

Find the best answer
to the future of
people and the earth
to realize a sustainable society

OYO oyo corporation



Creating the future through geoscience

Message from the President & CEO

Achieve further growth through DX and human capital management

OYO Group contributes to the realization of a sustainable society by harmonizing human society and the natural environment with technologies based on earth science.

Since its establishment in 1957, OYO Corporation has contributed to the construction of high-quality infrastructure, natural disaster-resilient urban development, the conservation and development of the natural environment, and the stable supply of natural resources and energy through our expertise in geology and ground.

Human society is now facing unprecedented challenges such as climate change, the increase in natural disasters, the biodiversity crisis, the dramatic changes in social awareness and lifestyles due to pandemics, and the turmoil of the global economy due to intensifying regional conflicts.

In order to adapt to these challenges, human society is expanding its efforts to transform social and industrial structures through digital transformation (DX) and green transformation(GX).

The OYO Group is also actively developing solutions that adapt to those changes, creating new markets by utilizing open innovation with other industries and promoting DX and GX.

In addition, we position investment in “human capital” as our most important management issue. We are strengthening our efforts for health and productivity management*, human resource development, and corporate governance.

As all of the OYO Group’s businesses are directly linked to the resolution of social issues, the growth of our businesses leads to the sustainable development of society. We will continue strengthening the Group’s earnings base through DX, GX, and human capital management and increasing our employees’ vitality and creativity. Based on these efforts, we aim to grow the Group’s businesses further and improve our corporate value.

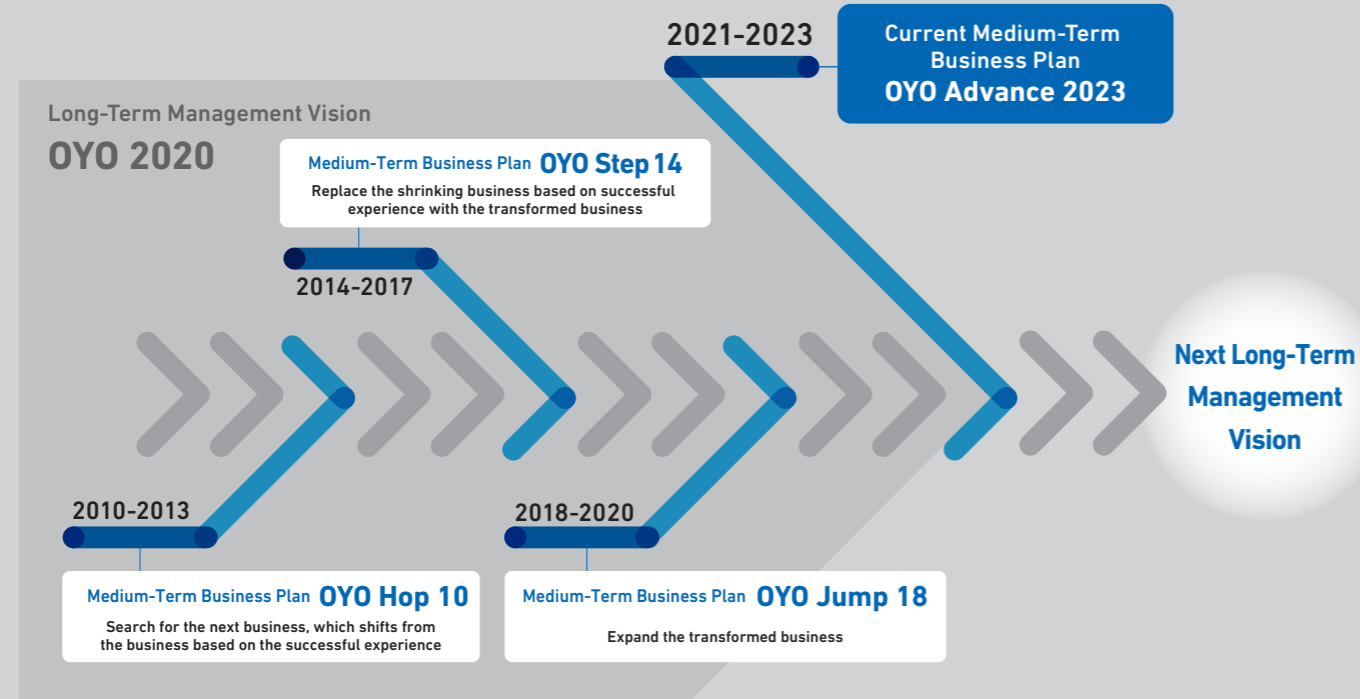
* “Kenkokeiei” (Health and Productivity Management) is a registered trademark of the NPO Kenkokeiei Kenkyukai (“Society for the Management of Company and Employee Health”).

Hirofumi Amano
Representative Director & President



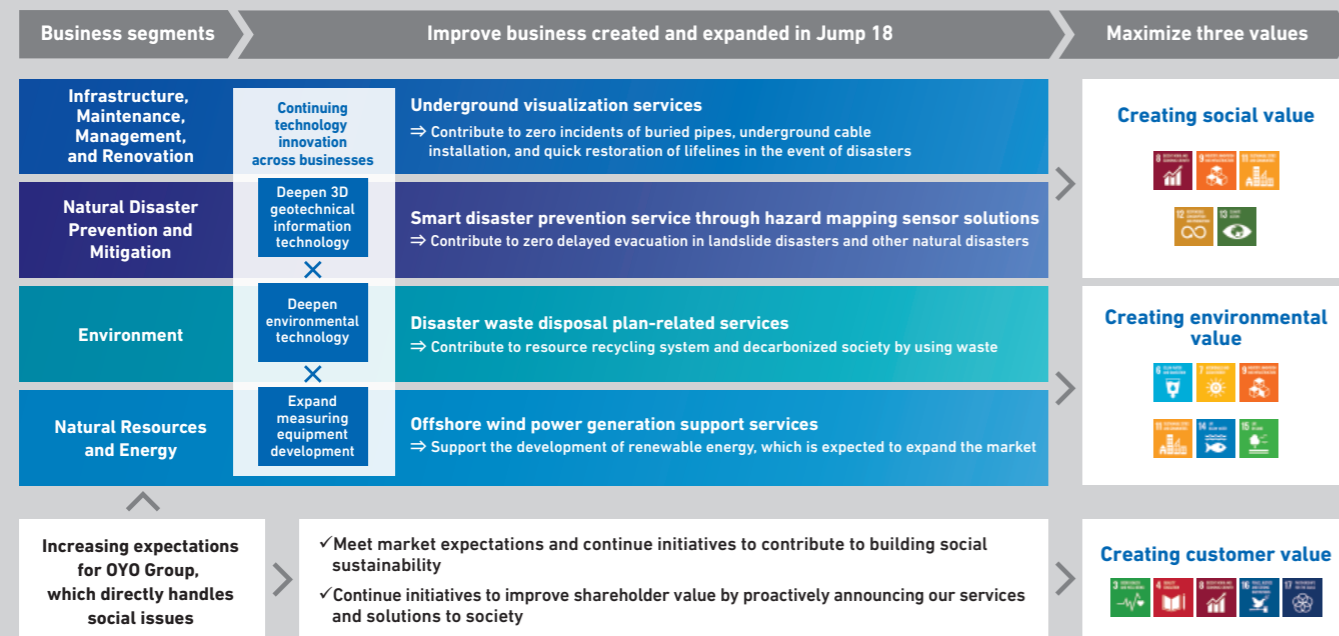
Medium-Term Business Plan OYO Advance 2023 (2021-2023)

The OYO Advance 2023 will take the following measures to grow into an earnings business while continuing the results of activities under the previous long-term business vision, "OYO 2020," and the previous medium-term business plan, "OYO Jump 18."



Basic Policy

We seek to maximize the three values (social value, environmental value, and customer value) through our four business segments, with sustainable management (ESG management and achievement of SDGs) as the basic policy



Growth Drivers

Step up investment for DX-centric innovation strategies

Innovation strategy 1 DX strategy	DX promotion for the creation of new business services	Investment amount (Total in 3 years) 1 billion yen
	DX promotion for deepening the existing business model	
	DX promotion for work-style reforms and innovative enhancement of productivity	
Innovation strategy 2 R&D strategy	BIM and CIM: Continue promoting 3D geotechnical analysis technology	Total: 5.5 billion yen Investment amount (Total in 3 years) 4.5 billion yen
	Measurement exploration equipment: development of new products and improvement of existing products	

Structural Reforms

To accelerate decarbonization, we will lay the next foundation for growth by promoting DX-centric innovation and implementing structural reform.

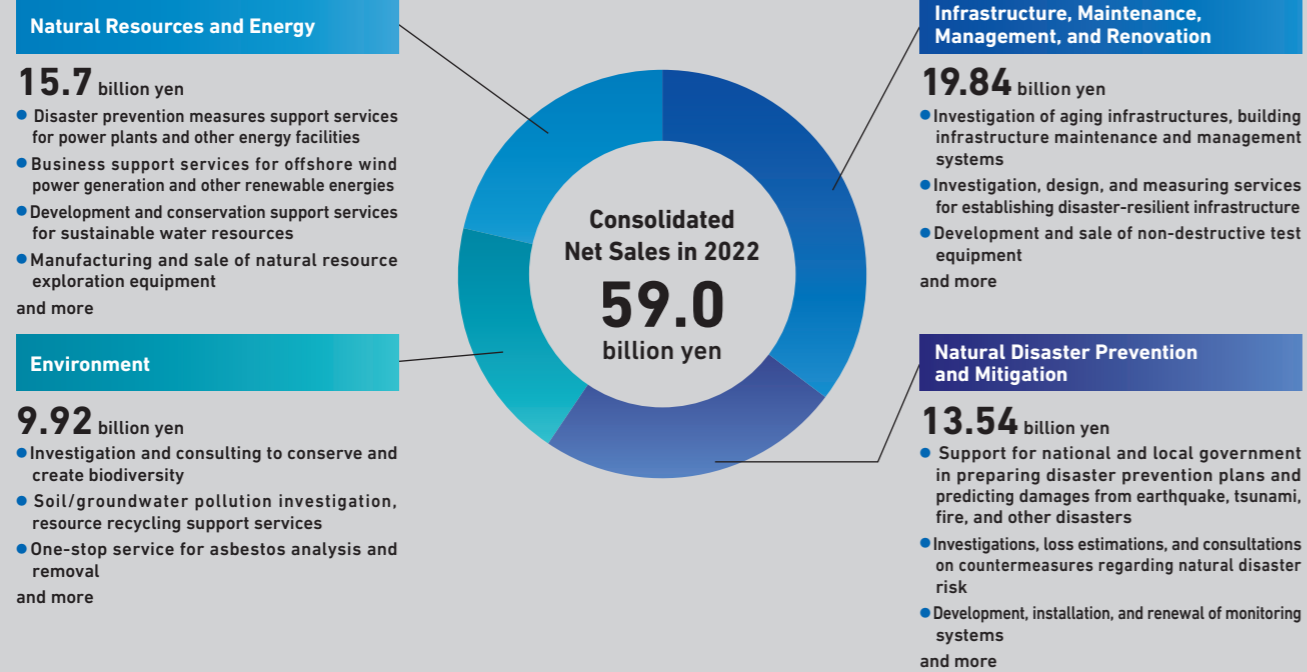
Business portfolio reform	Reform of four business segments	<ul style="list-style-type: none"> Expand the portfolio of "Infrastructure Maintenance," "Disaster Prevention and Mitigation," and "Environment" Accelerate the shift to the decarbonization market in "Natural Resources and Energy"
	Reform of domestic and overseas group companies	<ul style="list-style-type: none"> Promote reorganization/integration of domestic and overseas group companies through M&A by business segment For overseas group companies, consider selection and concentration based mainly on the potential for decarbonization and profitability
Business service reform	Reform through fusion of technologies	<ul style="list-style-type: none"> Promote fusion of technologies across the OYO Group through collaboration between segments to create one-stop solution services
	Reform through co-creation	<ul style="list-style-type: none"> Reform business services through DX, innovation, and cross-industrial co-creation
Work-style & corporate governance reform	Work-style reforms	<ul style="list-style-type: none"> Promote DX to realize diverse work styles
	Governance reforms	<ul style="list-style-type: none"> Promote corporate governance reforms, making it an important theme of management to achieve continuous growth and enhance corporate value over the medium to long term

Targeted Results (Performance Targets)

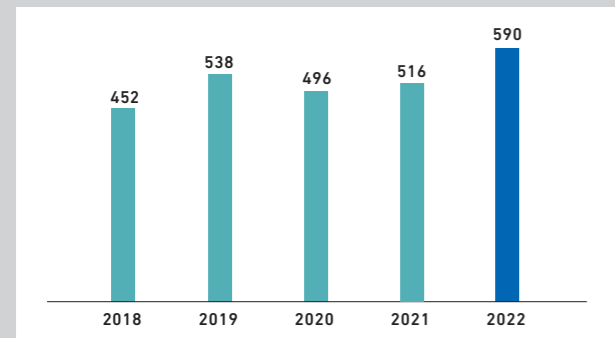
		Results for FY2020	Target for FY2023	Growth rate
Targeted Business Indices	Net Sales	49.6 billion yen	62.0 billion yen	125%
	Operating Income Margin	5.1%	8.0%	+2.9point
	ROE	2.6%	5.0%	+2.4point
Net Sales by Segment	Infrastructure, Maintenance, Management, and Renovation	18.7 billion yen	24.0 billion yen	128%
	Natural Disaster Prevention and Mitigation	13.2 billion yen	16.0 billion yen	121%
	Environment	9.3 billion yen	11.5 billion yen	124%
	Natural Resources and Energy	8.3 billion yen	10.5 billion yen	127%
Net Sales Ratio	Domestic vs. Overseas	82 : 18	75 : 25	

Business Overview

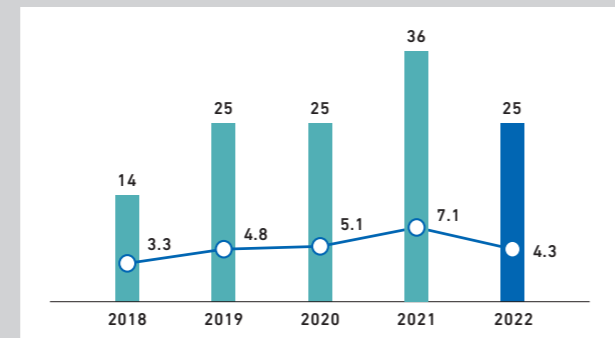
Net Sales by Segment



Net Sales (billion yen)



Operating Income (billion yen) Operating Income Ratio (%)



Number of countries where business is conducted

130+ countries

Number of group companies (including the Company and equity-method affiliates)

30

Total depth of boring surveys

7,721 km as of December 2021

Geotechnical data owned by OYO

Approx. 350,000 locations

Business Details

Infrastructure Maintenance, Management and Renovation

→ P07

Natural Disaster Prevention and Mitigation

→ P09

What we do

We are conducting business in four fields related to geoscience. Our distinctive feature is that we have significant strengths in geology and geotechnics. We are working to create new forms of sustainability in society by solving social challenges, such as community development, natural disaster prevention, conservation and restoration of the environment, and securing natural resources and energy.

Environment

→ P11

Natural Resources and Energy

→ P13

Extending the life of aged infrastructures to contribute to the development of a resilient society

Infrastructure Maintenance, Management and Renovation

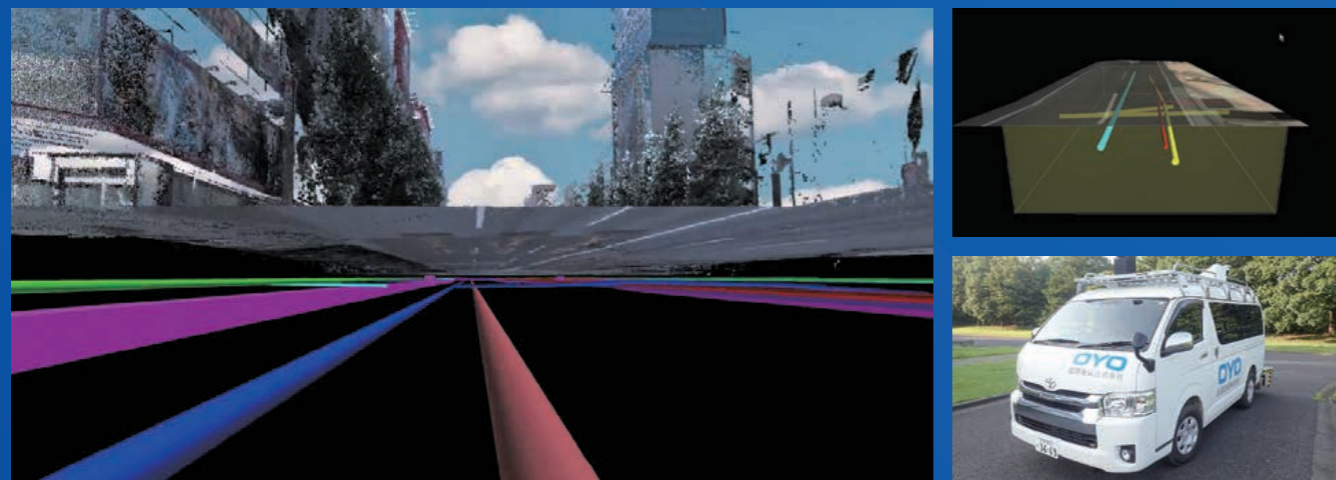
Contribute to building resilient and smart cities

Infrastructures such as roads, tunnels, and levees are indispensable for our lives and economic activities. However, these infrastructures' aging has recently become a serious social problem. How can we maintain and renovate those aging infrastructures while addressing various social issues, such as declining birthrate and aging population, increasing natural disasters, and financial difficulties? The OYO Group intends to consider the ideal way of infrastructure appropriate for the future by using unique technologies and new ideas related to geoscience.



Underground visualization services

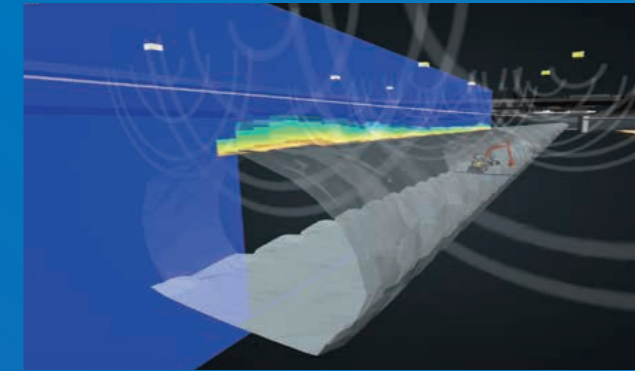
Beneath city streets lies various underground infrastructures – pipes and cables carrying water, sewage, gas, electricity, and communication. This has caused significant problems for those doing excavation work, with infrastructure information managed separately by each utility company or lost or inaccurate records of the pipes and cables. OYO's underground visualization services combine our 3D ground-penetrating-radar-equipped vehicles and AI analysis technology by Hitachi, Ltd. It provides a centrally managed platform for visualizing and mapping exact 3D locations of underground infrastructure beneath the road. Users can access the underground infrastructure information via the cloud anywhere, at any time.



3D modeling provides a digital twin of surface and subsurface conditions, including underground infrastructure

4D geotechnical visualization services

Geotechnical uncertainty poses a risk in underground excavation works, even with an understanding of the geotechnical structure. It can cause a risk of rework, higher costs, or even accidents. However, safe, reliable, and efficient work is possible with 4D geotechnical visualization services. S-wave structures are revealed three-dimensionally using 3D microtremor tomography, and changes are monitored over time as work progresses.



As excavation alters geotechnical structures, the changes are shown using 3D microtremor array survey

Sophisticated digital tunnel inspection

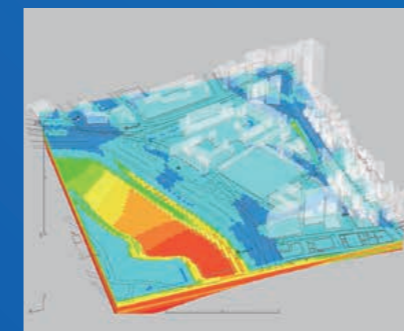
Besides conforming to technical standards, OYO's inspection combines high-density data acquired by 3D tunnel laser scanners and AI image analysis for more sophisticated and efficient inspection and better results. The 3D integrated information system, MAGIS-CIM, provides complete support from geological risk information management to BIM and CIM-based construction.



3D integrated information system, MAGIS-CIM

OYO GeoTools

OYO supports BIM and CIM modeling from a diverse product lineup, including the 3D geological analysis system, GEO-CRE, and the 3D geotechnical modeling and management system, OCTAS Modeler.



3D geotechnical modeling and management system, OCTAS Modeler

Under-road cavity exploration services

This service visualizes potentially dangerous cavities under roads in a fast, non-destructive way using AI based on the data obtained by ground-penetrating radar-equipped vehicles. This contributes to early countermeasures and reduces accident risks.



Vehicle used for under-road cavity exploration services

Geological risk management

We use our expertise in geology to provide appropriate risk management from the planning stage of a project, to eliminate construction accidents and inefficiencies caused by geological uncertainties. This comprehensive support extends from 3D geological risk visualization to countermeasure proposals, monitoring, and BIM and CIM integration.



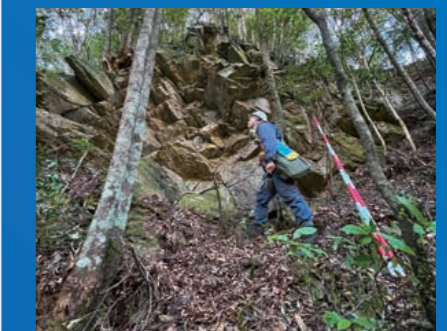
Pavement management using big data in transportation

Road surface conditions such as bumps and cracks are analyzed from the constant stream of data aggregated via the internet from connected vehicles, including wheel behavior and rpm changes. It enables efficient, inexpensive monitoring of extensive road networks where labor and budgets are limited.



Road disaster inspection services

OYO's road and slope inspection protects motorists and other road users from damage caused by heavy rain, earthquakes, and other disasters. The service is backed by the road disaster prevention expertise, and useful in road maintenance.



Reducing damage caused by natural disasters around the world and creating further safety and security in society

Natural Disaster Prevention and Mitigation

Protect communities from natural disasters

Flooding and landslides – brought by tropical cyclones or heavy rains and exacerbated by climate change and other factors – seem to grow more severe each year. Earthquakes are another threat, especially in Japan, where seismic activity has been increasing. Yet challenges to local disaster prevention and mitigation have also emerged, including labor shortages from lower birthrates and aging populations, revenue shortfalls, and an increasing number of vulnerable people. OYO's disaster prevention and mitigation solutions protect people from worsening natural disasters by leveraging advanced AI, IoT, and 3D geotechnical analysis technology, among other innovations.



Hazard mapping sensor solutions

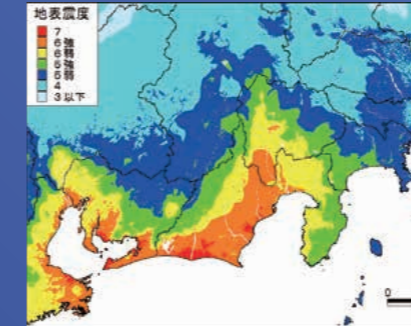
OYO provides a comprehensive real-time multipoint monitoring solution for natural disaster prevention and mitigation that can reduce operating costs and labor requirements. This solution consists of multipoint sensors applying edge computing, LPWA, and IoT/cloud technologies, combined with AI-enhanced extraction of danger zones for sensor positioning, drawing on insight from OYO's many years of surveying and operations. It is an all-in-one service that includes sensor installation and maintenance, data aggregation, risk assessment, transmission of alerts, and information visualization, with networks of sensors for slope failure and river flooding. Users are automatically notified by email if sensors detect abnormalities beyond a preset threshold, supporting emergency measures such as prompt issuance of evacuation instructions. Hazard mapping sensor solution received the highest award in the service & solution category at the 2020 MCPC Award held by the Mobile Computing Promotion Consortium.



Hazard mapping sensors (flood and slope sensors) and a screen for managing sensor information

Seismic motion calculation and damage prediction services

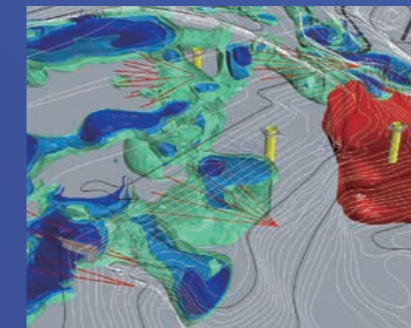
OYO provides services that are fundamental in local and national government disaster prevention strategies. We establish epicenters for large-scale earthquakes, provide analysis of widespread seismic motion and surveys of earthquake damage projections, and support the formulation of regional disaster prevention/action plans.



Source: Study group on modeling large Nankai Trough earthquakes, Cabinet Office, Government of Japan

Landslide prevention: 3D groundwater assessment services

Presence of groundwater that may cause landslides is visualized with advanced 3D geological analysis technology to propose highly effective and less costly preventive work or plans.



Visualizing groundwater conditions and countermeasures where landslides may occur

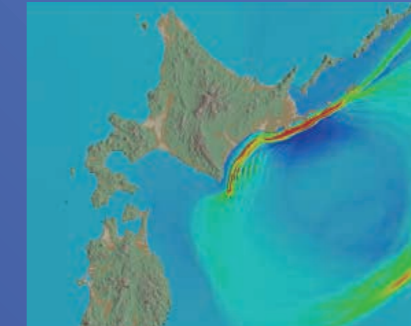
Volcano monitoring systems and strong-motion seismograph networks

OYO's system solutions are used in national disaster monitoring systems, including volcano monitoring systems and strong-motion seismograph networks (KiK-net), operated by the Japan Meteorological Agency and National Research Institute for Earth Science and Disaster Resilience.



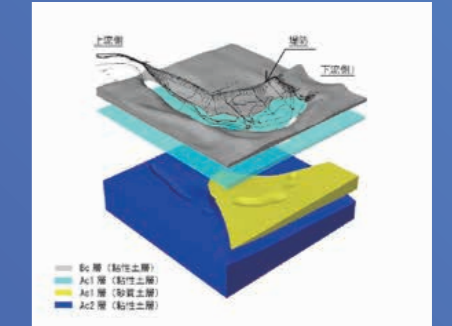
Tsunami height and flood forecast service

OYO's predictions of tsunami height and flood areas over wide areas (applying advanced supercomputer calculation and simulation) also form the basis for local and national government disaster prevention strategies and damage assessment studies.



System for soundness evaluation of the levee, ELLS3D

The continuous soil structure from shallow to deep areas around the levee is visualized with advanced exploration technology, and the results are integrated into 3D geological models. It enables efficient identification of weak embankment areas and effective countermeasure proposals.



3D geological models of the levee

Risk management services for slopes in urban areas

Slope failures in urban areas have become more common. This service includes preventive measures for municipalities and businesses, ranging from simple risk assessment reports to on-site studies and simulation-based determination of failure risks.



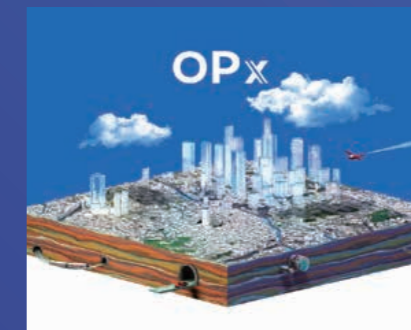
Flooding sensor bollards

The flooding sensor bollard is jointly developed with Sunpole Co. Ltd. and Yuasa Trading Co. Ltd. When flooding is detected, emergency warning lights on the top are automatically illuminated, and administrators are notified about rising water levels via email.



Risk information platform, OPx

OPx provides various data and system services for real estate, retail, distribution, and other markets by aggregating and integrating risk information, urban spatial information, market data, and other data maintained by OYO and others.



Fire spread prediction

OYO provides research services and system solutions for urban firefighting and prevention. This solution includes the prediction of fire spread damage after major earthquakes and the development of supporting information systems for more effective firefighting.



Environment



Toward comfortable, biodiverse communities

Global efforts to protect and restore the natural environment are rapidly expanding around the world, as shown by the Paris Agreement adopted at COP21, Japan's Carbon Neutrality Declaration for 2050, and various green transformation (GX) measures that promote decarbonization as a catalyst for growth. Since the establishment of the Environmental Business Division in 1976, the OYO Group has provided solutions for environmental issues such as soil and groundwater contamination, waste disposal and treatment, and biodiversity destruction. As geoscience experts, we will continue to contribute to environmental conservation and restoration and a sustainable future through unrivaled solutions that reduce environmental impact and risks while striking an optimal balance between development and conservation.



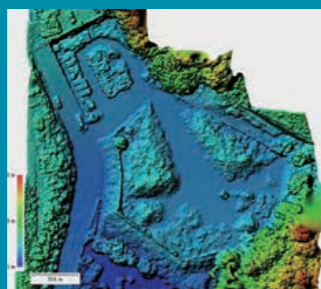
Disaster waste disposal planning



Since planning, designing, and supervising construction for waste treatment in six Iwate municipalities after the Tohoku disaster, OYO has gained incomparable expertise and technologies for analysis, calculation, transport, disposal, and recycling of vast amounts of disaster waste. Our services are distinguished by waste volume estimates, transport, and management plans based on high-level reproduction of probable damage, which combine our unmatched experience in Japan with damage forecasting techniques and other expertise in earthquake disaster prevention. Practical experience from the Tohoku disaster also underpins our work for actual disaster sites—an advantage that sets us apart. OYO assists municipalities reporting to the national government by promptly calculating amounts of disaster waste generated, formulating disposal action plans, and providing appropriate technical supervision of waste disposal for local enterprises. These distinctions and advantages have given OYO the leading market share in Japan for disaster waste services.



Drone photography of temporary storage sites



Aerial thermal infrared analysis

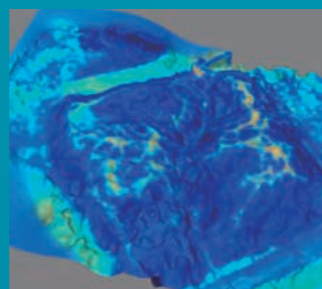


Table-top exercise

Supporting municipalities in decarbonization strategies

Japan has a high risk of natural disasters. Moreover, rural areas face other challenges, including lower birth rates, aging populations, and general depopulation. To develop decarbonization strategies in municipalities, it is necessary to raise awareness about the multifaceted nature of the particular region. OYO integrates and leverages wide-ranging expertise in disaster prevention, transportation planning, recycling, and renewable energy to help cities develop optimal decarbonization measures.



Example of a regional circular and ecological sphere (Ishigaki City)

Dealing with brownfields with exit strategies

For companies remediating contaminated soil, complex legal procedures and frequent revisions to technical guidelines often lead to confusion, planning delays, and higher costs. OYO provides complete support – from planning and research with exit strategies in mind to countermeasures and land utilization – to ensure that dealing with brownfields proceeds smoothly.



Example of dealing with soil contamination

Systems to control invasive fish

These services employ environmental DNA and other techniques for efficient assessment of non-native fish populations that affect bodies of water or the fishing industry, which are then controlled to reduce or eliminate them.



Ecological survey on a boat equipped with an electric shock system

Support services for environmental restoration in Fukushima

To promote environmental restoration and recovery in Fukushima disaster sites, OYO provides an array of technical assistance, facility design, monitoring, and other services to promote disaster waste disposal.



Services for naturally occurring heavy metals

OYO provides complete services for soil that contains naturally occurring heavy metals from construction and other work. This service ranges from analysis by official methods and rapid on-site analysis to various other surveys, analyses, and design of countermeasures with the overall project.



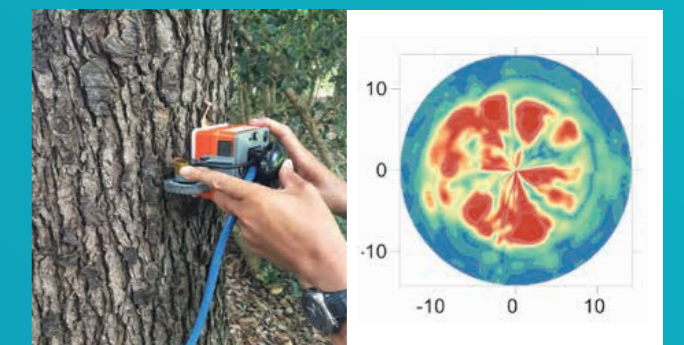
OECD registration support services: biodiversity surveys

Because companies benefit from the natural environment when procuring or transporting resources or using land in other ways for their activities, corporate value can be sustainably enhanced by protecting biodiversity. For companies actively engaged in environmental management, OYO provides biodiversity surveys throughout supply chains and OECD registration support services.



Tree diagnosis services

Old or diseased roadside trees that are decaying may collapse under strong winds or in typhoons may fall, which poses a risk of damaging communications infrastructure or harming people or vehicles on the road. To diagnose tree health, a specialized radar scanning system can be used to quickly examine trunks and rhizomes without damaging trees.



Compact radar for tree diagnosis

Securing stable resources and energy,
exploring new possibilities in energy development

Natural Resources and Energy

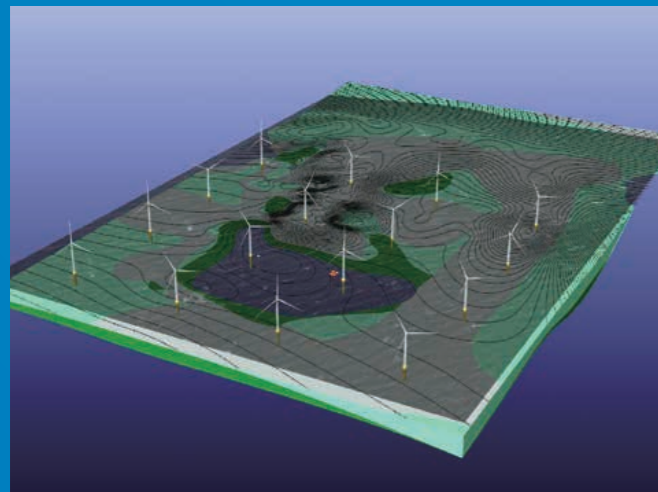
Supporting sustainable energy access

The Japanese government has declared the country's goal of becoming carbon neutral – a decarbonized society – by 2050 and formulated the Green Growth Strategy to lead efforts toward creating a positive cycle of economic growth and environmental protection. The initiative seeks new economic growth through energy decarbonization and industrial transformation, with one facet being full-scale introduction of offshore wind power and other renewable energy sources. Yet as natural disasters grow more threatening each year, it is also important to address the issue of resilience, to ensure energy security and a stable supply. The OYO Group will fulfill a key role in supporting sustainable energy access by encouraging widespread adoption and expansion of new energy sources through group strengths in development (such as for new survey equipment and 3D geological analysis technology) and by providing solutions for more resilient existing and new lifeline services.



Offshore wind power support services

To fulfill international commitments to reducing GHG emissions by 46% by fiscal 2030 and attaining carbon neutrality by 2050, the government adopted a basic green transformation policy through a Cabinet decision in February 2023, stating Japan's goal to make renewable energy a main source of power, with one aspect being a further introduction of offshore wind power. These projects require a seabed survey at construction sites in order to study the foundation design for wind turbines to be installed there and the layout design of the power plant. The surging growth of the offshore wind power market has driven demand for these seabed geological surveys. In response, OYO has been engaged in developing techniques for efficient and economical seabed surveys, introducing new soil testing methods as European companies enter the market, investing in additional survey scaffolding, and forming alliances with a variety of other companies, including those in other industries. As a result, we are currently the market leader in this field.



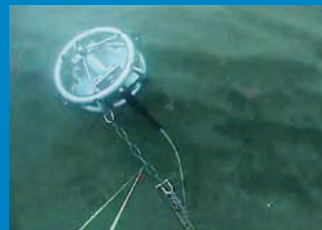
3D geological models of the seabed



Offshore boring surveys



CPT surveys

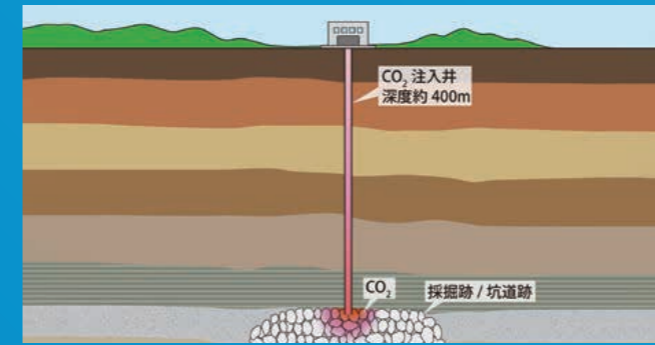


Seabed microtremor array equipment

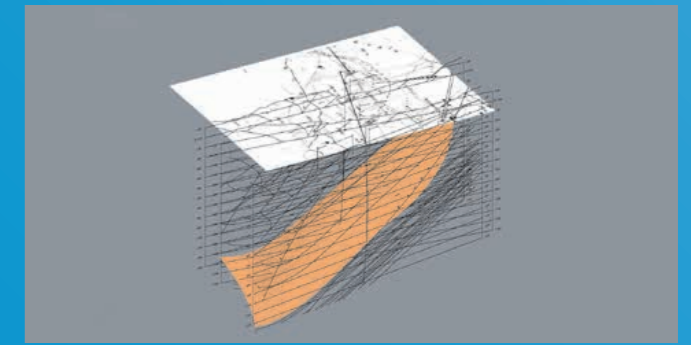


Decarbonized city development support services

Mikasa, Hokkaido was a coal mining town; unused coal can still be found there. OYO joins Mikasa city's project of decarbonized city development. In the project, the coal and local woody biomass are being used to create CO₂-free hydrogen. The coal is gasified in underground coal seams, with the resulting gas and hydrogen used for local industries and other consumers. The CO₂ generated from this process remains stored underground in closed coal mines. Applying OYO's carbon capture and storage technology and expertise, we conduct geological evaluations to ensure safe underground storage of CO₂. 3D geotechnical modeling is used to organize local geological information and select suitable sites. We provide services such as designing 3D geotechnical models that will form the basis for overall project planning.



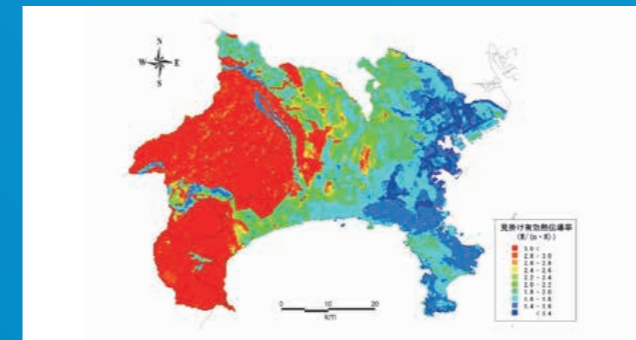
Schematic diagram of carbon capture and storage



3D model of a CO₂ reservoir

Renewable thermal energy support services

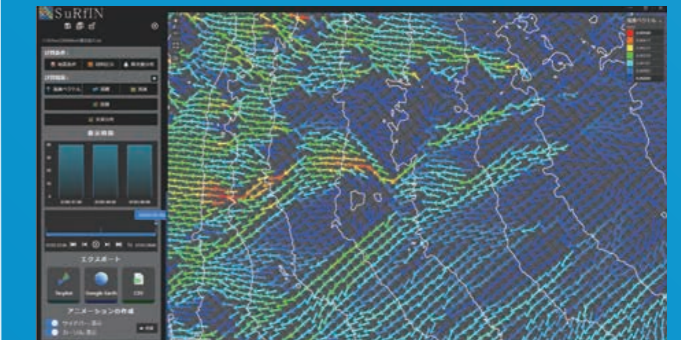
OYO provides one-stop services to support companies' concrete climate change efforts. This service ranges from identifying and evaluating the potential and feasibility of using used renewable thermal energy (geothermal or groundwater heat) or wastewater heat to conducting economic evaluations, designing deployment surveys, managing construction, and evaluating energy conservation after deployment through monitoring.



Geothermal suitability map

Water security management

OYO has extensive data on water resources (including groundwater and surface water) and the latest research and analysis technology. By applying these technologies, we provide solutions ranging from corporate water risk security responses to sustainable local water resource development and formulation of basic water cycle conservation plans for maintaining water resources.



Surface water flow simulation software, SuRFIN

Geothermal power support services

As Japan works toward carbon neutrality by 2050, the expansion of geothermal energy as a next-gen renewable energy source is expected. The OYO Group provides support throughout these projects, from feasibility studies at the initial geothermal resource development stage to selection of candidate sites to monitoring after plants are operational.



Disaster prevention support services for electric power facilities

When power plants or energy-related facilities are damaged due to natural disasters, the impact might not be limited to these facilities and their surroundings and spread to the entire Japanese economy. OYO contributes to a stable energy supply in Japan by assessing earthquake and tsunami risks at power plants and providing survey services for more resilient facilities.

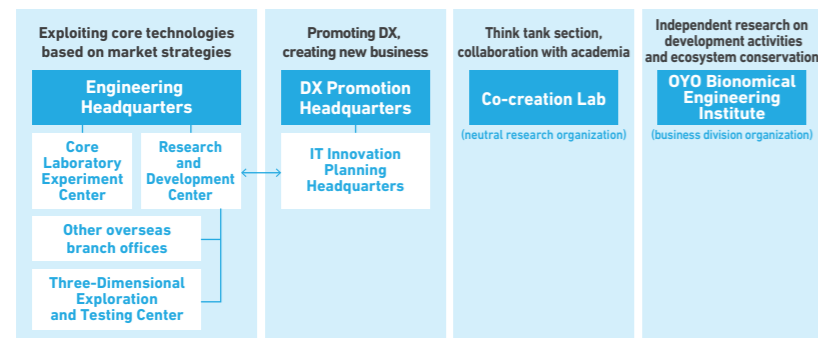


Earthquake simulation vehicle for seismic reflection surveys

Supporting new technical development and new markets for a changing world

To provide solutions in response to social issues and changing needs, the OYO Group is constantly researching new technologies. In addition to further exploiting our core technologies based on market strategies, a key mission of the R&D section is cultivating new businesses and markets by integrating advanced digital technologies and external resources.

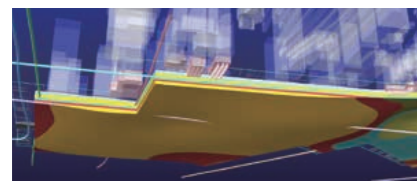
Framework for research and development



The Research and Development Center was established as a research organization for next-generation technology. The Center promotes the development of next-generation technologies by integrating the R&D activities of Group companies in Japan and overseas for greater efficiency and maximum synergy. Working with DX Promotion Headquarters, which promotes innovation based on DX strategies, the Center combines the Group's accumulated knowledge to date with digital technology. The Center aims to create new business models, add value, and improve service quality.

R&D for 3D geotechnical analysis technology

3D geotechnical analysis technology is significant for visualizing ground risks to prevent accidents and public disasters stemming from geotechnical uncertainty. Developing modeling tools and geophysical equipment for 3D applications make OYO a market leader in this field.



3D geotechnical model

R&D based on market strategies

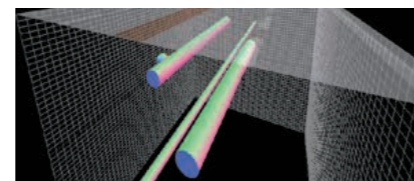
Leveraging dedicated departments for equipment development and soil/rock testing and research, OYO maintains a competitive edge by taking the initiative to develop and release new survey technology and testing equipment that meets market needs.



Seabed microtremor array equipment (used in seabed geological surveys for offshore wind power)

R&D based on DX strategies

Acting on the OYO DX strategy, we are further exploiting existing businesses based on the DX strategy by integrating AI, IoT, and cloud technology with conventional technologies. We actively promote open innovation with companies in other industries while cultivating new markets by actively promoting open innovation with companies in other industries.



Underground visualization services

Co-creation Lab



In times of volatility, uncertainty, complexity, and ambiguity, business as usual and approaches that are too narrow or localized are becoming less effective. In anticipation of future climate change and social transformation, OYO has established the Co-Creation Lab to develop predictive and multifaceted evaluation and analysis methods and integrative solutions for social issues.

OYO Bionomical Engineering Institute



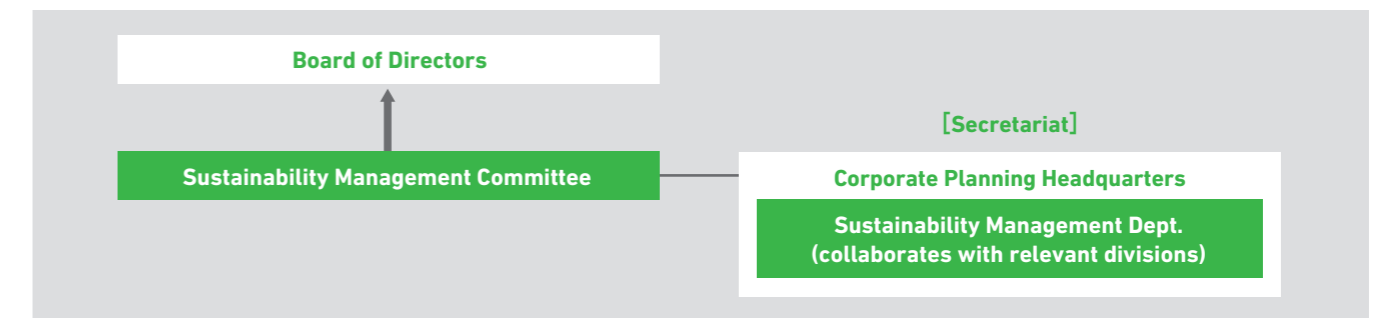
Established in Miharu, Fukushima, to work toward a society where development activities coexist in balance with nature. Research is focused on changes in ecology, water quality, and riverbed materials caused by dam and river development, with results presented at academic conferences in Japan, published in academic books, and applied in environmental impact assessments for various projects.

Promoting integration of sustainability and business activities, addressing social and environmental issues

Concept for Sustainability

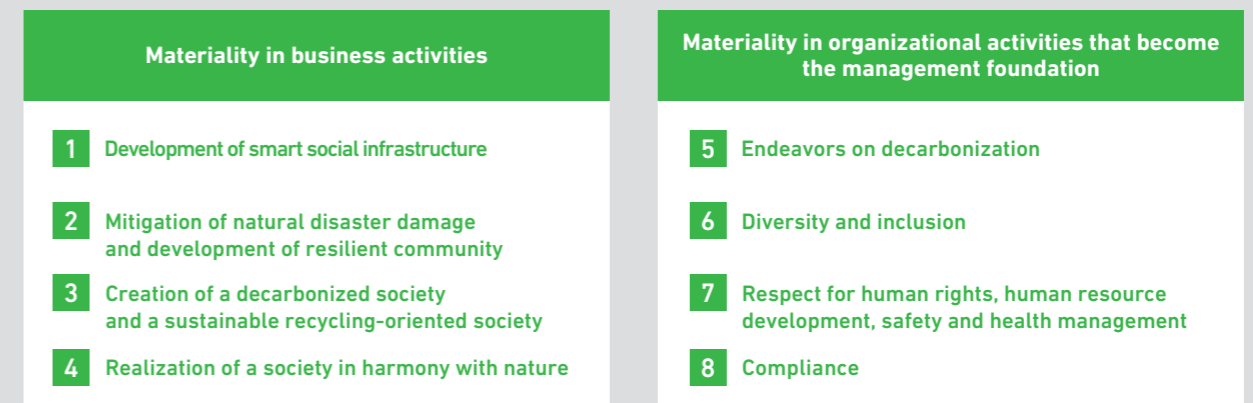
The OYO Group conducts business and organizational activities setting the management philosophy "Engineer a harmony between human society and the natural environment, sustain safety and security of society from an engineering approach and achieve social contributions through development of the company's business." All of the OYO Group's four business segments ("Infrastructure Maintenance, Management, and Renovation," "Natural Disaster Prevention and Mitigation," "Environment," and "Natural Resources and Energy") are closely related to sustainability. Therefore, providing solutions to customers through business activities contributes to the creation of a sustainable society and the enhancement of corporate value. Moreover, the OYO Group Corporate Code of Conduct "Pride" states, "We prepare for the unknown challenges of the future by embracing science, advancing safe, sustainable, and environmentally conscious technologies while maintaining the utmost integrity," encouraging all the Group employees to practice this. Aiming to maximize the three values (social value, environmental value, and customer value), the OYO Group further promotes the integration of sustainability and business activities to resolve social and environmental issues.

Sustainability Management System



- The Sustainability Management Committee considers policies and measures related to the Group's sustainability initiatives (including response to TCFD), deliberates risk management on ESG management, and reports to the Board of Directors at least twice a year.
- The Board of Directors regularly receives reports of important matters deliberated in the Sustainability Management Committee and supervises sustainability-related matters.

OYO Group's materiality



Environment

"The OYO Group positions the Environment as one of its business domains and believes that working on initiatives on both sides of business activities and organizational activities leads to the creation of a sustainable decarbonized society, recycling-oriented society and nature harmonized society." For business activities, we are promoting business related to renewable energy and proactively making proposals to contribute to the establishment of a regional circular and ecological sphere and harmonization between human society and the natural environment. In addition, for organizational activity, we are making efforts to respond to climate change, cut GHG emissions, and reduce environmental burden through the Environment Management System (EMS).



Offshore wind power generation support services

Offshore wind power is a key focus for Japan's carbon neutrality by 2050. OYO leads the market in seabed geological surveys at construction areas, which are required to design wind turbine foundations. Through this work, including developing original technology for efficient surveys and providing highly accurate 3D geotechnical models, we contribute to a decarbonized future accompanying the spread of offshore wind power.



Projects for local energy production and consumption

To enable local energy production and consumption in Toyotomi, Hokkaido, OYO has joined the Engineering Advancement Association of Japan and Air Water Inc. in a project that will supply energy to the area and attract businesses. Here, hydrogen produced from local natural gas will be used in fuel cells as a power source. While producing hydrogen from natural gas does create CO₂, by contributing technical expertise on geological storage, OYO helps curb on-site GHG emissions.

Calculation of greenhouse gas (GHG) emissions

Corporate GHG emissions are calculated and disclosed by the OYO Group, as are CO₂ emissions per employee and the breakdown (scope) of emissions, which are monitored. To reduce emissions, we have switched to LED lighting and updated air conditioning equipment, among other measures. We will continue promoting decarbonization initiatives.



Environmental management system and environmental load reduction activities

OYO has established the Environment Management System in accordance with ISO 14001. Based on the "environmental aspect assessment table," we identify significant environmental aspects in daily operations and individual business activities and consider and implement measures to reduce their environmental load. We are also working to conserve energy and adopt paperless operations, among other efforts.



Climate Change (Disclosure based on the TCFD Recommendations)

As a supporter of TCFD recommendations, the OYO Group follows the Sustainability Management Committee guidance in conducting scenario analysis of climate change. This knowledge is applied in management strategies and risk management, and the financial impact is considered. We also participate in the Carbon Disclosure Project and strive to disclose information on specific environmental impact reduction efforts.



Health management and human capital management

The OYO Group focuses particularly on human resources, one of our management resources. We also recognize that diverse talent is an essential element as a source of the Group's growth and innovation. From the perspective of focusing on talent and respecting human rights at our foundation, we promote a safe and rewarding workplace.

Diversity and inclusion (D&I)

The OYO Group believes that diversity is a source of innovation that enhances corporate value and competitiveness. Based on this idea, we promote the advancement of women and emphasize diversity in recruitment activities and the workplace.



Certified as a Health & Productivity Management Outstanding Organization 2023

OYO has been certified in the Certified Health & Productivity Management Outstanding Organizations Recognition, which is held jointly by Japan's Ministry of Economy, Trade, and Industry and the Nippon Kenko Kaigi. This program honors large corporations, SMEs, and others that practice outstanding health and productivity management, based on their efforts to address local health issues and promote health as advocated by Nippon Kenko Kaigi.



Promotion of work-style reforms

A committee, which consists of members from each division, has implemented work-style reform measures of many kinds to transform the ways our employees work. In 2022, casual meetings were introduced to encourage communication beyond departmental borders. Telecommuting was more strictly enforced as a facet of business continuity planning, and work-life integration initiatives were promoted that invited members to consider work and private life in an integrated way to get the most from both.



Corporate citizenship

Working toward a sustainable society is a commitment the OYO Group undertakes through business in our four segments, which all address social issues: infrastructure and maintenance, natural disaster prevention and mitigation, environment, and natural resources and energy. We also believe that sharing the knowledge gained from these business activities with our communities can enhance corporate value over the medium to long term. This forms the basis for our active stance in enriching society in many ways.

Flood monitoring near school commuting routes

Jointly with Ehime University, we have installed flood monitoring systems by small and midsize rivers near elementary school routes. This initiative helps keep children safe and secure on their way to and from school in case of heavy rain. Elementary students also learned about this system in disaster prevention lessons, with OYO representatives participating as instructors.



Participation in the 30by30 Alliance for Biodiversity

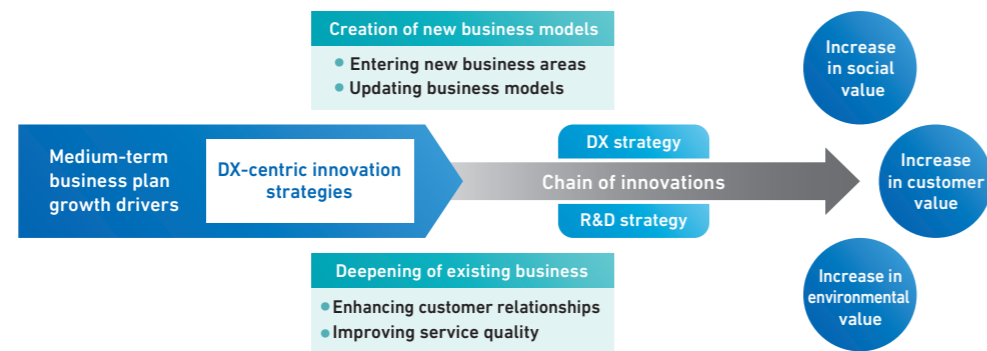
OYO is a member of the 30by30 Alliance for Biodiversity, which pursues a target of protecting or conserving at least 30% of land and oceans by 2030. As we participate in the Alliance, we work to attain the 30by30 target in Japan and achieve a sustainable society by applying our advanced technologies and expertise.



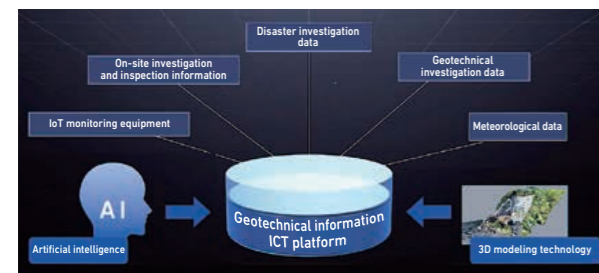
Creating a chain of innovation through DX strategies that are a few steps ahead of the times

In an era of great social change, the OYO Group has been promoting digital transformation initiatives designed to enable sustainable growth. Through them, we will fully embrace artificial intelligence, information and communication technology, and cloud technology in business activities, work styles, and more. They will transform overall management, from how we conduct regular business to how we create new business. OYO was even selected as a "DX Stocks 2022", a company boldly taking on the challenge of transforming business models and management.

Conceptual diagram of DX-centric innovation strategies in the medium-term business plan



Geotechnical information ICT platform

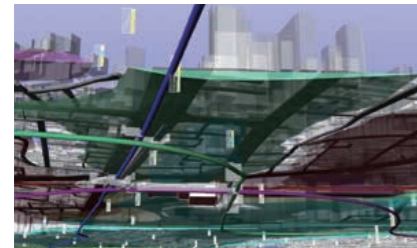


As the first OYO DX initiative, we developed a geotechnical information ICT platform. The platform brings together the data and knowledge we have built up internally. It is central to streamlining and reforming our work, enabling us to work in more sophisticated ways, besides serving as the basis for creating new business. The platform comprises the three domains of increasing work efficiency, integrating internal knowledge and general-purpose data, and expanding service business, all of which are comprehensively managed and operated through coordinated information.

Deepening of existing business through DX

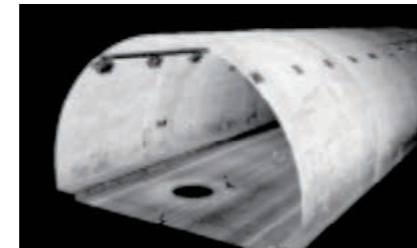
Digital transformation has enabled us to create new added value and yielded innovative productivity improvements.

3D geotechnical information technology



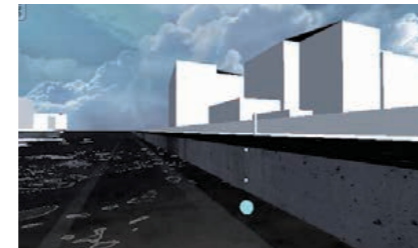
Geological structures are displayed three-dimensionally, and highly accurate geotechnical information is provided. Helps curb geological accidents or disasters and supports the development of smart underground spaces.

AI-based systems for tunnel inspection



AI analyzes high-density 3D data acquired by a 3D tunnel laser scanner, improving the quality of inspection results and enabling more sophisticated diagnosis.

Hazard mapping sensor solutions

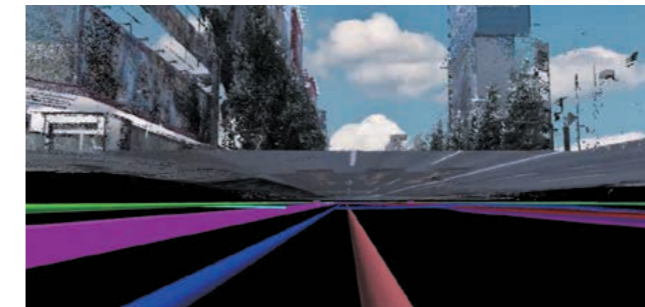


This disaster prevention system is responsive to climate change. It consists of emergency multipoint sensors applying edge computing, LPWA, and IoT/cloud technologies, which are positioned using AI-enhanced extraction of danger zones.

Creation of new business models with DX

DX initiatives – including open innovation with companies in other industries – have also enabled us to pursue new business.

Underground visualization services



Objects buried under roads are pinpointed by ground-penetrating radar and analyzed by AI. This service helps to prevent accidents involving buried pipes during excavation, by providing 3D location information on demand.

Real-time hazard maps



Under joint development in a group of four companies in the disaster prevention consortium (CORE). Intended to map impending disasters in real-time with IoT sensors and AI to ensure residents can evacuate immediately.

Flooding sensor bollard



An emergency IoT sensor system, with flood sensors embedded in bollards as part of road infrastructure. If flooding is detected, the system automatically notifies personnel and warns people nearby with emergency lights. Helps reduce flood damage from heavy rain.

Pavement management using big data in transportation



This service is an infrastructure DX solution using big data as applied to traffic. Provides efficient, inexpensive monitoring of road pavement using probe data transmitted by connected vehicles.

Innovative productivity improvements and workstyle reform with DX

Enabling higher productivity and quality as well as diverse work styles through digital technology and promotion of DX.

Initiatives for passing down technology with AR

Test equipment user manuals enhanced with augmented reality were introduced for special test equipment and the like, which previously required printed manuals and one-on-one instruction. Supports the goal of workstyle reform and efficiently passing down technology from one generation to the next.



Remote monitoring via wearable cameras

Wearable cameras are used to link client offices to job sites online, for remotely monitoring progress and results. Also useful in workstyle reform and simplifying customers' work.



Widely acclaimed outside the company, this system was distinguished with DX Stocks 2022.

OYO was selected as "DX Stocks 2022" by Japan's Ministry of Economy, Trade and Industry, the Tokyo Stock Exchange, and the Information-Technology Promotion Agency. The DX Stocks is a program which selects companies on the Tokyo Stock Exchange that have established internal mechanisms to promote DX leading to increased corporate value. These companies have also distinguished themselves by their record of using digital technology.



Company Overview

Overview

As of December 31, 2022

Name	OYO Corporation
Address	7 Kanda-Mitoshirocho, Chiyoda-ku, Tokyo 101-8486 Japan
Phone	+81-3-5577-4501
Website	https://www.oyo.co.jp/
Established	May 2, 1957
Paid-in capital	16,174.6 million yen
Listing	Tokyo Stock Exchange Prime Market
Net sales	59,011 million yen (consolidated, year ended December 2022)
Employees	2,438 (consolidated) 1,209 (non-consolidated)

Certifications

As of January 1, 2023

- Quality Management System (ISO 9001:2015)
 - Registered: November 13, 1998
- Environmental Management System (ISO 14001:2015)
 - Registered: July 6, 2012 (initially registered January 1, 2003)
- Information Security Management System (ISO/IEC 27001:2013)
 - Registered: March 14, 2014
- Personal Information Protection Management System (JIS Q 15001:2017)
 - Registered: November 27, 2020
- Second-level Eruboshi certification (women's participation and advancement)
 - Certified: September 30, 2016
- Platinum Kurumin certification (balancing work and parenting)
 - Obtained: January 19, 2018
- Resilience certification (business continuity and social contribution)
 - Obtained: November 20, 2020



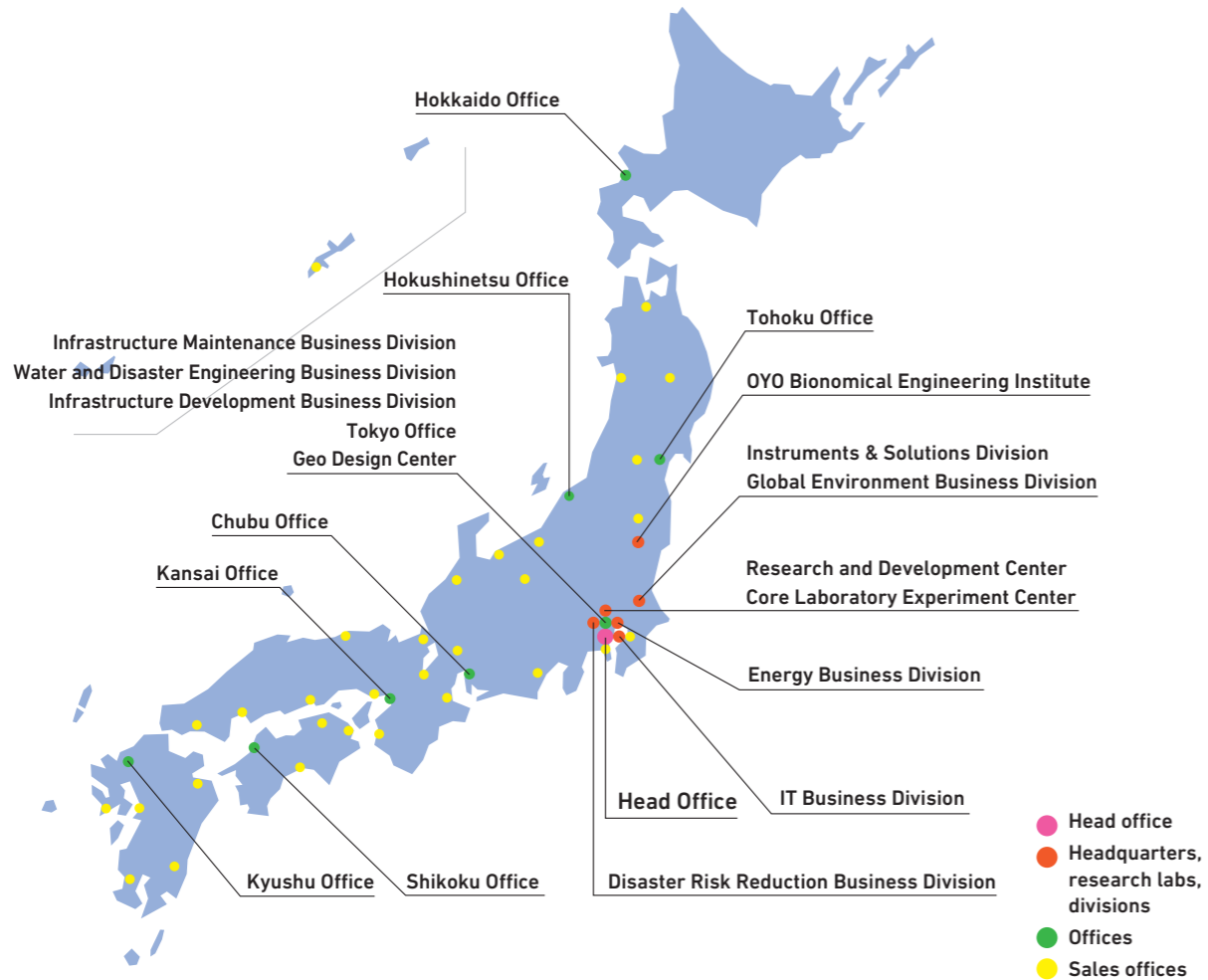
Business registration

As of January 1, 2023

Consulting engineer (MLIT registration: Ken 01 No. 175)	Measurement certification business
<ul style="list-style-type: none"> River, erosion control, and coastal/ocean engineering Urban/regional planning Harbor and airport engineering Geological engineering Road/highway engineering Soil/foundation engineering Water/industrial water supply engineering Steel structure/concrete engineering Sewerage engineering Tunnel engineering Agricultural civil engineering Construction environment engineering Forestry civil engineering Construction telecommunications engineering Waste engineering 	<ul style="list-style-type: none"> Concentration (Saitama registration: No. 555) Certified survey firm (MLIT registration: No. (14)-1334) Special construction contractor (MLIT registration: Toku-4 No. 2181) First-class registered architect office (Saitama registration: No. (3) 10113) Investigation firm designated by the Ministry of the Environment (Soil Contamination Countermeasures Act) Designated investigation firm for soil contamination (Kan 2003-8-1025) Specified worker dispatching undertaking (Toku 13-305162)
Geological surveyor (MLIT registration: Shitsu 04 No. 12)	

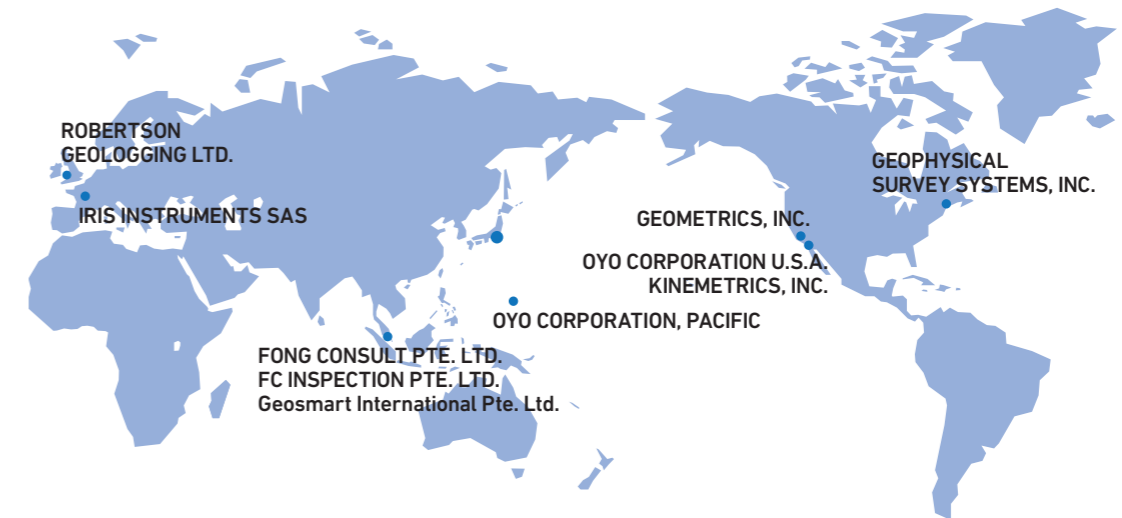
Business bases

As of January 1, 2023



Group Companies

As of January 1, 2023



Domestic companies

- NS Environment Corporation
- KCS Co., Ltd.
- Tohoku Boring Co. Ltd.
- Ocean Engineering Corporation
- KOEI Consultant Co., Ltd.
- OYO Seismic Instrumentation Corporation
- OYO RMS Corporation
- Nankyu Geo Technics Corporation
- OYO Resources Management Co., Ltd.
- OYO Geo-Monitoring Service Corporation
- Ox, Inc.
- Engineering & Risk Services Corporation

Overseas companies

- OYO Corporation U.S.A.
- Kinematics, Inc.
- Geometrics, Inc.
- Geophysical Survey Systems, Inc.
- Robertson Geologging LTD.
- OYO Corporation, Pacific
- Fong Consult Pte. Ltd.
- FC Inspection Pte. Ltd.
- Geosmart International Pte. Ltd.
- IRIS Instruments SAS