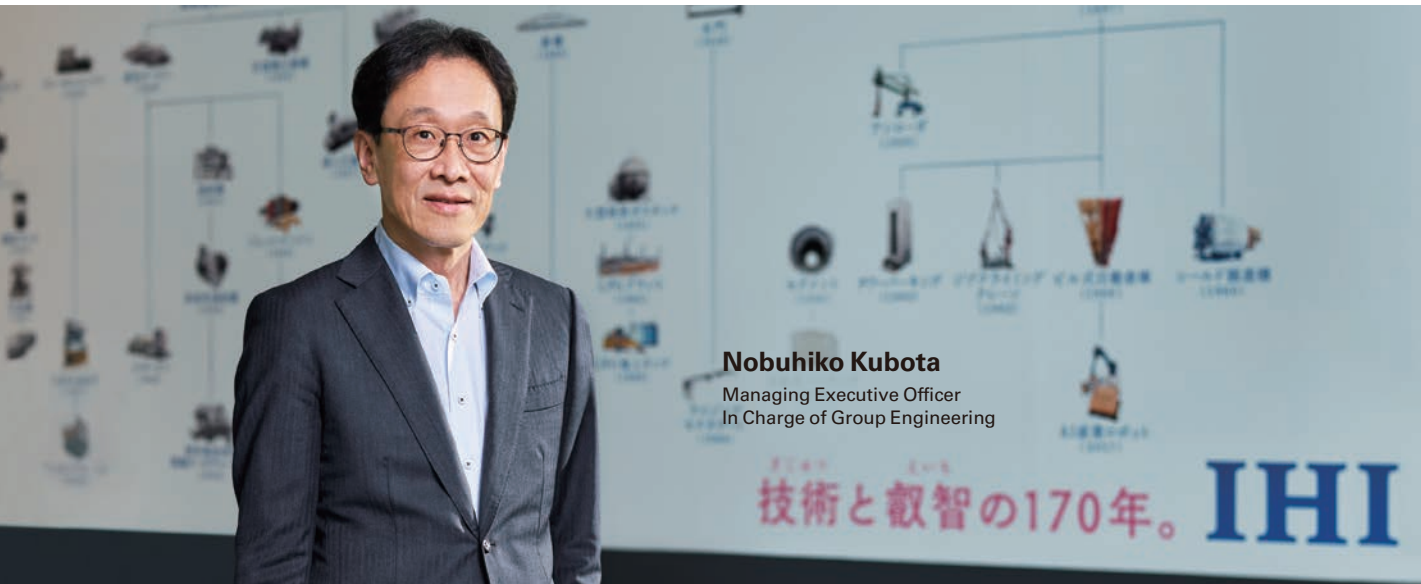


Message from the Managing Executive Officer (Group Engineering)



Nobuhiko Kubota
Managing Executive Officer
In Charge of Group Engineering

Pioneering global markets and shaping the future through technological innovation

Building a sustainable future on generations of technology excellence

Since its founding as a shipyard in the mid-19th century, the IHI Group has cultivated strengths in a wide array of technologies—from engines and rotating machinery to hull construction. These foundational capabilities have evolved into the cornerstones of our present mainstay businesses, including aero engines, boiler combustion, and large-scale structure manufacturing. Our unwavering commitment to technological advancement, passed from one generation to

the next, remains the driving force behind IHI's innovation.

Today, building on this pursuit of technology, our researchers work to support innovation within a global ecosystem of leading scholars and industry partners (what we call "top ecosystems"). Through this engagement, we stay abreast of the latest trends in technology, regulation, and policy, both in Japan and abroad. These insights help strengthen the IHI Group's foundations for developing new businesses and products.

Toward competitiveness drawn from ecosystems and technology roadmaps

The IHI Group draws upon the insights gained from global collaboration within top ecosystems to advance targeted initiatives across each of our Growth Businesses, Development-focus Businesses, and Conventional Businesses. To chart our long-term course with specificity, we have established a technology roadmap extending to the year 2050. This roadmap identifies key technical fields critical to the advancement of each business area, alongside the systematic creation of products and services that address pressing social challenges.

In particular, we aim to achieve sustainable business growth and improve profitability by investing human and financial resources with emphasis on our Growth Businesses and Development-focus Businesses. The Corporate Research and Development Division fosters an environment where researchers are encouraged to pursue basic research with a clear view toward future societal application.

Technology strategy driving growth and development areas

In our Growth Businesses, we are focusing on the development of new materials and the advancement of production technology to reduce the weight of next-generation aircraft. In January 2025, we also began operating a demonstration facility for sustainable aviation fuel (SAF), which synthesizes fuel directly from CO₂. This test will validate the raw material synthesis process of SAF, with the aim of supplying SAF to airlines by 2030. Looking further ahead, we are developing electrification technologies for aero engines and advancing hydrogen-based solutions that

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we believe will form a future source of competitive strength.

In our Development-focus Businesses, we are making significant progress on technologies for the ammonia value chain, which is central to the realization of a decarbonized society. In partnership with JERA Co., Inc., we succeeded for the first time in the world in replacing 20% of coal with ammonia at a commercial coal-fired power plant. We have also achieved successful continuous operation of a gas turbine running entirely on liquid ammonia, and interest in commercial adoption continues to grow. Further, in August 2024, we completed the world's first tugboat powered by an ammonia-fueled marine engine, which completed its demonstration voyage successfully. In November, we also successfully developed ammonia production equipment using green hydrogen derived from renewable energy. These outcomes are supporting our efforts in intellectual property development, international standard-setting, and the gradual resolution of challenges related to societal implementation and monetization.

Strengthening global competitiveness through technological leadership

The scope of technologies being developed by the IHI Group covers markets on a global scale and exists in a highly competitive environment. To survive and lead within this scope, we must remain at the forefront of cutting-edge ecosystems and cultivate robust partnerships with top-tier institutions and enterprises.

Active participation in these pioneering communities enables us to help set international standards from a technical perspective, identify potential obstacles at an early stage, and preemptively work toward timely solutions. We are especially

focused on advancing ammonia combustion and aero engine technologies. To enhance our global presence, we are engaging in direct dialogue with international stakeholders in these areas.

Furthermore, by pursuing open innovation with enterprises and research institutions, we have built a "coalition of the capable," enabling us to shorten development cycles and increase the viability of societal implementation. We are proud to play a central role in the global top ecosystem surrounding ammonia combustion technology and are pursuing similar leadership in adjacent fields.

Through these efforts, the IHI Group will continue to assert its position in international markets and demonstrate technological leadership in the service of a sustainable society.



Technological innovation that drives the future

The IHI Group is seeking to create new technologies, guided by the aspiration to "Create a World where Nature and Technology Work in Unity." To support this vision, we have dedicated approximately 20% of our R&D budget to long-term technological exploration and have established a system allowing researchers to allocate 20% of their working hours to freely pursue their own ideas, creating an environment conducive to the pursuit of our future world and the technologies it will contain. This initiative has attracted individuals motivated by the desire to contribute meaningfully to society and has helped cultivate an organizational culture that values intellectual curiosity and the courage to take on new challenges.

In my responsibility for engineering in the IHI Group, I am committed to preserving our world-class foundation in core technologies, building a well-optimized technology portfolio through the selection and concentration of resources, and overseeing a technology strategy that will enable the realization of a sustainable future. By drawing on the capabilities we have refined over generations, the IHI Group will continue to create value, address societal challenges, and earn the profound trust of stakeholders in Japan and around the world.