

Value Flow, Over Time



Kajima's two core business segments are construction and real estate development. In the latter, Kajima serves as both project developer and contractor. In both segments, the Kajima Group is strengthening and geographically expanding its businesses over the medium to long-term in fields where it can leverage the overall construction value chain. Kajima is pursuing sustainable growth as a creative corporate group. In an original value creation process, the Group seeks to provide more advanced, more diverse services while enhancing the international competitiveness of its core businesses.

Kajima Group Value Creation

Kajima first gained a strong reputation for its railway and civil engineering projects. Later, entering new fields, Kajima became known for skyscrapers and nuclear power plants. Kajima aims to keep making history by expanding the complexity of its projects and diversifying its core businesses. Since technology and human resources are important sources of value creation, Kajima is actively developing these two assets. The goal is to further advance the Group by providing comprehensive solutions in business fields related to buildings.

Developing Technologies with an Enterprising Spirit

Kajima has a long history of involvement in pioneering projects, realized through research and technology development and driven by a constant enterprising spirit. The Company is adapting to the times and meeting the needs of society by evolving into new business areas. It is pursuing technology development based on the social issues it has targeted and on its strategic initiatives for the future.

Making the Most of Human Assets

Kajima views its employees as essential assets and key stakeholders. The Kajima Group strives to help each employee to reach his or her full potential, and respects diversity across gender, nationality, religion and disability, as well as recognizing variety in work styles based on parenting and caregiving obligations. Kajima has group companies across the globe including in the Americas, Asia, Oceania, and Europe, where employees of diverse nationalities conduct businesses with deep roots in the local community.

Pursuing Sustainable Growth for Kajima

With its Medium-Term Business Plan, Kajima has plotted a course through fiscal 2020. The plan outlines how the Company intends to respond to changes in the Japanese construction market, such as a shrinking population, limited public spending, and a shift from new construction demand to maintenance, repair, and renovation. In order to ensure sustainable growth even after fiscal 2020, Kajima is working hard to further reinforce its business platform. The Company will work to develop a balanced business that can quickly respond to changes in the market and society, by strengthening the competitiveness of its core business segment, construction.

Automated Autonomous Advanced Accelerated Construction System for Safety, Efficiency, and Liability (A⁴CSEL[®])

Unlike conventional remote control operation of construction machinery, these systems enable a single person with a tablet device to issue operating instructions to multiple pieces of machinery, which are then carried out autonomously.



Strengthening Construction Business Competitiveness

There are serious concerns facing the construction industry in Japan, including the aging of skilled workers and an impending shortage of workers due to the mass retirement of the baby boom generation. Consequently, the industry is working to secure the workforce of the future by hiring more young people and ensuring skill transfers. Departing from the conventional image of a labor intensive industry, construction companies must develop technologies and employ construction systems that require fewer skilled workers, while still securing enough workers.

Kajima is making a range of efforts to make its construction business even more competitive. These include improving work efficiency through mechanization and automated construction, reducing onsite work by using precast materials and employing the unitization method, and promoting more construction innovation using IoT and AI technologies.

Successful Automation of Basic Road Bed Construction

- Dirt Transport, Unloading, Laying/Leveling, and Compacting



General-purpose dump truck equipped with a control computer and GNSS device



Networked bulldozer employing automation technology



General-purpose vibrating roller equipped with a control computer and automatic steering

Automated Construction Initiatives

Kajima's civil engineering department thinks outside the box when developing technologies, aiming to improve productivity, streamline construction, and ensure safety. One technology it created this way is the next-generation construction system, A⁴CSEL[®] (pronounced "quad axel"). By equipping general-purpose construction machinery with control computers and positioning devices, the new system allows one person to operate multiple pieces of heavy machinery at the same time.

Kajima is reforming the way work is done at construction sites by standardizing and improving the efficiency of on-site management utilizing common ICT tools. One such initiative involves a construction method that employs portable general-purpose welding robots to weld steel columns and beams. After a successful pilot, the new technology was implemented at two sites, and the subsequent inspection confirmed that the work done was equivalent to that of a skilled welder.



Welders need to be highly skilled, and a shortage is expected in the future due to stringent qualification standards. In order to train operators for these portable welding robots, a welding business division was established at a group company, Kajima Kress Corporation. By training operators for the near future, Kajima is preparing for the anticipated shortage of skilled welders, while standardizing operation skills and improving quality.

Developing Multi-Skilled Workers

Typically, interior work and facility construction are carried out by a combination of differently skilled workers assigned to different tasks. If a single-skilled worker could be trained to handle multiple tasks, however, it would reduce time between operations and improve efficiency. With this goal in mind, Kajima established Kajima Fit Co., Ltd., and Clima Works Co., Ltd. to do interior work and facility construction, respectively, by developing multi-skilled workers. The goal is to get work done at construction sites with fewer workers and less standby time between tasks. Going forward, Kajima plans to pursue other innovations, including new construction methods and technology development, and put them to use at construction sites in Tokyo.



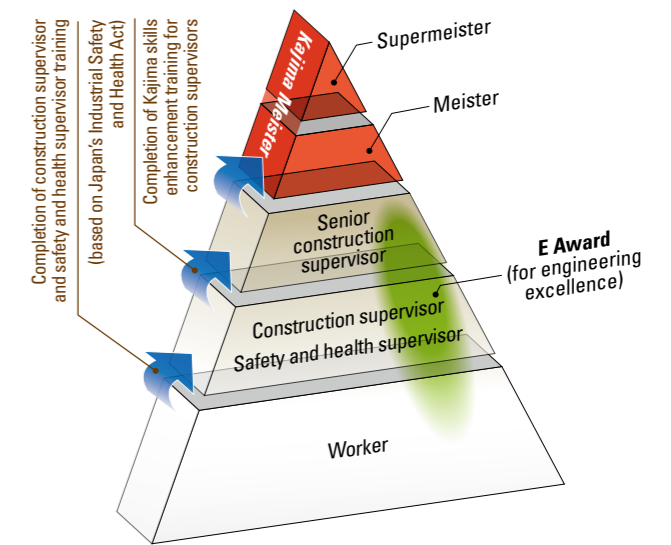
Securing a Future Workforce

Securing next-generation workers to ensure adequate human resources for construction sites is an urgent issue, for both Kajima and its subcontractors. Promoting labor saving and efficiency in construction, while fundamentally reviewing the construction site operation model and actively recruiting new workers, will lead to improvement of construction competitiveness at each company. Since fiscal 2014, Kajima has been strengthening its efforts to recruit, develop, and support human resources, in collaboration with the Kajima Business Partners' Association, an organization of partner companies.

The association has obtained a government permit to provide free employment placement services, and it supports recruitment of engineers and skilled workers at each member company. As part of this effort, the association is working to deepen public understanding of the construction industry, for instance by maintaining a recruitment information website for young people and producing recruitment pamphlets and DVDs for each job category.

The Kajima Meister System was launched in fiscal 2015 in an effort to secure outstanding technicians and supervisors who, though employed by key subcontractors, work

at Kajima construction sites. Once registered as meisters, these highly skilled workers are paid a direct financial incentive based on the number of days they work at Kajima sites. Kajima has been expanding the program by increasing the financial incentives in 2016 and 2017 and taking other measures, aiming to ensure that key supervisors stay on at the Company's sites for the long term.



Reinforcing the Business Platform

The Kajima Group recognizes that the key to sustainable growth is reinforcing its business platform. This is why the Group will look to further strengthen the environmental, social responsibility, and governance (ESG) performance of its priority business areas as it formulates its next medium-term business plan. One of the biggest challenges, however, is work-style reform. The Group has already taken steps to improve work-life balance for employees and create supportive workplace environments. Now the expanded focus is to improve the environment for all those working at Kajima construction sites. The Group will also reinforce its business platform by developing human resources ready to lead the way in future business development, while creating new technologies under unprecedented development themes.

Promoting Kajima Work-Style Reform

In April 2017, the Group began considering what it could do to make the work site and work environment more attractive for employees of both Kajima and its partner companies. Not only securing days off at Kajima work sites for employees, a similar working environment has also been established for subcontractor workers. With the aim of maintaining incomes at the same or higher levels, many issues such as Japan's stratified subcontracting structure and wage systems must be addressed industry-wide. Resolving these issues means improving both the construction process and the production system model. If the construction industry can transform itself so that its work environments are truly attractive, it will become a career choice for the next generation of young workers. Work-style reform and securing enough workers are inseparable issues.

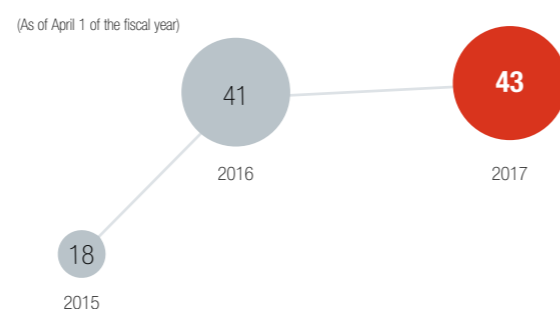
As a result of various effective initiatives to promote diversity management and enhance work-life balance, in March 2017 Kajima was included in the Diversity Management Selection 100 list. This recognition is given by Japan's Ministry of Economy, Trade and Industry to companies that have improved their corporate value by practicing diversity management. Kajima will continue to create supportive workplaces for all of its employees in order to foster environments where everyone can realize their potential and succeed.

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Diversity Initiatives

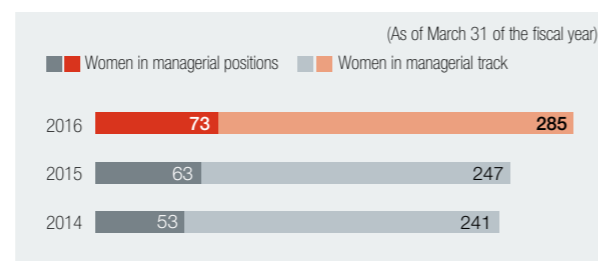
Kajima aims to double the numbers of its female engineers and managers by 2019, and then triple the numbers by 2024, both compared to 2014. Through the Kajima Corporation First Action Plan Based on Japan's Act to Promote Women in the Workplace, the goal is to hire at least 20% women in managerial track recruitment, and to double the number of women in managerial positions.

Numbers of Women among New Graduate Hires



On April 1, 2017, 43 out of 207 (20.8%) newly hired employees at Kajima Corporation were female.

Number of Women in Managerial Positions



Work-Life Balance

Kajima believes that helping employees to practice work-life balance raises motivation and improves overall productivity. Kajima aims to foster work-life balance that allows both women and men to work with peace of mind, while fulfilling personal responsibilities such as parenting or caregiving for a family member. The Company is working to enhance workplace environments and programs to enable employees with family responsibilities to succeed. To support work-life balance, Kajima is enhancing its initiatives in areas such as supporting volunteer work, expanding provisions for parenting and caregiving, encouraging employees to take vacations, and recommending no overtime work on designated days. Kajima also supports work choices by enabling parents to work shorter hours or take advantage of flexible scheduling and enabling caregivers to take leave for up to one year.

Parenting is the job of both spouses, and men are increasingly taking advantage of parenting provisions for shorter hours and flexible scheduling to get more involved

in raising their children. Starting in January 2017, extended parenting leave of up to 20 days can be taken with pay. Kajima is establishing supportive systems that help employees handle changes in their home environments, such as those relating to child rearing or home care for a family member. By doing so, the Company seeks to make its workplaces even more dynamic.



Training before and after childbirth leave

Human Resources Data (Non-consolidated)

(As of March 31 of the fiscal year)

(Fiscal Year)	2014	2015	2016
(No. of Persons)			
Employees	7,546	7,527	7,611
Re-employed personnel	908	921	1,102
Employees with disabilities (%)	2.25	2.19	2.11
Turnover rate (%)	3.7	3.7	3.0
Child birth/parenting			
Employees taking extended parenting leave	28	34	39
Employees taking leave for spouse's childbirth	100	115	112
Employees taking leave for caregiving	96	86	93
Male employees taking shortened work hours	23	33	41
Caregiving			
Employees taking extended caregiving leave	1	0	0
Employees taking caregiving leave	24	22	22
Employees using leave system for volunteering	10	12	17
Employees taking paid leave (%)	42.5	39.6	49.5

Helping to Build a Sustainable Society

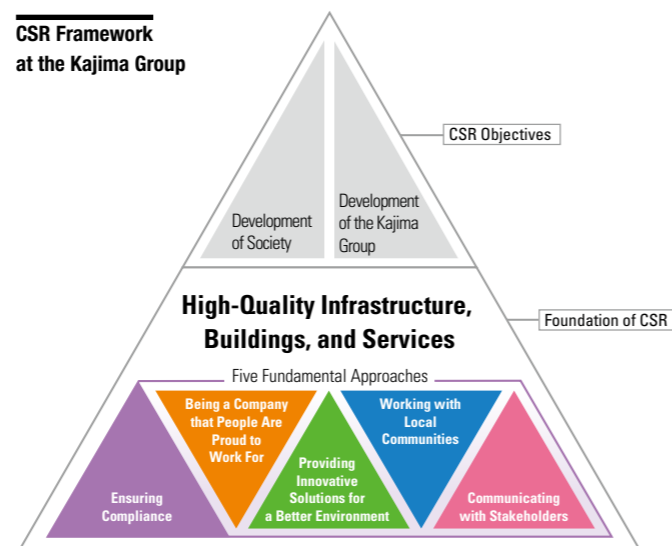
The buildings that Kajima constructs need to be used by successive generations. This is why the Kajima Group has a responsibility to fully consider not only the processes up until completion, but also the subsequent needs for medium- and long-term building maintenance and management. The Group's mission is to provide added value for society as a whole. Meeting the needs of society and its customers, while helping to build a sustainable society, also supports the sustainable growth of the Kajima Group.

Corporate Social Responsibility (CSR)

Kajima's management philosophy is to contribute to society by advancing its business operations. This means pursuing business activities that create value by continuing to provide high-quality infrastructure, buildings and services, thereby increasing added value for society as a result. Based on its CSR Framework, the Kajima Group is fulfilling its social responsibility to help build a society that is ever more safe, secure and comfortable.

Kajima Group activities at both offices and construction sites significantly impact local communities. As a member of the communities in which it operates, Kajima participates in local activities as an important way to communicate with other members of the community. In recent years, many natural disasters such as earthquakes and floods have occurred in Japan, causing upheaval in people's lives. As a technology-driven company, it is also a great responsibility for Kajima to engage in disaster prevention and mitigation. While fulfilling social responsibilities through its business, Kajima works to address social problems by engaging in disaster recovery, community support, environmental conservation, and education for the next generation. All this is done while making full use of Kajima's strengths and knowledge, including its technologies, human resources, business sites, and networks.

CSR Framework at the Kajima Group



Building a Sustainable Society where Economic Growth and Environmental Stewardship Are Compatible

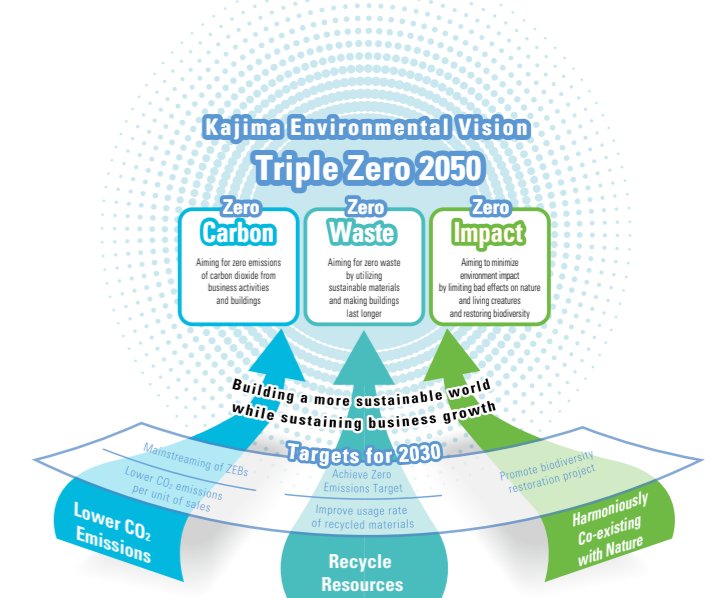
The construction industry has a substantial impact on the future by creating social infrastructure. As the company "Building for the Next 100 Years," Kajima strives to lead the way in the effort to build a more sustainable society. It is reducing the environmental impact of its own business activities, while working to make the social infrastructure it provides more environmentally friendly.

Kajima Environmental Vision "Triple Zero 2050"

Environmental conservation and environmental creativity are essential at every stage of a construction project, from planning to the actual work.

With this recognition, the Kajima Environmental Vision, "Triple Zero 2050," was implemented in 2013, aiming to help create a sustainable society. The vision aims for both environmental and business sustainability, focusing on three essential activities: reducing carbon emissions, recycling resources, and co-existing harmoniously with

nature. It calls for achieving zero carbon emissions, zero waste, and zero environmental impact from operations by 2050. Kajima is striving to achieve Triple Zero 2050 in two main ways: by reducing the environmental impact of its own business activities, and by proposing new environmental technologies to clients and society. Kajima has also identified the core activities needed and set interim quantitative targets for 2030.



Triple Zero 2050

	Social goals	Triple Zero 2050	Targets for 2030	Common Foundation Initiative Areas
Building a More Sustainable Society	Lower CO₂ Emissions Balancing greenhouse gas emissions from human activities with the Earth's capacity for CO ₂ absorption	Zero Carbon Aiming for zero emissions of CO ₂ and other greenhouse gases, not only from the Company's business activities, but also from the buildings it constructs	Design Operations Realize zero-energy buildings (ZEBs) by 2020, standardize ZEB techniques by 2025, and promote their mainstreaming by 2030. Construction Operations Lower CO ₂ emissions per unit of sales to 35% ¹ of 1990 level	<ul style="list-style-type: none"> • Management of hazardous substances: Ensure preventative measures (especially for soil contamination and asbestos) and proper management of chemical substances • Perform research and technology development • Actively distribute information in and outside the Company
	Recycle Resources Pursuing zero emissions by employing state-of-the-art infrastructure maintained and operated using sustainable resources	Zero Waste Aiming to eliminate waste from construction operations by ensuring zero landfill disposal of waste during construction, utilizing sustainable materials, and making buildings last longer	<ul style="list-style-type: none"> • Completely eliminate final landfill waste disposed from construction operations • Achieve a usage rate of recycled materials of at least 60% for principal construction materials.² 	
	Harmoniously Co-exist with Nature Valuing the continuous benefits of ecosystem services by minimizing the impact of human activities on the environment and living creatures	Zero Impact Aiming to minimize the overall environmental impact of construction operations by limiting their effect on nature and living creatures while promoting the restoration of biodiversity and new ways to make use of its benefits	<ul style="list-style-type: none"> • Promote biodiversity restoration projects • Build up effective projects and make them hubs for biodiversity-related networking 	

1. Equivalent to a 65% reduction of total emissions.

2. Principal construction materials are steel, cement, concrete, crushed stone, and asphalt.

Aiming for Buildings with Good Environmental Performance

Kajima's real estate development involves the planning, design, and construction of buildings based on various themes, including its own corporate buildings. Akasaka K-Tower, a skyscraper office building completed in 2012, was designed to reduce CO2 emissions by 40% during the use phase. In addition to an out-frame structure that helps shade the windows, it features state-of-the-art energy conservation and CO2 reduction technologies, including environmental air conditioning, heating, and lighting control. Moreover, energy-saving briefings are held to encourage building tenants to further reduce CO2 emissions. The aim is to leverage both hardware and human initiatives to minimize the environmental impact of the building while keeping the office space comfortable. The building was certified as a "top-level workplace" under the fiscal 2016 Cap-and-Trade Program of the Tokyo Metropolitan Government.

Akasaka
K-Tower +



Completed in 2016, the KT Building includes new energy-saving control technologies. Cost rationalization measures were incorporated from the design phase, along with various labor-saving methods in the construction phase. As a result, Kajima achieved the 54% energy conservation level under the new standards of the Building-Housing Energy-efficiency Labeling System (BELS). The KT Building is also the first office building in Japan to be designated as ZEB Ready—a high-tech building that shows the way to a zero energy building (ZEB). Kajima aims to complete its first ZEB in 2020. Using its own real estate, the Company will prepare a selection of environmental initiatives for each phase—planning, design, construction and use of buildings—as it steadily moves to realize a world of ZEBs.

In addition to thorough energy conservation in individual buildings, Kajima is also focusing on environmental initiatives that encompass multiple buildings and the planning of entire communities. The Company is pursuing higher sustainability via new technology development and alliances with companies in different industries.

+ KT Building

Under the 2014 Comprehensive Assessment System for Built Environment Efficiency (CASBEE) for new construction, Kajima attained a score of 8.1. This was the highest score for built environment efficiency (BEE) in Japan, among class S (excellent) buildings that maintain their certification.



Sheep keep the weeds down in a blueberry patch

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Taking on Challenges via Community and Industry Networks

Currently Kajima is participating in a hydrogen supply chain demonstration project in Hokkaido with Air Water Inc. and other companies. The Shikaoi Hydrogen Farm is a hydrogen production and supply facility that makes hydrogen from livestock biomass. By employing a previously unutilized local renewable energy source, the project, supported by Japan's Ministry of the Environment, aims to show the feasibility of building a complete hydrogen energy supply chain, from production to storage, transport, supply and consumption. Biogas is first produced from livestock manure using anaerobic digester tanks. The Shikaoi Hydrogen Farm receives this biogas and uses it to produce hydrogen onsite. The hydrogen is then used as the energy source for pure hydrogen fuel cells, or delivered to farmers and nearby facilities in racks of cylindrical tanks, where it is used to produce hot water or electricity.

Kajima will build on its experience with this project to study more ways it can help build a society where locally produced hydrogen can meet local energy needs.

In cooperation with Komae City in Tokyo, Kajima engaged in community-supported agricultural initiatives in the city in 2015 and 2016. The initiatives were supported by Japan's Ministry of Land, Infrastructure, Transport and Tourism, and enjoyed the involvement of local elementary schools, restaurants, and administrative offices. In addition to using sheep to control weeds, earthworm composting, and *hiratake* mushroom cultivation using waste coffee grounds, citizens grow "green curtains" of hops that shade windows in summer. The hops are later harvested and used to brew local beer. These and other initiatives are promoting community-based agriculture and developing a recycling-oriented city.

By helping to build a sustainable society and enhancing collaboration with local communities, Kajima aims to develop signature initiatives that reflect the perspectives of both the construction industry and urban planners.



Dialogue

ENVISIONING KAJIMA'S FUTURE

Yoshikazu Oshimi

President and
Representative Director

Masahiro Sakane

Outside Director

Two years have passed since Kajima appointed three outside directors in June 2015. Outside Director Masahiro Sakane sat down with President Yoshikazu Oshimi to talk about the current situation and issues faced by Kajima and the future vision for the Company.

Looking Back over the Last Two Years

Oshimi: You have been with us as an outside director for more than two years now. What are your frank thoughts?

Sakane: As you know, I have been with Komatsu Ltd. for many years. Komatsu appointed its first outside directors about 20 years ago, and today I am serving as an outside director for five different companies. The last two years have given me the opportunity to provide candid input as one of Kajima's first outside directors. From my experience at Komatsu, outside directors can provide valuable input, by noticing things from an outside perspective and sometimes broaching topics that are difficult to discuss.

Oshimi: In addition to attending the Board of Directors meetings, we ask our outside directors to give talks for senior management. This has given senior management cause to re-examine things and, personally, it has given me a lot to think about.

Sakane: The business results for Kajima and the rest of the construction industry have improved considerably, compared with how things were when I was first appointed. It is surprising how rapidly the situation has changed, and I think we must understand the factors that triggered such rapid changes. Without examining the underlying factors, Kajima's business results could decline or it could miss out on major opportunities.

Oshimi: The period directly before I was appointed president was very tough for Kajima. When I was General Manager of the Building Construction Management Division and GM of the Kansai Branch, we had a very clear picture of what the issues were at the time. To prevent the issues from arising again, we changed how we produce estimates, realizing that we needed to reexamine our cost estimating system.

Sakane: Markets are rooted in supply and demand issues. Labor costs are up today due to a shortage of skilled workers. The risk of higher labor costs could negatively affect Kajima's business results. I believe you did a good job of controlling this risk, as reflected in the Company's earnings. On the other hand, I do think that Kajima is overly customer-oriented. As a publicly-traded corporation, Kajima needs to be more sensitive to its shareholders and stock prices.

Oshimi: What kind of changes have you noticed over the last two years?

Sakane: When I was first appointed, I felt that there was an over-emphasis on Kajima Corporation as opposed to the Kajima Group. The emphasis has gradually shifted toward the Kajima Group, which

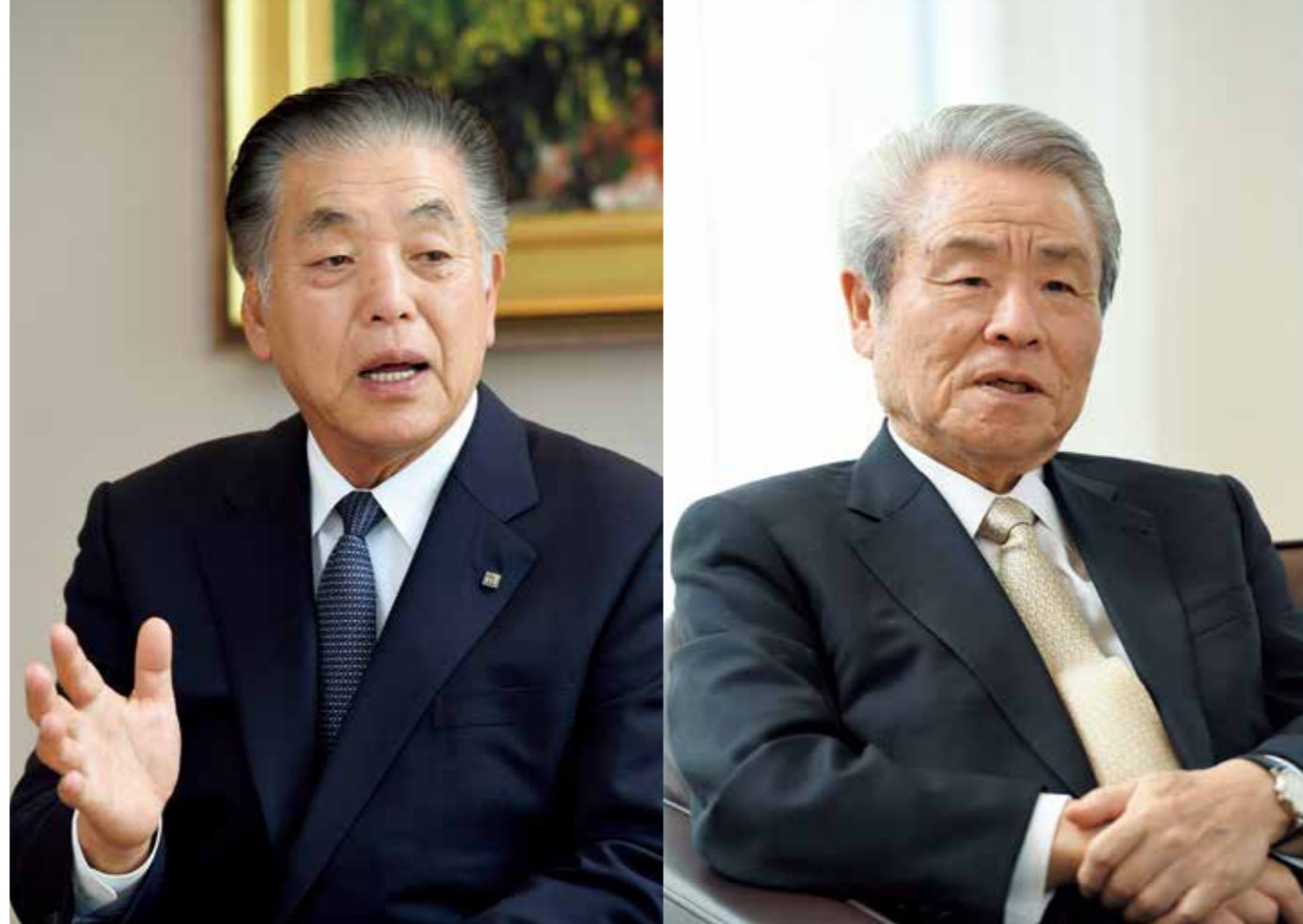
I presume has been driven by the growth of the real estate development business outside of Japan. This is a good sign, as I have been urging the Company to think of itself more as a corporate group.

Oshimi: Do you have any thoughts on how we conduct our board meetings?

Sakane: I always request two things from the companies for which I serve as an outside director. First, I ask that the president give a status report at the start of the board meetings, particularly including any bad news. Secondly, I ask that the board meetings be focused on discussion. The decision-making process at a company involves reporting followed by discussion and decision-making. As a result, the board meetings tend to be too focused on operational decisions.

Kajima has a solid branch management structure in place, but the top-down decision-making needs to be separated from the operational decision-making. Board meetings should of course include strategic discussions, such as where to concentrate management resources and overseas investment. Meanwhile, the Kajima Board needs to enhance focus on pressing issues such as work-style reform and the Company's relationship with its subcontractors. It is important for the Board to discuss these matters at the planning stages.

Oshimi: You have given us your input on the multi-layered structure of the partnering subcontractors that characterizes the construction industry. The Board has been discussing ways of promoting work-style reform at Kajima, but I think true change will only occur if we



By achieving work-style reform at Kajima, we can make our construction sites more appealing.

OSHIMI

can foster similar work-style reform at our subcontractors, so that everyone involved shares Kajima's vision for its construction sites.

Sakane: That is a crucial point. The Board needs to keep discussing this point, which represents a chance to differentiate Kajima from other general contractors. Outsourcing to subcontractors also happens in the automotive industry and other industries, although it is most embraced by the construction industry. While the stratified subcontracting structure may have worked for the construction industry until

now, I don't think it will continue to work much longer. Kajima gained experience and expertise from directly tackling every phase of construction in the old days, which gave it the tools to manage subcontracting. However, times have changed and subcontracting practices are increasingly a limiting factor. Now is the time for Kajima to show leadership by examining its vision for itself as a general contractor, which includes the issue of work-style reform.

Oshimi: Right. The conditions that the customer imposes on the

contractor can be completely different depending on the construction site. Furthermore, skilled workers can be employed under various conditions. If we close a work site to give the workers a break, oftentimes the workers will instead go work at a different work site rather than getting any rest. We asked ourselves what Kajima could do to address the situation. Firstly, we asked our project managers to study and identify the issues, and then to engage our subcontractors in frank discussions to find suitable solutions for each work site. We need to explore issues such as balancing rest and maintaining income as well as eliminate idle time between projects and have procuring departments follow up to secure ongoing work. We have to formulate a vision for all active construction sites. By achieving work-style reform at Kajima, we can make our construction sites more appealing so that we can secure the next generation of workers.

Sakane: It will take more than just Kajima acting alone to move away from the current subcontracting structure. Kajima's relationships with subcontractors will play a crucial role. Komatsu also places a great deal of emphasis on its ties with subcontractors. Raising the level of mutual trust between Kajima and its partner companies will also give the Company a competitive edge in the industry.

Oshimi: We are pursuing a number of initiatives with the Kajima Business Partners' Association to further solidify our competitive edge, such as establishing the E Award system and Meister System. Issues such as social insurance and human resources development are all connected, and we will focus on these in the next medium-term business plan. We must seize the opportunity now and pool our mutual knowledge to tackle these new initiatives. Kajima can also cause a ripple effect through its horizontal ties.

Setting the Stage for Future Growth

Oshimi: You have consistently talked about *dantotsu* (unique and unrivaled) management and the importance of collaborating with good partners, in striving to be far and away the best.

Sakane: There are three common practices and issues facing Japanese society: attempting to please everyone, aiming for the average, and trying to do everything in-house. Major corporations in particular have a tendency to try to do everything in-house, and there is a tendency to try to please everyone with technology. Striving to be far and away the best runs counter to the style of companies that have always done everything possible in-house. This is where it is vital for senior management to have a vision that the company can aspire to. In the process, they must clearly identify the areas where the company excels, and externally procure in areas where they are not as strong. Technology innovations such as the Internet of Things are constantly evolving, and the platform for building a unique and unrivaled business will become evident.

Oshimi: Companies are finding that the level of their construction technologies is equal in some areas. While Kajima is strong in structural and anti-seismic engineering, we can seize the future if we can take the next step forward. How can Kajima position itself to find breakthroughs that further enhance our capabilities? This will not be easy to accomplish, but will you give us some suggestions?

Sakane: Kajima has the next-generation Automated Autonomous Advanced Accelerated Construction System for Safety, Efficiency, and Liability (A⁴CSEL[®]) system, which it is now using for a dam construction project. Komatsu also launched its Smart Construction system about two years ago, which, I think,

will change things dramatically. Currently, the Smart Construction system stores three-dimensional data from around 3,000 construction sites across Japan in the cloud. As new projects arise, the collected data is being used to derive optimal solutions for construction planning, using artificial intelligence. The people who run the Smart Construction system are production technology experts who know how to achieve plant efficiency. They are very concerned about the setup wait times that occur in civil engineering projects, which means that there is a lot of room for improvement and application. Smart Construction uses images and 3D data for visualization of the construction site, realizing autonomous operation of construction machinery by using deep learning to leverage big data.

Oshimi: I believe that automated operations and automated construction technologies will rapidly expand in the future, after seeing how the systems are being used in civil engineering projects. Once they have been successfully used the first time, they will generate more ideas and push the technology forward. We can get our employees to generate more ideas about the direction we are heading. There are also areas, however, where we will look outside Kajima for collaboration.

Sakane: In the process, Kajima needs to look internationally as well as in Japan, to find solutions that are far and away the

best. Komatsu has declared that it wants to become far and away the best in environmental, safety, and information and communication technologies (ICT). I think Kajima and Komatsu share some common ground in that respect.

Oshimi: If we look at the environment, for example, when Kajima receives a project, we usually don't have an accurate grasp of how much energy will be used at the construction site. This means that we won't even be able to tell how much energy we have been able to conserve in the construction process. That is an area where we plan to make significant improvements, this fiscal year.

Sakane: In that case, one solution would be to advance initiatives to comprehensively visualize the environment at construction sites. Visualizing helps people to generate ideas about what to do. For example, Komatsu set a target of reducing electricity consumption by 50% at its plants in Japan. Through comprehensive data visualization, Komatsu was able to reduce its electricity consumption by 90% at a new assembly plant at the Komatsu Awazu Plant in Ishikawa Prefecture. This included realizing a 20% improvement in productivity.

Oshimi: Kajima is visualizing energy data in our construction business, as a way to identify areas where we need to conserve energy. This will affect everything from the way that we collect data to re-examining how we should be working.

Kajima has to identify the areas where it is most accomplished in-house and the areas where it can leverage external resources, to secure further differentiation.

SAKANE

Next Medium-Term Management Plan

Oshimi: Fiscal 2017 is the last year of the current medium-term management plan. In developing the next medium-term management plan, it will be a major challenge to extend the plan's vision to cover a slightly longer time frame. In addition to improving productivity and pursuing work-style reform, we will also endeavor to enhance our environmental, social and governance (ESG) initiatives and work to change our education and training systems.

Sakane: The crucial thing is to decide what kind of differentiation strategy to take. As I mentioned, a business model that is driven by subcontracting practices has its limitations, considering the labor market in Japan. This represents a major risk. Kajima has to identify the areas where it is most accomplished in-house and the areas where it can leverage external resources, to secure further differentiation. For example, Kajima can secure differentiation by creating value with the customer. Since the customer can only judge the value of a building after using it for a long time, it is hard for the customer to evaluate the construction company right after completion. That is where Kajima can secure differentiation by identifying something that the customer can appreciate right away when the building is first used. Of course, Kajima also needs to consider overseas investments, in addition to investments in Japan.

Oshimi: We will keep expanding our overseas operations and re-examine the things that we need to review. For the civil engineering business in particular, we need to create value in order to expand the business internationally, which requires taking a strategic approach.

Sakane: It's a difficult task, but Kajima must leverage its diverse international experience to nurture budding opportunities while

engaging in risk management. Corporate management is about leveraging limited management resources (human, financial, and tangible resources) to increase value for customers and generate greater returns. These returns are redistributed to employees, partner companies, shareholders, and society, as part of a continuous cycle of value recycling. By earning solid profits and distributing them,

Kajima can meet the expectations of more stakeholders, to increase its corporate value. There is still plenty of room for Kajima to grow as a corporate group, and I look forward to its future.

Oshimi: I appreciate your experience and look forward to your continued input. Thank you for this conversation today.

