

Top Management Tripartite Talk



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Significance of and Prospects for the IHI Group's Creation of Value Chains

The IHI Group has introduced a new guideline to create value chains, charting a course beyond its "Group Management Policies 2023."

Why is value chain creation critical to the Group's philosophy to "Create a World where Nature and Technology Work in Unity"? Three of IHI's top executives discussed the significance and prospects of this endeavor.

Value chain perspectives as a foundation for new value creation

— Could you explain how the idea of value chain creation first emerged within the IHI Group?

Ide: Around 2017, the concept of shifting from selling things to selling value became the topic of lively discussion within the IHI Group. Initially, as a manufacturing enterprise, the IHI Group was uneasy with the notion of selling value. Over time, however, its members came to appreciate the importance of value creation; specifically, that value lies not only in the product itself but also in the surrounding processes.

— Was that the starting point for the current value chain approach?

Ide: At the time, our focus was on enhancing product and plant performance, yet we lacked insight into how those assets were used after delivery and how they related to earlier and later stages. We came to see that by understanding the value created throughout a product or plant's lifespan, including what kind of surrounding processes existed, we could deliver more meaningful value in

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our products and services. Although we were not firmly aware of the term “value chain” at the time, we began to realize the importance of the concept, which was the starting point for our current efforts.

— For Mr. Morita and Mr. Kobayashi, what were your impressions of this shift in thinking?

Morita: I believe this is a vital perspective for engineers. The term “selling value” is often linked to aftermarket services, but what matters most is viewing the entire product lifecycle as a continuum and not just looking at the latter processes. A value chain, as the name suggests, systematically connects each step, offering systematic clarity on what must be achieved.

Kobayashi: When I took on responsibility for the fuel ammonia value chain businesses, Mr. Ide instructed me to adopt a value chain mindset. Unlike the supply chain, which emphasizes logistics and efficiency, the value chain focuses on maximizing customer value rather than just how a product is made. In the case of fuel ammonia, we work not only on equipment sales but also on production and receiving terminals, thereby enhancing the market value of our equipment offerings. This

provides customers with clear reasons to choose IHI Group equipment, while also maximizing its value for them. We believe that in addition to providing products and services, we must continue to focus on the processes surrounding these products and services to create new business opportunities and create a chain of value.

Business and technology evolution through building value chains

— What changes do you foresee in the IHI Group’s business operations through the lens of value chain thinking?

Ide: Corporate activities must constantly evolve. Similarly, the IHI Group has evolved by shifting its business focus from shipbuilding (sea) to energy (land), and now to aero engines (air). As we continue this evolution going forward, I am emphasizing the need to focus discussions on how our own technologies and products can proactively address customer needs. Until now, the IHI Group has mainly taken a passive stance, providing products in response to customer requests. However, this risks relinquishing leadership in our businesses to others. Even with superior products, if we simply do what our customers ask,

we may end up competing on price alone, which will eventually exhaust us. For this reason, we must create markets rooted in our technological and product strengths and offer value that exceeds expectations. By intentionally linking our value (i.e., by creating a value chain), I believe we can escape price-based competition and achieve sustainable growth.

Morita: I believe that our engineers must also undergo a transformation in direction. Making a value chain requires the engineering ability to integrate systems and equipment, and engineering is an area where IHI excels. That strength depends on our foundational technologies, which are a great source of strength for us and which we must continue to refine. For example, the IHI Group was able to manufacture industry-leading high-efficiency boilers because of its advanced materials technology. The fuel ammonia value chain businesses are also founded in combustion technologies developed in the coal-fired power sector. We believe that continually refining and deepening these cutting-edge technologies is essential for realizing a value chain.

Kobayashi: Ammonia is currently attracting attention for its value as a transition fuel bridging a carbon society to a hydrogen society, and promises even



more diverse applications ahead. If coal-fired power plants are decommissioned, the value of fuel ammonia use would decline, given that it would be co-fired with coal. By pursuing power generation using large gas turbines exclusively fired with fuel ammonia, we can harness this as a sustainable fuel and build a sustainable business model unaffected by changes in the social structure. Ammonia also holds promise for applications outside the energy sector. We intend to pursue novel uses and help shape future markets and paradigms.

Securing competitive advantage through value chain development

— What role does each member of senior management play in driving the efforts described so far?

Ide: Whenever we launch a new initiative or a policy that diverges from conventional practice, there is always a certain amount of resistance. In such situations, we recognize that it is our responsibility as upper management to clearly communicate our objectives and



the reasons for them to our colleagues and to gain their understanding. Moreover, value chain creation requires partnerships beyond the Group; it cannot be completed solely from within. We are actively cultivating relationships through executive-level outreach to achieve this. Furthermore, when building platforms from scratch, such as with ammonia, strategic investments and human capital allocation are vital. I see this as an important role for me.

Morita: While Mr. Ide leads major efforts inside and outside the Group, my focus is on strengthening the technical and production foundations of the value chain. For us, “technical capabilities” span traditional and modern technologies, quality control, and productivity enhancement. By aligning these elements effectively, we can develop strong value chains to serve our businesses. While strength does not always equate to profitability, technological competitiveness is essential for a sustainable value chain. Whereas trading companies have financial and networking strengths, the IHI Group’s competitive advantage lies in its technological, development, and production site capabilities, and I am responsible for these areas.

Kobayashi: My role as general manager of Business Development Division is

precisely to create new businesses. This does not mean chasing opportunities in existing markets, but creating new markets through our technological edge. Leveraging the cutting-edge technologies Mr. Morita described, we aim to build new markets, creating significant social impact and contributing to the IHI Group’s performance.

Ide: As Mr. Morita says, technology anchors value chains. Moreover, not only core technologies but also technologies that can address peripheral issues are required. For example, the commercialization of ammonia for fuel depends not only on combustion technologies but also on having technology to ensure safety. We must identify and reinforce weaker areas in the value chain to strengthen and differentiate the entire chain. I hope Mr. Morita will lead with a bird’s-eye view from a technical perspective and Mr. Kobayashi similarly from a business one.

Morita: There are multiple approaches to reinforcing a value chain. This can come in the form of compensating for weaknesses and erecting barriers to entry throughout the chain, or establishing world-class technologies in specific fields to make your presence dominant. In any case, it is important that engineers do not work in

isolation, but rather that they are managed in an organizational manner, meaning that their areas for demonstrating competitive advantage and future direction are clearly defined. For example, since extremely high technological standards are required in the field of aero engines, barriers to entry are high worldwide, and market expansion directly leads to business growth.

Therefore, we must continue to emphasize R&D in areas where we can leverage our current strengths and continue to gain technological competitive advantage.

Kobayashi: The barriers to entry mentioned by Mr. Morita are an extremely important perspective. Creating a value chain means forming a new market yourself and becoming a leader in that market. This offers competitive advantages for us and puts up barriers to entry for other companies. However, in order to create a market, the value we offer must be accepted by society. Innovation is complete only when it is accompanied by social acceptance, such as assurance of safety and institutional alignment. We must be constantly attuned to this reality as we proceed with our efforts.

Value chain perspectives offer insights to organizational and human capital growth

— What is the strategic significance of adopting a value chain viewpoint?

Ide: Manufacturers often concentrate so heavily on the product that they lose sight of their surrounding environment and customer relationships. Frequently, the connection with customers ends once delivery is complete. However, by engaging in the aftermarket, we expand touchpoints, stabilizing revenue through repair parts and services and gathering feedback to refine products. This is what we have termed “lifecycle business,” an area we will continue to emphasize. Furthermore, we believe that by introducing a broader value chain orientation, our field of view, areas of activity, and target markets will be further expanded. This offers each employee the opportunity to reexamine their role and potential, which is significant in that it can help them sharpen their skills and advance their careers.

Morita: Speaking in terms of career development, emphasis has traditionally been on what we have called “I-shaped talent,” who cultivate expertise in a

specific field, or “T-shaped talent,” who have insights across multiple disciplines. However, recent years have revealed a need for evolution toward “π (pi)-shaped talent,” who specialize in multiple fields. Creating a value chain requires such a broader perspective and knowledge than before, no one person can handle this alone. We need talent with varying expertise and value systems, and diverse collaboration across disciplines, nationalities, languages, and backgrounds is essential. Building these collaborative skills is as important as technical proficiency.

— Is this why IHI places such emphasis on diversity, equity & inclusion (DE&I)?

Morita: Exactly. To extend the value chain, welcoming diversity is not enough—it must be actively integrated. Generally, diverse teams are shown to achieve better results, though aligning varied viewpoints can be difficult. It is our job as management to harness this diversity and drive collective performance.

Kobayashi: Value chains are rarely confined to a single country. In our work as a unified Group to develop a value chain, it is essential to go beyond internal DE&I promotion and understand the

energy policies and cultural contexts of each country and region, broadening our field of view. Doing so will broaden employee perspectives and deepen their insight. In this sense, I feel the value chain perspective is deeply meaningful.

Key issues in value chain creation: Cultivating talent and deepening external collaboration

— What are the key challenges you face in building value chains?

Morita: From my perspective, the greatest challenge at present is the issue of human capital. IHI Group engineers are often introverted and tend to be self-reliant. This can be seen as the downside of our 170-year history of technical mastery, where we have always had the spirit of catching and overtaking our rivals. However, this has also fostered a preference for working within one’s area of expertise. Building a value chain requires collaboration across domains. To do this, in addition to internal human capital development, we must be open to external talent and foster systems and environments that welcome diverse contributors.

Kobayashi: As Mr. Morita said, value chain creation cannot be done by a single company, but instead depends on external



partnerships. Collaboration agreements, joint ventures, and other forms of collaboration can take many forms, but in each case, working with others involves certain difficulties. Though there are situations where we feel it would be more efficient to complete the work solely internally, we recognize that daring to overcome these situations is an important challenge for the future.

— What is your view on participating in top ecosystems of leading businesses and research institutions?

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Ide: We are already working to take part in top ecosystems and will expand those efforts. Gaining entry is not difficult with strong name recognition and technological credentials, but being seen as a truly valuable partner requires commitment. Therefore, we believe that it is very important to have the kind of conviction and preparedness that we bring to the table.

Morita: In these situations, a give-and-take attitude is naturally required. To be recognized as a true partner, we must offer valuable insights and expertise, not just receive them. This demands broad technical capability and cutting-edge technologies in focused areas. This is a very high hurdle, but we see it as a challenge worth overcoming.

Collective job satisfaction as a driver of sustainable societal and corporate development

— For some time, the IHI Group has been working to build value chains around elements such as fuel ammonia. What kind of response have you seen so far?

Ide: We recognize that the creation of a value chain for fuel ammonia is still in the development stages. In recent years, talk of a “hydrogen and ammonia society” has become common, but ammonia was still mostly at the laboratory level until recently. Reaching the demonstration stage and commencing commercialization in fiscal 2024 was a major achievement for us. At the same time, we feel a strong sense of responsibility and pressure to ensure that we meet rising expectations for ourselves.

— How is the progress in building value chains in areas other than fuel ammonia?

Ide: In the nuclear energy area, a certain value chain and industry structure already exists. However, since the Great East Japan Earthquake in 2011, the way things are done in Japan has changed dramatically, and there is a need to restructure the existing value chain. Meanwhile, overseas markets are increasingly reassessing nuclear power. We are identifying vulnerabilities and shortcomings in the current chain, particularly in Japan, and examining how

IHI Group technological strengths can complement these. Similarly, in the aero engine and space sectors, the challenge is to review and redesign existing value chains. The key is not to wait for direction from outside, but to proactively determine what value the IHI Group can offer to society and propose it. I am convinced that such an active approach is the key to building a true value chain.

— What is the direction you should aim for in the medium to long term in order to create value chains in the future?

Kobayashi: The IHI Group’s businesses contribute to the construction and safety of infrastructure on a global scale. Through the value chains we build, we aim to support better social infrastructure across a range of fields, including energy, transportation, and space. Our goal is to continue to be a source of such social value.

Morita: In a world of increasing threats to safety and stability on a global scale, we must continuously ask how to improve lives. The IHI Group has long supported public safety through its businesses, and this sense of mission is deeply ingrained

in our employees. Internal surveys reflect strong alignment with our Management Philosophy, which is very encouraging. We will continue to foster that sense of mission and conduct business that inspires confidence in the future.

Ide: The two pillars of the IHI Group’s Management Philosophy, “Contribute to the development of society through technology” and “Human resources are our single most valuable asset,” are closely related. In fact, nearly all employees cite a desire to address social issues as a motivation for joining us. This aspiration drives our value chain creation efforts. I am convinced that the IHI Group’s reason for being is to discover the factors that impede the development of society and to solve them with the power of technology. We will continue to value the growth and job satisfaction of each and every employee, while building an organization and culture that can bring them together to achieve sustainable development of society and the Group.