a mechanism to procure parts and materials with reduced environmental burdens, as well as the “IBIDEN Group Supplier CSR Guidelines” (hereinafter called “CSR Guidelines”) in 2011, which compile requirements for the entire supply chain, including human rights violation risks such as forced labor, corruption prevention, and responsible resource procurement.

Measures for Supply Chain Management

Communication and Cooperation with Supplier

In order to thoroughly implement CSR Guidelines throughout the entire supply chain, we request our suppliers, including new suppliers, to pledge to comply with CSR Guidelines, as well as to evaluate the status of guideline compliance through CSR investigation and report annually. Furthermore, to confirm the actual status of suppliers and promote improvements, we make requests on improving issues addressed in CSR investigation as well as conduct site visits and audits to ask the suppliers for improvements to their activities. Each guideline is published on the Company's website so that they may be reviewed by all stakeholders.

Suppliers' Compliance Counter

We set up a “compliance counter” for our suppliers to which suppliers can report any compliance problem while dealing with the Company. As with the compliance counter for our internal employees, information will be handled with the utmost care for privacy and the supplier will never suffer prejudicial treatment for contacting the counter.

Responsible Sourcing of Resources (Conflict Minerals)

Illegal mining of resources in conflict areas and high-risk areas has become a major international issue as it abets human rights violations and environmental destruction. Our “CSR Guidelines” clearly state that the suppliers should refrain from illegal mining in conflict areas as well as procuring resources that may support human rights violations. Furthermore, we will conduct reasonable investigations into the mineral supply routes and disclose the findings in good faith.



CSR briefing for suppliers

Quality Management

Basic approach

By consistently developing cutting-edge technologies, IBIDEN contributes to the creation of a comfortable IT society as well as a society where cars and nature coexist through the proposal and supply of high-value-added products. Based on its “customer first” policy, the Group meets the needs of customers through unique technologies and designs that take into account the global environment. We understand that our greatest mission is to consistently supply safe and reliable products.

**The basic policy for the quality**

(Electronics)	Based on the concept of quality first, we will achieve customer satisfaction by clearly grasping customer needs and producing and providing reliable products through IBI-TECHNO.
(Ceramics)	Through IBI-TECHNO, we will incorporate customers’ real and potential needs and add values to such needs while striving to provide moving experiences to customers through our product-making, which continually gives top priority to quality.

Measures for Quality Management

Quality Management System

The Group has received ISO9001 certification at main domestic and overseas manufacturing plants and IATF16949 in operations related to the automotive industry. We are striving to offer products that exceed the expectations and needs of our customers.

In addition, the Company has integrated mechanisms for quality (ISO9001, IATF16949), environment (ISO14001), occupational health and safety (ISO45001), and corporate operations into the IBIDEN Management System, and operates with an aim to continuously improve our operational competitiveness and customer satisfaction. Going forward, we will continue to build a system to provide high-quality products on a global scale and upgrade the level of quality.

Measures to improve quality

To contribute to our customers and the community with quality products, we conduct design reviews and hold quality assurance meetings to study the design and specifications at each stage of the manufacturing process, from the development of cutting-edge technologies, through product planning and design, to mass production. Furthermore, to improve quality, we offer guidance and audits, including assessment by the president, at workplaces in Japan and overseas and group companies, and also provide business partners with guidance for quality improvement.

IBI-TECHNO Promotion Activities

IBIDEN has conducted IBI-TECHNO promotion activities in which all employees from all divisions take part in achieving No.1 customer satisfaction by putting the IBIDEN Way into practice. The underlining philosophy is that our activities are designed first and foremost for our customers. Improving the four IBI-TECHNO(“Management of Business”, “Management of Technology”, “Total Productive Management” and “Management Capability”) will boost IBIDEN's corporate value and ensure a stable profit supported by strong competitiveness in the market. We also strive to give back to our stakeholders.



Image of "Spiral Up" for IBI-TECHNO promotion activities

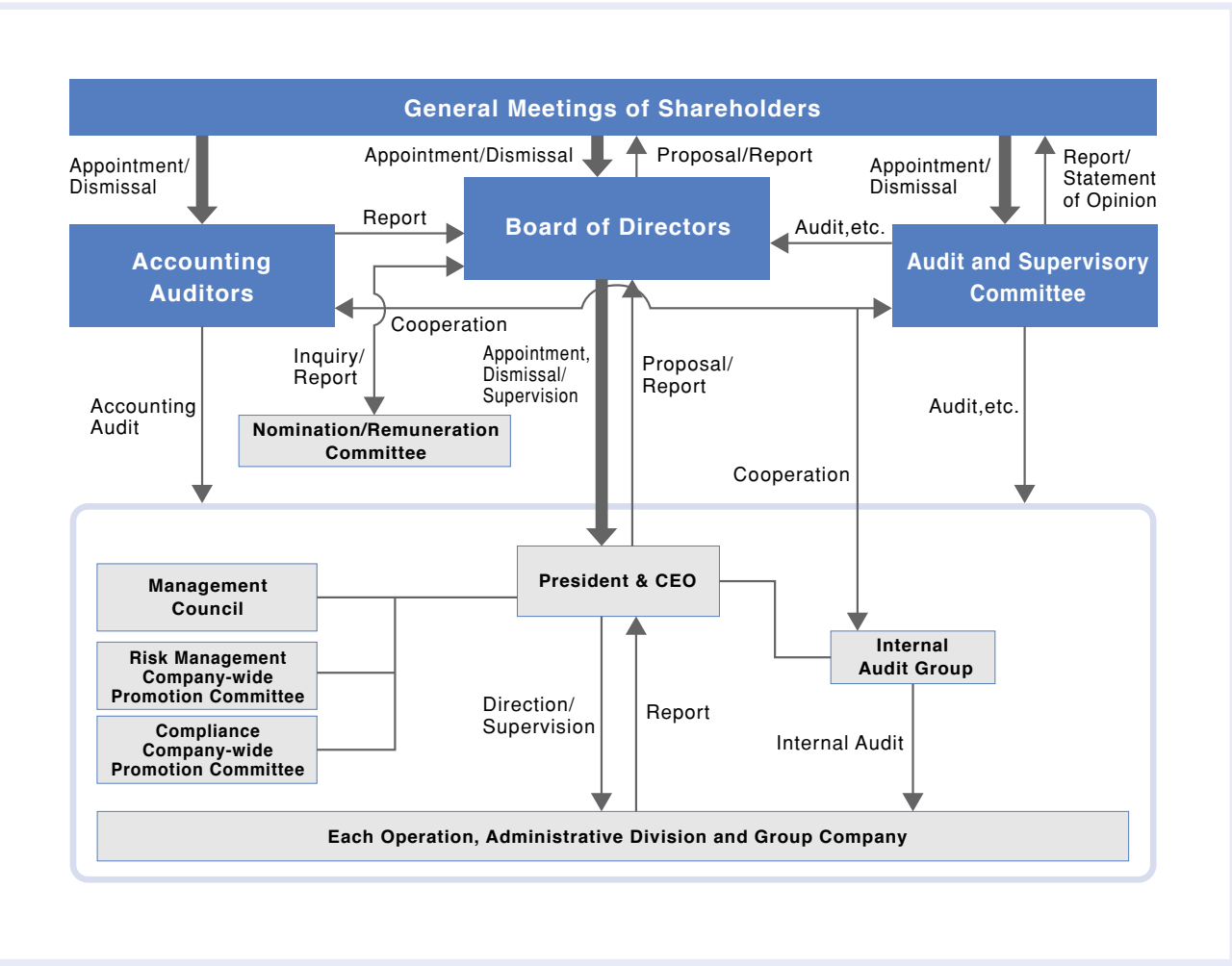


Corporate Governance

Basic Views

The Group considers corporate governance to be a key management mechanism for transparent, fair, prompt and resolute decision-making, and all Group companies are thus actively committed to improving corporate governance. As part of our Group's corporate governance, we are enhancing internal control by proactively undertaking activities to advance compliance and risk management and we are expanding/strengthening the management oversight functions of our board of directors and the audit functions of our Audit and Supervisory Committee Members. These steps will enable us to construct a transparent corporate governance system worthy of the trust of shareholders and other stakeholders and fulfill our corporate social responsibilities, and will help us improve our corporate value through sustained growth.

Chart of IBIDEN Group's Internal Control System



Overview of the Corporate Governance Structure

The Company has adopted the organizational form of a company with Audit and Supervisory Committee.

To ensure fair and transparent company management, 6 Outside Directors attend Board of Directors meetings and there provide advice on company management. For fair and transparent procedures applied to nominate and to determine their compensation, the Company has

Nomination/Remuneration Committee. An Executive Officer System has been introduced to permit rapid management decision-making and quicker execution of operations. The Audit and Supervisory Committee has also been given robust check-and-balance functions to help them monitor decision-making by the Board of Directors and the execution of operations by representative Directors.

IBIDEN's Source	Basin of Providing Value	River of Creating Value	Governance Structure Embodying the IBIDEN WAY	Financial and Corporate Data
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Efforts to Strengthen the Functions of Audit and Supervisory Committee members

Audit and Supervisory Committee Members attend the Board of Directors meetings and other important meetings and audit Directors' performance of their professional duties, and full-time Audit and Supervisory Committee Members collaborate with Internal Audit Group and Accounting Auditor in conducting audits of the Company and the Group companies in accordance with all applicable laws and regulations and rules. The presence of three Outside Audit and Supervisory Committee Members with a considerable level of knowledge in financial affairs, accounting, and tax practice and law suitably ensures that the above functions are performed.

Posting of Information on Securing Independent Directors and Executives

The Company has determined that Mr. Yamaguchi, Mr. Mita and Mr. Yoshihisa as outside directors and Mr. Kato, Mr. Horie and Ms. Kawai as outside Audit and Supervisory Committee members present no potential conflict of interest with general shareholders and, convinced that we can count on them to contribute to appropriate corporate governance at the Company and to offer advice on our standards of conduct, we have assigned them as independent directors.

Policies and Procedures for the Selection of Corporate Managers and the Assignment of Director Candidates by the Board of Directors

Candidates for Corporate Manager and Directors who are not Audit and Supervisory Committee Members are selected/assigned from the perspective of placing the right person in the right job, with due consideration given to the number of people that would enable precise and prompt decision-making and to a balance of knowledge, experience and skills among the Corporate Management Team/the Board of Directors overall. Candidates for Audit and Supervisory Committee Members are also selected/assigned from the perspective of placing the right person in the right job, with due consideration given to a balance among knowledge of accounting, tax and legal matters, knowledge about the Company's business, and other perspectives pertinent to corporate management. (For more information, please refer to page 45-48.)

Given the above, assignment for Audit and Supervisory Committee Member candidates is resolved by the Board of Directors after Audit and Supervisory Committee deliberates and agrees on it. Assignment for Corporate Director candidates, prior to a resolution of the Board of Directors, after it has been sufficiently deliberated by Nomination/Remuneration Committee as an advisory body to the Board of Directors, including Outside Directors who are not Audit and Supervisory Committee Members and reported to the Board of Directors. The standards for dismissal from a Corporate Director or an Executive Officer is determined pursuant to Director Regulations in order to resolve both in the Shareholders Meeting for a Director and in the Board of Directors meeting for an Executive Officer following the standards and the deliberation by Nomination/Remuneration Committee.

Evaluation of Effectiveness of Board of Directors

The Company conducts annual analysis and evaluation to verify if the Board of Directors functions effectively, with an aim to improve further function of the Board of Directors by continuing process to take measures to remedy problems and strengthen advantages.

Further Tasks Acknowledged and Company Actions

① We recognize that it is necessary to distribute meeting materials (to Outside Directors) well in advance of a meeting date.

In addition to conventional explanation ahead of a board meeting, the Company built a process which the members can share information at the earliest possible time introducing a fully secure file-sharing system for preliminary consideration in FY2018. In future, to further improve efficiency, we will strive to share information with the Directors on the process of the certain framework and enable them to review all the agenda in advance of the meetings.

② We recognize that it is necessary to implement measures to ensure diversity within the Company.

The Company launched promotion of Act on Promotion for Women's Empowerment ("the Act") in FY2017. We have supported promotion of female assistant manager and positively provided awareness-trainings for their superiors, improving ratio of female managers. Compared with FY2016, we have two more female managers and eleven assistant managers as of April 1st, 2019 thanks to the ACT. In the future, we will improve Diversity Action for a wide variety of staff not only women but also non-Japanese, veteran employees and people with disability in order to participate actively and develop themselves.

※Including seconded employees.

Evaluation Items
① Effectiveness of discussion and deliberation
② Effectiveness of supervisory function
③ Effectiveness of leadership
④ Effectiveness of environment development status
⑤ Effectiveness of correspondence to shareholders and stakeholders
⑥ Effectiveness of organization of the board of directors

1. Evaluation Method

Following an explanation on the purpose of the evaluation, all Directors including Outside Directors perform self-evaluations by answering a questionnaire prepared by an administrative office for the Board of Directors about the effectiveness of the Board of Director's functions.

2. Overview of Results of Analysis/Evaluation

The results could be analyzed and evaluated as that the Board of Directors largely secured the effectiveness in its function. On the other hand, the questionnaire results tabulation found that there were still tasks and room for improvements on the items below. The Company and the Board of Directors will place priority on those. The Board of Directors will continuously improve the effectiveness of its function, with taking the results of evaluation including further tasks into their further considerations.

Compensation of the Senior Management and Directors

Board Policies and Procedures in  
Determining the Compensation of the Senior  
Management and Directors

The compensation for the Company's Directors who are not Audit and Supervisory Committee Members and Executive Officers comprises monthly compensation and bonuses. The monthly compensation for Corporate Directors who are not Audit and Supervisory Committee Members is calculated based on their job positions, within the limits approved by the general meeting of shareholders, and is approved by the Board of Directors. Bonus allotments for Corporate Directors who are not Audit and Supervisory Committee Members are based on the degree to which each Director contributed to the Company's operations, within the scope of the total amount of bonuses calculated using the stipulated formula approved by the general meeting of shareholders, and are approved by the Board of Directors. The monthly compensation of Executive Officers is approved by the Board of Directors. In determining the compensation, broad consideration is given to a suitable balance between the monthly compensation for Corporate Directors who are not Audit and Supervisory Committee Members, assessments of respective Executive Officers' and Managing Officers'

job performance, benchmarks of the same types of industries and the same size companies based on compensation surveys with external organization's participation, and other factors. The amounts of bonuses to be paid are approved by the Board of Directors. Bonus amounts are calculated in accordance with the degree of the Executive Officers' contribution to the Company's business results and other factors. The Nomination/Remuneration Committee, including Outside Directors who are not members of the Audit and Supervisory Committee, which was established as an advisory committee for the Board of Directors, prior to a resolution of the Board of Directors, deliberates on compensation and bonuses of Corporate Directors and Managing Officers who are not Audit and Supervisory Committee Members, and reports to the Board of Directors. Outside Directors who are not Audit and Supervisory Committee Members, because they are in positions independent of the execution of operations, are paid only a fixed, basic compensation.

The Company has also introduced 'the Stock Distribution Trust for Officers' to Directors who are not Audit and Supervisory Committee Members and Executive Officers, so that they shall make a clearer linkage between the Company's stock value and compensation for themselves and elevate their awareness of contributing to improving medium- to long term operating results and increasing corporate value.

Amount of compensation, etc., of Directors (Fiscal Year 2018)

Position		Number of recipients	Total remuneration paid	Total amount of remuneration by type		
				Basic remuneration	Bonus	Sharebased payment
Directors who are not Audit and Supervisory Committee Members	Directors	5	326	178	88	60
	Outside Directors	3	34	34		
	Subtotal	8	361	213	88	60
Directors who are Audit and Supervisory Committee Members	Directors	2	66	66		
	Outside Directors	3	34	34		
	Subtotal	5	100	100		
Total		13	462	314	88	60

(Millions of yen)

1.The above includes Directors who retired during the fiscal year under review.

2.The maximum limit of remuneration for Directors who are not Audit and Supervisory Committee Members was approved at not more than ¥30 million per month at the 164th General Meetings of Shareholders held on June 16, 2017. Of the total, the amount for Outside Directors accounts for ¥5 million or less, with the remaining ¥25 million or less paid to the other Directors.

3.In addition to the remuneration mentioned above in 2, at the 164th General Meetings of Shareholders held on June 16, 2017, the resolution was approved stipulating that Directors who are not Audit and Supervisory Committee members, are to receive a bonus equal to 0.5% of the consolidated profit attributable to owners of parent for the fiscal year as well as 1.6% of the total amount of annual dividends for the applicable fiscal year. However, the maximum limit was also set at not more than ¥440 million by the resolution, with amounts less than ¥1 million being rounded down.

4.Although bonuses for Directors amounted to ¥94 million based on the above calculation in 3, a resolution to pay bonuses totaling ¥88 million for Directors was adopted by the Board of Directors meeting held on May 16, 2019, based on the reporting results on the amount of individual payments on the basis of the comprehensive discussion in consideration of titles and relevant departments' achievements of the target bonus recipients in the Nomination/Remuneration Committee.

5.The maximum limit of remuneration for Directors who are Audit and Supervisory Committee Members was approved at not more than ¥13 million per month at the 164th General Meetings of Shareholders held on June 16, 2017.

Timely disclosure, Communication with Shareholders and Investors

Relationships with Stakeholders and  
Timely Disclosure

Aiming to improve its corporate value, and based on our mission to meet our shareholders, our company group believes that we must fulfill our responsibilities to respective stakeholders other than shareholders, such as employees, business partners, investors, local residents, and local communities.

Based on the Disclosure Rules, which are intended to promote stakeholders' understanding of the Group and to facilitate proper assessments of the Group, we disclose in a fair, timely, and appropriate manner with decisions on management-related information related to the Group by the Disclosure Committee, consisting chiefly of the president, the Managing Officers in charge of the Financial Department, and other relevant officers.

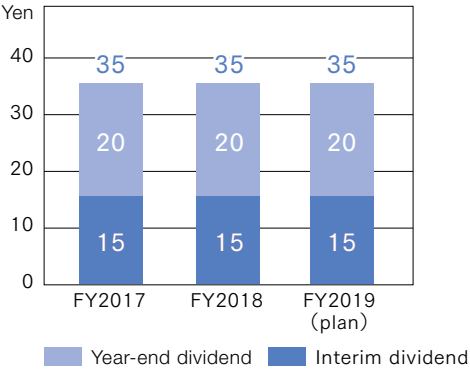
In addition to making every effort to comply with the Financial Instruments and Exchange Act and relevant rules, as well as the stock exchange's regulations, we maintain our social credibility in the securities market through education for employees and strict management regarding regulations on insider trading in accordance with the Insider Trading Guidelines.

Concept of our capital policies

Our company aims to increase shareholder value based on the growth of our business and improvement of profitability, and is disclosing our medium-term management plan. The basic policies of our capital policies are to maintain adequate capital stock standards and the shareholder composition required for stable business management in a changing business environment.

For return to shareholders, setting our target dividend payout ratio at 30%, we make a comprehensive examination of the balance between retaining sufficient earnings for investment in the business and long-term steady dividend payments to shareholders.

Dividend per share



Communication with Shareholders and  
Investors

The Company issued approximately 140 million shares and had about 26,000 shareholders as of March 31, 2019. We held a general meeting of shareholders in the multi-purpose hall in the IBIDEN Headquarters Building on June 14, 2019. We have sought to establish a more open environment by adopting the voting rights exercise platform from fiscal year 2006 and making possible the exercise of voting rights via the Internet and smart phones, etc., for shareholders who are unable to attend the meeting. (The ratio of voting rights exercised at the 166th general meeting of shareholders: 86.18%).

In addition, to ensure prompt disclosure, the Notice of Ordinary General Meeting of Shareholders added elements of business report is available in our website and platform by a week before mailing it to shareholders. We will continue to promote prompt disclosure such as on our website before mailing.

As for other IR activities, we hold periodic briefings for analysts and institutional investors after the announcement of business results for the full year and those for the interim term, and release materials for the briefings on our website.

Furthermore, we take part in a range of events as briefings for individual investors, providing them with opportunities to invest in shares of the Company.



Notice of the Ordinary General Meeting of Shareholders



Website for shareholders and investors



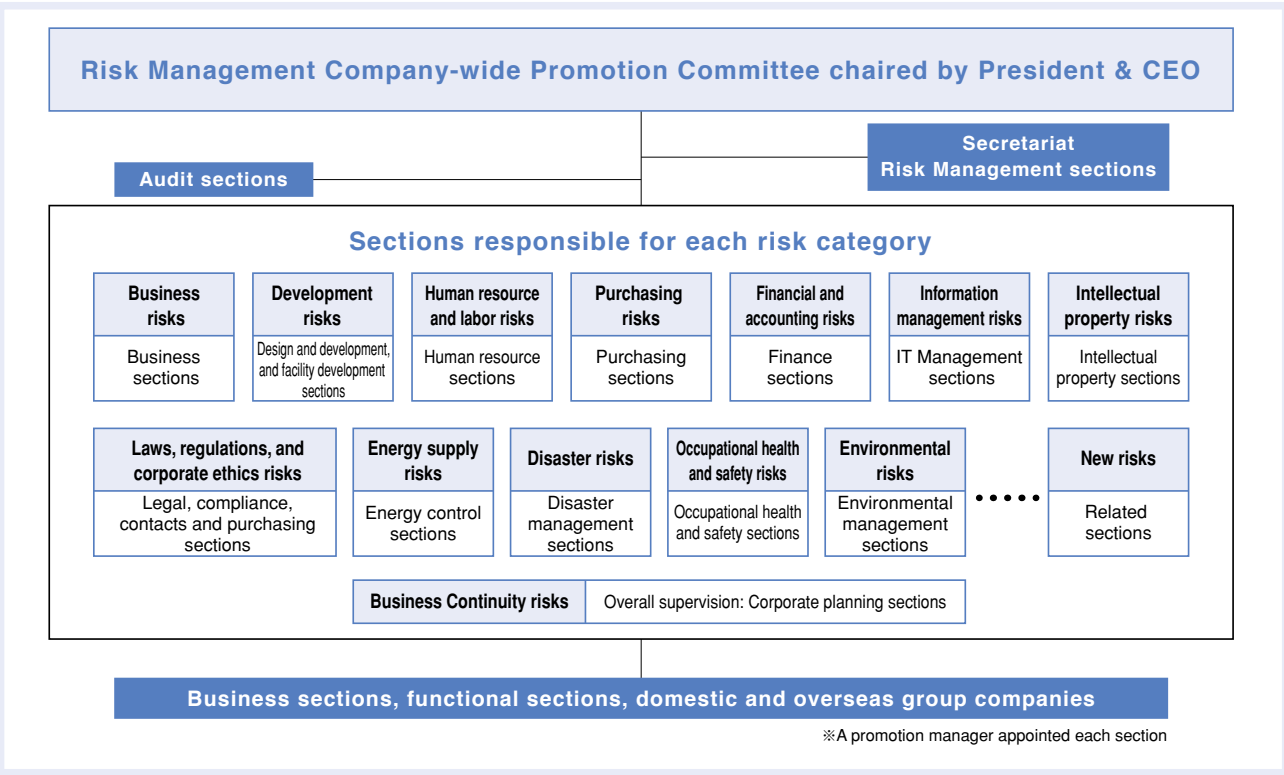
Risk Management

Activities for Advancing Risk Management

Risk Management Basic Approach

The IBIDEN Group enables business continuity by analyzing various risks surrounding management, accurately handling losses of business resources that have a great negative impact on the ease of our business operations, ensuring the safety of our shareholders, customers and officers, and reducing and preventing losses of business resources.

Structure for Advancing Risk Management



Measures to Implement Intensively

1. Business Continuous Plan

We consider the risk of disruptions to production caused by the occurrence of a large-scale accident or a disaster in areas where our plants are located as an important risk theme, and are taking measures to prepare for the occurrence of a disaster. As for measures to be taken when disasters such as earthquakes occur, we believe that lifesaving comes first, followed by the early supply of products to customers. With regard to concrete risk themes in the event of a natural disaster, including confirmation of the safety of employees, supply of materials by suppliers, equipment failure and occurrence of utility problems, we are building a response system, mainly led by divisions that cope with such risks. Assuming the occurrence of the Nankai Trough Megathrust Earthquake, we set a recovery time objective (ROT) for our plants and domestic affiliated companies that may be affected by the disaster.

2. Information Security Measures

Information concerning the operation, technologies and management of the Company is a valuable asset, and for a technology-development-oriented company like us, proper management of information including confidential information of customers and suppliers and prevention of leakage are important issues and responsibilities. We have established a framework for information security promotion

and stipulated fundamental rules to comply with in utilizing and maintaining information assets we own such as trade secrets, personal information and information technologies (IT) under the "Regulations for Information Management."

To improve the protection and utilization of information of the entire IBIDEN Group, we have established the Information Security Committee, chaired by the director in charge of Strategic Corporate Planning Operations.

For the operation of information security, we have kept all employees well-informed through the IT Promotion Managers' Committee and compliance education.

As for personal information, we have established a personal information protection policy and stipulated procedures necessary for collection, management and utilization of personal information. Our personal information protection policy is available on our website.

Falsification of data, etc., has become a social problem. Against this background, the IBIDEN Group, in fiscal 2017, introduced a data integrity audit, and is working to prevent falsification and incorrect handling of data for provision to customers.

In fiscal year 2018, there were no information leaks that could significantly affect our business activities.

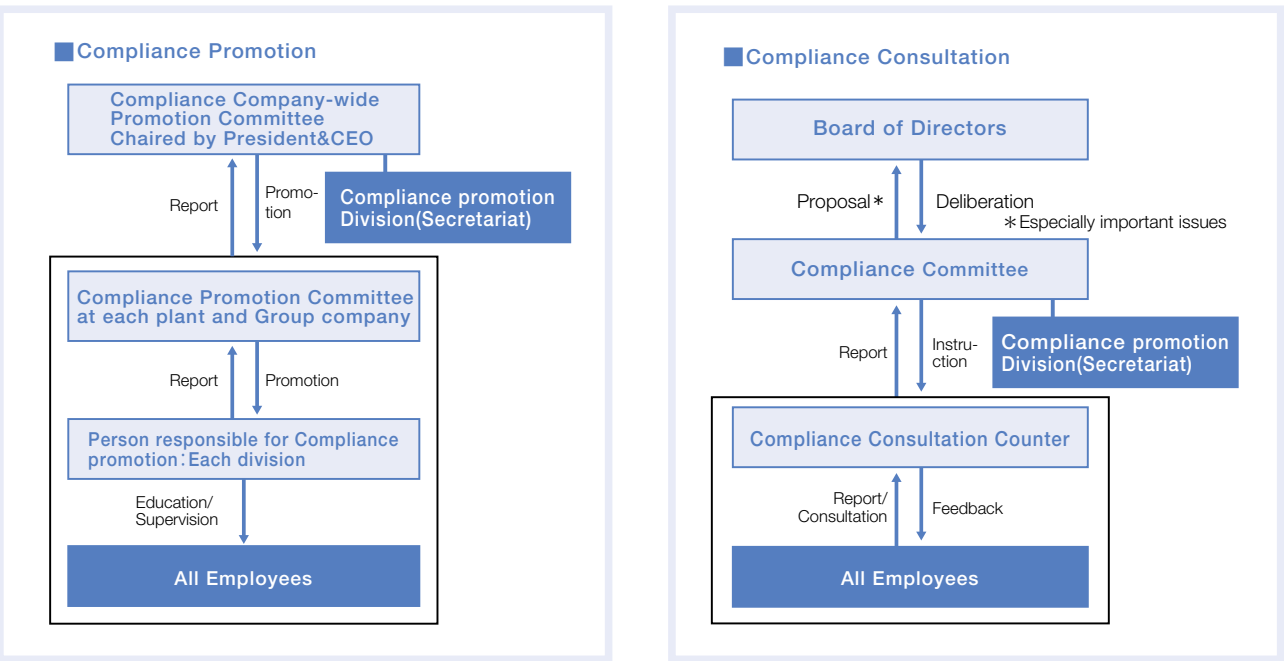
Compliance

Bolstering Compliance Activities

Compliance Basic Policy

By achieving thoroughgoing commitment to "compliance with domestic and international laws, our articles of incorporation, internal regulations and corporate ethics" (Compliance) and through open and fair corporate activities, we aim to be a company that international society relies on.

Structure for Promoting Compliance Program



Measures to Implement Intensively

1. Compliance Education

When promoting compliance activities, it is crucial that employee awareness is continuously maintained at a high level. The Company has been building educational system for employees to regularly receive training by job grade, in which the programs start immediately after hiring.

In addition to education based on the Standards for Employee Behavior, we are promoting special education programs, including ones focused on various laws and regulations and corporate taxation.

At overseas bases, which employ many immigrant workers, training is provided on educational training such as the Standards for Employee Behavior in workers' native language so that they can fully understand the contents of the training.



IBIDEN Standards for Employee Behavior

2. Efforts for Fraud Prevention including Anti-bribery

The Group upholds the IBIDEN Group Charter of Behavior to make efforts to prevent every form of corruption. In the Standards for Employee Behavior also, we demand ethical behavior and strictly prohibit unlawful actions and acts of conflict of interest including bribery. We have appropriately developed a system for ensuring a certain

prevention of corruption in line with the current conditions of each site, such as stricter authority when paying social expenses, establishment of the Gift-giving and -receiving Guidelines, and development of the Whistleblowing System.

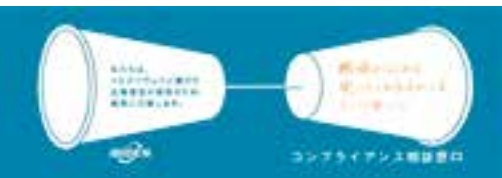
Also, we have promoted an effort for early detection and correction of fraud through such means as internal audits that use data. In fiscal 2018, there was no instance of legal violation with a significant influence on our business activities, such as the imposition of fines for malpractice.

3. Whistleblowing System

In addition to the formal channel of reporting, the Group has established a compliance consultation service to facilitate reporting when an officer or employee discovers a violation of compliance.

Through this service, officers and employees may report violations nominally to employees in charge of the compliance consultation service or anonymously to outside experts.

The consultation counters have been operated with due consideration for the protection of rights of whistleblowers, such as privacy protection and ensuring no disadvantageous treatment.



Compliance consultation service card distributed to all employees





Senior Management and Directors (As of September 2019)



Hiroki TAKENAKA

Chairman of the Board,Representative Director,  
Chairman of the Board Meeting,  
Administrator of Corporate Business Operation,  
Corporate Executive Director of Electronics Operation

April	1973	Joined IBIDEN Co., Ltd.
June	1997	Director
June	2001	Managing Director
June	2005	Director & Executive Managing Officer
April	2007	President & CEO, Representative Director, Administrator of Corporate Business Operation (present)
January	2015	Corporate Executive Director of R&D Operation
March	2016	Corporate Executive Director of Affiliates and Subsidiaries
June	2017	Chairman of the Board, Representative Director (present)
June	2018	Corporate Executive Director of Electronics Operation (present)



Kozo KODAMA

Executive Vice President, Representative Director,  
Corporate Executive Director of Quality Unit, Engineering  
Unit, Production Unit and System Promotion Unit,  
President of Corporate Strategic Manufacturing Operation  
and MLB Operation,President of IBIDEN Electronics  
Beijing, Chairman of IBIDEN Electronics Malaysia

April	1986	Joined IBIDEN Co., Ltd.
April	2012	Corporate Officer Vice President of IBIDEN Philippines Inc.
January	2015	Managing Officer Vice President of Electronics Operation
June	2015	Director & Managing Officer
March	2016	Executive Vice President, Representative Director (present)
April	2017	President of Corporate Strategic Manufacturing Operation (present), Corporate Executive Director of CSR Promotion Division and Energy Control Division
February	2018	Chairman of IBIDEN Electronics Malaysia (present)
June	2018	Corporate Executive Director of Quality Unit, Engineering Unit, Production Unit (present)
December	2018	President of Corporate MLB Operation (present), President of IBIDEN Electronics Beijing (present)
April	2019	In charge of System Promotion Unit (present)



Chiaki YAMAGUCHI

Outside Director

June	2003	Full-time Corporate Auditor of Toyota Motor Corporation (Retired on June, 2011)
June	2011	Executive Managing Director of Toyota Industries Corporation
June	2012	Representative Director & Senior Vice President of Toyota Industries Corporation (Retired on June, 2015)
June	2014	Outside Director of IBIDEN Co., Ltd. (present)
June	2015	President & Representative Director of Towa Real Estate Co., Ltd. Outside Director of Nakanihon Kogyo Co., Ltd. (Retired on June, 2019)
June	2018	Advisor of Towa Real Estate Co., Ltd (Retired on June, 2019)
June	2019	Commissioned by Towa Real Estate Co., Ltd Towa Real Estate Co., Ltd (present)



Takeshi AOKI

President & CEO, Representative Director,  
Administrator of Corporate Business Operation,  
Corporate Executive Director of Ceramics Operation,  
R&D Operation and Internal Audit Division

April	1981	Joined IBIDEN Co., Ltd.
April	2008	Corporate Officer
June	2013	Director & Corporate Officer
April	2014	Director & Managing Officer Vice President of Ceramics Operation
March	2016	Executive Vice President, Representative Director President of Ceramics Operation
April	2017	Administrator of Corporate Business Operation (present), Corporate Executive Director of Ceramics Operation (present)
June	2017	President & CEO, Representative Director (present)
June	2018	Corporate Executive Director of R&D Operation (present)
April	2019	Corporate Executive Director of Internal Audit Division (present)



Masahiko IKUTA

Director & Executive Managing Officer,  
President of Strategic Corporate Planning Operation,  
Corporate Executive Director of PKG Operation and IR

April	1985	Joined IBIDEN Co., Ltd.
April	2010	Corporate Officer
October	2013	In charge of FGM Operation In charge of IR, Operations Manager of Strategic Corporate Planning Operations (present)
June	2014	Director & Managing Officer
March	2016	Director & Executive Managing Officer
April	2017	Corporate Executive Director of affiliates and subsidiaries (present)
June	2017	Executive Managing Officer
June	2018	Director & Executive Managing Officer (present)
April	2019	Corporate Executive Director of PKG Operation (present)



Toshio MITA

Outside Director

April	1969	Joined Chubu Electric Power Co., Inc.
June	2003	Managing Officer, Tokyo Office Manager
June	2005	Director, Senior Managing Executive Officer, President of Sales Company
June	2006	President & CEO
June	2007	President &CEO, Representative Director
June	2010	Chairman of the Board
June	2015	Advisor of Chubu Electric Power Co., Inc. (present) Outside Auditor of NYK Line (Retired on June, 2019)
June	2017	Outside Director of IBIDEN Co., Ltd. (present)
June	2018	Outside Auditor of Nagoya Railroad Co., Ltd. (present)
June	2019	Outside Auditor of Chubu-Nippon Broadcasting Co., Ltd. (present)



Koichi YOSHIHISA

Outside Director

March	1981	Tokyo University PhD (Engineering)
April	1982	Assistant of IIS at Tokyo University
April	1984	Joined the Faculty of Science and Technology at Meijo University
April	2000	Professor at Architectural Course of Science and Technology at Meijo University
April	2003	Manager of at Architectural Course of Science and Technology at Meijo University
April	2013	Dean of Science and Technology at Meijo University, Chair of Research Department, Councilor at Meijo University
April	2015	President of the University, Full-Time Director of Meijo University
June	2017	Outside Director of IBIDEN Co., Ltd. (present)
April	2019	Professor at Architectural Course of Science and Technology at Meijo University (present)



Yoichi KUWAYAMA

Full-time Member of Audit and Supervisory Committee

April	1983	Joined IBIDEN Co., Ltd.
April	2008	Corporate Officer
April	2011	Operation Manager of DPF Operation
April	2012	Managing Officer
June	2012	Director & Managing Officer
April	2014	Director & Executive Managing Officer Operation Manager of Ceramics Operation
March	2016	Corporate Executive Director of Audit
June	2016	Full-time Corporate Auditor
June	2017	Full-time Member of Audit and Supervisory Committee (present)



Masaki HORIE

Outside Director  
Outside Member of Audit and Supervisory Committee

April	1973	Joined PricewaterhouseCoopers Co., Ltd.
November	1980	Joined Ito Accounting & Consultancy Office
July	1997	Senior Partner of Ito Accounting & Consultancy Office
January	2001	Senior Partner of Chuo-Aoyama Audit Corporation
September	2006	Senior Partner of Arata Audit Corporation
June	2010	Opened Masaki HORIE Certified Public Accountant Office, Director of the Office (present)
June	2011	Outside Corporate Auditor of Tokai Rika Co.,Ltd.
June	2015	Outside Corporate Auditor of Futaba Industrial Co., Ltd.
June	2016	Outside Director of Futaba Industrial Co., Ltd. (present) Outside Auditor of IBIDEN Co., Ltd.
June	2017	Outside Corporate Director who is Audit and Supervisory Committee Member of IBIDEN Co., Ltd. (present)



Keiichi SAKASHITA

Full-time Member of Audit and Supervisory Committee  
Specific Member of Audit and Supervisory Committee

April	1981	Joined IBIDEN Co., Ltd.
June	2007	Director & Managing Officer
April	2009	Corporate Executive Director of Ceramics Operation Operation Manager of DPF Operation
April	2011	Operation Manager of Strategic Manufacturing Operation
April	2013	Director & Executive Managing Officer
January	2015	Corporate Executive Director of Audit Corporate Executive Director of IMS Promotion
June	2015	Full-time Corporate Auditor
June	2017	Full-time Member of Audit and Supervisory Committee (present)



Fumio KATO

Outside Director  
Outside Member of Audit and Supervisory Committee  
Chairman of Audit and Supervisory Committee

July	2000	Deputy Manager of Investigation Department Nagoya Regional Taxation Bureau
July	2001	Superintendent of Showa Tax Office
August	2002	Registered as certified tax accountant, Opened Fumio Kato Certified Tax Accountant Office, Representative of Fumio Kato Certified Tax Accountant Office (present)
July	2004	Outside Corporate Auditor of Seino Holdings Co., Ltd. (present)
November	2014	Outside Corporate Auditor of HIMARAYA Co.,Ltd.
June	2015	Outside Corporate Auditor of IBIDEN Co., Ltd.
November	2015	Outside Director who is an Audit and Supervisory Committee Member of HIMARAYA Co.,Ltd. (present)
June	2017	Outside Corporate Director who is Audit and Supervisory Committee Member of IBIDEN Co., Ltd. (present)



Nobuko KAWAI

Outside Director  
Outside Member of Audit and Supervisory Committee

April	1992	Registered as attorney (The First Tokyo Bar Association)
January	1995	Switched the registration as attorney to Nagoya (currently Aichi Prefecture) Bar Association
April	1998	Opened Nobuko KAWAI Law Office, Representative of the office (present)
January	2004	Mediator for Civil Trial of Jury of Nagoya Summary Court (Part-Time Judge)
April	2009	Deputy Chairman of Aichi Bar Association
April	2012	Professor At Law School of Nagoya University (Practice of Law)
June	2015	Outside Corporate Director of FUJI CORPORATION (present)
June	2017	Outside Corporate Director who is Audit and Supervisory Committee Member of IBIDEN Co., Ltd. (present)

Analysis of Our Business Performance and Financial Condition

Overview of the Fiscal Year Under Review

During the fiscal year under review, the global economy saw moderate growth in the first half, supported by a strong U.S. economy and a recovering European economy. However, in the latter half of the year, uncertainties increased including a slowdown in the Chinese economy stemming from trade disputes between the U.S. and China, as well as political chaos surrounding the U.K.'s withdrawal from EU. In addition, in the domestic economy, the management environment surrounding companies is unclear, with weaknesses seen in parts of export and production due to the effects of trends in the uncertain world economy.

In the semiconductors and electronic components market, the server market for data centers experienced a high-level growth. However, the personal computer and smartphone market saw negative growth from the previous year and the environment surrounding the Company's Electronics Operation prevents optimism.

The exhaust system components market in the automotive industry is under harsh conditions due to a decrease in the ratio of diesel passenger vehicle sales in the European passenger vehicle market, in addition to weak trends in the global automobile sales.

Given this situation, the Company started a new five-year medium-term management plan "To The Next Stage 110 Plan" in April 2018 in order to realize stable and sustainable growth. In the new medium-term management plan, we will enhance the competitiveness of our existing businesses based on human resource development and work on expanding new businesses that will support medium- to long-term growth. With regard to new businesses, we are working on developing new products and launching into markets quickly at the four development centers established in FY2017.

As a result, net sales for the fiscal year under review amounted to ¥291,126 million, a decrease of ¥9,278 million (3.1%) compared to the previous fiscal year. Operating income totaled ¥10,138 million, a decrease of ¥6,564 million (39.3%) compared to the previous fiscal year. Ordinary profit amounted to ¥12,600 million, a decrease of ¥5,002 million (28.4%) compared to the previous fiscal year. Profit attributable to owners of parent for the period stood at ¥3,306 million, a decrease of ¥8,277 million (71.5%) compared to the previous fiscal year.

Analysis of Financial Situation

- ① Assets
- Total assets at the end of the fiscal year under review were ¥423,057 million (a decrease of 3.1% compared to the end of the previous fiscal year). Current assets amounted to ¥228,973 million (a 1.2% increase), and fixed assets were ¥194,084 million (a 7.6% decrease).
- The significant contributing components in the increase in current assets were increases of ¥4,954 million in merchandise and finished goods and ¥2,367 million in raw materials and supplies.
- The significant contributing component in the decrease in fixed assets was a decrease of ¥12,811 million in investment securities.
- ② Liabilities and Net Assets
- Total liabilities at the end of the fiscal year under review were ¥146,751 million (a 2.2% decrease compared to the end of the previous fiscal year). Current liabilities amounted to ¥118,083 million (a 26.3% increase), and long-term liabilities were ¥28,669 million (a 49.3% decrease).
- The significant contributing component in the increase in current liabilities was an increase of ¥25,000 million in current portion of bonds.
- The significant contributing component in the decrease in long-term liabilities was a decrease of ¥25,000 million in current portion of bonds.

Analysis of Management Results

- ① Net Sales and Operating Income
- Net sales amounted to ¥291,126 million (a decrease of 3.1% compared to the end of the previous fiscal year).
- Cost of sales was ¥232,806 million (a 0.7% decrease) reflecting lower net sales. The cost-to-sales ratio declined 1.9 percentage points to 80.0%.
- Accordingly, operating income totaled ¥10,138 million (a 39.3% decrease).
- ② Non-operating Income and Expenses and Ordinary Profit
- Non-operating income and expenses improved from ¥901 million (net) in the previous fiscal year to ¥2,462 million (net). This was mainly due to increases of ¥895 million in foreign exchange gain (loss), net and ¥854 million in compensation income.
- Accordingly, ordinary profit amounted to ¥12,600 million (a 28.4% decrease compared to the end of the previous fiscal year).
- ③ Extraordinary Income or Loss
- Extraordinary income or loss worsened from ¥947 million (net) in the previous fiscal year to ¥(3,273) million (net). This was mainly due to an increase of ¥6,538 million in loss on liquidation of subsidiaries and affiliates.
- Accordingly, profit before income taxes amounted to ¥9,327 million (a 49.7% decrease compared to the previous fiscal year).
- ④ Income Taxes (Including Income Taxes – Deferred)
- Income taxes decreased from ¥6,696 million in the previous fiscal year to ¥5,753 million in the fiscal year under review.
- Accordingly, profit amounted to ¥3,573 million (a 69.9% decrease compared to the end of the previous fiscal year).
- ⑤ Profit Attributable to Non-Controlling Interests
- Profit attributable to non-controlling interests amounted to ¥267 million in the fiscal year under review, compared to ¥271 million in the previous fiscal year.
- ⑥ Profit Attributable to Owners of Parent
- Profit attributable to owners of parent was ¥3,306 million (a decrease of 71.5% compared to the end of the previous fiscal year).
- Basic earnings per share was ¥23.66 (a decrease of 71.6%).
- Return on equity (ROE) stood at 1.2%.

Cash Flow Conditions

Cash and cash equivalents (hereafter "cash") at the end of the fiscal year under review amounted to ¥113,493 million, down ¥4,267 million compared to the end of the previous fiscal year.

The following is a summary of cash flow activities.

① Cash Flow from Operating Activities

Net cash provided by operating activities totaled ¥18,556 million (versus ¥27,040 million in the previous fiscal year). This primarily reflected increases from ¥25,136 million in depreciation and amortization, ¥9,327 million in profit before income taxes, and ¥5,288 million in loss on liquidation of subsidiaries and affiliates, despite decreases from ¥9,018 million in increase in inventories and ¥8,555 million in income taxes paid.

② Cash Flow from Investing Activities

Net cash used in investing activities totaled ¥18,036 million (versus ¥21,303 million in the previous fiscal year). This was mainly due to payments of ¥23,438 million for purchases of property and equipment and ¥6,873 million for proceeds from sales of investment securities.

③ Cash Flow from Financing Activities

Net cash used in financing activities totaled ¥4,926 million (versus ¥6,725 million in net cash provided in the previous fiscal year). This was mainly due to ¥4,896 million in cash dividends paid.



## Consolidated Balance Sheet (March 31, 2019)

	Millions of yen		Thousands of U.S. dollars (Note)
	2019	2018	2019
<b>Assets</b>			
<b>Current assets:</b>			
Cash and deposits	¥ 113,493	¥ 117,760	\$ 1,022,459
<b>Notes and accounts receivable:</b>			
Trade	60,278	62,236	543,048
Other	2,483	2,464	22,366
Allowance for doubtful accounts	(98)	(102)	(884)
<b>Inventories:</b>			
Merchandise and finished goods	17,794	12,839	160,303
Work in process	11,358	9,922	102,323
Raw materials and supplies	19,619	17,251	176,749
Other current assets	4,046	3,965	36,450
Total current assets	228,973	226,335	2,062,814
<b>Property, plant and equipment:</b>			
Land	19,962	19,831	179,841
Buildings and structures	186,286	184,443	1,678,246
Machinery and equipment	458,242	449,392	4,128,310
Leased assets	262	733	2,361
Construction in progress	13,342	10,707	120,200
Accumulated depreciation	678,094 (531,384)	665,106 (513,797)	6,108,958 (4,787,243)
Property, plant and equipment, net	146,710	151,309	1,321,715
<b>Investments and other assets:</b>			
<b>Investment securities:</b>			
Unconsolidated subsidiaries and affiliates	33	33	300
Other	39,110	51,922	352,339
Long-term loans receivable	9	11	85
Deferred income taxes	2,916	1,842	26,266
Other assets	5,568	5,241	50,162
Allowance for doubtful accounts	(262)	(268)	(2,359)
Total investments and other assets	47,374	58,781	426,793
Total assets	¥ 423,057	¥ 436,425	\$ 3,811,322
<b>Liabilities and net assets</b>			
<b>Current liabilities:</b>			
Short-term borrowings and current portion of long-term debt	¥ 45,030	¥ 20,006	\$ 405,676
<b>Notes and accounts payable:</b>			
Trade	37,310	37,347	336,129
Other	12,982	15,718	116,954
Lease obligations	141	109	1,271
Accrued expenses	6,187	6,605	55,736
Income taxes payable	2,259	4,092	20,348
Accrued bonuses for employees	3,439	3,829	30,980
Accrued bonuses for directors and audit and supervisory board members	89	90	802
Provision for loss on liquidation of subsidiaries and affiliates	4,865	—	43,829
Other current liabilities	5,781	5,684	52,087
Total current liabilities	118,083	93,480	1,063,812
<b>Long-term liabilities:</b>			
Long-term debt	25,000	50,000	225,225
Lease obligations	44	79	396
Liability for retirement benefits	672	525	6,054
Provision for share based compensation	180	75	1,619
Deferred income taxes	1,974	4,507	17,784
Other long-term liabilities	799	1,391	7,193
Total long-term liabilities	28,669	56,577	258,271
<b>Net assets:</b>			
<b>Shareholders' equity:</b>			
<b>Common stock:</b>			
Authorized – 230,000,000 shares			
Issued – 140,860,557 shares in 2019 and 2018	64,152	64,152	577,952
Capital surplus	64,579	64,579	581,797
Retained earnings	122,145	123,736	1,100,402
Less treasury stock, at cost	(2,602)	(2,609)	(23,444)
Total shareholders' equity	248,274	249,858	2,236,707
<b>Accumulated other comprehensive income:</b>			
Net unrealized holding gain on other securities	12,415	20,247	111,852
Deferred gain on hedges	—	77	—
Surplus arising from land revaluation	160	160	1,443
Translation adjustments	10,013	10,856	90,203
Total accumulated other comprehensive income	22,588	31,340	203,498
Non-controlling interests	5,443	5,170	49,034
Total net assets	276,305	286,368	2,489,239
Total liabilities and net assets	¥ 423,057	¥ 436,425	\$ 3,811,322

## Consolidated Statement of Income / Consolidated Statement of Comprehensive Income (Year Ended March 31, 2019)

### Consolidated Statement of Income

	Millions of yen		Thousands of U.S. dollars (Note)
	2019	2018	2019
Net sales	¥ 291,126	¥ 300,404	\$ 2,622,753
Cost of sales	232,806	234,517	2,097,350
Gross profit	58,320	65,887	525,403
Selling, general and administrative expenses	48,182	49,185	434,072
Operating income	10,138	16,702	91,331
<b>Other income (expenses):</b>			
Interest and dividend income	1,342	1,390	12,088
Interest expense	(159)	(147)	(1,428)
Gain on sales of investment securities	4,667	60	42,042
Other, net	(6,661)	545	(60,009)
Profit before income taxes	9,327	18,550	84,024

### Income taxes:

Current	(6,509)	(7,399)	(58,633)
Deferred	755	703	6,802
	(5,754)	(6,696)	(51,831)
Profit	3,573	11,854	32,193

### Profit attributable to:

Non-controlling interests	(267)	(271)	(2,406)
Owners of parent	¥ 3,306	¥ 11,583	\$ 29,787

### Consolidated Statement of Comprehensive Income

	Millions of yen		Thousands of U.S. dollars (Note)
	2019	2018	2019
Profit	¥ 3,573	¥ 11,854	\$ 32,193
<b>Other comprehensive income (loss):</b>			
Net unrealized holding gain (loss) on other securities	(7,827)	4,291	(70,515)
Deferred gain on hedges	(77)	(563)	(693)
Translation adjustments	(826)	2,572	(7,447)
Total other comprehensive income (loss)	(8,730)	6,300	(78,655)
Comprehensive income (loss)	¥ (5,157)	¥ 18,154	\$ (46,462)
<b>Comprehensive income (loss) attributable to:</b>			
Owners of parent	¥ (5,445)	¥ 17,926	\$ (49,057)
Non-controlling interests	288	228	2,595

Note : U.S. dollar amounts have been converted for convenience only at the rate of ¥111.00 = US\$1, the rate of exchange on March 31, 2019.

## Consolidated Statement of Changes in Net Assets (Year Ended March 31, 2019)

Millions of yen											
	Number of shares issued (Thousands)	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Net unrealized holding gain on other securities	Deferred gain (loss) on hedges	Surplus arising from land revaluation	Translation adjustments	Non-controlling interests	Total net assets
Balance at March 31, 2017	140,861	64,152	64,579	121,092	(18,306)	15,987	640	160	8,211	4,425	260,940
Cash dividends	—	—	—	(4,760)	—	—	—	—	—	—	(4,760)
Profit attributable to owners of parent	—	—	—	11,583	—	—	—	—	—	—	11,583
Purchases of treasury stock	—	—	—	—	(363)	—	—	—	—	—	(363)
Retirement of treasury stock	—	—	—	(4,059)	16,060	—	—	—	—	—	12,001
Change in scope of consolidation	—	—	—	(120)	—	—	—	—	—	—	(120)
Other changes	—	—	—	—	—	4,260	(563)	—	2,645	745	7,087
Balance at March 31, 2018	140,861	¥ 64,152	¥ 64,579	¥ 123,736	¥ (2,609)	¥ 20,247	¥ 77	¥ 160	¥ 10,856	¥ 5,170	¥ 286,368
Cash dividends	—	—	—	(4,896)	—	—	—	—	—	—	(4,896)
Profit attributable to owners of parent	—	—	—	3,306	—	—	—	—	—	—	3,306
Purchases of treasury stock	—	—	—	—	(3)	—	—	—	—	—	(3)
Retirement of treasury stock	—	—	—	(1)	10	—	—	—	—	—	9
Change in scope of consolidation	—	—	—	—	—	—	—	—	—	—	—
Other changes	—	—	—	—	—	(7,832)	(77)	—	(843)	273	(8,479)
Balance at March 31, 2019	140,861	¥ 64,152	¥ 64,579	¥ 122,145	¥ (2,602)	¥ 12,415	¥ —	¥ 160	¥ 10,013	¥ 5,443	¥ 276,305

Thousands of U.S. dollars										
	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Net unrealized holding gain on other securities	Deferred gain (loss) on hedges	Surplus arising from land revaluation	Translation adjustments	Non-controlling interests	Total net assets
Balance at March 31, 2018	\$ 577,952	\$ 581,797	\$ 1,114,731	\$ (23,507)	\$ 182,410	\$ 694	\$ 1,443	\$ 97,796	\$ 46,575	\$ 2,579,891
Cash dividends	—	—	(44,114)	—	—	—	—	—	—	(44,114)
Profit attributable to owners of parent	—	—	29,787	—	—	—	—	—	—	29,787
Purchases of treasury stock	—	—	—	(24)	—	—	—	—	—	(24)
Retirement of treasury stock	—	—	(2)	87	—	—	—	—	—	85
Change in scope of consolidation	—	—	—	—	—	—	—	—	—	—
Other changes	—	—	—	—	(70,558)	(694)	—	(7,593)	2,459	(76,386)
Balance at March 31, 2018	\$ 577,952	\$ 581,797	\$ 1,100,402	\$ (23,444)	\$ 111,852	\$ —	\$ 1,443	\$ 90,203	\$ 49,034	\$ 2,489,239

## Consolidated Statement of Cash Flows (Year Ended March 31, 2019)

	Millions of yen	Thousands of U.S. dollars (Note)	
	2019	2018	2019
Operating activities			
Profit before income taxes	¥ 9,327	¥ 18,550	\$ 84,024
Adjustments to reconcile profit before income taxes to net cash provided by operating activities:			
Depreciation and amortization	25,136	24,567	226,453
Loss on impairment of fixed assets	330	244	2,974
Amortization of goodwill	—	237	—
Reversal for accrued bonuses for employees	(389)	437	(3,509)
Reversal for accrued bonuses for directors	(1)	90	(9)
Reversal of allowance for doubtful accounts	(10)	(197)	(91)
Increase (decrease) in liability for retirement benefits	56	(4)	503
Interest and dividend income	(1,342)	(1,390)	(12,088)
Interest expense	159	147	1,428
Share of profit of entities accounted for using equity method	(1)	(3)	(13)
Gain on sales of property and equipment	(51)	(89)	(455)
Loss on disposal of property and equipment and other assets	916	1,698	8,253
Gain on sales of investment securities	(4,667)	(54)	(42,042)
Loss on liquidation of subsidiaries and affiliates	5,288	—	47,639
Decrease (increase) in notes and accounts receivable, trade	1,197	(3,402)	10,788
Decrease (increase) in inventories	(9,018)	(5,844)	(81,246)
Increase (decrease) in notes and accounts payable	875	6,439	7,886
Increase (decrease) in accrued expenses	(386)	538	(3,480)
Other, net	(1,520)	(12,436)	(13,693)
Subtotal	25,899	29,528	233,322
Interest and dividends received	1,370	1,367	12,346
Interest paid	(158)	(147)	(1,428)
Income taxes paid	(8,555)	(3,708)	(77,072)
Net cash provided by operating activities	¥ 18,556	¥ 27,040	\$ 167,168
Investing activities			
Purchases of property and equipment	¥ (23,438)	¥ (18,768)	\$ (211,157)
Proceeds from sales of property and equipment	147	277	1,325
Purchases of intangible assets	(1,174)	(408)	(10,578)
Purchases of investment securities	(281)	(2,558)	(2,527)
Proceeds from sales of investment securities	6,873	165	61,919
Long-term loans receivable made	—	(11)	—
Purchases of investments in subsidiaries resulting in change in scope of consolidation	(88)	—	(793)
Collection of long-term loans receivable	0	17	2
Other, net	(75)	(17)	(681)
Net cash used in investing activities	(18,036)	(21,303)	(162,490)
Financing activities			
Increase in long-term debt	30	—	270
Repayment of long-term debt	(6)	(57)	(52)
Purchases of treasury stock	(3)	(363)	(23)
Proceeds from sales of treasury stock	10	12,000	85
Cash dividends paid to non-controlling interests	(15)	(20)	(132)
Cash dividends paid	(4,896)	(4,760)	(44,114)
Repayments of lease obligations	(46)	(75)	(414)
Net cash (used in) provided by financing activities	(4,926)	6,725	(44,380)
Effect of exchange rate changes on cash and cash equivalents			
	139	490	1,258
Increase (decrease) in cash and cash equivalents	(4,267)	12,952	(38,444)
Cash and cash equivalents at beginning of year	117,760	104,102	1,060,903
Increase in cash and cash equivalents from newly consolidated subsidiary	—	706	—
Cash and cash equivalents at end of year	¥ 113,493	¥ 117,760	\$ 1,022,459



Corporate Information / Stock Information (As of March 31,2019)

Corporate Data

Trade name	IBIDEN CO., LTD.
Established	November 25, 1912
Capital	¥64,152 million
Number of employees	Consolidated: 14,718 Non-consolidated: 3,525
Plants	Head office 2-1, Kanda-cho, Ogaki City, Gifu 503-8604, Japan Tokyo branch Marunouchi Bldg. 29F, 2-4-1, Marunouchi, Chiyoda-ku, Tokyo 100-6329, Japan Plants Gifu Prefecture: Ogaki, Ogaki Central, Aoyanagi, Gama, Ogaki-Kita, Godo Aichi Prefecture: Kinuura
Number of subsidiaries	Consolidated subsidiaries: 39 (18 in Japan, 21 overseas)

Stock Information

Fiscal year-end	March 31
Annual meeting of shareholders	June
Independent Auditors	KPMG AZSA LLC
Domestic stock exchange listings	Tokyo, Nagoya
Date of record for dividend payout	Interim dividend: September 30 Year-end dividend: March 31
Authorized shares	230,000,000
Shares issued and outstanding	140,860,557 (including 957,813 shares of treasury stock)
Number of shareholders	25,763

Disclosure of Financial Information

IBIDEN takes steps to disclose information at appropriate times to shareholders and investors in a fair, accurate, and easy-to-understand manner. Pursuant to the Timely Disclosure Rule of the Tokyo Stock Exchange, our information disclosure standards require the disclosure of information relevant to our operations, scope of business, and assets that could significantly affect investment judgments, as well as any changes or suspension of important corporate information that has already been published. Our policy is to disclose such information proactively and fairly. We will also disclose corporate information that could significantly influence investment judgments even if the Timely Disclosure Rule does not apply, as accurately, promptly and appropriately as possible.



Website for shareholders and investors



Website for shareholders and investors <https://www.ibiden.com/ir/>

External Corporate Evaluation regarding ESG

Our company, after being assessed by external assessment bodies, was selected as a component of major ESG investment-related indexes.

FTSE4Good Index Series<sup>※1</sup>

FTSE Blossom Japan Index<sup>※1</sup>

MSCI Japan ESGSelect Leaders Index<sup>※2</sup>

The ISS ESG Corporate rating

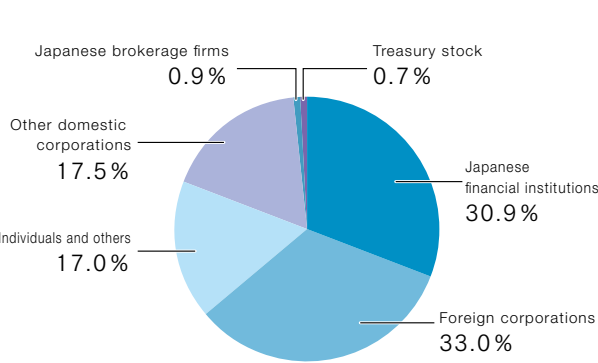
※1 FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company) confirms that IBIDEN Co., Ltd. has been independently assessed according to the FTSE4Good criteria and FTSE Blossom Japan criteria, and has satisfied the requirements to become constituents of both Index Series. Created by the global index provider FTSE Russell, these indices are designed to measure the performance of companies demonstrating strong Environmental, Social and Governance (ESG) practices. These indices are used by a wide variety of market participants to create and assess responsible investment funds and other products. Visit below website for each index details.  
FTSE4Good: <http://www.ftse.com/products/indices/FTSE4Good>  
FTSE Blossom Japan Index: <http://www.ftse.com/products/indices/blossom-japan>

※2 The inclusion of IBIDEN Co., Ltd. in any MSCI index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of IBIDEN Co., Ltd. by MSCI or any of its affiliates. The MSCI indexes are the exclusive property of MSCI. MSCI and the MSCI index names and logos are trademarks or service marks of MSCI or its affiliates.

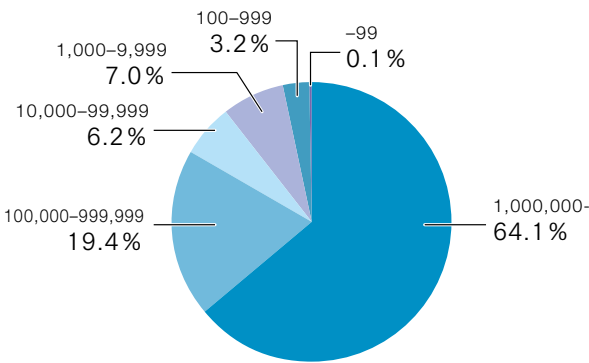
Principal Shareholders (top 10)

Name of Shareholder	The number of shares held (thousands)	Percentage of owned shares to outstanding shares (%)
Japan Trustee Services Bank, Ltd. (Trust Account)	8,191	5.85
The Master Trust Bank of Japan, Ltd. (Trust Account)	7,876	5.63
DENSO CORPORATION	7,712	5.51
NORTHERN TRUST CO. (AVFC) RE SILCHESTER INTERNATIONAL INVESTORS INTERNATIONAL VALUE EQUITY TRUST	6,362	4.55
Toyota Industries Corporation	6,221	4.45
The Ogaki Kyoritsu Bank, Ltd.	4,150	2.97
The Juroku Bank, Ltd.	4,130	2.95
IBIDEN Business Partners' Shareholding Association	3,996	2.86
NORTHERN TRUST CO. (AVFC) RE U.S. TAX EXEMPTED PENSION FUNDS	3,442	2.46
JPMorgan Chase Bank 385635	3,285	2.35

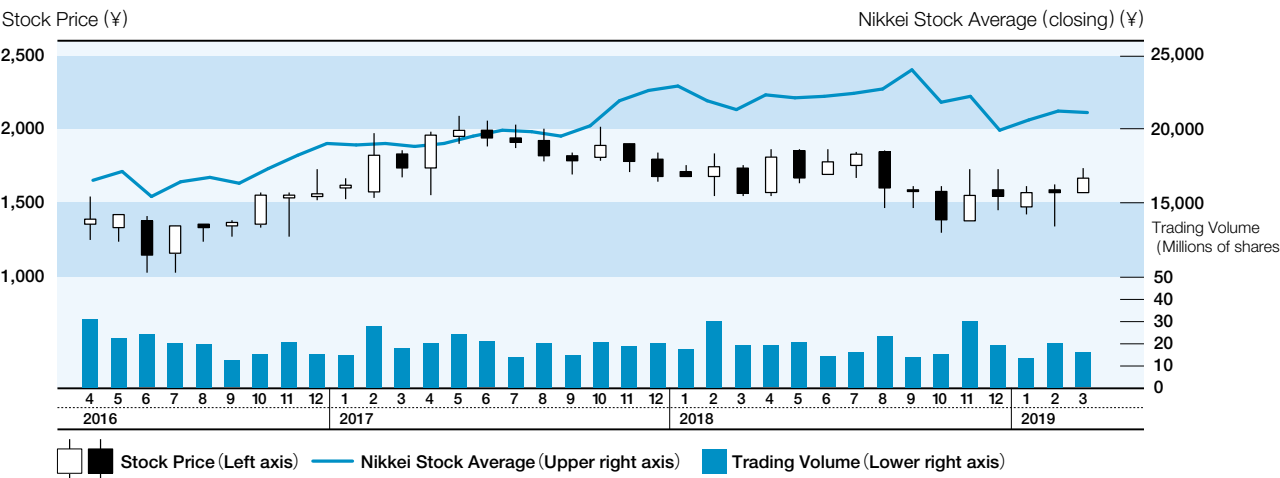
Breakdown by Type of Shareholder



Breakdown by Size of Holding



Stock Price Range and Trading Volume (Common Stock)





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