



ESG Presentation FY2023

October 30, 2023

Cosmo Energy Holdings Co., Ltd.

Shigeru Yamada, Representative Director, Group CEO

Takayuki Uematsu, Representative Director, Senior Managing Executive Officer

Junko Takeda, Director, Senior Executive Officer

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Group CEO

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Senior Managing
Executive Officer

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Director, Senior
Executive Officer

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Vision 2030 & Sustainable management

Cosmo Energy Group's Sustainable Management

- The Cosmo Energy Group Management Vision encompasses our “The Basic Concept of Sustainability” and we are committed to sustainable management.
- Identify material issues as an important issue for both of the Group and society in the medium-to-long term.

Cosmo Energy Group Management Vision

In striving for harmony and symbiosis between our planet, man and society, we aim for sustainable growth towards a future of limitless possibilities.

The Basic Concept of Sustainability

Harmony and Symbiosis

- Harmony and Symbiosis with the Global Environment
- Harmony and Symbiosis between Energy and Society
- Harmony and Symbiosis between Companies and Society

Creating Future Values

- Creating the Value of “Customer First”
- Creating Value from Diverse Ideas of the Individual
- Creating Value by Expressing Collective Wisdom

Cosmo Energy Group's Code of Conduct

Cosmo Energy Group's Policies

Most important material issues

Sustainable value creation

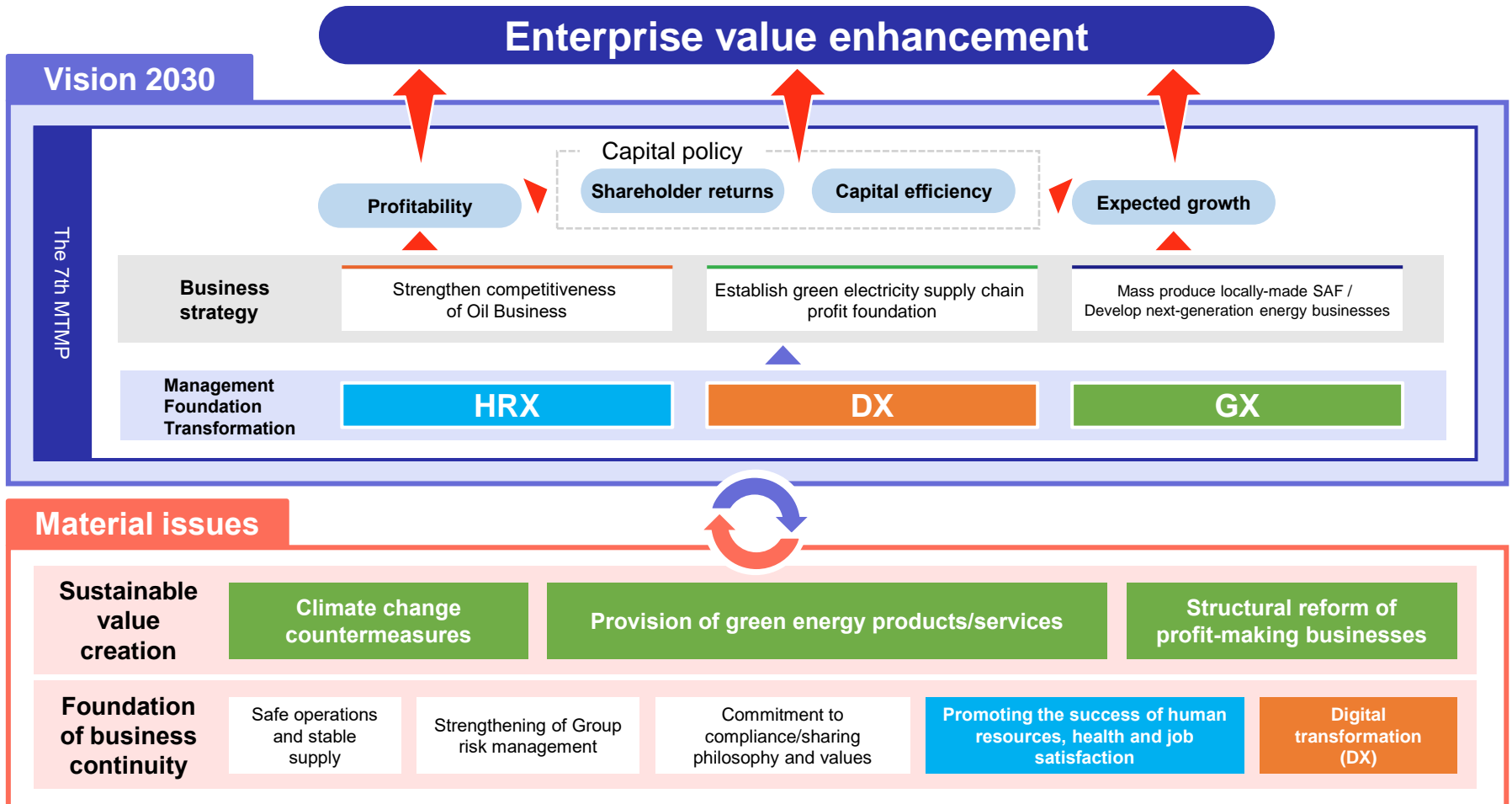
- Climate change countermeasures
- Provision of green energy products/services
- Structural reform of profit-making businesses

Foundation of business continuity

- Promoting the success of human resources, health and job satisfaction
- Commitment to compliance/sharing philosophy and values
- Strengthening of Group risk management
- Digital transformation (DX)
- Safe operations and stable supply

Material issues and the 7th MTMP & Vision 2030

- Material issues identified from a long-term perspective and the 7th MTMP are linked, and by addressing material issues, we will transform the management foundation (HRX, DX, GX) and enhance enterprise value.

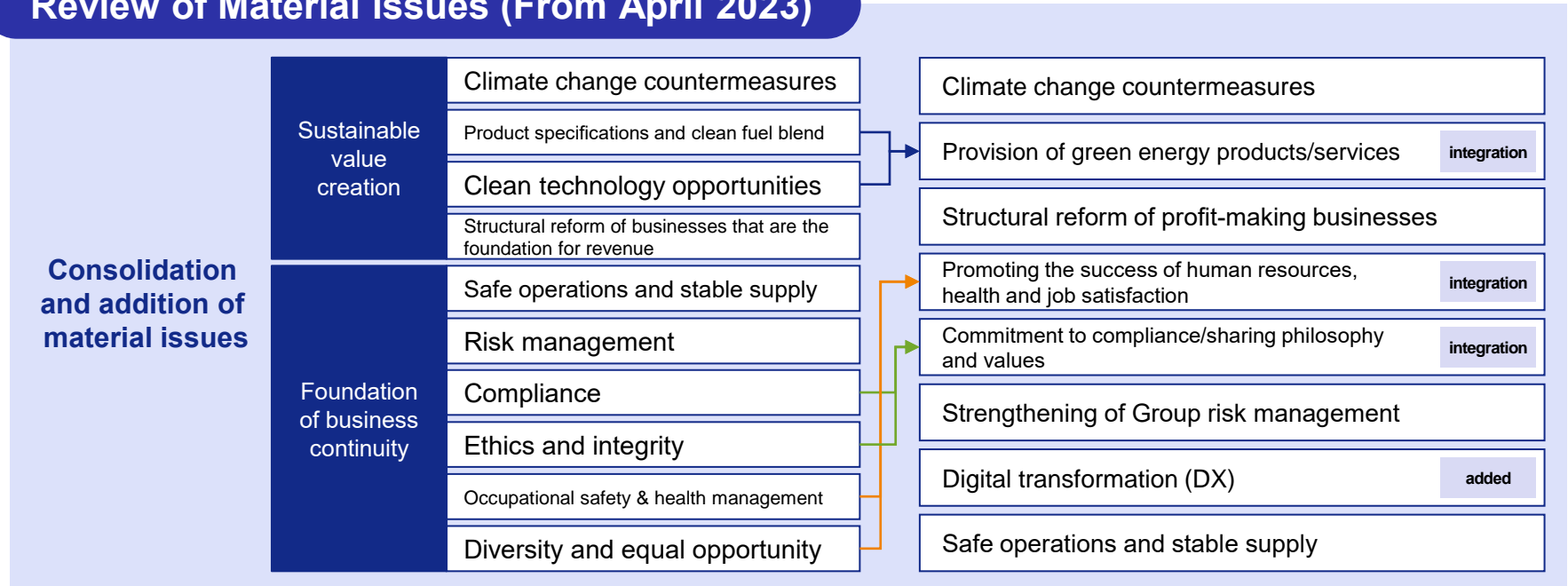


Ideal Material issues and KPIs

- In identifying material issues, we reconsider their "ideal state" and consolidate them into eight material issues.
- Set KPIs by backcasting from the ideal state, and set goals for the medium-term management plan period.



Review of Material issues (From April 2023)



Our Sustainability Governance

- As part of the governance structure of the Company, KPIs set based on the Company's material issues are monitored through submissions to the Board of Directors by the Sustainability Strategy Committee.

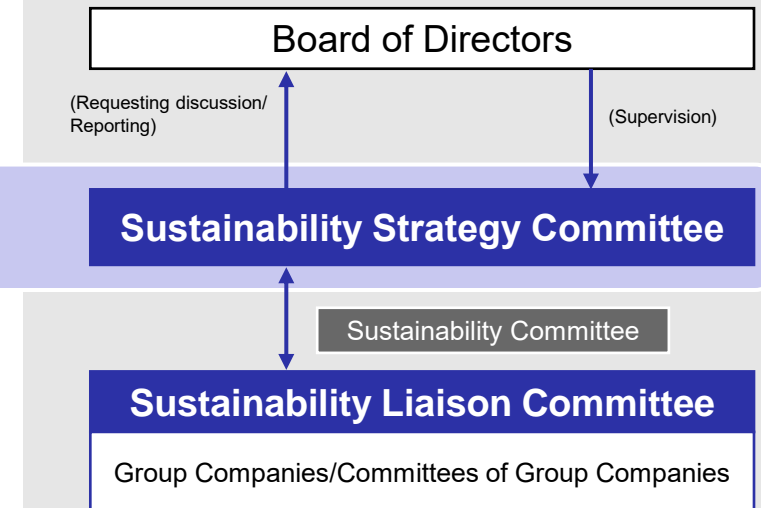
Sustainability Strategy Committee

Chairman	Group CEO
Committee member	Executive Officers of Holdings, Audit Office General Manager, the core operating companies' Presidents, and the Executive Officer in Charge of sustainability
Observer	Directors who are members of the Audit and Supervisory Committee

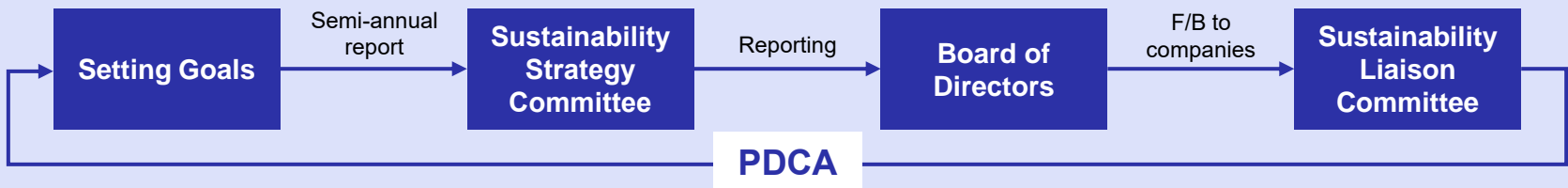
Major Topics of Discussion at the Sustainability Strategy Committee in FY2022

April 20, 2022	7th meeting	· 2050 Carbon Net Zero Declaration roadmap
June 3, 2022	8th meeting	· Corporate Governance Code response policy · Report on achievement of FY2021 non-financial KPIs
September 5, 2022	9th meeting	· Establishment of Safety Policy and Quality Policy · Vision for material issues and direction of sustainability strategy in the Seventh MTMP · Status of Cosmo Energy Group's risk management initiatives
December 8, 2022	10th meeting	· Review of material issues and setting of KPIs · First half year FY2022 (April-September) progress report on non-financial KPIs · Report on implementation of human rights due diligence process
March 2, 2023	11th meeting	· The Seventh MTMP: Non-financial KPIs · Establishment of Risk Management Policy

Governance System Driving Sustainability

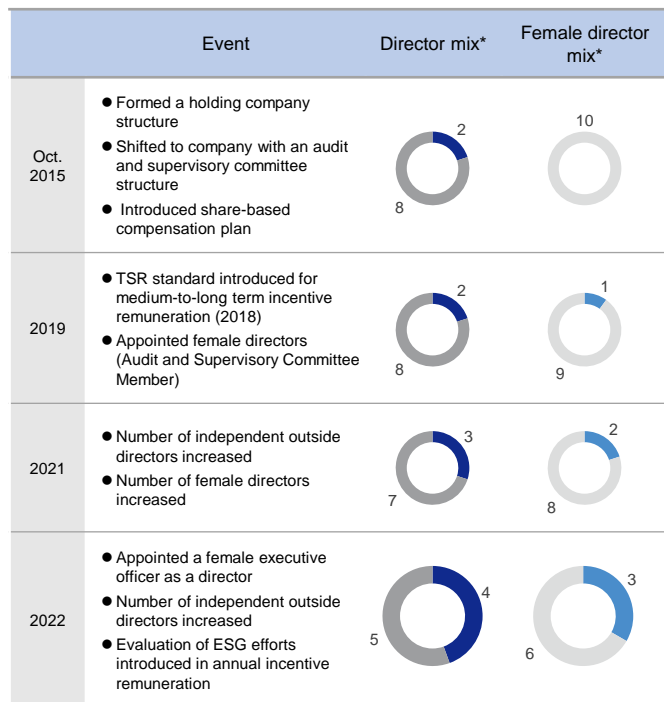


KPI Review Cycle



Governance promotion structure

- Improve diversity in terms of skills, gender and the balance between internal and external directors to ensure that the Board functions effectively and efficiently.
(Of the nine directors, three are women and four are independent outside Director as of Oct.,2023)
- Consider the effectiveness of evaluation, using external bodies to further improve the effectiveness and transparency of the Board.



Name	Experience, knowledge, and expertise etc. *1,2									
	Corporate management	Petroleum Business (Oil)	Other businesses (New) (Renewable Energy Business/new businesses)	Sustainability (ESG)/risk management	Personnel affairs/human resource development/diversity	DX/IT	PR/IR/brand marketing	Finance/accounting/taxation	Legal affairs/compliance	Global-maindness
Hiroshi Kiriya	◎	◎	○	○	—	—	○	—	—	—
Shigeru Yamada	◎	◎	○	—	—	—	○	—	—	—
Takayuki Uematsu	◎	—	—	○	—	—	○	◎	—	—
Junko Takeda	—	◎	—	—	◎	—	—	—	○	—
Tatsuko Inoue	—	—	—	○	○	—	—	—	◎	○
Takuya Kurita	—	—	◎	—	○	○	—	—	—	—
Toshiyuki Mizui	○	—	○	—	—	—	—	◎	○	—
Yasuko Takayama	—	—	—	◎	○	—	○	—	○	—
Keiichi Asai	◎	○	○	—	—	—	—	—	—	○
Noriko Rzonca	—	—	—	—	—	◎	○	—	—	○
Taisuke Matsuoka	—	◎	○	—	—	—	—	—	—	—
Yoshihiko Sato	—	◎	—	—	—	—	—	—	—	○
Tomoki Iwai	—	○	—	—	—	—	—	◎	—	—
Hideyuki Wakao	—	○	—	—	—	—	—	◎	○	—
	5	8	6	4	4	2	5	4	5	4

*Audit and Supervisory Committee members included in "Directors."

■ Independent outside directors
■ Female
■ Male

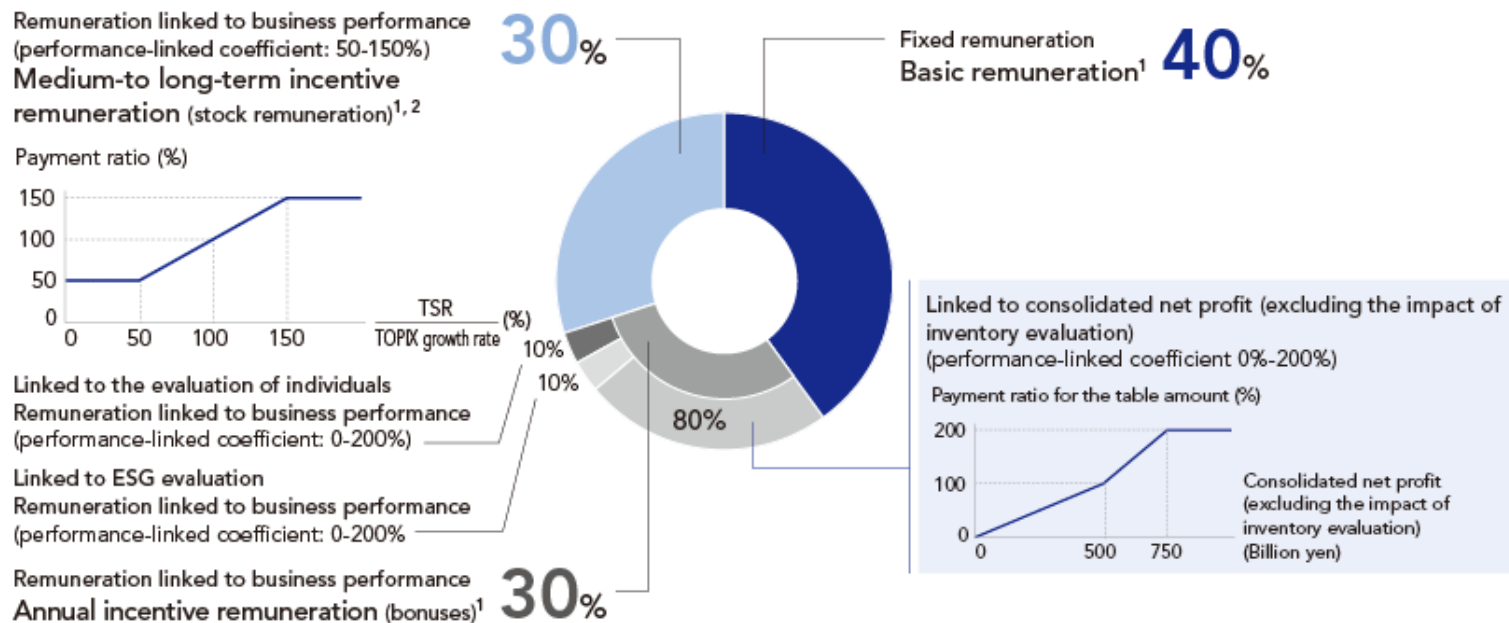
*1 The expertise and attributes of each director disclosed here includes the areas in which they have outstanding knowledge and experience. It is not an exhaustive list of the capabilities of each director.

*2 "◎" indicates the areas in which the individual has a higher level of expertise

Executive remuneration plan

- Revised the performance evaluation criteria to consolidated net income (excluding the impact of inventory valuation) to be consistent with the shareholder return policy announced in the 7th MTMP.
- Beginning in FY2022, efforts made towards ESG targets were reflected in remuneration. ESG targets as indicators are linked to material issues KPIs in the 7th MTMP.

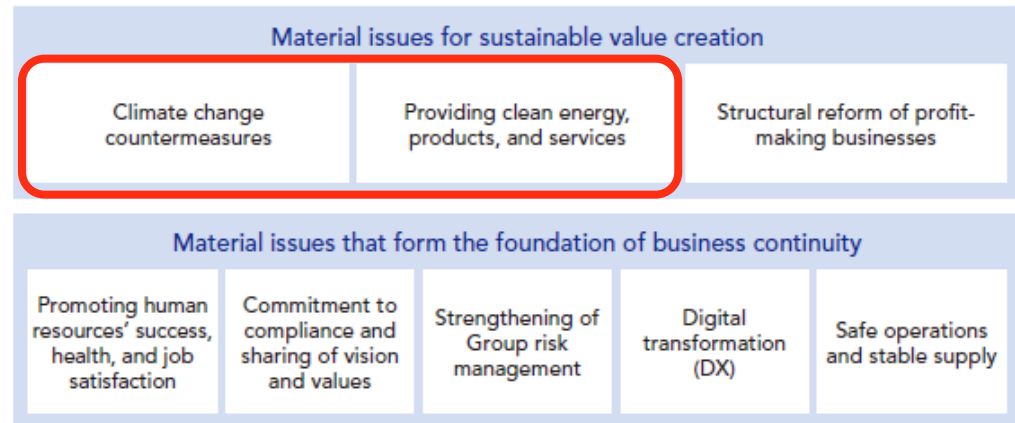
Executive officer remuneration plan (example)



1 The basic remuneration, annual incentive remuneration, and medium- to long-term incentive remuneration distribution ratio varies depending on the executive position.

2 Linked to FY2023-2025 total shareholder return (TSR) growth rate relative to TOPIX and the consolidated net debt-to-equity ratio

Green transformation (GX)



Roadmap to 2050 Carbon Net Zero

- Declaration of carbon net zero by 2050, including Scope 3, to contribute to the realization of a decarbonized society by working together with stakeholders on "To create energy that shapes the future".

Our Group's Past Initiatives

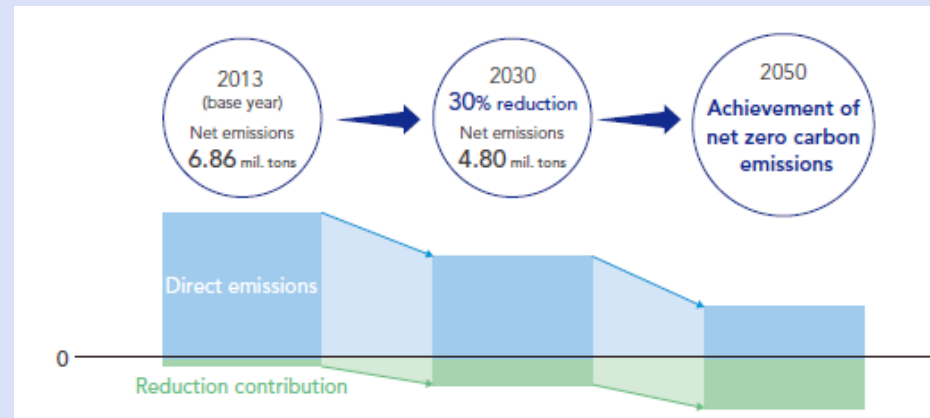
- The Sakaide Refinery was closed in 2013 for rationalization of the production system. CO₂ emissions reduction due to closure is approximately 1 million tons per year.
- Reduced emissions intensity by 7% over 10 years by promoting high-efficiency as well as energy-saving measures.

Estimated supply status by 2030

- Despite continued decline in demand, maintain high refinery utilization until 2030 by continuing the short position strategy, mainly due to lower imports.

GHG Emission Targets and Reductions

Scope1/Scope2



Scope3

Aiming for Net Zero in 2050

SAF and other Development and supply of biofuels

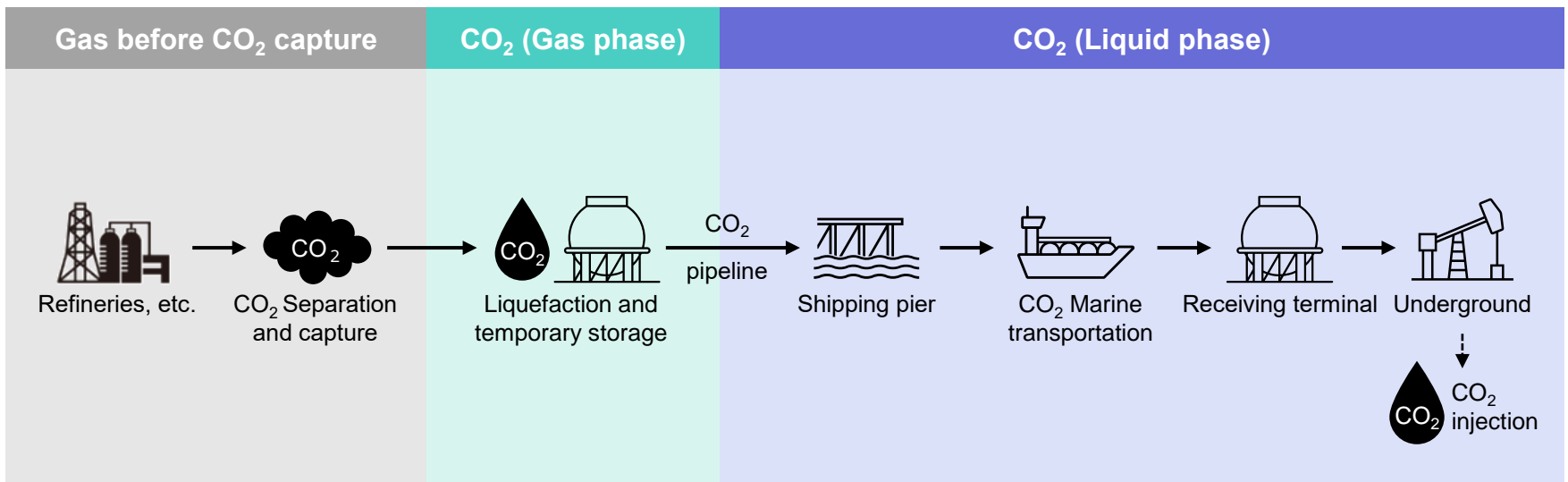
Strengthening the Green Power Supply Chain

Hydrogen supply chain and Carbon Recycled Product Initiatives

“Climate change countermeasures” efforts to reduce CO₂ emissions

- Negative emission technologies are used to reduce emissions in our roadmap.
- Joint study with Kansai Electric Power Co. (KEPCO) on liquefaction, storage, and shipping facilities, aiming to design larger-scale and more efficient facilities.
- Aiming to accumulate know-how, concluded a MOU on marine transportation with Mitsui O.S.K. Lines (MOL).

CO₂ Recovery/Storage (CCS) image

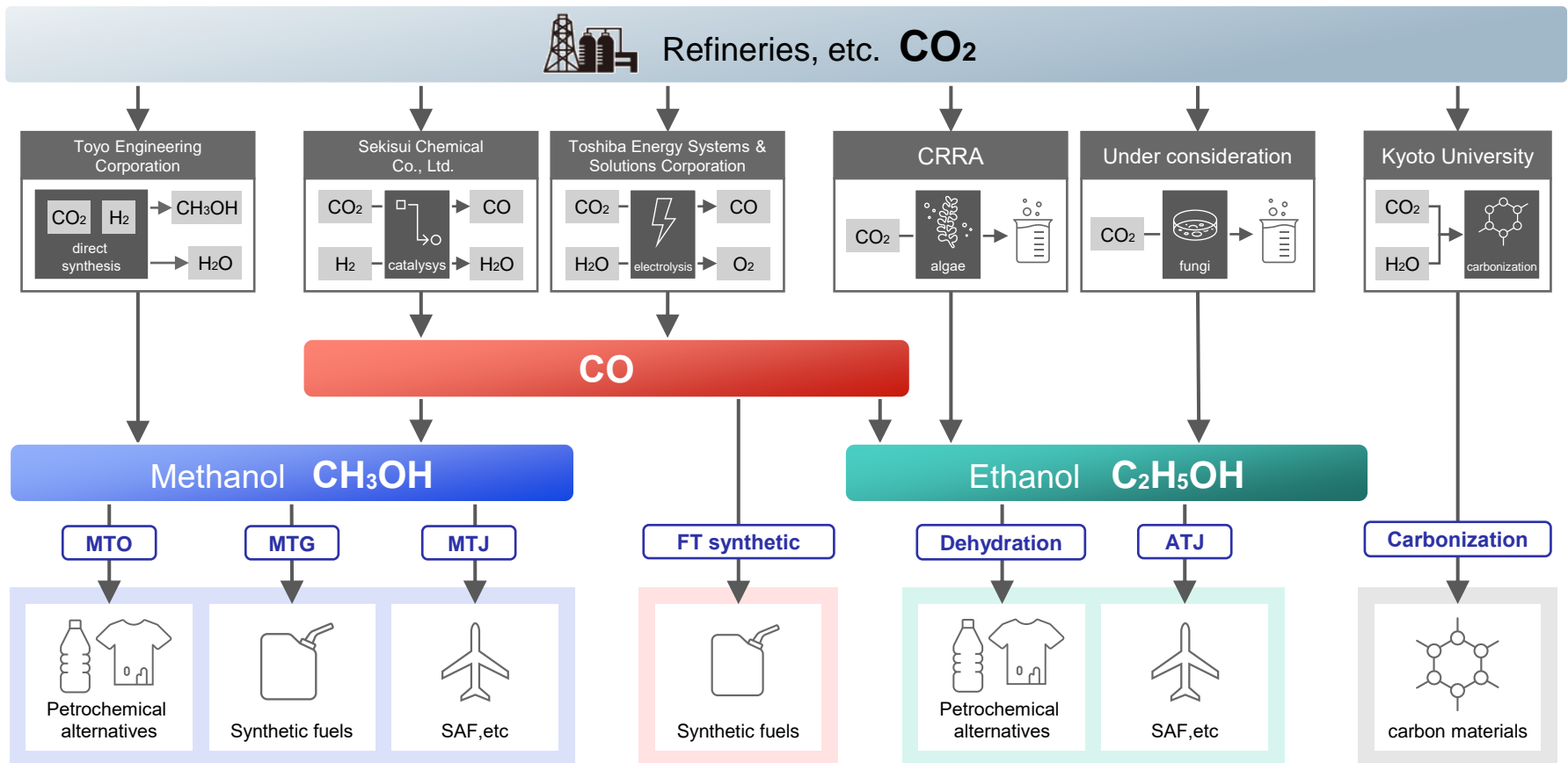


Related Press Releases

October 13, 2023	Started joint study with KEPCO to establish a CCS value chain in the Sakai-Semboku area
October 27, 2023	Signed MoU with MOL to study ocean transport for development of CCS value chain

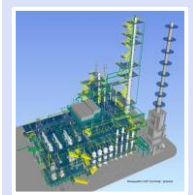
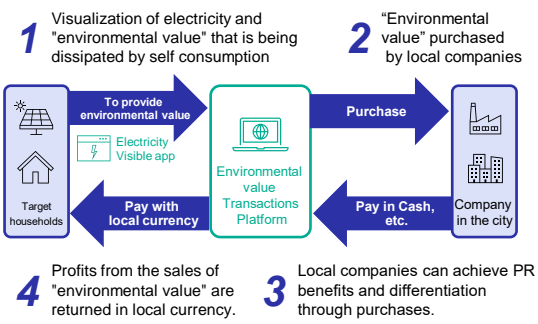


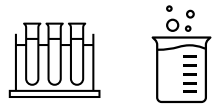
“Climate change countermeasures” efforts to reduce CO₂ emissions

- Promoting consideration of effective utilization of CO₂ (CCU) beyond CCS.
- Individually collaborate with companies with cutting-edge technologies to convert CO₂ emitted from refineries, etc. into valuable resources.
- Examine multiple processes and work with each company to determine feasibility and investment profitability.

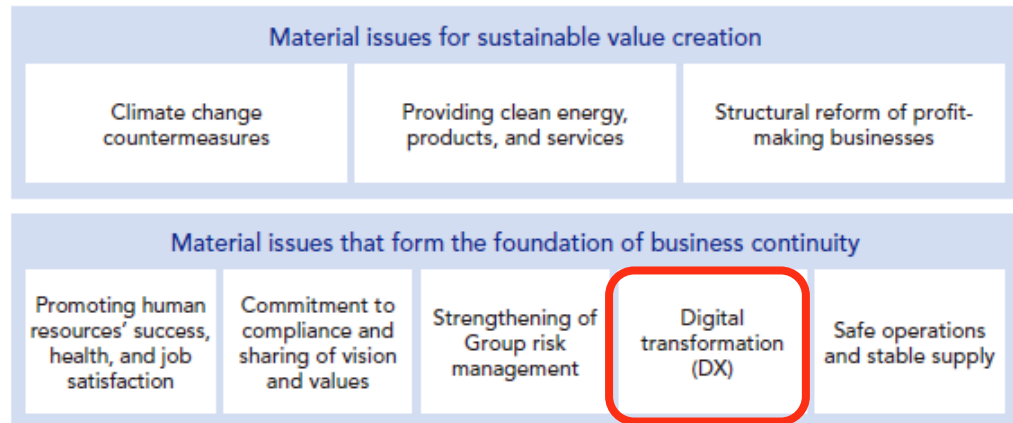


“Provision of green energy products/services” Initiatives for Scope3

- Contributing to the realization of a decarbonized society by working together with stakeholders on "To create energy that shapes the future".

	Development and supply of biofuels including SAF	Bolster green electricity supply chain	Initiatives for hydrogen supply chain and carbon recycled products
<p>Major initiatives for Scope3</p>	<ul style="list-style-type: none"> Ground-breaking ceremony for a large-scale demonstration facility for locally-made SAF made from waste cooking oil, the first in the country, was implemented Adopted for business related to promotion of recovery of waste cooking oil in Tokyo  <p>Large-scale production of locally made SAF Projection of completion of demonstration equipment</p>	<p>Improving the added value of green electricity sales by providing platform for visualization and recycling of environmental value</p> 	<ul style="list-style-type: none"> Considering partnering with Iwatani Corp. Operation of hydrogen station for trucks  <p>Utilize existing assets for hydrogen supply chain entry</p> <ul style="list-style-type: none"> Exploring new hydrogen production technologies (turquoise hydrogen) Joint development with Toda Kogyo Corp.
<p>KPIs for Material issues</p>	 <p>Amount and percentage of clean fuel supply</p>	<p>Wind power generation capacity</p> <hr/> <p>CO₂ reduction contribution from renewable energy (1Q FY2023 results)</p> <p>65,000ton/CO₂</p>	 <p>New Business R&D/Investment</p>

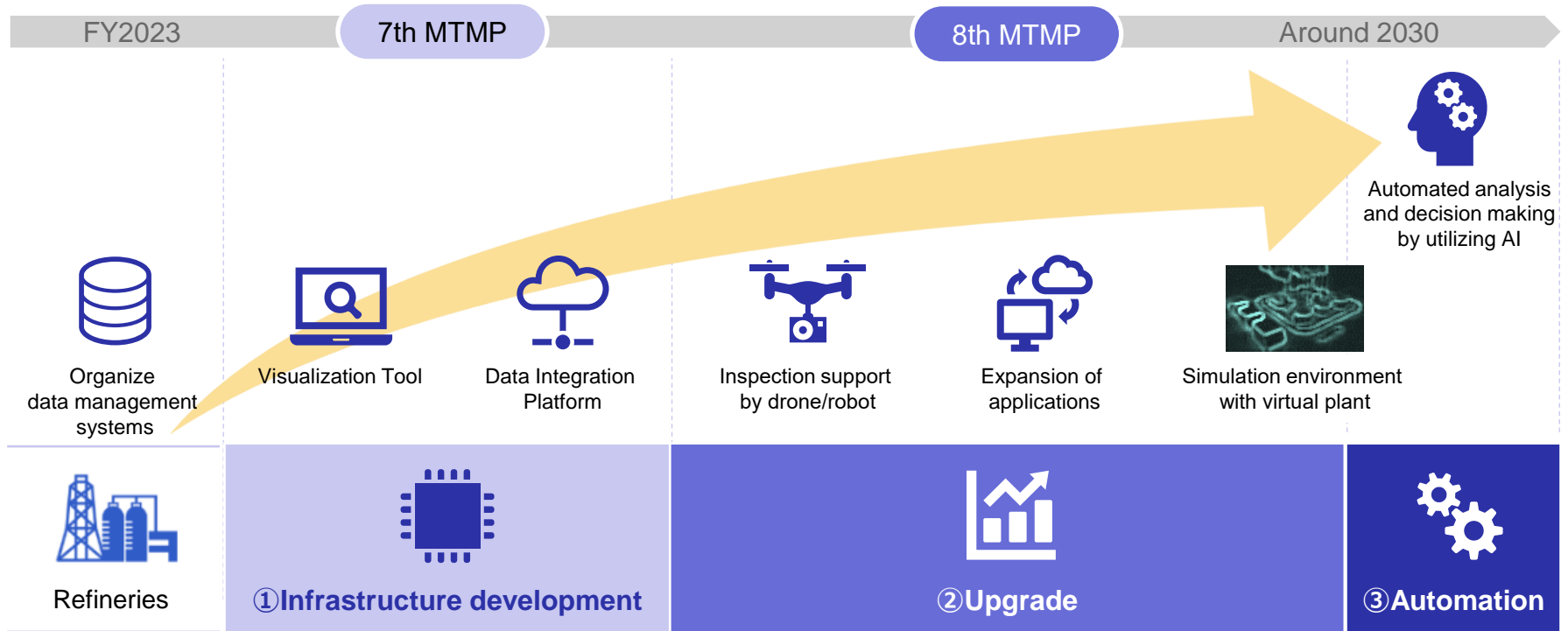
Digital transformation (DX)



Strengthen competitiveness of existing businesses through DX

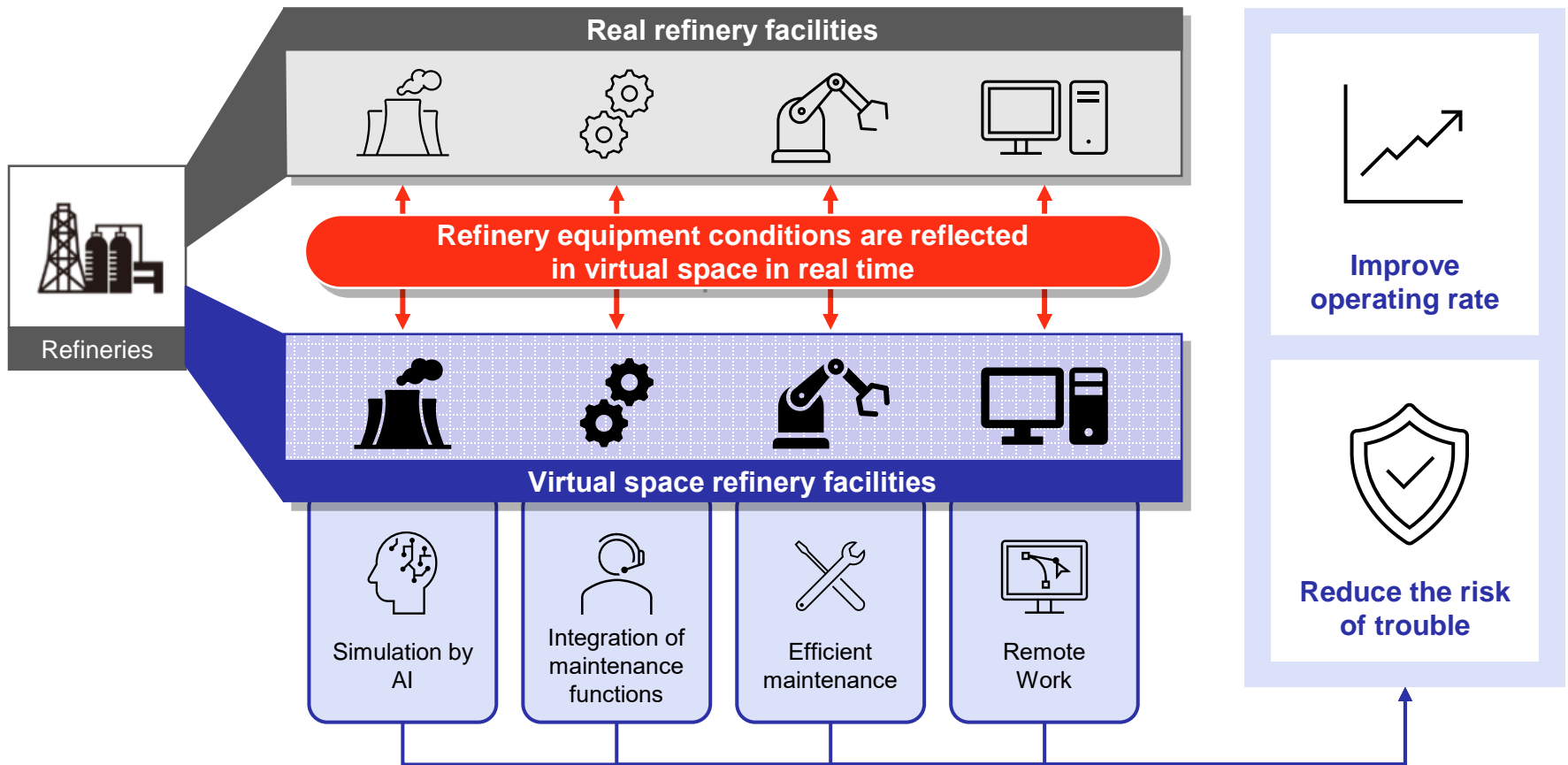
- Promoting the use of digital technology to ensure high uptime and high-efficiency operations at refineries.
- Pursuit of maintenance and operational optimization by focusing on advanced and non-routine decision making.
- Aim to improve productivity by utilizing the plant digital twin to increase the efficiency of existing operations.

Roadmap to Digital Refineries



Strengthen competitiveness of existing businesses through DX

- The plant digital twin is the reproduction of real refineries in a digital virtual space and the creation of a state in which necessary refinery equipment information (operation data, repair history, equipment specifications, etc.) can be immediately accessed.



Strengthen competitiveness of existing businesses through DX

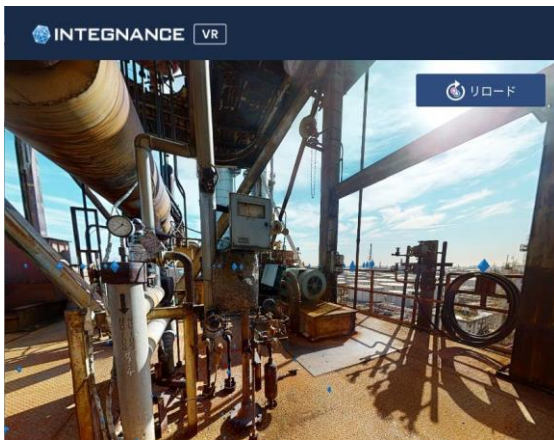
- Build plant digital twin by combining Visualization Tool and Data Integration Platform.
- Decided to introduce the system at all three refineries at the same time, accelerating collaborative maintenance (maintenance coordination/functional integration).

Two elements to build the plant digital twin

① Visualization Tool (INTEGNANCE VR)



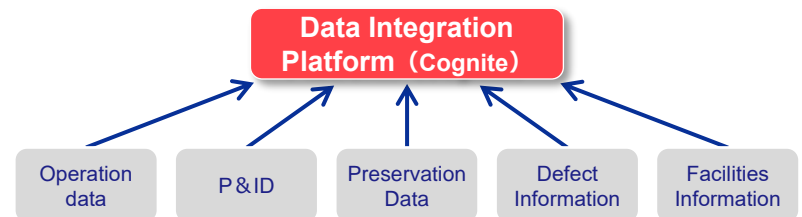
Equipment information and other information is registered in a 3D viewer based on 360° panoramic photographs. An environment is created where information on the site can be obtained from anywhere, enabling planning from remote locations.



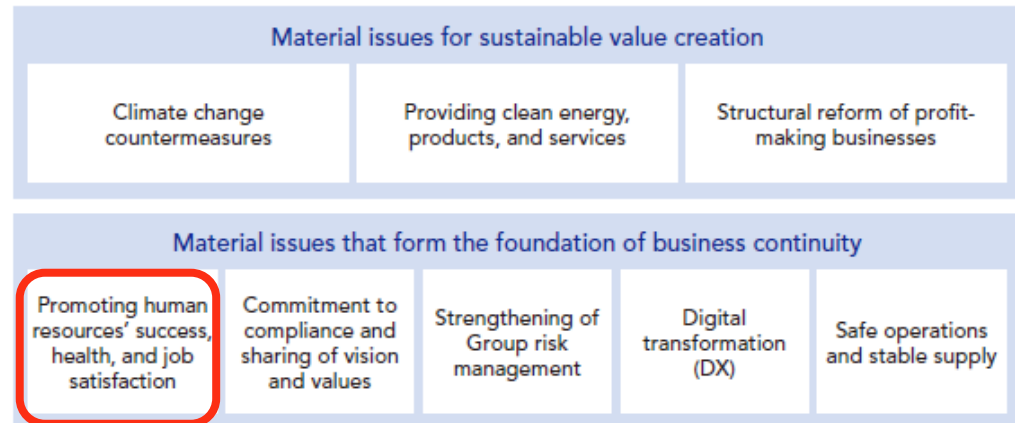
② Data Integration Platform (Cognite Data Fusion)



- By linking all kinds of data, improving simulation accuracy and automatic analysis of the generated AI are possible.
- ChatGPT already implemented



Human resource transformation (HRX)



Promotion of “Pursue a people strategy that motivates employees and harnesses their skills”

- Develop a human resources group that can realize Vision 2030 by strengthening the foundation of human resource capabilities such as "health" and "engagement," improving wellbeing, and transforming from the current common issues, thereby enhancing the human resource capabilities that drive the business forward.

Vision 2030

To create energy that shapes the future, energy that sustains society, and new forms of value






Bolster green electricity supply chain



Expand next generation energy






Strengthen competitiveness of Oil Business and pursue low carbonization



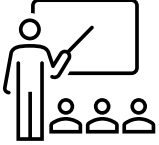




 Human resource strength for driving force	✓ Capability to expand business areas and create new value	✓ Capability to create new value based on existing business strengths	✓ Capability to transform existing businesses through initiatives such as digitalization to further improve competitiveness	
 Direction of change required for human resources strategy	Homogeneity ↓ Expanding diversity	Other-oriented, passive ↓ Shift to autonomous and proactive	Maintenance of status quo ↓ Fostering a desire to grow	Analog and oral tradition ↓ Improve DX literacy
 Human resource strength foundation	Wellness enhancement / higher engagement			

Initiatives for Realization

- Implement specific initiatives in the areas of human resources training and development, organizational culture, and wellness to realize the ideal state of the human resource strategy.

	 Human resources training and development	 Organizational culture	 Wellness
Toward 2030 human resource strategy what we want to be	Self-directed career development Training and development of change- and challenge-oriented, professional-type human resources	Maximize performance and increase engagement through diverse human resources and working styles	Promoting wellness management
Transformation direction	<ul style="list-style-type: none"> ● Transformation to autonomous and proactive ● Fostering a desire to grow ● Improve DX literacy 	<ul style="list-style-type: none"> ● Further expand diversity 	<ul style="list-style-type: none"> ● Wellness enhancement
Specific measures during 7th MTMP period	<ul style="list-style-type: none"> ● Monitoring by the Human Resources Strategy Committee ● Promoting the right person in the right position by visualizing of capabilities and skills ● Succession planning for management talent ● Revises evaluation and promotion systems ● Expand job challenge system ● Cultivate core digital personnel 	<ul style="list-style-type: none"> ● Accelerate securing diverse qualities and experience by brushing up recruitment strategies ● Continued female/mid-career hiring and active promotion based on capability ● Continued support for balancing childcare and work ● Promoting senior employee activation ● Development of a compensation system for professionals ● Realization of working styles that enhance productivity through promotion of "Cosmo's Work Style Guidelines" 	<ul style="list-style-type: none"> ● Commitment by the Wellness Management Promotion Committee ● Educational activities to improve smoking, drinking and eating habits ● Organize wellness events ● Disseminate information and provide learning opportunities to establish healthy lifestyle habits

KPIs in the 7th MTMP

 Human resources training and development	 Organizational culture	 Wellness
 <p>Initiatives in FY2023 -Development of core digital personnel -Increase in company payments for personal development courses -Coaching by professionals</p> <p>Human capital investment (per person) ¥180,000 (¥100,000)</p>	 <p>Engagement index*² ≥60Points (57Points)</p>	 <p>Healthy Lifestyle Index*³ 61Points (58Points)</p>
 <p>Self-directed career development index*¹ 80Points (58Points)</p>	 <p>Percentage of female managers 10% (6.7%)</p>	 <p>Paid leave usage rate 90% or more (93%)</p>

* () is the result of the 6th MTMP

*1: Percentage of positive respondents to the three career development items in the Employee Consciousness Survey








*2: Percentage of positive respondents in the three categories of job satisfaction and pride in work in the Employee Consciousness Survey

*3: Average of the healthy percentage of the following 5 items among the results of periodic health checkups

((1) Exercise (2) Diet (3) Drinking (4) Sleeping (5) Smoking)

Appendix

(Ref.) KPIs for material issues in the 7th MTMP

	Material issues	Vision for the future	KPIs	Related SDGs
Material issues for sustainable value creation	Climate change countermeasures	<ul style="list-style-type: none"> GHG emissions are managed appropriately Progress has been made toward achieving net zero carbon emissions by 2050 	<ul style="list-style-type: none"> 30% reduction in emissions by FY2030 (vs. FY2013) CO₂ emissions reduction (Scope 1, 2) CO₂ offset amount 	 
	Provision of clean energy, products, and services	<ul style="list-style-type: none"> Clean fuel that meets customer needs has been developed and is supplied We have become a leading company in domestic renewable energy generation Clean products have been developed and are being provided across the entire value chain Technologies and services that support low carbonization and decarbonization have been developed and are being supplied 	<ul style="list-style-type: none"> Amount of clean fuel supplied and supply ratio Wind power generation facility capacity Other renewable energy generation facility capacity Construction of a green electricity supply chain Amount of next-generation raw materials supplied Sales excluding fossil fuels R&D expenses and investment in new businesses 	    
	Structural reform of profit-making businesses	<ul style="list-style-type: none"> Business profits are generated in a decarbonized society by investing profits from existing businesses in new businesses Enterprise value is being enhanced through new businesses centered on clean technology 	<ul style="list-style-type: none"> Investment in New businesses 	
Material issues that form the foundation of business continuity	Promoting human resources' success, health, and job satisfaction	<ul style="list-style-type: none"> All employees can demonstrate their abilities to the fullest, regardless of age, gender, nationality, job type, affiliation, or work history Decisions are made through dynamic discussions that incorporate diverse opinions Overwork and harassment are prevented, and employees can work healthily and with peace of mind Employees take the lead in managing their own physical and mental healthcare, and manage and improve their health Employees autonomously improve and utilize their strengths and expertise to implement business strategies Employees are energetic and challenge themselves, and enjoy continuous growth with job satisfaction and fulfillment 	<ul style="list-style-type: none"> Proportion of females in managerial roles Ratio of females among new university graduate hires Percentage of employees who have taken a stress check (mental health) Percentage of employees who have received lifestyle health guidance (physical health) Investment in employee education and training Employee awareness survey "work satisfaction/pride" score 	    
	Commitment to compliance and sharing/practice of vision and values	<ul style="list-style-type: none"> Laws, regulations, and social norms are observed Officers, employees, and other staff members understand and observe the Group Management Vision, policies, and internal regulations The Cosmo Energy Group Code of Conduct and policies are widely understood and individuals are able to make appropriate decisions 	<ul style="list-style-type: none"> Number of compliance violations Employee awareness survey scores for "compliance education," "awareness of consultation helplines," and "understanding of Code of Conduct" 	  
	Strengthening of Group risk management	<ul style="list-style-type: none"> Both the Company's operational risks and strategic risks (including opportunities) can be identified, and risks are appropriately hedged or taken Serious risks for the entire Group are understood and managed 	<ul style="list-style-type: none"> Risks associated with CEG priority initiatives are additionally monitored Risks associated with priority initiatives undertaken by each company are monitored 	
	Digital transformation (DX)	<ul style="list-style-type: none"> A corporate culture that uses digital technology to change work processes and continuously pursue innovation is being fostered to bring about business transformation Efforts are being made to improve internal and external CX (customer experience) by providing customers and employees with solutions to solve internal and external challenges centered on data utilization 	<ul style="list-style-type: none"> Cultivation of core digital personnel 	 
	Safe operations and stable supply	<ul style="list-style-type: none"> Employee injuries are prevented Plant accidents and product (quality) accidents are prevented Operations are carried out so they do not threaten the safety of the operating area or surrounding residents A stable supply of energy is provided, even during disasters and emergencies 	<ul style="list-style-type: none"> Number of work-related accidents Number of accidents Number of accidents with an impact on the environment Number of days when supply was impossible 	     

Disclaimer FORWARD-LOOKING STATEMENTS

Certain statements made and information contained herein constitute "forward-looking information" (within the meaning of applicable Japanese securities legislation). Such statements and information (together, "forward looking statements") relate to future events or the Company's future performance, business prospects or opportunities. Forward-looking statements include, but are not limited to, statements with respect to estimates of reserves and or resources, future production levels, future capital expenditures and their allocation to exploration and development activities, future drilling and other exploration and development activities, ultimate recovery of reserves or resources and dates by which certain areas will be explored, developed or reach expected operating capacity, that are based on forecasts of future results, estimates of amounts not yet determinable and assumptions of management.

All statements other than statements of historical fact may be forward-looking statements. Statements concerning proven and probable reserves and resource estimates may also be deemed to constitute forward-looking statements and reflect conclusions that are based on certain assumptions that the reserves and resources can be economically exploited. Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, using words or phrases such as "seek", "anticipate", "plan", "continue", "estimate", "expect", "may", "will", "project", "predict", "potential", "targeting", "intend", "could", "might", "should", "believe" and similar expressions) are not statements of historical fact and may be "forward-looking statements". Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements.

The Company believes that the expectations reflected in those forward-looking statements are reasonable, but no assurance can be given that these expectations will prove to be correct and such forward-looking statements should not be unduly relied upon. The Company does not intend, and does not assume any obligation, to update these forward looking statements, except as required by applicable laws.

These forward-looking statements involve risks and uncertainties relating to, among other things, changes in oil prices, results of exploration and development activities, uninsured risks, regulatory changes, defects in title, availability of materials and equipment, timeliness of government or other regulatory approvals, actual performance of facilities, availability of financing on reasonable terms, availability of third party service providers, equipment and processes relative to specifications and expectations and unanticipated environmental impacts on operations. Actual results may differ materially from those expressed or implied by such forward-looking statements.