DISCO

CORPORATE REPORT

2018













Message from the President

# Aiming for Excellence in Corporate Activities

Business conditions in economic and global environments as well as in science and technology have been recently changing at a dizzying pace. The expected content and quality of the corporate activities and the social responsibilities that companies are being called upon to fulfill are continually evolving. DISCO has established "DISCO Values" – an ethos intended for application throughout the organization. The aim in so doing is to clarify the future direction of the corporation under rapidly changing conditions, without being sidetracked by superficial changes.

DISCO Values clearly states: "By achieving excellence in all of our corporate activities, our existence will be welcomed by our stakeholders and society." This indicates that DISCO is a corporation which aspires for technology and services regarded as an international standard. As such, we must show strong determination to respond flexibly to changes in society and to enhance every aspect of our corporate activities which meets our corporate values.

Since 2003, DISCO has been introducing activities known as Performance Innovation Management (PIM). These activities involve setting target values on the basis of a desired future state formulated individually by different units and for different types of work, and then reflecting at brief intervals to see whether these values have in fact been achieved. The aim of these reviews is to ensure that the organization as a whole is able to evolve through a process of self-awareness concerning matters such as how improvements can be made. In order to achieve "Excellence in corporate activities," (a target of DISCO Values) it is indispensable that each individual employee act to ensure that improvements can be made by reflecting on and learning from these activities. Our everyday PIM activities have allowed us to streamline operations throughout the corporation, making DISCO a dynamic, evolving organization.

Since implementing our original management accounting system, Personal Will, throughout the company, the work performance of individuals has become visible, and it is being used to manage profits and expenditures. Employees are able to choose the work that they want to do through this system, and their job satisfaction is increasing. Furthermore, employees are able to think and make decisions for themselves by refining their ability to make logical decisions in order to make a profit. As a result, DISCO is becoming an even stronger organization than it has been in the past.

DISCO intends to continue to evolve by aiming for true excellence in all our corporate activities. We look forward to your continued support and cooperation.

> Kazuma Sekiya President, CEO and COO

Corporate Philosophy

# **DISCO** Values

DISCO Values represent the corporate philosophy that identifies the ideal from various perspectives, including the direction in which the company should progress, the basic approach of management, and the manner in which each and every employee works. DISCO Values stipulate over 200 items, systematically organized so they may be reflected in actual activities. Specifically, they document general corporate social responsibility (CSR) concepts by which we aim to exchange value with our stakeholders, all the while fulfilling the company's social mission. DISCO strives to conduct all of our activities from management decisions to day-to-day business in line with DISCO Values. The following are examples of DISCO Values:

# Bringing science to comfortable living through advanced *Kiru*, *Kezuru* and *Migaku* technologies

"Advanced *Kiru, Kezuru* and *Migaku* technologies" is DISCO's business domain. In other words, DISCO will never deviate from the three technology fields of *Kiru* (*cutting*), *Kezuru* (*grinding*) and *Migaku* (*polishing*) in our business activities. The company's social mission is to connect the ever-advancing science to bountiful and comfortable lifestyles via these core technologies.

# Our growth is defined as our increase in mission-achievability and value-exchangeability

The management of a company can significantly change depending on how it defines its growth. DISCO does not think of growth in terms of expansion of sales, scale, or market share. For DISCO, growth is measured by how close we come to achieving our Mission and by the increase in our exchange of value with and satisfaction for our stakeholders, such as the customers, employees, stockholders, and suppliers.

### Always the best, always fun

DISCO's motto is "Always the best, always fun." We feel that, as professionals, it is a given that we thoroughly pursue the highest level of quality in the performance of our work. Also, it is just as important that we enjoy our work. These do not contradict each other, but rather we feel that their compatibility contributes to a fulfilling work experience.





Behavior Identity Action Guidelines for DISCO Employees

Structure of DISCO Values

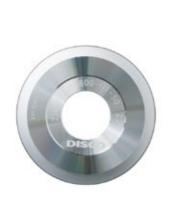
# Value and Solutions Provided by DISCO

The precision processing equipment, consumable products and applications know-how provided by DISCO enable *Kiru*, *Kezuru*, *Migaku* solutions.



### **DISCO Processes**

*Kiru, Kezuru* and *Migaku* – our three core technologies.





### DISCO Consumable Products

Abrasive blades and wheels attached to equipment for processing.

# DISCO Equipment

Equipment that processes the workpiece through fine control of size and thickness.

### What is processed?

We mainly process silicon, sapphire, gallium arsenide, and other raw materials which become the materials used for semiconductors and electronic components. There are many various types of these raw materials. However, the majority are round disks called "wafers," such as silicon wafers and sapphire wafers. Semiconductors and electronic components function inside devices including smartphones and also computers, IC cards, medical devices, and automotives. All of the essential products around us are processed with DISCO's technology.

### Processed for what?

In order to manufacture smaller and thinner digital products such as smartphones and PCs, the components that are found inside must also be made smaller and thinner. This allows for many components in the same space as well as enhanced functionality. DISCO contributes to the advancement of digital products, contributing to comfort in people's lives.



Q~\_ 🛄

Smaller Higher functionality



### How is it processed?

#### Fine Cutting

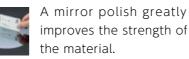
DISCO can finely cut material to micrometer accuracy (1/1000 of a millimeter). This is precision to the point of being able to groove a human hair crosswise 30 times.

#### Thin Grinding to the Point of Transparency

We are able to thinly grind material to 5 micrometers (copy paper is 100

micrometers thick). In addition, we are able to maintain a thickness variation less than 1.5 micrometers in a 300 mm diameter wafer.

Mirror-Like Polishing



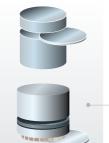
### Relationship between Semiconductor Manufacturing Process and DISCO's Technologies

The majority of DISCO products, which incorporate a broad number of engineering disciplines, such as mechanical, electrical, physical, chemical and IT, are currently used for manufacturing high-value-added semiconductors.

#### Wafer Manufacturing and Semiconductor Manufacturing Processes

#### Wafer Manufacturing Process

The process of manufacturing silicon wafers, the substrate material used in manufacturing semiconductors



#### Semiconductor Manufacturing: Front-End Process

The process of making semiconductor die by forming transistors on the substrate wafer





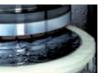
The process of assembling semiconductor die via wiring and packaging



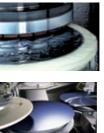
Device



**DISCO's Processing Technology** 



Grinders are used to thin wafers cut from silicon ingots. As semiconductors have become thinner with enhanced functionality, the precision of flatness in the thinning process has become more important.



The backside of the wafer is ground (in a process called backgrinding) in order to thin it while protecting the circuit on the front side. End products like smartphones and computers have become even thinner thanks to this process.

The damage layer is removed for the purpose of improving the strength of the thinned wafer (stress relief). As the thinning of end-products progresses, demand for stress relief is increasing.





Semiconductor die are cut from the thinned wafers in a process called dicing. In addition to conventional blade dicing, there has been an increase in the use of laser cutting.



DISCO's equipment is also used to cut the package after it is enclosed in resin.

Semiconductors are used in the latest digital equipment that facilitates our comfortable lifestyles.

# Four Business Fields, Our Unique Total Solutions

DISCO's greatest strength lies in our four distinct business fields, each interwoven to provide total solutions.



### Precision Processing Consumable Products

### Cutting-Edge Technology Honed Since our Founding in 1937

Our consumable products can be characterized by our abrasive blades and wheels made with synthetic diamonds. When installed on the equipment and rotated at high speeds, they cut, grind, and polish materials. We manufacture various consumable products including dicing blades and grinding/polishing wheels. Users can make different selections in terms of shape, thickness, bonding material, and diamond size according to their processing needs.

DISCO was originally established in 1937 as a manufacturer of abrasive cutting wheels. Ever since, we have continued to develop these products to find solutions for the needs of our customers, and we now have tens of thousands of high-precision processing tools in our line-up.

### **Precision Processing Equipment**

### Limitless Innovation and Application of Advanced Kiru, Kezuru and Migaku Technologies

Precision Processing Equipment is the general term we use to describe the machines that perform our Kiru, Kezuru and Migaku technologies. DISCO has primarily been involved in the development of equipment such as dicing saws and grinders mounted with blades and wheels. However, the processing methods have expanded significantly in recent years beyond our original abrasive equipment to include dicing saws that cut using lasers, and surface planers that employ a diamond bit. Most DISCO equipment is customized to meet our customers' wide-ranging requirements regarding not only device quality and equipment productivity, but also effective use of space and low environmental impact.

DISCO will continue to evolve our core technologies of Kiru, Kezuru and Migaku to contribute to comfort in peoples' lives.



### Service Support Enthusiasm for Craftsmanship Embodied in Our Service

We at DISCO consider the services we provide after product delivery to be a very important aspect of our business. Our service is primarily comprised of after-sales service which may involve regular equipment spot checks or repairs, as well as training services to provide our users with opportunities to acquire the necessary operation/maintenance skills. We have created a six-level in-company certification program for our Customer Engineers who are in charge of after-sales service allowing us to provide uniform global service support. When it comes to our training service, we put into practice feedback obtained via questionnaires filled out by the participants in an effort to provide service and support that delight our customers. The very thing that defines the DISCO spirit is our belief that the care we put into the craftsmanship of our equipment and consumable products must also be fully reflected in our application know-how and service support.

Application Know-How

### Solutions that Truly Meet Our Customers' Needs

Precision equipment, consumable products, and processing parameters can be combined in a myriad of ways. This can make it difficult for our customers to make equipment selections that are best for them. The facilities in our application laboratory can solve this problem as our application engineers perform test cuts with the materials provided by the customer in order to recommend solutions that will produce the best processing results.

Providing processing solutions, namely, in achieving the best processing results, is the core element offered by DISCO. In an effort to provide free application testing close to our customers, we have application laboratories in our domestic and overseas offices, in addition to the Application Laboratory at our Head Office/R&D center in Tokyo with its 70-plus private test booths.

# DISCO's Kiru, Kezuru, Migaku Products That Create Comfortable Living

We at DISCO want to use our advanced Kiru, Kezuru and Migaku technologies to create comfort in the lives of people. Let us take a look at some of the DISCO products that allow us to do this.



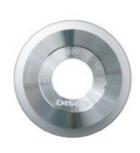
Kiru





#### **Dicing Saws**

Equipment that cuts materials with an abrasive blade. They are categorized into two types: compact semi-automatic dicing saws for specialized applications and fully-automatic dicing saws, which are high-productivity models that include automatic handling, alignment and cleaning.

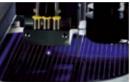




**Dicing Blades** These are thin abrasive wheels used for cutting, created by molding synthetic diamond grains with bonding materials such as phenolic resin.







Laser Saws Equipment that cuts material using a laser. Depending on the material, it can be more productive than a blade dicing saw. We offer both manual and fully automatic models.







#### Grinders

Equipment that grinds materials with a grinding wheel. We offer semi-automatic grinders for specialized applications and high-productivity fully automatic models that include automatic handling and cleaning.

Grinding Wheels

thin and flat.

Grinding wheels used for kezuru pro-

cesses. These products are used to

make wafers and other workpieces







**Grinder-Polishers** 

Equipment configured for both grinding and polishing in one integrated unit which also offers a selection of specific polishing methods, including dry polishing and chemical mechanical polishing (CMP).





#### Surface Planers

Equipment that uses a hard milling bit to flatten the material. These products are used to cut the surface of malleable materials (such as gold and copper) and LED resins, planarizing with high precision.









Dry Polishers Equipment used for polishing

materials. They do not use any chemicals or water during processing, thus minimizing the impact on the environment.





**Dicing Engines** 

These are dicing sub-systems that are integrated with a handling system, and cut chip scale packages (CSP) covered with resin in order to protect the semiconductor die from external impact, contamination and water.







Dry Polishing Wheels

Used with polishing pads for dry polish to produce a mirror finish on the processed surface.

# **R&D:** Creating Future Value

by actively utilizing original and creative ideas.



### Major R&D Center in Tokyo

DISCO's Head Office/R&D Center is located in the Omori region of Tokyo, which has easy access to Haneda Airport as well as Shinagawa Station, where the Shinkansen stops. The site was chosen for our R&D center to be more convenient for our customers to visit us for technological discussions. The content of these early engagements provides a major source of ideas for DISCO's next generation of R&D, and represents a valuable asset to our company.

### An R&D Environment that Places Importance on Inspiration and Challenges

Building B in the Head Office/R&D Center is primarily our R&D facility. This places our engineers' desks adjacent to the area where the R&D equipment is located. The creation of an environment that allows for an immediate examination of the engineers' inspiration using close-by equipment enables DISCO to continue to provide invaluable creative solutions and products even in the rapidly changing semiconductor industry.

### **Turning Customer Needs into Innovation**

What our customers want is not the product itself, but the processing solutions, and we at DISCO place great importance on this approach. Testing helps determine whether the solutions required by our customers can be realized. This testing takes place in the application laboratories of not only our Head Office/R&D Center, but also in our branch, affiliate, and agent offices worldwide, which create stronger relationships of trust with our customers. The cycle that contributes to the processing results provides DISCO with a high level of expertise and know-how, and the accumulation of this knowledge helps us to respond to even more complex requirements.









### Monozukuri<sup>\*</sup> in Pursuit of Customer Satisfaction

DISCO was established as a grinding wheel manufacturer originally named Dai-Ichi Seitosho in the city of Kure, Hiroshima Prefecture in 1937. Although our products have evolved, our stance regarding *monozukuri* to respond to customers' needs and continue to provide them with true and lasting satisfaction has continued unchanged since the first day. DISCO works out of three different production sites including two in its city of inception, Kure, and one in Chino City in Nagano Prefecture.

\* Craftsmanship, pride in manufacturing

### **Producing Custom-Built Products**

Although DISCO's equipment comes with standard specifications, most customers require customization for their specific processing needs. Several of DISCO's departments and divisions, such as Sales, Engineering, Purchasing, Manufacturing, and Applications, collaborate to ensure that the specifications requested by the customers are precisely reflected in our products. Particularly when it comes to the important components that directly affect the processing results, we at DISCO make continuing efforts to increase the in-house manufacturing ratio to allow us to provide our customers with a more reliable product.

## Creating Customer Delight via Our Evolving Activities

Even at the manufacturing site, we actively utilize PIM\* activities that are being developed and expanded throughout the company in our affiliate offices throughout the world. Our zero defect activities in blade manufacturing and reduction of assembly man-hours in equipment manufacturing have directly contributed to customer satisfaction in terms of faster delivery of products and a stable supply.





<sup>\*</sup> PIM: Performance Innovation Management This specifically refers to a program where each department or division sets targets based on the desired future state. The group subsequently looks back over short intervals to detect any gaps between the targets and the current state in an effort to obtain Kizuki ("lightbulb" moment) for the end purpose of evolving. Visibility of the targets and current state via the abundant use of notices, posters, and Post-it notes encourages all of us to increase our awareness in our daily activities

### What Can Be Done to Provide Peace of Mind BCM - Business Continuity Management

DISCO has established a system that allows us to readily respond when faced with unforeseen circumstances. In so doing, we strive to be a company with whom our customers can feel reassurance in doing business and where our employees can work in a risk-free environment. We believe that such peace of mind will foster a feeling of trust in our abilities as a company and add value to our products.







### Buildings that Can Withstand Disasters

Every year, Japan experiences many earthquakes. DISCO is strengthening its BCM (Business Continuity Management) through activities, such as using earthquake-resistant seismic isolation structures in the buildings at the Head Office and R&D Center, and each of the manufacturing affiliates, in order to best cope with earthquakes. In January 2015, the expansion of the quake-absorbing structure building (Zone-B) was completed in Kuwabata Plant. As a result of this expansion, a system for producing all precision processing tools and equipment in guake-absorbing structure buildings has been established. In order to continue production and

shipping during a power outage during disasters, an elevator was installed in the expanded building for equipment transport. The elevator operates on electric power generated by a privately-owned electric Conceptual drawing of completed Zone



C and Zone D in Kuwabata Plant

### **Creating Disaster-Resistant People**

DISCO considers the main point of our BCM to be "Everyone being able to protect themselves." Thus, we strive to predict risks such as natural disasters and epidemics, educate our employees, and promote activities for employees to be able to protect themselves.

For example, for a seasonal flu and other infectious diseases, the most important thing is preventing it from infecting others, even more so than treating it. DISCO is also strengthening its infection and epidemic countermeasures, one of its many daily activities in being prepared for a pandemic, and part of an effort to raise awareness.

### Countermeasures for Heavy Rain in Western Japan (July 2018)

There was heavy rainfall in the western areas of Japan in July, 2018. Kure City in Hiroshima, where DISCO's plants are located, was seriously affected by the rainfall. DISCO was also greatly affected by a water outage for both daily activities and production in Kure Plant on July 7, Saturday where our precision processing tools are manufactured. In addition, confusion occurred in logistics operations due to the disruption of routes.

DISCO resumed uninterrupted production on July 9, Monday of the following week, and equipment shipments have continued, even under such circumstances. DISCO has made every possible effort, such as securing water for production, choosing the optimum logistics routes regardless of land, sea or air, arranging deliveries at home, providing lunch with emergency food, and supporting the

### Achieving Ongoing Evolution of DISCO's BCM

DISCO strives for ongoing evolution while also incorporating various opinions through activities that are deployed both internally an externally, such as providing training and workshops for departments which are required to act urgently in a disaster, and providing seminars based on requests from other companies and government agencies. In the future, we will continue to improve our response to earthquakes, epidemics, and other predicted risks, and establish a comprehensive system which further reassures customers when conducting business with DISCO.

generator

In regards to future expansion plans, a quake-absorbing structure has been adopted again and the construction of the Zone-C started in January 2017, with a scheduled completion date of January 2019. Furthermore, construction for Zone-D will also start in FY2019.

DISCO established Nagano Works Chino Plant in April 2018, aiming for further improved production capacity and BCM performance. By preparing a production system for precision processing equipment and tools in eastern Japan in addition to our two existing Plants (Kure Plant

and Kuwabata Plant) in Hiroshima. DISCO aims to be a disaster-resistant company that can make customers feel reassured when conducting business.



Tide protection gate

#### Examples of Risk Countermeasures

Creation of DISCO's pandemic levels	We have, in greater detail, determined the risk levels that take into consideration even highly-virulent influenza as well as the corresponding actions.
Utilization of colored masks	Those who are in close contact with infected individuals and those in poor condition are obligated to wear pink masks to help visualize the respective risk.
Establishing a telecommuting program	DISCO has established a program and conducted corresponding exercises that allow for telecommut- ing equivalent to working in the office.
Support for employees who unable to return home	DISCO has developed a support system in which essential foods, items required to stay at the company, and other supplies are stored at the company for employees who are unable to return home after a disaster.

lives of the affected people.

Deliveries were delayed by a maximum of one day due to the disaster, and we were able to minimize the impact on our

customers. However, we also felt that more could be done when facing unexpected disasters. We will continue to be an "Organization of disaster-resistant employees" and further strengthen our BCM Water truck countermeasures.





Head Office/R&D Center

# Aiming towards a Greater Exchange of Value with DISCO Customers and Suppliers

DISCO strives for essential customer satisfaction (CS) in an effort to delight our customers. We are also committed to establishing strong relationships of trust with our suppliers.

### Improving Customer Satisfaction

DISCO has established a customer satisfaction (CS) charter and facilitates the development of a corporate culture in which activities to improve CS can be proactively deployed.

In order to improve CS, an internal support system for responding to customers' true needs is required, and all employees must endeavor to act with an awareness for the customer.

For this reason, the opinions and comments we receive from customers through the CS survey results, the activities which adopt those results, and the One Month Feedback conducted after delivering equipment to customers is shared not just with the sales departments, but also with the departments that play a supporting role.

Furthermore, DISCO strives to implement company-wide activities to improve CS from a variety of perspectives, such as requiring all supporting departments to receive training in CS.



### Customer Satisfaction Survey

We believe that advice and suggestions from our customers provide us with the opportunity to evolve so that we can better respond to their expectations.

The CS survey is a questionnaire we have been conducting since 1999 and is one of the most important tools for knowing our customers' opinions. In 2014, the content in our CS survey was changed from content shared across all DISCO affiliates throughout the world to individual content suited to the business style of each region. Since the change, the CS survey has been helping each of our affiliates to grow, and uncovers customer needs which remained unnoticed.

The results and opinions acquired through the survey play an important role when investigating how to improve existing products and develop new ones, provide new services, etc. The survey findings also are used to examine whether the current activities to improve CS are functioning as planned. The examination findings are subsequently fed back to the related departments such as Sales, Engineering, and Service in order to allow for more precise

### One Month Feedback

A majority of DISCO's precision processing equipment is made to order and delivered to the customer after pre-shipment testing. This is done to ensure the equipment provides the processing results desired by the customer. After the equipment is delivered to the customer's production site, it must be checked to make sure it is providing satisfactory processing results, and if adjustments are needed, they must be made quickly. DISCO has launched the One Month Feedback system that assesses the individuality of the equipment delivered to each customer.

Under the system, a questionnaire is sent to customers immediately after the equipment is delivered. The questionnaire asks about equipment usage, quality of support by sales staff or agents, and other related matters. The views and comments of customers who respond to the questionnaire are shared with relevant employees within the company, and, as necessary, a coordinated response is CS-improvement activities. Furthermore, the thoughts and opinions of our customers are passed onto our employees through applications on their iPhones (which are used for internal communications), successfully achieving high CS awareness, including in our administrative departments.

#### ■Uses for the CS Survey Results



provided by the Sales, Engineering, and Service Departments as well as other divisions.

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### Excellence in Understanding Customers

Customers who mass produce devices everyday make time for test cuts and negotiations despite their busy schedules. Since a late response can adversely affect the customer's production schedule, I always try to respond with speed more than anything else. In order to do this, I engage in close communication to quickly and correctly grasp the customers' needs and the hidden intention of their inquiry.

I would like to understand the customer better than anyone else by finding a solution to the problem, together with the customer, no matter how difficult the problem is.



Sales Divisior

## Thorough Quality Control

Quality control is essential to deliver true satisfaction to customers. DISCO establishes an annual quality policy and, in order to ensure that it is achieved, we have acquired ISO 9001 certification (an international standard for quality management systems). The organizations to which the certification applies do not only include the departments directly involved with the products, but also the indirectly-related departments that support these departments. Our overseas affiliates have also acquired ISO 9001 certification in their effort to make improvements on a sustained basis.

We are attempting to create a comprehensive system to prevent any quality issues. But, in the event a problem does arise, we are also forging a system that allows for a prompt investigation of the causes and resolution of the issue. With regard to particularly important

### Export Management System

DISCO strives to realize efficient logistics in order to quickly deliver products to customers.

It is common for companies to delegate export declarations to specialist companies. However, DISCO has developed its own customs clearance system and as a result, we are able to transport our products directly to airlines, reducing export costs and shortening leadtimes. Furthermore, at the recommendation of the Japanese Ministry of Land, Infrastructure, Transport and Tourism, DISCO was audited by the U.S. Department of

### Activities to Improve Suppliers' Satisfaction

Our suppliers are our valued business partners which we could not do without. The ideal method with which DISCO should pursue purchasing activities is contained within the Buyer's Oath. Every employee who comes in contact with a supplier must sign the Oath.

Also, in order to build a better partnership with all of our suppliers, every year we undertake a supplier satisfaction survey. For items which we receive many requests for improvement for, we will investigate the root cause and carry out activities to correct any problems.

In the future, we will continue to put our best efforts into being a good partner to our suppliers by making best use of the survey.

TOPICS

#### **DISCO Receives Intel Corporation's SCQI Award**

DISCO was awarded the Supplier Continuous areas of quality, cost, supply system, Quality Improvement (SCQI) award by Intel Corporation in 2017. The SCQI award is given to recognize corporations' achievements in the

issues, we form a solutions committee, which consists of the president and the managers of each relevant department such as the Engineering and Sales Departments, to deliberate on radical solutions.



Homeland Security's Customs and Border Patrol as a shipping consignment representative of Japan. DISCO was highly praised in the audit, and we received a letter of appreciation from the Ministry of Land, Infrastructure, Transport and Tourism



Letter of appreciation from the Ministry of Land, Infrastructure, Transport and Tourism

#### Buyer's Oath

- 1. Buyers are the face of the company.
- 2. Suppliers are equal partners.
- 3.1 will not accept gifts.
- 4.1 will refuse business entertainment as much as possible.
- 5.1 will determine the validity of the price.
- 6. I will strive to take transparent and honest business endeavors.
- 7.1 will not conduct any behavior that may result in my dismissal by a supplier.
- 8.1 will always end all business interactions with a smile and in a friendly mood, regardless of how rigorous the preceding negotiations were.

technology, customer service, and sustainability.



Photo by Holley Productions

# Aiming for a Pleasant Work Environment

We at DISCO strive to implement policies and develop the work environment so that each and every employee can work actively and comfortably, as well as provide them with opportunities for growth.

### Provision of Opportunities to Diverse Personnel

Regardless of gender, age, nationality, ethnicity, religion, or academic record, DISCO actively employs individuals who empathize with DISCO Values and wish to utilize their own individuality to realize DISCO's mission together.

For example, DISCO holds life-plan seminars which provide employees with the opportunity to think about how they will work and their lifestyle once they have retired. Healthy employees over 60 years of age who wish to keep working at DISCO can use the re-employment system until the age of 65. We also offer counseling services from re-employment specialist agencies and special paid

### Support for Skill Development

In a society which is changing every day, adaptability to change is required for not only the company, but also for each employee. Whether the employees show their personality or ability is dependent on the will of each individual. In DISCO, in order to encourage this will, we have established various types of education programs.

These programs consist of training sessions which aim to provide expert knowledge in specific operations, fields, techniques, and technical skills, the "DISCO Career Academy," which is a unique educational program aimed towards all employees, and a self-development support system for online and commuter courses provided off-site

In recent years, the education programs have not just been those developed by DISCO, but have also included employee-developed lectures in areas which they are experts such as communication training, programming courses, and also seminars given by famous lecturers. These activities have helped expand the opportunities for employees to improve their skills.

Furthermore, DISCO has also established Tateshina Study, which is a system designed to improve the quality of relationships between employees through the use of Tateshina Lodge, the welfare facilities in Chino City in Nagano since FY2015. Tateshina Study can be used



#### Training program

#### Work-Life Balance Promotion Committee

DISCO received the Award of Excellence in the 10th TOPICS Work-Life Balance Grand Prize Awards. This award is given to corporations which make outstanding efforts in aspects including support for career planning and improvements to work-productivity.

DISCO was given this award for utilizing the Personal Will accounting system (which helps employees to develop their own work-life balance and style of work by allowing them to voluntarily choose what they would like to do

leave even for employees who do not wish to continue working at DISCO.

DISCO is recruiting people with disabilities from the Recruit Support Center for People with Disabilities, special support schools, etc. The employment rate for people with disabilities was 2.12% in FY2017, which exceeds the mandatory employment rate (2.0%) designated by law.

With the increasing globalization of our business activities, we are also proactively seeking to hire foreign employees, and we are putting great effort into building an environment in which workers of all nationalities will find it easy to work.

for trainings or lectures held among department members, and the company supports travel expenses, meal costs, and accommodation fees. In FY2017, 658 employees utilized this system.

- Basic Policies for Skill Development
- 1. Responsibility to society and the customers
- 2. Duty as an employee •Duty as a DISCO constituent member •Duty as a manager
- 3. Support of career formation via selections and self-responsibility
- 4. Strategic early development

#### ■ DISCO Career Academy Overview

through their own will) as well as the monthly Town

Meetings, which are an opportunity for both the

president and all employees to communicate face-to-face

so that they can reconfirm the direction for how employ-

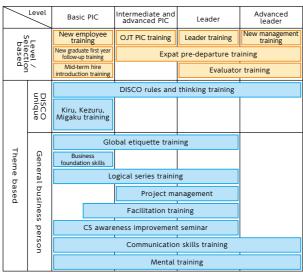
DISCO will continue to make efforts to create an excel-

lent work environment, based on the idea that creating

true customer satisfaction cannot be achieved without

ees should work.

employee satisfaction



## Support for Balance between Child-Rearing and Work

We are committed to promoting a work-life balance so that our employees are able to demonstrate their abilities while balancing their jobs with their private lives. As part of these efforts, we introduced the Child-Rearing Assistance Program based on the concept of "Creating an environment where employees with different ways of thinking can work with confidence while balancing their work and child-rearing commitments." Since the introduction of the program in 2005, use of the program is being aggressively promoted as it is continually improved.

As a result of this, 54 employees, both men and women, were able to take childcare leave in 2017.

#### ■ Aspects of the Child-Rearing Assistance Program

- Maternity leave childbirth
- · Leave to support the balance between child-rearing and work arv is paid during the lea
- Childcare leave until the child is 3 years of age
- Shortened work hours until the child graduates from elementary school
- Nursing leave
- Daycare center inside the company
- · Working from home while required to provide nursing care

DISCO has expanded our definition of childcare support to extend the scope of child-rearing assistance measures. In fiscal 2007, we introduced a program to subsidize the cost of fertility treatments for employees who would like children but are having difficulty conceiving. Assistance of 100,000 yen (max.) is provided up to twice a year for a total of 5 years.

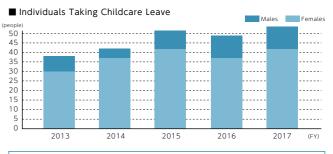
### Commendation of Employees

DISCO has an award system to commend employees for their achievements. Employees are awarded for their contributions to the company based on each case, such as the "Mission Award" for employees who play a large role in achieving the company missions, and the "Value Exchange Award" for employees who significantly increase the company's ability to exchange value. In 2014, a new award was created: the "Excellent Quality Award" for employees who personify the quality that DISCO strives to achieve for its stakeholders and make contributions to reinforce that impression. These awards also apply to

### Employee Satisfaction Survey

DISCO has conducted the Employee Satisfaction Survey anonymously every year since fiscal 2003 in order to translate the views and feelings of employees into the creation of an even better work environment. In 2017, 4,200 associate employees, part-time employees, and employees in overseas offices were surveyed. The response rate was 91.4%, and the percentage of those who responded positively of the overall satisfaction was 89.4%. The Employee Satisfaction Committee, which is made up of members of management, discusses company-wide issues raised by the survey and works to make related improvements.

The findings from the survey are presented to all employees.



#### Comments from a Male Employee Who Took Childcare Leave

My first child was prematurely born, so he had to stay at the hospital for two months after the birth. Since my wife and I had to raise our child with various concerns right from the start, I decided to take childcare leave for three weeks after our son was discharged from hospital.

During the leave, we shared our concerns and discussed what we can do

to overcome those concerns. Because I understood what was difficult for her through the time we spent together and the discussions we had during the leave, we now cooperate even better when we have any issues or concerns. For me, childcare leave was a very important time which made me review how I spend time with my family, helped us to deepen our family bonds, and motivated me to work, all at the same time.



VOICE

When I took the childcare leave, my colleagues warmly encouraged me and wished me "Good Administration Department, luck." I strongly recommend that other male employees also take childcare leave.

Corporate Support Division

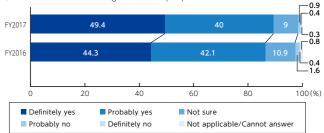
employees in Group companies and overseas affiliates. In 2017, 631 employees were presented with 71 awards. 20 employees were also awarded 13 different awards in the invention contest held around the same time.



Employee commendation ceremony

#### ■ Some Results from Employee Satisfaction Survey





One of the priorities at DISCO is the health and safety of our employees. We extend our efforts to create a safe and comfortable work environment, while maintaining and improving the mental and physical health of our employees.

# Activities that Contribute to the Local Community

Based on the belief that good social relations starts with good corporate citizenship, DISCO strives to create better relationships with the general public.

### Creating a Safe Workplace

In order to create a workplace that allows all to work with peace of mind, we at DISCO put a great deal of effort not only on facilities and equipment, but also disaster contingency planning in terms of individual actions and dissemination of information.

We have concentrated on eliminating all accidents in an effort to establish health and safety as part of our corporate culture and create an environment without accidents. DISCO proactively provides employees with opportunities to think about safety by means of safety education and training when joining the company called KYT (Kiken Yochi [Danger Prediction] Training) and discussions about creating an accident-free workplace.

Health and Safety Committee (HSC) meetings are held every month at all DISCO affiliates, both in Japan and overseas, to realize a safe and comfortable working environment. The committee members patrol each workplace, recording processes that show excellent safety or ways in which to improve them, and then report back to the HSC.

When a work-related accident occurs, after a countermeasure has been proposed by the applicable departments, the HSC discuss the validity of the countermeasure and how to apply it in other departments. All of the committee members are thorough in sharing the details of the accident and implementing countermeasures,

regardless of how large or small the accident was.

DISCO has established and implemented a work health and safety management system based on OHSAS 18001 (Occupational Health and Safety Management System) both domestically and internationally so our efforts will continue without being influenced by differences in individual interpretation.

DISCO uses various types of chemical substances in development and manufacturing processes. To understand the use of chemical substances throughout DISCO, an SDS (Safety Data Sheet) database was developed. These activities are carried out in coordination with the safety and environment management system. Since April 2016,

DISCO has implemented the "Company driver licensing system." Even if an employee possesses a public driver's license, an in-house driver's license is also needed to drive for work purposes. A course and an actual driving test are offered, helping every employee to Internal driver's license test reflect on their driving habits.



### Employee Health and Well-Being

DISCO provides a number of facilities and programs so that all of our employees may maintain and improve their health and live happily each and every day.

The Head Office and R&D Center is equipped with a fitness gym, yoga studio, swimming pool and massage area, and Hiroshima Works is equipped with a golf center, swimming pool, gymnasium, yoga studio, and tennis courts. The fitness gym allows us to support employee efforts to make themselves healthier from all aspects in an environment developed so each employee can casually ask for a suitable fitness program from dedicated instructors. DISCO opened a clinic within the company facilities, allowing employees to discuss health issues with an industrial physician or a public health nurse in-house. These efforts are of since FY2013, we have implemented "Excellence in Health" activities company-wide, and the departments that manage

employee health and the Health Insurance Society have been cooperating together. In FY2017, employees formed their own teams and competed in the "Better Health through Team Competition" by conducting health-promotion and health-improvement activities, as well as competing to improve their health checkup results. In addition, in order to improve the

follow-up examination rate after regular health checkups, we support the health of our employees by giving incentives to employees who provide the feedback from their follow-up examinations to the company nurses.



Rooftop tennis court at Kuwabata Plant

#### DISCO Certified as "Good Health and Management Corporation: White 500" Company Second Consecutive Year

DISCO has been certified as a "Good Health TOPICS and Management Corporation: White 500" company for the second consecutive year by The Ministry of Trade, Economy and Industry for being a corporation that shows excellent cooperation with insurers in the management of employee health. In the evaluation process. "Organizational management" and "Evaluation smoking.

improvement." In addition to implementing the above mentioned "Excellence in Health' activities company-wide, we support the health of our employees through various initiatives, such as a "Support Program to Stop Smoking," in which the Health Insurance Society covers all costs for clinic fees and we received particularly high praise in supplements in order to help employees quit



### Green Certification/SEGES Acquired at Two Production Plants

DISCO promotes the greening of production plants based on the concept "Plants in a forest." In the plants at Hiroshima Works, the Greenland Club (147 members) continue conservation activities on green areas while aiming for further harmony with the natural environment. As a result, Kuwabata Plant was promoted to Green Certification SEGES "Excellent Stage III" in FY2017.

In Chino Plant at Nagano Works, "Excellent Stage II" was acquired in April 2017 in recognition of our green contributions, such as the green area which we have possessed for 46 years and which contributes to forming the landscape of the area, the planting of mosaic cherry blossoms, and the harvesting of vegetables from the garden on the premises, which are then used for the meals in the employee cafeteria.

Note: SEGES is a system that evaluates green areas created by companies and corporations, as well as their daily activities and initiatives. Ranked in 5 stages, SEGES evaluates and certifies excellent effects in green initiatives, and visualizes "values" of corporate greenery.

### Donating Bicycles for Children in Singapore

In FY2017, DISCO HI-TEC (SINGAPORE) PTE LTD (DISCO Singapore affiliate) donated 10 children's bicycles assembled by DISCO employees to an NPO which provides child welfare services. The employees assembled the bicycles by cooperating with each other while visualizing children riding the bicycles, also encouraging teamwork.

### Hiroshima and Nagano Programming Contest

Excellent programmers are indispensable for realizing our future society, such as the IoT, AI, and self-driving technology. At Hiroshima Works and Nagano Works, a programming contest was held by DISCO to discover and support these programmers. Approximately 100 people in total gathered at the two sites, ranging from 13 to 64 years old. Prizes were awarded to the top contestants.

By supporting the further enhancement of skills, DISCO is playing a part in developing the human resources that will create the future.

TOPICS

#### **Received Fire Brigade Inspector Award**

In March, 2018, we received the "Fire Brigade General Award" from the Tokyo Fire Department. This award ranks the highest among the firefighting awards given by the Tokyo Fire Department. DISCO has a single dormitory in the company, and we require employees who use the dormitory to acquire self-defense firefighting qualifications as a condition for living in the dormitory.













Furthermore, in order to improve employees' initial response in firefighting, DISCO participates in three categories of the Firefighting Technique Competition co-hosted by the Omori Fire Station and Omori Fire Prevention Research Foundation every year. In 2017, DISCO won first place in two categories. These efforts were comprehensively evaluated and recognized as a benchmark.



Firefighting Technique Competition 2017

# Principle-Based Organizational Management

We at DISCO fully recognize that preservation of nature and the global ecosystem is vital, and we are dedicated to creating a sustainable business that is appropriate for a member of a recycling-based society.

### **Environmental Vision**

DISCO is continuously pursuing initiatives aimed at reducing our environmental footprint and has established a mid-and-long term roadmap in the form of our Environmental Vision. The Environmental Vision 2020, enacted in April 2011, outlines the desired state with regard to the environment for fiscal 2020 and sets out the main targets to be achieved, namely, Reduction of CO<sub>2</sub> Emissions, Resource Saving Activities, Pollution Prevention, and Conservation of Biodiversity.

### Environmental Vision 2020

### Achieving Environmental Corporate Excellence by FY2020

### Reduction of CO<sub>2</sub> Emissions

•3.8% reduction in DISCO's CO<sub>2</sub> emissions for business activities by FY2020 compared to FY2010 levels

#### **Resource Saving Activities**

•Elimination of all forms of *mottainai* from all business activities

Elimination of *mottainai* means not wasting finite and valuable resources such as water, electricity, gas, paper and waste used or emitted by business activities, and using them wisely, not only subjectively but objectively.

### **Pollution Prevention**

·Continued preservation of zero environmental accidents

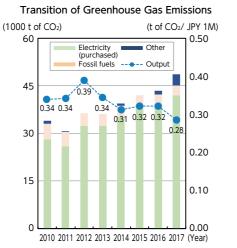
•Forward-looking collection of information regarding hazardous substances and related requirements, and taking prompt and appropriate action

#### Conservation of Biodiversity

Contribution to local nature conservation activities

### Environmental Performance Data

DISCO engages in CO<sub>2</sub> reduction and resource saving activities as part of its "Environmental Vision." Due to increased production in recent years, the amount of energy (CO<sub>2</sub> emissions, etc.) has also increased. However, our environmental efforts have been effective, and our environmental performance, (i.e., output divided by sales) has improved as a whole.



Electricity (purchased): Electricity purchased from power companies. Fossil fuels: Fuels such as city gas, gasoline, lamp oil, etc. Other: Non-energy such as Freon Output: Total amount of greenhouse gas emission divided by consolidated net sales

with consideration for the environment.

Ranked 19th out of 396 companies in the Environment

DISCO ranked 19th out of 396 companies in the such as the reduction of waste and

Environment Management Index Ranking announced greenhouse gas. DISCO will continue its

annually by Nikkei. This program evaluates the overall efforts to conduct business operations

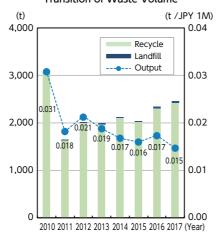
Management Index Ranking

environmental management of companies, and DISCO

was rated highly for engaging in environmental measures,

## Note: Targets may be revised or amended as necessary every fiscal year based on the circumstances.

Transition of Waste Volume



Recycle: Reusable, non-buried waste Landfill: Waste to be disposed as landfill Output: Total amount of greenhouse gas emission divided by consolidated net sales



Solar power monitor

### Environmental Considerations in Business Activities

DISCO engages in various activities to reduce its environmental load and realize a sustainable business. For example, aimed at efficient utilization of water resources, DISCO has installed facilities which can reproduce and circulate drainage generated during the production process in the Head Office R&D Center and Hiroshima Works. The reproduced water covers more than 40% of the water usage volume for the entire company, including branch offices and regional offices. (Recycle ratio in FY 2017: 36%)

Because a large amount of clean water is used in the manufacturing of precision processing tools and equipment, this activity not only reduces the financial impact, but also contributes to regional drought management. Furthermore, DISCO proactively adopts solar power generation and uses the generated power to conduct business activities, helping us to contribute to greenhouse gas reduction. (Power generated in FY 2017: 1,954 MWh) In addition, DISCO is also working on continued environmental performance improvement, such as making its production process efficient and conducting production activities with an awareness for saving resources.



## Expansion of Environmentally Friendly Products

When designing and developing new products, DISCO considers methods to reduce the environmental burden for each product life cycle. Additionally, we use the Green Product Guideline as the core tenet of our standards to avoid the use of chemicals or materials harmful to the environment or human health.

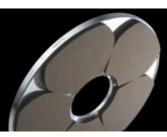
### **Precision Processing Equipment**

When purchasing parts and raw materials for our products, based on the Green Procurement List of DISCO Restricted Substances prepared in 2003, we preferentially procure raw materials and parts that do not contain 15 hazardous substances, including the 6 substances specified by the RoHS Directive.

Although precision processing equipment (or large-scale stationery industrial tools) falls outside the scope of the RoHS Directive, we consider this to be part of the social responsibility of a corporation, and arrangements for green procurement have been completed for almost all of our products.

### Precision Processing Tools

DISCO is also engaged in efforts to reduce the environmental burden of our consumable products. For example, we have introduced our own unique dry polishing process as a stress relief process used to remove damage caused by backgrinding.



DPEG series dry polishing whee



TOPICS



Solar power system (Kuwabata Plant)

	5 440	in the second
Pi	5	
		1
		2
1		160

Waste water recycling equipment Maximum solar output

Location	Maximum output		
Head Office/R&D Center	40 kW		
Kuwabata Plant	1,200 kW		
Kure Plant	315 kW		
Chino Plant	140 kW		
DISCO HI-TEC Singapore	75 kW		

Compared to other processes which require the use of chemicals, the dry polish process has a much smaller impact on the environment. We currently offer the DP08 series and the DPEG series dry polishing wheels as part of our product lineup, and we promote more environmentally friendly processing methods to our customers.

### Accessory Equipment

For accessory equipment, our DWR series lineup, which is capable of the production and recycling of DI water for both dicing and grinding, has been expanded.

In the dicing of devices such as image sensors or other devices which use very fine wiring rules, due to the demand for removal of particles and high cleanliness level during cleaning, there has

been a tendency towards increasing DI water consumption. The DWR series circulates and reuses nearly 100% of the cutting wastewater from the dicing saw, effectively using a limited supply of water.



DWR1722

# Principle-Based Organizational Management

DISCO is also devoted to organizational management in order to continuously communicate and improve our corporate culture and values.

### Instilling the Corporate Philosophy

To enable all of our employees to understand DISCO Values (our corporate philosophy) and to implement and realize them in their daily activities, DISCO has initiated shared activities within the company. We engage in a number of activities, large and small, ranging from level-based training, in which all officers and employees participate in study sessions conducted on a departmental basis.

Each of the employees participates in activities such as discussions and case studies so that they may gain an essential understanding of the meaning of the DISCO Values, allowing them all to share ways of thinking that prove to be helpful in their work at

DISCO. We have been taking part in these activities for over twenty years as a fundamental aspect of our management operations, endeavoring to link them to stronger organizational capabilities. The shared activities of DISCO Values has been established at our affiliates in Japan as well as overseas.



### **DISCO** Vision

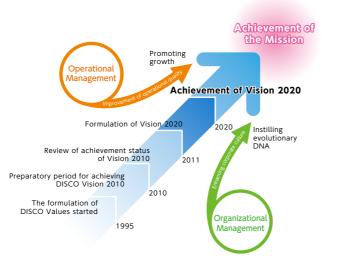
The DISCO Vision plays the role of a milestone to specifically define what we want to be or what we should aim for in achieving our mission.

The DISCO Vision was established in 1997 when we started our activities aiming at 2010. In 2010, when we reached the achievement year, aiming at further evolution, we reviewed our progress and established DISCO Vision 2020 for where we want to be in the future.

As with the original DISCO Vision, DISCO Vision 2020 provides quantitative targets such as sales and profits along with qualitative targets. In addition, this new Vision defines the goals for 2020 from multiple angles. The Element Angle elucidates what the corporation is based on its main elements, such as the business, organization and human resources, while the Stakeholder Angle focuses on the relationship between DISCO and our predominant stakeholders.

In this way, it is not a DISCO management plan starting from the present, but a management plan reversely formulated from the desired future state, established to achieve a higher level of ideals

#### DISCO's Management Structure



### Will Accounting

At DISCO, we have been implementing our unique self-developed accounting system known as "Will Accounting" since 2003. Prices are set for all items related to jobs (including income generated through internal jobs and expenditures such as labor and equipment costs) using Will price values. Each department utilizes this system to manage their own income and expenditures. In 2011, we also started implementing "Personal Will Accounting"

so that the Will accounting system can be incorporated by each employee. Through cultivating their understanding of Personal Will Accounting, employees are able to choose the work that they want to do. Furthermore, their job satisfaction, performance, and decision-making speed improve, increasing our productivity. Utilizing these Will accounting systems strengthens our organizational management.

#### **PIM** (Performance Innovation Management)

In order to increase the strength of our organization, we must not only execute strategies based on our corporate philosophy and vision, but also strengthen our ability to take action.

Since 2003, DISCO has promoted routine business improvement activities called PIM in all of its offices, including overseas offices, to increase our operational performance and to enhance our potential for improvement on a daily basis. We perform PIM activities by producing improvement plans (method changes) based on ideas obtained through work and executing the plans so that DISCO can continuously evolve.

Since 2012, we have been holding PIM matches to present our

### **Corporate Governance**

DISCO has adopted a corporate auditor and director-based system of corporate governance. The boards consist of four internal board members\* and six independent board members\* (two external directors\* and four external auditors).

The board of directors contains a limited number of members (internal members as well as six external members) in order to make prompt corporate decisions. The external directors have the right to vote, ensuring the effectiveness of corporate management. The board of auditors is comprised exclusively of external members, ensuring fairness and neutrality of audits. By actively implementing an external perspective, we aim to ensure validity

from multiple perspectives and improve the transparency of our corporate decisions.

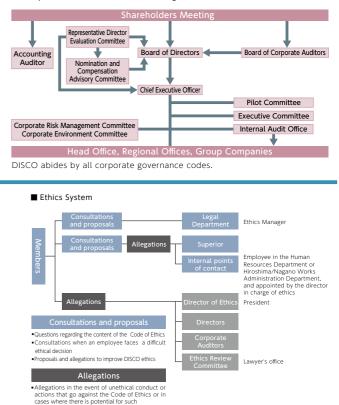
DISCO has also appointed a board of executive officers consisting of four members\* who make decisions as members of management and are officially responsible for the further improvement of management operations. Furthermore, the company president supervises and directs the board of executive officers, and the board of directors oversees the board of executive officers.

A "Nomination and Compensation Advisory Committee" has been established as an advisory body to the Board of Directors. The committee consists of the Chairman, President, Outside Directors, and Outside Corporate Auditors, and discusses and reports on the nomination and compensation of each candidate for the Board of Directors and company executive officers. The committee also advises the Board of Corporate Auditors on the nomination and compensation of the auditors.

Since fiscal 2018, DISCO has appointed a "Representative Director Evaluation

### **Corporate Ethics**

DISCO's Code of Ethics has been established due to our strong desire not only to obey the law, but also to never become involved in matters considered to be unethical by society at large. The Code of Ethics clarifies what must not be done from an ethical standpoint. The Code is explained and distributed to all employees, and all employees are obligated to follow the Code in all activities and in their everyday behavior. In order to assess whether our approach to ethics has been fully embedded in the mindset of each employee, the Employee Satisfaction Survey includes questions on ethics. Additionally, we provide counseling for employees facing difficult ethical decisions.



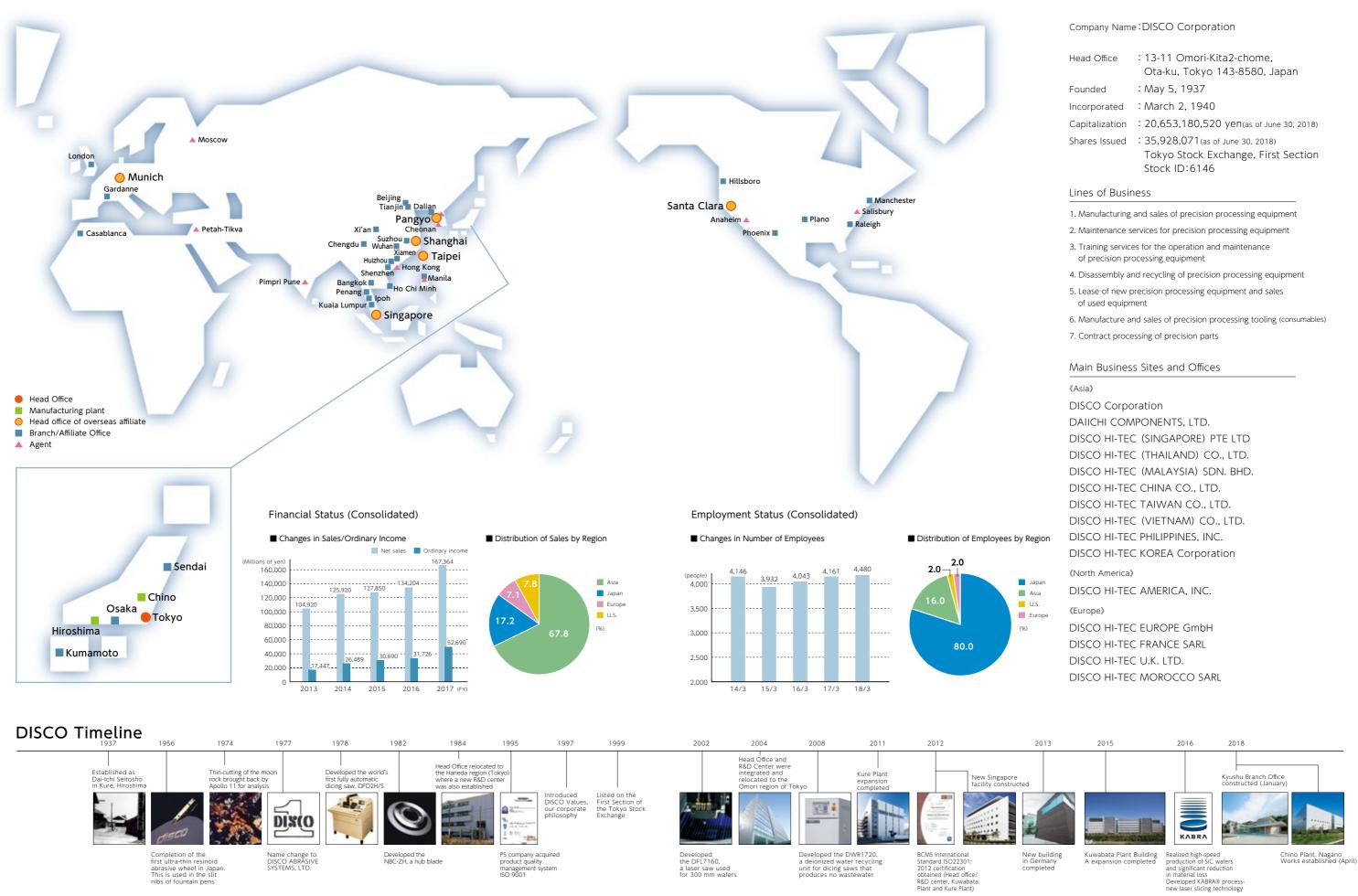
method changes. The presenters compete by utilizing their presentation materials in a limited time in a dedicated space called "PIM Coliseum." Then, management and the employees vote for the better method change. Presenters cultivate their ability to think of high-quality method changes in order to win the PIM matches and polish their presentation skills to gain more votes. Audiences also polish their ability to judge whether a method change is good or not by voting on the presentations using Will. Continuous PIM activities makes the employees devise better ideas every day. Polishing everyone's ability helps us to become a stronger organization, resulting in evolution as a company.

Committee" which evaluates the appropriateness of the representative directors' management of operations. The committee consists solely of independent members, ensuring objectivity, fairness, and transparency when dismissing a representative director based on the results of an evaluation.

Furthermore, DISCO has established a "Basic Policy on Internal Control" designed to maintain and improve internal control. DISCO's internal control also aims to comply with laws and improve the effectiveness and efficiency of operations in addition to achieving the legal obligation of ensuring reliability of financial reporting. To accelerate the accomplishment of these aims, a team dedicated to supervising internal control guides the company in promoting activities to internally disseminate the concept and significance of internal control and the keypoints regarding the evaluation of internal control, while also conducting internal control evaluations and supporting the establishment of internal control systems for the DISCO Group worldwide. \*As of July 31, 2018



# **Company Data**



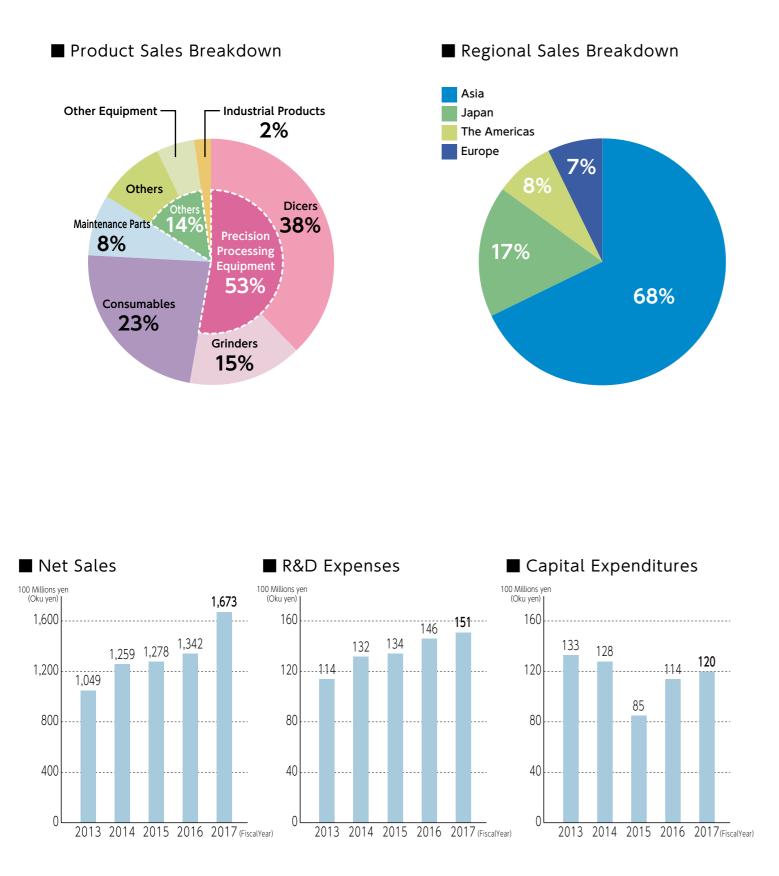
25 DISCO Corporate Report 2018

Head Office	: 13-11 Omori-Kita2-chome, Ota-ku, Tokyo 143-8580, Japan
Founded	: May 5, 1937
Incorporated	: March 2, 1940
Capitalization	: 20,653,180,520 yen(as of June 30, 2018)
Shares Issued	: 35,928,071 (as of June 30, 2018) Tokyo Stock Exchange, First Section Stock ID:6146

WEB

R&D center, Kuwabata Plant and Kure Plant)

	DISCO HI-TEC (MALAYSIA) SDN. BHD.
	DISCO HI-TEC CHINA CO., LTD.
	DISCO HI-TEC TAIWAN CO., LTD.
	DISCO HI-TEC (VIETNAM) CO., LTD.
Region	DISCO HI-TEC PHILIPPINES, INC.
	DISCO HI-TEC KOREA Corporation
	(North America)
Japan Asia	DISCO HI-TEC AMERICA, INC.
U.S. Europe	<pre>《Europe》</pre>
	DISCO HI-TEC EUROPE GmbH
	DISCO HI-TEC FRANCE SARL
	DISCO HI-TEC U.K. LTD.
	DISCO HI-TEC MOROCCO SARL



Summary

	1				
	FY2013	FY2014	FY2015	FY2016	FY2017
Net Sales	1,049	1,259	1,278	1,342	1,673
Operating Income	173	267	303	313	509
Ordinary Income	174	264	306	317	526
Net Income	120	200	230	242	371
Capital Expenditures	133	128	85	114	120
Depreciation	59	60	65	59	60
R&D Expenses	114	132	134	146	151
Total assets	1,701	2,019	2,079	2,257	2,565
Total liabilities	467	500	399	444	512
Total net assets	1,234	1,519	1,680	1,813	2,052
Gross Profit Margin	51.6%	54.1%	56.5%	55.5%	59.2%
Operating Income Margin	16.5%	21.3%	23.7%	23.4%	30.5%
Ordinary Income Margin	16.6%	21.0%	24.0%	23.6%	31.5%
Net Income Margin	11.5%	15.9%	18.1%	18.0%	22.2%
4-year accumulated ordinary income margin	14.8%	16.1%	19.1%	21.6%	25.5%
ROE	10.5%	14.7%	14.5%	13.9%	19.3%
Equity Ratio	71.4%	74.8%	80.4%	79.9%	79.6%

100 Millions	yen (Oku	yen)
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## Consolidated Balance Sheets

	FY2016	FY2017	
Assets			Liabi
Current assets			Cu
Cash and deposits	77,718	91,574	1
Notes and accounts receivable-trade	38,895	43,647	E
Merchandise and finished goods	6,832	7,093	(
Work in process	10,394	9,656	I
Raw materials and supplies	13,108	16,943	F
Deferred tax assets	3,734	4,361	F
Other	4,027	5,809	F
Allowance for doubtful accounts	(71)	(52)	(
Total current assets	154,639	179,034	-
Non-current assets			No
Property, plant and equipment			F
Buildings and structures, net	35,113	33,129	/
Machinery, equipment and vehicles, net	9,180	9,383	(
Tools, furniture and fixtures, net	671	706	-
Land	13,802	13,797	То
Construction in progress	7,455	12,248	Net
Total property, plant and equipment	66,223	69,264	Sh
Intangible assets	588	511	(
Investments and other assets			(
Investment securities	1,936	3,746	F
Deferred tax assets	267	109	-
Net defined benefit asset	530	612	-
Other	1,591	3,300	Ac
Allowance for doubtful accounts	(30)	(23)	١
Total investments and other assets	4,296	7,744	I
Total non-current assets	71,108	77,520	F
otal assets	225,748	256,555	1

Total liabilities and net assets	225,748	256,555	
Total net assets	181,318	205,264	
Non-controlling interests	93	110	
Share acquisition rights	840	899	
Total accumulated other comprehensive income	1,418	3,070	
Remeasurements of defined benefit plans	(10)	(47)	
Foreign currency translation adjustment	1,388	1,619	
Valuation difference on available-for-sale securities	40	1,498	
Accumulated other comprehensive income	.,	,	
Total shareholders' equity		201,184	
Treasury shares	(18)	(25)	
Retained earnings		157,919	
Capital surplus	20,374		
Shareholders' equity Capital stock	20,374	20,651	
Total liabilities Net assets	44,430	51,290	
Total non-current liabilities	707		
Other	575	717	
Asset retirement obligations	117	215	
Provision for directors' retirement benefits	14	_	
Non-current liabilities			
Total current liabilities	43,722	50,357	
Other	7,395	10,332	
Provision for product warranties	446	487	
Provision for directors' bonuses	437	159	
Provision for bonuses	5,300	8,651	
Income taxes payable	3,323	10,209	
Current portion of long-term loans payable	8,989	-	
Electronically recorded obligations-operating	11,931	14,230	
Notes and accounts payable-trade	5,897	6,286	
Current liabilities			
Liabilities			
	FY2016	FY2017	
(Millions of yen)			
	A	- <b>f</b>	

## Consolidated Statements of Income

()	Millions	of yen)
	FY2016	FY2017
Net sales	134,204	167,364
Cost of sales	59,709	68,239
Gross profit	74,495	99,125
Selling, general and administrative expenses	43,153	48,130
Operating income	31,341	50,995
Non-operating income		
Interest income	47	57
Share of profit of entities accounted for using equity method	94	177
Rent income	83	71
Subsidy income	230	1,629
Other	155	173
Total non-operating income	610	2,110
Non-operating expenses		
Interest expenses	42	22
Sales discounts	45	63
Foreign exchange losses	72	260
Depreciation	53	49
Other	11	19
Total non-operating expenses	226	415
Ordinary income	31,726	52,690
Extraordinary income		
Gain on sales of non-current assets	7	16
Gain on reversal of share acquisition rights	1	1
Insurance income	_	87
Total extraordinary income	9	105
Extraordinary losses		
Loss on sales and retirement of non-current assets	117	85
Impairment loss	514	1,191
Loss on sales of investment securities	-	1
Loss on valuation of investment securities	273	26
Loss on sales of shares of subsidiaries and associates	_	680
Special retirement expenses	35	86
Loss on disaster	90	—
Demolition cost	136	_
Total extraordinary losses	1,169	2,070
Profit before income taxes	30,566	50,724
Income taxes - current	6,788	13,794
Income taxes - deferred	(463)	(293)
Total income taxes	6,325	13,501

## Consolidated Statements of Cash Flows

(Millions of yen)

	FY2016	FY2017
Cash flows from operating activities	32,905	50,731
Profit before income taxes	30,566	50,724
Depreciation	5,987	6,053
Decrease (increase) in notes and accounts receivable-trade	(5,536)	(4,974)
Decrease (increase) in inventories	1,502	(2,981)
Increase (decrease) in notes and accounts payable-trade	4,530	2,714
Income taxes (paid) refund	(7,910)	(6,952)
Other	3,766	6,146
Cash flows from investing activities	(6,342)	(12,673)
Purchase of property, plant and equipment	(10,091)	(11,494)
Other	3,748	(1,178)
Cash flows from financing activities	(11,956)	(24,053)
Cash dividends paid	(11,198)	(15,492)
Repayments of long-term loans payable, other	(757)	(8,561)
Net increase (decrease) in cash and cash equivalents	14,528	13,854
Cash and cash equivalents at beginning of period	57,162	71,690
Cash and cash equivalents at end of period	71,690	85,545