

## Message from Top Management

Striving to evolve over the long-term as a leader in the environment and energy by harnessing both our technologies and relationships of trust with customers

Hiroaki Nanjo  
President and CEO

## Proprietary technological capabilities and relationships of trust with customers built with sincerity

### The Group's Management Principles

Takuma was founded by Tsunekichi Takuma, who invented boilers using solely Japanese technology and is known as one of the top ten inventors in Japan during the Meiji and Taisho periods (1868 to 1926). While we started as a boiler manufacturer, we moved into the environmental field in 1963 by leveraging our combustion and engineering technology cultivated through boiler modification and improvement, delivering Japan's first fully continuous mechanical waste incineration plant. Today, we have grown into a corporate group whose main business is plant engineering centered on the environment and energy fields, including waste treatment facilities, energy plants, and water treatment facilities.

Our Management Principles, which are based on the philosophy of "Serve society through boiler manufacturing" put forth by founder Tsunekichi Takuma, state, "Takuma will strive for social contribution, corporate value enhancement, long-term corporate development and the satisfaction of all stakeholders by providing goods and services that are needed and recognized as valuable in society." In short, we have embraced a commitment to contributing to our customers and society through our goods and services.

### The Group's strengths

With this history, we have two major strengths: our technological capabilities and our relationships of trust with customers. Our technological capabilities encompass proprietary core technology based on our founding business in boiler research and manufacturing such as combustion technology that stably utilizes diverse fuels and heat recovery technology that effectively utilizes thermal energy generated. They also include various technologies derived

from boilers. For example, starting with boiler installation, EPC for numerous municipal solid waste treatment plants and biomass plants, followed by plant construction, resulting in plant engineering technology that offers custom-made plants based on a wealth of experience and know-how. Today, we continue to hone our capabilities through business operations and research and development.

Another major strength is that we have built strong relationships with our customers through our earnest approach in our business, which consists of two main categories: EPC business and after-sales services business that provides services after plants are delivered. The EPC business involves multiple processes, from design to production, procurement, construction and test operations to bring a plant to completion. The after-sales services business provides continuous services related to operational management and maintenance for the long-term operation of plants upon completion. There are various issues to be addressed before a plant is completed. We address each one by one through continuous dialogue with the customer, and ultimately over several years build a plant that meets the specifications and performance required. In addition, in the after-sales services business, we continue to respond promptly and sincerely to issues and troubles that arise during the day-to-day operations of our customers. Relationships are cultivated through these efforts, which also lead to new jobs from the customers.

I believe that this approach taken by the Group and its corporate culture of honing our technological capabilities and valuing relationships with our customers is something we should continue to pass on.

## Achieving Vision 2030 with recurring revenue model businesses as growth drivers

As for the future environment surrounding the Group, we anticipate demand for measures against labor shortages due to population decline in Japan, consolidation of aging facilities and the effective use of existing facilities. Additionally, demand for energy and waste treatment is expected to increase in emerging countries overseas driven by urbanization. In 2021, we established Vision 2030, which sets forth a long-term vision for the Group as it should exist in 2030 based on these environmental changes. The Vision reads: "Aim to maintain our role of being an indispensable presence in society as a leading company in the field of renewable energy utilization and environmental protection by realizing

sustained growth alongside our customers and society through implementation of ESG management." In addition, it sets forth a goal for ordinary profit of JPY 20.0 billion in FY2030. In addition to further expanding recurring revenue model businesses as growth drivers, we will mainly focus on maintaining and expanding our position in the EPC business, which will increase the number of facilities we delivered that are in operation, and developing the Overseas Business as one of the Group's pillars for the future. In implementing ESG management, we will identify the Group's materiality and address these issues through our business activities.



## Recurring revenue model businesses as growth drivers

In order to ensure the stable operation of plants, which play an important role as social infrastructure, it is essential to provide after-sales services that include day-to-day operation control and appropriate maintenance. Generally speaking, the lifespan of a plant is about 20 to 30 years. In recent years, however, from the perspective of existing facility management, customers are considering not only using existing facilities for a longer period of time, but also using core improvement work to extend the life of the main part of the plant while maintaining the building and renewal work to replace all of the plant part only. As a result, there is a growing need for after-sales service and effective use of existing facilities, and we must meet these needs.

Recurring revenue model businesses represent the front line for maintaining and enhancing our strength of “relationships of trust with customers.” In addition to proactively proposing improvement measures to address current issues while communicating closely with customers who operate plants and facilities on a daily basis, we respond quickly to and resolve problems if they arise, which not only deepens the relationship of trust with the customer, but also leads to the growth of our employees themselves.

While proactive efforts in recurring revenue model businesses offer the advantage of securing stable earnings

over the long term, we believe that the long-term and careful use of existing facilities is valuable to customers and society from the perspective of effective use of assets, and also leads to the growth of employees and, ultimately, the growth of the Group, which is exactly what our vision calls for.

## Creating a foothold for overseas business growth

In anticipation of the possible decline in demand in the domestic market after 2030, we must start building achievements overseas. We aim to continue to receive orders for waste treatment plants and energy plants, which are expected to be in demand due to economic growth and urbanization, mainly in Southeast Asia, where we have a local subsidiary. I have been involved in overseas projects as engineer in the past, and I believe that it is difficult to establish a system that will continue to produce results in the Overseas Business immediately because we must acquire know-how based on laws, systems, cultures, and ways of thinking that differ from country to country when carrying out projects. Going forward, we will solidify the foundation for growth by having our employees continue to gain hands-on experience in the Overseas Business and cultivate their abilities, and in the future, we will establish it as the fourth pillar after the three pillars of municipal solid waste treatment plants, energy plants, and water treatment plants.

## Recap of the 13th Medium-Term Management Plan and Policy of the 14th Medium-Term Management Plan

We are working to achieve Vision 2030 based on our Medium-Term Management Plan. First, in the 13th Medium-Term Management Plan (“previous Medium-Term Management Plan”) spanning the period from FY2021 to FY2023, in order to respond to stable demand for plant renewal and service life extension in the future, we promoted

the recruitment and training of human resources, and reconstructed the Harima Factory, which produces boilers and combustion equipment, the core facilities of plants, and started operations as a new factory in January 2023. In addition to achieving our target of ordinary profit for the three-year period, orders received exceeded our initial plan,

setting the stage for growth.

In the 14th Medium-Term Management Plan, which started this fiscal year and runs from FY2024 to FY2026, we aim to crystallize our growth story to realize our vision based on the achievements and challenges of the previous Medium-Term Management Plan. While continuing to secure and develop human resources, we will prioritize the investment of management resources in the municipal solid waste treatment plant business, accumulate more

orders for EPC projects than in the previous Medium-Term Management Plan, and receive orders for after-sales service after completion. In this way, we will realize a virtuous cycle between the EPC business and the recurring revenue businesses, which will lead to growth from the 15th Medium-Term Management Plan onward. As for the three-year cumulative orders received target, we aim to achieve JPY 600 billion, which is significantly higher than the previous Medium-Term Management Plan.

## Enhancing corporate value by promoting ESG management

In implementing ESG management as set forth in Vision 2030, we have identified seven key issues (Materiality) and are managing progress using KPIs. The Group’s business itself contributes to environmental conservation and climate change countermeasures, and in addition to reducing our own CO<sub>2</sub> emissions, we will continue to contribute to the reduction of CO<sub>2</sub> emissions for our customers and society as a whole through the plants we construct. To continue to provide these products, we must maintain a good relationship with society; that is, we will provide products and services that are useful to our customers and local communities by co-creating technologies that the world needs with various partners and promoting innovation, and build relationships of trust. We will secure and develop human resources who will put this into practice, and it is crucial that we work on employee health and on-site safety management to create a workplace environment so that all employees can play an active role. Additionally, we recognize that the role of corporate governance, which oversees the progress of these initiatives, is extremely important in achieving our vision, and we will conduct risk management and decision-making as appropriate.

### Initiatives for key issues of focus in the 14th Medium-Term Management Plan

With regard to “promoting activities of human resources” among other key issues, while the market environment remains strong, the Group’s challenge in achieving the targets of the 14th Medium-Term Management Plan is a

shortage of human resources and other resources. In the previous Medium-Term Management Plan, we actively recruited mainly in the engineering, construction, and maintenance divisions, and on a consolidated basis, we increased our headcount by approximately 350 over the three-year period. We also enhanced training options and the education system, but we were not able to completely eliminate the shortage of resources. Under the 14th Medium-Term Management Plan, we will continue to strive to secure human resources, further expand our resources, and work to further improve job satisfaction and ease of work with the aim of establishing an internal environment where diverse human resources can play active roles over the long term.

With regard to “pursuing partnerships and innovation,” which is a key issue related to our strength of “technological capabilities,” our strength lies in our technological capabilities backed by past experience and know-how, but in order to further refine these, it is important to actively incorporate and utilize new technologies through repeated trial and error. In particular, the development of digital technology has been striking, and in the 14th Medium-Term Management Plan, we will promote the digital transformation (DX) from both “offensive” and “defensive” perspectives to strengthen competitiveness. In addition, in the field of R&D, we will accelerate research toward the realization of a decarbonized society, including CCUS (carbon capture, utilization, and storage). We aim to put this into practical use as soon as possible by leveraging partnerships with outside parties.

## Promoting dialogue with stakeholders to implement our Management Principles

While I have explained our Management Principles, our long-term vision called Vision 2030, and our Medium-Term Management Plan, in order to realize these, it is vital that we carefully work and communicate with our stakeholders, including shareholders and investors, customers, and employees. We will continue to do our utmost to increase our value as a company that grows sustainably over the long

term together with our customers and society, and to satisfy all stakeholders, including shareholders who support us, customers who trust us, partner companies that cooperate with the Group’s corporate activities, and executives and employees of the Group. I would like to extend my sincere gratitude to all of our stakeholders for your continued support, and ask for your continued guidance and support in the future.



## A History of Our Value Creation

Takuma has been responding to society's needs since the Company's founding. Committed to a philosophy of "Serve society through boiler manufacturing," we have maintained an understanding of the evolving issues that changing times have posed for our customers and wider society, developed new environmental protection and energy use technologies that contribute to solving those problems, and continued to take on new challenges.

### Societal needs

**Increasing demand for boilers as energy sources for manufacturing facilities.**

The 1930s saw a growing demand for producing facility expansions, accompanied by an increased demand for Japanese-made boilers to serve as their energy sources. After World War II, demand fueled by reconstruction projects prompted increased investment in producing facilities, also requiring boilers as energy sources. Once reconstruction-led demand had abated, efforts to modernize and streamline facilities to increase productivity progressed, and demand for boilers fueled chiefly by heavy oil rather than coal, as well as that for small-scale boilers, rose.

**Urgent need to improve sanitation negatively impacted by urbanization and industrialization.**

Progressive urbanization accompanying the country's intense economic growth resulted in an explosive increase in the quantity of waste produced, creating a high volume of garbage truck traffic, leading in turn to unpleasant odors, vermin, and other issues; pressure on landfill disposal sites; and a range of other challenges. Rapid industrialization, meanwhile, meant that worsening sanitation, including contamination of public waters by industrial wastewater and air pollution as factories released soot and smoke, were an issue of public concern, and the creation of sanitation and environmental protection facilities, including for treating waste, sewage collected by pump truck, and sewage collected through municipal sewerage systems (often processed separately in Japan), became a matter of urgency.

**Action on environmental laws and promotion of energy conservation.**

Around 1970, a range of laws and regulations were enacted in response to issues of pollution, heightening demand for flue gas and sewage treatment facilities and for treatment of commercial waste and wastewater. The two major energy crises of the 1970s also increased demand for energy conservation. In the 1980s and 1990s, the dioxins released by waste incinerators became a cause of public concern, and the Act on Special Measures against Dioxins, enacted in 1999, meant that renovations of and improvements to waste incineration plants became a central focus around this time.

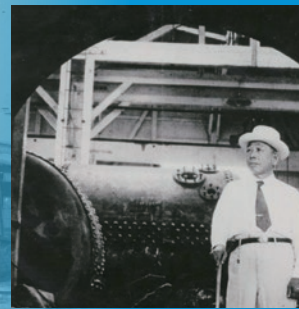
**Private contracts for public services and the spread of renewable energies.**

The prior focus on renewal of and improvements to incineration plants resulted in a tailing off of demand, the 2008 financial crisis sent the Japanese economy into a downturn, and investment in industry slumped. Against this backdrop, the 2011 Great East Japan Earthquake made expansion of renewable energy sources a matter of urgency. In 2012, Japan's feed-in-tariff (FIT) program (through which power companies purchase renewable energy at a fixed price) was launched and demand for biomass power plants soared. At the same time, the DBO project, under which construction and operation of facilities are contracted to private companies, began to take off within the waste treatment sector.

**Transition to a circular economy and achieving carbon neutrality by 2050.**

We anticipate demand for renewal to the facilities that uniformly underwent renewal and improvement work around 2000 to continue until 2030. Alongside this, as part of efforts aimed at achieving the global initiative toward net-zero greenhouse gas (GHG) emissions by 2050, we expect to see continuing demand for renewable energies, as well as the emergence of decarbonization products and their integration into waste treatment and other facilities. A growing demand for waste incineration technologies aimed at improving sanitation is also predicted in emerging countries now seeing the progressive urbanization as a result of economic growth that Japan experienced in the 1960s.

### Pre-1960



Our founder, Tsunekichi Takuma, pictured with a boiler

### 1961-1970



Japan's first 24-hour operating waste incineration plant delivered (Osaka City)

### 1971-2000



Japan's largest waste incineration plant (Koto City, Tokyo)

### 2001-2020



Biomass power plant

### 2021 onward



New Harima Factory

### Takuma's challenges

**Invention of Japan's first 100% domestically produced water-tube boiler, founding of the Company, and securing of its position as a boiler manufacturer.**

Founder Tsunekichi Takuma invented the first water-tube boiler to be entirely produced in Japan in 1912. The Takuma boiler offered performance that exceeded the imported products of the time, and its reputation spread. Tsunekichi Takuma founded the Company (then Takuma Boiler Manufacturing Co., Ltd.) in 1938 and began manufacturing the new high-performance Tsunekichi boiler. Factories and ships and vessels of all kinds utilized this new product as an energy source. After World War II, the Company developed a variety of different boiler models—still incorporated into our product range today—which it began selling in Japan and overseas. It also established a firm foundation from which to build its position as a boiler manufacturer providing custom boiler design, manufacture, and construction and gained the foothold that would allow it to enter the environmental sector.

**Entry to the environmental sector (waste and water treatment) and establishment as an environmental health facility manufacturer.**

Using the combustion technologies and engineering capabilities the Company had so far amassed, it delivered Japan's first 24-hour waste incineration plant in 1963 and went on to provide waste incineration plants also able to generate power, crushing systems, and more. This laid the groundwork for the Company's position—which it maintains to this day—as leaders in the waste management field. It also leveraged its boiler water treatment technologies to expand into the water treatment sector, beginning delivery of projects for the installation of treatment plants for sewage collected by pump truck in 1963 and of sewage sludge incineration facilities at sewage treatment plants connected to municipal sewerage systems in 1973, as well as other initiatives, thereby establishing its position as a manufacturer of environmental health facilities.

**Addressing waste management, pollution, and the demand for energy conservation.**

The environmental health field became the Company's main area of business, and in 1972 it changed its name to TAKUMA CO., LTD. In 1975, it began sales of a vacuum-type water heater (the Vacotin heater), offering a simpler method of supplying hot water as compared to the boiler. Coinciding with commercial demand for energy conservation and other factors, this product became and remains a longtime best-seller. As a result of a surge in demand for renovations of and improvements to waste incineration plants around 2000 (a response to public concern about dioxins in the 1980s and 1990s), in 2001, the Takuma Group achieved net sales of JPY 170.9 billion and an ordinary profit of JPY 22.0 billion, both Group records.

**Entry into and withdrawal from overseas markets. Contributing to the rapid spread of renewable energies.**

Experiencing a slump in demand as a by-product of the previous focus on renewal waste incineration plants, the Company attempted to enter the European and other overseas markets. However, as a result of various factors, including the difference in business norms, the Company recorded significant losses and had to streamline and consolidate its business, including domestically. In order to establish a stable earnings base, the Company increased its focus on after-sales services and secured numerous orders for biomass power plants, an area of rapid expansion with the launch of the FIT scheme. It also established internal company structures allowing it to offer a 20-year waste treatment facility management package and responded to recovered demand for waste treatment facility renovations to revive its business in both the environmental and energy sectors.

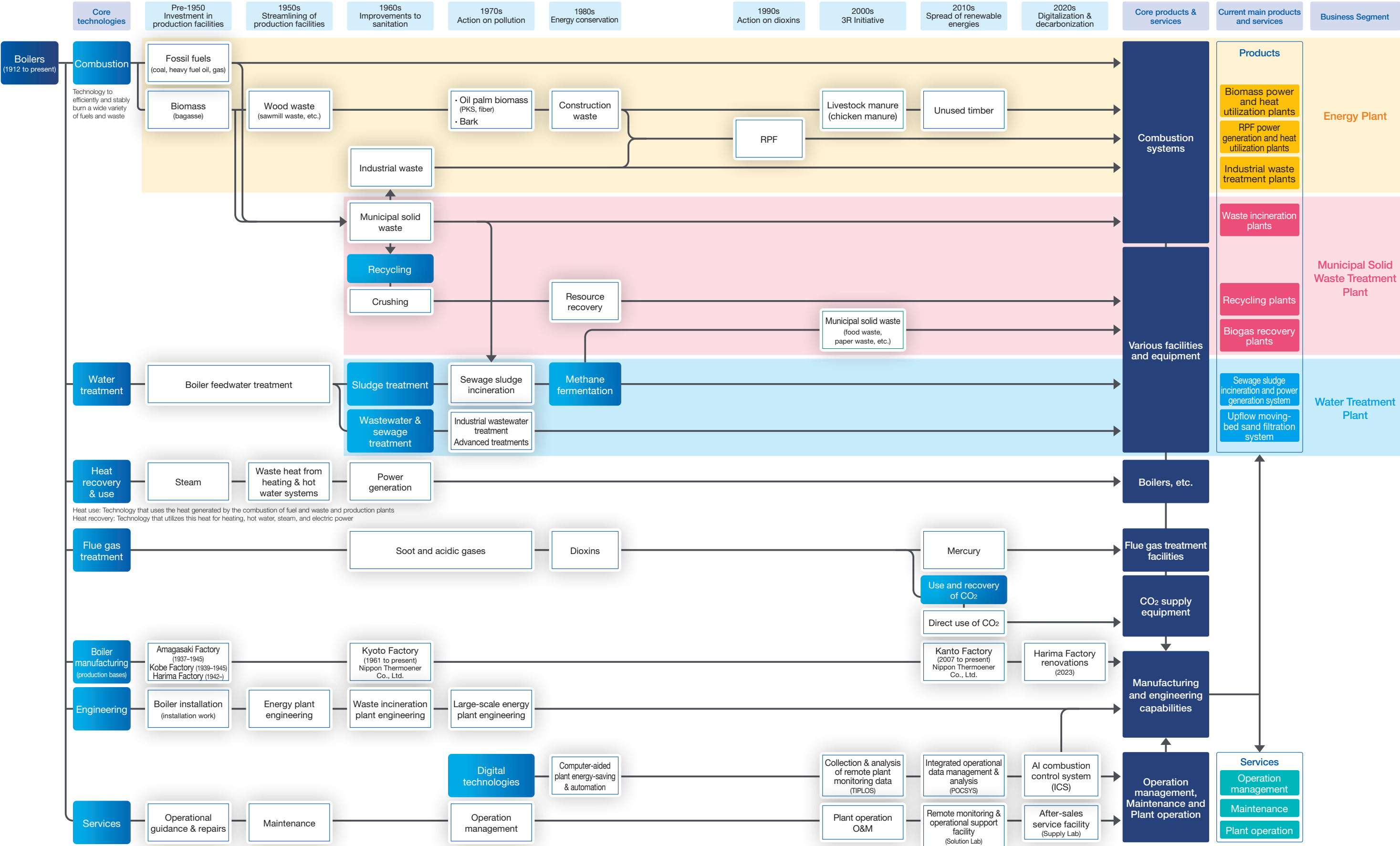
**Taking on the challenges of global decarbonization and environmental protection as a leading company in the environmental and energy fields.**

The spread of renewable energies and measures aimed at achieving carbon neutrality form the backdrop to demand for new construction and renewal of a range of plants, as well as that for waste treatment plant renewal. With an understanding of this demand, we will continue to develop our business around our three core areas: municipal solid waste treatment plants, energy plants, and water treatment plants. We also aim to grow our overseas business as a fourth core area, providing Takuma products and technologies aimed at improving sanitation in Southeast Asia, an emerging issue, and the spread of renewable energies. In addition, with the goal of achieving carbon neutrality, we aim to market decarbonization products that will contribute to further reductions in GHGs, explore potential areas of demand, and pursue R&D.



Evolution of Takuma's Technical Capabilities

Starting with the invention of the Takuma boiler, we have developed and improved a variety of equipment utilizing the combustion, heat recovery, and other technologies required by boilers and continued to broaden our range of products and services as a company offering custom plant engineering work that combines this equipment as needed to meet our customers' needs.

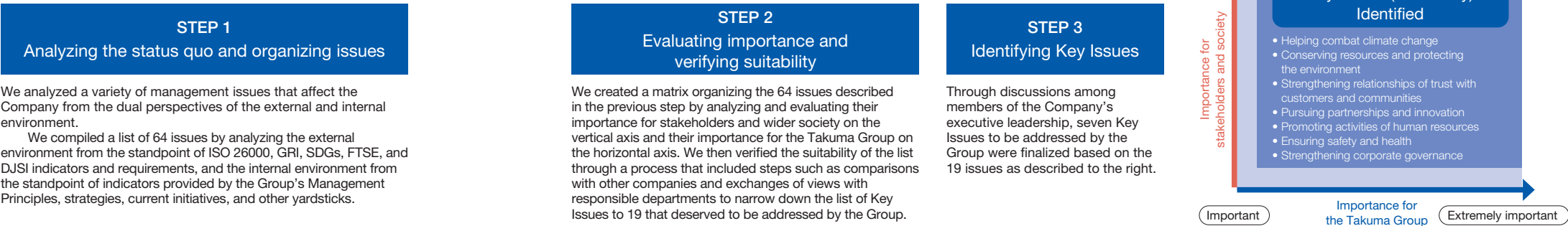









Key Issues (Materiality)

In implementing ESG management, in 2021 we identified seven Key Issues (Materiality) related to ESG that deserve to be given priority when being addressed through our business activities. Under our 14th Medium-Term Management Plan (MTP), we will continue to promote initiatives through our business activities as set out in our 13th MTP, as well as adding new KPIs (numerical targets) for employee engagement and customer satisfaction.

Identification Process

The following process was used to identify key issues.

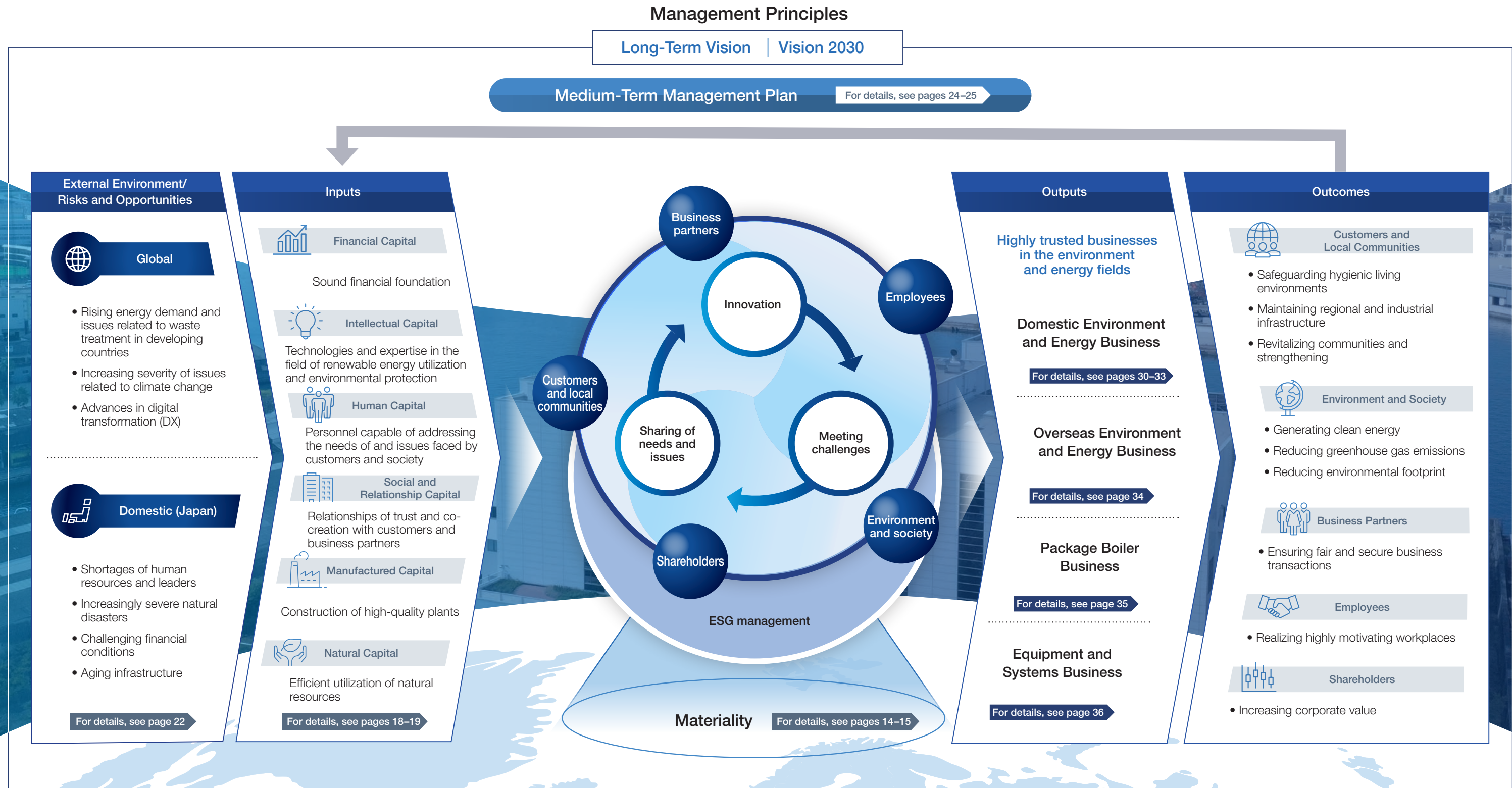


Materiality and issues		Risks and opportunities		Specific initiatives	KPIs	Target	Progress (as of the end of FY2023)
E Environmental Initiatives	 <b>Helping combat climate change</b> 1. Promoting renewable energy (non-fossil energy) 2. Improving energy efficiency	<b>Risks</b> <ul style="list-style-type: none"><li>Accommodating policies and regulations intended to realize a decarbonized society</li><li>Changes in customer requirements, for example additional improvements in energy efficiency</li><li>Reduction in support from policies, for example as a result of the review of the FIT program</li></ul> <b>Opportunities</b> <ul style="list-style-type: none"><li>Growth in the market for renewable energy and environmental businesses due to strengthening of environmental regulations</li><li>Growth in energy usage demand for biomass (including waste, sewage sludge, and other resources) in order to alleviate climate change</li></ul>		<ul style="list-style-type: none"><li>Supply of biomass power plants</li><li>Supply of fuel conversion (biomass, RPF, etc.) boilers</li><li>Supply of renewable energy and CO<sub>2</sub>-free electric power</li><li>Reduction in CO<sub>2</sub> emissions (energy consumption) by Takuma</li><li>Improvement in energy efficiency at facilities Takuma operates on a contractual basis</li><li>Proposal of energy efficiency improvements for customer facilities and equipment</li></ul> <div>P. 40–41</div>	<b>CO<sub>2</sub> emission reduction targets through our own products and services</b> <b>Magnitude of potential reduction in CO<sub>2</sub> emissions due to newly delivered power plants</b>	FY2026: <b>1,250,000</b> tons per year FY2030: <b>2,500,000</b> tons per year	<b>806,000</b> tons per year* <small>* Calculated based on available generating capacity (renewable energy) as of one month after delivery for plants delivered from FY2021 to FY2023 (four waste treatment plants, two sewage sludge plants, and 15 biomass plants).</small>
	 <b>Conserving resources and protecting the environment</b> 1. Conserving resources and reducing environmental impacts 2. Making effective use of unutilized resources	<b>Risks</b> <ul style="list-style-type: none"><li>Reduction in domestic waste volume due to the shrinking of the population</li></ul> <b>Opportunities</b> <ul style="list-style-type: none"><li>Growth of appropriate treatment of waste and growth in demand for use of energy from waste in emerging nations</li><li>Growth in expectations towards resource-saving and low-environmental-impact systems and the effective use of unutilized resources</li></ul>		<ul style="list-style-type: none"><li>Supply of high-efficiency, low-environmental-impact energy from waste plants</li><li>Supply of sewage sludge-fueled power plants</li><li>Supply of advanced treatment sand filter systems</li><li>Establishment of combustion technology for unutilized biomass</li><li>Development of technology for reusing bottom ash</li><li>Development of technologies for capture and use of CO<sub>2</sub></li></ul> <div>P. 42–45</div>	<b>In-house CO<sub>2</sub> emissions reduction targets</b> <small>* FY2030 targets including group companies remain under consideration. * CO<sub>2</sub> emissions from procured products and use of Takuma products by customers (Scope 3) also remain under consideration. * The Scope 1 target includes offsets using environmental value such as J-credits. * The Scope 2 target is calculated using post-adjustment emission factors.</small>	FY2026: <b>Effectively zero</b> CO <sub>2</sub> emissions by the Takuma Head Office and the Harima Factory (Scope 1 and Scope 2) FY2030: <b>Effectively zero</b> CO <sub>2</sub> emissions by all Takuma worksites in Japan (Head Office, branch offices, factories, and construction sites) (Scope 1 and Scope 2)	<b>188</b> tons per year* (Scope 1 and 2 emissions from the Takuma Head Office, our Harima Factory, and our branches and branch offices) <small>* In FY2023, we purchased J-Credits equivalent to the Scope 1 emissions. We achieved our FY2023 target of net zero CO<sub>2</sub> emissions from the Takuma Head Office and our Harima Factory (Scopes 1 and 2).</small>
S Social Initiatives	 <b>Strengthening relationships of trust with customers and communities</b> 1. Pursuing customer satisfaction 2. Ensuring the stable, continuous operation of plants and equipment 3. Recycling local resources and creating new value for communities	<b>Risks</b> <ul style="list-style-type: none"><li>Loss of trust in the event Takuma fails to provide safe, high-quality products and services</li><li>Shrinking local government budgets</li></ul> <b>Opportunities</b> <ul style="list-style-type: none"><li>Growth in demand for biomass power generation as a type of energy that can be produced and consumed locally</li><li>Growth in expectations toward the creation of new value for communities, for example through disaster prevention facilities and energy centers</li><li>Additional growth in the use of private-sector entities to provide government services</li></ul>		<ul style="list-style-type: none"><li>Supply of products and services that satisfy customers</li><li>Improvements in the quality of Takuma's operation and O&amp;M businesses</li><li>Increasing sophistication of maintenance service</li><li>Initiatives addressing the Regional Circular and Ecological Sphere (Regional CES), regional use, and decentralized power supplies</li><li>Initiatives such as PPP that address additional use of private-sector entities</li></ul> <div>P. 46–47</div>	<b>Customer satisfaction</b>	Number of responses with the highest rating <b>60%</b> or more <small>* The percentage of respondents giving the highest rating for questions (on a 4-point scale) about customer service and overall product quality in the Customer Satisfaction Survey.</small>	<b>63.2%</b> <small>* Newly added to 14th MTP</small>
	 <b>Pursuing partnerships and innovation</b> 1. Utilization of digital technologies (AI, IoT, robots, and more) 2. Developing open partnerships 3. Pursuing innovation	<b>Risks</b> <ul style="list-style-type: none"><li>Opportunity loss due to lag in accommodating new technologies such as artificial intelligence (AI) and the Internet of Things (IoT)</li></ul> <b>Opportunities</b> <ul style="list-style-type: none"><li>Growth in demand for efficiency-boosting and labor-saving technologies in plant operation (Remote monitoring and operation, data analysis, maximization of amount of power sold, etc.)</li><li>Creation of revolutionary technologies and services as well as new business opportunities through the expansion of partnerships</li></ul>		<ul style="list-style-type: none"><li>Increases in the added value of facilities and plants</li><li>Strengthening of competitiveness in EPC operations, operation management, and maintenance service</li><li>Pursuit of open innovation</li><li>Pursuit of new businesses that contribute to the enhancement of existing businesses and services</li><li>Development of technologies and products that are sought by society and customers</li></ul> <div>P. 48–49</div>	<b>Number of main career track and management positions filled by women</b> <b>Percentage of eligible employees utilizing parenting support programs</b>	Cumulative total for FY2021 to FY2025 <b>35</b> or more Average for FY2021 to FY2025 <b>25%</b> or greater	Cumulative total for FY2021 to FY2023 <b>29</b> Average for FY2021 to FY2023 <b>44%</b>
	 <b>Promoting activities of human resources</b> 1. Securing and training human resources 2. Promoting diversity 3. Improving employee satisfaction	<b>Risks</b> <ul style="list-style-type: none"><li>Reduction in competitiveness due to a shortage of employees with specialized skills</li><li>Discontinuity in the passing down of skills as highly experienced employees reach retirement age and leave the workforce</li></ul> <b>Opportunities</b> <ul style="list-style-type: none"><li>Strengthening of competitiveness through human resources development and management that promotes diversity</li></ul>		<ul style="list-style-type: none"><li>Hiring of new graduates and mid-career employees</li><li>Development of optimal human resources programs in response to social changes</li><li>Development of an effective training system</li><li>Active hiring of diverse human resources and development of career support programs</li></ul> <div>P. 50–53</div>	<b>Employee engagement</b>	Highest rating <b>50%</b> or more <small>* The percentage of respondents giving the highest rating for each question (on a 5-point scale) on job satisfaction and pride in the Company in the Employee Attitude Survey.</small>	High level of job satisfaction <b>41.0%</b> High level of pride in the Company <b>47.3%</b> <small>* Newly added to 14th MTP</small>
	 <b>Ensuring safety and health</b> 1. Ensuring occupational safety and health 2. Managing employee health 3. Creating a comfortable working environment	<b>Risks</b> <ul style="list-style-type: none"><li>Reduction in productivity and social trust due to problems involving safety and health among employees and affiliates (loss of opportunities for earning orders due to the occurrence of serious occupational accidents, etc.)</li></ul> <b>Opportunities</b> <ul style="list-style-type: none"><li>Improvement in productivity and strengthening of competitiveness through improvements in the workplace labor environment</li></ul>		<ul style="list-style-type: none"><li>Reduction in the occurrence of occupational accidents</li><li>Prevention of health problems and rectification of overwork</li><li>Implementation of workstyle reforms</li></ul> <div>P. 54–55</div>	<b>Number of fatal accidents</b>	<b>0</b>	<b>0</b>
	 <b>Strengthening corporate governance</b> 1. Strengthening corporate governance 2. Strengthening risk management 3. Ensuring compliance	<b>Risks</b> <ul style="list-style-type: none"><li>Reduction in business sustainability due to a lack of appropriate decision-making</li><li>Cessation of business due to violations of competition or environmental laws or regulations on conduct such as corruption, and associated reduction in social trust</li></ul> <b>Opportunities</b> <ul style="list-style-type: none"><li>Improvement in the ability to create value along with avoidance and reduction of risk as a result of strengthened corporate governance</li></ul>		<ul style="list-style-type: none"><li>Sustained improvement through practices such as evaluations of the effectiveness of the Board of Directors</li><li>Continued conduct of appropriate internal audits</li><li>Additional improvement in the effectiveness of risk management activities</li><li>Even more thorough project risk management</li><li>Implementation and ongoing reassessment of business continuity planning (BCP)</li><li>Ongoing implementation of compliance education</li></ul> <div>P. 56–61</div>	<b>Number of serious compliance violations</b>	<b>0</b>	<b>0</b>



## Value Creation Process

As leaders in the fields of renewable energy usage and environmental protection, the Takuma Group will continue to increase its corporate value by resolving social challenges.



## Six Key Management Resources

Through our plant engineering, procurement, and construction (EPC) and after-sales services, the Takuma Group has amassed a range of technologies and expertise and forged solid relationships of trust with our customers. These forms of capital are handed on to successive cohorts of the Group's diverse human resources. By helping them to thrive, we aim to conduct business that provides value to society, thereby further enhance our various types of capital, and in turn sustainably build corporate value.



### Financial Capital

Achieving both a sound financial foundation and capital efficiency

- Capital adequacy ratio: **57.7%**  
(FY2023, ended March 2024)
- ROE: **8.3%**  
(FY2023, ended March 2024)
- Backlog: **JPY 482.6 billion**  
(FY2023, ended March 2024; long-term O&M contracts of 10+ years accounted for approx. 50% of total)

#### Details

Plant EPC and after-sales services are our primary sources of revenue. With the facilities we construct in use for 20 to 30 years, we receive steady revenue from after-sales services (recurring revenue model businesses). At the same time, certain projects—notably plant EPC projects for government agencies—require advance payment of our suppliers (equipment manufacturers and construction companies), meaning that we must maintain a working capital equivalent to two to three months' worth of sales.

#### Initiatives toward further enhancing value

We will build on a basis of maintaining and improving the sound financial foundation (capital adequacy ratio of 50–59%) and credit rating that have helped us to win customer trust, working to improve our capital efficiency through reducing our cross shareholdings, investment in growth, and shareholder returns, and aiming to improve our ROE (to 11% or more in FY2026, ending March 2027).



### Social and Relationship Capital

Relationships of trust and co-creation with customers, business partners, and communities

- Customer satisfaction: **91.0**  
(FY2023, of a possible 100 points, non-consolidated)

#### Details

We continue to nurture the relationships of trust with our customers and partner companies built up through our EPC and after-sales services and are also working to create relationships of trust with local communities through co-creation with our research collaborators, years-long construction projects at various construction sites, and our waste treatment facility operation, which see us involved in operational tasks at local waste treatment facilities for a period of 10 to 20 years. These relationships of trust with our stakeholders are the indispensable foundation of our continued business.

#### Initiatives toward further enhancing value

To secure our role as essential to our stakeholders and the communities we are in contact with, we will work to build relationships of trust with our customers and partner companies through our business, contribute to these communities through community participation and hiring local people and order businesses, and collaborate with a wide range of partners to strengthen our ability to propose solutions to our customers and carry out R&D.



### Intellectual Capital

Technologies and expertise in the field of renewable energy utilization and environmental protection

- Municipal solid waste treatment (waste incineration) plants: **370**
- Biomass plants: **640** in Japan and overseas
- Upflow moving-bed sand filtration systems: **2,900**

#### Details

We are a specialized company in the environmental and energy sector, handling all aspects of waste treatment, water treatment, and biomass-related projects. As such, we possess advanced plant engineering and construction capabilities and expertise in after-sale service provision, thanks to the portfolio of technologies—based on tried and tested engineering practices—that we have built up since the Company's founding. We are also advancing R&D in decarbonization and other high-demand fields.

#### Initiatives toward further enhancing value

We will maintain and scale up the size of our orders to add additional technologies and knowledge to our roster and further enhance our strengths. In addition to utilizing data analysis to increase efficiency in our plant operation projects and thereby contribute to resolving the challenges our customers are facing, we will strengthen our R&D systems and aim to cultivate our technical capabilities and enhance our competitive edge.



### Manufactured Capital

Construction and operation of high-quality plants

- Manufacturing base: **Harima Factory**
- Facility operations offices: **23**  
(As of April 1, 2024. This includes DBO projects and long-term O&M projects of 10+ years)

#### Details

In order to construct high-quality, high-performance plants, we ensure that the working environments at our construction sites are safe and secure. In parallel, we are committed to maintaining the working environments of our waste treatment facility operations offices to a high standard, ensuring that they can provide safe, secure, high-quality services. We have also positioned our Harima Factory—where we produce boilers, combustion equipment, and other core products for our plants—as a “mother factory,” where we maintain and improve our manufacturing technologies and, in turn, work to maintain and improve the quality of the plants we install.

#### Initiatives toward further enhancing value

By continuing to improve the working environments at our construction sites and facility operations offices through occupational health and safety activities, we will work to create safe, secure sites with a target of zero workplace accidents. Renewal constructions at our Harima Factory were completed in 2023 and we are utilizing digital tools and other cutting-edge technologies to work toward productivity improvements, further increase our technical capabilities, and create systems allowing us to manufacture high-quality products.



### Human Capital

Personnel capable of addressing the needs of and issues faced by customers and society

- Number of employees (consolidated): **4,278**  
(As of March 31, 2024)
- Employee engagement: high level of job satisfaction – **41.0%**, high level of pride in the Company – **47.3%**  
(Proportion of employees giving the highest rating for these questions in our Employee Attitude Survey)

#### Details

Plants are not mass produced in factories; they are tailor-made products that bring together on-site a range of equipment that will enable the desired functionality. Each customer's needs are different, requiring plant engineering company to possess the ability to propose solutions that fulfill those needs and the technical capabilities to implement those solutions. We are working to develop human resources with these skills.

#### Initiatives toward further enhancing value

We will develop human resources capable of engaging head-on with the work of resolving the challenges facing our customers and able to build relationships of trust with them. Our efforts in this area will include enhancing our human resources programs, arranging working environments for increased job satisfaction, and improving our employees' work experience, as well as initiatives using OJT and expanded Off-JT to increase our technical capabilities and our ability to propose solutions, and sharing knowledge and expertise on a Company-wide basis through promotion of knowledge management.



### Natural Capital

Efficient utilization of natural resources

- CO<sub>2</sub> emissions: **188 tons**  
(FY2023, Takuma Head Office, branches and branch offices, and Harima Factory)  
\* In FY2023, we purchased J-Credits equivalent to our Scope 1 emissions.
- Contribution to reduction in CO<sub>2</sub> emissions: **4.5 million tons**  
(Municipal solid waste treatment plants and biomass power plants constructed by Takuma; calculated using the results of the Ministry of the Environment's survey on municipal waste management for the former and covering facilities built in the past 30 years for the latter)

#### Details

We are promoting efforts to reduce the environmental impacts of our offices, factories, and construction sites, including energy- and resource-saving initiatives and adopting 100% renewable energy. We are also contributing to reducing environmental impacts at a societal level through our products and services, which help our customers to save energy and decarbonize.

#### Initiatives toward further enhancing value

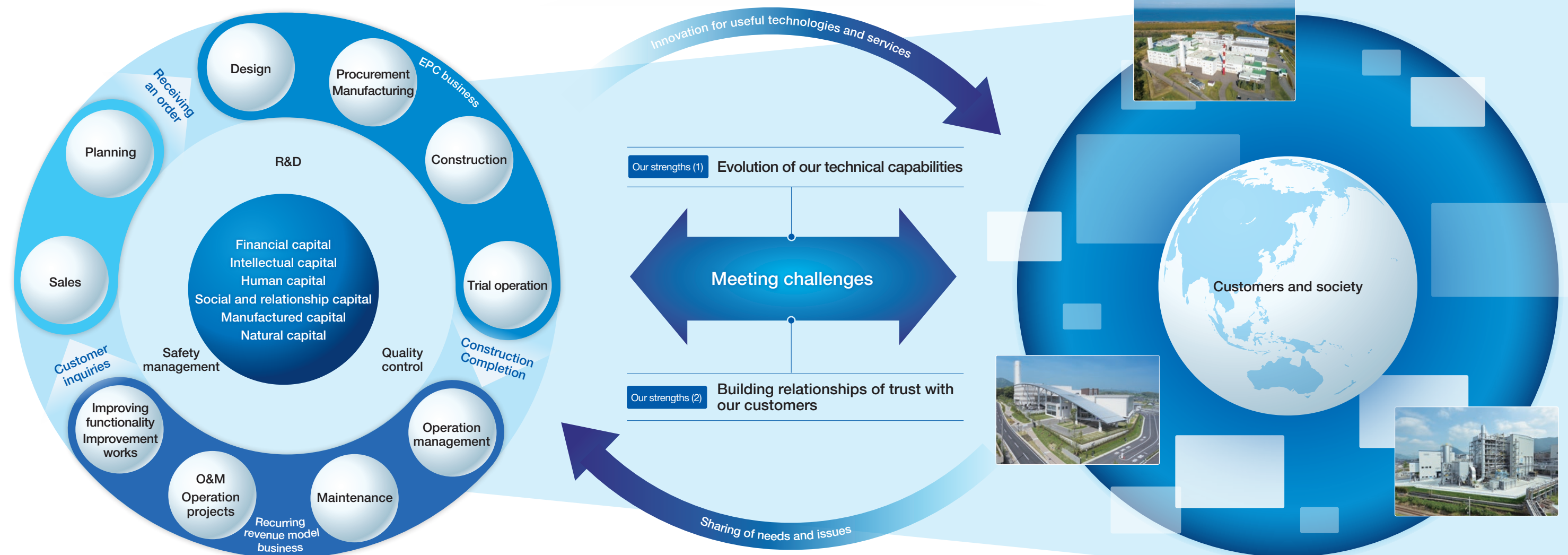
In addition to our existing initiatives, we plan to reduce the environmental impacts of our business activities in a variety of ways, including by increasing the number of our facilities that use energy-saving products and carbon-free electricity. We will continue to contribute to reducing environmental impacts at a society-wide level, whether through constructing environmentally-friendly plants and proposing energy-saving equipment upgrades to plants already in operation or R&D of CCUS and other decarbonization technologies.



## Our Value Chain

Through our plant engineering, procurement, and construction (EPC) work and our after-sales services, the Takuma Group has met challenges faced by our customers, advanced our technical capabilities, and built solid relationships of trust with our customers. By means of these ongoing efforts, we aim to achieve sustainable growth, together with our customers and wider society.

Sustainable growth alongside our customers and wider society



EPC business

Constructing a plant over approximately 2 to 5 years

Recurring revenue model business

Plant operation and maintenance for 20 to 30 years

Sales	We ensure that we are aware of our customers' opinions on a wide range of aspects, from facility and plant planning and potential challenges to specification and budget requirements. Our Planning & Design Division and other relevant divisions collaborate and establish relationships of trust with external project participants, allowing us to propose solutions that pinpoint our customers' needs with the aim of securing orders.
Planning	Based on the information gathered in the sales phase, we draft plans for facilities and plants that will meet our customers' needs (system flow covering the entire facility, layout, equipment specifications, etc., fulfilling customer conditions and performance requirements) and estimate costs for design, procurement of equipment, and construction based on these plans. Customers receive a competitive quote taking all of the above into account.
Design	Based on the plans proposed in the preceding phase, we hold multiple consultations with the customer to create a detailed plant design. In addition to systems design for the entire plant, our specialist departments design combustion systems, incinerators, boilers, and flue gas treatment equipment—core Takuma technologies—as well as the electrical equipment and instrumentation that will operate and control the plant.
Procurement and manufacturing	Once the necessary equipment and specifications have been determined at the design stage, our Procurement Division selects the optimal vendors, whether domestic or overseas, to meet specification, quality, cost, and completion date requirements. In parallel, our Harima Factory, the Company's manufacturing base, manufactures and produces the combustion systems and boilers that will be core plant components and drivers of plant performance.
Construction	Plant construction is carried out over the course of several years, including installation of the plant equipment we have procured and manufactured ourselves, and plumbing, electrical, and instrumentation works. We select contractors and act as overseers, monitoring progress on each element of the construction project and otherwise managing the site to ensure that these works are completed successfully. This involves managing safety, processes, and budgets on a daily basis.

Trial operation	Over a period of several months, we test plant operations to check whether each piece of equipment is functioning properly and whether plant-wide systems are running without issue. In the second half of the trial operation period, we add actual waste products and other fuel for combustion to confirm that there are no issues with combustion performance, power output, and other areas of performance throughout the plant.
Recurring revenue model business	We ensure stable operations through operation management that allows facilities to function at their absolute best, regular inspections and maintenance to prevent malfunctions and ensure that plants can operate in a safe and stable manner, and large-scale renovations. In the waste treatment facility sector, we are receiving an increasing number of contracts for operation projects that combine all of the above services.
R&D	We are pursuing R&D that will contribute to strengthening our competitive edge from a medium- to long-term perspective. This includes enhancing and expanding on Takuma's core technologies, including our combustion and flue gas treatment technologies, and developing decarbonization technologies such as capturing and utilization of CO <sub>2</sub> from flue gases, as well as other new products for commercialization.
Safety management	When occupational accidents occur, they have the potential to engender terrible costs to society, including loss of life. They may also incur criminal penalties or administrative penalties, such as temporary barring from bidding on contracts for a particular body. Our Safety Management Division ensures safe working conditions and works to prevent occupational accidents through occupational health and safety activities and other initiatives.
Quality control	We conduct factory inspections and checks of each piece of equipment that goes into our plants. Each aspect of a product's performance is verified, from whether it conforms to standards and design specifications, to whether it performs appropriately when tested and ensuring that it will not cause any problems when installed in the plant. In this way, we confirm that our products will fulfill our customers' needs.