Message from the Officer-Technology Development and Digital Transformation



We are strengthening the fundamental technologies that will be needed in the future to remain a company that society needs.

Steadfastly committed to our future-oriented growth strategy

Kawasaki Heavy Industries founder Shozo Kawasaki established the Kawasaki Tsukiji Shipyard in Tokyo in 1878 to fulfill his aspiration of "contributing to the nation—to society—through expertise." The Kawasaki Group has continued refining its expertise, developing leading-edge technologies, and introducing a long succession of national and global firsts that have helped solve social issues in each passing era. Our founder's drive to develop the nation and society is the origin of the Group's sustainability management and is manifest in our Group mission that clearly states our role in society.

In one of our sustainability management policies, "taking on the challenge of resolving social issues," we aim to enhance sustainable corporate value. The evolution of our hydrogen-related business is a prime example. The thermal insulation technology we began developing in the 1970s has progressed into cryogenic technology for liquefied hydrogen tanks, which are key to creating the hydrogen supply chains necessary for decarbonization and energy security. The PCR testing service is another example. Launched to protect medical workers from the risk of contracting COVID-19 during the pandemic, the service has proven successes, built

up our expertise, and earned the trust of testing and medical institutions, which has created a foundation for developing new businesses in the healthcare field.

We are continuing our history of actively addressing social issues like these to cultivate new businesses that will be future pillars of our Company in the Group Vision 2030's three focal fields of "a safe and secure remotely connected society," "near-future mobility," and "energy and environmental solutions."

Our approach to developing new technologies is to project the technical areas that will be needed to address social issues in the future. Then we backcast to determine which technologies we will need to create and focus on developing and cultivating the new technologies. We are seeking to quickly establish and fortify the fundamental technologies we will need in the future through open innovation with outside partners and technology turnover by replacing mature technologies with new technologies.

Accelerating our business transformation and creating a new business for selling IP and services with digital technology

Digital technology is indispensable to accelerating our ability to produce solutions. The Kawasaki Digital

Platform we created with Microsoft Corporation provides a digital space for centralized management of our value chain from our Company to suppliers and customers. We are combining the platform with our various analysis technologies to accelerate our business transformation and further enhance our ability to deliver solutions.

We use the platform to collect data on the operating status and performance of the products we deliver, and use the information in our sales and design to continue developing new services. We are continuing to advance our remote operating services using the industrial metaverse, and are proposing solutions to enhance the efficiency and maintenance of customer manufacturing facilities. In addition, the track monitoring service for rail freight operators we launched in North America is proposing solutions to reduce damage risk, such as from train derailment accidents.

In addition to the Group's foundation of product sales, we are focusing on digital transformation (DX) that will create a service business (sales of IP and services) turning our product operating data into new value.

/ Improving profitability and management efficiency through business process reform

Improving our overall business structure, including our existing businesses, is essential for the Group to continue sustainably growing in a rapidly changing business environment. To bring about the changes we need, we are currently focusing on reforming our business processes to improve both management efficiency and profitability.

The reform includes examining all design and production operations, which have been conducted separately by each business division, and applying total quality management (TQM) to improve our overall organizational management. We believe digital technology will not only allow us to move beyond people-reliant business operations and to firmly stabilize our product quality, but will also lead to an overall improvement in the quality and efficiency of our business.

In addition, the 3D design, simulation, and system evaluation technologies we have been working on are enabling us to shorten the time needed to develop new products and to reduce our fixed costs.

Profitability and management efficiency will continue to improve throughout the value chain as we continue to standardize and centralize data from our sales, design, procurement, production, and maintenance activities.

/ Aggressive IP activities driving our business strategies and maximizing profits

We are shifting our use of our intellectual property (IP) from the "defensive" approach we have used for past products and businesses to an aggressive "offensive"

approach that will drive our business strategies.

One of our main initiatives for maximizing the profitability of new businesses is striking an effective balance between "open (standardized)" and "closed (intellectual property)" assets. The hydrogen-related business, for example, is a business that must create new markets. We are therefore aiming to establish standardization, such as for safety assessment standards and evaluation methods, as open assets that can be used throughout the market, which will help it grow. On the other hand, to secure profitability, our businesses will also have closed assets, such as core components like cryogenic tanks that store liquefied hydrogen at -253°C and their licenses.

Since the critical importance of intellectual property will only increase as we continue to develop new businesses, we are also initiating efforts to enhance employee IP awareness.

Developing the diverse human resources essential for growth and accelerating company-wide reform

I often think of technology as being people. Technology does not just appear out of nothing. Technology starts to take shape when one person thinks they want to make something new, they want to do something good for society, then they get together with others and bring their idea into existence. My role is to prepare fertile fields where employees can cultivate and actively work on their ideas. I believe that increasing engagement and developing our human resources will strengthen our technical capabilities.

At the same time, as social issues become more complex, technology development requires increasing diversity in human resources. We will firmly define human resources that are essential for the growth of the Group and implement development measures to strengthen human capital in areas including high-tech human resources who will be responsible for future core fundamental technologies, data scientists and other specialists in advanced technologies, management personnel with the wide-ranging knowledge for overseeing entire systems, and human resources with commercialization skills and entrepreneurial experience.

As a director in charge of technological development, I have the responsibility of passing on Kawasaki Heavy Industries' 125 years of commitment to technology to the future generation. No one knows what the future will bring. Whatever it brings, the Kawasaki Group will continue to be a company needed by society, creating new technologies for a better future.

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