





Integrated Report

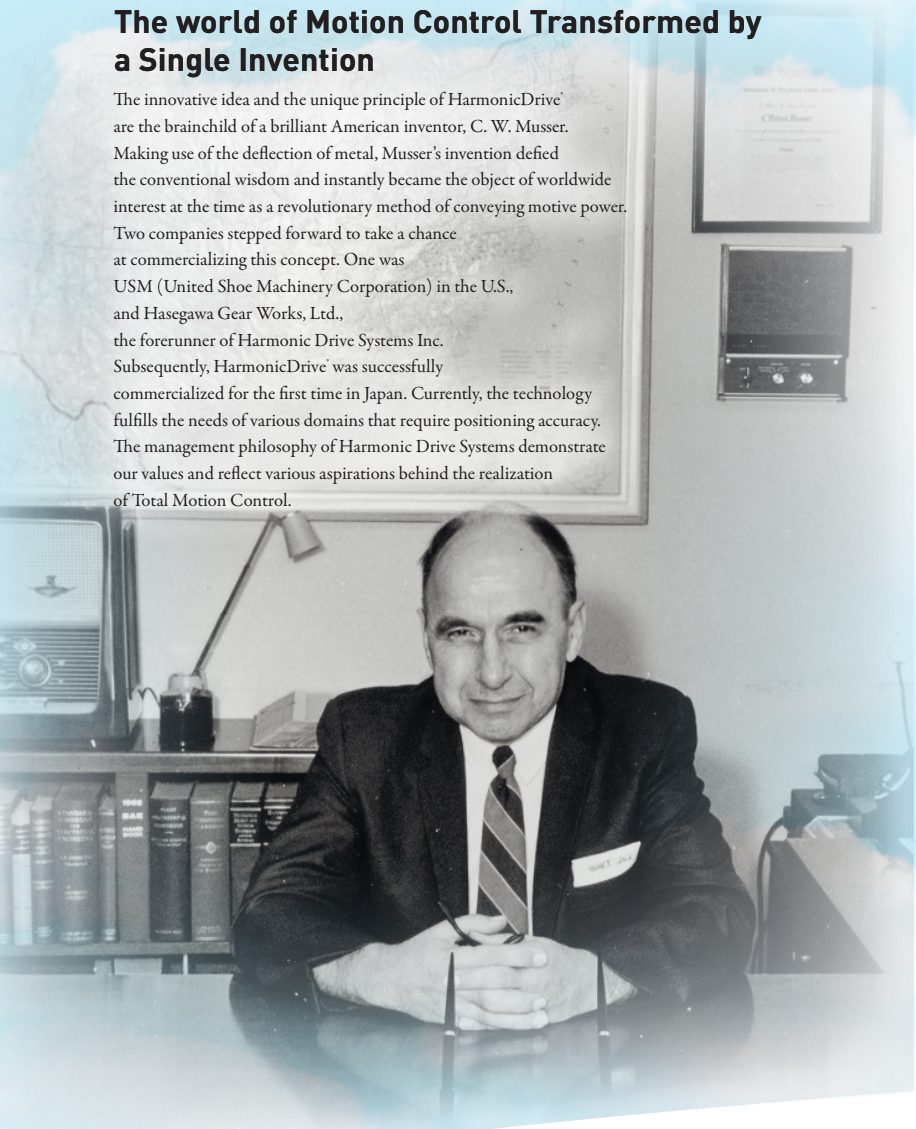
HDS REPORT 2024

Take on the Challenge of “Value Creation and Transformation”

Values and Aspirations

The world of Motion Control Transformed by a Single Invention

The innovative idea and the unique principle of HarmonicDrive® are the brainchild of a brilliant American inventor, C. W. Musser. Making use of the deflection of metal, Musser's invention defied the conventional wisdom and instantly became the object of worldwide interest at the time as a revolutionary method of conveying motive power. Two companies stepped forward to take a chance at commercializing this concept. One was USM (United Shoe Machinery Corporation) in the U.S., and Hasegawa Gear Works, Ltd., the forerunner of Harmonic Drive Systems Inc. Subsequently, HarmonicDrive® was successfully commercialized for the first time in Japan. Currently, the technology fulfills the needs of various domains that require positioning accuracy. The management philosophy of Harmonic Drive Systems demonstrate our values and reflect various aspirations behind the realization of Total Motion Control.



Unchanging goals that we want to achieve through corporate activities

Management Philosophy

Respect for the Individual

HDSI aspires to be a company where the rights of every individual employee are respected, and where individuals can pursue a meaningful, cultural, and worthwhile life.

We will make HDSI a company that believes in each employee's aspirations, supports independent activities, and creates an environment where employees can maximize their abilities through work, and where abilities and performance are rewarded.

A Meaningful Company

HDSI wants to be recognized as a meaningful, superior company which manifests creativity, has personality and distinctive characteristics, and whose management foundation is based on ceaseless research and development activities and a constant emphasis on quality—a company where the entire organization finds meaning in making utmost efforts.

Coexistence and Co-prosperity

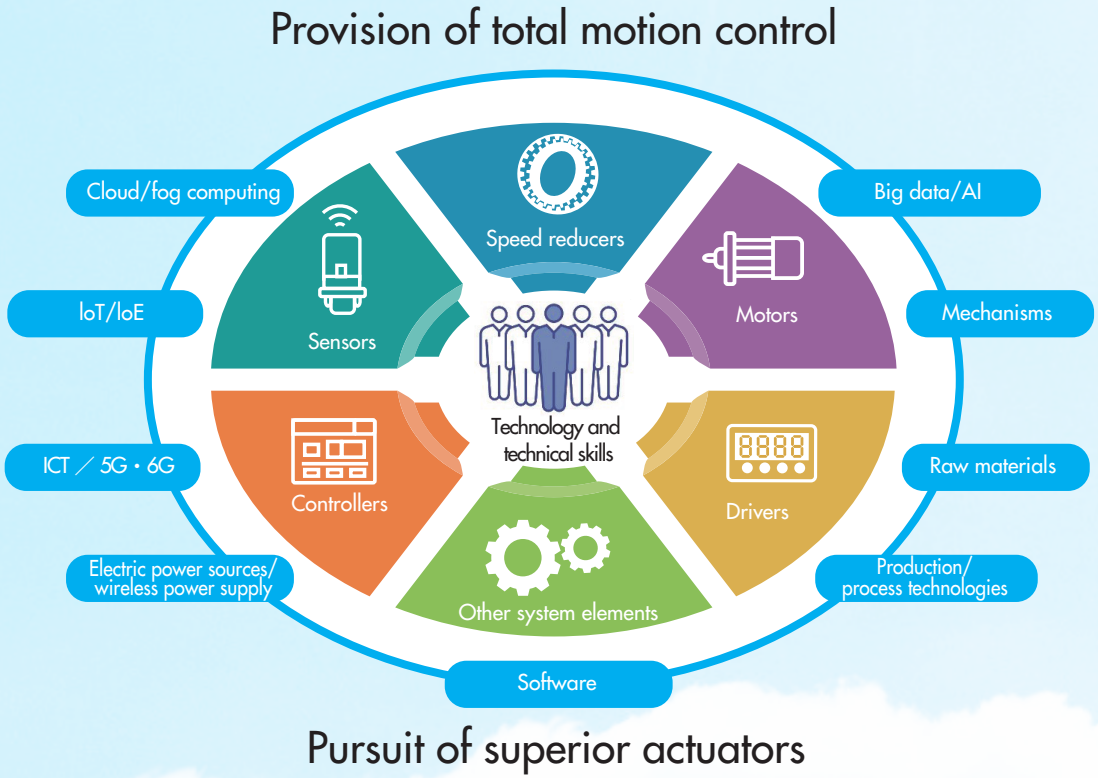
HDSI is supported by many different parties including our employees, customers, shareholders, materials and parts suppliers, affiliated companies, and trading partners.

We make our best efforts to create attractive products, services, compensation, working environments, and trading relations to satisfy all these concerned parties.

Contribution to Society

HDSI broadly contributes to society and industry through our corporate activities as a good corporate citizen.

The products and services we provide directly and indirectly contribute to the betterment of society. We aspire to be a company that helps improve the environment and the quality of the communities where we are located.



— Mission —

To contribute to innovation
in the society by
our motion control technology

— Long-term Vision —

The best provider of
total motion control
in harmony with the future

Greetings from Our New Leadership

We will continue to maintain our leading position as the best provider in harmony with the future



Akira Nagai
Chairperson of Board of Directors

Akira Maruyama
President and CEO

Our Management Philosophy

The Harmonic Drive Systems Inc. (HDSI) Management Philosophy comprises four pillars: "Respect for the Individual," "A Meaningful Company," "Coexistence and Co-prosperity," and "Contribution to Society." This Management Philosophy was devised during HDSI's early days and passed down as part of our corporate culture to the present day. It is also the foundation that will underpin the Harmonic Drive Systems (HDS) Group's continued survival and further development going forward. We designated "Respect for the Individual" as our first pillar, and as this suggests, the Group considers human capital to be our most important form of management capital. In fact, we set "maximization of the value of human capital" as the most important of materiality forming the basis of our Medium-Term Management Plan that began in fiscal 2024. To realize our Medium-Term Management Plan we must meet customer expectations by means of high quality and technical expertise. In our development and manufacturing, we must be unafraid of failure, instead allowing human resources with innovative ways of thinking to generate knowledge and ideas of all kinds. We must also deliver customer satisfaction in terms of cost, service, and delivery schedules and it is the employees comprising our human capital who are interacting with customers at the forefront of efforts to deliver in these areas. At the same time, the Group's products would not even be made if it were not for the members of the HDS Kyoryokukai (HDS Cooperative Association) and our other suppliers. Our relationships of Coexistence and Co-prosperity with suppliers are set to become increasingly important. We are convinced that it is this provision of new value founded on our Management Philosophy that will enable us to contribute to the sustainability of society.

Realizing our long-term vision

Before settling on our long-term vision of "The best provider of total motion control in harmony with the future," we discussed what kind of company we aspire to be in 2030. We reached a consensus on the quantitative targets of ¥100.0 billion or more in net sales and 20% or more in operating income to net sales ratio. One example of a new growth field that could drive our achievement of these targets is the growing humanoid robot market. Likewise, industrial robotics is another field in which we should ensure that we grasp similar opportunities for future growth, given the anticipated evolution in co-robots, among other developments. In particular, our customers that manufacture humanoid robots often come to us with ideas for new markets and applications based on AI (i.e., "artificial intelligence"). Such ideas presage the emergence of customer needs beyond what we ourselves can currently predict. We will address such needs by continuing to maintain our leading position in the precision speed reducer market and seeking to remain the best provider. In doing so, we believe that it will be essential to avoid pursuing short-term profits and instead to make appropriate investments based on a medium- to long-term perspective.

Our sustainability activities

Demands on companies to engage with sustainability look set to increase even further. This being the case, we need to clearly identify sustainability initiatives that align with the requirements of our customers and other stakeholders and implement such initiatives reliably. At HDSI, there are some things we do that contribute to sustainability in ways we ourselves are often unaware of. One example would be our handling of employees' suggestions for improvements. We give the employees feedback on the outcomes of their suggestions and inform everybody in the Company of suggested initiatives' potential contribution to sustainability. However, we believe it is important not to focus solely on implementing sustainability activities as an end in itself, but to respond appropriately to what the wider society actually wants of us and take action that is meaningful.

Last year, after we produced HDS Report 2023, our first integrated report, we received a great deal of feedback from shareholders, investors, and other stakeholders. We are gratified that we succeeded in helping stakeholders to better understand the Group's business activities and future direction by including a range of perspectives, not only from top management, but also from officers in charge of each section, as well as from young employees and Outside Directors.

On June 21, 2024, we transitioned to a new management structure. The current management team will continue making a concerted effort to enhance the Company's corporate value. We would greatly appreciate your support as we do so.

Chairperson of Board of Directors Akira Nagai

President and CEO Akira Maruyama

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Information Disclosure System

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Company Guide	
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Corporate Website	
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Our website

Access our website for detailed information including financial information, such as Financial Results, Presentation of Business Results, as well as sustainability information.

Investor Relations | Harmonic Drive Systems

Sustainability | Harmonic Drive Systems

Harmonic Drive Systems 50th anniversary

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Editorial Policy

This HDS REPORT 2024 aims to deepen the understanding of wide-ranging stakeholders, including shareholders and investors, by explaining the medium- to long-term economic value generated by the HDS Group, as well as the HDS Group's Management Philosophy, long-term vision, business models, capital and strengths forming the source of its competitive edge, sustainability promotion system, etc., to improve social and environmental values. In compiling this report, we referred to IFRS Foundation's International <IR> Framework, the Ministry of Economy, Trade and Industry's "Guidance for Collaborative Value Creation," and other relevant guidelines.

Scope of reporting

Entities reported: Harmonic Drive Systems and its Group companies included in the scope of consolidation and those accounted for by the equity method.
Period reported: this report covers mainly fiscal 2023 (from April 1, 2023, to March 31, 2024). Notes, etc., are inserted where any other period is mentioned.
Terms used to refer to the Company and its Group: In this report, "HDSI" or the "Company" refers to Harmonic Drive Systems alone, while "HDS Group" or the "Group" is used to refer to the Company and its Group companies.

Notes on forward-looking statements

Forecasts and outlook regarding future financial results indicated in this integrated report are what the Company judged as reasonable based on currently available information. Note that such forecasts contain risk and future uncertainty, and actual achievements and financial results may differ from them.

HDS REPORT 2024 Key Topics

1 Introducing Our New President & CEO and Chairperson of the Board

The new President & CEO and Chairperson of the Board share their commitment to the Management Philosophy that has been passed down over many years and their aspirations embedded in the newly established long-term vision.

Greetings from Our New Leadership P.03

The new President & CEO leading the HDS Group outlines his aspirations and strategies for achieving the long-term vision and the Medium-Term Management Plan.

Message from the President & CEO P.13



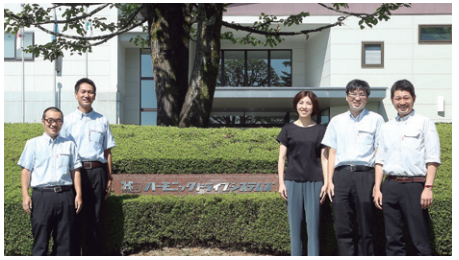
2 Launch of Medium-Term Management Plan for fiscal years 2024-2026

This section details the overview of the Medium-Term Management Plan for fiscal years 2024-2026 launched under the new management structure.

Medium-Term Management Plan for fiscal years 2024-2026 ..... P.27

The next generation leaders of our Group gather to discuss the on-the-ground efforts and challenges to achieve the Medium-Term Management Plan and long-term vision.

Special Feature 1: Next Generation Leaders Roundtable Discussion P.56



3 Messages from the Top Leaders of the Overseas Group Companies with a Deep Understanding of the HDS Group

Top leaders of four key overseas companies of the HDS Group's global network share their individual visions, strategies, and strengths.

Message from the CEO of Harmonic Drive SE (Germany) P.37
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Messages from the President of Harmonic Drive Systems(Shanghai) Co., Ltd.
and the Presidents of SAMICK ADM CO., LTD. (South Korea) P.39









4 Expectations and Challenges for the Sustainable Growth of the HDS Group: Insights from the Outside Directors and Outside Corporate Auditors

The Outside Directors and Outside Corporate Auditors engage in a candid discussion on business strategies for the sustainable growth of the HDS Group, as well as challenges and expectations regarding internal controls and governance enhancement. The officers discuss about the roles of the Nomination and Remuneration Advisory Committee (voluntary committee) established in March 2024.

Special Feature 2: Outside Officers Roundtable Discussion P.69

Our Products

MECHATRONICS

Mechatronics products

Production base: Harmonic Winbel Inc. (Komagane-shi, Nagano)

In order to take advantage of the excellent angle transmission precision and positioning precision of HarmonicDrive®, we offer total motion control, including AC, DC, and step actuators capable of ultra-high resolution and high-precision rotary motion, and linear actuators capable of ultra-fine volume and high-precision linear motion.



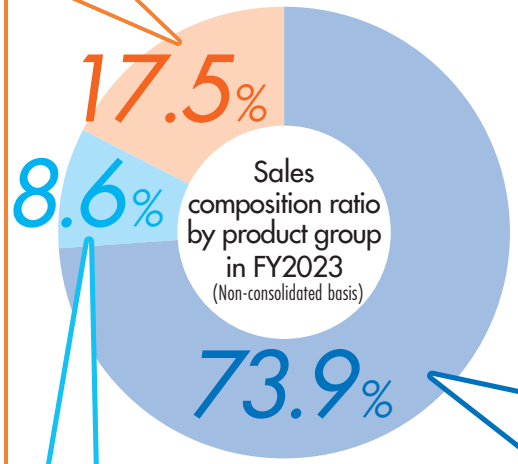
SHA series
AC servo actuator
Flat hollow shaft type



RH series
DC servo actuator



LA series
AC servo linear actuator



HarmonicPlanetary®

Precision planetary speed reducers

Production base: Harmonic AD, Inc. (Azumino-shi, Nagano)

HarmonicPlanetary® is a Precision planetary speed reducers that utilizes the accumulated precision machining expertise of HarmonicDrive® at lower reduction ratios. With a unique backlash elimination function, it achieves high rotational precision.



HPG-R series
Gearhead

HarmonicDrive®

Strain-wave gearing

Production base: Hotaka Factory/Ariake Factory (Azumino-shi, Nagano)

The HarmonicDrive® consists of only three basic components. Unlike motions of ordinary gearing, the unique tooth behavior (operating principle) of HarmonicDrive® achieved nonbacklash motion, infinitesimal angular feeding (one-pulse feeding) and high positioning repeatability.



Wave Generator

The wave generator consists of a thin ball and bearing that fit into the outer circumference of the elliptical cam. The inner ring of the bearing is fixed to the cam, while the outer ring deforms elastically via the ball. Normally, this is installed on the input shaft.

Flexspline

This is the thin, cup-like, metallic, and elastic body. The outer circumference of the opening has the teeth. The bottom of the flex spline (bottom of the cup shape) is referred to as the diaphragm, and is installed on the output shaft in the normal fashion.

Circular Spline

This is the rigid and ring-shape component. The inner circumference has the teeth, and the number of teeth is higher than the flex spline by two teeth. Normally, it is fixed to the casing.

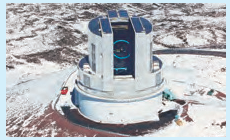
Product Applications

Hayabusa; Hayabusa2



Courtesy of Japan Aerospace Exploration Agency (JAXA)

Large-scale optical/infrared telescope "Subaru"



Courtesy of Inter-University Research Institute Corporation, National Institutes of Natural Sciences, National Astronomical Observatory of Japan

Collaborative Robot(Co-bot)



Courtesy of Techman Robot Inc.

eVTOL (flying cars)



Power assist suits



Courtesy of Hashimoto Laboratory of Shinshu University

Surgical robots





Mars rover "Perseverance"



Courtesy of NASA/JPL-Caltech

Semiconductor wafer transport robots



Courtesy of DAIHEN Corporation

Automated guided vehicles (AGVs)



Industrial robots

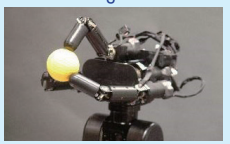


Mobility vehicles



Courtesy of Lean Mobility Co., Ltd.

Small robot finger module



Courtesy of Ishikawa Group Laboratory of the University of Tokyo

Corporate History

HDSI : Harmonic Drive Systems Inc.
HDSGmbH : Harmonic Drive GmbH (Germany) (Currently, Harmonic Drive SE)
HDL : HD Logistics, Inc.
HPI : Harmonic Precision Inc.
HAD : Harmonic AD, Inc.
HDLLC : Harmonic Drive L.L.C (the U.S.)
WB : Winbel Co., Ltd. (Currently, Harmonic Winbel Inc.)
HDSE : Harmonic Drive SE (Germany)
HDCH : Harmonic Drive Systems (Shanghai) Co., Ltd. (China)
ADM : SAMICK ADM CO., LTD. (South Korea)

1911-1978 Birthing Period・Foundation Period

1911-1969 Birthing Period

"Birth of HarmonicDrive®"

1911 Kiyoharu Hasegawa established Hasegawa Gear Works, Ltd.
1955 C. W. Musser invented HarmonicDrive®
1964 Hasegawa Gear Works and USM (the U.S.) signed a technological partnership agreement
1965 Completed the first HarmonicDrive® unit

1970-1978 Foundation Period

"Established Harmonic Drive Systems Inc."

1970 Established a J/V company, HDSI Established HDSGmbH in Germany
1976 Joined the umbrella of USM (the U.S.)
1977 Began manufacturing and selling mechatronics products

1979-1997 Expansion Period・Independence Period

1979-1988 Expansion Period

"Expanded a factory and entered the U.S."

1985 Expanded Matsumoto Factory (currently, Toyoshina Factory)
1987 Established HD Systems, Inc. in the U.S.

1989-1997 Independence Period

"Became independent from foreign capital"

1989 Established new HDSI as a wholly owned subsidiary of former HDSI
1990 Completed Hotaka Factory Established HDS Cooperative Association

1998-2013 Development Period・Stabilization Period

1998-2006 Development Period

"Listed shares for over-the-counter trading and enhanced supply chain"

1998 Listed shares for over-the-counter trading
1999 Established HDL (logistics company)
Established HPI (J/V) (producing cross roller bearings)
2000 30th anniversary
2003 Established HAD (manufacturing of HarmonicPlanetary®)
2004 Listed on JASDAQ
2005 Established HDLLC in the U.S.

2007-2013 Stabilization Period

"Enhanced presence in Asian markets and mechatronics products"

2007 Formed a capital and business alliance with WB (for developing actuators)
Made HPI a wholly owned subsidiary
2008 Formed a capital and business appliance with Ome Iron Casting Co., Ltd. (manufacturing high-strength cast-iron products)
2010 40th anniversary
2011 Established HDCH (Chinese sales company)
2013 Established ADM (Korean manufacturing company)

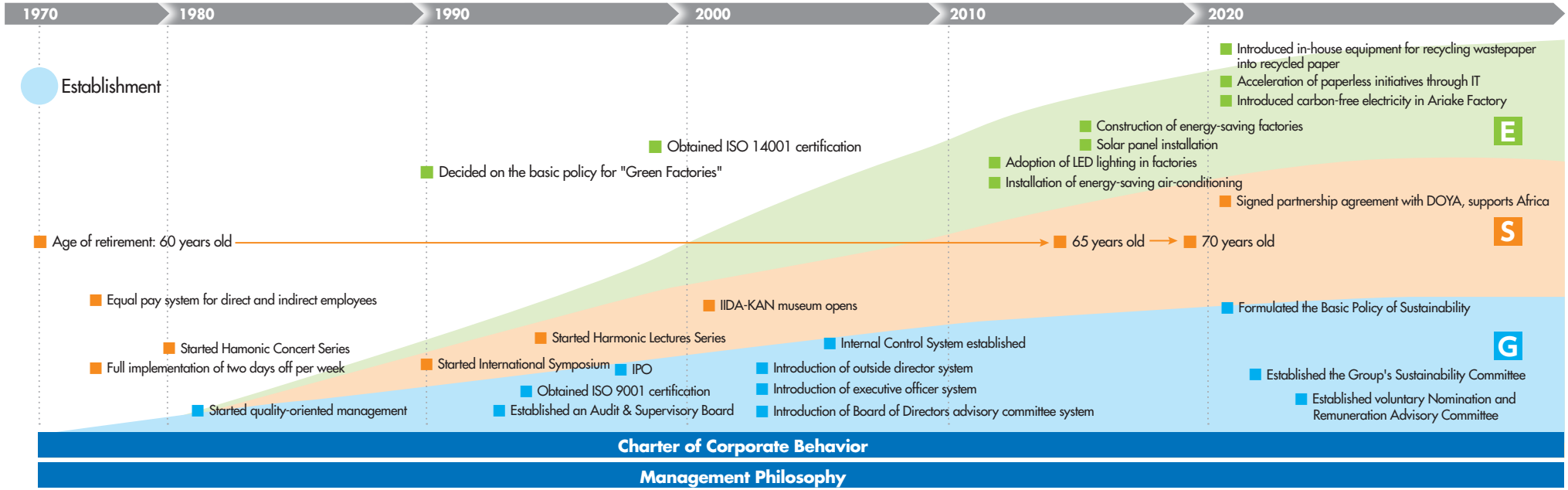
2014- Current Investment in Future Period

2014- Current Investment in Future Period

"Enhanced corporate fundamentals and supply structure for the future"

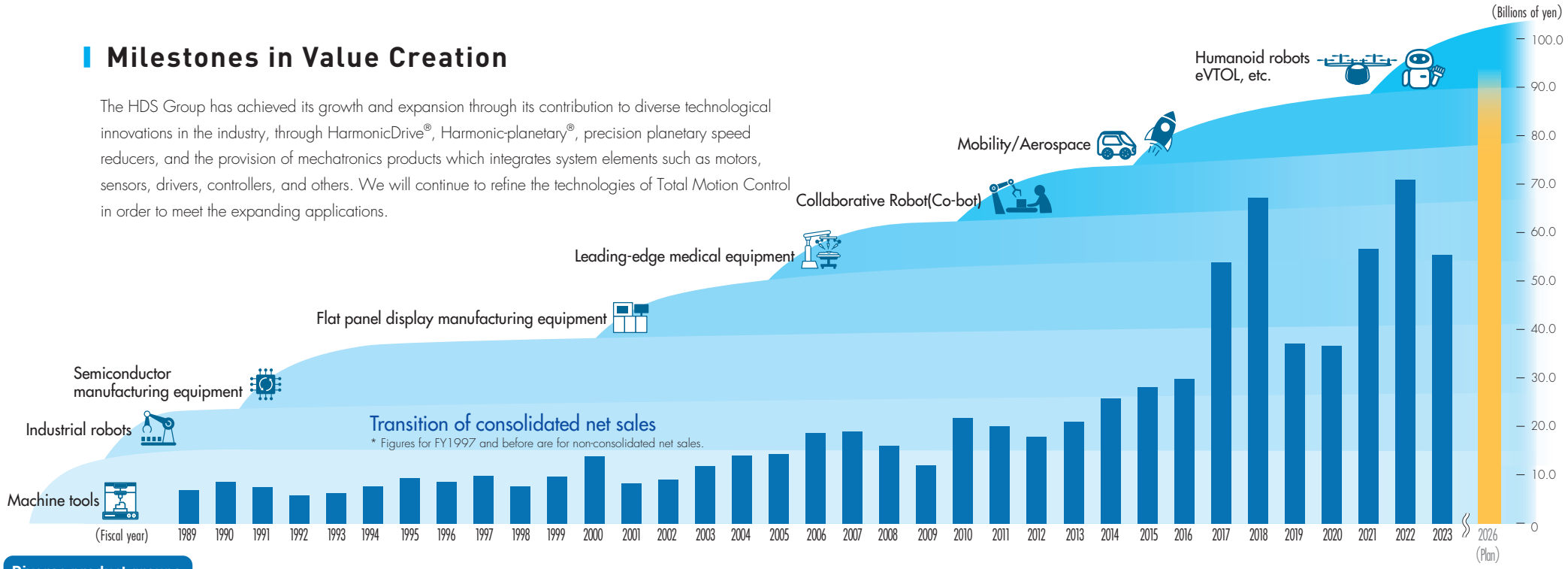
2014 Invested in enhancing production capacity of Hotaka Factory
2016 Opened Taiwan Representative Office
2019 Completed HPI's new factory
Completed new Ariake Factory
2020 50th anniversary
2021 Made HDLLC a wholly owned subsidiary
Made HDSE a wholly owned subsidiary
Made WB a wholly owned subsidiary

Our ESG efforts to improve the corporate value



Milestones in Value Creation

The HDS Group has achieved its growth and expansion through its contribution to diverse technological innovations in the industry, through HarmonicDrive®, Harmonic-planetary®, precision planetary speed reducers, and the provision of mechatronics products which integrates system elements such as motors, sensors, drivers, controllers, and others. We will continue to refine the technologies of Total Motion Control in order to meet the expanding applications.



Diverse product groups

Strain-wave gearing HarmonicDrive®

1965 • Completed first unit made in Japan



1972 • Launched FD series differential unit for phase fine-tuning



1977 • Birth of R series (initial product)



1985 • Launched model number 5 products



1988 • Launched CSS series with a new IH tooth profile



1992 • Launched CSF series



1995 • Launched silk hat type SHF series
• Established production technology of cross roller bearings

1999 • Developed units with a reduction ratio of 1/30
• Launch larger torque capacity, longer life CSG series



2001 • Launched ultra-thin CSD series



2002 • Launched larger torque capacity, longer life SHG series

2006 • Launched CSF-3 micro precision speed reducer



2015 • Launched CSF-mini ultra flat, high stiffness type (2UP)

2020 • Launched ultra-light ULW



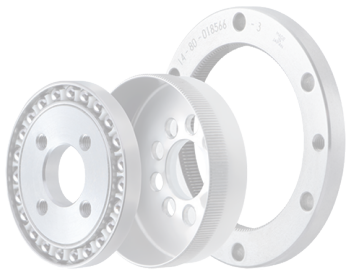
2023 • Launched CSD-ULW



2023 • Added model number 7 to small unit types



Mechatronics products MECHATRONICS



1978 • Commercialized Hi-T Drive



1984 • Launched high power DC servo actuator RH series



1987 • Launched DC servo actuator RH mini series

1989 • Launched LA-30 linear actuator



1990 • Launched FHA-25A FH2000 series servo actuator



1994 • Launched LSA-50A for laser scanners



2000 • Launched FH2000 series C type

2006 • Launched RSF-3 micro AC servo actuator



2009 • Launched new SHA series flat hollow actuator



2018 • Launched FLA series ultra flat brushless DC actuator



2018 • Launched HMA series flat and hollow AC servo motor



2025 • Addition of ULW type to the FHA-C mini series (planned)



Precision planetary speed reducers HarmonicPlanetary®

1988 • Launched BP series



1990 • Launched HP series

1999 • Launched HPG series



2007 • Added right angle type to HPG series



2015 • Launched HPG series helical gear type



2017 • Launched HPN series

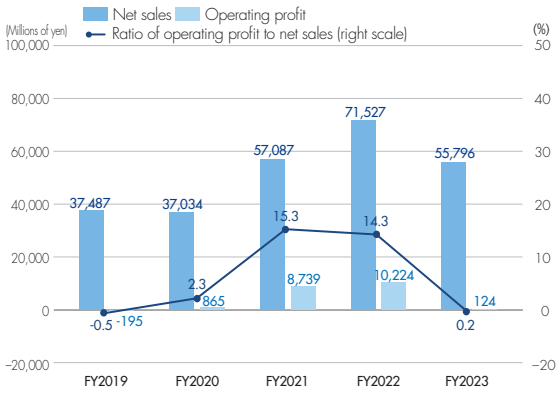


2023 • Added model number 40 to HPG series helical gear type



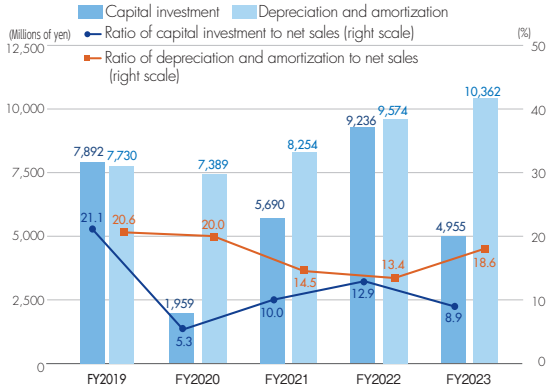
Financial Highlights

Net sales, Operating profit, and Ratio of operating profit to net sales



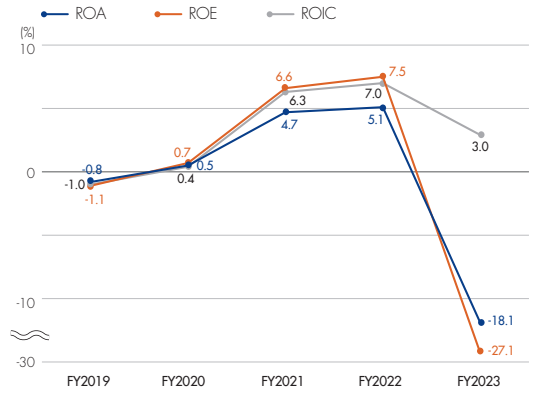
The net sales for fiscal 2023 amounted to ¥55,796 million, a decrease of 22.0% from the previous fiscal year, impacted by the continued stagnation of the domestic order from the previous fiscal period. Operating profit decreased 98.8% compared to the previous fiscal year to ¥124 million, due to an increase in depreciation and amortization as a result of investments to expand production capacity, as well as the decline in the operating rate of domestic production factories.

Capital investment, Depreciation and amortization, Ratio of capital investment to net sales, and Ratio of depreciation and amortization to net sales



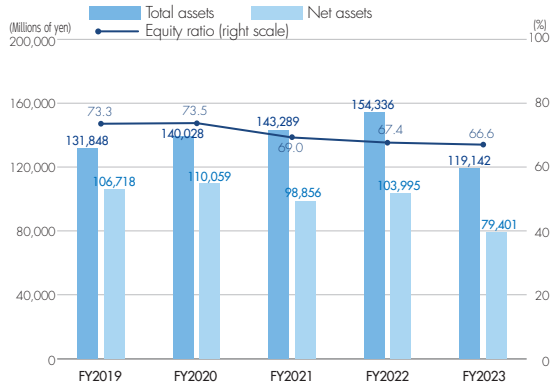
The capital investment decreased 47.5% compared with the previous fiscal year to a total of ¥4,955 million (¥3,548 million for Japan, ¥942 million for Europe, ¥465 million for North America). The three-year cumulative capital investment for the previous Medium-Term Management Plan for fiscal years 2021-2023 amounted to a total of ¥19,881 million, exceeding the plan (¥15,000 million) by 32.5%. Depreciation and amortization, including intangible, increased by 8.2% compared with the previous fiscal year to ¥10,362 million.

ROA, ROE, and ROIC



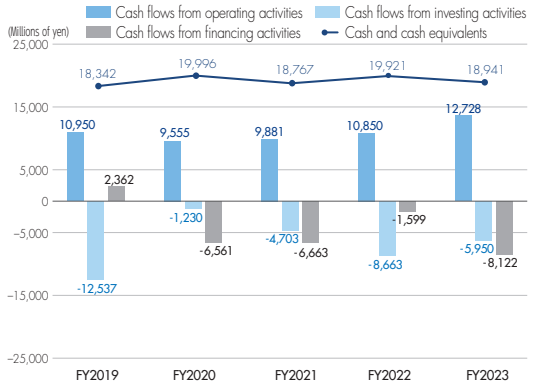
Return on equity (ROE) decreased by 34.6 percentage points to -27.1%, return on assets (ROA) decreased by 23.2 percentage points to -18.1%, and return on invested capital (ROIC) decreased by 4.5 percentage points to 3.0%, all from the previous fiscal year. The major reason for the decline in each profit ratio in fiscal 2023 is the recording of ¥28,159 million for impairment losses on intangible assets related to the consolidated subsidiary, Harmonic Drive SE.

Total assets, Net assets, and Equity ratio



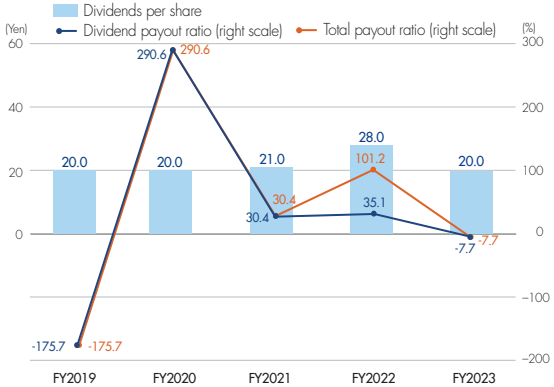
At the end of fiscal 2023, total assets decreased ¥35,193 million from the previous fiscal year end to ¥119,142 million, and net assets decreased ¥24,553 million from the previous fiscal year end to ¥79,401 million. Equity ratio dropped 0.8 percentage points from the end of the previous fiscal year to 66.6%. The major reason for this is the recording of ¥28,159 million for impairment losses on intangible assets related to the consolidated subsidiary, Harmonic Drive SE.

Cash flows, and Cash and cash equivalents



In terms of cash flows, operating activities provided net cash of ¥12,728 million, increasing by ¥1,878 million from the previous fiscal year, while investing activities used net cash of ¥5,950 million. Financing activities used net cash of ¥8,122 million, and cash and cash equivalents at fiscal year-end came to ¥18,941 million.

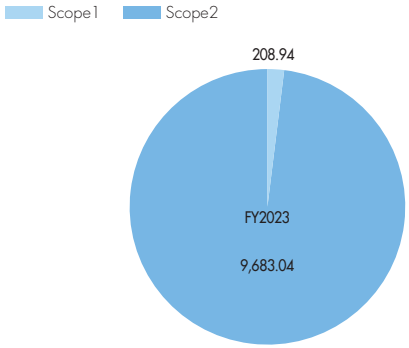
Dividends per share, Dividend payout ratio, and Total payout ratio



Dividends per share decreased ¥8 from the previous fiscal year to ¥20 (¥10 interim and ¥10 year-end), and dividend payout ratio was -7.7%, while ratio of total amount of dividends to net assets was 2.1%. A dividend payout ratio of 30% is our basic dividend policy. In the event of significant short-term fluctuations in performance, we will consider stable dividend payments while pursuing a flexible capital policy.

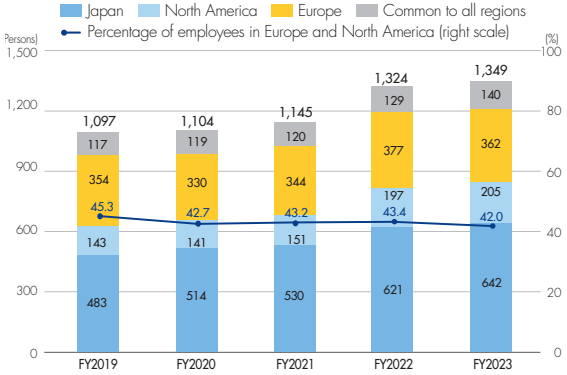
Sustainability Indicators Highlights

Greenhouse gas (GHG) emissions (t-CO_2)



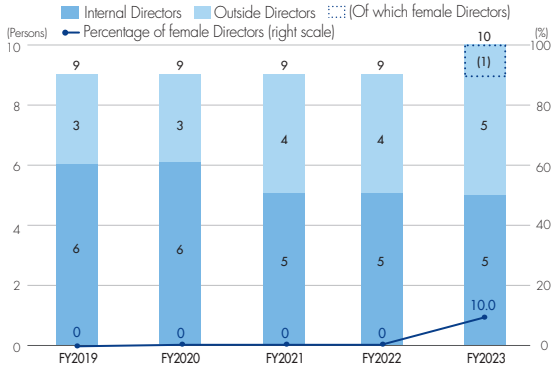
We began disclosing greenhouse gas (GHG) emissions on a consolidated bases with the figure from fiscal 2022. For fiscal 2023, the Scope 1 emissions totaled 208.94 t-CO_2, while Scope 2 emissions (location-based) totaled 9,683.04 t-CO_2, with a combined total of 9,891.98 t-CO_2.
The data on Scope 1 and Scope 2 GHG emissions for fiscal 2023 has undergone third-party verification by an external organization.

Number of employees on consolidated basis by region, and Percentage of those in Europe and North America



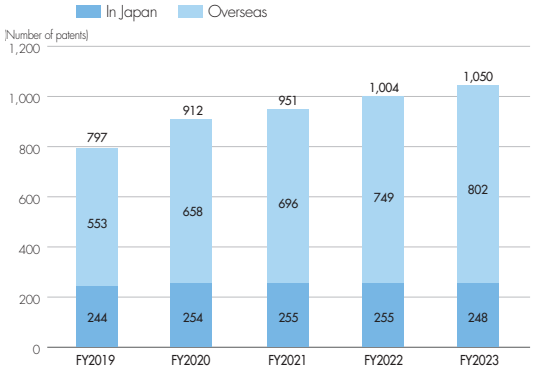
On a consolidated basis, the number of employees increased 25 from the end of the previous fiscal year to 1,349. The figure includes 642, up 21 from the previous fiscal year in Japan; 205, up 8 from the previous fiscal year in North America; 362, down 15 from the previous fiscal year in Europe; and 140, up 11 from the previous fiscal year for employees common to all regions. The combined total of the numbers in North America and Europe decreased by 7 to 567, representing 42.0% of all employees on a consolidated basis.

Number of Directors



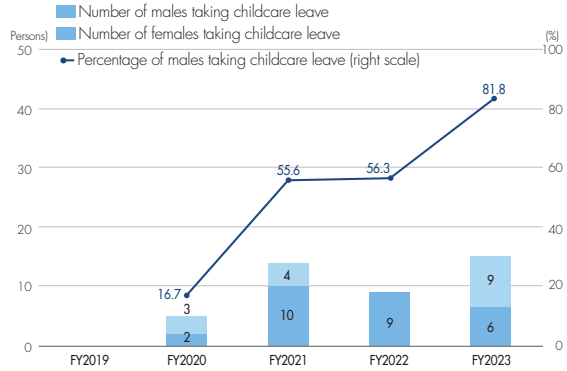
In fiscal 2023, the Company's Directors totaled ten, including five Outside Directors, and the percentage of Outside Directors came to 50%. Female Directors increased by one (Outside), and the percentage of female Directors has risen to 10.0%.

Number of patents held



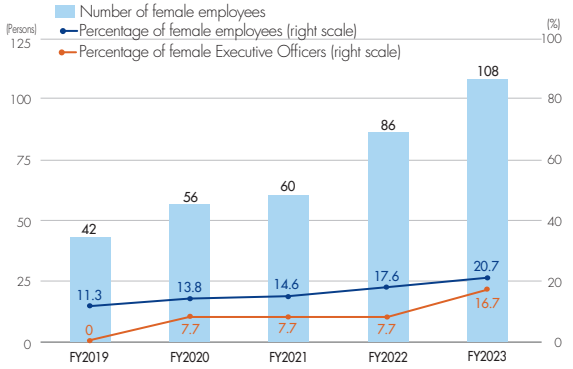
The Company held patents totaling 248 in Japan and 802 overseas totaling 1,050 at the end of fiscal 2023 on a non-consolidated basis. The number of patents held on a consolidated basis is 1,079.

Number of employees taking childcare leave, and Percentage of males taking childcare leave



The number of employees who took childcare leave on a non-consolidated basis was nine (nine males and zero females) in fiscal 2022 and 15 (six males and nine females) in fiscal 2023. Ratio of male employees who took childcare leave came to 81.8% on a non-consolidated basis. The number of employees who took childcare leave and the ratio of males who took childcare leave have been collected since fiscal 2020.

Number and percentage of female employees, and Percentage of female Executive Officers



The number of female employees on a non-consolidated basis increased 22 from the end of the previous fiscal year to 108, representing 20.7% of the non-consolidated total employees of 523. The Company has two female Executive Officers, representing 16.7%, and two females in managerial positions, representing 2.2%. For fiscal 2024, our target figure for female officers and those in managerial positions is to have two female officers and five females in managerial positions.

I Message from the President & CEO

Take on the Challenge of Value Creation and Transformation

We will contribute to technological innovation in society through motion control by further mobilizing and unleashing the brain power of individuals as we seek to realize our long-term vision



President and CEO Akira Maruyama

AKIRA MARUYAMA



Introduction : We will rebuild a corporate culture that encourages employees to embrace challenges

I joined Harmonic Drive Systems Inc. (HDSI) in 1985 as a new-graduate recruit. After gaining experience in various business operations such as production, design, development, and sales, I became involved in determining business strategy for the Company as a whole in the corporate planning division. When I joined, the average employee age was in the 20s and I had the strong impression that young employees were driving the Company. We visited customers that manufactured industrial robots and we young employees gained experience in proving ourselves by making a large number of technical proposals. The Company had a deeply rooted culture of swift decision-making and immediate action that allowed good ideas to be put into practice promptly. I myself was able to grow within this culture, and the colleagues I worked with at that time are also still active today.

Rebuilding a corporate culture that encourages employees to embrace challenges

However, as the Company developed and expanded in scale, then became a listed company that was expected to fulfill its responsibilities to society, the entire organization started to change. The roles of individuals increasingly standardized, and in some ways it became difficult to think freely or take on challenges. Having had this experience myself, when I talk to the younger generation of employees now, I sense that to some extent they relate to my own perspective and thought processes when I was young, which I find reassuring. That is why I want to rebuild a corporate culture that encourages employees to once more embrace challenges. So, how can we build such an environment again? First, it is essential to improve communication and transparency within our organization. We need to create an environment in which, rather than hanging onto a "ball" (i.e., an issue), individuals can proactively share information both internally and with the customer to make rapid decisions that resolve the issue and enable the ball to be returned. This is a challenge to be addressed by all our employees throughout every aspect of day-to-day operations, regardless of whether they work in direct or indirect sections, or what their job title might be.

I believe it is everyday communication that brings out the strengths of an organization and leads to problem-solving. If we only ever share information in groups or communicate through meetings, we will never be able to see the whole picture; instead, it is day-to-day communication that is essential to deal with the concerns and problems of individual employees. Particularly when we need to overcome disparities in thinking based on age and job position, I believe it is important to understand the generational gap and communicate frankly. During the COVID-19 pandemic, opportunities for communication declined, but since Japan downgraded COVID-19 to a "Class 5" infectious disease in May 2023, we have restarted social gatherings and other events, and are actively organizing occasions for employees to exchange opinions and understand each other better. I sincerely hope that we can make use of opportunities such as these to bridge the generational gap so that all our employees can grow in unison.

My task as chief executive and the strengths of our business model

My task as chief executive is to steadily grow the business the Company has built over more than 50 years and pass it on to the next generation in a sustainable form. In order to do so, it is crucial that we, the management team, create a comfortable working environment for employees. Looking back over HDSI's history, we see that for the first 10 years after its establishment, during the 1970s, strain wave gearing struggled to gain recognition and times were hard for the Company. It was later, when the electrification of industrial robots started, that our products began to be in demand. This demand subsequently continued as technological innovation advanced from one decade to the next in fields such as semiconductor manufacturing equipment and flat panel display manufacturing equipment, followed in more recent years by innovation in advanced medical equipment, co-bots, and aerospace. The HDS Group grew as these developments generated demand for its products. Thus, we have been able to predict the emergence of new products and applications as technology has progressed and bring to market products that are ahead of the curve, thereby establishing a cycle of growth. Looking ahead, we will continue to target sustainable growth by providing products that customers find appealing.

I have built my career thus far in an environment where business operations come first. Having taken on the responsibility of the President role, however, I intend to make a point of devoting time to connecting with people outside the Company in order to broaden my perspective. I think it will be important in terms of the Group's growth for me to leverage the abundant personal connections of our Chairperson, Akira Nagai, as well as to interact with a greater number of external parties. This will shorten the amount of time I can spend being in our factories, but given that I am responsible for developing and expanding the Group's business, I must also allow time for creating personal connections that give me a big-picture overview of the world in which we operate. On a separate

note, another of my key responsibilities from now on will be to place even greater value on management that prioritizes individual employees and focus on creating a comfortable working environment where all men and women can demonstrate their abilities to the full.

Moving toward providing more highly customized actuators

The distinguishing characteristic of the Group's business model is that we have evolved by keeping HarmonicDrive® strain wave gears as our core offering while providing products customized for each individual customer. It is this customization, and the R&D it entails, that comprise our core competencies. The added value the Group provides is, I believe, our ability to customize a product to the specifications that our customers' engineers want to use. To achieve this, we must constantly accumulate technical expertise exceeding what our customers demand from us and have a system enabling such expertise to be perpetuated. There are times when we deviate from customers' stated needs and make our own new proposals to pique their interest, offering the best possible specifications to satisfy their engineers' requirements.

In terms of R&D, we are exploring how far we can improve the strength, lifespan, and accuracy of HarmonicDrive®, and the experience and knowledge thus accumulated forms the basis of our business. Although we already have excellent products, we will continue researching methodically to further improve our technologies, working to make these products even lighter and thinner. In addition, we are developing and providing actuators, which motor manufacturers are unable to make for themselves. To provide actuators that customers actually want to use, we need to produce a large number of outstanding proposals. Of course, making proposals is not so easy that they all end up being adopted. However, once we succeed in having a proposal adopted, the product in question has a relatively long lifecycle and contributes significantly to keeping our revenue stable.



Emergence of competitors and realization of our long-term vision

Over the past five years, the emergence of competitors has become more pronounced. The biggest difference between the HDS Group and our competitors is that our HarmonicDrive® has been created from the lessons learned through mistakes made over more than 50 years. And this experience is reflected in our day-to-day efforts to reduce the size of products and improve their design, materials, and production. To ensure that we are not overtaken by competitors and continue to maintain our presence, we must constantly work on technological innovation and deliver new value to the market. A few years ago, we entered into partnership with a research institution in the U.S., SRI, with which we are now researching the Abacus® speed reducer, a device which, theoretically, promises to be highly efficient. Through investments such as this, we are actively taking on new challenges.

Meanwhile, the recently accelerating progress of generative AI is likely to make industrial robots more "intelligent." One example is the potential for humanoid robots to further penetrate the logistics and factory automation markets. A major challenge with speed reducers used in such robots is reducing their size and weight; working out how to make robot arms lighter is key. Although making our products lighter is not easy, we are continuing to work on this challenge while still meeting customers' specifications.

As competitors become more of a threat, the HDS Group needs to further reinforce its efforts to provide the value that our customers demand. This requires us to create new value by means of measures including bold cost-cutting. As we do so, it will be important to mobilize the knowledge and ingenuity—in other words, the brain power—of individual employees and maintain our commitment to continually taking on new challenges. But even if a new initiative fails to go as planned, nothing is lost; in fact, such failures are extremely beneficial as they offer opportunities to learn from our mistakes. I believe that the path to eventual success lies in making use of every lesson learned for the next challenge and not giving up.

Realizing our long-term vision for 2030

As we work toward realizing our long-term vision for 2030, "The best provider of total motion control in harmony with the future," my key concern is whether the Group will be able to maintain its position as the supplier that leading robot manufacturers can rely on. Remaining "the best provider," requires us not only to continue providing products of value that solve customers' issues, but also to ensure robust supply capacity that will never cause customers any worry. At our Ariake Factory, we are currently installing automated production lines, which we invite customers to observe directly to reassure them in this regard.

Meanwhile, our Hotaka Factory, which handles high-mix low-volume production, has in the past employed manufacturing methods characterized by highly skilled craftsmanship, but it is now adopting methods aimed at eliminating reliance on individual expertise. We have succeeded in maintaining high product quality and dramatically improving productivity by employing advanced measurement technology on processing and assembly lines, which have traditionally been considered difficult to automate.

Business environment outlook and the HDS Group's strategy

In seeking to understand our business environment, we refer to the long-term forecasts of the International Federation of Robotics (IFR) to identify long-term trends in the market for industrial robot-related products. The critical decline in developed nations' working populations has made it difficult to secure personnel to work in logistics or in factories, making labor-saving measures at manufacturing sites unavoidable. Accordingly, we expect the industrial robot field—particularly co-bots and humanoid robots—to continue evolving and growing in future.

The Chinese market accounts for around half of worldwide demand for industrial robots. Current demand in the Chinese market is weak, but local robot manufacturers have been advancing. Year by year, foreign manufacturers' market share is further eroded by local Chinese companies and now four of the top ten robot manufacturers in the Chinese market are local companies. Several local Chinese companies are targeting the same level of quality as Japanese companies, and some small-robot manufacturers that claim to have achieved the same level of quality as Japanese manufacturers have already emerged. The increasingly competitive Chinese robot market is of key importance for the HDS Group, so we must continue to keep a close watch on this market.

In fact, the Company has already received an order from a local Chinese manufacturer for a product to be used in high-end robots. This local manufacturer is currently targeting the Chinese domestic market, but it is also considering the possibility of exporting in future. Consequently, the imperative to ensure that their robots meet global standards of quality may well give rise to a desire to further improve their robots' reliability by switching to HDSI's precision speed reducers. From HDSI's point of view, if we do not focus on participating in the Chinese market as a partner, we risk losing market share. In order to meet this type of need, therefore, we must think about how to set our prices at a level satisfactory to local manufacturers. The situation is similar with regard to co-bots; we have already received an inquiry about HDSI's products from a local Chinese company that is considering international expansion of its co-bot business, and we intend to use this as an opportunity to grow our market share. Under these circumstances, the Company plans to keep production of its core HarmonicDrive® product within Japan, but we will also look into the possibility of assembling peripheral components locally in China. We will move cautiously, however, as we need to address not only pricing and cost competition, but also the risk that production technologies could be leaked.

Aims of our company-wide cost innovation project

Achieving the targets of the current Medium-Term Management Plan will necessitate pricing strategies founded on a sound cost structure to maintain and grow the Company's share of sales. That is why we are implementing our cost innovation project throughout the Company. We have strengthened our plan-do-check-act (PDCA) cycles for all operations throughout the Company and started efforts to thoroughly explore how we can cut costs. In specific terms, we are challenging ourselves to cut the cost of producing products, including the cost of procured items, to 50% of the previous level. To that end, we are currently working to improve materials and processing methods. It will not be possible to cut all our costs by 50%, but we intend to keep costs down as far as possible without compromising quality and reflect those savings in product prices promptly. We are reviewing our cost structure throughout the Company and deploying measures that represent a break from the past, not only for individual factories and procurement operations, but also for indirect sections. Such measures will be particularly important for products to be used in robots.

I told our employees that this project is a "challenge." That is to say, even if a particular measure fails to go to plan, nothing is lost. The intention behind this is that I want employees to avoid placing constraints upon themselves and instead generate knowledge and ingenuity by thinking freely. The various measures will be implemented for differing lengths of time depending on what they involve, but we are allowing two years for the longer measures. The key is to set goals in terms of action to be taken and corresponding outcomes to be achieved. Even our indirect sections are making efforts to

cut their meeting times in half, primarily by improving operational efficiency through proactive use of IT and challenging themselves to get through more of the same work in less time.

"Things that should not be changed" and "things that should be changed"

To achieve our targets, we must not simply continue along the same path as hitherto, although we must also avoid rejecting the past in its entirety. Instead, the best approach would be to respect the valuable foundation we have built over the past 50 years while making changes flexibly where necessary in response to changes in our operating environment. I firmly believe that if we stay aware of problems and targets in our day-to-day work, improvements and elimination of inefficiencies will occur naturally and accumulate, leading to transformation several years later. A company gives its employees their own individual roles, but how employees perform their roles is something that they themselves can change for the better; indeed, that is what it means to be a professional. I would like all our employees to take pride in their own work, to set their sights higher, and to aim to experience a sense of accomplishment on a daily basis.

In terms of "things that should not be changed," one example is keeping quality stable at a high level. This is reflected in our Management Philosophy, which was devised immediately after HDSI's establishment and remains the cornerstone of our business activities today. It stipulates a constant emphasis on quality as one element comprising the foundation upon which the Company's management is based. When I read our Management Philosophy again now as the President, I find that it still makes very good sense. The process of putting the management philosophy into my own words to draw up policies makes me realize that, whichever way you look at it, the fundamental philosophy remains the same.

On the other hand," things that should be changed" include, first and foremost, our speed of response. When we receive an inquiry from a customer, our ability to reply to them quickly with a delivery schedule is crucial. If we fail to respond with the necessary speed, we will not even get a chance for further consideration. Moreover, the customer's requirements should be all that matters, yet somehow we still have a tendency to set schedules based on our own convenience. And designing schedules to suit the Company's own rules and workload is risky. This is because the ways in which we work have become more complex, so despite the greater efficiency achieved through IT, we have still not achieved overall optimization. For example, senior managers are often asked to make decisions regarding customer problems, but responding to customers quickly requires a system that enables decisions to be made onsite as much as possible. In fact, when we visited customers and suppliers, we realized that all companies face this same issue. However, just because the situation is the same at other companies does not mean we should accept it. That is why, as the centerpiece of our previous Medium-Term Management Plan, we set the target of having emergency response (ER) teams deal with urgent problems and reply to customers quickly. The issue, however, was that prioritizing ER problems sometimes resulted in other work being delayed. So, I also intend to hire more human resources with novel perspectives to deal with such problems. Going forward, I want us to cut our client response time to half of what it has been in the past.

Other "things that should be changed" are our employees' awareness of costs and willingness to take on challenges. There is no downside to taking on a challenge, while assuming that something cannot be done impedes growth. It is of paramount importance, therefore, to ensure an environment that is tolerant of people failing when they take on a challenge.

Achieving our Medium-Term Management Plan for fiscal years 2024-2026

In fiscal 2024 we started our current Medium-Term Management Plan, but before discussing it, I would like to review our previous Medium-Term Management Plan. From a quantitative perspective, we regret that operating income during the previous plan fell short of our target. From a qualitative point of view, we took action to speed up management, implement an emergency response approach, and improve productivity. However, we made the mistake of focusing on generating the same outputs every year, and I feel that we did not produce satisfactory results as far as all employees were concerned. But, given the rapid progress in the world around us, even achieving the targets set out in our Medium-Term Management Plans would not have merited full marks. For that reason, I would rate the success of our previous Medium-Term Management Plan at only around 50%.

On the other hand, we did make some headway in automating our factories and our use of IT progressed. For some time, there had been a sense of urgency in frontline operations about the need to make more use of IT, but previously we had been following other companies' examples without our own strategy. Then we increased our IT personnel through mid-career hiring and put together a new ICT Team. As a result, the ICT Team was able to devise a proper strategy and employees now consult the ICT Team first of all when designing new work flows within individual organizational units. The ICT Team also takes the initiative in making its own recommendations and visualization of factory processes has advanced.

The challenge from now on will be the development of human resources. Rather than obtaining high-quality human resources through hiring, the key issue is how we can create an environment that enhances the individual abilities (i.e., brain power) of existing personnel. We will of course invest effort in education, but I hope to generate even better results through human resource development plans. Such plans would account for employees' individual job positions and characteristics and could

include boosting employees' experience through more delegation of authority.

Emphasizing profitability to increase value through the Medium-Term Management Plan for fiscal years 2024-2026

The basic policy of the current Medium-Term Management Plan is "Take on the Challenge of Value Creation and Transformation." When devising the Medium-Term Management Plan, we were conscious of links with our materiality. In terms of what we will actually do, one of the plan's policies is achieving sustainable growth of all businesses with an emphasis on profitability. Accordingly, I consider it important to provide education for the employees who will put this into practice. Linked to our materiality, this corresponds to maximizing the value of human capital.

During periods when factory utilization rates are low, it is possible to make time for education of human resources, but the challenge is how to provide such education at busy times. As we are currently in a period of low factory utilization, we are progressing with on-the-job training, preparation and updating of procedure manuals, and multi-skilling of workers. We expect the results of these initiatives to become apparent during or after fiscal 2025. Meanwhile, we are ensuring profitability by taking appropriate action to raise product prices.

Our cost innovation project, which is connected to improving profitability, focuses not only on simple reduction of costs, but also on creation of new value. To cultivate novel applications for our products, we must consider what technologies are lacking and what types of products are in demand. For example, humanoid robots require ultra-lightweight, highly reliable precision speed reducers, which no other company can supply. HDSI has nearly perfected the necessary technology and we are now planning to develop it further to produce actuators. The Company already manufactures motors, sensors, and drivers in addition to precision speed reducers, and by providing these products all in one, we can generate substantial added value.

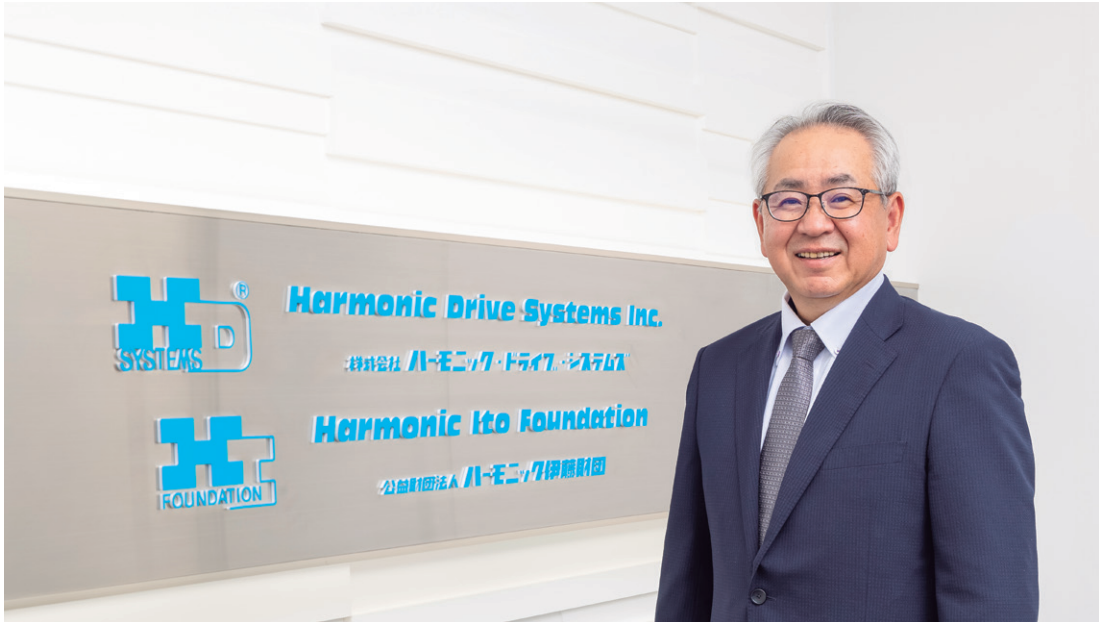
Meanwhile, in another effort to create new value, we are considering partnerships and M&A with other companies.

Closing remarks : Stock price and shareholder returns

What is important in terms of our relationship with shareholders and investors is to be open about our mission, steadily put it into practice, and proactively disclose information in order to be evaluated by the capital markets. Companies prioritize dividends and offer returns to shareholders if their business is not expected to grow. However, HDSI is currently in the process of growing, so many of our shareholders and investors think we should prioritize investment, which is a source of reassurance and encouragement for us. I myself also think we should prioritize growth investments over returns to shareholders at the moment.

Against a backdrop of worldwide labor shortages and advancements in AI, demand for automation and new robots can be expected to grow even further going forward. Guided by its unchanging mission of contributing to technological innovation in society by our motion control, the HDS Group intends to mobilize the brain power of its employees to become stronger than ever as a company.

I sincerely hope that our stakeholders will continue to support the HDS Group's growth.

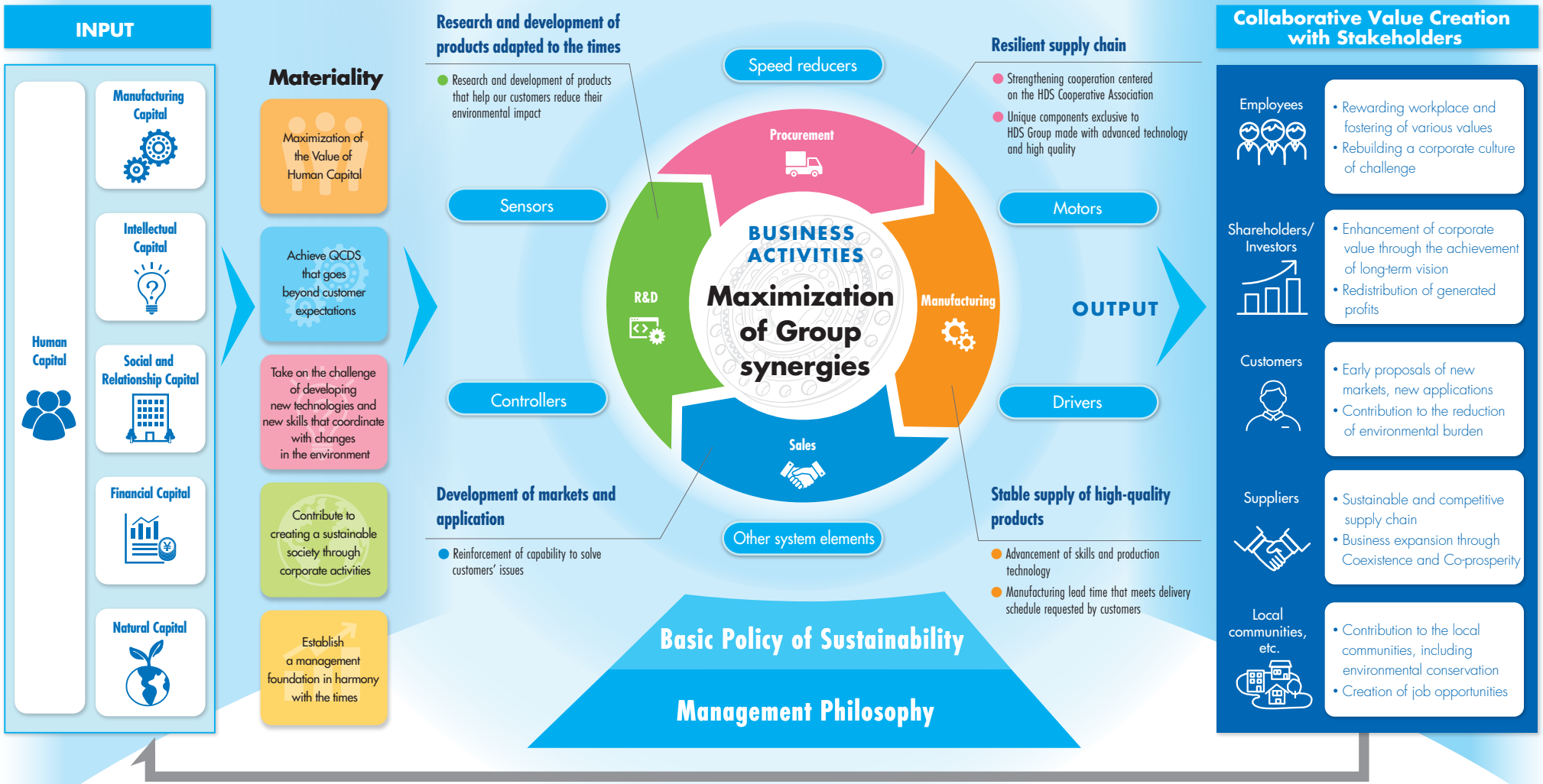


I Value Creation Process

Mission To contribute to innovation in the society by our motion control technology

Long-term Vision The best provider of total motion control in harmony with the future

Medium-Term Management Plan for fiscal years 2024-2026 **Take on the Challenge of "Value Creation and Transformation"**



Management Capital as a Driver of Value Creation

In order for the HDS Group to achieve sustainable growth, it is important for us to accurately identify the surrounding social issues and business environment, specify risks and opportunities, and produce outcomes that lead to increased corporate value. These outcomes will be created from our inputs that are our strengths and through our unique business activities based on our Management Philosophy. Through this process, we will strive to achieve our mission and long-term vision.

External environment/Risks and opportunities

● **Reduction of global environmental burden and realization of a decarbonized, recycling-oriented society** ● **Decrease in workforce and skilled workers** ● **Increased interest in sustainability** ● **Establishment of robust supply chain**

Our Group's suppliers are increasingly paying attention to global environmental issues such as decarbonization and resource recycling, and request for information disclosure on these issues. Delays in addressing these issues may lead to a decrease in business opportunities for the HDS Group. On the other hand, the decline in the working population and the number of skilled workers will lead to an increase in demand from robot manufacturers and others, who are our customers, and the Group will also need to strengthen its production system and establish a sustainable supply chain.

	Strengths	**INPUT** (FY2023)	**Highly relevant materiality**	**OUTCOME** (Medium-Term Management Plan)	Refer to:
Human Capital	Development of an appropriate evaluation of each individual and work environment based on the Management Philosophy, "Respect for the Individual"	● Number of employees (consolidated): 1,349 (including 567 overseas)	Maximization of the Value of Human Capital	● Individual growth and exercise of diverse skills ● Thorough implementation of QCDS + Speed that meets beyondcustomer expectations ● Fostering a culture that goes beyond conventional mindsets	P.53 P.54 P.56
Manufacturing Capital	8 domestic and 4 overseas production bases, and a build-to-order system that creates competitiveness	● Capital investment: ¥4.9 billion; ratio of property, plant and equipment to total assets: 40.4%	Achieve QCDS that goes beyond customer expectations	● Enhancing productivity through the promotion of automation and IT adoption ● Ensuring absolute superiority in product quality	P.33 P.34
Intellectual Capital	Quality standards that meet customer expectations and realization of total motion control	● R&D expenditure: ¥3.6 billion ● 141 R&D personnel	Take on the challenge of developing new technologies and new skills that coordinate with changes in the environment	● Developing new drivers for growth ● Solutions that meet customer needs	P.41 P.44
Social and Relationship Capital	Supply chain structure that supports competitiveness and an enhanced global presence	● HDS Cooperative Association: 38 companies ● 31 global sites in 12 countries	Achieve QCDS that goes beyond customer expectations	● Maintaining No. 1 market share ● Coexistence and Co-prosperity with suppliers	P.51 P.73 P.74
Financial Capital	High financial stability, growth investments, including use of interest-bearing liabilities	● Total assets: ¥119.1 billion ● Net assets: ¥79.4 billion ● Interest bearing liabilities: ¥18.4 billion	Establishment of a management foundation in harmony with the times	● Achieving ROE that exceeds capital cost ● Balancing financial stability with growth investments	P.29 P.60 P.69
Natural Capital	Promotion of environmentally friendly business activities	● Energy input: 37,815 MWh ● Water withdrawals: 29,909m^3	Contribute to creating a sustainable society through corporate activities	● Developing products that reduce environmental impact ● Promoting Net Zero GHG emissions	P.45 P.47 P.49 P.77

Reinforcing Value Chain for Value Creation

Since the sale of HarmonicDrive®, the HDS Group's flagship product, is affected by the capital investment trends of our customers, including manufacturers of industrial robots, semiconductor manufacturing equipment, and machine tools, demand is highly volatile. This trend has become increasingly pronounced in recent years. To strengthen our ability to respond to demand fluctuations, we need to cooperate with suppliers including the HDS Kyoryokukai (HDS Cooperative Association), increase our production capacity, and gain insight into anticipating what will happen beyond demand. We will further reinforce our value chain, one of our strengths, and maximize the value we create, thereby achieving profit growth over the medium- to long-term.

Sales

- Reinforcement of capability to solve customers' issues
- Maintain position as top manufacturer

Themes of medium- to long-term importance

- Increase our capabilities to respond to our customers (speed, in particular) and customer satisfaction
- Maintain the HDS Group's position by key customers

Initiatives and values expected to be created

The unique feature of HarmonicDrive®, the HDS Group's core product, is that it is customized according to the individual needs of our customers. The sales section aims to improve customer satisfaction by trying to refine its unique solution sales style that goes beyond what our customers demand from us and strengthen its capabilities to support our customers through system reforms and other measures. Specifically, it works with the Motion Control (MC) Development Group to conduct the solution-based selling that will meet our customers' demand. Our basic policy is to make sales through our direct sales and sales agents domestically and directly overseas. In October 2024, the latest data-driven sales DX began full-scale operations. This allows us to collect and analyze data such as demand forecasts, inventory status, examples of successes and failures, and we will build a structure under which we can develop our sales activities more strategically.

While the sales team sets achieving QCDS that meets customer expectations as the most important materiality, maximizing the value of human capital and taking on the challenge of developing new technologies and skills that coordinate with changes in the environment are also important. The value created as a result includes **(1) new-value-creating products, (2) realization of total motion control,** and **(3) increasing our capabilities to respond to our customers.**

R&D

- Research and development of products that help our customers reduce their environmental impact
- Creation of innovative proprietary technologies

Themes of medium- to long-term importance

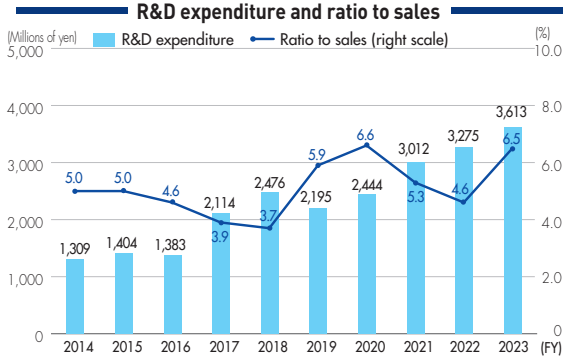
- R&D on various motion mechanisms to realize total motion control
- Pursuit of development efficiency and strengthening the development of human resources in R&D

Initiatives and values expected to be created

Our R&D structure consists of three divisions: the Development and Engineering Division that develops and designs standard catalogue products and develops and designs products based on customer requests mainly in Japan; the New Mechanism Principle Laboratory that freely explores new principles and mechanisms beyond the boundaries of existing products; and the Harmonic Drive Laboratory that investigates deeply the basic technology supporting HarmonicDrive® to find possibilities for enhancing its performance. In addition, we have an office in Silicon Valley in the U.S., a region where the world's most advanced IT and robot technologies are concentrated, to conduct studies and research on next-generation products such as humanoid robots.

The R&D team identifies market and technology trends and customer needs at an early stage to support proposals that go beyond their expectations. Its most important materiality is to take on the challenge of developing new technologies and skills that coordinate with changes in the environment, and to achieve that, it is essential to maximize the value of human capital. The value created as a result includes **(1) innovative proprietary technologies** and **(2) helping our customers reduce their environmental impact.**

R&D expenditure and ratio to sales



To this end, it is essential to make full use of our management capital centered on human capital, which is one of the HDS Group's strengths, to demonstrate the strength of our superior value chain by taking into account our materiality in our business activities. We will be committed to solving social issues and improving corporate value through the provision of total motion control, by accurately capturing market and technological trends and customer needs at an early stage and by continuing to propose product development with an eye to the future.

Procurement

- Strengthening cooperation with suppliers centered on the HDS Kyoryokukai (HDS Cooperative Association)
- Unique components exclusive to the HDS Group made with advanced technology

Themes of medium- to long-term importance

- Building and strengthening a system for stable supply (collaboration with the HDS Cooperative Association)
- Comprehensive capability of the entire supply chain and high quality

Initiatives and values expected to be created

Stable procurement of materials and parts is essential to definitively capture new business opportunities. A sustainable procurement policy was formulated in fiscal 2022, and the Supply Chain Division is working on (1) strengthening a system for stable supply, (2) strengthen comprehensive capability of the entire supply chain, and (3) human resource development as priority measures. In order to embody our Management Philosophy of Coexistence and Co-prosperity, it is important to maintain a close relationship with the HDS Cooperative Association, which is made up of tier 1 suppliers, and other suppliers, and this will lead to the enhancement of our ability to address issues related to quality and delivery deadlines . For the realization of a sustainable society, the HDS Group will continue to communicate meticulously with our suppliers and work on building a collaborative system based on trust. In doing so, we will fulfill our social responsibility across our entire supply chain.

In procurement, the most important materiality is to achieve QCDS that meets customer expectations; however, suppliers' awareness of sustainability (e.g., Scope 3, response to human rights, etc.), contributing to a sustainable society through corporate activities and maximizing human capital value are also important. The value created as a result includes **(1) accurate response to delivery deadlines**, and **(2) contribution to the global environmental conservation.**

Manufacturing

- Advancement of skills and production technology
- Manufacturing lead time that meets delivery schedule requested by customers

Themes of medium- to long-term importance

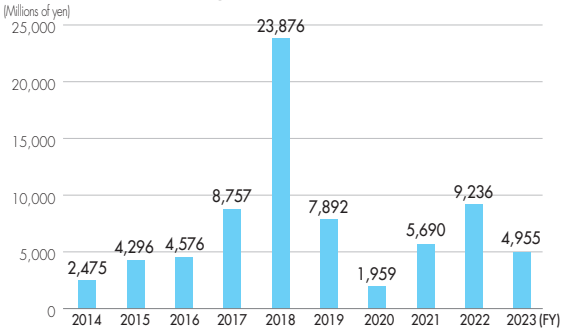
- Human resource development at the Hotaka Factory and distributing workloads evenly by promoting multi-skilling of workers
- Improving profitability by rolling out automation technology developed at the Ariake Factory to the Hotaka Factory

Initiatives and values expected to be created

The HDS Group generates added value through manufacturing, as indicated by its balance sheet, where property, plant and equipment account for 40% of total assets, and continues to innovate production for high quality and high reliability. At the Hotaka Factory, we engage in high-mix low-volume production with advanced expert skills and at the Ariake Factory, we work to maintain high quality and further increase productivity through mass production of same type by promoting automation and DX. In this way, we meet customer requests.

In manufacturing, the most important materiality is to achieve QCDS that meets customer expectations; however, maximizing the value of human capital, taking on the challenge of developing new technologies and skills that coordinate with changes in the environment, and contributing to a sustainable society through corporate activities are also important. The value created as a result includes **(1) providing products with high quality and high reliability**, and **(2) shortening of production lead times.**

Capital investment



Materiality to Achieve Aspirations

Based on our Management Philosophy, we aim to bring a sustainable society into reality and grow our business by achieving our mission of "To contribute to innovation in the society by our motion control technology."

In modern society where things are changing rapidly and all kinds of social issues have been brought to the fore, it is becoming increasingly more critical to build a sustainable management foundation that can flexibly respond to short-, medium-, and long-term opportunities and risks in the future and to contribute to the solution of social issues. To achieve this, it is necessary to identify our priorities to be addressed for the sustainable growth of the HDS Group. As part of this effort, we have identified material issues (materiality) for our business. It is important to incorporate them into our business strategy and work on it with a medium- to long-term view.

In identifying materiality, we focused on ensuring consistency with social requirement as well as Management Philosophy and business strategies. For evaluation, we look at it from the perspective of social sustainability and sustainable growth of the HDS Group.

With the formulation of the Medium-term Management Plan for fiscal years 2024-2026, the Sustainability Committee repeatedly discussed to review materiality, and identified five new materiality following the discussion at the Board of Directors meeting held on November 20, 2023. The materiality is positioned as a priority issue to be addressed to realize our long-term vision of becoming the best provider of total motion control in harmony with the future.

Process of extraction and identification of materiality

Toward the realization of a sustainable society and improvement of corporate value, we have identified material issues (materiality) through the following process, led by the Sustainability Committee.

The Sustainability Committee is chaired by President and CEO and its members consist of executive Directors.

Step 1 Extracting sustainability-related issues

In addition to issues concerning the HDS Group's business strategy, issues that are related to sustainability are extracted comprehensively by going through case studies focusing on value chain companies and looking at global frameworks on sustainability such as the ISSB, GRI, and SASB Standards as well as seeking opinions from experts.

Step 2 Impact assessment of each issue

Extracted issues are evaluated by the Sustainability Committee from the perspectives of "impact on social sustainability" and "impact on the sustainable growth of the HDS Group" and mapped on a materiality matrix. Issues that have particularly strong impacts are selected.

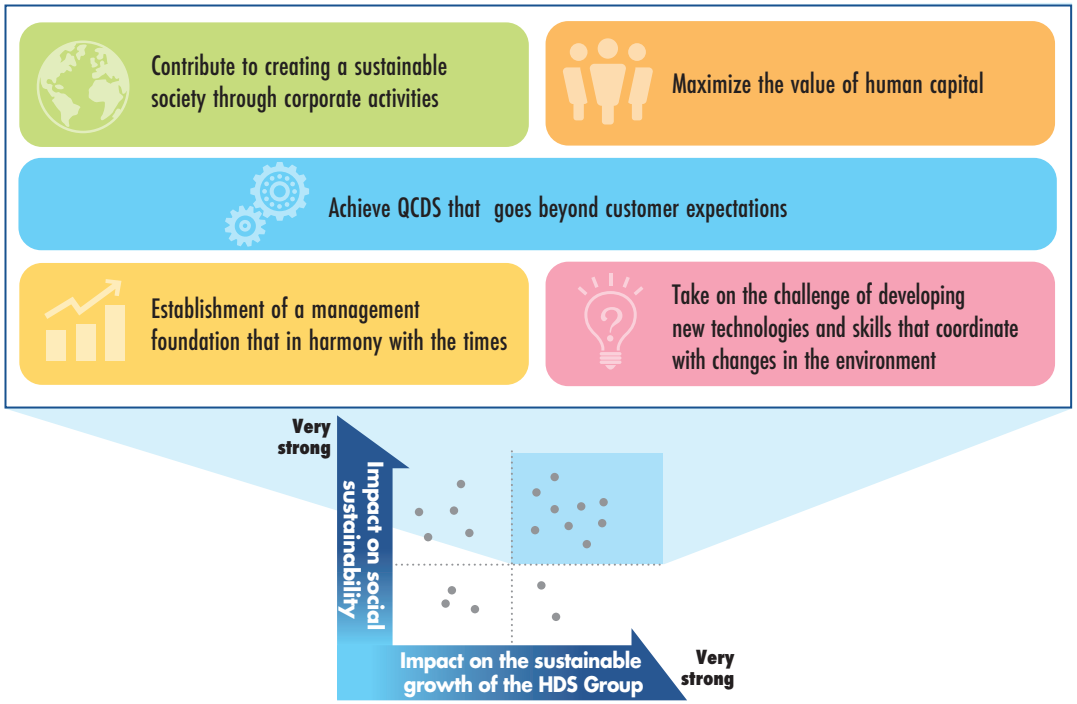
Step 3 Identification of materiality

Discussion is held based on the materiality matrix created in STEP2, and based on the HDS Group's business strategies, issues are classified into five material issues (materiality) in the materiality matrix.

Step 4 Approval by the Board of Directors

At the Board of Directors meeting held on November 20, 2023, materiality classified in STEP3 is discussed and finally approved.

Materiality Matrix



Materiality to Achieve Aspirations

The newly identified five material issues (materiality) are priority issues to be addressed to realize our long-term vision of becoming the best provider of total motion control in harmony with the future, and form the basis for formulating the Medium-term Management Plan for fiscal years 2024-2026.

Human capital, as stated in "maximize the value of human capital," is the most important management capital in corporate activities, and is the source of all other management capital (manufacturing capital, intellectual capital, social capital, financial capital, and natural capital). In our Management Philosophy, we set "respect for the individual" as the first item of the priority issues. We are working to maximize human capital including fostering a corporate culture that encourages employees to take on the challenge without fear of failure, creation of a rewarding workplace, and enhancement of personnel systems and capacity development.

"Achieve QCDS that goes beyond customer expectations" is a key issue to achieve sustainable growth of all businesses with an emphasis on profitability, which is the core of our Medium-term Management Plan. In addition to Quality (Q), Costs (C), Delivery (D), and Service (S), we are making company-wide efforts to improve another Speed (S).

"Taking on the challenge of developing new technologies and skills that coordinate with changes in the environment" is an essential element to achieve our mission of "to contribute to innovation in the society by our motion control technology," and it is becoming even more important in this era of rapid technological innovation and market change.

"Contribute to creating a sustainable society through corporate activities" is an essential initiative to enhance global, social, and the HDS Group's sustainability together. We will strengthen our sustainability initiatives, aiming to achieve harmony with all stakeholders including the global environment and our employees.

We are working on the "establishment of a management foundation in harmony with the times" with the aim of enhancing the sustainability of our financial base, governance and management system that are pivotal for realizing these material issues (materiality).

Materiality of the HDS Group

Materiality	Key Measures	Refer to:
Maximize the value of human capital	● Provide a safe and secure work environment ● Promote professional development ● Develop personnel systems and workstyle that promote diversity ● Develop a corporate culture and environment that encourage employees to take on the challenge	P.50,53,54,56
Achieve QCDS that goes beyond customer expectations	● Strengthen the quality management system ● Complete a company-wide cost innovation project ● Improve productivity ● Strengthen solutions (planning, proposal, technology) ● Respond with a focus on speed	P.33,34,35,36, 37,38,39,51
Take on the challenge of developing new technologies and skills that coordinate with changes in the environment	● Develop next-generation applications ● Create new technologies and methods	P.40,41,44
Contribute to creating a sustainable society through corporate activities	● Initiatives to achieve the target of Net Zero by 2050 ● Reduce environmentally hazardous substances ● Address human rights issues ● Build robust supply chain	P.45,47,49,52, 73,77
Establishment of a management foundation in harmony with the times	● Promote sustainable management ● Align organization and management structure to market expectations ● Establish a financial base to support growth and strengthen financing ● Establish an effective sustainability system	P.29,60,66,67, 69

Past Medium-Term Management Plans

Medium-Term Management Plan (FY2012-FY2014)

Management Policy

- Position quality and safety as the foundation of business operations
- Reflect needs of the market (customers) in product development and expand sale of new products
- Become a group that faces the needs of the market (customers) head-on and responds accordingly
- Bolster business of all major products

Business Strategy

- Continuously upgrade technologies and skills (strengthen core technologies)
- Enhance product appeal with technologies and skills (expand product variation)
- Raise competitiveness of actuators
- Implement sales expansion strategy in the Asian market

Achievements and Challenges

Net sales for industrial robots showed significant growth, and net sales for Asia rapidly increased roughly three-fold over the three-year period. Results fell slightly short of numerical targets, but net sales, operating income, and operating income to net sales ratio all reached all-time highs, with operating income to net sales ratio achieving 27.2%. Also, ROE stood at 14.7%.

Items	FY2014 Management targets	FY2014 Results
Net sales	¥26.0 billion	¥25.9 billion
Operating income	¥7.5 billion	¥7.0 billion
Operating income to net sales ratio	28.8%	27.2%
Dividend payout ratio and dividends per share	–	27.2% (¥29/share)
Capital investment (3-year total)	–	¥5.1 billion
Depreciation and amortization (3-year total)	–	¥3.5 billion
R&D expenditure (3-year total)	–	¥3.6 billion

Medium-Term Management Plan (FY2015-FY2017)

Management Policy

- Aim for a business foundation supported by the three product groups
- Reinforce the competitiveness and business foundation of the three main product groups
- Develop the Asian market and create a business foundation

Business Strategy

- Find new applications for HarmonicDrive® Speed Reducers and launch new products in the market
- Actively launch new mechatronics products
- Capture overseas markets for precision planetary speed reducers
- Actively expand sales in the Asian market
- Improve organizational strength and develop human resources

Achievements and Challenges

Net sales and operating income have cleared numerical targets by a wide margin and set new records. A rapid growth in demand globally for industrial robots and the conversion of a German affiliate company into a subsidiary were contributing factors. However, the operating income to net sales ratio figure ended short of the plan. This was mainly attributable to the fact that against a three-year plan for aggregate capital investment of ¥10 billion, the actual figure reached ¥17.6 billion, and the burden of depreciation and amortization expanded from the planned ¥6 billion to ¥9.1 billion. Issues remained with regard to production capacity and stable supply.

Items	FY2017 Management targets	FY2017 Results
Net sales	¥35.0 billion	¥54.3 billion
Operating income	¥9.5 billion	¥12.5 billion
Operating income to net sales ratio	27.1%	23.2%
Dividend payout ratio and dividends per share	–	31.5% (¥26/share)
Capital investment (3-year total)	¥10.0 billion	¥17.6 billion
Depreciation and amortization (3-year total)	¥6.0 billion	¥9.1 billion
R&D expenditure (3-year total)	¥4.8 billion	¥4.9 billion

Medium-Term Management Plan (FY2018-FY2020)

Management Policy

- Significantly raise global production capacity
- Raise capabilities of group companies to strengthen all-around abilities
- Increase customer satisfaction by raising QCDS capabilities
- Strengthen management foundation to support future growth
- Lay groundwork for growth in the future

Business Strategy

- Raise production capacity and achieve improvements in productivity
- Carry out greater investment in the main production bases and bolster comprehensive capabilities
- Normalize and reduce production lead times, launch new products, and strengthen the support system for technology proposal capability
- Secure and develop human resources, utilize IT, promote management that takes ESG into account

Achievements and Challenges

In steadily implementing the business strategy, cutbacks in capital investment worldwide for manufacturing industry due to factors such as US-China trade friction, in addition to declining advance orders as a result, and further, a sharp decline in capital investment with the global spread of COVID-19 became evident, resulting in considerably underperforming against numerical targets. While keeping the capital investment plan under restraint, the groundwork for growth looking toward 2030- 2050 was being firmly laid.

Items	FY2020 Management targets	FY2020 Results
Net sales	¥100.0 billion	¥37.0 billion
Operating income	¥26.0 billion	¥0.8 billion
Operating income to net sales ratio	26.0%	2.3%
Dividend payout ratio and dividends per share	–	290.6% (¥20/share)
Capital investment (3-year total)	¥71.0 billion	¥33.7 billion
Depreciation and amortization (3-year total)	¥25.5 billion	¥21.6 billion
R&D expenditure (3-year total)	¥9.4 billion	¥7.1 billion

Previous Medium-Term Management Plan (FY2021-FY2023)

Management Policy

Long-term Vision

In pursuit of total motion control

- Take on the challenge of developing new technologies and skills that capture changes in the environment
- Achieve QCDS that goes beyond customer expectations
- Contribute to creating a sustainable society through corporate activities

Basic Policy

Toward the Next 50 Years: Moving to a Solid Growth Stage

(1) Achieve QCDS that meets customer expectations
(2) Expand RD, AD, and MT businesses by developing valuable products and enhancing services
(3) Build a management foundation that meets the demands of the times
(4) Strengthen coordination and maximize synergies with overseas group companies and institutions
(5) Create new standards that define the next 50 years through outside-the-box thinking

Initiatives implemented and their results

[investment in property]

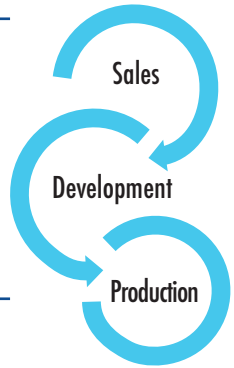
- Increased facility's capacity at the Ariake Factory
  (40,000 units for industrial machines and 30,000 units for automobiles)
  ➡ Productivity per worker is now more than twice that of the conventional line
- Promoted DX in the factory

[investment in human resources]

- Improved operations with "waste elimination" as the keyword
- Promoted multi-skilling of workers
- Further improved workers' skills

Increase our capabilities to respond to our customers' issues

- Discover new needs
- Absorb insights of different industries, advisers, and outside research institutions
- Develop new products applying the latest light-weighting technologies and methods
- Develop HarmonicDrive® with built-in torque sensor
- Adopt local content
- Maintain and improve "universal quality"



Expected investment results in fiscal 2024 and beyond

- Improvement in abilities to meet delivery deadlines
- Productivity improvement
  (Productivity per worker to be more than three times that of the conventional production line at the Ariake Factory)
- Sustainable supply chain system and quality maintenance during production expansion
- New products and applications will contribute to net sales
- Increase cost competitiveness

Operating results

We set numerical targets such as net sales of ¥70.0 billion, operating profit of ¥15.0 billion (operating profit to net sales ratio of 20% or more), ROE of 10% or more, equity ratio of 70% or more, and dividend payout ratio of 30% or more for FY2023, the final fiscal year.

Regarding financial results for FY2022, net sales reached ¥71.5 billion, exceeding the numerical target, driven by the emergence of post-COVID-19 pent-up demand. However, operating profit was ¥10.2 billion, operating profit to net sales ratio was 14.3%, and ROE was 7.5%, against the backdrop of more aggressive capital and R&D investments than our plan, as well as securing human resources and strengthening investment in human resources.

Regarding financial results for FY2023, net sales were ¥55.7 billion and operating profit was ¥0.1 billion (operating profit to net sales ratio was 0.2%), against the backdrop of deteriorating external environment such as the slowdown of the Chinese economy, sluggish capital investment in semiconductors, and prolonged inventory adjustment at industrial robots manufacturers. In addition, we recorded impairment loss on intangible assets (goodwill, customer related assets, and technical assets) of Harmonic Drive SE, our consolidated subsidiary, resulting in ROE of -27.1%.

Equity ratio as of the end of FY2023 was 66.6%, slightly below the numerical target but stable at a high level. As for shareholder returns, we paid dividends that exceeded our commitment to a dividend payout ratio.

Items	Previous Medium-Term Management Plan				
	FY2021 Results	FY2022 Results	FY2023 Results	FY2023 (Final Year of the Medium-Term Management Plan) Management Targets	
Net sales	¥57.0 billion	¥71.5 billion	¥55.7 billion	¥70.0 billion, 24% CAGR	Tie market expansion to our growth
Operating profit	¥8.7 billion	¥10.2 billion	¥0.1 billion	¥15.0 billion	Improve profitability by providing high value products
Operating profit to net sales ratio	15.3%	14.3%	0.2%	20+%	Improve profitability by providing high value products
ROE	6.6%	7.5%	–27.1%	10+%	ROE > Cost of equity
Equity ratio	69.0%	67.4%	66.6%	70+%	Build a financial base that balances growth and stability
Dividend payout ratio	30.4% (¥21/share)	35.1% (¥28/share)	–% (¥20/share)	30+%	Maintain stable dividends
Capital investment	¥5.6 billion	¥9.2 billion	¥4.9 billion	¥15.0 billion (3-year total)	Lay out capital investments to support our growth
R&D expenditure	¥3.0 billion	¥3.2 billion	¥3.6 billion	¥9.0 billion (3-year total)	Create new technologies and skills

Medium-Term Management Plan for fiscal years 2024-2026

Medium-Term Management Plan (FY2024-FY2026) Take on the Challenge of "Value Creation and Transformation"

Basic Policy

Under our unchanging mission of "to contribute to technological innovation in society by our total motion control technology," we have formulated new long-term vision, identification of materiality, and Medium-Term Management Plan for fiscal years 2024-2026. In the Medium-Term Management Plan, we are committed to "value creation" to create new value and adapt to technological innovations and new applications, and "transformation" to change conventional structures, common sense, and culture for the future. In order to promote value creation and transformation, we have set three basic policies of "sustainable growth of all businesses with an emphasis on profitability," "strengthen management resources (people, things, money, information) that can adapt to changes in the environment," and "initiatives to enhance corporate value that will continue into the future," and will put them into practice together with materiality linked to them.

1 Sustainable growth of all businesses with an emphasis on profitability

Develop new drivers for growth

Creation
- Create and incorporate technologies and skills that match next-generation applications

Thorough implementation of QCDS+Speed to meet customer expectations

Transformation
- Company-wide cost innovation project
- Ensure absolute superiority in product quality
- Enhance productivity through the promotion of automation and IoT adoption
- Strengthen solutions (planning, proposal, technology) that meet customer needs
- Simplify all operations with a focus on speed/promote DX

2 Strengthen management resources (people, things, money, information) that can adapt to changes in the environment

Realize an organization where individual growth and diverse skills are demonstrated and respected

Transformation
- Create an environment that tolerates failures
- Foster a culture that goes beyond conventional mindsets
- Top-notch inside and outside the company

Creation
- Establish a system for new technology creation

Growth investment aware of capital efficiency

Transformation
- Capital investment with production efficiency improvement and saving manpower in mind to the maximum extent possible
- Stabilize and strengthen IT infrastructure
- Simplify operations/promote DX (including generative AI)
- Promote new technology incorporation

Strengthen financial foundation and governance

Transformation
- Management based on cost of capital
- Strengthen governance to enhance corporate value

3 Initiatives to enhance corporate value that will continue into the future

Full-scale development of activities based on the Basic Policy of Sustainability

Creation
- Develop products that promote the reduction of customers' environmental impact

Transformation
- Appoint and hire diverse personnel
- Promote Net Zero

Materiality

- Achieve QCDS that goes beyond customer expectations
- Take on the challenge of developing new technologies and skills that coordinate with changes in the environment
- Maximize the value of human capital
- Establishment of a management foundation in harmony with the times
- Contribute to creating a sustainable society through corporate activities

Management targets

Items		FY2023	FY2026 (Final Year of the Medium-term Management Plan) Management Targets		Aspirations (2030)
Growth	Net sales	¥55.7 billion	¥90.0 billion	Tie market expansion to the HDS Group's growth	¥100.0+ billion
Profitability	Operating profit to net sales ratio EBITDA margin	0.2% 18.8%	15~20% 20~30%	Provide high value-added products and reduce costs	20+% 30+%
Efficiency	ROE ROIC※	– –	10+% 10+%	> Cost of equity	10+% 10+%
Stability	Equity ratio	66.6%	70+%	Build a financial base that balances growth and stability	70+%
Shareholder returns	Dividend payout ratio	¥20/share	30+%	Dividend increase due to financial results expansion	30+%
Capital investment	Capital investment (3-year total)	¥19.8 billion	¥27.5 billion	Lay out capital investments to support the HDS Group's growth	–
Development technologies	Development expenditure (3-year total)	¥9.9 billion	¥12.3 billion	Create new technologies and skills	–

*ROIC = NOPAT (after-tax profit)/return on invested capital (shareholders' equity + interest bearing liabilities)

Long-term vision "The best provider of total motion control in harmony with the future"

Priority measures to realize sustainable growth with an emphasis on profitability

Net sales: net sales in FY2026, the final fiscal year of the Medium-Term Management Plan are expected to be ¥90.0 billion due to an increase in sales for existing applications and growth in sales for new applications such as humanoid robots.

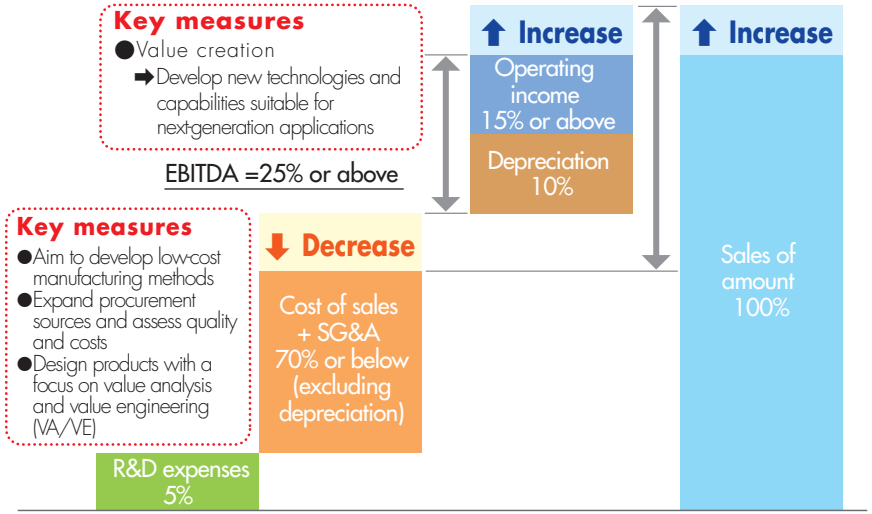
Profitability: we aim to achieve operating profit to net sales ratio of 15% or more by controlling cost of sales and selling, general and administrative expenses (SG&A) through newly launched cost innovation project, in addition to a steady implementation of various priority measures set forth in the Medium-Term Management Plan. We will aim to achieve the numerical targets and further increase profitability by steadily implementing product price revisions that appropriately reflect the HDS Group's product value. We plan to make capital investment of ¥27.5 billion during the period of the Medium-Term Management Plan, and aim to achieve EBITDA margin of 25% or more, which is EBITDA (operating profit + depreciation and amortization) divided by net sales.

Net sales for new applications will drive growth

For existing applications: net sales for existing applications, mainly for industrial robots, semiconductor manufacturing equipment, and automobiles applications, are expected to steadily recover from FY2025 onward, as inventory adjustment by mainstay industrial robot manufacturers progresses, and we aim to achieve record-high net sales in FY2026.

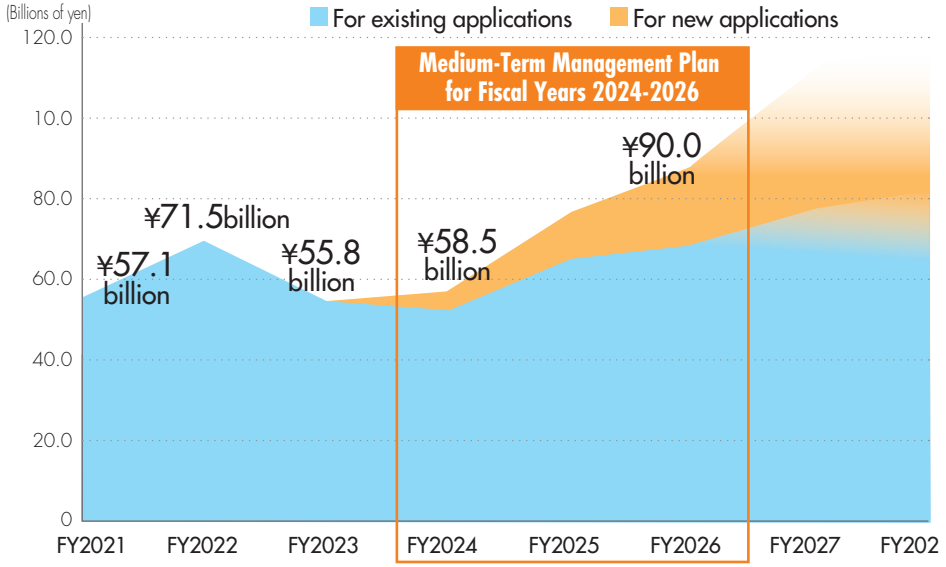
For new applications: we expect that net sales for new applications including those for space, mobility vehicles, and humanoid robots will enter a growth phase from FY2024 onward. In particular, in the market for humanoid robots, new players have emerged in the U.S., Europe, and China, and other regions, and expectations for growth are rapidly rising. Orders for the HDS Group's compact and high-precision products are also recovering, albeit gradually. We have developed production capacity to meet the demand expansion in the future, and we will aim to achieve our net sales target by strengthening our ability to meet delivery deadlines.

Profitability Target for FY2026 (Final Year of the Medium-Term Management Plan)



Net Sales Target of the Medium-Term Management Plan for Fiscal Years 2024-2026

Consolidated net sales



Message from Chief Financial Officer



We will allocate financial management resources in accordance with changes in the environment to ensure sustainable growth of every businesses in the HDS Group with a focus on profitability, and strive to accurately communicate the group's essential corporate value based on a long-term vision to shareholders and investors.

Representative Director
Senior Managing Executive Officer
General Manager of Finance Accounting, Finance and Tax Division

Kazutoshi Kamijo

The role of the CFO of the HDS Group

The performance of the HDS Group is greatly impacted by global capital investment trends. Thus, it is relatively volatile, which makes it difficult to determine the suitable production capacity and decide on capital investments. Responding to short-term demand fluctuations is especially difficult, but it is my role and responsibility as Chief Financial Officer to make capital investments at the right timing based on mid- to long-term demand forecasting and to choose and implement the optimal financing method, which includes sources other than cash flows from operating activities, to secure the funds needed for the investment.

As a listed company, we consider the market capitalization of our stock to be important indicator of corporate value. Theoretically, the corporate value is the future cash flows discounted to their present value, but the reason indicators such as price earnings ratio are evaluated highly, even though fiscal 2024 performance is forecast to remain at a low level, has to do with the expectations for the future growth of shares.

I also serve the important role of correctly understanding the expectations of shareholders and investors, and disclose information and present our growth story in accordance.

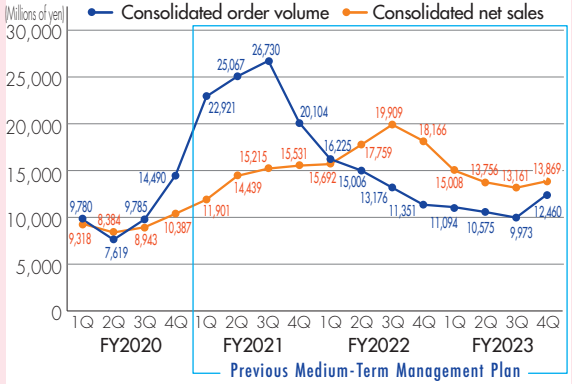
Results and Challenges of the Previous Medium-Term Management Plan

The final year of the previous Medium-Term Management Plan was fiscal 2023. Business operations were difficult due to insufficient production capacity and challenges in securing staff in the first two years of the plan. Manufacturing lead time became gradually longer due to a greater-than-expected short-term demand increase, which resulted in advance orders by customers. In response, we invested ¥6.0 billion to expand the production line at Ariake Factory to boost production capacity, but unfortunately the equipment utilization rate remains low today due to the subsequent drop in demand. But from a long-term perspective, I think it was an essential investment. Our efforts at Ariake Factory resulted in a new, more automated production system and important achievements in production technology.

To raise capital for the investment, we used debt financing and carried out a financial strategy that takes into account Weighted Average Cost of Capital (WACC). This enabled us to obtain advantageous interest rate terms from the financial institution, and personally I think it was a good investment that will lead to improving corporate value over the mid- to long-term.

One issue with the previous Medium-Term Management Plan was that we were unable to keep up with fluctuations in demand, as I mentioned above. Most notably, factory utilization rate changed greatly in a short time. The dramatic change from an extremely busy period to a period of low capacity utilization in those three years had a significant impact on business. This made it clear that we needed to build a production system—both in terms of people and equipment—that can respond

Quarterly Changes in Order Volume and Net Sales



flexibly to changes in demand.

Furthermore, the impact of the worldwide imbalance in semiconductor supply and demand raised prices and made it difficult to procure electronic parts used in mechatronics products, which made us keenly aware of the need to build a robust supply chain.

Impairment Losses of German Subsidiary and Future Outlook

In the fiscal 2023 consolidated financial results, we recorded ¥28.1 billion in impairment losses on intangible assets related to our German subsidiary Harmonic Drive SE. As the CFO, I take these unfortunate results very seriously. We announce the performance of our main subsidiaries in our financial results briefing materials, and in fiscal 2023 our German subsidiary recorded an operating profit of around ¥2.0 billion—the highest profits in the HDS Group. Despite this, looking back, the main reason for recording the impairment losses was that our expectations at the time of acquisition were too high. In the acquisition of the German subsidiary, we amortized goodwill (which includes customers and technical assets) of about ¥3.0 billion per year, but the subsidiary's operating profit continued to be below this amount for several fiscal years. We had been aware of signs of impairment for several fiscal years and evaluated the possibility of recovery each fiscal year based on the forecasted cash flow in accordance with the remaining recovery period. As a result, we determined that we needed to record an impairment in fiscal 2023.

We use Japanese accounting standards, and amortized goodwill from the acquisition on a straight-line basis over 20 years. Based on this, we recorded a depreciation and amortization of around ¥3.0 billion in consolidated selling, general and administrative expenses per year, but we expect this to drop to about ¥1.0 billion from fiscal 2024 thanks to the impairment write-down. Fiscal 2024 was the first year of the current Medium-Term Management Plan, and we expect return on equity (ROE) to improve in part due to the reduction of net assets from the impairment write-down. I believe that recording the impairment loss has made the HDS Group's balance sheet more sound, and although it was painful to do, I believe that it had a positive effect when considering business operations going forward.

Going forward, we will maintain a sound and robust balance sheet and improve corporate value while taking into account both profitability and capital efficiency.

Financial and Capital Strategy of the Medium-Term Management Plan for Fiscal Years 2024-2026

The basic policy of the Medium-Term Management Plan for fiscal years 2024-2026 is "Take on the Challenge of Value Creation and Transformation." We have laid out three priority measures to actualize this policy: (1) Sustainable growth of all businesses with an emphasis on profitability, (2) Strengthen management resources (people, things, money, information) that can adapt to changes in the environment, and (3) Initiatives to enhance corporate value that will continue into the future. To achieve these, we need an accurate financial and capital strategy and will carry out the following initiatives.

In regard to (1), while we have always emphasized profitability, the current operating profit to net sales ratio has unfortunately decreased compared to the peak in the past and is at a very unsatisfactory level. Recovering profitability is a pressing issue to get closer to the previous level of profit. The utilization rate of our main factories in Japan are now below 50%. This makes it difficult to cover fixed expenses. First we need to increase production volume by recovering order value to raise the factory utilization rate. We already have the equipment and staff needed to increase production for the time being, so I believe it is possible to reap the benefits of increased revenue going forward while keeping the rise in fixed expenses to a minimum. In the event new investments are required, our policy is to select the optimal equipment from a wide range of options, taking into account factors such as performance, cost, and delivery time as a whole. These initiatives are also part of a project that balances value creation and companywide cost cutting, and include IT investments to streamline business operations and cut costs through digitalization.

In regard to (2), we aim to take full advantage of growth opportunities through effective use of management resources. In particular, the expansion of the humanoid robot market holds the potential for dramatic growth going forward. As the HDS Group is a parts manufacturer, I believe that if we remain committed to taking on challenges with customers to contribute to their technological innovation, it will serve as a foundation for the growth of the HDS Group. As the CFO, I must accurately allocate management resources and serve the role of formulating multiple plans on investment, timing, and profitability in collaboration with business divisions, and execute said plans while managing risks.

In regard to (3), my role is to actively engage in dialogue with and disclose information to investors and shareholders through IR and SR activities, and accurately communicate our essential corporate value based on our long-term vision.

The current Medium-Term Management Plan focuses on the expansion of the global robotics market as a growth opportunity, but I believe that seeking to equip all robots with our products is not a wise policy. As robots become increasingly diverse, it is essential that we determine with a cool head which fields the HDS Group should enter and which we should not. It is also crucial that we improve our technical capabilities—one of the strengths of the HDS Group—and develop products in which customers can recognize their higher added value. In the event we forecast an increase in net sales in the future, our policy is to move forward strategically while carefully gauging profitability instead of pushing ahead while bracing ourselves to go in the red. In specialized fields, we will share risks with customers and also consider investing in fields with high growth potential while entertaining the possibility of collaborating with other companies.

Initiatives to Achieve Management Targets in Fiscal 2026

The net sales target for fiscal 2026—the final year of the current Medium-Term Management Plan—is ¥90.0 billion. We plan

Message from Chief Financial Officer

to achieve this by growing existing applications and building up new ones. Although future demand trends are uncertain, I believe that our compact, lightweight, and high-precision HarmonicDrive® strain wave gear and our mechatronics products that combine motors, sensors, controllers, and other elements with HarmonicDrive® show promise to grow in demand thanks to their high compatibility with high growth-potential devices.

In terms of production capacity, we already have equipment that can meet immediate demand, so we will increase the utilization rate. As for autonomous robot products that are expected to drive growth of the HDS Group going forward, since customers prefer smaller, lightweight, and flat types, we plan to improve our production lines in accordance with the increase in demand for these products.

(1) Improvement of Operating Profit to Net Sales Ratio and EBITDA Margin

The HDS Group is a manufacturing company that has created added value through high-precision fabrication—one of our greatest strengths. In terms of our profit structure, we will maintain a comparatively high marginal profit ratio, so if net sales exceeds the break - even point, there will be a gearing effect on profitability. At this stage, we are striving to make a comeback as quickly as possible. We are also focusing efforts on the development of high value-added products. We will further enhance the knowledge we have accumulated as a pioneer in strain wave gearing over 50 years and offer products that are differentiated from the competition. We will increase added value by meeting the universal needs for precision planetary speed reducers and actuators that have large torque and are lightweight, compact, high-precision, and long-lasting with our high-quality technology and skills, and by offering more attractive products to customers.

To improve profitability by reducing variable expenses, we will consider the optimal way to divide in-house and outsourced processes, while keeping in mind Coexistence and Co-prosperity with suppliers. It is also important to increase awareness of costs further starting from the initial design stage of product development. The development section is working to cut materials and processing costs by standardizing materials and parts and streamlining designs. Inventory control is also important, so we will strive to improve cash flow while maintaining an appropriate level of inventory. We have been procuring items mainly from Japan, but to cut costs further we will also consider procuring from outside Japan with top priority placed on quality.

With regard to fixed expenses, we will invest necessary management resources with a focus on expanding demand and strengthening our business foundation going forward, but first we will minimize investments and improve revenue by prioritizing making full use of current equipment and staff.

Through these efforts, we aim to return to a consolidated operating profit to net sales ratio of 15% or more in fiscal 2026.

(2) Decrease in Shareholders' Equity Cost and WACC

Improving capital productivity is an key issue for us. We will strive to improve capital efficiency with a focus on ROE and ROIC indicators. In addition, we will continue to be conscious of shareholders' equity cost and Weighted Average Cost of Capital (WACC) in the management of the HDS Group. Controlling capital costs is not an easy task, but I believe that mitigating the dependence on business performance contributes to managing capital costs. Therefore, we need to maintain and improve our capacity to provide a stable supply of products to customers and prevent speculative demand from arising due to prolonged lead time caused by short-term demand increases. And since the HDS Group is a parts manufacturer, we will also diversify applications with the aim of diversifying our customer and application portfolio and balancing growth with the mitigation of fluctuations in performance. For example, the mobility market, which includes surgical robots, cars, amusement, and evolve electric vertical take-off and landings (eVTOLs), is expected to have stable demand trends that have a low correlation with FA investment.

Furthermore, we will work to enhance communications with investors by actively engaging in IR and SR activities, which will result in reducing shareholders' equity costs.

Management Targets for the Medium-Term Management Plan for Fiscal Years 2024-2026 and Long-term Vision

Items		FY2023	FY2026 (Final Year of the Medium-term Management Plan) Management Targets		Aspirations (2030)
Growth	Net sales	¥55.7 billion	¥90.0 billion	Tie market expansion to the HDS Group's growth	¥100.0+billion
Profitability	Operating profit to net sales ratio EBITDA margin	0.2% 18.8%	15~20% 25~30%	Provide high value-added products and reduce costs	20+% 30+%
Efficiency	ROE ROIC*	– –	10+% 10+%	> Cost of equity	10+% 10+%
Stability	Equity ratio	66.6%	70+%	Build a financial base that balances growth and stability	70+%
Shareholder returns	Dividend payout ratio	¥20/share	30+%	Dividend increase due to financial results expansion	30+%
Capital investment	Capital investment (3-year total)	¥19.8 billion	¥27.5 billion	Lay out capital investments to support the HDS Group's growth	–
Development technologies	Development expenditure (3-year total)	¥9.9 billion	¥12.3 billion	Create new technologies and skills	–

*ROIC = NOPAT (after-tax profit)/return on invested capital (shareholders' equity + interest bearing liabilities)

(3) Stable Equity Ratio

In order to maintain financial stability taking into account the HDS Group's business characteristics, we have set our equity ratio at around 70%. (It was 66.6% at the end of fiscal 2023.) In the previous Medium-Term Management Plan, we used debt financing to raise capital, and we will continue to carry out flexible financial management with top priority placed on debt. As a development manufacturer, it is important for the HDS Group to maintain stable capital during short-term slumps in performance and run the company in an unwavering manner with a mid- to long-term perspective. And I believe that this will benefit shareholders and investors and meet their expectations. However, we will not strictly commit to a 70% equity ratio, but consider increasing debt if necessary in accordance with the business environment.

(4) Increase in R&D Expenditure

The current Medium-Term Management Plan increases R&D investments to ¥12.3 billion (it was ¥9.9 billion in the previous plan) and focuses allocation of management resources on R&D—the lifeline of the HDS Group. In order to provide high value-added products backed with high quality, we need to conduct countless tests in the development stage, collect data, and leverage it in product development. We will also enhance product quality and cut costs by taking on the challenge of developing new production technologies and improving processes.

(5) Cash Allocation and Capital Investment Policy

In terms of cash allocation, we expect cash flows from operating activities to come to approximately ¥43.0 billion—a roughly ¥10.0 billion increase from the ¥33.4 billion of the previous Medium-Term Management Plan. For cash outflow, we are planning ¥27.5 billion in capital investments (¥19.8 billion in the previous plan) and ¥7.0 billion in shareholder returns (¥6.5 billion in the previous plan). We will maintain a dividend payout ratio of 30% and expect to reduce interest bearing liabilities to a little over ¥20.0 billion through scheduled payments and other measures. We will also strive to shorten the collection time of trade receivables, and work methodically to achieve results through negotiations with customers.

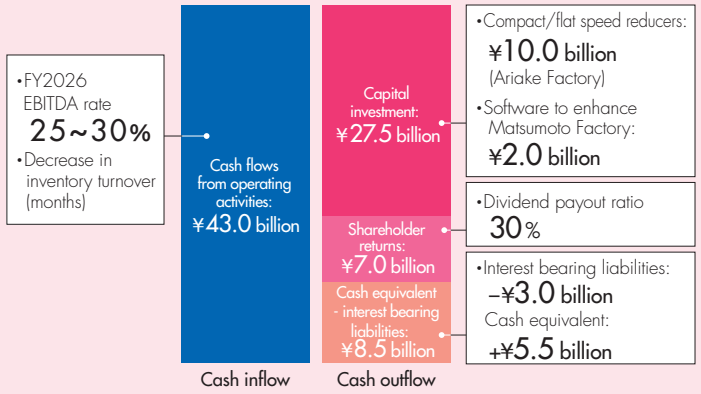
The breakdown for the ¥27.5 billion in capital investments is as follows: We expect to invest ¥10.0 billion over three years to build capacity to produce compact reduction gears for autonomous robots, which show promise to grow going forward. Other measures we are planning include updating machinery and equipment, building IT and other infrastructures, and investing in tools and other equipment.

We view reducing cross-held shares as a key management issue, so we are considering when the best time to implement this would be. We plan to allocate the capital gained from this first to growth investments such as capital investments, and will also consider returning capital to shareholders through share buybacks and other measures, taking into account factors such as our capital position and stock prices at the time as a whole.

Raising Internal Awareness of Capital Costs and Stock Prices

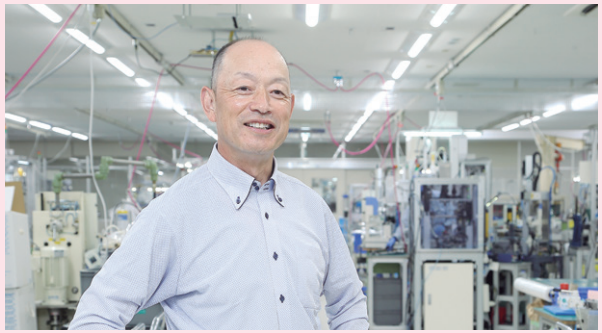
In order to take "Action to Implement Management that is Conscious of Cost of Capital," which is also a request by the Tokyo Stock Exchange, the executive employees in charge of the relevant department make decisions on capital investments by calculating the economic efficiency of the investment based on the DCF method and setting the hurdle rate at 10%. Going forward, we will convey our policy on return on invested capital (ROIC) to each business division to improve capital efficiency. With regard to total shareholder return (TSR), we will focus efforts on income gains based on a policy of a 30% dividend payout ratio, but we realize we are a growing company, so capital gain is a key factor. Therefore, we will strive to maintain a price earnings ratio (PER) at an appropriate level by prioritizing the improvement of earnings per share (EPS) and conveying our growth story more concretely to the capital market. We will also actively disclose information with high transparency and continue to communicate meticulously to contribute to improving corporate value.

Cash Allocation in the Medium-Term Management Plan for Fiscal Years 2024-2026





Message from Officer in Charge of Production



In addition to working to develop human resources and improve product quality, we will eliminate the personalization of operations by converting our engineers' insights into formal knowledge, and aim to maximize output by strengthening the production system.



Executive Officer (In Charge of Production, Production Planning)
General Manager of First Production Division

Tsuyoshi Awaduhara

My missions as the person in charge of production

The production section must satisfy customers' requirements for quality (Q), cost (C), delivery (D), and speed (S), while ensuring that there are no complaints. My missions in that process are to draw out the maximum production capacity of each of our factories, including the Hotaka Factory and Ariake Factory, during the next demand recovery period and to maximize our output as a Group. We recently received an urgent order from an overseas customer for several thousand speed reducers to be delivered within two weeks. I am proud to say that our ability to produce such a large order at the Ariake Factory and deliver it on time through close collaboration between sales and production planning was the result of our ongoing efforts to improve productivity.

Maximization of value of human capital

At the Hotaka Factory, we dispatch personnel from the manufacturing section to other departments such as production technology and ICT. As well as broadening these employees' perspectives on operations, this initiative also strengthens internal collaboration. In particular, in the ICT Promotion Office, which is in charge of DX operations, they learn about scheduling management for the various processes and how to use manufacturing data, for example, which leads to mindset reform in the manufacturing section. In addition, to make the skills of the manufacturing section's engineers and skilled workers visible, we have prepared skills assessment charts for each person. This enables us to identify the skills of each individual and the kind of work that they can be assigned, which allows us to pursue effective human resources development. The outcome of these efforts is that, in the past twelve months, a total of 385 personnel have grown into multi-skilled workers who can be entrusted with multiple processes such as assembly and machining (ratio of multi-skilled workers: 50%). Looking ahead, even if there is a rapid recovery of demand and imbalances occur in the product mix, we have built a production system that is able to respond flexibly to such circumstances.

Achieving QCDS that meets customer expectations

AT HDSI, as part of our efforts to improve quality, we hold Quality Meetings three times a week, attended by people in charge of quality assurance, production technology, design, service, and other sections. Because many of the Group's products accommodate customers' special specifications, we rely a great deal on the experience and intuition of our engineers and skilled workers. This dependence on individuals is also an issue. By quantifying such personalized operations and advancing DX, we are promoting activities to realize production that is more streamlined and efficient. We also hold Quality Waste Elimination Meetings once a month. With the aim of reducing quality variations, by identifying the causes of non-conforming products and implementing countermeasures, we strive to make testing processes more efficient and improve production efficiency.

Achieving the numerical targets of the Medium-Term Management Plan

Under the current Medium-Term Management Plan, we aim to achieve consolidated net sales of ¥90.0 billion in FY2026. If the existing facilities at Hotaka Factory and Ariake Factory operate at full capacity, HDSI alone will be able to achieve around ¥80.0 billion of that target. Currently, the HDS Group is anticipating new demand for humanoid robots. In terms of products for humanoid robots, as well as our existing speed reducers, we can expect demand for compact speed reducers that can be fitted into both hands. Under the current Medium-Term Management Plan, we have capital investment plans of ¥27.5 billion over three years. Through steady growth investment, we aim not only to achieve the numerical targets of the Medium-Term Management Plan, but also to realize a target of ¥100.0 billion or more in consolidated net sales in FY2030. We will also strive to improve profitability through the introduction of new production methods, the digitalization and 3D management of individual processes, and the multi-skilling of engineers and skilled workers. By focusing our efforts on production systems and human resources development that will realize QCDS of the Group's proprietary, differentiated products, we will work to improve productivity for the achievement of the Medium-Term Management Plan.

Production capacity

The Ariake Factory has the capacity to produce 40,000 units for industrial machinery and 90,000 units for automotive installation per month. Going forward, we will place efforts into the optimization of production capacity, including considering replacing an automotive automation line with a line dedicated to products for humanoid robots. Harmonic Winbel Inc., which produces mechatronics products, currently has a production capacity of 5,000 units per month, but with the injection of new products, we plan to raise that capacity to approximately 8,000 units in 2026. The production capacity of Harmonic AD, Inc., which produces precision planetary speed reducers, is currently 6,000 units per month, but it is able to accommodate production of 10,000 units per month depending on demand.

Message from Officer in Charge of Production Technology



While maintaining high quality, we will aim to further optimize manufacturing processes by moving beyond conventional methods to embrace the challenge of "new manufacturing."



Executive Officer
General Manager of Production Technology Division
Hiroki Hanaoka

My missions as the person in charge of production technology

My missions are to reduce manufacturing costs and optimize manufacturing processes by maximizing the performance of the manufacturing capital (machinery and equipment, human resources, technologies) that we possess and improving the efficiency of manufacturing processes. In FY2023, we worked on efficiency improvements in production automation, concentrating on the Ariake Factory. We look forward to this automation equipment contributing to profitability in earnest in the next demand recovery period. We will also aim to achieve aspirations for 2030 by embracing the challenge of "new manufacturing" that is not bound by conventional thinking.

Initiatives for solving materiality

One of our material issues (materiality) is "achieving QCDS that meets customer expectations." Quality (Q), cost (C), delivery (D), and speed (S) are the fundamentals of manufacturing and the most important initiatives for the HDS Group as a manufacturer. The Group's products have unique structures, and there is significant dependence on the techniques, skills and intuition of the engineers in the assembly and testing processes of our products. Automation of production is under way at each of our factories, and going forward, by leveraging AI to promote the automation of quality evaluation and measurement processes, we will strive to improve and stabilize quality (Q) in particular. As this will also lead to improvements in delivery (D) and speed (S), we are rushing to introduce further automation and new production technologies. In addition, due to growing price competition with the emergence of competitors, we will undertake a fundamental review of our conventional approaches to manufacturing, introduce the optimal production equipment for the properties and sizes of our products, and explore new processing methods, in our aim to make significant reductions to cost (C).

Initiatives for realization of the Medium-Term Management Plan

This year, to achieve the numerical targets of the current Medium-Term Management Plan that began in FY2024, we have set as our priority measures the "development of new production methods," and the "productivity improvement through skill improvement and automation, and thorough pursuit of QC through DX" and are working on those priority measures. In addition, concurrently with the Medium-Term Management Plan, to strengthen our competitiveness and increase long-term profitability, we have launched a project for the improvement of operational efficiency and productivity, with the aim of company-wide cost reductions. In component processing, we are considering the introduction of innovative mass-production methods in addition to the introduction of new machinery. By reviewing material selections and sizes, tool selections, processing methods, and equipment selections, we are working to reduce the costs of materials and tools, significantly reduce setup times, and improve the efficiency of equipment space. For this endeavor, we have set an internal KPI of a 3% improvement in productivity per year. To achieve this target, we are strengthening our collaboration with the various departments, such as procurement of materials, development, design, manufacturing, and quality assurance. Further, based on requests from customers in each region, we have begun consideration of production aimed at the expansion of local production for local consumption. Our intention is to develop new customers by matching our design philosophy to local customers.

Progress in raising the level of automation

The Hotaka Factory handles high-mix low-volume production, while the Ariake Factory deals in mass production of same type of product. If we compare the automation rate of the two factories, Level 4 automated equipment in which the individual processes are connected accounts for 37% at the Hotaka Factory, while at the Ariake Factory, it has reached 90%. Because the Hotaka Factory's operations focus on high-mix low-volume production of custom products tailored to customers' specifications, Level 1 equipment, which features manual attachment/detachment, making it highly flexible and allowing for easy changes in production items, accounts for approximately 40% of equipment processes (average for the East and West buildings). By introducing automated equipment and modifying existing equipment for automation at the Hotaka Factory as well, we are rolling out measures to raise the level from the current Level 1 to Level 2 equipment, which has an automated attachment/detachment feature, or even to Level 3 equipment, which has automated attachment/detachment and automated assessment features.

Risks and Issues

While we are working on the introduction of automated equipment and moving away from dependence on individual workers for specific processes, on the other hand, the presence of our highly experienced engineers and skilled workers is important, and I have concerns about their eventual retirement causing a decline in our skill level. To counter that concern, we are proceeding with efforts to increase the number of multi-skilled workers by making the skills and experiences that our engineers and skilled workers possess visible and identifying those skills and personnel that are lacking and those processes that are dependent on specific individuals. In addition, as well as strengthening our recruitment, we are placing efforts into education, including the passing on of techniques and skills.

Message from Officer in Charge of Domestic Sales



We will accelerate our sales DX strategy, realize the early achievement of the Medium-Term Management Plan targets, and aim to establish a sales structure that allows us to focus our efforts on solving customers' issues.

Director
Executive Officer (In Charge of Marketing and Sales)
General Manager of Domestic Sales Division
Naomi Shirasawa



My missions as the person in charge of domestic sales

We are engaged in a variety of sales reform initiatives with the aims of realizing the current Medium-Term Management Plan that began in FY2024, as well as the early achievement of the target of ¥100.0 billion or more in consolidated net sales by FY2030 set forth in our long-term vision. The acceleration of sales DX lies at the core of those initiatives. By building mechanisms for making effective use of customer data and extending information even to production and the supply chain, we are restructuring our sales methods that have conventionally been dependent on individual sales persons. My missions are to make our sales structure one that allows us to focus our efforts on solving customers' issues and to ensure that the outcomes of these initiatives lead to higher profits with certainty.

Sales DX strategy

With the establishment of the Head Office Sales Department about two years ago, we set up a dedicated team to strengthen our function for monitoring the trends of key customers, with a focus on manufacturers of industrial robots. We have thus established a structure whereby we gather and analyze information such as customers' demand forecasts for six months ahead and feed that information back to the production and supply chain sections. In future, even in the event of sudden demand fluctuations, if we are able to predict the situation six months ahead to a certain extent, we believe we will be able to prevent delivery delays. Also, looking ahead to the next ten years, we are advancing reforms to move away from personalized sales and, by analyzing and using data, promote more efficient and productive ways of working that are suited to an era of rapid change. In October 2024, the latest data-driven sales DX based on data began full-scale operations. This will make it possible to collect and analyze data such as demand forecasts, inventory status, successes, and failures. We will continue to build a sales structure that can be developed more strategically.

Initiatives for achievement of the Medium-Term Management Plan

Although we have many customers that make repeat purchases of our products, capturing new customers has been a struggle. For this reason, two years ago, we began selling highly versatile precision planetary speed reducers manufactured by our Korean subsidiary, SAMICK ADM CO., LTD., in Japan as well, and we are working on the acquisition of new customers. We are actively conducting PR activities that involve approaching customers that are not familiar with our precision planetary speed reducers and proposing new applications for these products. In addition, our in-house experts in various fields, including robots, semiconductors, mobility, and space, members of our sales bases in Japan and overseas, and motion control (MC) development team members hold information exchanges once a month, where they discuss future prospects and development themes. In the field of industrial robots, our main customers for strain wave gearing, the market for co-robots and humanoid robots is expanding, and there has also been a rapid increase in their adoption for space applications in recent times. We are stepping up our information gathering activities with the aim of identifying these kinds of market changes with certainty.

Product price revisions

In recent years, to respond to the entry of competing companies and requests from customers for price cooperation, we have achieved continuous, significant cost reductions, while also making investments to improve delivery times. On the other hand, amid the recent sharp rises in costs, including labor, materials, energy, and transportation, we have had increasing opportunities to hold in-depth discussions about selling prices with our customers. At this stage, a growing number of customers have shown understanding of our sustainability perspectives and the state of our suppliers, as well as a willingness to engage in positive discussions regarding price increases. We are grateful to our customers for their support, which has allowed us to exist.

Future demand trends

Inquiries from industrial robot manufacturer customers have gradually started to recover from around July 2024. We are able to track the trends of our key customers, and can see that just over half of them are making progress in optimizing their inventory. The remaining customers are also starting to place orders for model numbers that they have run out of. Their inventory adjustments should be completed within the year, and we expect to see a resumption of orders from around the end of the year. On the other hand, at this stage, we have not yet seen a significant recovery in orders for semiconductor manufacturing equipment, although there has been a start in capital investment. We anticipate an expansion of demand in excess of the previous demand peak, against the backdrop of increased demand for servers and data centers accompanying the spread of autonomous driving in vehicles and AI. Under these circumstances, the end of 2024 will be a turning point for order placement, and we envisage reaching the next demand peak in 2025-2026.

Message from Officer in Charge of Overseas Sales



In addition to capturing large orders, we will achieve the numerical targets of the Medium-Term Management Plan by steadily executing sales DX.

Executive Officer
General Manager of Overseas Sales Division and General Manager of Sales Administrative Division
(From October 1, 2024: Executive Officer and General Manager of Risk Management) Michiya Yashiro



My missions as the person in charge of overseas sales

As well as making effective use of local sales companies to suit market characteristics and achieving net sales commensurate with invested capital, our overseas sales persons are expected to enhance the presence of HSDI through sales activities that accurately grasp market trends and customer needs. My mission as the person in charge of overseas sales is to establish an environment and structure that will allow the individual sales companies and sales persons to demonstrate maximum performance. In the short term, this means indicating concrete business targets and striving for profitability, while at the same time, we will identify long-term market trends and gather customer information, conduct accurate analyses based on that information, and take action aimed at the future. Further, we aim to expand net sales by strengthening collaboration with the development and production sections and building a structure to respond speedily to customers' requests, and operating our sales organization to that end.

Initiatives for realization of the Medium-Term Management Plan

For projects related to humanoid robots that have been factored into the Medium-Term Management Plan's numerical targets, while identifying customer needs and making technical proposals from our end, we are building a product supply structure to match demand for robots and our production plans. We are also strengthening company-wide collaborations due to the large number of new customers and the need to respond swiftly to information that changes daily.

I also feel tremendous potential for meeting the numerical targets of the Medium-Term Management Plan. In terms of qualitative measures, similar to domestic sales, we are also planning to introduce sales DX in overseas sales as well during the period of the Medium-Term Management Plan. With the accumulation of various kinds of information from overseas in the sales DX, sales persons and managers will be able to grasp the situation in real time and deploy their next strategies on that basis. It will first be introduced at our Overseas Sales Division and Taiwan Representative Office, with plans to roll it out progressively to our overseas sales network, while considering the characteristics of individual regions. We will aim to achieve the numerical targets of the Medium-Term Management Plan by reinforcing our sales strategies with the use of sales DX and working steadily to acquire new projects.

Product prices

Over the past 15 years, with the cooperation of our suppliers and sub-vendors, we have worked on cost reductions while keeping our selling prices unchanged. However, as costs such as energy prices, costs of various materials, packaging and transport, and labor costs continue to skyrocket, we have notified the sales companies in each region of revisions to our prices. By providing careful explanations to help customers and sales agents understand these price revisions, we believe that they will be able to reflect the value of our products appropriately.

Future overseas demand trends

My impression is that the pace of recovery of overseas demand has been slower than expected. The stagnation of the Chinese economy, the slowdown in the EV market, and the increasing reluctance of manufacturing companies to make capital investments ahead of the U.S. presidential elections have all had an impact. Orders from overseas industrial robot manufacturers have also been patchy, with some manufacturers holding excess inventories. Semiconductor-related capital investment is showing signs of recovery, mainly in logic, but we are still waiting on a recovery in memory. For this reason, we are currently conducting various simulations in preparation for future demand recovery. As a major trend, worldwide labor shortages and growing needs for automation and labor saving, particularly in the manufacturing sector, as well as expansion of demand and the trends of miniaturization and multilayering being seen in the semiconductor sector represent structural, medium- to long-term business opportunities. As we head toward 2025, in the U.S. market, we can expect to see an increase in demand in the sector of medical equipment, particularly surgical assistance robots, and in space and satellite sectors. Other areas where expansion of demand is expected include the semiconductor and medical equipment sectors in Europe, high-end industrial robots in China, and semiconductor and telecommunications infrastructure in Asia. We anticipate a full-scale recovery in demand from the end of 2024 to the beginning of 2025, and forecast the arrival of the next demand peak in the second half of 2025 and into 2026.

Message from the CEO of Harmonic Drive SE (Germany)



Our employees are the heart of our company and the foundation of our success.

Chief Executive Officer
Harmonic Drive SE
Thomas Berger

My career and mission

I have worked as part of the Harmonic Drive Group for more than 20 years in a variety of management roles. Since 2022 I am CEO of Harmonic Drive SE (HDSE). I am proud to have been able to position the company to achieve further growth for the future with the help of our business strategy. We view the Harmonic Drive Group as a global group. It is in the interest of the entire group to further expand collaboration between Harmonic Drive companies, particularly with regard to customers, products and the brand. It is my mission to ensure that this approach is reflected in future action plans.

Precision. Reliability. Flexibility. OverAll

HDSE's vision can be expressed in these words: "Precision. Reliability. Flexibility. OverAll." We are a company offering advanced mechanical and mechatronic drive technology, and we strive to use our extensive expertise and experience to the benefit of our customers and our company. HDSE aims for long-term value creation, continuously invests in the development of its employees and takes the principles of sustainability into account when making decisions. In 2022 we formulated the HDSE vision with a 10-year horizon and are currently undertaking concrete measures to achieve it.

Exceptional engineering skills

A significant asset of HDSE is our exceptional engineering expertise, our in-depth knowledge of manufacturing and our extraordinary technical capabilities that result in high quality products. This enables us to offer our customers tailored and outstanding solutions across various markets. We strictly follow all applicable regulatory and quality requirements, ensuring that our products meet the specific and rigorous demands of various industries. As part of our strategy, we are pursuing this particularly in the Aviation & Space segment.

Five initiatives of the HDSE Strategy 2027

Based on the HDSE vision, we have developed and are carrying out the HDSE Strategy 2027, a five-year strategy that sets out economic goals for 2027. This strategy aims to increase our turnover significantly every year and to ensure profitability. It has been integrated in the Harmonic Drive Systems Medium-Term Management Plan for fiscal year 2024-2026. In order to reach these goals, we have developed and follow five strategic initiatives: "Excellent team and attractive employer", "fostering innovation", "securing existing business", "expanding into new markets", and "taking care of a sustainable organization and processes".

We have made the "Excellent team and attractive employer" initiative a particularly important part of our strategy, as we are fully aware of the great value and importance of qualified and satisfied employees. After all, our employees are the heart of our company and the foundation of our success. Based on this conviction, we have developed a modern human resources strategy and offer contemporary and attractive working conditions.

Strategy to drive demand and differentiate ourselves

Looking ahead to 2027, we expect demand to grow especially in the areas of Aviation & Space, Defense and Robotics. We believe these areas will continue to drive growth after 2027. However, we must also recognize the challenge posed by the competition. HDSE will continue to differentiate ourselves from our competitors by offering tailored solutions (product, engineering, quality, after sales service) and by following our "strategy" "high variance, small quantities".

Social responsibility and sustainability

We are undertaking efforts to comply with the EU Corporate Sustainability Reporting Directive (CSRD). For example, in July 2024 we established a Code of Conduct in our company. We have also formed an energy team that is pursuing numerous projects to save energy and resources throughout the company. HDSE is also undertaking efforts to promote biodiversity. One example is that we installed five beehives on our factory premises to contribute to the realization of a society that is in harmony with nature through beekeeping. And we offer the honey we gather as a gift to colleagues and clients. HDSE has been supporting local charities for many years thanks to the voluntary and active support of our employees. Many of our female employees participate every year in a women's race that supports a local organization dedicated to the protection of women. We believe that these activities meet the requirements of a modern company. We have a positive outlook for the future and take social responsibility and sustainability into account in our business activities.



Honey made by HDSE

Message from the President & CEO of Harmonic Drive LLC (USA)



It is people, not machines, that enable growth of our business. I am proud to say that we have an amazing, knowledgeable and dedicated workforce.

President & CEO
Harmonic Drive LLC Douglas Olson

My career and HDLLC's vision

I have worked at Harmonic Drive in the US for 34 years. Before that, I was the owner of a manufacturing company that produced a range of products, including medical equipment and servo actuators. It was then I was introduced to HarmonicDrive® strain wave gearing. Through working with the people at Harmonic Drive Systems' US subsidiary HD Systems, Inc. (now Harmonic Drive LLC) as a customer, I came to deeply appreciate the quality of their product and the dedication of their employees. It was therefore an easy decision for me to join the company. I have proudly served as President of HD Systems, Inc. (now holding company of Harmonic Drive LLC) for 14 years and as President of Harmonic Drive LLC for the past 16 years. The company has grown significantly over that period and is now poised to rapidly accelerate in growth. HDLLC's vision is to become the North American market leading manufacturer of high precision actuators and motion control products. I am honored to be leading the company during this exciting period of growth and innovation.

If our customers are successful, we will also enjoy success

It is people, not machines, that enable growth of our business. I am proud to say that we have an amazing, knowledgeable and dedicated workforce at all levels of the company; executive leadership, middle management, and team members. We invest in our staff through training and coaching and empower them to take actions to best serve our customers. I always tell our employees, "Our job is to make our customers successful. If we do that well, we will also enjoy growth and success." People sometimes ask why I have stayed at Harmonic Drive for so many years. There are two major reasons. One is the amazing people that I have the privilege of working with every day, and the other is the unique applications where our products are used that benefit society.

The medical, semiconductor, and aerospace market segments are expected to continue to show strong growth

In North America, our major market segments are medical equipment (including surgical robots), semiconductor capital equipment, and aerospace. Quality and reliability are paramount and it is inspirational to all of our employees to know that we manufacture products used in applications that greatly benefit and improve people's lives. Several of our employees have even had medical procedures done with the surgical robots equipped with our products. The medical market segment is forecast to see accelerated growth and a significant increase in demand due to needs of aging populations as well as the desire for faster post-surgery recovery times. The semiconductor capital market is propelled by the high demand for semiconductors used everywhere from mobile phones, IoT devices, electric cars and, most notably, today it is driven by the computing needs for artificial Intelligence. The aerospace segment has grown as a result of the constellations of low earth orbit satellites and the ongoing programs to return to the moon and travel to Mars. We have thousands of our HarmonicDrive® strain wave gears in orbit around Earth as well as on spacecraft to explore every planet in our solar system and beyond. Looking to the future, it is clear that humanoid robots equipped with AI will be commonplace in the workplace sometime this decade.There are many players around the world engaging in development, and we are preparing to contribute to this new, high growth market.

The Harmonic Drive Group's strengths that set us apart from the competition

Recognizing the success the Harmonic Drive Group has experienced over the years, competitors have recently been copying our designs and hoping to capture some existing business and new opportunities. However, copying a work of art does not make you an artist. Sixty years of experience cannot be copied. It is our accumulated knowledge, experience, and dedication that sets us apart from our competition. The Harmonic Drive Group has a unique environment that maximizes the group's strengths by sharing knowledge regarding design, manufacturing knowhow, markets, and supply chain.

Factory automation and elevating machinists' skill level

We have, and continue to, focus on employing automation in our factory to minimize the direct labor needed to produce products and maximize machine utilization while maintaining superior quality. This also allows us to elevate the skill level of our employees, where, for example, a machinist learns new skills and earns higher pay as they become able to set up and maintain automation cells. We have never downsized our staff when implementing new automation; we were simply able to produce more with our existing skilled team members. We will continue working to enhance our strengths further and improve the value of the entire group.

Message from the President of Harmonic Drive Systems (Shanghai) Co., Ltd.



We strive to accommodate local Chinese manufacturers and seize new revenue opportunities that have strong growth potential.

Takeshi Nakahira

President
Harmonic Drive Systems (Shanghai) Co., Ltd.

Rise of local Chinese manufacturers

Since our company was established in 2011, we have grown due to expanding sales to foreign industrial robot manufacturers with local production bases. Recently, local industrial robot manufacturers in China increased their share of the market thanks to strong cost competitiveness. According to one report, the market share of local manufacturers exceeded 50% in the second half of 2024. The performance and quality of robots manufactured by local Chinese manufacturers have improved, and we have received more technical inquiries and the level of the requests made to us has increased.

Enhancing efforts to cut costs and shorten delivery time

As we continue to expand sales to local industrial robot manufacturers, we have some of our products assembled by an external partner to cut costs and shorten delivery time. We plan to enhance efforts to expand sales even further while maintaining our competitive edge and ensuring profit.

Mid- to long-term demand potential continues to expand

In the Chinese market, the spotlight is on strong growth-potential humanoid robots as well as semiconductor capital and medical equipment. Semiconductor capital equipment has activated development and production in local Chinese manufacturers. More companies are using strain wave gearing especially in front-end processing. In addition, the over-60 population of China is expected to reach 30% of the country's total population in 2035, so demand for speed reducers used in medical equipment and humanoid robots is expected to increase greatly. We plan to focus our efforts on this in collaboration with group companies in North America and Europe that have extensive knowledge. Recently, we have been enhancing our lineup of actuator products that connect to servo drivers manufactured by major local electronics manufacturers. This has contributed to expanding latent revenue opportunities in a wide range of markets.

Message from the President of SAMICK ADM CO., LTD. (South Korea)



We will continue undertaking innovative cost-cutting measures and transform ourselves into a stable profit-making company.

Hyun-Woo Jin

President
SAMICK ADM CO., LTD.

Features and strengths of SAMICK ADM

SAMICK ADM was established in Daegu, South Korea in 2013 to manufacture Precision planetary speed reducers in East Asian countries such as China and South Korea. In June 2022 we became a 51-percent-owned subsidiary of Harmonic AD (HAD) with the aim of expanding sales of Precision planetary speed reducers for the HDS Group. We are provided support on design and production technology by Harmonic Drive Systems (HDSI), carry out quality and technological exchange with our parent company HAD, and have strengthened collaboration with the worldwide sales network. We provide a stable supply of high-quality Precision planetary speed reducers and our ability to accommodate short delivery times and urgent inquires has been recognized, resulting in sales expansion.

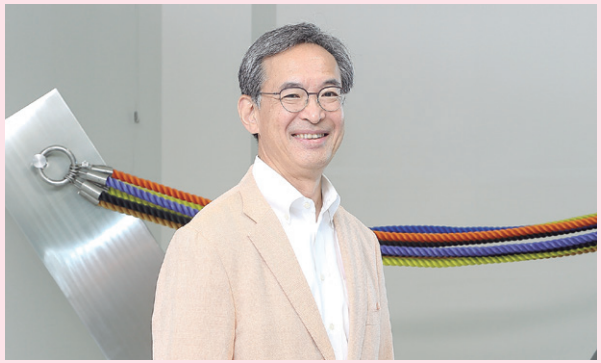
Measures to achieve 2030 goals

We are building an organizational structure that will generate stable profit while maintaining high product quality. Currently we are taking on bold challenges to reduce costs, such as carrying out pricing strategies tailored to different regions and applications and utilizing a wide range of materials and processing methods. We are also working with suppliers to accommodate forged and extruded components that were difficult to employ before. We aim to achieve a monthly production and sales volume of about 1,700 units by FY2030 (our target for this fiscal year is 1,200 units). To achieve these targets, we will enhance quality, production capacity, and price competitiveness, and strengthen our ability to accommodate short delivery times and urgent inquiries.

Sustainability initiatives

Our sustainability initiatives include optimizing production, placing solar panels on the roof of our factory, and installing high-efficiency equipment. In addition, we encourage our employees to conduct voluntary activities through the improvement suggestion system. We are striving to be a company that makes our customers and our staff happy, while deepening collaboration with other members of the HDS Group.

Message from Officer in Charge of Corporate Planning



We will strive to build "one team" across the globe and improve corporate value through active dialogue with all stakeholders.

Executive Officer
General Manager of Corporate Planning Division and Business Development Division
Tetsuya Shiokawa



Background and mission as General Manager of Corporate Planning Division

After working in sales at a major trading company, I went to business school in the US, and after graduating I worked in management at a foreign-affiliated company and was involved in M&A. Then I became involved in establishing Graduate School of Leadership and Innovation, Shizenkan University in Japan, where I also taught and served as vice president. My mission as General Manager of Corporate Planning Division is to plan and facilitate business with an emphasis on achieving both "evolution and depth" in today's unpredictable VUCA age and to realize sustainable growth. I will explore new business opportunities and strengthen competitiveness further by evolving the company and deepening existing businesses.

Vision for the Company and business model

Our company does not have non-Japanese Directors, but considering the growth of our overseas businesses, we need a diverse Board of Directors. Diversity enables global business decisions to be properly carried out; drives globalization of wages, recruitment, personnel exchange, types of employment, joint purchasing, and so on; and promises to improve efficiency of the entire organization and increase competitiveness. Our company uses area-specific sales organizations now, but going forward I want to strengthen communications with each location and build a business model that emphasizes efficiency. Furthermore, it is clear that organizations and people play a key role in improving sustainability.

Our U.S. subsidiary HDLLC is the first company in the HDS Group to conduct employee satisfaction (ES) surveys, and has improved its organizational capabilities by strengthening communication between management and employees. We will expand this initiative to other regions and are also considering customer satisfaction surveys with the aim of strengthening activities as "one team" even further.

Becoming listed on the Prime Market

We have received requests from investors within and outside Japan to comment on moving to the Prime Market, but this requires us to strengthen sustainability initiatives and formulate a persuasive mid- to long-term growth story. We also need to enhance human resource recruitment and development, build an organizational foundation that is befitting of a company that is listed on the Prime Market through measures such as increasing the number of women in management, and activate our organization and create a virtuous cycle.

Building an IT information system that includes a DX Strategy

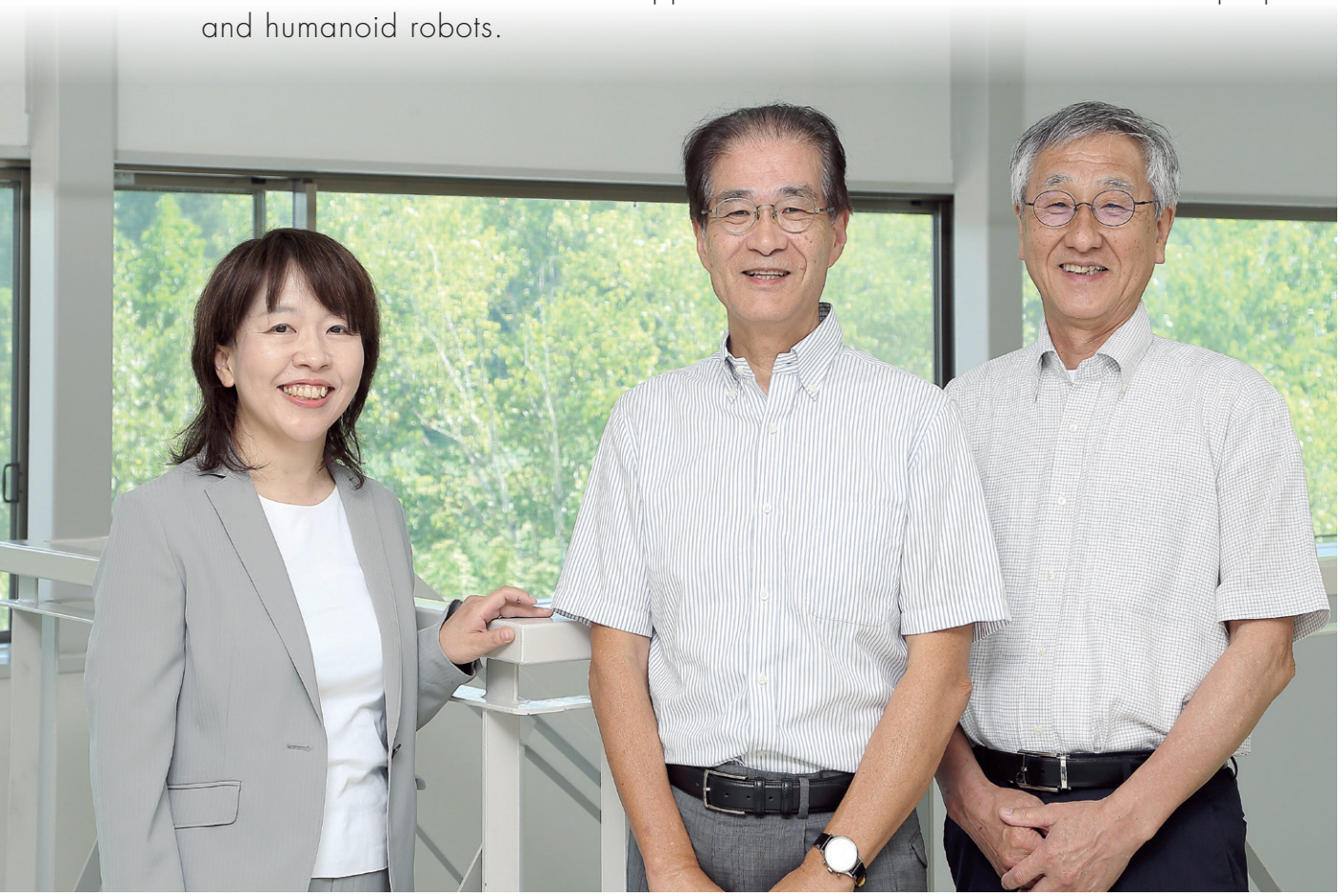
Currently we are focusing efforts on driving digital transformation (DX). We still have many analogue processes that are dependent on specific individuals. For example, creation of diagrams and management of information in design and quality assurance are still paper based. By digitalizing these processes with manufacturing execution system (MES), we expect to improve QCDS in production activities. In addition, production sites and the ICT Promotion Office—the organization responsible for driving DX—maintain constant collaboration to accelerate DX. One recent example is successfully cutting costs by managing data of jigs and tools and visualizing the state of utilization. We will drive digitalization to pursue efficiency while continuing to place importance on analogue processes as elements that differentiate us from the competition and give us a competitive advantage, with the aim of enhancing sustainability by improving efficiency further and driving digitalization.

Challenges

The HDS Group's overseas bases are building a strong foundation in their respective regions, but integration between companies in the group has not progressed enough. For example, the brand logo of the U.S. (HDLLC) and Japan are both blue and the logos look similar, but the logo of our German subsidiary (HDSE) is magenta and the logo itself is different. Having every base in the HDS Group think of themselves as "one team" and building a global network through dialogue will facilitate information sharing and joint development and enhance corporate value. To accomplish this we will promote communication further through measures such as increasing the frequency of global conferences.

Roundtable Discussion with officers in Charge of Technology Development

We will strengthen our competitive advantage by enhancing cross-organizational collaboration to seize business opportunities such as new cost innovation projects and humanoid robots.



Shizuka Yata

Executive Officer
Chief of Harmonic Drive Laboratory

Yoshihiro Tanioka

Director
Executive Officer
General Manager of Development and Engineering Division

Yoshihide Kiyosawa

Executive Fellow Officer (Chief Technical Officer) (in Charge of Technology and Quality)
General Manager of Quality Assurance Division

MC: Tell us about your initiatives for realization of the Medium-Term Management Plan.

Tanioka: We are placing particular importance on new product development. We did not launch many new products in 2023, but in 2024 we released a new series—the ULW series of ultralightweight HarmonicDrive® strain wave gear—and are taking measures to strengthen reliability. By overcoming challenges in productivity in the mass production stage, we expect to enhance product performance and improve production yield. We will also launch new drivers in our mechatronics product series. With functions that replace the current drivers, these new drivers incorporate the results of years of research and enable optimized control through integration with HarmonicDrive®. We are striving to control vibrations by combining these drivers with our new actuators and improving positioning accuracy. One of our strategies to achieve the targets for the mechatronics business in the Medium-Term Management Plan is to make up for the shortcomings of HarmonicDrive® with an easier to use system.

Kiyosawa: Our core product, HarmonicDrive® strain wave gear, was developed in 1964 based on the technology and drawings of USM (U.S.). We made our own changes to various parts, such as the gear teeth, but there are still parts that depend on the original technology. Going forward we will replace these with our own designs and technology to evolving it into a new product. For example, our CSF series was launched in 1992 as a revamped version of the previous CSS series. Then in 1999 we released the CSG series, a high-strength version of the CSF series. Since then we have incorporated added value such as making it more compact, lightweight, and longer-lasting, and also expanded the product lineup, but we still manufacture and sell the CSF series. Going forward we will improve productivity and profitability and stabilize quality by standardizing and combining the CSF and CSG series. We will strive to achieve the targets in the Medium-Term Management Plan by expanding such efforts to other products.

Roundtable Discussion with officers in Charge of Technology Development

Yata: To achieve the objectives of the cost innovation project being carried out under President & CEO Akira Maruyama, we need to consider things such as combining the CSF and CSG series. I want to continue placing importance on the mindset to meet customer expectations by offering new solutions, but I do not think it is wise to meet excessive requests for customization to the point of sacrificing our own profitability. One view is that standardizing the CSG series will allow us to create a foundation to offer proposals and roll out products to customers. We have started deliberations on how much we can improve profitability by revising manufacturing methods and materials in the development of new products. The Harmonic Drive Laboratory (hereinafter "HD Laboratory") develops underlying technology in collaboration with the development section. HD Laboratory strives to add new value to top-selling products and products that are superior to the competition. It also works to enhance improvement efforts related to development proposals, materials, and design. To achieve the numerical targets of the Medium-Term Management Plan, we need to create new value through our own efforts and carry out activities to improve productivity further.

MC: Tell us more about the cost innovation project.

Tanioka: The project was drawn up by President & CEO Akira Maruyama. It aims to revise all costs—from fixed to variable—and expand profitability. I have served as the chief operations officer since July 2024. I have created five companywide working groups based on QCDS. For Quality (Q), we will eliminate waste in quality and reduce spoilage cost. For Cost (C), we are taking approaches such as figuring out what kind of quality and lifespan a product will have if we make it with half the cost, which includes exploring new construction methods. For Delivery (D), we are driving digital transformation (DX) by utilizing data and visualizing the production process with a manufacturing execution system (MES) to meet customers' desired delivery times. For Speed (S), the sales and management sections plan to reduce indirect costs by streamlining business operations and taking measures to expand net sales such as revising product pricing. Our policy is to boost effectiveness by defining quantitative KPIs and conducting regular monitoring.

MC: Is organizational collaboration across sections progressing?

Yata: HD Laboratory handles operations such as development of underlying technologies, but it is also part of a cost innovation project working group. The working group is expected to produce analysis results such as demonstrating what effect using low-cost materials has on the performance of speed reducers. In the past I have sometimes felt that sections were siloed, but recently there have been active efforts to break down the walls between sections. There have been more meetings between sections with different perspectives and between engineers of diverse specialties.

Tanioka: When components are procured from a new materials manufacturer, the procurement section determines whether it is effective after consulting with the design, quality assurance, and other sections. The development section and production section are also carrying out cross-section activities such as implementing DX. And the production section has been consulting with the development section more often. In addition, ever since CTO Kiyosawa took on the concurrent role of Quality Officer three years ago, cross-organizational communication has become more active. Previously, the development, quality assurance, and production sections had conducted activities independently, but since the quality officer said he would take the lead, communication has improved, allowing them to share a range of experiences and issues. I expect the cost innovation project to accelerate the cultivation of a companywide sense of solidarity and strengthen cross-section collaboration.

Kiyosawa: I think we can achieve our target net sales if we can find solutions to customers' unreasonable demands, offer products that go above and beyond customers' requests, and improve quality. As the Executive Officer in Charge of Technology and Quality, I am currently focusing efforts on improving product quality. Defective products and customer complaints are a clear waste, and their reduction will lead directly to boosting profit. In addition, the quality assurance department exchanges information with other organizations such as the development and design department, HD Laboratory, and production technology department on matters such as cost innovation project initiatives and product development for humanoid robots. Cross-organizational activities can be seen everywhere. Relevant departments communicate to solve problems and share issues with each other; for example, when replacing processing machinery, departments other than the production technology department participate.



Kiyosawa

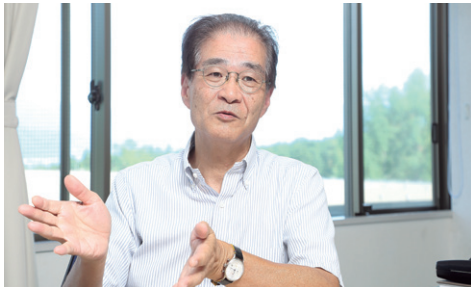
MC: Tell us your opinion and the advantages of humanoid robots.

Yata: By internally sharing, to the extent possible, where the products we develop and manufacture are used in robots and in what type of robots, our policy is to boost the motivation of every individual involved and tackle this companywide. Automated equipment generally used in the manufacturing industry is a heavy investment, and the cost is even greater if the parts that connect machine to machine can be used for a wide range of purposes. However, I think that if humanoid robots become commonplace, it may lead to reducing the cost of implementing automated equipment. Some are considering implementing humanoid robots for precision tasks, and since

Roundtable Discussion with officers in Charge of Technology Development

there are needs for high-speed, high-precision, and large torque components, more companies will probably use our compact speed reducers. We will continue to take on challenges to ensure that in five years when our rivals catch up to us we will be even farther ahead by overcoming highly difficult technical issues, which includes sometimes applying state-of-the-art technologies.

Kiyosawa: I think that rather than simply replacing workers with robots, companies seek speed and accurate positioning in factories beyond that of what workers can do. This requires advanced controls equipped with a torque sensor, and we are accelerating R&D in this area. We have already successfully developed a compact speed reducer product for humanoid robots, and it is undergoing design review for mass production. I am sure other companies are also conducting development, but considering the technical advantage we have gained through making many mistakes, I think we are five to ten years ahead of the competition.



Tanioka

Tanioka: We are examining how small of a speed reducer with a strain wave gearing mechanism we can turn into a product. Currently we are taking on the challenge of developing a product with a 5-mm outer diameter and also working on improving test equipment for items with a 3-5-mm outer diameter. Right now we are working to solve the backlash problem and to improve strength and stability. Going forward, we plan to also enhance development of actuators which are part of speed reducers. We are also strengthening information security measures to prevent our proprietary technologies from leaking.

MC: What are your thoughts on barriers to entry for the competition?

Tanioka: To create barriers to entry, we must take on the challenge of developing a large number of products before the competition, and accelerating the product development cycle of making mistakes, solving them, and translating that into new products. We have the human resources, equipment, and experience, so we are confident that we have, and will continue to have, high barriers to entry for the competition.

Yata: If we lose the mindset to take on challenges in product development, it's over. We are actively incorporating the latest technology in our underlying technologies. In aerospace applications, products they were talking about 10 years ago have emerged and a new market has formed. I'll say it again: To stay ahead of the competition and maintain our advantage, we need to continue taking on challenges to ensure profitability while continuing to meet customers' expectations. If we stop taking on challenges, then that is the end for us.

Kiyosawa: You cannot just perform the tasks you were told to do. New ideas are born from thinking for yourself, going for it, and experiencing failure. Tackling new problems and themes before rivals and finding answers through experiencing utter failure leads to success. Technologies developed without making a mistake will end up being copied by the competition. Mistakes are a source of barriers to entry, so I want everyone to take on challenge after challenge and make lots of mistakes. (lol)

MC: Lastly, I would like you to talk about risks and challenges.

Tanioka: I want to cultivate successors and turn things more over to young people by gradually delegating authority. I have also talked about this with engineers on the manufacturing floor, but I want leaders and manager class mid-level employees who will take the reins 10 or 20 years from now to work hard to drive the company.

Yata: We also need to build a foundation to take on new challenges. Recently we have had the bitter experience of a deal falling through because exchanging contracts in English took so long that the other party who wanted to conduct joint research lost enthusiasm. We need to enhance the organizational structure and speed to respond to globalization. I have reaffirmed my belief that we need an R&D facility fully equipped with development testing equipment, which will also serve to promote our development capabilities externally.



Yata

Kiyosawa: We run the risk of the competition catching up to us if we stay satisfied with the status quo and do not take on challenges. Offering high quality products tailored to customer specifications is the essence of our business model. We will contribute to creating new markets and improve corporate and social value by offering products that exceed customer expectations and carrying out a product-oriented strategy.

Management Based on Ceaseless R&D and Constant Emphasis on Quality

As a basic principle, the HDS Group prioritizes "ceaseless research and development activities" and "a constant emphasis on quality," as a foundation to its management aiming to create attractive products that satisfy our customers and provide services from the perspective of our customers.

R&D Organization

The R&D organization of the Company comprises the New Mechanism Principle Laboratory, which conducts R&D of new principles and mechanisms, free from the boundaries of existing products and technologies; the Harmonic Drive Laboratory, which conducts preemptive research and product development based on future forecasts with a focus on deepening and expanding core technologies; the Development and Engineering Division, which develops and designs products based on customer requests; and the Production Technology Division, which conducts R&D of the methods and equipment required for product manufacturing.

This system enables us not only to meet diverse customer requests but also to conduct preemptive R&D for the future, pursue fundamental technologies that form the basis of all R&D, and actively engage in studying new principles and mechanisms capable of delivering innovative value to customers in the future. We are building a system capable of adapting to the rapid changes of today.

Furthermore, to enable agile customer response and to accelerate technological development, our business operations are conducted through the close collaborations among the three sections of sales, development and production. Also, we pursue technological development aiming to establish new technologies through the collaboration among the industry, government, and academia.

Quality Promotion Organization

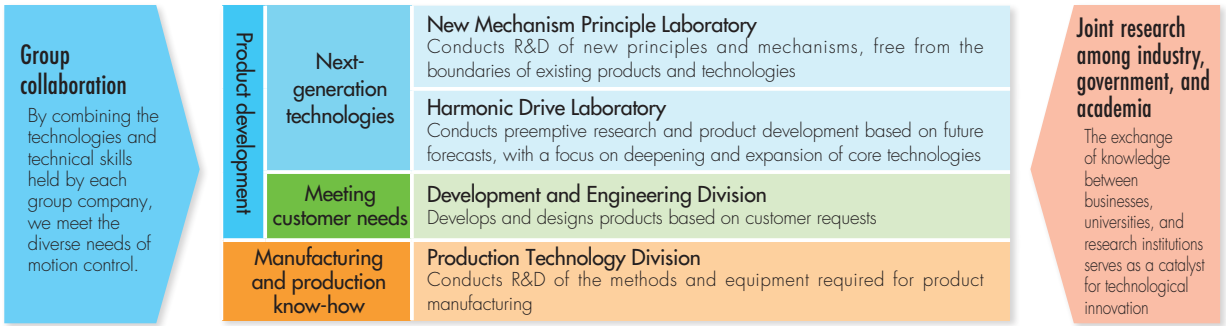
In the HDS Group, the head of quality assurance of Harmonic Drive Systems Inc. supervises the quality of our branded products across group companies, shares policies, and ensures the promotion of initiatives.

To enhance the quality level of all matters related to our branded products such as development, production, and service, the head of quality assurance grasps the quality status of each company through the quality assurance divisions of each group company, and receives monthly quality reports, including critical quality issues, in the regular quality meetings held every month at each company. Through such efforts, the HDS Group supervises quality information.

Furthermore, through the quality assurance divisions in each group company, we guide and supervise domestic and international factories, suppliers, and partner companies entrusted with manufacturing.

All group companies involved in manufacturing are certified with ISO9001, the international standard for quality management systems, and we are committed to maintaining and improving a quality assurance system for the stable delivery of high-quality products.

■ R&D Organization



Five strengths of the HDS Group that serve in meeting customer expectations

(1) Accumulated technologies and skills related to strain wave gearing

We believe that the development technologies, production technologies, processing and assembly technologies and skills, and production systems that we have built up for more than 50 years since our foundation in pursuit of expanding the potential of speed reducers, are the HDS Group's greatest strength.

(2) A product lineup providing compact size, light weight, and high accuracy

The mechatronics products and speed reducers are being chosen by customers who seek advanced levels of motion control and more compact, lightweight equipment. We provide differentiated added value that would be difficult to achieve with any other mechanisms across a wide range of applications.

(3) Core technology enabling the provision of total motion control

The HDS Group has built up total motion control technologies and skills through R&D and production of mechatronics products that integrate speed reducers, motors, sensors, drivers, controllers, and other system elements. The resulting tangible and intangible technologies and skills related to core technology are the source of the competitive advantage of the HDS Group.

(4) Business operations integrating sales, manufacturing, and development

The strength of the HDS Group lies in the system in place to quickly reflect customer needs and ideas of engineers in production and to provide products that meet customer expectations, which is made possible through the close collaborations among the sales, manufacturing, engineering, and development sections.

(5) Global business expansion

The HDS Group has operation sites in Japan, Europe, the U.S., South Korea, China, and Taiwan. Business strategies that conform to characteristics of each region are promoted and each site mutually cooperates to provide optimal products and services to customers around the world.

Interview with Officer in Charge of Sustainability



Formulating the Medium-Term Management Plan for fiscal years 2024-2026 through discussions to connect materiality with our management strategy marked a huge step for the HDS Group's sustainability efforts.

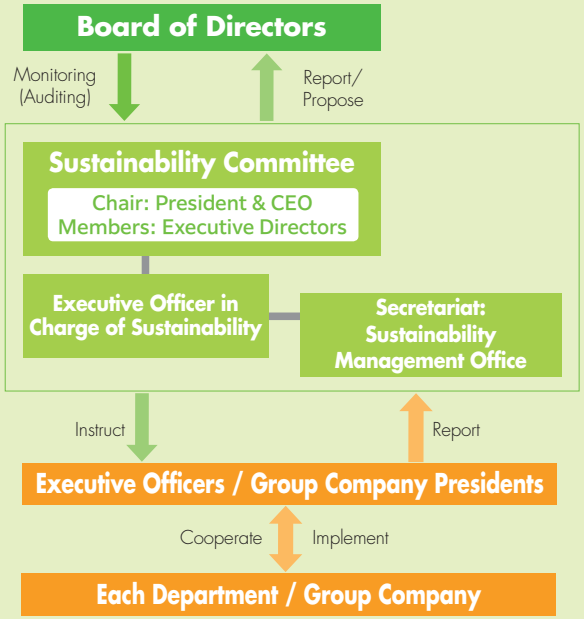
Executive Officer
Head of Sustainability, Corporate Planning and Investor Relations

Makiko Ono

Q. The HDS Group has revised its long-term vision and material issues (materiality). Tell us the purpose of the revisions and discussion process.

In order to link the Medium-Term Management Plan that started in fiscal 2024 with our sustainability strategy, we revamped our long-term vision for our ideal state in 2030 and revised and identified materiality, which we then reflected in the Medium-Term Management Plan for fiscal years 2024-2026. In revising materiality, we emphasized measures that can contribute to achieving a sustainable society by leveraging the HDS Group's strengths, rather than temporary measures that were separate from our business. I think what companies should do when tackling sustainability is make their businesses sustainable. Therefore, I think it is important for the HDS Group's businesses to coincide with the sustainability sought by society. The five material issues (materiality) that the Sustainability Committee identified through discussion were translated into the basic policy of the Medium-Term Management Plan after approval by the Board of Directors, and are being implemented in the form of concrete measures in each department's management programs.

HDS Group Sustainability Governance Structure



Q. Which of the five material issues (materiality) do you think will have a particularly big impact on future financial information? Tell us about how they are linked to the management strategy and implemented on the working level.

Every materiality impacts future financial information, but if I were to choose one, it would be "Maximization of the Value of Human Capital." The theme of the Medium-Term Management Plan that started in fiscal 2024 we announced is "Take on the Challenge of Value Creation and Transformation." However, what we are instilling internally is for "Each individual to unleash their brain power and take on the challenge of value creation and transformation." What I mean by "individual" is each employee—our human capital. As I said in the last integrated report, management strategies are executed by the employees who handle day-to-day operations. The other four material issues (materiality) are also implemented by employees—our human capital. In this sense, the five material issues (materiality) are not equal; it may be more correct to say that the other four are based on the "Maximization of the Value of Human Capital." As part of our efforts to achieve "Maximization of the Value of Human Capital" in the current Medium-Term Management Plan, we are building an environment where each person is respected and individual growth and a wide range of "brain power" are demonstrated. It is especially important to create an environment where people can take on challenges without fear of failure and cultivate an outside-the-box organizational culture. We place importance on encouraging employees to take on challenges and evaluating them correctly. In addition, we are moving forward with delegating authority from senior staff to employees, and we provide support so that employees of all levels can take the initiative to build their careers, which I hope will contribute to changing awareness and behavior.

Q. What kind of sustainability management is the HDS Group practicing, including outside Japan?

We have shared the Medium-Term Management Plan with companies in the HDS Group outside Japan and they are collaborating on materiality in the current plan. However, we have not started on concrete sustainability initiatives yet. First we need to share the long-term group sustainability strategy for 2030 and 2050 with the group companies outside Japan. Our German subsidiary Harmonic Drive SE is required to comply with Europe's CSRD (Corporate Sustainability Reporting Directive) from 2025. We will define long-term group targets and indicators on materiality and carry out the sustainability strategy as a consolidated group.

Q. The Sustainability Committee was established a year and a half ago. Tell us the accomplishments and challenges of sustainability management, and the policy going forward.

We formulated the Medium-Term Management Plan through discussions to connect the HDS Group's sustainability efforts with the management strategy, focusing on revising and identifying materiality. Formulating the plan marked a huge step for sustainability management. Recently, we have been receiving more requests to disclose information on sustainability, not only from shareholders and investors, but also from major customers.



Basic Policy of Sustainability

As a technologies and skills-based organization in pursuit of Total Motion Control, the HDS Group aims to enhance corporate value and realize a sustainable society by contributing to technological innovation for the betterment of society. We intend to achieve these goals based on our Management Philosophy comprising four pillars: Respect for the Individual, A Meaningful Company, Coexistence and Co-prosperity, and Contribution to Society.

We have also expanded the scope of disclosure to include climate change and human rights activities. The HDS Group is part of a supply chain of global companies and I am keenly aware that going forward sustainability initiatives may impact our competitiveness as a company. For our policy going forward, we will focus efforts on the following three measures. The first is to develop a process to implement the five material issues (materiality) initiatives on the working level and manage the progress of those initiatives. The second is to strengthen collaboration between group companies, including those outside Japan, on setting long-term sustainability targets for 2030 and 2050. The third is to develop a policy on corporate ethics, which includes human rights initiatives in business and the prevention of corruption. We plan to instill these group-wide. We will ensure that the Basic Policy of Sustainability is consistent with our Management Philosophy and implement it with the aim of enhancing the corporate value of the HDS Group.

Key Discussions by the Sustainability Committee (FY2023)

Date	Details
June 2023	Text on sustainability in the securities report for the fiscal year ended March 2023 is confirmed and discussed
August 2023	Sustainability Committee formulated plan for future activities
October 2023	Materiality is reexamined (identified candidates)
November 2023	Materiality is reexamined (evaluated importance)
November 2023	Materiality is reexamined (finalized final draft)

Q. What is the HDS Group's sustainability strategy for its supply chain?

The HDS Group has grown by building a sustainable relationship with its suppliers. HarmonicDrive® is used in a wide range of applications requiring compact, lightweight, and high-precision components, such as industrial robotics, semiconductor manufacturing equipment, aerospace, and medical equipment. To meet the demanding needs of such customers, it is essential to have the cooperation of suppliers that continuously pursue advanced technical capabilities and high quality. As sustainability initiatives have progressed worldwide, such initiatives must include not only a company's manufacturing processes, but also their suppliers' processes. In addition, the scope of sustainability initiatives has expanded from mitigating environment impacts to also include taking action for human rights. If we do not work with suppliers, we will not be able to provide society with high-quality products that take into account sustainability expected by society. To respond to the needs of society and customers, we will strengthen initiatives in partnership with suppliers and drive initiatives across the entire HDS Group.

Measures to Address Climate Change

Information Disclosure Based on the TCFD Framework

The HDS Group recognizes the impact climate change has on society, and Net Zero by 2050 has been set as a long-term goal that must be addressed as a serious social issue for management.

1. Governance

The HDS Group's governance on climate change is incorporated into the governance for sustainability overall. For details, please refer to "HDS Group Organization Structure for Sustainability and Governance" in "Message From Officer in Charge of Sustainability" on pages 45 to 46, and "Sustainability Promotion System" in our corporate website (following link).

HDSI website | Sustainability Promotion

2. Strategy

Risks and opportunities related to climate change that could potentially affect the HDS Group's business were identified, then a scenario analysis was conducted to analyze the degree of impact and timeframe for conceivable emergence of each risk and opportunity on a short-, medium-, and long-term timeline. Based on the results of this scenario analysis, we will promote efforts for opportunity creation and risk mitigation. As a countermeasure against the increased risk of heavy rains and flooding projected under the 4°C scenario, we conduct risk assessments for our group's operating sites and major domestic suppliers. At sites identified as having significant flooding damage risk, we have implemented measures such as installing water barriers to reduce the risk. Meanwhile under the 1.5°C scenario, as the entire society increasingly shifts toward low-carbon solutions, we see opportunities for increased demand for our group's products, which are characterized by energy efficiency and resource conservation through their compact and lightweight designs. Recognizing this, we will continue R&D to make our products even smaller, lighter, and long-lasting.

Scenario analysis

Referenced scenarios: IEA NZE2050 (1.5°C scenario), RCP 8.5 (4.0°C scenario) **Timeline definitions:** short-term 0-3 years, medium-term 4-10 years, long-term 11-30 years, Ultra long-term 30 years-

Scenario	Value chain	Risk / pportunity	Relevant business activity	Risk / opportunity factor	Details	Timeframe in which it may emerge	Probability of occurrence	Magnitude of impact
4.0°C	Upstream	Risk	Procurement / Transportation and distribution	Flooding, heavy rains, etc.	Supply chain disruptions due to more intense and frequent natural disasters (typhoons, heavy rains, etc.) cause delays and halt in procurement of raw materials	Short-term	Medium	Medium
		Opportunity	Procurement / Transportation and distribution	Reputation	Gain greater trust from customers with transport and distribution more resilient to natural disasters by diversifying suppliers	Short-term	Low	High
	Direct	Risk	Technology / Production	Water shortage	Changes in precipitation patterns cause a decline in available water. Restricted water withdrawal, etc. cause halt in operations Increase in production costs due to surge in water prices	Medium- to long-term	Low	Medium
		Risk	Technology / Production	Flooding, heavy rains, etc.	Increase in flooding damage at coastal operation sites due to elevation in sea level	Extremely long-term	Low	Low
		Risk	Technology / Production	Flooding, heavy rains, etc.	Damage to operating sites, halt in operations, and lower production amounts occur due to more intense and frequent natural disasters	Short-term	Medium	Medium
		Risk	Technology / Production	Rising temperatures	Labor productivity falls due to rising temperatures	Medium-term	Low	Low
		Risk	Technology / Production	Rising temperatures	Costs increase to add / replace air conditioning equipment at operating sites and their running costs increase due to rising temperatures	Medium-term	Medium	High
	Downstream	Opportunity	Procurement / Transportation and distribution	Reputation	Gain greater trust from customers with transport and distribution more resilient to natural disasters by dispersing manufacturing sites	Short-term	Low	High
1.5°C	Upstream	Risk	Procurement / Transportation and distribution	Surge in energy prices	Surge in energy prices due to introduction of renewable energy	Short-term	Low	Medium
		Risk	Procurement / Transportation and distribution	Surge in raw material prices	Surge in raw material prices for electrification and decarbonization (steel materials, aluminum, steel, rare earth elements, etc.)	Medium-term	Low	High
	Direct	Risk	Technology / Production	Development of low-carbon technology	If the competition to develop low-carbon products intensifies and the response is delayed, the competitiveness of products will be reduced	Medium-term	Low	High
		Risk	Technology / Production	Tightening regulations	Increase in burden to respond to broadening and stricter regulations related to sustainability, and failure to comply resulting in restriction on transactions and penalties	Short-term	Medium	High
		Risk	Technology / Production	Spread of energy-saving technology	Increase in burden of capital investment to reduce emissions and of energy-saving measures	Short-term	Medium	High
		Risk	Technology / Production	Tightening regulations	Increase in expenditure with carbon pricing for emissions (tax)	Medium-term	High	High
		Risk	Technology / Production	Development of low-carbon technology	Increase in costs for technology development to switch to low-carbon materials (green materials, recycled materials)	Short- to medium-term	Low	High
		Opportunity	Technology / Production	Spread of energy-saving technology	Reduced energy costs and lower burden of carbon taxes as a result of switch to low emission facilities	Medium-term	Medium	High
		Opportunity	Technology / Production	Spread of low-carbon technology	Increase in sales related to low-carbon products (EVs, etc.) due to promotion of low-carbon trend in society	Medium-term	High	High
		Opportunity	Technology / Production	Development of low-carbon technology	Increase in demand for low-carbon materials	Medium-term	High	High
		Risk	Technology / Production	Decrease in demand for existing technologies	Decline in sales of products for applications related to petroleum, natural gas, and paper due to decrease in demand for such material	Medium-term	Low	Low
		Risk / Opportunity	Sales/ Reputation	Reputation	Reputational risk of response to climate change being deemed inadequate (society, consumers, employees)	Medium-term	Medium	High

3. Risk Management

HDSI has established a system to be able to identify, assess, and respond to risks and opportunities related to climate change in accordance with the "Crisis and Risk Management Regulations." Risks are categorized into company-wide risks and risks by business process, with risk assessment conducted once a year.

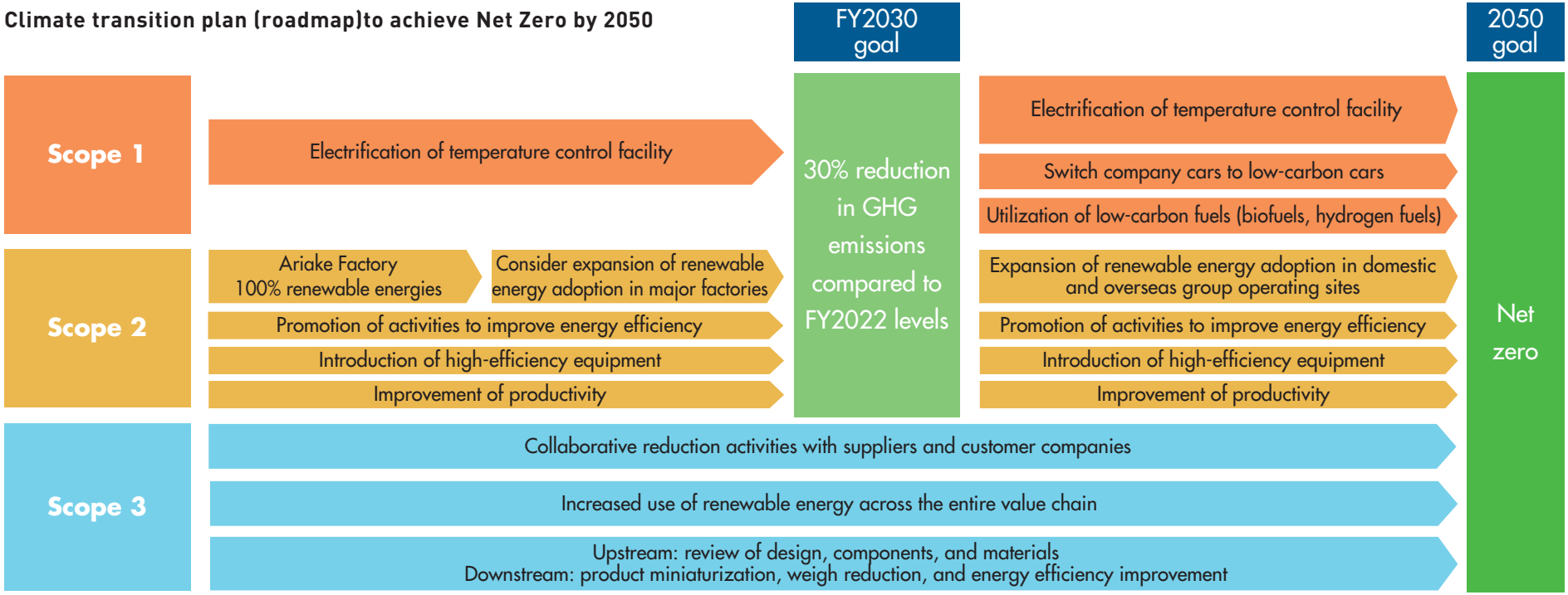
The Executive Officer in Charge of Corporate Planning and the corporate planning division grasp, analyze, and assess company-wide risks, while each of the divisions extracts and identifies risks by business process. The Internal Control and Audit Office conducts risk assessment with a short-, medium-, and long-term timeline from the perspective of frequency and scale of damage, and formulates policies from the perspective of law and of human life. In addition, comprehensive risk assessment is conducted putting all of the above together, and the Executive Officer in Charge of Human Resources and Administration, who is in charge of risk management, prioritizes them based on assessment results, for the President and CEO to approve. Risk mitigation activity is conducted based on policies formulated from the perspectives of legal compliance and prioritizing human life, with division leaders setting management targets for each of the risks and determining the response such as avoid, accept, mitigate, and transfer, according to the risk. Progress of such activity being conducted is reviewed by the Executive Officer in Charge of Human Resources and Administration annually. Based on such review, the President and CEO decides on policy for the following fiscal year, which is deployed to the divisions.

4. Metrics and Targets

The HDS Group has set Net Zero by 2050 as a long-term GHG emission reduction goal in relation to climate change. In addition, to achieve the Net Zero goal, the HDS Group has set "30% reduction in GHG emissions by FY2030" (Scope 1 + 2, compared to FY2022 levels) as a milestone (interim goal) and has developed a climate transition plan (reduction roadmap).

Furthermore, to ensure accurate progress tracking towards achieving the goals and to enhance the reliability of disclosed information, the Group has obtained third-party verification of GHG emission data (Scope 1 and 2) from FY2023.

Climate transition plan (roadmap)to achieve Net Zero by 2050



Efforts on Global Environment

Basic Policy on Global Environmental Initiatives

Deeply aware of our corporate social responsibility regarding the global environment, the HDS Group is committed to implementing global environmental protection policies. Through our business objective of pursuing total motion control, we provide society with superior technologies and services that will mitigate environmental destruction.

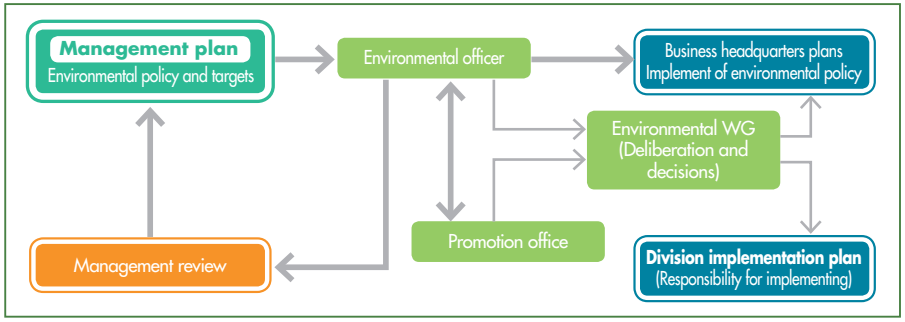
Environmental Policy

1. By assessing the environmental impact of all production processes from development to recovery and disposal, and by working to develop technologies that will act as a brake on environmental destruction, we create and provide products in harmony with the environment.
2. By observing laws and ordinances related to the environment, setting our own voluntary management targets, and reviewing our environmental action plans, we continue to raise our level of environmental management.
3. We aim to reduce the environmental impact of our products and activities through more efficient use of resources and energy and by reducing and recycling wastes and discharges.
4. We make sure our environmental policy is known to employees as well as to our affiliates and partners.
5. We take part in the environmental protection efforts of local communities and endeavor to coexist with them.

Environmental Management Organization

Based on our environmental policy, every fiscal year we set areas of focus and targets to be achieved by each division and develop a management program, thereby encouraging each organization to carry out its own environmental actions and making operation of the environmental management system more efficient.

Environmental Management Organization chart



Measures to Address Water Security

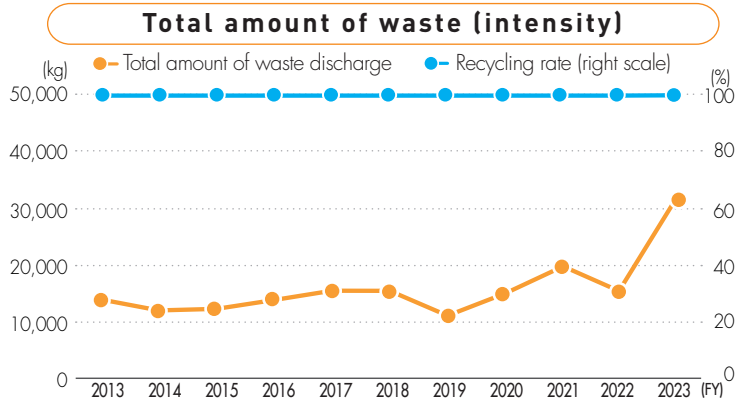
In recent years, with droughts and large-scaled flooding stemming from global climate change, a growing population, changes in consumption patterns, prospective increase in demand for freshwater in line with economic growth, etc., the impact of water security on the HDS Group's business activities cannot be ignored. In Japan, impact on both procurement and sales of materials in particular is growing, such as with breaks in the supply chain due to typhoons, heavy rains, and flooding, decreased production capacity resulting from damage to production facilities, and effects of confusion within the value chain on logistics and sales. Water security is thus being seen as a serious environmental issue that companies need to address along with climate change.

Since FY2022, the HDS Group has been making efforts to reduce water withdrawal and wastewater amounts by setting specific targets. Water risk analysis is also being conducted at each site using water risk assessment tools AQUEDUCT, provided by the World Resources Institute, and Flood Navi from the Ministry of Land, Infrastructure, Transport and Tourism, and steps taken for the identified risks.

Reduction of Industrial Waste and Promotion of Recycling

The total amount of waste (intensity) in FY2023 was 36,962 kg, a 70.3% increase compared to the previous year. The recycling rate declined by 0.8% from the previous fiscal year to 99.1%, achieving the annual target of a recycling rate of 99% or higher.

(Coverage: Hotaka Factory, Harmonic Drive Systems)



Note: Recyclable materials = scrap metal and chips, discarded motor parts, electrical wire scraps, electronic parts, office machines, development prototypes, etc.
Waste = wood chips, plastic waste, magnetic powder, etc.

Respect for Human Rights

Basic views

As a globally operating company, the HDS Group recognizes respect for human rights as a one of the critical elements of its business activities. We have established our view on respecting fundamental human rights and are committed to creating a safe and secure workplace environment for all.

The Harmonic Drive Systems Code of Conduct explicitly states the elimination of all forms of unreasonable discrimination against individuals, the protection of privacy, and the respect for fundamental human rights. As a measure to respect human rights in the supply chain, in 2022, we established the HDS Sustainable Procurement Policy which stipulates the eradication of discrimination and the prohibition of forced labor and child labor. Furthermore, in 2024 we used the Sustainable Procurement Self-assessment Questionnaire (SAQ) to confirm the awareness and efforts of suppliers regarding human rights and the development of better working environments.

Through human rights awareness initiatives based on international norms, we strive to cultivate a corporate culture that respects human rights and promote efforts to uphold human rights across all business activities. By doing so, we will actively fulfill our responsibility to respect the human rights of all individuals.

HDS Group's initiatives on human rights

FY2004	Established HDS Code of Conduct
FY2018	Introduced an awareness program (e-learning) on harassment prevention
FY2019	Began operating the whistleblower system
FY2022	Established the Sustainable Procurement Policy which includes respect for human rights and disseminated the policy to the suppliers
FY2022	Established the Health Promotion Center and began support for employee mental health
FY2023	Conducted harassment communication training for those in managerial positions
FY2024	Implemented Sustainable Procurement SAQ to important suppliers

Major human rights issues handled by the Sustainability Committee

- Promoting a better understanding of DE&I within the HDS Group
- Ensuring a vibrant and productive work environment, with a strict commitment to creating a harassment-free workplace
- Implementing sustainable procurement practices based on international human rights norms

Human rights education

To achieve empowerment of diverse human resources and respect for human rights, we implement awareness and educational programs to raise the awareness towards human rights.

Number of participants in programs to raise awareness on and educate human rights issues (e.g., harassment prevention)

	FY2021	FY2022	FY2023
Number of programs held	3	3	9
Number of participants (cumulative)	381	144	320

Note: Consolidated basis from FY2023

Operation of whistleblower system

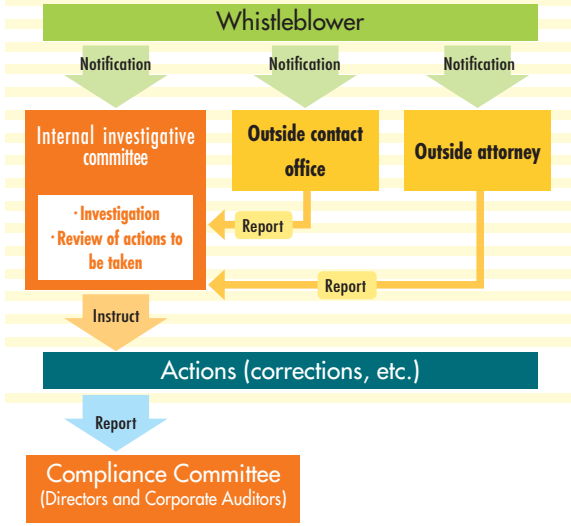
In accordance with the provision on the operations of the whistleblowing system, we have established and operate both internal and external (via external specialists and attorneys) whistleblowing contact points for all employees, including temporary employees, temporary staff, part-time employees, and seasonal staff. This contact point accepts whistleblowing not only on compliance violations, but also on human rights issues such as harassments. The internal investigative committee investigates the whistleblowing cases and handle them swiftly and appropriately. In addition, the provision on the operations of the whistleblowing system also stipulates that whistleblowers will not face dismissal or any other adverse treatment, and their personal information will remain confidential. The Compliance Committee reviews the effectiveness of this whistleblowing system and the system is revised as necessary.

Transition in the number of whistleblowing cases

	FY2021	FY2022	FY2023
Number of whistleblowing cases	17	21	35

Note: Consolidated basis from FY2023

Operation system of the whistleblower system



Future initiative regarding human rights

We will strengthen our system for identifying, assessing, preventing, and mitigating the impact of human rights risks in all stakeholder relationships, with human rights education and a whistleblowing system as the foundation for respecting human rights. As major initiatives from 2024 and onwards, we will implement the following three initiatives.

1. Formulation of HDS Group Polices on Human Rights
2. Establishment of a framework for human rights due diligence
3. Implementation and expansion of human rights education

Message from Officer in Charge of Supply Chains



We will implement supply chain management based on the two material issues (materiality) of "Achieve QCDS that meets customer expectations" and "Contribute to creating a sustainable society through corporate activities."

Managing Executive Officer
General Manager of Supply Chain Division Minoru Asano

Initiatives to "achieve QCDS that meets customer expectations"

As customers' demands for quality grow every year, the Supply Chain Division is working to improve the quality of the components that we accept, with the aim of achieving zero defects in procured components. We assess about 30 suppliers that we consider to be particularly important throughout the year, based on our own QCDS assessment criteria. We share the results of those assessments with the suppliers, and if they fail to meet the criteria, we prepare improvement plans and work together with them to implement those plans. In addition to annual plans, we also assess the quality results of delivered components on a monthly basis. If any important quality issues are found in these monthly assessments, we promptly share those issues with the suppliers and work with them to improve quality. Ensuring that our suppliers maintain high QCDS standards enables us to respond flexibly to customers' new needs. Customers' requirements are constantly changing. We believe in the importance of preventing loss of opportunity by strengthening supply chain management and enhancing our ability to respond to change.

Promotion of sustainable procurement

In October 2023, we formulated the HDS Group Sustainable Procurement Guidelines, and we are now engaged in the promotion of sustainable procurement. We have long made our basic approach clear in our green procurement policy, and we are now taking that one step further by sharing a recognition between our suppliers and the HDS Group and distributing a code of conduct for sustainable procurement to ensure it is communicated thoroughly. In addition, with regard to suppliers of electronic components and raw materials with higher risks, such as conflict mineral resources, we have rolled out a self-assessment questionnaire on sustainable procurement in accordance with international norms. This questionnaire includes 126 questions across 10 survey categories, such as human rights, labor, and environment. We ask our suppliers to respond to this questionnaire and collect their answers progressively. If these self-assessments uncover any risks, we will ask the relevant supplier to make improvements and give them any support they may require. For the realization of a sustainable society, the HDS Group will continue to communicate meticulously with our suppliers to achieve Coexistence and Co-prosperity with them. In doing so, we will fulfill our social responsibility across our entire supply chain.

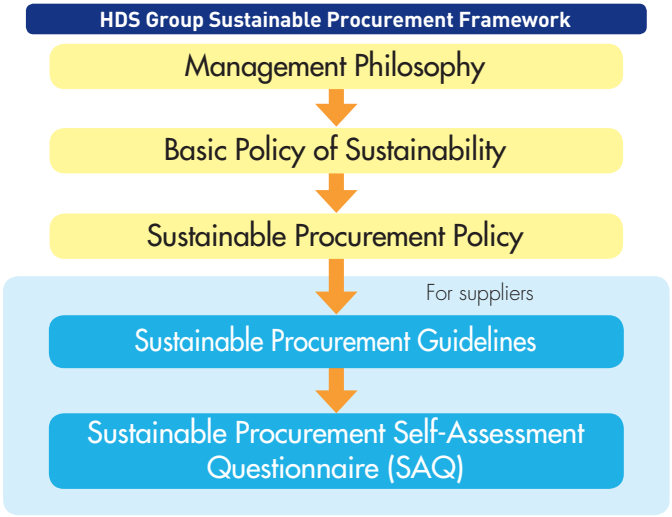
Support for the resolution of social issues in the supply chain

As many of our suppliers from which the HDS Group requests processing of components operate in the Nagano Prefecture area, primarily the Azumino region, issues for the supply chain are also issues for the local community. For suppliers who have



concerns about business succession, we also provide various assistance on the human resources development front, such as bringing their successors to work and gain experience at our production sites and quality assurance section. We also ask suppliers headed by young owners to serve as director companies of the HDS Kyoryokukai (HDS Cooperative Association), which comprises our major suppliers. This gives them the opportunity to discuss various issues with the executives of other member suppliers. Through such initiatives, the HDS Group has built a resilient supply chain with high technological standards, which we will connect to the achievement of sustainable growth together with our suppliers.

Sustainable Supply Chain Management



Sustainable Procurement Policy

1. Fair and Equitable Transactions
2. Compliance with Laws and Social Norms
3. Respect for Human Rights and Work Environment
4. Consideration for the Global Environment
5. Coexistence and Co-prosperity with Suppliers

HDSI website | Sustainable Procurement Policy

Implementation of the Sustainable Procurement Self-Assessment Questionnaire (SAQ)

In line with the Sustainable Procurement Policy of the HDS Group, we have communicated with our suppliers to establish a supply chain that respects the environment and human rights, reduces waste to a minimum, and fosters safe and healthy working environments. Furthermore, from July 2024, we have asked 21 suppliers of electronic materials and components handling high-risk materials such as procurement of minerals to respond to the Sustainable Procurement Self-Assessment Questionnaire. This questionnaire is created based on the CSR Self-assessment Questionnaire announced by the Supply Chain Working Group of Global Compact Network Japan.

Moving forward, we will share the evaluation results with suppliers to enhance their understanding of their current status and actively encourage improvement efforts. In addition, we will gradually expand the scope of this questionnaire and work to establish and embed the PDCA cycle for responsible procurement, aiming to build a sustainable supply chain.

HDS Sustainable Procurement Self-Assessment Questionnaire (SAQ): 10 survey categories

(126 questions in total)

Survey categories	No. of questions (open-ended included)
1. Governance	21
2. Human rights	10
3. Labor	24
4. Environment	16
5. Fair business practices	21
6. Quality and safety	8
7. Information security	10
8. Supply chain	8
9. Coexistence with local communities	5
10. Dissemination to suppliers	3

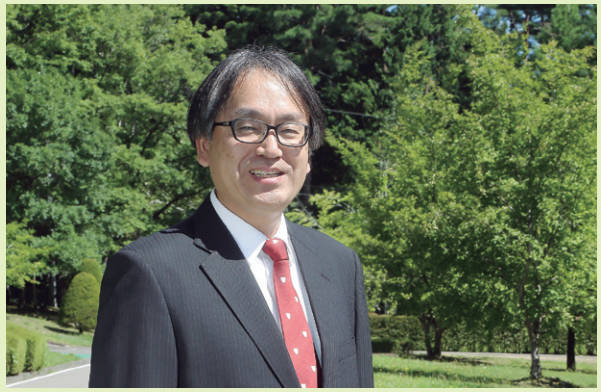
Ensuring thorough understanding of the Sustainable Procurement Guidelines

To meet societal expectations and customer needs, the HDS Group has established the Sustainable Procurement Guidelines as a code of conduct to align awareness and promote sustainability in collaboration with our suppliers. These guidelines are disseminated in principle to all primary suppliers (approximately 200 companies) and to the secondary suppliers through the primary supplies.

These guidelines are composed of seven items including ethics, human rights, and labor practices and cover the specific code of conduct in line with the Sustainable Procurement Policy. We ask suppliers who understand and agree with this code of conduct to submit a confirmation letter. As of July 31, 2024, we have distributed the guidelines to approximately 160 companies and have received confirmation letters from 43 companies. The guidelines will be reviewed once every year and will be revised as needed in response to societal demands.

HDSI website | Sustainable Procurement Guidelines

Message from Officer in Charge of Human Resources and Administration



To take on "the challenge of value creation and transformation," we aim to create a respectful organization in which individual growth and diverse capabilities are demonstrated

Executive Officer
General Manager of Human Resources and Administration Division Osamu Asakura



HDS's human capital management based on our Management Philosophy

HDS's Management Philosophy begins with "Respect for the individual." For more than a half century since our foundation, our aim has been to be a company that respects the rights of every individual employee and gives them a sense of satisfaction in their work. Our belief that human resources are the source of value creation has been passed down from generation to generation in the DNA of our company. As the pioneer of HarmonicDrive®, we have contributed to the development of various industries, along a path that has been forged by the power of people, including technological capabilities. We also set "Maximization of the value of human capital" as the first of our material issues (materiality) to be addressed as a priority for the realization of the long-term vision. We will strive to establish a working environment that will help each and every one of our employees, our human capital, to demonstrate their capabilities to the fullest extent.

The realization of our long-term vision, "The best provider of total motion control in harmony with the future" and our talent pool

As the pioneer of HarmonicDrive®, we have strived to respond to our customers' various needs. That requirement for us to respond to motion control needs that are changing with the times and to make the best proposals will continue into the future.

Simultaneously with our efforts to reduce the size and weight of HarmonicDrive®, we are also working to strengthen peripheral areas, such as motors, controllers, and sensors. Achieving these things will require people who have many and varied interests, alongside the willingness to take on challenges. We recruit around 30 people every year, a mix of new graduates and mid-career hires, primarily in engineering fields. The degree of difficulty of our customers' requirements has increased in recent years. As such, we need expertise not only in the mechanical field, but in adjacent fields such as electrical, communications, lubrication, materials, and chemical engineering, and we are recruiting diverse personnel to meet those needs. While reinforcing personnel in specific fields can be an effective way to address short-term issues, from long-term perspectives, I believe that, by having diverse individuals striving together for excellence, sustainable value creation and transformation will be possible.

Realizing an organization where individual growth and diverse skills are demonstrated and respected

To give our younger and mid-level employees a better sense of their own growth, we have begun delegating authority to them from senior staff and creating an environment where those more junior employees can do their work with both authority and responsibility. I believe that delegating authority to their subordinates will also allow our usually extremely busy managers to devote more time to addressing medium- to long-term issues and human resources development. At the same time, we are also working on making our organization flatter. In the technological development sections, we have abandoned the conventional demarcations of departments and sections and re-organized into loose teams covering individual technical fields. The aim of this change is to realize a structure in which rapid decision-making and technology establishment is possible, regardless of organizational framework.

For the development of employees' skills, we have built a human resources development program that enables them to improve their skills in a systematic manner, and we also conduct various training aimed at skills development. We also provide support to help employees grow through self-development. Employees with high motivation to grow are given opportunities for open-call cross-border learning, such as acquisition of PhD or MBA (Master of Business Administration), language training overseas, and training dispatch to overseas Group companies. In addition, we actively support engineers and skilled workers, who support our manufacturing over the medium to long term, to obtain qualifications through our in-house qualification programs and external skill certification programs. To "strengthen management resources that can adapt to changes in the environment," an issue to be addressed under the current Medium-Term Management Plan that started in FY2024, we aim to realize an organization where individual growth and diverse skills are demonstrated and respected.

Maximize the value of human capital

Increasing employee engagement (job satisfaction)

I believe that there are three initiatives that we need to pursue to increase employee engagement (job satisfaction). The first is to create an environment in which employees can actively choose their own career paths. Until now, employees have been able to declare their wishes for transfers under their self-declaration system, but this fiscal year, we introduced a new internal recruitment system, which is already in operation. Under this system, departments that require personnel disclose recruitment information within the company, and employees are free to apply for those jobs without having to inform their superiors. This gives them greater autonomy in choosing their career paths. They are also able to embrace the challenge of the kind of work that they want to do, which raises their motivation. My hope for this scheme is that our employees can exercise their own will in seeking to fulfill themselves professionally, instead of merely obeying unilateral directions issued by the company.

The second thing that we need to do is to ensure that employees can really sense how their own work has contributed to the company's business performance. To achieve this, we need to make a greater effort to share company information, including about its performance, internally. I would like to communicate qualitative information, including management issues, with all employees to ensure that they can truly sense how much they are contributing to solutions to issues and to business performance. We will embark on concrete initiatives with the hope of increasing employees' sense of belonging to the company and job satisfaction by reflecting that degree of contribution to performance in their bonuses.

Third and finally, we intend to pursue the transformation of corporate culture by fostering a culture of proactively giving praise. A workplace environment in which people can feel comfortable and work with enjoyment is highly important. To that end, we have started working on initiatives to improve the quality of communication between superiors and their subordinates. Specifically, we are asking all people in managerial positions to undergo training in listening and communication skills in our efforts to change the mindset of those in our leadership ranks.

Type of individuals the HDS Group seeks

1. People who think for themselves and act with the ambition to take on new challenges
2. People who act with the spirit of cooperation needed in an organization
3. People who are richly individual and draw on their creativity
4. People who correctly see the direction of changes in the environment and can adapt to them
5. People who possess cultural and human breadth

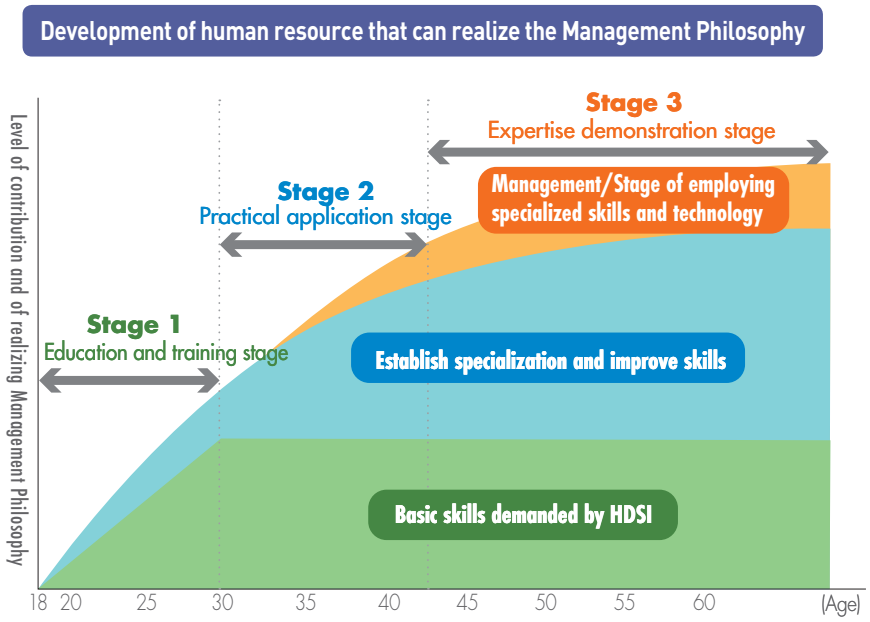
Human resource development policy

Our basic policy is to develop human resource capable of realizing our Management Philosophy and the development policy is divided into the following three stages. Based on this policy, we strive to nurture individuals who embody the type of personnel sought by the HDS Group.

Stage 1:
Education and training stage
Thorough education of the basics of the type of personnel sought

Stage 2:
Practical application stage
We support individual efforts while enhancing skills and establishing expertise through practical work. Additionally, we strategically develop future executive candidates.

Stage 3:
Expertise demonstration stage
We develop individuals who can contribute to divisional operations and the nurturing of junior staff, leveraging the ability and experience acquired to date, such as management skills and specialized skills and technology. (We develop individuals who will take on the role of developing others.)



Maximize the value of human capital

Enhancement of work environment

In order to build an organization where individuals can actively contribute, HDSI work to create a work environment where diverse talents can thrive.

1. Ensuring diversity

We aim to create a work environment in which all employees, regardless of differences in factors such as gender, nationality, age, and disabilities, can demonstrate their abilities and thrive. At the end of fiscal 2023, the ratio of female employees was 20.7%; ratio of foreign employees, 1.7%; and ratio of employees with disabilities, 1.9%; all increasing compared to the previous fiscal year.

Items	FY2021	FY2022	FY2023
Ratio of female employees	14.6%	17.6%	20.7%
Ratio of foreign employees	-	1.2%	1.7%
Ratio of employees with disabilities	1.9%	1.8%	1.9%

(Non-consolidated)

2. Recruitment

Our goal is to build a diverse organization by recruiting individuals who can share our Management Philosophy and possess the skills necessary for the HDS Group, through regular recruitment for new graduates and proactive mid-career recruitment, targeting individuals with diverse experiences, skills, and qualifications who can make an immediate impact. From before, promotion to managers is based on capabilities regardless of whether the individual is a newly graduated recruit or a mid-career recruit. The ratio of mid-career recruits and the number of managers are both sufficient, thus no target values have been set.

Items	FY2021	FY2022	FY2023
Number of newly graduated recruits	6	9	12
Number of mid-career recruits	16	13	15
Ratio of mid-career recruits	72.7%	59.0%	55.6%

(Non-consolidated)

3. Personnel systems/diverse workstyles

The HDS Group builds personnel systems based on the belief that enhancing employees' capabilities and motivation to work is essential for achieving the management vision and goals. Various systems have been established for the professional development of individual employees, such as job rotation for skill development, a self-declaration system for employees to directly communicate their career and development wishes to the Officer in Charge of Human Resources, an internal recruitment system, and a childcare and nursing care system that is available to employees of all employment type. In particular, to strengthen support for balancing work and childcare, we are improving the work environment through various systems such as maternity and childcare leave, leave of absence, return-to-work programs, shortened working hours, and teleworking. In addition, as part of our efforts on female empowerment and employee workstyle reform, we actively promote the use of childcare leave by male employees. As a result, the ratio of males who took childcare leave on a non-consolidated basis for fiscal 2023 came to 81.8%.

Items	FY2021	FY2022	FY2023
Ratio of males who took childcare leave	55.6%	56.3%	81.8%

(Non-consolidated)

4. Professional development system

In terms of the professional development of our employees, we have drafted a systematic human resources development plan with a medium- to long-term perspective, establishing a system that enables everyone to effectively and continuously enhance and develop the skills expected of our company's employees.

There are various programs available for professional development such as the mandatory level-based training conducted at each organizational level to demonstrate the abilities need for each role, basic training necessary for job performance and career development, and specialized training aimed to acquire the necessary specialized skills for career development. Furthermore, taking into account the evolving economic environment, technological advancements, and globalization, there are special trainings to support further professional development of employees through self-development, such as the support for employees pursuing advanced degrees such as MBAs and MOTs at domestic and international universities and other academic institutions, as well as opportunities for overseas training at international affiliates or language studies through academic English and international programs at foreign universities. In addition, to support the engineers and skilled workers who underpin our medium- to long-term growth, we actively support them in acquiring internal qualifications and taking external skill certification exams.

Items	FY2021	FY2022	FY2023
Number of employees in graduate schools, MBA, MOT programs	0	2	4
Number of employees in overseas training	0	0	1
Number of employees taking correspondence education programs	234	131	167

(Non-consolidated)

5. Health promotion

The health of our employees serves as the foundation to maximize the value of human capital. We strive to protect the physical and mental health of our employees and create a safe work environment through measures such as regular health check-ups, stress checks, and other measures to prevent physical and mental issues, as well as establishing the Health Promotion Center, offering personalized health advice and guidance from in-house industrial health nurses, and providing whistleblowing/consultation hotlines both internally and externally for issues such as harassments.

Items	FY2021	FY2022	FY2023
Stress check inspection rate	88.6%	86.0%	85.0%
Ratio of high-stress individuals	17.8%	17.8%	12.5%
Smoking ratio	31.0%	30.9%	29.8%

(Non-consolidated)

Special Feature 1 Next Generation Leaders Roundtable Discussion

We asked five next-generation leaders of HDSI about topics such as initiatives and challenges of their respective sections on achieving the Medium-Term Management Plan that started in fiscal 2024, aspirations for 2030, and our long-term vision.



Yuki Mieda
First Production Division
HD Production Department #1 (Mainline)
F/S-line #1 Manager

Takashi Sasaki
Corporate Planning Division
General Manager of ICT Promotion Office

Kaori Takamine
Development and Engineering Division
Technical Management Section Leader

Daisaku Takei
Production Technology Division
Production Technology Department
First Production Technology Machining Team Leader

Hiroshi Shimada
Supply Chain Division
Procurement Department
Purchasing Leader

Special Feature 1 Next Generation Leaders Roundtable Discussion

MC: Could you introduce yourselves?

Mieda: This year marks my 22nd year with the Company. Two years ago I became manager of the First F/S-line. The Flexspline manufacturing line consists of the First F/S-line, which manufactures standard products, and the Second F/S-line, which handles compact and large-scale products. Currently I oversee about 40 people on First F/S-line.

Takamine: My previous job was in 3D modeling at a major automobile manufacturer that makes trucks and buses. I joined HDSI in 2007 as a mid-career hire. At first I worked in development in the Mechatronics Business Department, but after coming back from my second maternity leave, I joined the then-Legal and IP Department. Today I serve as leader of the Technical Management Section, where I manage IP and chemical substances legislation.

Sasaki: I joined the Company as a mid-career hire six years ago. This June I became General Manager of the ICT Promotion Office. My previous job was in building manufacturing support systems to manage parts with 3D data. At HDSI, I digitalize various business operations with IoT and connect different sections with data. I also focus on developing IT human resources.


Sasaki

Shimada: In 2010 I joined Harmonic AD, Inc. (HAD), a subsidiary that manufactures precision planetary speed reducers. After working in accounting for a year and a half at HAD, I was transferred to HDSI's Finance Accounting Department. Then I was transferred to the Procurement Department through the job rotation program. Currently I serve as leader of procurement of components such as circular splines.

Takei: I joined as a mid-career hire in 2018. I work in the Production Technology Department and have served as leader there since last year. My previous job was in metalworking at a parts fabrication company that fabricated prototypes and stand-alone items such as optical and satellite components. Currently my duties include planning and implementing fabrication lines for machine tools, maintaining equipment, and designing jigs.

MC: Tell us about your initiatives to achieve the goals of the new Medium-Term Management Plan that started in fiscal 2024.

Mieda: Recently we have been focusing efforts on human resources development, which had been an issue before. Specifically, we score workers' skills and capabilities between 1 and 5 (1: Cannot do it, 2: Needs help, 3: Can do it alone, 4: Can instruct others, 5: Can make improvements) and clearly define the steps needed for workers to be able to complete tasks alone, which we visualize on an evaluation sheet. Currently I evaluate each worker individually, but I am considering creating roadmaps that include standardized duties and building a system that makes evaluations impartial and enables workers to improve their skills themselves. Workers' duties consist of more than just work on a fabrication line, but include a wide range of tasks such as handling measurement tools, maintaining equipment, and profilometry. There are 30-40 evaluation categories. Quantifying and continuously monitoring these skills makes training more effective and efficient. In addition, we started an initiative for monitoring the work of all workers in fiscal 2023. We are striving to improve the quality of workers by monitoring the work of everyone from new hire to experienced worker every three months. We evaluate whether they are capable of doing the work or not and provide training based on the results. Currently, the staff that handles monitoring checks work processes visually, but we're considering implementing a work analysis system that uses video in the future. By working to optimize work processes based on data, we aim to prevent human error like dropping workpieces or making mistakes in operating machine tools, and to maximize output and boost production efficiency further to achieve the targets of the Medium-Term Management Plan. I think this initiative will also lead to "Maximizing the value of human capital," one of our material issues (materiality).


Mieda

Takamine: Our IP patent strategy is effective not only in improving corporate value but also in differentiating us from the competition. With patents, it is not just the number of applications that is important; the key is whether you can secure key technology. As a leading strain wave gearing company, the HDS Group has refrained from applying for patents in which we would have to disclose know-how. But recently competitors have been actively applying for patents that specifies the specific numbers. When a rival's technology is patented, we could run the risk of being sued, so I think that it is essential to "defensively" apply for patents to serve as a barrier for entry to rivals. The Technical Management Section is strategically managing IP by strengthening collaboration with the development section. Actually, when we announce information to the public, we sometimes find a new partner and it leads to the development of new technology or enhancement of existing technology. The



technologies HDSI has accumulated over 50 years have been developed thanks to making countless mistakes. I believe that patenting the knowledge and experience gained from these mistakes will lead to building effective barriers to entry. HDSI has also built a patent reward program. Any employee can receive reward money just by applying for a patent, and if the patent is registered, they gain additional reward money. In addition, each year we select a Grand Prize, First Prize, and Most Numerous Applications Prize. And every five years we give additional reward money to the employee whose patent has contributed the most. These efforts will contribute to achieving the materiality, "Take on the challenge of developing new technologies and skills that coordinate with changes in the environment." Going forward we will further enhance conveying information internally and tackle effective patent strategies.

Sasaki: HDSI has a firmly rooted paper-based culture, and each section in each organization has operated in a way that is optimal for them. The objective of digital transformation (DX) is to link data and information scattered across paper documents and Excel sheets companywide across organizations. With the advancement of AI, I feel there is a risk of the competition catching up to the knowledge and experience we have gained in a few years from now. To prevent that, we will link the entire company seamlessly with data. If this initiative comes to fruition within the next five years, it will greatly contribute to improving productivity and maximizing profit and also to the materiality, "Achieve QCDS that goes beyond customer expectations." Linking data will also connect organizations and people to each other. In addition, transforming the organizational culture based on IT and removing the walls between organizations will also foster the sense of being "one team" even further. Currently, the ICT Promotion Office is accelerating DX by driving new initiatives to enhance three chains: supply chain, manufacturing chain, and engineering chain. Because this will result in centralizing all factories, it shows great promise to bring about new innovation by improving productivity further and integrating information.

Shimada: The HDS Group makes key niche components with a high market share. That's why fulfilling our commitment to supply customers is top priority. To "Achieve QCDS that goes beyond customer expectations," one of our material issues (materiality), it is absolutely crucial that we avoid delays in delivery times. About two years ago there was a period when the order volume broke all previous records, and supply became tight. There was a sharp increase in advance orders from customers anxious that our production capacity was lacking. While this surge of orders was a factor, one reason for the tight supply was not sharing enough information with our suppliers. Building a system to regularly share information like customer inventory and demand trends is essential for efficient production. I am keenly aware of the need to collaborate with the ICT Promotion Office, which includes sharing information with sales and production sections. Furthermore, to achieve the targets in the Medium-Term Management Plan, we need an optimal production method, such as one that aims to tap new suppliers, eliminate defective items, and maximize output. The Procurement Department visits suppliers directly and offers suggestions such as new methods and how to improve the workplace environment. The department also acts as a bridge between suppliers and the design, production, and quality assurance sections when new products are developed and produced. If a defective product is found, it is the role of the Procurement Department to suggest improvements to the supplier and find a solution in collaboration with the production technology section. The Procurement Department staff works to build a relationship of trust by communicating with the supplier and visiting them if necessary.

Takei: The role of Production Technology is to ensure we have the production capacity to achieve the targets and to improve production efficiency and profitability by cutting production costs. There are many ways to cut costs. Examples include automation to improve existing processes, implementing new processing methods, and switching from procuring parts to manufacturing them in-house to improve profitability. To ensure production capacity, we are steadily carrying out capital investment plans to achieve the targets of the Medium-Term Management Plan. In regard to cutting costs, we are strengthening human capital by multi-skilling workers in existing processes, and improving production efficiency and capacity by installing automated equipment in the assembly stage. In the metalworking stage, we will improve the equipment utilization rate by making use of processing data, and we are also considering installing new equipment such as combined processing machines to automate processing. We are also considering to switch processing of around ten components, such as blanks and flanges, that we have been outsourcing to in-house to improve internal processing techniques. We aim to cut outsourcing costs by incorporating in-house manufactured components into new orders.



Takei

Special Feature 1 **Next Generation Leaders Roundtable Discussion**

MC: As a next-generation leader, what do you think should be done looking ahead to the HDS Group 10 years from now?

Takei: No matter how advanced technological capabilities a company has, it will decline if it cannot respond to the changes of the times. The HDS Group has established a strong position with strain wave gearing, but it still has a firmly rooted old-fashioned analogue culture that relies on workers' experiences. It is essential that we carry on the experience and knowledge of leaders, engineers, and technicians that helped the HDS Group get its start and maintain the strengths and advantages of the group. To do this we need to build the capability to flexibly respond to the changes of the times by quantifying and digitalizing various elements. With regard to cutting costs, digitalization will enable us to advance based on long-term themes and roadmaps through measures such as identifying where workers excel and where they don't, visualizing their skills, enhancing their strengths, and overcoming their weak points with effective training. By steadily carrying out companywide measures now, I think we can transform into a strong company that can respond to changes in the external environment.

Takamine: In Europe, the chemical regulations RoHS and REACH went into effect in 2006 and 2007 respectively. Today, the number of regulated substances continue to increase worldwide. HDSI has implemented a chemical substances management system and the products offered by the group comply with regulations. Going forward, I want to strengthen compliance with regulated substances that continue to increase year by year and expand activities to reduce substances that impact the environment. With regard to patents, we need to apply for patents strategically by balancing an "offensive patent approach" to tap new markets and a "defensive patent approach" to protect our technologies and products—our company's strengths. I believe it is important to undertake both approaches strategically and carry out a group-wide strategy that also includes IP other than patents.


Takamine

Sasaki: In addition to measures to achieve the goals of the Medium-Term Management Plan, we have also started a new project to reform costs. To reform costs, we need to implement a DX strategy with a sense of urgency. Going forward, we expect fluctuations in demand to become even more dramatic and new business opportunities to emerge. It is essential to build a data-based organizational structure to flexibly respond to changes in the external environment and maximize profit. And to strengthen barriers to entry, we also need to properly disclose information and partner with other companies and suppliers. We also need to build a system to promote work style reforms and innovation, and develop initiatives to create and diversify new businesses. Currently we are carrying out a range of measures to transform into a great company where everyone wants to work in 10 years.

Mieda: So far HDSI has been a stable company with high market share. However, with the rise of competitors and emergence of new business opportunities, I think now is the perfect chance for transformation. I believe this transformation will also invite new growth. To take advantage of this chance, I want to change employees' mindsets with the goal of becoming an organization where each employee takes ownership. We will create a vibrant workplace where every employee can work together towards the same objective and challenge themselves. I want people to do more than just make things. I want them to always question things, and think and act on their own. To achieve this, I want everyone on the manufacturing floor to have a mindset to make improvements to fix even the slightest problem, and make solving problems and eliminating waste they find in their day-to-day work something routine. The accumulation of small improvements will lead to dramatic results.


Shimada

Shimada: We want to work with more suppliers who want to build a win-win relationship and work with the HDS Group. Recently we have received comments from some suppliers that our quality requirements are too strict, so we need to clearly define our quality standards. Some suppliers also face the problems of labor shortage and lack of a successor. Suppliers with outstanding technical capabilities are essential for the HDS Group. I want to create more value across the HDS Group's supply chain by understanding suppliers' problems and working together to find solutions. If we neglect doing this, we run the risk of being weeded out in 10 years. I think that now is our chance to transform and grow: This includes corporate culture, organizational management, and DX. We need to act with a sense of urgency to ensure that we continue to have a competitive advantage in 10 years.

MC: Through today's roundtable discussion, I get the impression that HDSI is running a vibrant organization where everyone is working together to transform the company and achieve its aspirations and the goals of the Medium-Term Management Plan. Thank you for joining me today.

Corporate Governance

Basic views

The fundamental policy of Harmonic Drive Systems Inc. (hereinafter "the Company") for corporate governance is based upon ensuring sound and transparent corporate management and achieving swift and effective decision-making, with the aim of meeting the expectations of our stakeholders, achieving sustainable growth, and enhancing our corporate value over the long term. We do so through the implementation of our Management Philosophy, which consist of four pillars: Respect for the Individual, A Meaningful Company, Coexistence and Co-prosperity, and Contribution to Society.

Track record of corporate governance enhancement

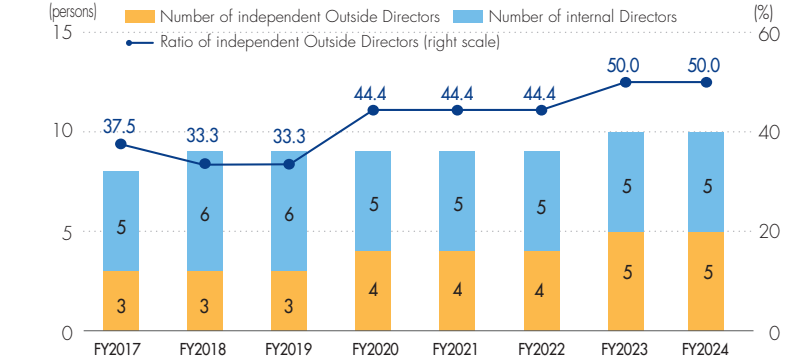
FY2001	● Number of outside corporate auditors increased (from 2 to 3)
FY2003	● Executive officer system adopted ● Outside directors appointed (2 directors) ● Board of Directors Advisory Committee established
FY2004	● Number of outside directors increased (from 2 to 3)
FY2005	● Functions of Board Chairperson and President-cum-Representative Director separated
FY2006	● Basic policy for internal control system formulated
FY2011	● Internal Control and Auditing Office established
FY2013	● Number of outside directors increased (from 3 to 4)
FY2019	● Whistleblower system established
FY2022	● Executive retirement allowance system abolished ● Stock compensation system with transfer restrictions introduced
FY2023	● Sustainability Committee established ● Number of Outside Directors increased (from 4 to 5) ● Female Director appointed ● Nomination and Remuneration Advisory Committee (voluntary) established

Reasons for selecting a company form with a Board of Corporate Auditors

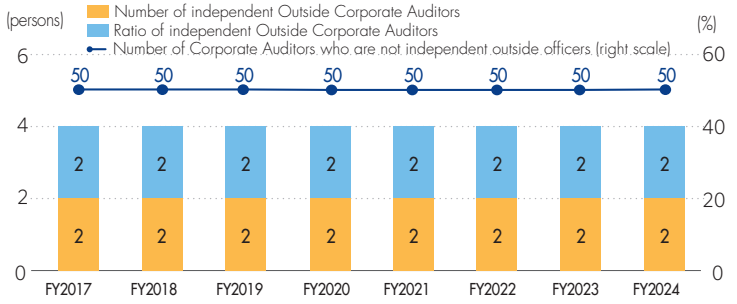
The Company has a Board of Corporate Auditors system in place. The Company's governance structure is based fundamentally on an institutional system in which it has a Board of Corporate Auditors in place, as stipulated in the Companies Act. Since the Company believes that its current governance system is functioning effectively, it has determined that it is appropriate to continuously enhance the corporate governance structure based on the current setup of the company with a Board of Corporate Auditors. The Board of Corporate Auditors after the Ordinary General Meeting of Shareholders held on June 21, 2024 comprises a total of four members, two full-time and two part-time, out of which two are Outside Corporate Auditors. A system is in place so that the Corporate Auditors can regularly audit the status of business execution. This includes active participation in important meetings related to business execution in addition to the Board of Directors meeting, interviews with the Representative Directors, information sharing with Outside Directors, exchange of opinions with executive Directors, Executive Officers, heads of major divisions, and the presidents of domestic and overseas subsidiaries.

Changes in ratio of independent outside officers in the Board of Directors and Board of Corporate Auditors (As of June 21, 2024)

Changes in ratio of independent Outside Directors to Board membership



Changes in ratio of independent Outside Corporate Auditors in the Board of Corporate Auditors



Corporate Governance

Composition of the Board of Directors (As of June 21, 2024)

Attributes	Name	Current Position (Responsibility)	Attendance at Board of Directors Meetings (FY2023)	Time of Appointment as Director	No. of Shares Held	Expected Insight, Experience, Capability, Expertise, etc.							
						Corporate Management/ Management Strategy	Overseas Business	Sales/ Marketing	Manufacturing/ Production	Technology/ R&D	Financial Strategy/ Capital Policy/ Accounting	Information and Communication Technology (ICT)	Sustainability
	Akira Nagai	Chairperson of the Board of Directors	18/18	June 2013	54,713	●	●	●			●	●	
	Akira Maruyama	President, Representative Director	18/18	June 2016	8,166	●		●	●	●		●	
	Kazutoshi Kamijoh	Representative Director	18/18	June 2020	12,123	●		●			●		
	Yoshihiro Tanioka	Director	18/18	June 2021	6,279	●	●	●	●	●			
	Naomi Shirasawa	Director	Newly appointed thus not applicable	June 2024	7,099	●	●	●	●	●			
Outside Independent	Haruhiko Yoshida	Outside Director (Independent Officer)	18/18	June 2023	22,011	●	●	●					
Outside Independent	Masanobu Nakamura	Outside Director (Independent Officer)	18/18	June 2013	13,205	●	●	●			●		
Outside Independent	Yoshio Fukuda	Outside Director (Independent Officer)	18/18	June 2020	1,265	●	●	●	●		●		
Outside Independent	Kazuhiko Hayashi	Outside Director (Independent Officer)	18/18	June 2022	234	●	●			●			
Outside Independent	Kaeko Kitamoto	Outside Director (Independent Officer)	12/13	July 2023	0	●					●		●

Note: Ms. Kaeko Kitamoto was newly elected in the FY2022 General Meeting of Shareholders held on June 21, 2023 and assumed office on July 1, 2023. The attendance shown above shows the number of meetings of the Board of Directors held after she assumed office.

Reasons for selecting skill areas of the Skills Matrix

Skill areas	Reason for selection
Corporate management/ Management strategy	A director needs management experience and track record at various companies including a manufacturing company as well as abundant knowledge to deliver technological innovation for a better society under the Group's mission of "contributing to technological innovation in society through motion control technology", in addition to achieving a sustainable society and enhancing corporate value.
Overseas business	A director needs abundant knowledge and experience in overseas business management and local culture, etc. to promote the growth strategy of the Group which operates business overseas.
Sales/ Marketing	A director needs proven knowledge and abundant experience in sales and marketing to identify essential needs of customers, create attractive and satisfactory products, and provide customer-oriented services.
Manufacturing/ Production	A director needs proven knowledge and abundant experience in manufacturing and production which is essential to maintain and develop a production system to achieve added-value manufacturing in total motion control, the domain of the Company, and high customer satisfaction.
Technology/ R&D	A director needs experience in R&D for speed reducers and mechatronics products, in addition to expertise and experience in the industry, to ensure high product quality as a leading company of precision speed reducers, and develop high added-value products for customers.
Financial strategy/ Capital policy/ Accounting	A director needs proven knowledge and abundant experience in finance and accounting to build a solid financial base, promote growth investment and financial strategy to sustainably enhance corporate value and return profits to shareholders.
Information and Communication Technology (ICT)	A director needs proven knowledge and experience in information and communication technology to develop information infrastructure including cyber security measures and to promote ICT across the Company utilizing advanced information technologies.
Sustainability	A director needs proven knowledge and experience in sustainability promotion including the introduction of renewable energy sources to reduce greenhouse gas emissions and human capital such as the promotion of diversity, equity, and inclusion to promote the reduction of global environmental impacts, the development of a rewarding work environment, etc. based on the Basic Policy of Sustainability and material issues (materiality), which were established to realize a sustainable society and enhance corporate value.

Reason for nomination as candidate for Outside Director and expected role

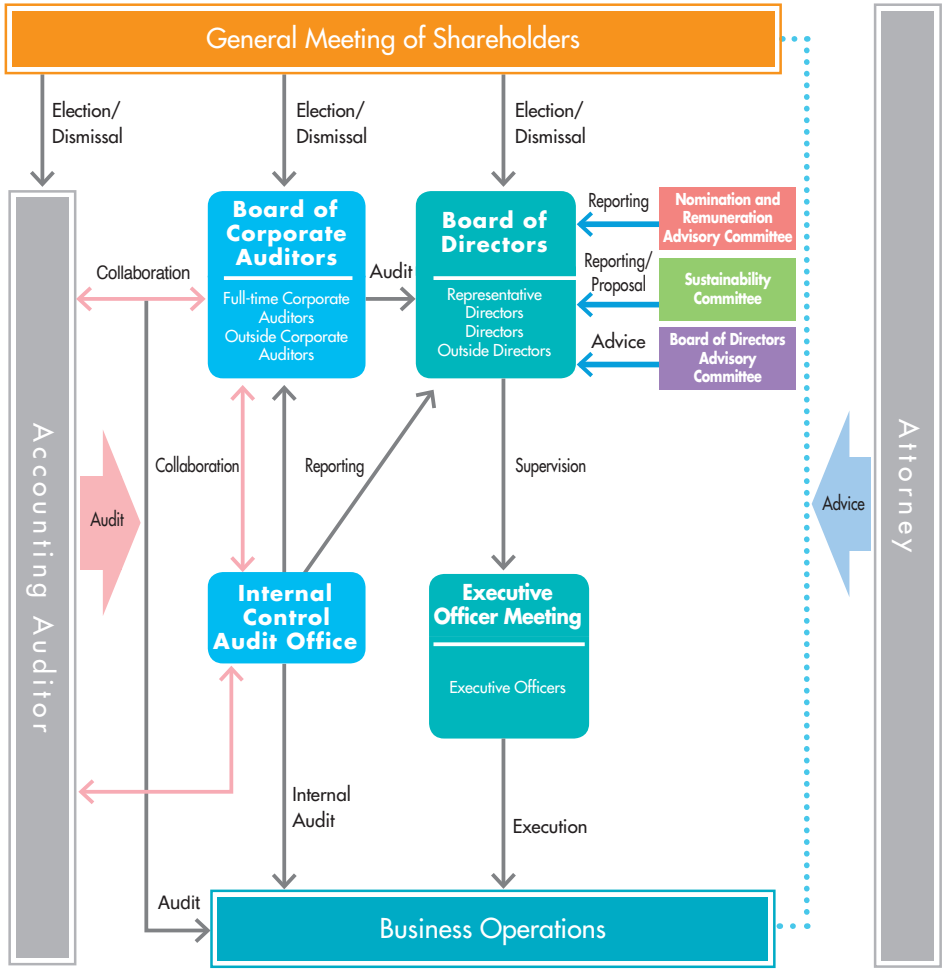
Name	Reason for appointment
Haruhiko Yoshida	Mr. Haruhiko Yoshida has served in prominent positions at Mitsui & Co., Ltd., and possesses abundant experience and superior insight in regard to corporate management, in addition to extensive international experience. Thus far, he has utilized this ability and experience to appropriately advise and supervise the management of the Company in general, and can be expected to continue to do so.
Masanobu Nakamura	Mr. Masanobu Nakamura has served in prominent positions in major banks and securities companies, and possesses abundant experience and superior insight in regard to corporate management, in addition to extensive international experience. Thus far, he has utilized this ability and experience to appropriately advise and supervise the management of the Company in general, and can be expected to continue to do so.
Yoshio Fukuda	Mr. Yoshio Fukuda has served in prominent positions at Teijin Limited and Teijin Group and possesses abundant experience and superior insight in regard to corporate management, in addition to extensive international experience. In addition, he has a high level of knowledge of strategic planning, establishment of joint ventures, M&A, etc. Based on the above, the Company has judged that he has been appropriately advising and supervising the overall management of the Group, which is expanding its business internationally, from an independent standpoint, and can be expected to continue to do so.
Kazuhiko Hayashi	Mr. Kazuhiko Hayashi has engaged in the development and engineering of power train and electric drive control system, etc. at the Toyota Group, and demonstrated leadership as manager. He has served in prominent positions at the Sumitomo Electric Industries Group, and possesses abundant experience and superior insight in regard to corporate management. In addition, he has top-class expertise on the development and engineering of such products, and served as a visiting professor at a graduate school which was established to invent new technology based on advanced technology and creating new business, where he lectured on energy and control-related fields in the automotive industry. Based on this experience and capability, the Company judges that he can advise and supervise the management of the Company in general, and can be expected to continue to do so.
Kaeko Kitamoto	Ms. Kaeko Kitamoto has abundant experience and superior insight into financial accounting, having been involved in accounting audits of various listed companies as a certified public accountant at a major audit corporation and is currently serving as a Partner and Executive Board Member of the same corporation. In addition, since 2018, she has served as a member of the Electricity and Gas Market Surveillance Commission, Ministry of Economy, Trade and Industry, and has knowledge of introducing renewable energy sources to reduce CO_2 emissions. Based on this experience and capability, the Company judges that she can appropriately advise and supervise the management of the Company in general and its sustainability initiatives, including climate change and diversity, equity, and inclusion.

Main agenda items of Board of Directors meetings in FY2023

- Reports and deliberations on progress of Medium-Term Management Plan/single-year plan, and status of business execution
- Deliberations on annual management plan and budget, R&D investment, etc.
- Reports and deliberations on internal audit, whistleblower system, effectiveness of business activities, and operational status of other internal control systems
- Business execution framework and revamp of organizational mechanisms
- Evaluation of Board of Directors' effectiveness (analysis based on questionnaire survey conducted among all Directors and Corporate Auditors)
- Acquisition of treasury shares, financing, and global sales of company shares
- Promotion of sustainability-related activities (identification of materiality, etc.)

Corporate Governance

Corporate Governance System



Roles and Compositions of Supervisory Institutions (As of June 21, 2024)

Institutions	Board of Directors	Board of Corporate Auditors
Composition	Independent Officer 5 Chair: Chairperson of the Board of Directors	Independent Officer 2 Chair: Full-time Outside Corporate Auditor
Percentage of Independent Officers	50%	50%
Purpose/ Authority	・Resolutions on basic management policies, etc. ・Supervision of the execution of duties by Executive Officers	・Audit of the execution of duties by Directors ・Preparation of audit reports ・Determination of the content of proposals concerning the selection and dismissal of Accounting Auditors, etc.
Number of meetings held in FY2023	18	17
Secretariat	Corporate Planning & Investor Relations	Corporate Auditors' Office

Status of activities of Board of Corporate Auditors in FY2023

HDSI is a company with a Board of Corporate Auditors, and the Company's audit for fiscal 2023 was conducted as follows by a total of four members of the Board of Corporate Auditors (including three Outside Auditors), consisting of two full-time auditors and two part-time auditors.

- After the Ordinary General Meeting of Shareholders held on June 21, 2023, the Board of Corporate Auditors determined audit policies, plans, and work assignments, and each Board member audited the execution of duties by Directors, Executive Officers and others in accordance with the "Board of Corporate Auditors Regulations," "Board of Corporate Auditors Auditing Standards" and "Implementation Standards for Internal Control System."
- Audited the execution of duties by Directors through attendance at important meetings, including Board of Directors meetings, Executive Officer Meeting sessions, Business Process Innovation Meeting sessions, Development Promotion Meeting sessions, Affiliated Company Meeting sessions, and the President's Audit
- Met with Representative Directors, shared information with Outside Directors, exchanged opinions with executive Directors, Executive Officers, division heads, office managers, divisional sales managers, and the presidents of domestic and overseas subsidiaries
- Inspected important documents, including authorization requests and credit application forms
- Planned and held Group corporate auditor liaison meetings with auditors from affiliated companies to share information among Group companies and took the lead in improving knowledge related to auditing duties

The status of Board of Corporate Auditors meetings is as follows.

The Board of Corporate Auditors holds regular meetings on the same day in principle as the Board of Directors' meetings and convenes extraordinary meetings as necessary. The Board of Corporate Auditors held a total of 17 meetings in FY2023.

Name	Full-time/Part-time	Internal/Outside	Independent	Number of meetings held	Number of meetings attended	Attendance rate
Yoshitsugu Yokogoshi	Full-time	Outside	Independent	17	17	100%
Hidefumi Iguchi	Full-time	Internal	–	17	17	100%
Shigeto Ohashi	Part-time	Outside	–	17	17	100%
Eisaku Imazato	Part-time	Outside	Independent	17	17	100%

Priority audit items in FY2023

- Monitoring of implementation status of execution and progress of the final year of the Medium-Term Management Plan
- Monitoring of the status of establishment and reinforcement of communication with important subsidiaries under overseas trilateral framework
- Continuous monitoring of establishment and operation of internal control systems, which is a common issue for the domestic and overseas group subsidiaries
- Monitoring of fixed asset impairments and other matters of the HDSE Group, which is a key audit matter (KAM)
- Monitoring of initiatives related to Group risk management
- Reinforcement of IR activities as an excellent listed company and monitoring of the status of sustainability (ESG) initiatives

Cooperation with internal audit section

Internal audits are conducted throughout the year by the Internal Control and Audit Office, which is led by one office manager and three auditors, based on a pre-planned audit schedule for the Company and for domestic and overseas subsidiaries.

The matters identified through internal audits are reported to the President as audit results and are also reported to the Board of Corporate Auditors, establishing a dual reporting line system. They are also reported to the Board of Directors. During the audit process, the head of the Internal Control and Audit Office mutually share information and closely collaborates with the Corporate Auditors and accounting auditors.

Policy for determining executive compensation and its calculation method

Compensation for executive directors consists of a fixed remuneration of basic compensation in cash and equity-based compensation in the form of shares with transfer restrictions, and variable remuneration such as bonuses linked to the annual performance. Such executive compensation takes into account Directors' responsibilities for enhancing the medium to long-term corporate value of the HDSI Group and for improving its performance in each business year. The compensation for Outside Directors consists of basic compensation in cash and bonuses.

Breakdown of Directors compensation

Executive Director

Fixed remuneration (cash compensation + stock with transfer restrictions) + Performance-linked bonuses (cash compensation)

Outside Director

Fixed remuneration (cash compensation) + Performance-linked bonuses (cash compensation)

Corporate Governance

Indicators determining performance-linked compensation

The Directors' performance-linked compensation is determined by a comprehensive consideration of the earnings performance of each business year (based on a standard of 4% of non-consolidated net profit in principle) and the achievement status of the relevant year's management plan, in order to enhance the awareness of performance improvement on an annual basis. After this process of determination, the proposed compensation is consulted with the Nomination and Remuneration Advisory Committee, which gives recommendations, and is resolved by the Board of Directors as a matter to be submitted to the shareholders' general meeting before being finalized at a shareholders' general meeting. The reason for using non-consolidated net profit as a metric for determining executive bonuses is based on the belief that it is desirable to align executive bonuses with earnings performance. In addition, it is a clear indicator and it highly correlates with earnings per share, among other factors.

Proportion by type of compensation

Remuneration for executive Directors consists of fixed compensation (basic compensation in cash and equity-based compensation in the form of shares with transfer restrictions) and variable compensation (performance-linked bonuses). Since non-consolidated net profit, which serves as the funding source for bonuses, varies depending on business performance, the proportion of each type of compensation is not determined in advance, but retrospectively, based on the amount of bonus determined by the performance linked key indicators for each business year.

Method for determining compensation amount for individual Directors

Decision-making authority on compensation for individual executive Directors is delegated to the President, Representative Director, taking into account factors such as if a Director has the authority to represent the company, position, responsibilities, and contribution. In determining the compensation amount, however, the President, Representative Director consults with other Representative Directors and two Outside Directors selected by the Board of Directors regarding a draft remuneration amount prepared in advance for each Director, and decides after considering recommendations from these officers. Regarding the responsibilities, execution of duties, and contribution of executive Directors, decision-making authority based on a comprehensive perspective is delegated to the President, Representative Director, after undergoing the aforementioned consultation and recommendation process since the President, Representative Director, has the most comprehensive understanding of these matters.

Compensation for individual Outside Directors is determined after consideration and evaluation of factors such as the responsibilities of each Outside Director, the status of Board meeting attendance, and the contents of statements and proposals at various meetings. The President, Representative Director makes decisions from a comprehensive perspective after discussions with each Outside Director.

The compensation for each Director and other matters for the fiscal year ending March 31, 2025 and onwards will be decided by the President, Representative Director after going through the process of consultation and recommendation from the Nomination and Remuneration Advisory Committee (established on March 25, 2024) and a resolution by the Board of Directors.

Compensation for Corporate Auditors

Compensation for Corporate Auditors consists solely of fixed basic remuneration in cash.

Breakdown of executive compensation (FY2023 results)

Officer category	Total amount of compensation, etc. (in thousands of yen)	Total amount of compensation, etc. by type (in thousands of yen)			Number of target officers (persons)
		Basic compensation	Performance-linked compensation	Non-monetary compensation, etc.	
Directors (Except Outside Directors)	199,387	127,600	—	71,787	5
Corporate Auditors (Except Outside Corporate Auditors)	28,800	28,800	—	—	1
Outside officers	119,400	119,400	—	—	8

Note: The performance-linked compensation for Directors is zero comprehensively considering the FY2023 performance.

Nomination and Remuneration Advisory Committee (voluntary)

At the Board of Directors meeting held on March 25, 2024, HDSI established a Nomination and Remuneration Advisory Committee (voluntary) on the same date. According to its regulations, the Nomination and Remuneration Advisory Committee is required to have a majority of Outside Directors among its members. Currently, three Directors (Outside Director, Haruhiko Yoshida; Outside Director, Masanobu Nakamura; and President, Representative Director, Akira Maruyama) serve as members. The Committee is chaired by Outside Director, Haruhiko Yoshida.

As an advisory body to the Board of Directors, the Nomination and Remuneration Advisory Committee considers and deliberates Director candidates, candidates for Directors with titles, compensation plans for Directors, and other matters, and decides the recommendations for the Board of Directors.

Status of activities in FY2024 (April-October 30, 2024)

Name	Internal/Outside	Independent	Number of meetings held	Number of meetings attended	Attendance rate
Haruhiko Yoshida	Outside	Independent	5	5	100%
Masanobu Nakamura	Outside	Independent	5	5	100%
Akira Nagai	Internal	—	4	4	100%
Akira Maruyama	Internal	—	1	1	100%

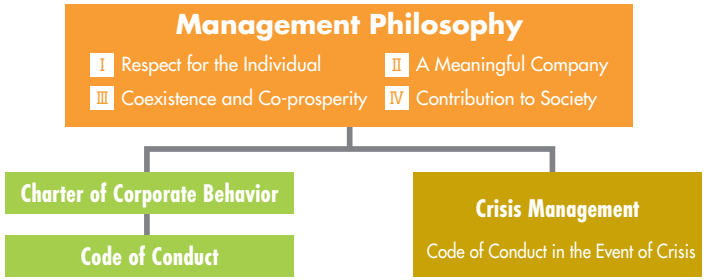
Note: The attendance status for Akira Nagai is for the period of his service (March 25, 2024-June 21, 2024).
Note: The attendance status for Akira Maruyama is from the date he assumed office on June 21, 2024.

Compliance & Risk Management

Compliance

Fundamental stance for business activities

As the fundamental stance for business activities, the HDS Group strives to enhance customer satisfaction and pursue profit through business activities grounded in fair and legal competition. In addition, in executing business activities, everyone working at the Group recognizes the need to fulfill corporate social responsibility, observes laws and regulations, and respects trade customs, social norms, and business ethics. Furthermore, the Group respects the individual rights of each employee and endeavors to facilitate the realization of their cultural aspirations as well as makes its best effort to achieve coexistence and co-prosperity with everybody who is involved with the Group.



Compliance education

The HDS Group provides various compliance education programs, centering on group training, to everyone working at the Group so as to enhance employees' understanding of compliance.

Furthermore, everyone working at the Group is required to carry a pocket-size booklet that contains the Management Philosophy, the Charter of Corporate Behavior, the Code of Conduct, and Crisis Management—Code of Conduct in the Event of Crisis.

Measures to prevent inside trading

In order to prevent insider trading, the HDS Group clearly specifies procedures for buying/selling the Company's stocks and provides education on insider trading control to everyone working at the HDS Group. When an employee wishes to buy/sell the Company's stocks, he/she is obligated to do so by the specified method within the specified period in accordance with the Company's Rules on Insider Trading Control.

Monitoring of Compliance Status

The Internal Control and Audit Office, which reports to the President, Representative Director, periodically inspects and audits the compliance status, and also maintains and improves various compliance systems.

In addition, the President's Management Review in which the President directly reviews the situation of operation execution by each Executive Officer twice a year includes a mechanism for the President to check with each Executive Officer the compliance status as well as maintenance and improvement of compliance systems.

Risk management

Fundamental approach and preparedness for risk management and crisis response

The HDS Group defines risks as events that may hinder the achievement of business objectives, and situations that have significant adverse impact on the Group's management, including natural disasters, as crises. In executing business, the Group strives to implement risk management and crisis response in a safe and responsible manner. We are committed to continuously minimizing damages caused by the occurrence of risks and crises. In the event that risks related to corporate management and crises occur, our fundamental approach prioritizes the avoidance of harm to human life and physical well-being above all else, followed by actions to minimize the negative impact on the company. The Charter of Corporate Behavior states details of this risk management and the Code of Conduct specifies specific action guidelines. Furthermore, for crises, it is stipulated that all actions must follow the Crisis Management—Code of Conduct in the Event of Crisis.

Information security measures

In order to ensure compliance with laws, regulations, and other rules concerning information security, the HDS Group provides education designed to raise the awareness on information security of everyone working at the Group. The information security check is conducted twice a year using a questionnaire survey and the survey results are notified to the entire company.

Business Continuity Plan (BCP)

In order to deal with any crisis in a secure and responsible manner in the event of an emergency, such as a large-scale disaster, the HDS Group has established the Crisis Management—Code of Conduct in the Event of Crisis and endeavors to develop systems for this purpose. Furthermore, in order to minimize the impact on business and to fulfill our responsibility of supplying products and services to customers, the subsidiaries in the U.S., Germany and South Korea are also strengthening their production systems. The Group is deploying a collaborative production structure across four regions: Japan, the U.S., Germany, and South Korea.

Directors and Executives (As of June 21, 2024)

Directors



Akira Nagai
Date of birth: March 26, 1948

April 1972	Joined Mitsui & Co., Ltd.
April 2002	Joined Harmonic Drive Systems Inc. (the "Company")
April 2002	General Manager of Overseas Division, the Company
June 2002	Chairperson and Director, HD Systems, Inc.
June 2003	Executive Officer (Marketing and Sales), General Manager of Overseas Division, General Manager of Corporate Planning and IT Office, the Company
December 2005	President and CEO, HD Systems, Inc. (incumbent)
June 2007	Managing Executive Officer (Corporate Planning and IT), the Company
April 2009	Managing Executive Officer (Corporate Planning and Finance), the Company
January 2011	Corporate Auditor, Harmonic Drive Systems (Shanghai) Co., Ltd.
June 2013	President and Representative Director, Executive President, the Company
May 2015	Director, Harmonic AD, Inc. (incumbent)
June 2016	President and Representative Director, Chief Executive Officer, In Charge of Marketing and Sales, the Company
December 2016	Manager, GK HD Management (incumbent)
March 2017	Chairperson of the Supervisory Board, Harmonic Drive AG
June 2017	President and Representative Director, Chief Executive Officer, In Charge of Marketing and Sales and Quality, the Company
June 2019	President and Representative Director, Chief Executive Officer, In Charge of Quality, the Company
January 2020	Deputy Chairperson of the Supervisory Board, Harmonic Drive SE (incumbent)
June 2020	President and Representative Director, Chief Executive Officer, the Company
June 2024	Chairperson and Executive Officer, Group Management(incumbent)



Akira Maruyama
Date of birth: January 8, 1962

April 1985	Joined Harmonic Drive Systems Inc. (the "Company")
April 2007	General Manager of Marketing and Sales Division, the Company
April 2009	General Manager of Marketing and Sales Division and General Manager of Sales Planning Department, the Company
September 2009	General Manager of Engineering Department, Precision Equipment Division, the Company
September 2012	General Manager of Engineering Division, the Company
June 2014	Executive Officer (Engineering), the Company
May 20151	Director, HD Logistics, Inc.
June 2016	Director and Executive Officer (Development Engineering), the Company
June 2018	Director and Executive Officer (Corporate Planning and IT), the Company
June 2019	Corporate Auditor, Winbel Co., Ltd. (currently Harmonic Winbel Inc.)
June 2019	Director and Executive Officer, General Manager of Corporate Planning Division, the Company
June 2021	Director and Executive Officer, General Manager of Corporate Planning Division and General Manager of ICT Promotion Office, the Company
June 2022	Representative Director and Senior Managing Executive Officer, General Manager of Corporate Planning Division and ICT Promotion Office, the Company (incumbent)
May 2023	Director, Harmonic Winbel Inc. (incumbent)
June 2024	President and Chief Executive Officer, Chief Executive Officer (incumbent)



Kazutoshi Kamijoh
Date of birth: June 9, 1968

April 1992	Joined Harmonic Drive Systems Inc. (the "Company")
July 2007	General Manager of Corporate Planning Department, Corporate Planning and IT Office, and General Manager of Administration Department, the Company
May 2012	Corporate Auditor, Ome Iron Casting Co., Ltd.
May 2013	Corporate Auditor, Harmonic Drive Systems (Shanghai) Co., Ltd.
July 2014	Executive Officer, In Charge of Corporate Planning and Finance, the Company
June 2016	Executive Officer, In Charge of Corporate Planning, Finance and Accounting, the Company
March 2017	Manager, GK HD Management (incumbent)
June 2019	Executive Officer, General Manager of Finance Accounting, Finance and Tax Division, the Company
June 2020	Director and Executive Officer, General Manager of Finance Accounting, Finance and Tax Division, the Company
July 2021	Member of the Supervisory Board, Harmonic Drive SE (incumbent)
June 2022	Director and Executive Officer (Finance Accounting, Finance, Tax, Human Resources and Administration), General Manager of Finance Accounting, Finance and Tax Division, the Company
June 2023	Director and Executive Officer, General Manager of Finance Accounting, Finance and Tax Division, the Company
June 2024	Senior Managing Executive Officer, General Manager of Finance Accounting, Finance and Tax Division (incumbent)



Yoshihiro Tanioka
Date of birth: September 21, 1958

April 1982	Joined Harmonic Drive Systems Inc. (the "Company")
March 2006	General Manager of Engineering Department, Mechatronics Division, the Company
May 2007	Director, Winbel Co., Ltd. (currently Harmonic Winbel Inc.)
July 2007	General Manager of Mechatronics Division, the Company
October 2009	General Manager of Development Division, the Company
June 2010	Executive Officer and General Manager of Development Division, the Company
September 2011	Executive Officer (Engineering), the Company
September 2012	Executive Officer and General Manager of Overseas Business Division, the Company
April 2015	Executive Officer and General Manager of Sales Strategy Division, the Company
May 2015	Representative Director and President, Harmonic AD, Inc.
May 2015	Director of SAMICK ADM Co., Ltd. (incumbent)
May 2017	Executive Officer in Charge of Harmonic Planetary Development, the Company
May 2018	Director, Harmonic AD, Inc. (incumbent)
June 2018	Executive Officer (Development Engineering), the Company
June 2019	Executive Officer, General Manager of Development and Engineering Division, the Company
June 2021	Director and Executive Officer, General Manager of Development and Engineering Division, the Company (incumbent)

Corporate Auditors



Kazuhiko Hayashi
Date of birth: April 25, 1954

April 1978	Joined Toyota Motor Co., Ltd. (currently Toyota Motor Corporation)
January 2001	Project General Manager of Leadingedge Vehicle Development Planning Office, Toyota Motor Corporation
January 2004	General Manager of Electronics Engineering Div. II, Toyota Motor Corporation
January 2005	General Manager of Electronics Engineering Div. I, Toyota Motor Corporation
April 2007	General Manager of BR Control Software Development Office, Toyota Motor Corporation
January 2010	Managing Executive Officer, Sumitomo Wiring Systems, Ltd.
January 2012	Executive Officer of Sumitomo Electric Industries, Ltd., Managing Executive Officer of Sumitomo Wiring Systems, Ltd., and Director of AutoNetworks Technologies, Ltd.
June 2015	Senior Managing Executive Officer of Sumitomo Wiring Systems, Ltd., Executive Officer of Sumitomo Electric Industries, Ltd., and Director of AutoNetworks Technologies, Ltd.
July 2019	Visiting Professor, Nagasaki Institute of Applied Science
June 2022	Outside Director, Harmonic Drive Systems Inc. (the "Company") (incumbent)



Kaeko Kitamoto
Date of birth: April 15, 1965

April 1988	Joined Sapporo Breweries Limited
October 1993	Joined Ota Showa Audit Corporation (currently Ernst &Young ShinNihon LLC)
July 2009	Partner, Ernst &Young ShinNihon LLC
September 2018	Member of Electricity and Gas Market Surveillance Commission, Ministry of Economy, Trade and Industry (incumbent)
July 2019	Executive Board Member, Ernst &Young ShinNihon LLC
July 2023	Outside Director, Harmonic Drive Systems Inc. (the "Company") (incumbent)



Yoshitsugu Yokogoshi
Date of birth: November 16, 1953

April 1977	Joined The Sanwa Bank, Ltd. (currently MUFG Bank, Ltd.)
April 1995	Yoyogi Branch Manager, The Sanwa Bank, Ltd.
May 2005	Executive Officer, General Manager, Public Relations Department, UFJ Bank Ltd. (currently MUFG Bank, Ltd.)
May 2007	Managing Executive Officer and Deputy Chief Executive, Retail Banking Business Unit, The Bank of Tokyo-Mitsubishi UFJ, Ltd. (currently MUFG Bank, Ltd.)
January 2009	Executive Vice President, Mitsubishi UFJ Asset Management Co., Ltd. (currently Mitsubishi UFJ Asset Management Co., Ltd.)
June 2014	President, The Midori Kai Co., Ltd.
June 2017	Full-time Audit & Supervisory Board Member, Cosmo Oil Co., Ltd.
June 2020	Full-time Outside Corporate Auditor, Harmonic Drive Systems Inc. (the "Company") (incumbent)



Hidefumi Iguchi
Date of birth: April 5, 1959

April 1983	Joined Harmonic Drive Systems Inc. (the "Company")
May 1999	General Manager of Quality Assurance Promotion Office, the Company
April 2009	General Manager of Operational Process Innovation Department, the Company
June 2011	General Manager of Internal Control and Audit Office, the Company
May 2013	Corporate Auditor, Harmonic Precision Inc.
July 2014	Executive Officer (Corporate Governance), General Manager of the Internal Control and Audit Office, the Company
June 2020	Executive Officer (Administration and Human Resource), General Manager of Administration and Human Resource and Manager of Environment
April 2022	Executive Officer, General Manager of Administration and Human Resource Division, Manager of Environment and General Manager of Well-Being Center, the Company
June 2022	Full-time Corporate Auditor, the Company (incumbent)



Naomi Shirasawa

Date of Birth : Nov. 2, 1960

April 1983	Joined Harmonic Drive Systems Inc. (the "Company")
September 1998	General Manager in charge of Precision Equipment, Marketing Department, Marketing and Sales Division, the Company
July 2001	General Manager of AccuDrive Division, the Company
March 2003	Managing Director, Harmonic AD, Inc.
May 2007	Representative Director and President, Harmonic AD, Inc.
June 2010	Executive Officer and General Manager of AD Business Promotion Office, the Company
May 2011	Senior Managing Director, Harmonic AD, Inc.
June 2013	General Manager of Sales, Harmonic Drive Systems (Shanghai) Co., Ltd.
July 2016	Director, Harmonic Drive Systems (Shanghai) Co., Ltd.
June 2018	General Manager of Overseas Sales Division, the Company
June 2019	Director and General Manager of Domestic Sales Division, the Company
June 2021	Executive Officer and General Manager of Domestic Sales Division, the Company
June 2023	Executive Officer, In charge of Marketing and Sales, General Manager of Domestic Sales Division, the Company
June 2024	Executive Officer, In Charge of Marketing and Sales; General Manager of Domestic Sales(incumbent)



Haruhiko Yoshida

Date of birth: September 2, 1943

April 1966	Joined Mitsui & Co., Ltd.
February 1996	Senior Executive Vice President, Mitsui & Co. (U.S.A.), Inc.
April 1998	General Manager of Communications, Transportation & Industrial Project Unit, Mitsui & Co., Ltd.
June 1998	Director and General Manager of Communications, Transportation & Industrial Project Unit, Mitsui & Co., Ltd.
June 2001	Representative Director, Executive Managing Director, and General Manager of Communications, Transportation & Industrial Project Unit, Mitsui & Co., Ltd.
April 2002	Executive Managing Officer and General Manager of Communications, Transportation & Industrial Project Unit, Mitsui & Co., Ltd.
July 2002	Executive Managing Officer and Assistant to President of Machinery and Information Group, Mitsui & Co., Ltd.
June 2003	Outside Director, Nagano Keiki Co., Ltd.
June 2003	Outside Director, Harmonic Drive Systems Inc. (the "Company") (incumbent)
June 2006	Corporate Auditor, Hakudo Co., Ltd.
June 2007	Outside Director, Hakudo Co., Ltd.



Masanobu Nakamura

Date of birth: August 23, 1946

May 1970	Joined The Sanwa Bank, Ltd. (currently MUFG Bank, Ltd.)
June 1999	Executive Officer and Nihonbashi Branch Manager, The Sanwa Bank, Ltd.
April 2001	Executive Officer and New York Branch Manager, The Sanwa Bank, Ltd.
January 2002	Managing Executive Officer and New York Branch Manager, UFJ Bank Limited (currently MUFG Bank, Ltd.)
May 2002	Executive Operating Officer, Corporate Banking Company Director, UFJ Bank Limited
May 2004	Representative Director, Executive Operating Officer (Strategic Support Group), Company Director, UFJ Bank Limited
June 2005	Special Advisor, Sanshin Co., Ltd.
October 2005	President and Representative Director, BNP Paribas (Japan)
November 2005	Director, Tokyo Branch, BNP Paribas Securities (Japan) Limited
June 2007	Board of Directors Advisory Committee, Harmonic Drive Systems Inc. (the "Company")
May 2011	Chairperson, BNP Paribas Securities (Japan) Limited
September 2011	Special Advisor, BNP Paribas Securities (Japan) Limited
June 2013	Outside Director, the Company (incumbent)



Yoshio Fukuda

Date of birth: March 1, 1953

April 1976	Joined Teijin Limited
July 2006	Corporate Officer, Teijin Group Member of the Board and General Manager of Raw Materials & Polymers Division, Teijin Fibers Ltd.
May 2007	President, P.T. Teijin Indonesia Fiber Corporation Tbk
June 2010	Corporate Officer and Member of the Board, General Manager of Corporate Planning Division, Teijin Limited
June 2012	Executive Officer and Member of the Board, General Manager of Electronics Materials and Performance Polymer Products Business Group, and General Manager of Resin and Plastic Processing Business Unit, Teijin Limited President, Teijin Chemicals Ltd. Chairperson, Global Policy Board, Teijin DuPont Films Global Joint Venture
June 2013	Senior Executive Officer and Member of the Board, General Manager of Electronics Materials and Performance Polymer Products Business Group, Teijin Limited Chairperson, Global Policy Board, Teijin DuPont Films Global Joint Venture
April 2015	Advisor, Member of the Board, Teijin Limited
June 2015	Advisor, Teijin Limited
June 2016	Outside Director, Toyo Construction Co., Ltd.
June 2017	Outside Corporate Auditor, Harmonic Drive Systems Inc. (the "Company")
June 2017	Auditor, Japan Indonesia Association, Inc. (incumbent)
June 2020	Director, Harmonic AD, Inc.
June 2020	Outside Director, the Company (incumbent)
March 2021	Auditor, Japan-Sri Lanka Association (incumbent)



Eisaku Imazato

Date of birth: March 2, 1956

April 1979	Joined The Nikko Securities Co., Ltd. (currently SMBC Nikko Securities Inc.)
March 2002	General Manager, Corporate Clients Department II, Nikko Cordial Securities Inc.
March 2003	Executive Officer, General Manager, Tokyo Corporate Clients Department II, Nikko Cordial Securities Inc.
December 2004	Director in charge of sales planning and corporate clients, Nikko Cordial Securities Inc.
February 2005	Executive Managing Director in charge of planning and wholesale business promotion, Nikko Cordial Securities Inc.
February 2007	Senior Managing Director in charge of Wholesale Sales Division I, Nikko Cordial Securities Inc.
August 2008	Senior Executive Officer, Head of Institutional Client Coverage Division, Nikko Citigroup Limited
February 2009	Managing Executive Officer, Co-Head of Corporate & Institutional Business Unit, Mitsubishi UFJ Securities Co., Ltd.
May 2010	Managing Executive Officer, Head of Corporate & Institutional Business Unit, Head of Corporate Clients Group, and Co-Manager of Regional Executives, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. Managing Executive Officer, Mitsubishi UFJ Securities Holdings Co., Ltd. Executive Officer, Mitsubishi UFJ Financial Group, Inc.
June 2012	Principal Executive Officer, Head of Corporate & Institutional Business Unit, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
June 2016	Outside Director, Chairperson of the Board of Directors, Marusan Securities Co., Ltd.
March 2020	Outside Director, Marusan Securities Co., Ltd. (incumbent)
June 2020	Outside Corporate Auditor, Harmonic Drive Systems Inc. (the "Company") (incumbent)



Nobuyuki Higashi

Date of Birth : Mar. 31, 1964

April 1987	Nomura Research Institute, Ltd.
April 1998	Nomura Securities Co., Ltd.
July 2000	Nomura Principal Finance Co., Ltd.
April 2012	Managing Director of Investment Business Group, Innovation Network Corporation of Japan (currently Japan Investment Corporation)
April 2017	Outside Director, JOLED Inc. (incumbent)
April 2017	Outside Corporate Auditor, Harmonic Drive AG (currently Harmonic Drive SE)
June 2017	External Director, Japan Display Inc. (retired in June 2018)
Septmber 2018	Executive Managing Director and Managing Director of Investment Business Group, INCJ, Ltd.
March 2020	External Director, Japan Display Inc.
June 2021	Senior Executive Managing Director and Managing Director of Investment Business Group, INCJ, Ltd. (incumbent)
June 2024	Corporate Auditor, the Company(incumbent)

Executive Officers (As of October 1, 2024)

Akira Nagai	Chairperson and Executive Officer (Group Management)
Akira Maruyama	President and Chief Executive Officer (Chief Executive Officer)
Kazutoshi Kamijoh	Senior Managing Executive Officer (General Manager of Finance Accounting, Finance and Tax Division)
Minoru Asano	Managing Executive Officer (General Manager of Supply Chain)
Tetsuo Ikuta	Executive Officer (In Charge of Public Relations)
Yoshihide Kiyosawa	Executive Fellow Officer (Chief Technical Officer) (In Charge of Engineering and Quality)
Yoshihiro Tanioka	Executive Officer (General Manager of Development and Engineering)
Michiya Yashiro	Executive Officer (General Manager of Risk Management)
Naomi Shirasawa	Executive Officer (In Charge of Marketing and Sales) (General Manager of Domestic Sales)
Makiko Ono	Executive Officer (Head of Sustainability, Corporate Planning, and Investor Relations)
Tsuyoshi Awaduhara	Executive Officer (In Charge of Production, Production Planning) (General Manager of First Production Division)
Hiroki Hanaoka	Executive Officer (General Manager of Production Technology)
Osamu Asakura	Executive Officer (In Charge of Administration, Human Resource and Environmental Management Representative)
Shizuka Yata	Executive Officer (In Charge of Harmonic Drive Laboratory)
Tetsuya Shiokawa	Executive Officer (General Manager of Corporate Planning; In Charge of Business Development)

Special Feature 2 **Outside Officers Roundtable Discussion**

Toward the achievement of the 2030 Vision and growth beyond that

The HDS Group is working to strengthen its governance and improve the effectiveness of the Board of Directors through the advice and supervision provided by seven outside officers (five Outside Directors and two Outside Corporate Auditors), based on their objective viewpoints and diverse experiences. In this roundtable discussion, two Outside Directors, who concurrently serve as members of the Nomination and Remuneration Advisory Committee, and two Outside Corporate Auditors, exchange candid views about their expectations of the achievement of the 2030 Vision and growth beyond that, and about the issues involved therein.



Eisaku Imazato
Independent Outside Corporate Auditor

Yoshitsugu Yokogoshi
Independent Full-time Outside Corporate Auditor

Haruhiko Yoshida
Independent Outside Director
Chair of Nomination and Remuneration Advisory Committee

Masanobu Nakamura
Independent Outside Director
Nomination and Remuneration Advisory Committee Member

Management that is conscious of profitability and growth potential

MC: What is your focus in monitoring the progress of 2030 Vision and the Medium-Term Management Plan for fiscal years 2024-2026?

Yoshida: I intend to check two points strictly, namely , whether the basic approach and goals of the Vision and Medium-Term Management Plan have been shared among everyone in every corner of the organization, and whether the whole of the company is working in unison to address them. HDSI used to be the only company of its kind, with little competition, but these days, it faces an extremely competitive environment. I feel that there is a sense of complacency within the company, the attitude that "it is still okay." Changing the mindset of all employees will be essential for the accomplishment of the Medium-Term Management Plan. I have also sounded the warning bell on this point in the Board of Directors.

Nakamura: The impairment write-down associated with the acquisition of the German subsidiary at the end of the previous fiscal year put an end to past problems. I look forward to seeing HDSI decisively execute its growth strategy under the leadership of the new president. Progress is being made in the expansion of capacity and improvement of productivity at the Ariake Factory, and preparations are well under way at that factory for the next growth.

Yokogoshi: I place particular emphasis on two points when auditing and supervising the execution of management strategy. The first point is whether the basic views of the management strategy has been properly shared with frontline employees, enabling them to work toward its goals. For this reason, as Corporate Auditor, I visit frontline operations such as factories on a regular basis, gathering opinions from many people, including the responsible officers of the relevant departments, and providing feedback from the frontlines to the executive side. The other point is whether internal controls is being established and implemented properly across the entire HDS Group, particularly its eight major subsidiaries in Japan and overseas. In emphasizing these points, I hope to establish an environment in which the management team can be decisive in taking appropriate risks.

Imazato: As the high PER and PBR of HDSI's shares indicate, I am aware that investors have high expectations for the company's growth. Even further management efforts will be needed to meet those expectations. Until about a dozen years ago, HDSI had been operating its business with almost no competition, but in more recent times, competition has become increasingly intense. We can also expect that listening carefully to customer feedback, as the company done has in the past, will become more difficult. As Corporate Auditor, I will also pay attention to risks that newly emerge with the change in competitive environment, as well as the underlying risks of overseas subsidiaries that pursue localization.

MC: What kind of discussion is taking place in the Board of Directors about business portfolio transformation and capital reallocation in consideration of capital costs?

Nakamura: An assumption of cost of shareholders' equity of 8% has been shared in the Board of Directors. Meanwhile, the hurdle rate for new investments has been set at 10% or higher, by which, I believe, we have been able to implement investment allocations that are conscious of capital efficiency. HDSI's business model is based on a Business to Engineer (B2E) approach, and we provide customized products that meet the needs of the engineers at our customer companies. I believe that we will be able to improve capital efficiency by continuously identifying growth markets and making selective and intensive investments.

Yoshida: As HDSI focuses on the businesses of precision speed reducers and motion control, the transformation of its business portfolio may not necessarily be the ideal approach. Having said that, there is a possibility that capital allocations


Yoshida

to the planetary gear business will become an important item on the Board of Directors' agenda in the future. To achieve ROE of 10% or higher, which is our financial target for capital efficiency, I believe that we need to actively invest in digital transformation, using automation of production and AI, and to improve operational efficiency and productivity.

Imazato: My understanding is that the rise of competing companies and increasingly harsh competition in both Japan and overseas have been factored into the evaluations made by capital markets. To maintain a high return on invested capital going forward, we need to change our previous awareness and behavior. I hope to confirm whether the reform of awareness and behavior that the management team aspires to has taken root on the frontlines through exchanges of opinion with people on those frontlines.

Yokogoshi: HDSI has a relatively uncomplicated business portfolio, so in my view, the need analyze the spread between ROIC and WACC in detail and discuss it in the Board of Directors is relatively low. Nevertheless, the number of M&A and business investment projects is expected to grow in the future, which will require investment decisions to be made with a focus on capital efficiency. Gaining a deeper understanding of that point will also be important for those on the supervising side.

Special Feature 2 **Outside Officers Roundtable Discussion**

Sustainability-conscious management

MC: There is an expectation in the capital markets for management strategy and sustainability strategy to be integrated. What is your assessment of HDSI's efforts toward its material issues (materiality) for the realization of the 2030 Vision?

Yokogoshi: In April 2023, we established a Sustainability Committee, chaired by the President & CEO. We identified the material issues (materiality) for the achievement of the long-term vision and reflected them in specific measures under the Medium-Term Management Plan that began this fiscal year. Sustainability management systems and disclosure contents will also be subject to audits from now on, necessitating the reinforcement of the supervisory function of the Board of Corporate Auditors and Board of Directors.

Yoshida: Among those material issues (materiality), "Achieving QCDS that meets customer expectations," particularly the "C" part, namely restoration of cost competitiveness, is the most important issue. I hope to see the realization of company-wide cost innovation projects with a focus on results. I also want the company to take on the challenge of developing new business models through collaboration with overseas Group companies in Germany, the U.S., and China. If we establish a value chain overseas, it will function as a BCP in the event of unforeseen circumstances, even in Japan. "Maximizing the value of human capital" is another matter of urgency, so I look forward to seeing the Company clarify its concrete plans and execute them swiftly to achieve that goal.

Nakamura: One of the material issues (materiality) of "Achieving QCDS that meets customer expectations" is crucial for the HDS Group to deliver what society needs through our customers' products. To respond to ever changing needs, it will be necessary for the entire value chain, including development, manufacturing, and sales, to act in unison to enhance technologies and skills that solve customers' issues. To achieve this, we will strengthen these initiatives even further by linking it to another material issue (materiality), "Take on the challenge of developing new technologies and skills that coordinate with changes in the environment."


Nakamura

Imazato: I think the next step in HDSI's sustainability management will be to promote it across the Group, including overseas Group companies. I hope that the HDS Group will enhance sustainability through contribution to the sustainability of society by sharing a common philosophy with subsidiaries in Germany and the U.S. as well. We could probably learn from them about their approaches toward and practice of sustainability.

Yokogoshi: In the Board of Corporate Auditors meetings held in FY2024, we set key audit items, such as initiatives for sustainability, structures for their promotion, indicators and materiality targets, and state of progress, in the Medium-Term Management Plan launched this fiscal year. Looking ahead of the transition to statutory disclosure, we will also include appropriateness of information disclosure in the scope of audit. By auditing the appropriateness of sustainability management, the Board of Corporate Auditors hopes to help the Group's various initiatives for sustainability take root as part of the corporate culture.

MC: Do you see any issues in terms of HDS Group's governance and internal control, including at its overseas Group companies?

Yokogoshi: To enhance the effectiveness of Group governance, members of the executive team of the parent company, HDSI, serve as directors and corporate auditors of overseas Group companies and perform supervisory functions. As the Board of Corporate Auditors, four Corporate Auditors make regular site visits and conduct detailed operational audits. We also receive quarterly reports from the heads of Group companies in Japan and overseas on their respective progress of their management plans and any issues. In addition, the Corporate Auditors check the monthly reports of the Group companies to identify any changes that occur, even short-term ones. I believe that the supervisory function over the entire Group has been well established.


Yokogoshi

Yoshida: In terms of internal control across the entire Group, including overseas companies, we receive regular reports from the Board of Corporate Auditors and Internal Control and Audit Office. I think that this approach works soundly. However, as we have entrusted the business operations of overseas Group companies to local management teams, I do see a need over the medium to long term to further strengthen our supervisory functions. In the

future, for example, we will consider involving the Nomination and Remuneration Advisory Committee in the selection and nomination process of management teams of local subsidiaries.

Nakamura: HDSI has delegated operational authority to the local executive teams of its subsidiaries in Germany and the U.S. On the other hand, HDSI dispatches top management to the Group company in China, as it is positioned as a sales subsidiary of the company. As well as appointing HDSI executives as directors and corporate auditors of local subsidiaries as supervisors of business execution, we outside officers also conduct monitoring by observing the quarterly business report meetings of Group companies in Japan and overseas, through reports made by corporate auditors, and further, through the operation of the internal whistleblowing system, in which I am directly involved.

Imazato: While localization of subsidiaries in Germany and the U.S. is progressing, making it possible for them to make management decisions swiftly, due to the small number of seconded employees from HDSI, I sense that there are issues in terms of communication at the frontlines level. I hope to increase the number of young and mid-level employees dispatched to overseas locations. This will allow for deeper mutual understanding and strengthen personal networks, and I believe we could expect to see synergy in operations emerge from that. I think there are many employees who want to build up their career overseas, so I hope that the executive side will establish an environment in which these employees can take on such challenges.


Imazato

Functions demonstrated by independent outside officers

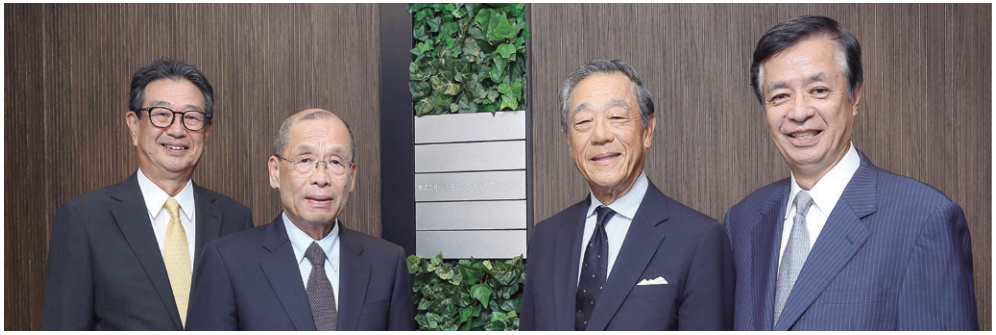
MC: What is your view on the functions and roles of the Nomination and Remuneration Advisory Committee? Could you also tell us about any main initiatives coming up?

Yoshida: The Nomination and Remuneration Advisory Committee was established in March 2024. Even before the establishment of the Committee, HDSI's outside officers have always participated in discussions on officers' remuneration. Regarding nomination as well, outside officers participated in meetings and committees held by the executive side and were involved in the process of evaluating director candidates in a natural way. The purposes of establishing the Committee are to enhance the objectivity and transparency of these processes, including such participation by outside officers and to be accountable to stakeholders. The Committee met four times in the three months until the General Meeting of Shareholders. We consulted and reported for the nominations of the new President & CEO and Chairperson of the Board. This was to be the first change in President & CEO in 11 years and the first change in Chairperson of the Board in 21 years. Going forward, we will proceed with the formulation of succession plans as well as an examination of the remuneration system that will contribute to the enhancement of the HDS Group's corporate value.

Nakamura: For the nomination of new President & CEO and Chairperson of the Board, the Nomination and Remuneration Advisory Committee held numerous discussions and undertook careful deliberations. The objective and transparent deliberations through which the candidates were selected has, I believe, secured the legitimacy of those choices. Going forward, we will accelerate initiatives for the formulation of succession plans from medium-to long-term perspectives and strive to strengthen corporate governance.

Yokogoshi: The Board of Corporate Auditors inspects the minutes of the Nomination and Remuneration Advisory Committee and checks the legality of the content of the consultation and report. Regarding the question of how Outside Corporate Auditors should be involved in discussions on officers' remuneration and nomination, I am aware that one school of thought is that they should be involved in the Committee directly. However, in consideration of the scale and governance structure of HDSI, we see the current status as appropriate under present circumstances.

Imazato: I believe that, for the selection and development of the next generation of executive management, an approach of selecting individuals early and developing them over the long term will be key. While I understand that management of the manufacturing business requires abundant experience, I also believe that we will be able to enhance the talent pool for the next generation of management by providing highly motivated employees who have management qualities with opportunities that will allow them to demonstrate leadership at an early stage.



Message from Officer in Charge of Public Relations



We will communicate the Group's diverse social initiatives to internal and external stakeholders and contribute to the achievement of our long-term vision by realizing corporate culture reform and enhancing the value of the HDS brand.

Executive Officer in Charge of Public Relations Tetsuo Ikuta

Roles of public relations section inside and outside the Company

The Company is enhancing its communication of information both internally and externally through public relations. Internally, we are working to foster a corporate culture based on our Management Philosophy by sharing information that employees will find useful in their business activities. Externally, we contribute to the maximization of corporate value by establishing our corporate image in line with our branding strategy and building a relationship of trust with society. We have two major media for internal public relations. "HD.Times" is an internal newsletter distributed to all employees of the HDS Group, and "HD Technical Report" is a technical journal aimed at educating and raising awareness among engineers. First published in 1979, HD.Times will mark its 300th issue in December 2024. Taking this opportunity, we are planning to enhance the English version and publish an electronic version of the newsletter. The main thrust of our external public relations includes dealing with the media, sponsorship of local events such as the Shinshu Azumino Half Marathon, and public relations activities at company events such as Harmonic Concerts and Harmonic Lectures. We believe that these public relations activities at sports and cultural events have helped to increase recognition of the HDS Group in the Nagano Prefecture's Azumino region, where our production base is located, and to nurture pride in HDS Group employees.

Passing on the Management Philosophy, fostering corporate culture, and enhancing communication of information to stakeholders

Our aims in the editing of HD.Times are to pass on the Management Philosophy and to realize corporate culture reform. We place particular emphasis on sharing the vision and policy of top management with employees. As an initiative for the communication of information to stakeholders, we are preparing to establish a company museum at our Ariake Factory. Specifically, video panels will be installed in the entrance hall on the 1st floor to screen videos introducing the company and the various initiatives being undertaken by the HDS Group. There will also be a product showroom. The 2nd floor will house the Musser Memorial Room introducing C. W. Musser, the inventor of HarmonicDrive®, and a lobby overlooking the factory, where the history of the company and its product development will be exhibited using digital archives. Our goal is to open this museum in 2025 as a place to convey the history and aspirations of the HDS Group to our employees, shareholders, customers, suppliers, sales agents, and the local community.

Contributions and achievements for local community and future society

Since establishing a factory in Azumino, Nagano Prefecture in the 1970s, we have held Harmonic Concerts and Harmonic Lectures with the aim of contributing to the local community. All proceeds of the concerts are donated to elementary and junior high schools in Azumino City to cover the cost of purchasing books. In addition, the Personnel Department and Public Relations Office collaborate to conduct outreach classes at national technical colleges and high schools in Nagano Prefecture. In these classes, our development engineers act as lecturers to introduce the principles of HarmonicDrive® and practical examples of its applications. We hope to keep contributing to the development of future generations who will support Japan's manufacturing industry. We also actively participate in local events. In addition to sponsoring the Shinshu Azumino Half Marathon as a gold partner, our employees participate as runners themselves. This year, more than 20 of our employees ran through the streets of Azumino.

As a manufacturer of precision speed reducers, the HDS Group has been consistent in its proposals of products that meet customer needs. These products are mounted on our customers' innovative devices and robots, and as such, they have made great contributions to the development of industries in society. Going forward, we hope to continue our contribution to the society of the future by predicting the future and preemptively developing products that will be needed.

Roles of the public relations section in the achievement of the long-term vision and current Medium-Term Management Plan

Sharing the concepts and goals of the long-term vision and current Medium-Term Management Plan with employees and stakeholders is another key role of the Public Relations Office. To this end, our immediate issue is how to roll out public relations activities in an integrated manner across the Group companies. In our internal public relations, we aim to stimulate communications among Group companies and employees, and in our external public relations, we aim to establish a future-oriented, high-quality HDS brand through collaboration with the marketing sections of Group companies. It is in such ways that we hope to contribute to the achievement of the long-term vision and Medium-Term Management Plan.

*Harmonic Ito Foundation has hosted the Harmonic Concerts since the 35th concert in 2018 and the Harmonic Lectures since the 20th lecture in 2019, with HDSI participating as a co-sponsor.

Stakeholder Engagement

The HDS Group aims to enhance corporate value as well as enriching the lives of people worldwide and bringing a sustainable society into reality by contributing to technological innovation in society through motion control technology. To achieve this, we are endeavoring to build trusting relationships with all stakeholders, including employees, shareholders/investors, customers, suppliers, local communities, and future generations, through continuous dialogue and co-creation with them.

Stakeholders	Basic Policy	Key concerns of stakeholders	Main dialogue channels	SDGs
Employees	We aim to be a company where the rights of each and every employee are respected, and where individuals can pursue a meaningful and fulfilling cultural life. For that purpose, we strive to be a company that rewards capabilities and performance by supporting the autonomous activities of each individual and creating an environment where individuals can fully utilize their abilities through work.	● Respect for fundamental human rights in labor ● Safe production site environment ● Opportunities for growth and self-realization ● Environmental protection of the earth, respect for culture and customs of society ● Ensuring diversity and choice in work style	● Job rotation ● Self-declaration system for career paths, etc. ● Regular personnel appraisals and meetings with superiors ● Internal recruitment system ● Varied skill development training ● Whistleblower system	3, 4, 5, 8
Shareholders/ investors	We discloses information in accordance with the Financial Instruments and Exchange Act and the "Rules on Timely Disclosure of Corporate Information by Issuers of Listed Securities" established by the Tokyo Stock Exchange. Furthermore, it is our policy to proactively and fairly disclose various corporate information considered useful for understanding the Company, including mechanisms of corporate value creation and efforts for enhancing corporate value.	● Initiatives for enhancing corporate value (strengthening shareholder returns) ● Capital policy taking account of capital efficiency ● Earning shareholder returns that exceed capital cost ● Enhancing sustainability-related efforts and disclosure ● Enhancing effectiveness of governance	● Financial results briefing attended by president-cum-representative director (twice a year) ● Small meetings for overseas institutional investors (FY2023: 10 meetings attended by 293 persons, FY2022: 14 maeetings attended by 291 persons) ● Individual meetings with domestic and overseas institutional investors (Domestic : FY2023: 106 investors, FY2022: 146 investors) (Overseas: FY2023: 89 investors, FY2022: 79 investors) ● Company briefing sessions for individual investors (once or more per year)	17
Customers	As the foundation of its management, The HDS Group prioritizes "ceaseless research and development activities" and "a constant emphasis on quality," aiming to create attractive products that satisfy our customers and provide services from the perspective of our customers.	● Stable supply of high-quality products ● Meeting delivery deadlines ● Maintaining and improving product quality ● Provision of environmentally-friendly products ● Responsible supply chain	● Provision of products and services that satisfy customers ● Continuous communication with customers ● Establishment of Customer Satisfaction (CS) Dept. to accommodate various specification requirements ● Global technology exchanges among industry, government and academia through international symposiums	9, 12, 17
Suppliers	We established a Sustainable Procurement Policy in September 2022. We aim for mutual prosperity with all suppliers, who are valued partners, taking into account such matters as fair and equitable transactions, compliance with laws and social norms, respect for human rights and consideration for labor conditions, and consideration for the global environment throughout the entire supply chain.	● Fair, equitable and transparent terms of trading ● Continuous and stable transactions ● Procurement activities friendly to society and the global environment ● Co-creation of sustainability	● Daily procurement activities ● Audits of product quality ● On-site audit on sustainable procurement and response to SAQ ● Environmental impact assessments of potentially hazardous substances and submission of documents on green procurement standards	9, 12
Local communities	Toward achieving "Coexistence and Co-prosperity and "Contribution to Society," as stated in our Management Philosophy, we aim to contribute directly and indirectly to society and industry broadly through our business activities as a good member of society, striving to be a company that helps improve the environment and quality of life in our local communities.	● Prosperity of local communities ● Coexistence and Co-prosperity with local communities ● Job creation in local communities and their development	● Sponsorship of Harmonic Concerts ● Sponsorship of Harmonic Lectures ● Cleanup activities in local communities ● Support for Shinshu Azumino Half-Marathon ● Donations and support activities	4, 11, 17
Future generations	We teach the mechanisms of our group's products, how they are used in robotics, the joy of manufacturing, value creation, and social contribution to younger generations who shoulder the future, ranging from elementary school to university students, through various events and lessons given at school as an outreach program.	● Joy and importance of manufacturing ● Role of mechanical design ● Mechanisms of robots and how they are used ● Value created by our group's products	● Painting competition for elementary schoolchildren ● Lectures on science ● Lessons given at school as outreach program	4, 9

Financial Data for the Past 11 Years

Items	Units	FY2013	FY2014	FY2015	FY2016
Net sales	(Millions of yen)	21,083	25,951	28,278	30,069
Cost of sales	(Millions of yen)	11,965	13,829	14,992	16,202
Gross profit	(Millions of yen)	9,117	12,121	13,286	13,866
Selling, general and administrative expenses	(Millions of yen)	4,449	5,054	5,667	6,052
Operating profit or loss	(Millions of yen)	4,668	7,066	7,618	7,813
Ordinary profit	(Millions of yen)	4,822	7,525	7,829	7,958
Profit or loss attributable to owners of parent	(Millions of yen)	2,993	4,833	5,001	19,732
Total assets	(Millions of yen)	38,625	49,440	48,749	101,999
Total net assets	(Millions of yen)	30,520	37,680	38,891	62,611
Interest bearing liabilities	(Millions of yen)	217	745	892	15,666
Net cash	(Millions of yen)	8,870	11,402	12,014	(3,569)
Equity ratio	(%)	75.9	73.3	76.1	54.0
Cash flows from operating activities	(Millions of yen)	3,643	5,494	6,499	7,225
Cash flows from investing activities	(Millions of yen)	(1,102)	(2,103)	(4,394)	(32,522)
Free cash flows	(Millions of yen)	2,540	3,390	2,105	(25,296)
Cash flows from financing activities	(Millions of yen)	(5,591)	(737)	(1,384)	24,648
Cash and cash equivalents at end of period	(Millions of yen)	6,883	9,730	10,439	9,668
Net assets per share	(Yen)	320.1	395.7	405.3	601.1
Net profit or loss per share	(Yen)	32.7	52.8	54.6	215.4
Dividends per share	(Yen)	9.7	14.3	18.0	20.0
Total dividend paid	(Millions of yen)	885	1,312	1,648	1,831
Dividend payout ratio	(%)	29.6	27.2	33.0	9.3
DOE(Dividend on Equity)	(%)	3.3	4.0	4.5	4.0
Ratio of gross profit to net sales	(%)	43.2	46.7	47.0	46.1
Ratio of operating profit to net sales	(%)	22.1	27.2	26.9	26.0
ROA(Return on Asset)	(%)	7.9	11.0	10.2	26.2
ROE(Return on Equity)	(%)	11.0	14.7	13.6	42.8
Capital investment	(Millions of yen)	1,304	2,475	4,296	4,576
Depreciation and amortization	(Millions of yen)	1,170	1,305	1,524	1,774
R&D expenditure	(Millions of yen)	1,235	1,309	1,404	1,383

Note 1: The Company conducted a 3-for-1 common stock split on October 1, 2014. However, net profit/dividend paid/net assets per share are calculated based on the assumption that the stock split was executed at the beginning of FY2012.
Note 2: Depreciation and amortization represents the total depreciation and amortization expense related to property, plant and equipment and intangible assets.

Financial Data for the Past 11 Years

FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
54,339	67,809	37,487	37,034	57,087	71,527	55,796
28,636	37,363	25,484	24,451	34,661	45,741	40,189
25,703	30,446	12,003	12,582	22,426	25,786	15,606
13,386	13,821	12,198	11,716	13,686	15,561	15,481
12,316	16,624	(195)	865	8,739	10,224	124
11,946	17,185	236	1,366	9,108	10,757	570
7,777	11,322	(1,095)	662	6,643	7,595	(24,806)
138,584	142,872	131,848	140,028	143,289	154,336	119,142
108,719	113,277	106,718	110,059	98,856	103,955	79,401
1,938	2,104	6,963	6,328	16,887	22,946	18,431
27,526	16,717	12,607	14,835	3,041	(2,133)	(1,923)
71.7	72.5	73.3	73.5	69.0	67.4	66.6
9,233	15,121	10,950	9,555	9,881	10,850	12,728
(8,171)	(22,399)	(12,537)	(1,230)	(4,703)	(8,663)	(5,950)
1,062	(7,277)	(1,587)	8,324	5,178	2,187	6,778
17,493	(3,271)	2,362	(6,561)	(6,663)	(1,599)	(8,122)
28,320	17,600	18,342	19,996	18,767	19,921	18,941
1,032.4	1,076.7	1,003.8	1,068.8	1,026.9	1,093.5	836.0
83.9	117.6	(11.4)	6.9	69.0	79.7	(261.0)
26.0	38.0	20.0	20.0	21.0	28.0	20.0
2,446	3,658	1,925	1,925	2,021	2,661	1,900
31.5	32.3	—	290.6	30.4	35.1	—
3.2	3.6	1.9	1.9	2.0	2.6	2.1
47.3	44.9	32.0	34.0	39.3	36.1	28.0
22.7	24.5	(0.5)	2.3	15.3	14.3	0.2
6.5	8.1	(0.8)	0.5	4.7	5.1	(18.1)
10.1	11.2	(1.1)	0.7	6.6	7.5	(27.1)
8,757	23,876	7,892	1,959	5,690	9,236	4,955
5,164	5,566	6,826	6,464	7,278	8,520	9,189
2,114	2,476	2,195	2,444	3,012	3,274	3,613

Sustainability Data

Environment

Items		Unit	Scope covered	FY2022	FY2023
Total GHG emissions		t-CO_2	Consolidated	3,835,340	903,178
Scope 1	Japan	t-CO_2	Consolidated	81	54
	Asia (excluding Japan)			14	0
	Europe			103	72
	North America			145	82
	Total			342	★ 209
Scope 2 (Location-base)	Japan	t-CO_2	Consolidated	15,418	12,792
	Asia (excluding Japan)			264	287
	Europe			2,494	2,168
	North America			474	361
	Total			18,650	★ 15,609
Scope 2 (Market-base)	Japan	t-CO_2	Consolidated	9,839	7,828
	Asia (excluding Japan)			298	287
	Europe			1,785	1,207
	North America			291	361
	Total			12,213	★ 9,683
Scope3	1. Purchased goods and services	t-CO_2	Consolidated	358,792	289,079
	2. Capital goods			11,237	12,441
	3. Fuel- and energy-related activities not included in Scope 1 or Scope 2			18,329	21,589
	4. Upstream transportation and distribution			8,466	6,568
	5. Waste generated in operations			1,322	1,067
	6. Business travel			702	1,301
	7. Employee commuting			613	694
	8. Upstream leased assets			—	—
	Total upstream			399,461	332,739
	9. Downstream transportation and distribution			3,837	2,287
	10. Processing of sold products			—	—
	11. Use of sold products			3,428,809	※ 557,746
	12. End-of-life treatment of sold products			1,400	※ 228
	13. Downstream leased assets			270	286
	14. Franchises			—	—

Items		Unit	Scope covered	FY2022	FY2023
Scope3	15. Investments	t-CO_2	Consolidated	—	—
	Total downstream			3,434,316	560,547
	Other (upstream)			—	—
	Other (downstream)			—	—
	Total			3,833,776	893,286
Energy consumption	Fuel consumption	MWh	Consolidated	1,815	1,052
	Electricity consumption			45,780	36,762
	Total			47,595	37,815
Total water withdrawal		m^3	Consolidated	31,020	★ 29,909
Total water discharge				31,020	★ 29,446
Amount of general waste discharge	Incineration waste	t	Consolidated	2,245	1,837
	Cafeteria waste			10	9
	Total			2,255	1,846
Amount of hazardous waste discharge				712	584
Green procurement	Ratio of consent acquired for green procurement standards	%	Consolidated	56	56
	Number of suppliers audited			43	54
Number of companies surveyed for inclusion of environmentally hazardous substances		Company	Consolidated	121	116
Amount of copper usage		Thousand t	Consolidated	3	4
Amount of oil and grease used		Thousand t	Consolidated	0	0
Amount of recycled plastic raw materials used		t	Consolidated	14	6
ISO 14001 certification	Number of companies certified	Company	Consolidated	5	6
	Ratio of certifications acquired	%		56	67
Number of sites where EHS audits were conducted		Company	Consolidated	4	4
Ratio of sites where environmental risk assessments have been conducted		%	Consolidated	57	79
Violations of environmental laws and regulations		Number of cases	Consolidated	0	0
Accidents and pollution causing environmental issues		Number of cases	Consolidated	0	0
Complaints on environmental issues		Number of cases	Consolidated	1	0
Fine on environmental issues		Yen	Consolidated	0	0
Environmental training	Number of participants	Person(s)	Consolidated	950	830
	Ratio of participants	%		72	62

★Third-party verified data
*The calculation method has been changed for Scope 3 categories 11 and 12 in FY2023.

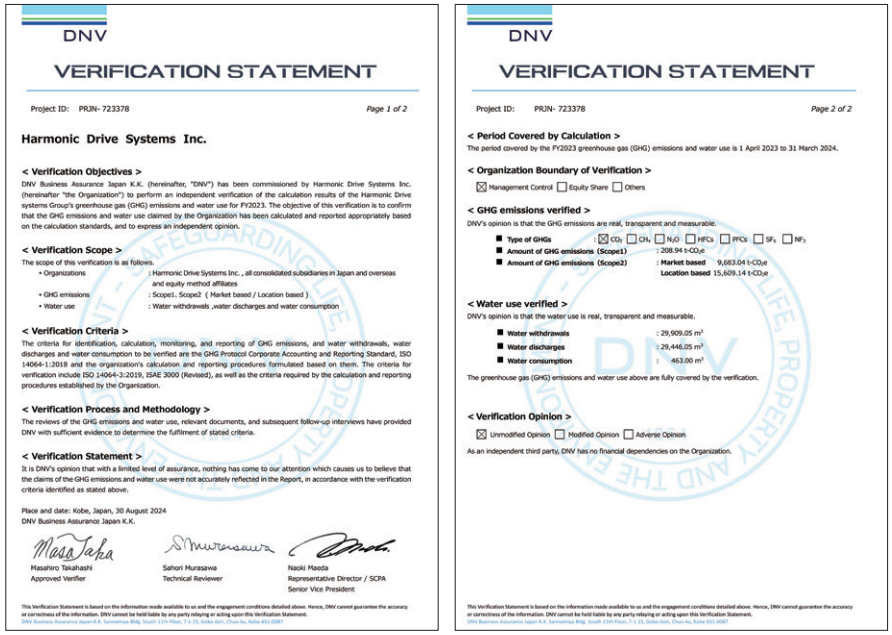
Third-party verification

In order to improve the credibility of the environmental performance data for the entire HDS Group, we have acquired an independent third-party verification by DNV Business Assurance Japan K.K. on the GHG emissions for FY2023 (Scope 1, Scope 2 (Market-base/Location-base)), as well as water usage (total water withdrawal, total water discharge, and water consumption). We will perform continuous verifications and broaden the coverage of verified items , striving to enhance the reliability of our sustainability data.

<Verified data>

- GHG emissions Scope 1
- GHG emissions Scope 2 (Market-base)
- GHG emissions Scope 2 (Location-base)
- Total water withdrawal
- Total water discharge
- Water consumption

Third-party verification statement



DNV

VERIFICATION STATEMENT

Project ID: PRJN- 723378 Page 1 of 2

Harmonic Drive Systems Inc.

< Verification Objectives >

DNV Business Assurance Japan K.K. (hereinafter, "DNV") has been commissioned by Harmonic Drive Systems Inc. (hereinafter "the Organization") to perform an independent verification of the calculation results of the Harmonic Drive systems Group's greenhouse gas (GHG) emissions and water use for FY2023. The objective of this verification is to confirm that the GHG emissions and water use claimed by the Organization has been calculated and reported appropriately based on the calculation standards, and to express an independent opinion.

< Verification Scope >

The scope of this verification is as follows.

- Organizations : Harmonic Drive Systems Inc. , all consolidated subsidiaries in Japan and overseas and equity method affiliates
- GHG emissions : Scope1. Scope2 (Market based / Location based)
- Water use : Water withdrawals ,water discharges and water consumption

< Verification Criteria >

The criteria for identification, calculation, monitoring, and reporting of GHG emissions, and water withdrawals, water discharges and water consumption to be verified are the GHG Protocol Corporate Accounting and Reporting Standard, ISO 14064-1:2018 and the organization's calculation and reporting procedures formulated based on them. The criteria for verification include ISO 14064-3:2019, ISAE 3000 (Revised), as well as the criteria required by the calculation and reporting procedures established by the Organization.

< Verification Process and Methodology >

The reviews of the GHG emissions and water use, relevant documents, and subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

< Verification Statement >

It is DNV's opinion that with a limited level of assurance, nothing has come to our attention which causes us to believe that the claims of the GHG emissions and water use were not accurately reflected in the Report, in accordance with the verification criteria identified as stated above.

Place and date: Kobe, Japan, 30 August 2024
DNV Business Assurance Japan K.K.

Masahiro Takahashi
Approved Verifier

Sahori Murasawa
Technical Reviewer

Naoki Maeda
Representative Director / SCPA
Senior Vice President

This Verification Statement is based on the information made available to us and the engagement conditions detailed above. Hence, DNV cannot guarantee the accuracy or correctness of the information. DNV cannot be held liable by any party relaying or acting upon this Verification Statement.
DNV Business Assurance Japan K.K. Sumitomo Bldg. South 13th Floor, 7-1-23, Kaigan-dori, Chuo-ku, Kobe 651-0087

DNV

VERIFICATION STATEMENT

Project ID: PRJN- 723378 Page 2 of 2

< Period Covered by Calculation >

The period covered by the FY2023 greenhouse gas (GHG) emissions and water use is 1 April 2023 to 31 March 2024.

< Organization Boundary of Verification >

☒ Management Control ☐ Equity Share ☐ Others

< GHG emissions verified >

DNV's opinion is that the GHG emissions are real, transparent and measurable.

- Type of GHGs : ☒ CO_2 ☐ CH_4 ☐ N_2O ☐ HFCs ☐ PFCs ☐ SF_6 ☐ NF_3
- Amount of GHG emissions (Scope1) : 208.94 t-CO_2e
- Amount of GHG emissions (Scope2) : Market based 9,683.04 t-CO_2e / Location based 15,609.14 t-CO_2e

< Water use verified >

DNV's opinion is that the water use is real, transparent and measurable.

- Water withdrawals : 29,909.05 m^3
- Water discharges : 29,446.05 m^3
- Water consumption : 463.00 m^3

The greenhouse gas (GHG) emissions and water use above are fully covered by the verification.

< Verification Opinion >

☒ Unmodified Opinion ☐ Modified Opinion ☐ Adverse Opinion

As an independent third party, DNV has no financial dependencies on the Organization.

This Verification Statement is based on the information made available to us and the engagement conditions detailed above. Hence, DNV cannot guarantee the accuracy or correctness of the information. DNV cannot be held liable by any party relaying or acting upon this Verification Statement.
DNV Business Assurance Japan K.K. Sumitomo Bldg. South 13th Floor, 7-1-23, Kaigan-dori, Chuo-ku, Kobe 651-0087

Social

Items		Unit	Scope covered	FY2022	FY2023
Number of employees (consolidated)		Person(s)	Consolidated	1,324	1,349
Number of employees (non-consolidated)	Male	Person(s)	Non-Consolidated	389	415
	Female			86	108
	Total			484	523
	Ratio of female employees	%		17.8	20.7
Average number of temporary and contract employees*		Person(s)	Consolidated	156	689
Ratio of average number of temporary employees*		%	Consolidated	24.1	33.8
Average age*		Age	Consolidated	41.8	40.0
Average years of service*		Year(s)	Consolidated	14	9
Number of foreign employees*	Male	Person(s)	Consolidated	3	59
	Female			5	28
	Total			8	87
	Ratio of foreign employees	%		1.2	6.4
Number of newly graduated recruits*	Male	Person(s)	Consolidated	8	18
	Female			1	5
	Total			9	23
Number of mid-career recruits*	Male	Person(s)	Consolidated	10	68
	Female			3	24
	Total			13	92
Retention of newly graduated recruits (turnover rate after 3 years)*	Male	%	Consolidated	0.0	6.0
	Female			0.0	0.0
	Total			0.0	6.0
Turnover rate*		%	Consolidated	3.0	8.6
Turnover rate for personal reasons retirees*		%	Consolidated	2.8	8.3
Managers*	Male	Person(s)	Consolidated	82	205
	Male (foreign nationals)			0	8
	Female			2	14
	Female (foreign nationals)			0	0
	Total			84	219
	Ratio of female managers	%		2.4	6.4
Executive Officer*	Male	Person(s)	Consolidated	12	29
	Male (foreign nationals)			0	1
	Female			1	2
	Female (foreign nationals)			0	0
	Total			13	31
	Percentage of female Executive Officers	%		7.7	6.5

*Consolidated basis from FY2023

Sustainability Data

Social

Items		Unit	Scope covered	FY2022	FY2023
Employees with disabilities*	Male	Person(s)	Consolidated	9	24
	Female			2	4
	Total			11	28
	Ratio of employees with disabilities	%		1.8	2.1
Average monthly overtime hours*		Hours	Consolidated	22.9	9.7
Percentage of employees who took paid leave*		%	Consolidated	73.2	66.7
Number of employees who took childcare leave*	Male	Person(s)	Consolidated	9	25
	Female			N.A.	20
	Total			9	45
Ratio of males who took childcare leave*		%	Consolidated	56.3	47.2
Average number of labor-management meetings held*		Times	Consolidated	12	9
Average number of Safety and Health Committee held*		Times	Consolidated	12	9
Employee training on safety and health*	Number of meetings held	Times	Consolidated	12	82
	Number of participants	Person(s)		162	641
Number of ESH risk assessments		Number of cases	Consolidated	33	31
Stress check inspection rate*		%	Consolidated	86.0	90.1
Harassment prevention training*	Number of meetings held	Times	Consolidated	3	9
	Number of participants	Person(s)		144	320
	Ratio of participants	%		75.3	29.4
Number of child labor, forced labor, human trafficking		Number of cases	Consolidated	0	0
Number of participants in special trainings (master's, doctoral, MBA, MOT, overseas training, overseas language study, etc.)*		Person(s)	Consolidated	2	5
Number of employees taking correspondence education programs*		Person(s)	Consolidated	131	185
Certification status (including ISO 9001 and other industry-specific standards)	Certified sites	Company	Consolidated	7	7
	Ratio of certifications acquired	%		77.8	77.8
Number of patents held		Number of cases	Consolidated	1,004	1,050
Corporate citizenship (social contribution) activities	Community cleanups	Times	Consolidated	7	10
	Harmonic Lectures		Non-Consolidated	1	1
	Harmonic Concerts			0	1
	Lessons in educational facilities			5	5

*Consolidated basis from FY2023

Governance

Items			Unit	Scope covered	FY2022	FY2023
Directors	Internal	Male	Person(s)	Non-Consolidated	5	5
		Female			0	0
		Total			5	5
	Outside	Male	Person(s)		4	4
		Female			0	1
		Total			4	5
	Total		Person(s)		9	10
	Ratio of female Directors		%		0.0	10.0
Ratio of Independent Outside Directors			%	Non-Consolidated	44.4	50.0
Number of Board of Directors meetings			Times	Non-Consolidated	18	18
Average attendance at Board of Directors meetings			%	Non-Consolidated	98.5	98.5
Corporate Auditors	Internal	Male	Person(s)	Non-Consolidated	1	1
		Female			0	0
		Total			1	1
	Outside	Male	Person(s)		3	3
		Female			0	0
		Total			3	3
	Total		Person(s)	Non-Consolidated	4	4
	Ratio of female Corporate Auditors		%	Non-Consolidated	0.0	0.0
Ratio of Independent Outside Corporate Auditors			%	Non-Consolidated	50.0	50.0
Number of Board of Corporate Auditors meetings			Times	Non-Consolidated	18	17
Average attendance at Corporate Auditors meetings			%	Non-Consolidated	98.6	100
Number of whistleblowing cases*			Number of cases	Consolidated	21	35
Number of corruption cases*			Number of cases	Consolidated	0	1
Amount of fines related to corruptions*			Yen	Consolidated	0	0
Compliance trainings*	Number of meetings held		Times	Consolidated	6	4
	Number of participants		Person(s)		293	931
	Ratio of participants		%		60.5	69.0
Political donations*			Yen	Consolidated	0	0
Number of corruptions and briberies detected*			Number of cases	Consolidated	0	0
Number of violations of antitrust laws*			Number of cases	Consolidated	0	0
Number of information security incidents*			Number of cases	Consolidated	0	1
Information security compliance ratio*			%	Consolidated	96.5	97.9
Awareness training to prevent information security breach*	Number of trainings held		Times	Consolidated	2	29
	Number of participants		Person(s)		1,040	1,696
Number of information security due diligence performed by a third party*			Times	Consolidated	2	16

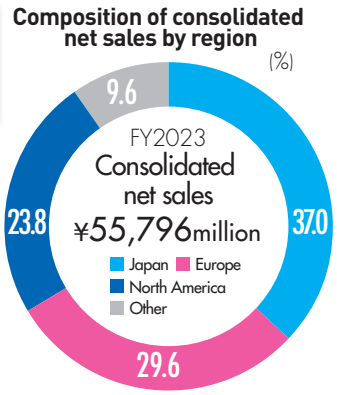
*Consolidated basis from FY2023

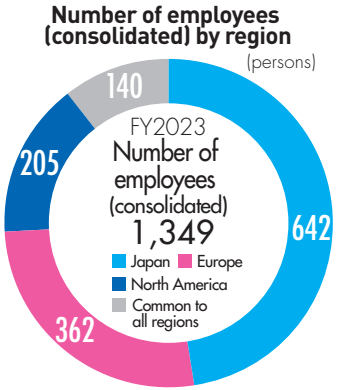
Global Network

Establishing a global supply network of high-quality product lineups

The HDS Group has production bases in Japan, Germany, the U.S., and South Korea and also conducts development in Japan, Germany, and the U.S. The Company provides sales and technological services in Japan and the Asian region, while the German subsidiary, Harmonic Drive SE and its eight consolidated subsidiaries are in charge of Europe, Middle East, Africa, India, and South America. Harmonic Drive LLC, the U.S. subsidiary, covers North America.
The Chinese subsidiary, Harmonic Drive Systems (Shanghai) Co., Ltd., provides sales and technological services to the Chinese market. The South Korean subsidiary, SAMICK ADM CO., LTD., manufactures Precision planetary speed reducers.







Corporate Overview

Corporate Information (As of March 31, 2024)

Corporate Name	Harmonic Drive Systems Inc.
Location of head office	6-25-3 Minami-Oi, Shinagawa-ku, Tokyo 140-0013, Japan
Phone Number	+81-3-5471-7800
Corporate website	https://www.hds.co.jp/english/#1
Founded	October 27, 1970
Listed stock exchange	Tokyo Stock Exchange (Standard Market) Securities code: 6324
Business domain	Development, production, and sales of precision speed reducers and applied mechatronics products (actuators and motion control equipment)
Fiscal year end	March
Share capital	¥7,100,036,369
Net sales	Consolidated: ¥55.7 billion Non-consolidated: ¥28.5 billion
No. of employees	Consolidated: 1,349 Non-consolidated: 523
Group companies	Consolidated subsidiaries: 18, Equity-method affiliates: 1

Major Offices and Factories

Name	Location
Head Office	Shinagawa-ku, Tokyo, Japan
Tokyo Office	Shinagawa-ku, Tokyo, Japan
Kohshin Office	Azumino-shi, Nagano, Japan
Chubu Office	Meito-ku, Nagoya-shi, Aichi, Japan
Kansai Office	Yodogawa-ku, Osaka-shi, Osaka, Japan
Kyushu Office	Hakata-ku, Fukuoka-shi, Fukuoka, Japan
Taiwan Representative Office	Taipei City, Taiwan (R.O.C.)
Hotaka Factory	Azumino-shi, Nagano, Japan
Ariake Factory	Azumino-shi, Nagano, Japan
Matsumoto Factory	Matsumoto-shi, Nagano, Japan
Toyoshina Factory	Azumino-shi, Nagano, Japan
Komagane Factory	Komagane-shi, Nagano, Japan

Name of consolidated subsidiary	Percentage of voting rights	Location	Business domain
HD Logistics, Inc.	100.0%	Azumino-shi, Nagano, Japan	Logistics
Harmonic Precision Inc.	100.0%	Matsumoto-shi, Nagano, Japan	Production and processing of cross roller bearings
Harmonic AD, Inc.	100.0%	Azumino-shi, Nagano, Japan	Production of Precision planetary speed reducers
Harmonic Winbel Inc.	100.0%	Komagane-shi, Nagano, Japan	Development, mass production support, manufacturing and sales of various motors
HD Systems, Inc.*	100.0%	Beverly, Massachusetts, U.S.A.	Investment in Harmonic Drive LLC, research and study of speed reducers and mechatronics products
Harmonic Drive LLC*	100.0%	Beverly, Massachusetts, U.S.A.	Development and production of speed reducers and mechatronics products, and sales in North America region
Harmonic Drive Systems (Shanghai) Co., Ltd.*	100.0%	Shanghai, China	Sales and technical services of speed reducers and mechatronics products
SAMICK ADM CO., LTD.*	51.0% (51.0%)	Dalseong-gun, Daegu, South Korea	Production of Precision planetary speed reducers
GK HD Management*	100.0%	Shinagawa-ku, Tokyo, Japan	Holding company for the purpose of investment in Harmonic Drive SE
Harmonic Drive SE and 8 consolidated subsidiaries*	100.0%(63.2%)	Limburg a.d. Lahn, Hessen, Germany	Development and production of speed reducers and mechatronics products, and sales in Europe, Middle East, Africa, India and South America region

Note 1: Fiscal year ends on December 31 for the consolidated subsidiaries marked with *.
Note 2: Percentage of voting rights ( ) indicates the percentage of indirect ownership.
Note 3: Harmonic Winbel Inc. changed its name from Winbel Co., Ltd. as of April 1, 2023.

Name of equity-method company	Percentage of voting rights	Location	Business domain
Ome Iron Casting Co., Ltd.	49.2%	Nishitama-gun, Tokyo, Japan	Development, production, and sales of high-strength cast-iron products

HDS Report 2024 Editors

Sustainability Management Office



Kazuha Yamakawa　Makiko Ono　Aoi Ando

<From the editors>

Thank you for reading the HDS REPORT 2024. In this second publication of the integrated report, we have included the unwavering commitment of our President & CEO, Executive Officers in charge of respective areas, next-generation leaders, and the top leaders of our overseas Group companies as we work towards the realization of the Medium-Term Management Plan (FY2024-FY2026) which began in FY2024. We hope that this report will help you deepen your understanding of the HDS Group and look forward to the realization of our vision. We also hope that the report will stimulate our dialogue with all of our stakeholders.

Stock Information

Stock Information (As of March 31, 2024)

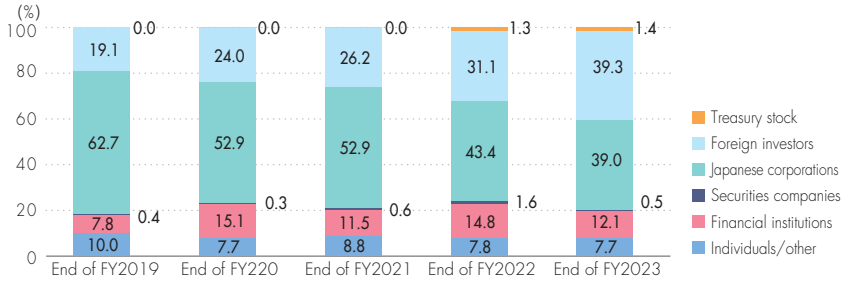
Total number of shares authorized to be issued	356,400,000 shares
Total number of issued and outstanding shares	96,315,400 shares
Number of shareholders	8,302
Fiscal year	From April 1 of each year to March 31 of the following year
Ordinary General Meeting of Shareholders	Held in June every year
Record date	March 31
Interim dividend	September 30
Transfer agent Special account manager	1-3-3, Marunouchi, Chiyoda-ku, Tokyo 100-8241 Japan Mizuho Trust & Banking Co., Ltd.
Handling office	1-3-3, Marunouchi, Chiyoda-ku, Tokyo 100-8241 Japan Stock Transfer Agency Department, Head Office, Mizuho Trust & Banking Co., Ltd.

Status of Major Shareholders

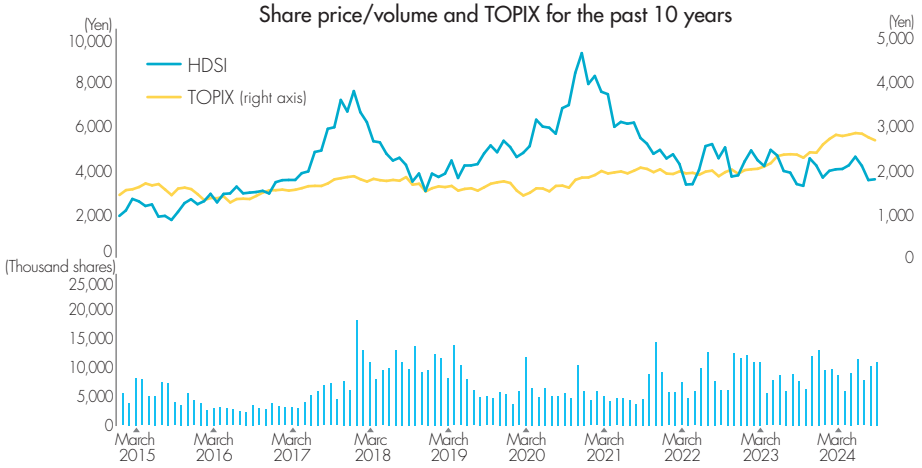
Name of shareholder	No. of shares held (thousand)	Shareholding ratio (%)
KODEN Holdings Co., Ltd.	33,490	35.3
SSBTC CLIENT OMNIBUS ACCOUNT	7,058	7.4
The Master Trust Bank of Japan, Ltd. (Trust Account)	3,752	4.0
Custody Bank of Japan, Ltd. (Trust Account)	3,345	3.5
Norimitsu Ito	3,041	3.2
Control trust (A030) trustee SMBC Trust Bank Ltd.	2,176	2.3
JP MORGAN CHASE BANK 385632	1,986	2.1
STATE STREET BANK WEST CLIENT-TREATY 505234	1,681	1.8
J.P. MORGAN BANK LUXEMBOURG S.A. 381572	1,571	1.7
NORTHEN TRUST CO. (AVFC) REIEDU UCITS CLIENTS NON LENDING 15 PCT TREATY ACCOUNT	1,448	1.5
Total	59,553	62.7

Note: The shareholding ratios noted above are calculated excluding treasury stock.

Percentage of Shares Held by Type of Shareholder



Stock Price Chart



Comparison of Stock Performance (TSR: Total Shareholder Return, %)

Investment period	1 year (March 31, 2023 - March 31, 2024)	3 years (March 31, 2021 - March 31, 2024)	5 years (March 31, 2019 - March 31, 2024)	10 years (March 31, 2014 - March 31, 2024)
Harmonic Drive Systems Inc.	-8.9	-45.8	8.0	305.5
TOPIX	41.3	52.5	96.2	188.6
TOPIX Sector Indices (Machinery)	46.2	52.8	117.0	201.8

Note: The table above shows the cumulative return on investment including dividends as of March 31, 2024, if investments were made 1, 3, 5, and 10 years ago.

Stock Price Valuation

	FY2019	FY2020	FY2021	FY2022	FY2023
Stock price at end of term (Yen)	4,725	7,480	4,220	4,395	3,985
PBR (Times)	4.7	7.0	4.1	4.0	4.8
ROE (Times)	-1.1	0.7	6.6	7.5	-27.1
PER (Times)	-415.2	1,087.2	61.1	55.2	-15.3
Dividend yield (%)	0.4	0.3	0.5	0.6	0.5
Market capitalization at end of period (Billions of yen)	4,551	7,204	4,065	4,233	3,838

Harmonic Drive Systems Inc.

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