



# Corporate Philosophy

## Our Values

**Integrity, Imagination,  
and Entrepreneurship**

## Our Vision

**Growth through integrating  
technological innovation  
and financial expertise**

### Editing policy

*Integrated Report 2019* is intended as a stakeholders' guide to Japan Asia Group's (JAG's) financial results and business activities for the fiscal year ended March 31, 2019, and our group-wide efforts to contribute to a sustainable society through actively addressing environmental and social issues. Our editing policy references the International Integrated Reporting Framework issued by the International Integrated Reporting Council (IIRC).



Japan Asia Group strives to create green communities.

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### Disclaimer on forward-looking statements

Forward-looking statements included in this integrated report are based on information currently available to JAG. Forecasts are subject to unknown risks and uncertainties. Actual results may thus differ from forecasts due to a range of factors, including but not limited to changes in the business environment or foreign exchange rates.







# Group History

## Snapshot of the Group in numbers

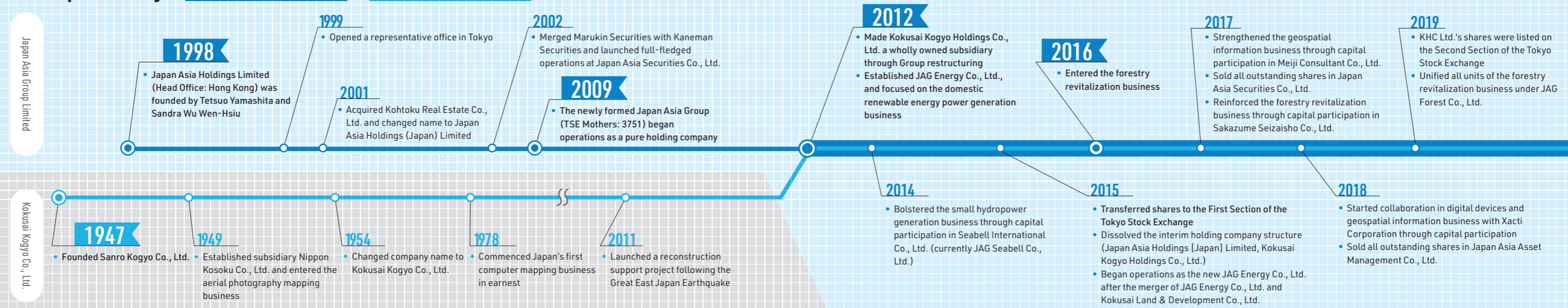
- Geospatial Information
- Green Energy
- Forestry Revitalization

Core competency

Addressing social issues

 <b>Geospatial Information business</b> <h1 style="font-size: 48px;">70+</h1> years of experience <p>The Group's largest subsidiary, Kokusai Kogyo Co., Ltd., has embraced the business principle of "capture, process, and make use" since its founding in 1947, and it has mainly provided consulting services leveraging its aerial photo measurement and analysis technology. Recently, it has been promoting the development of cutting-edge technology and businesses through the adoption of AI and IoT.</p> <p>We will continue our efforts to solve social issues, ranging from the maintenance of social infrastructure (which supported Japan's post-war reconstruction) to more recent measures for disaster prevention and reduction, as well as national resilience.</p>	 <b>Number of patents</b> <h1 style="font-size: 48px;">475</h1> (Japan and overseas) <p>The Group files and obtains many patents every year. Patents obtained in FY2018 (April 1, 2018 to March 31, 2019) included "Real-time Tsunami Inundation and Damage Forecasting System (Patent No. 6323880)" and "Tsunami Information Provision System (Patent No. 6362178)." The number of patents indicated are for patents with valid rights in FY2018.</p> <p>We will accelerate research and development with universities, government offices, and companies to advance and practically apply technologies in order to realize improved safety and security.</p>	 <b>Local government partners</b> <h1 style="font-size: 48px;">700+</h1> <p>The Group boasts a valuable network of partners built on strong ties of trust with local governments across the nation forged through the 70+ years of history at Kokusai Kogyo Co., Ltd., which operates the Geospatial Information business. Leveraging these ties with local governments, our other two businesses (Green Energy and Forestry Revitalization) have been steadily expanding the number of orders from local government offices.</p> <p>We will provide various solutions to support and enhance services for the community, bolstered by an ongoing expansion of our local government network.</p>	 <b>Renewable energy</b> <h1 style="font-size: 48px;">195</h1> MW (as of March 2019) <p>The Sano SolarWay (approx. 16.6MW) was completed in Tochigi Prefecture (in March 2019), and the Group's power generation facilities have grown to encompass 83 locations nationwide with a total capacity of over 195MW. In addition, we established a regional corporation to operate a retail electricity business and started providing regional energy services.</p> <p>We will support local governments in promoting regional energy policies with an eye to producing local benefits (e.g., local production and local consumption of energy, job creation).</p>	 <b>Owned forest land</b> <h1 style="font-size: 48px;">5,053</h1> ha (as of March 2019) <p>The Group has been increasing its owned forest land, starting with Miyoshi, Tokushima Prefecture, and gradually expanding to Kochi, Niigata, and Nara prefectures. We will continue to leverage our laser measurement technology to promote a data-driven forestry business, as we strive to turn undeveloped forests into productive forests and revitalize the domestic forestry industry.</p> <p>We have been introducing data-driven forestry operations to solve labor shortages and ensure a stable supply of wood materials.</p>	 <b>Consolidated subsidiaries</b> <h1 style="font-size: 48px;">100</h1> (as of March 2019) <p>The Group's portfolio of consolidated subsidiaries has been growing every year. Recently, we launched JAG Forest Co., Ltd. to make a full-fledged entry into new areas of business. Our policy is to focus on autonomy and speed as we continually expand into growing businesses. The expansion of our business scope is reflected in the number of our consolidated subsidiaries.</p> <p>We will work to expand into new business areas, aimed at boosting our business capacity to create greener communities.</p>
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## Group history




# The Year at JAG


Geospatial Information Green Energy Forestry Revitalization Overseas

**April 2018**

Released SPHERE, an interactive globe for visualizing global issues




Held a SDGs seminar using SPHERE




**June 2018**

Started a regional energy business at Fuchu and Chofu  
Machinaka Energy Co., Ltd. to promote the local production and local consumption of energy




Kaneko Nursery



Tamagawa Nature Information Museum



**November 2018**

Jointly established Miyoshi Energy Co., Ltd. with the town of Higashimiyoshi in Miyoshi, Tokushima Prefecture



**February 2019**

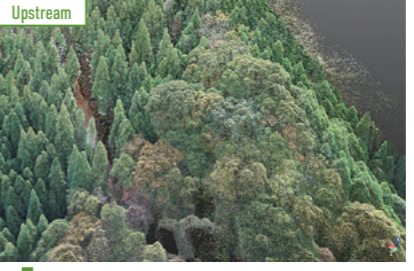
Received the Minister of Internal Affairs and Communications Award of the 1st Japan Open Innovation Prize for the development and operation of the Real-time Tsunami Inundation and Damage Forecasting System

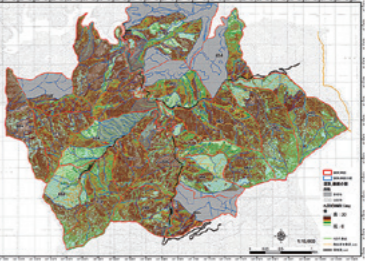
**April 2019**

Unified all units of the forestry revitalization business under JAG Forest Co., Ltd. to accelerate the formation of a new value chain


**Upstream**



Using geospatial information technology (right: analysis of forest volume) to facilitate collaboration with regional forestry businesses and revitalize forest real estate businesses




**Midstream**



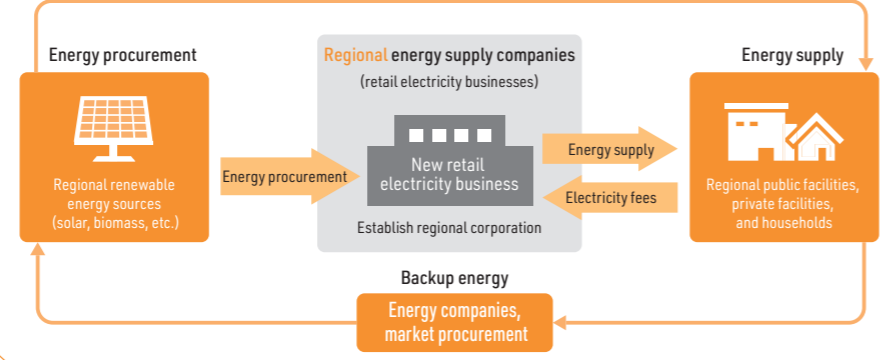
Productivity gains and forestry revitalization through drone filming, KKC-3D analysis, etc.

**Downstream**



Stable supply of domestic wood materials and market expansion

**New energy business aimed at revitalizing local communities**



The diagram shows a flow from 'Regional renewable energy sources (solar, biomass, etc.)' through 'Energy procurement' to 'Regional energy supply companies (retail electricity businesses)'. These companies include a 'New retail electricity business' and 'Backup energy' from 'Energy companies, market procurement'. They then supply 'Energy supply' to 'Regional public facilities, private facilities, and households', which pay 'Electricity fees' back to the supply companies.

April    May    June    July    August    September    October    November    December    January    February    March    April    May

**April 2018**

Acquired a capital stake in Xacti Corporation and promoted management reforms with the aim of launching original brands on the market



Night vision camera



Wearable camera



Four-eye lens drone camera

**May 2018**

Established joint venture ThinkTron Limited in Taiwan and started providing smart solutions in the Asian market



Signed a memorandum on a business tie-up with Vietnam's Fecon Corporation in the areas of disaster prevention and reduction, soil environment, and road assets



**August 2018**

Received the Minister of Land, Infrastructure and Transport Award at the Eighth Robot Awards for a system using drones to forecast landslides after volcanic eruptions




Remotely obtain data on areas with restricted access

**November 2018**

Purchased additional forest land in Nara, Tokushima, and Niigata prefectures, bringing the total area of forest land owned to 5,053 hectares, in order to promote the ownership of natural resources



**March 2019**

Realized an advanced spraying system with farming support service, "Up-A-Ray" in collaboration with Yamaha Motor Co., Ltd.



Target crops

**December 2018**

Sakazume Seizaisho Co., Ltd. expanded its sawing and pre-cutting factory



**May 2019**

Held a completion ceremony for Sano SolarWay (16.6MW) constructed in Sano, Tochigi Prefecture



## Message from the CEO

JAG works earnestly to solve social issues and create sustainable societies, through its corporate philosophy of "Save the Earth, Make Communities Green."

# We will continue our efforts to address climate change through both mitigation and adaptation measures.

Tetsuo Yamashita  
Chairman and CEO  
Japan Asia Group Limited



Efforts are being made around the world to address climate change, as outlined in the Paris Agreement and the 17 UN Sustainable Development Goals (SDGs). Increasingly, businesses as well as governments are called upon to carry out initiatives to both mitigate and adapt to climate change.

JAG prides itself in being one of the few companies that is able to contribute to both types of climate action through its business activities. We are spearheading the challenge against climate change, having placed it front and center in our management strategy; we respond

swiftly to the rapid changes in society, providing solutions through our unmatched technology and services in relevant fields.

Japan has always been beset by frequent earthquakes and volcanic activities, flooding rivers, flood damage and landslides caused by torrential rains, and various other natural threats; recently, it also faces problems caused by aging social infrastructure such as tunnels and bridges. These are critical issues that JAG strives to provide solutions to, through its technology and other means.

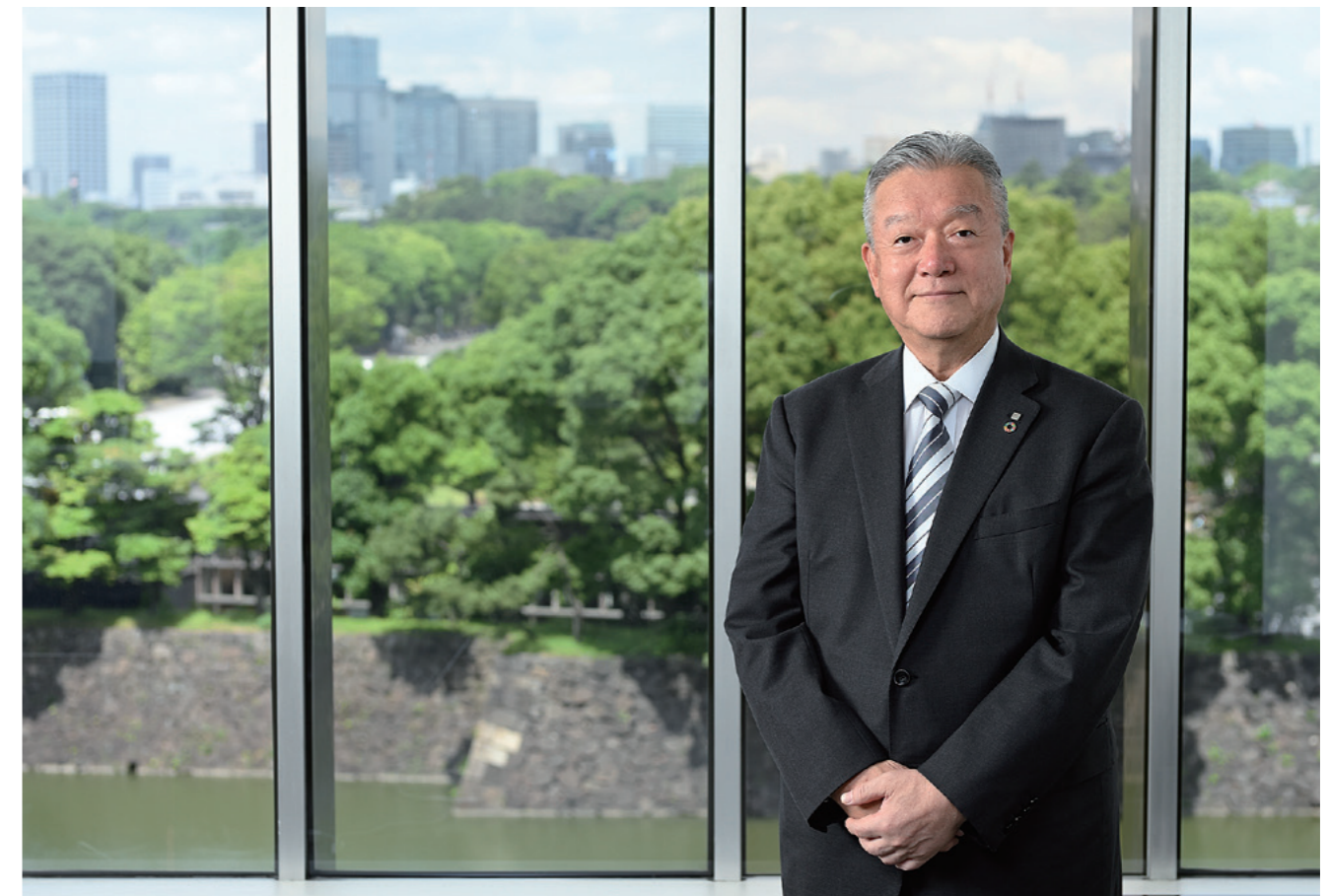
Japan has fallen seriously behind other developed countries in renewable energy use. Countries around the world are trying to increase the ratio of renewable energy in their future energy mix, and consumers are increasingly selective about how their energy is produced. Japan should not remain an exception; we must make proactive efforts to overhaul our energy mix in order to enable sustainable community development. JAG is rapidly developing diverse sources of renewable energy, in Japan and elsewhere, with an eye toward the future.

At JAG, we also focus on Japan's abundant forests and the potential of forestry to benefit local economies, connecting upstream and downstream businesses to revitalize the forestry industry and stimulate growth in various forestry-related industries. Critical to these efforts are innovation and the creation of a new value chain in each stage of forestry businesses, reinvigoration of related local industries, and the development of a viable scheme for the next generation, addressing regional revitalization and community development under conditions of rapid population decline.

JAG's will to protect the natural environment and solve social issues affecting not only Japan, but the world, underpin the technology and services we provide in three business segments: Geospatial Information, Green Energy, and Forestry Revitalization. We believe our proactive and relentless efforts toward breakthroughs and solutions will ultimately enhance social value and contribute to a better life for all. We also expect that our strong sense of social purpose and steady execution of our medium-term business strategy will lead to the growth of our corporate value.

Entrepreneurship is one of JAG's core values and driving forces. JAG is a company where each employee continually adapts their perception to the changes and the needs of society, and rises to meet new challenges. Collectively we will discern the changing global currents and lead other businesses in comprehensive efforts that contribute to society through the realization of green communities.

Thank you for your ongoing support of JAG as we continue to forge ahead with realizing sustainable growth.



# Value Creation



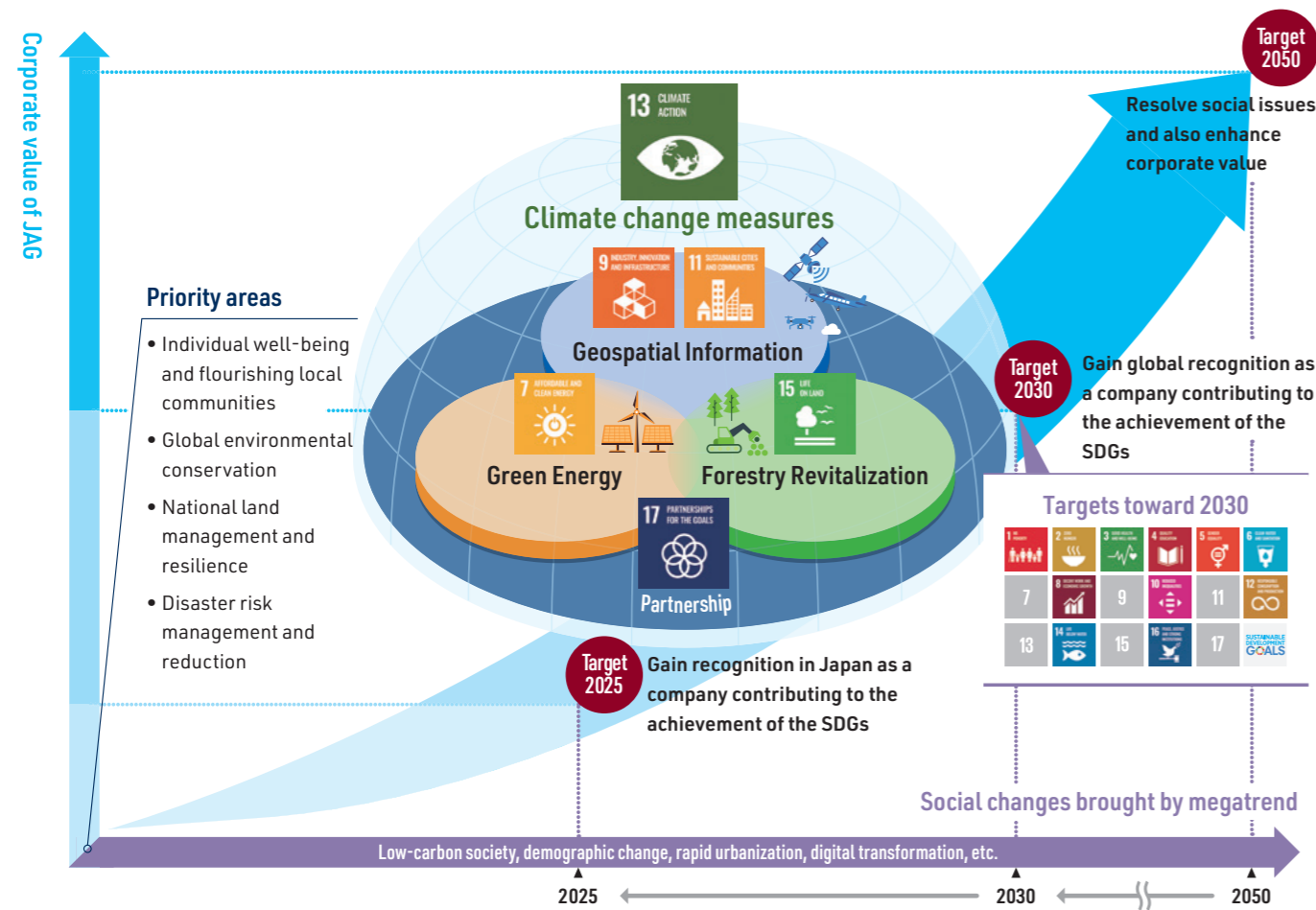
Aging social infrastructure and intensifying natural hazards, as well as the need for regional revitalization are some of the pressing issues faced by Japan. Globally, the fourth industrial revolution (Industry 4.0/Society 5.0) is accelerating change, such as the rapid proliferation of

IoT and AI devices and high-speed, large-capacity data communication enabled by 5G networks, while population decline and labor shortages caused by a declining birthrate and aging population and an increased importance placed on work-life balance are changing

social norms. JAG aims to create social value by working to solve issues stemming from diverse and rapid changes in society through its three business segments. By creating social value, spreading value through

our business activities, and circulating value and profits back to stakeholders, we move forward in our ambition to create green communities.

# Contributing to Resolving Critical Social Issues and the SDGs



## JAG and the future

### Forecasting megatrend and analyzing risks

Major waves of change are engulfing society around the world, including the shift to a low-carbon society, an aging population with declining birthrate, urbanization, and digital transformation. JAG formulates its business strategy through risk and opportunity analyses, megatrend forecasts and the use of AI, reducing medium- to long-term risks and capitalizing on business opportunities emerging from megatrend and resulting social issues.

### Identifying critical issues in society and the SDGs

JAG has a long history of addressing issues related to sustainability, SDGs and climate change through business activities in the fields of resilient community development, disaster risk reduction, and environmental conservation. We have identified priority areas of interest in tackling these issues toward 2050 based on our corporate philosophy, social issues identified across the organization, and in comprehensive consideration of stakeholder expectations and requests, in order to further advance these initiatives.

By working on these seven critical social issues, we will also contribute to SDGs 7, 9, 11, 13, 15, and 17.

Going forward, we aim to establish ourselves as a company that plays a key part in the resolution of global issues such as climate change and enhance our corporate value.

Corporate philosophy

Global and local social issues

Stakeholder expectations and demands

### Critical social issues

GI Geospatial Information GE Green Energy FR Forestry Revitalization

Issues	Description	Initiatives
Individual well-being and flourishing local communities	<ul style="list-style-type: none"> <li>Support for public services, increased convenience, and solving of pressing issues</li> <li>Development of geospatial x information communication technology (ICT) toward safe and secure communities</li> </ul>	<ul style="list-style-type: none"> <li>GI Medical facility information system to address issues in rural emergency medical care</li> <li>GI Road and water utility management information systems for supporting community lives and livelihoods</li> <li>GE Revitalizing rural and regional areas and creating jobs through low-carbon community development focusing on renewable energies</li> <li>GI Utilization of idle land and decontamination of polluted land for improved quality of life</li> </ul>
Global environmental conservation	<ul style="list-style-type: none"> <li>Climate change measures</li> </ul>	<ul style="list-style-type: none"> <li>GE Renewable energy development for the reduction of CO2 emissions</li> <li>FR Forestry revitalization for nature conservation and reduction of CO2 emissions</li> <li>FR Environmental conservation through remote sensing and REDD+</li> <li>GI Environmental assessment surveys and follow-up support</li> </ul>
National land management and resilience	<ul style="list-style-type: none"> <li>Tackling the issue of aging social capital</li> </ul>	<ul style="list-style-type: none"> <li>GI Efficient construction and surveying activities using i-Construction and UAV</li> <li>GI Develop and provide cutting-edge surveying technology</li> </ul>
Disaster risk management and reduction	<ul style="list-style-type: none"> <li>Grasping the extent of disaster damage and reducing disaster risk</li> <li>Government-led disaster risk management and risk reduction</li> <li>Swift and effective disaster emergency response</li> </ul>	<ul style="list-style-type: none"> <li>GI Disaster damage assessments toward the prevention of secondary damages and reconstruction</li> <li>GI Quickly provide disaster risk information through the development of the Real-time Tsunami Inundation and Damage Forecasting System</li> <li>GE Local production and local consumption of energy for disaster resilient communities</li> </ul>
Human resource development	<ul style="list-style-type: none"> <li>Accumulation and transfer of technology and expertise</li> <li>Creation of a workplace environment that maximizes capabilities</li> </ul>	<ul style="list-style-type: none"> <li>Hold technological symposiums</li> <li>Plan and hold various university seminars</li> <li>Enhance support for various certification programs</li> <li>Hold "Future Project" to discover and create new business ideas</li> </ul>
Compliance	<ul style="list-style-type: none"> <li>Rigorous compliance with laws and regulations</li> <li>Fostering an awareness of social ethics</li> </ul>	<ul style="list-style-type: none"> <li>Hold regular HR and compliance training sessions</li> <li>Raise awareness of corporate ethics and enhance internal control policies</li> <li>Utilize the whistleblowing system</li> <li>Take measures against antisocial forces</li> <li>Protect and make use of intellectual property rights</li> </ul>
Governance	<ul style="list-style-type: none"> <li>Improved execution of corporate governance principles</li> </ul>	<ul style="list-style-type: none"> <li>Ensure transparency and objectivity</li> <li>Utilize the Advisory Committee for Executive Nominations and Remunerations</li> </ul>



# Geospatial Information

## Business overview and strategy

The Geospatial Information business, led by Kokusai Kogyo Co., Ltd., provides consulting services based on wide area geospatial survey technology and social infrastructure development expertise. Satellites, aircraft, drones, automobiles, and ships are used to capture data; engineers process and analyze, then make use of data to solve issues connected with our lives, such as infrastructure development, environmental conservation, urban development, disaster damage assessment, disaster risk management measures, and energy development.

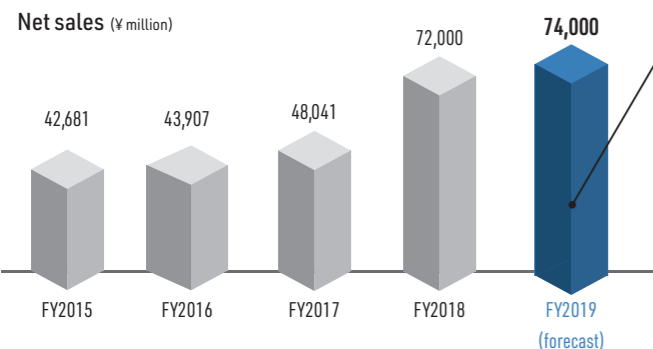
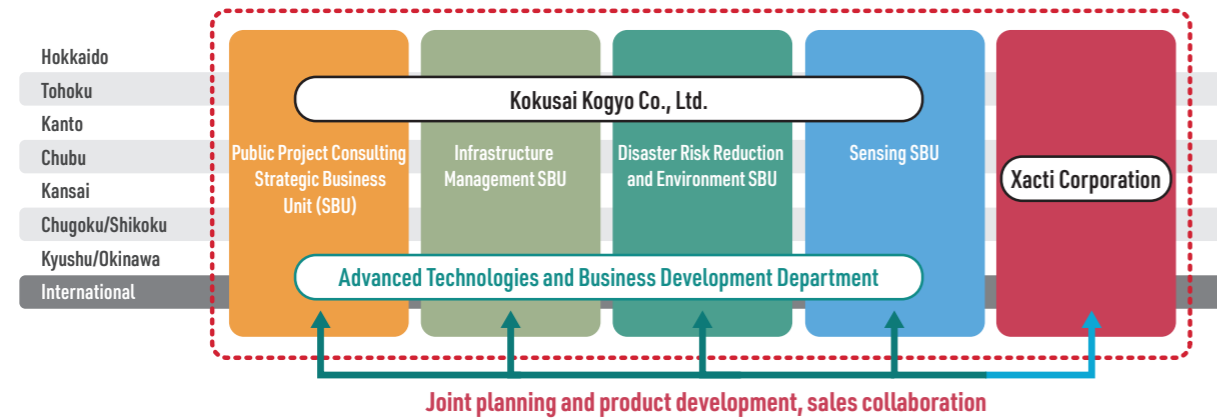
Urgent social issues such as population decline, aging social

infrastructure, and climate change measures (including disaster risk management and environmental conservation) heighten the importance of geospatial information solutions for the public sector. Our services constantly evolve in response to advances in technology and use of ICT, and we support decision-makers in quickly and accurately addressing difficult and urgent problems. The Geospatial Information business closely supports the work of national and local governments, and through them, the foundation of people's lives.

## Implementation of a four-business-unit structure

Starting in FY2019, we adopted a divisional structure comprising four business units, namely Public Project Consulting (geospatial information, national land management, overseas ODA business, etc.), Infrastructure Management (public private partnerships [PPPs], private finance initiatives [PFIs], maintenance and management of roads, bridges, and tunnels, etc.), Disaster Risk Reduction and Environment (environmental risk- and disaster risk management-related businesses, etc.), and Sensing (3D maps, displacement measurement, etc.). We aim to specialize, gain a stronger competitive edge and identify profit targets in each of these units. We also established an independent Advanced Technologies and Business Development Department,

to collaborate with each of the four business units and Xacti Corporation, which provides image solution services. Under this new structure, we aim to create and provide outstanding businesses and services in Japan and elsewhere. The Ministry of Finance's revised general accounting budget includes spending on disaster risk management and national resilience. The Ministry of Land, Infrastructure, Transport and Tourism's initial budget for public projects has exceeded the level in FY2018. Against this backdrop, we will leverage our group-wide technological capabilities and service solutions to achieve earnings surpassing FY2018.



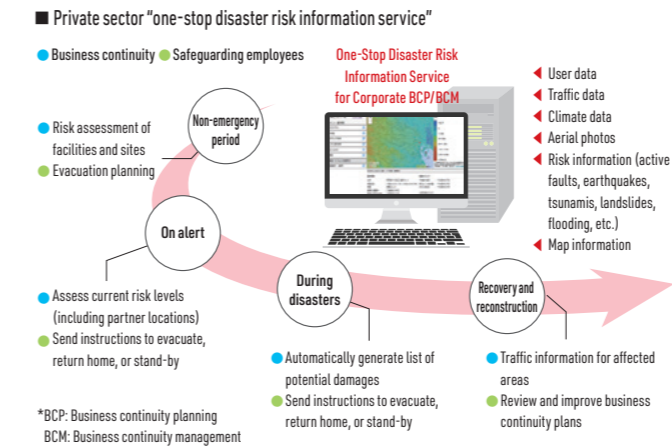
Breakdown of FY2019 (¥ million)	
Kokusai Kogyo Co., Ltd. Public Project Consulting SBU	25,626
Kokusai Kogyo Co., Ltd. Infrastructure Management SBU	7,250
Kokusai Kogyo Co., Ltd. Disaster Risk Reduction and Environment SBU	1,965
Kokusai Kogyo Co., Ltd. Sensing SBU	2,802
Xacti Corporation	21,659
Other (Meiji Consultant Co., Ltd., etc.)	14,698
<b>Total</b>	<b>74,000</b>

## Disaster emergency response

Natural hazards, which can cause disasters, are intensifying in recent years due to climate change and put our lives and livelihoods at a significant risk. The role we play in Japan's national resilience (see page 16-01) has assumed ever greater importance.

When disasters are imminent, we conduct aerial photography surveys and dispatch geological experts to quickly provide government and local authorities with information they need. We also continually enhance our information analysis technology (geomorphic analysis, crustal deformation analysis, tsunami detection system using oceanographic data, etc.), and provide products tailored for the private sector, such as a one-stop, map-based interface for businesses providing disaster risk and business continuity management information.

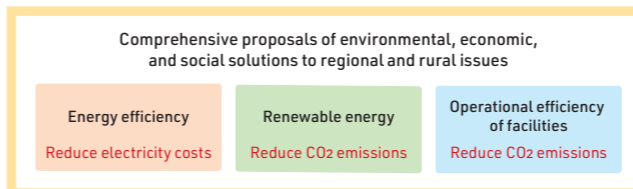
We contribute to the creation of sustainable communities as our clients' consulting company of choice, from five locations (Tohoku, Eastern Japan, Central Japan, Western Japan, and Kyushu).



## Carbon emissions management: realizing a low-carbon society

Global efforts to realize a low-carbon society are accelerating after the Paris Agreement, and Japan is faced with a need to step up. We innovatively combine CO<sub>2</sub> emissions reduction for a low-carbon society with much-needed cost reductions for local governments.

We provide consulting and technical services on the installing and upgrading of renewable energy and energy efficiency equipment, and their operational efficiency, to lower both costs and CO<sub>2</sub> emissions. We endeavor to provide comprehensive solutions that address environmental, economic, and social issues, in order to bring about low-carbon societies and contribute to our collective sustainable future.



## Management of roads, tunnels, bridges, and pavement

Many of Japan's roads, tunnels, and bridges were constructed during the post-war period of high economic growth, when the emphasis was on mass production and little consideration was given toward designs to mitigate disasters. We now face the need to address the aging of infrastructure and their ability to withstand increasingly frequent large-scale disasters.

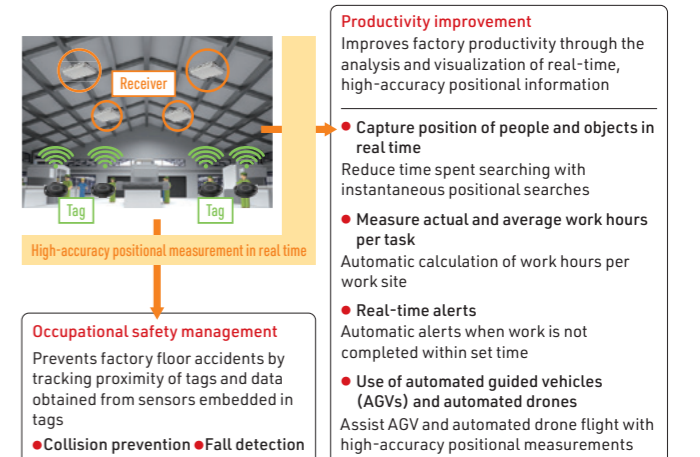
Combining expertise accumulated over the 70 years since our founding, we propose an information-driven maintenance cycle that is built on data on damages and post-construction deterioration of structures, in order to maintain and extend the life of infrastructure. We design, propose, and implement solutions, such as using geospatial information technology to quantitatively and visually grasp signs of deterioration, such as cracks, in structural management and maintenance, or using 3D modeling and a mobile measurement system (MMS) to automatically plot the location of damages on pavement by tracking the path of inspection vehicles.

We develop technologies and technical manuals in collaboration with other businesses, government bodies, and universities, in order to efficiently manage and maintain social infrastructure assets worth over ¥450 trillion, reduce manpower and costs where possible, and to create a better living environment for all.

## Positioning systems (indoor positioning)

Our indoor positioning service is one of our data capture technology offerings that measures the location of a target indoors with high accuracy and in real time. It can be used for real-time monitoring of moving targets, such as workers and products in a factory setting, through the installation of sensors and tags. This in turn allows quantification of labor required per task, and potential improvement of productivity, as well as applications in occupational health and safety, where data from sensors on workers and heavy machinery may be used to prevent collisions or to detect spills and falls.

The same technology is also used to add value to large-scale events and conferences, where the finding of people whom one wishes to meet (business matching) is facilitated by tags worn by participants.







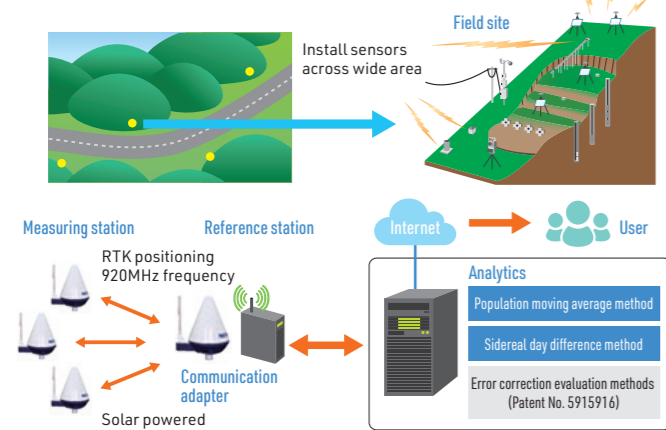
### Positioning systems (“SMILEsafety” satellite positioning)

Measuring displacement is important for managing and maintaining aging and historical structures, particularly when climate change-induced conditions affect the stability of ground surfaces. Our SMILEsafety satellite positioning system deploys a large number of specially developed, low-cost GNSS sensors\* to cover a large area of land and monitors the entire area with high precision. The wider coverage reduces the amount of work necessary to diagnose a displacement event, and lowers costs, while providing service to additional areas, and facilitates greater operational efficiency in infrastructure maintenance and management, construction management, and disaster risk management.

\* GNSS sensors: Global Navigation Satellite System sensors

#### System overview

Wide coverage by low-cost sensors to measure displacement of previously unmonitored at-risk zones

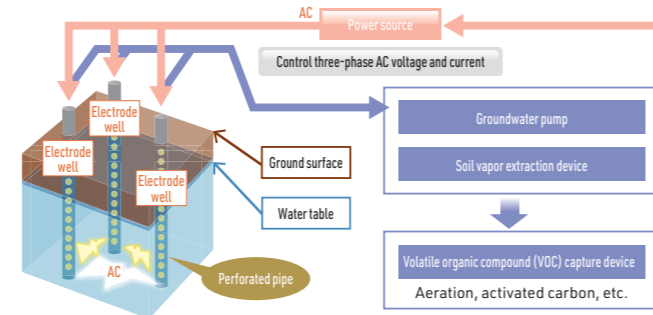


### Solutions for soil and groundwater contamination

Soil contamination by factory discharge and other production activities cannot be entirely undone by the forces of nature. Contaminants remain in the soil for a long time and can spread through groundwater, jeopardizing people’s health and lowering the value of real estate.

We provide a one-stop solution, from the assessment of land history and soil contamination levels, groundwater flow analysis and modeling, and designing and implementing appropriate decontamination measures fit to proposed future use, based on a track record of providing consulting and engineering services on soil and groundwater environmental conservation. The electrical resistive heat method (shown below) allows remediation of contaminated viscous soil particles (such as clay) without removal, and is the preferred approach for factories and waste disposal sites in operation.

#### Electrical resistive heat method



Note: Figure above prepared by Kokusai Kogyo Co., Ltd. based on a diagram by Shimadzu Corporation

Kokusai Kogyo

Startups

Xacti

Geospatial information and remote sensing

Cutting-edge technology

Digital Eye

Strategic partnership

## New technologies and services

Building a next-generation 3D mapping platform

### Risk identification and opportunities

#### 01 Demand created by the Basic National Resilience Plan

The SDGs and heightened general awareness about sustainability are creating significant business opportunities for us. In Japan, approval of the Basic Plan for National Resilience by the Cabinet Secretariat in December 2018, which outlines urgent measures over three years to prevent, reduce and mitigate disaster risk and build greater national resilience, also creates a favorable business environment. Our reorganization, which consolidates all of our public-sector businesses under two strategic business units—Public Project Consulting and Infrastructure Management (see page 13)—aims to strengthen our customer base and give us flexibility and speed in responding to customer needs in order to meet the short-term boost in demand created by the three-year plan. The appointment of Sandra Wu Wen-Hsiu, Chairperson and CEO of Kokusai Kogyo Co., Ltd., to the Advisory Committee on National Resilience (Disaster Reduction and Mitigation) by the Cabinet Secretariat, adds to our determination to make strong contributions toward national resilience.

In this brief period of policy tailwind, we are strengthening internal collaboration, creating a structure conducive to project development across the organization, and laying other groundwork for future business expansion. We will sharpen our competitive edge and create value that meets market needs by combining geospatial information technology with the latest developments in AI and IoT, thinking outside the box of legacy technologies and business models.

#### 02 Medium- to long-term social change

While meeting the demand created by the three-year national resilience plan is essential to our short-term growth, megatrend, such as the shift to a low-carbon society (see page 11), is also of paramount importance. To achieve long-term growth, we need to set medium- to long-term goals aligned with the SDGs, in order to continue to provide services that are in demand by an ever-changing society.

The Disaster Risk Reduction and Environment SBU and Sensing SBU (see page 13) will build new business models around the SDGs and climate change, tapping the domestic private sector market and expanding outside Japan with a medium- to long-term perspective. We will offer solutions, built through dialogue with our clients, to mitigate disaster risk and environmental risk that build resilience and the ability to cope with disasters during non-emergency period.

Our Institute for SDGs/Climate Change Strategies was established to bolster employee growth and the creation of new businesses toward the development of sustainable and resilient communities, from a medium- to long-term perspective. The research center promotes employee awareness of risks and opportunities arising from changes in society, as well as the understanding of global critical issues and how their work may contribute to solving them.

The pace of technological innovation is accelerating as we near Society 5.0. Our forming capital alliances with startups is bid to create completely new, next-generation geospatial information services and businesses, in response to the accelerating speed of change.

#### 03 Changes in, and reduction of, public investments

We project reduced public sector investments and reallocation of capital as outcomes of an aging population, falling birthrates, and population decline. To remain on a sustainable growth trajectory under such conditions, we are building on our public-sector business foundations, strengthening our data maintenance and management capacity and expanding into private-sector and overseas markets.

We will also leverage our unique strength in integrating finance and technology, accelerating our entry into the PPP and PFI businesses and public-private cooperation with local governments. By doing so, we aim to contribute as a business that formulates strategies for the revitalization of regional cities and areas.

### Collaboration with next-generation image solutions businesses and startups

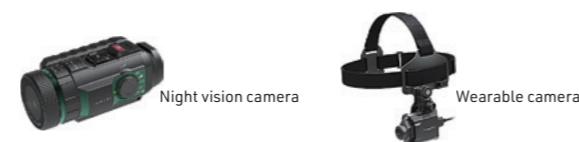
Xacti Corporation is tapping growing markets such as mirrorless cameras, night vision cameras, 4K video cameras, and multiview camera images, shifting away from the shrinking digital camera OEM production market. It focuses on wearable cameras with superior image stabilization and the burgeoning, next-generation “Digital Eye” market, with possible exclusive brand development in sight.

Digital Eyes are in demand in this era of digital innovations, in fields ranging from automotive, robotics, and industrial, to security and disaster risk management, medical, and agricultural. Xacti aims to leverage its technological research and development capacity and stable production system to lead the Digital Eye market and evolve into a company that consistently delivers high profits. It looks to create the future of imaging and enter the world of sensing by pursuing the ultimate imaging technology, while strengthening collaborations with startups. Specifically, Xacti aims to synchronize 3D information, object recognition, and artificial perception technology SLAM\* into a new platform, useful for route navigation, automatic transportation systems,

and applications at airports, train stations, underground spaces, and factories. Collaborations are also underway in replay technology, to identify the most effective patterns and multiple camera combinations for capturing sports and other images. Xacti is pursuing cutting-edge alliances at a high pace to integrate sensing and Digital Eyes with technology.

In its collaboration with Kokusai Kogyo Co., Ltd., Xacti is harnessing its video technology to develop products that can eliminate human intervention at survey and construction sites. Applications of video and sensing technologies are expected to expand when 5G networks are rolled out.

\*SLAM: Simultaneous Localization and Mapping





# Green Energy

## Business overview and strategy

The Green Energy business is led by JAG Energy Co., Ltd., and aims to "attain a society in which everyone has unlimited access to energy, by replacing all energy used by humanity with renewable energy."

In 2015, the Paris Agreement (COP21) set a global target for the average rise in temperature, to be achieved through a reduction in greenhouse gas emissions, and outlined a framework of actions to combat global warming. Japan's Ministry of Economy, Trade and Industry (METI)'s Strategic Energy Plan, referring to renewable energy as one of the main sources of power, called for 22-24% of Japan's energy to come from renewables by FY2030. Japan currently lags far behind other developed countries in the proportion of renewables in its energy production, and there is considerable potential for development. We are taking up the challenge of realizing this potential.

### ► Development of renewable energy power plants

We are developing new renewable-energy power plants to increase our capacity to supply stable energy at low cost.

In 2008, we commenced a large-scale solar power generation business ahead of competitors. To date we have constructed solar power plants in 83 locations across Japan with a total supply capacity of 195MW (as of March 2019). We also work toward the development of other renewable energy power sources, and secure opportunities to develop 52MW by solar, 7MW by wind, and 75MW by biomass energy as of April 2019. We are also expanding into the Southeast Asian market.

The experience and expertise gained through these projects gives us the ability to provide a steady, long-term stream of low-cost electricity.

### ► Regional electricity companies for local production and local consumption of energy

We are establishing regional electricity companies in select regions in order to increase penetration of renewable energy

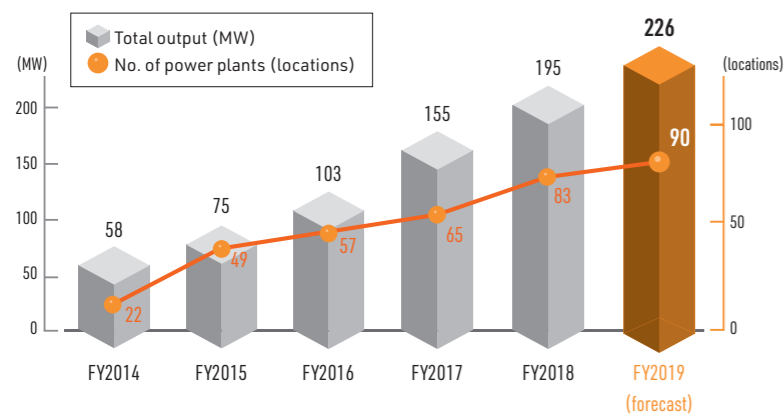
sources across Japan. Currently the national policy to spread the use of renewable energy focuses on reinforcing the power grid, but this approach passes on additional social infrastructure costs to end users. We instead set up regional power producer and suppliers (regional PPSs), catering to autonomous or defined areas, that are large enough to sufficiently utilize locally produced energy.

We have already established such PPSs based on renewable energy, working with local governments in three regions, including Fuchu and Chofu in Tokyo, Higashimiyoshi in Miyoshi, Tokushima Prefecture, and Sango in Ikoma, Nara Prefecture. These regional electricity companies not only work toward local consumption of locally produced renewable energy as electricity retailers, but encourage sustainable local community development by converting the capital generated into new jobs, better health and welfare, and educational support.

In the Long-Term Energy Demand Outlook issued by the Ministry of Economy, Trade, and Industry, Japan aims to reduce its energy consumption by 50.3 million kiloliters of oil equivalent by FY2030. JAG is also working to promote energy efficiency through our ESCO\* business model. The ESCO business model has not gained popular recognition in Japan due to its economic benefits being difficult to demonstrate, but we believe it will gain support as a type of subscription model where users do not own energy efficiency equipment, but pay for its use.

\* ESCO business: Energy service company business in which energy efficiency refurbishing costs are paid through savings in utility fees after implementation

Total operational output of renewable energy power plants and number of facilities in operation



Solar power plants under construction (SolarWays)

SolarWay	MW
Kamigo	1.4
Kanra	2.3
Tajimi	16.3
Nobori	2.7
Komono	4.6
Toyokoro	1.6
Yamaguchi	2.6
Fukuoka	1.6
Sarabetsu	1.4
<b>Total</b>	<b>34.5</b>

### CO2 emission reductions

Approx. **99,000** tons/year

Note: Calculated by JAG based on figures as of end-June 2019 according to guidelines issued by the Ministry of the Environment and the Ministry of Economy, Trade and Industry

## Risk identification and opportunities

The global push to make renewable energy the main power source provides a significant tailwind for expanding our Green Energy business, but various risks accompany the development and operation of renewable-energy power plants. We consider measures to avoid and mitigate these risks crucial to enhancing our competitive advantage and ensuring our sustainable growth.

### 01 Response to the uncertainties around the FIT system

Cost competitiveness is key to making renewable energy the main source of power. While feed-in-tariffs (FITs) have long been the driver of renewable energy development, unit prices are expected to fall and squeeze the profit margins of new projects. We maximize earnings by selecting optimal types of panels, careful choices made in the engineering, procurement, and construction (EPC) process, and using our solid track record to procure project financing, in order to develop yet more power plants and extend our track record. We judge ourselves capable of continued development amid declining FIT prices, even turning it into an opportunity to gain an edge in competitiveness.

### 02 Shortage of land suitable for the development of solar power plants

Rapid development of mega-solar plants across the country has resulted in a perceived shortage of suitable land for future projects. We continue to be able to develop mega-solar plants through the identification of candidate locations through the marketing network of Kokusai Kogyo Co., Ltd., which reaches all corners of Japan, combined with our due diligence and competitiveness honed by many years of developing such plants. We also develop small to medium-sized solar power plants and acquire existing power plants to keep growing.

### 03 Output restrictions and abnormal weather

In FY2018, output restrictions on solar power were enforced in the jurisdiction of Kyushu Electric Power Co., Inc., which included some of our power plants, but the impact was minimal. Output restrictions are expected to increase as more solar power plants come online, increasing operational risk, but our strategy of locating our plants throughout Japan insulates us from this particular risk.

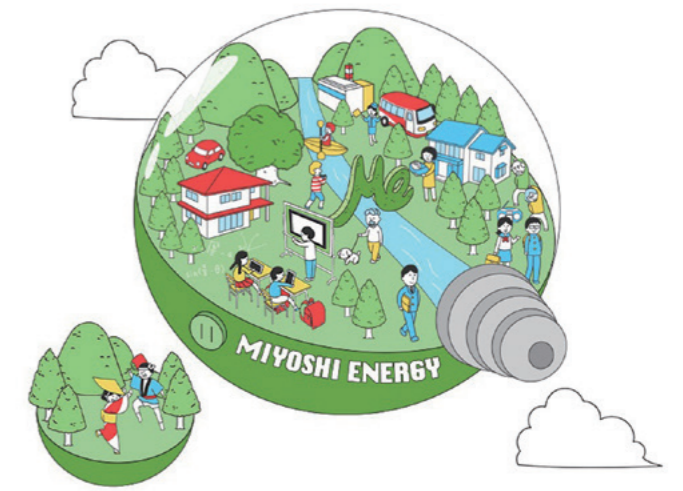
Solar power plants are at physical risk from inclement or extreme weather triggered by climate change, and the resulting reduction in power output or damage to facilities. We leverage Kokusai Kogyo Co., Ltd.'s expertise in disaster risk reduction to select locations that are least prone to landslides and other risk, and take out insurance to cover residual risks. We are also diversifying our renewable energy portfolio to include wind, biomass, and other forms, while strategically spreading out our facilities geographically to reduce the impact of adverse and extreme weather events.

### 04 Regional electricity companies and contributions to local communities

Ever since the liberalization of energy markets, regional power producers and suppliers (PPSs) geared for local production and local consumption of energy, as well as local government-driven organizations providing utility services such as electricity, gas, and water and sewage, modeled after Stadtwerke in Germany, have spread rapidly across Japan. We are also making efforts to develop these regional electricity companies.

Significant risks associated with the operation of regional electricity companies are price competition with major electric power companies, and policy changes by local governments.

We counter these risks by enhancing our ability to develop renewable energy power plants at low cost, and creating mechanisms for local consumption of energy, increasing our competitiveness in terms of profitability. We aim to contribute meaningfully to the ongoing revitalization of local communities.





# Forestry Revitalization

## Business overview and strategy

### ► Forestry Revitalization

The Forestry Revitalization business segment, led by JAG Forest Co., Ltd., aims to invigorate the domestic forestry and timber-related industries through increasing domestic timber production, which has long been in decline. Roughly two-thirds of Japan is covered by forests, mostly artificial forests of mature cedar and cypress from active afforestation in the past and ready for logging, yet the domestic timber supply remains unstable, due to the aging and ongoing decline in the number of forestry workers. Our goal is to realize sustainable forestry by maximizing the value of forests and making the multifaceted functions and potential value held by forests and forestry in general tangible, to reinvigorate regional forestry and timber-related industries, and ultimately to protect Japan's forests as precious natural resources.

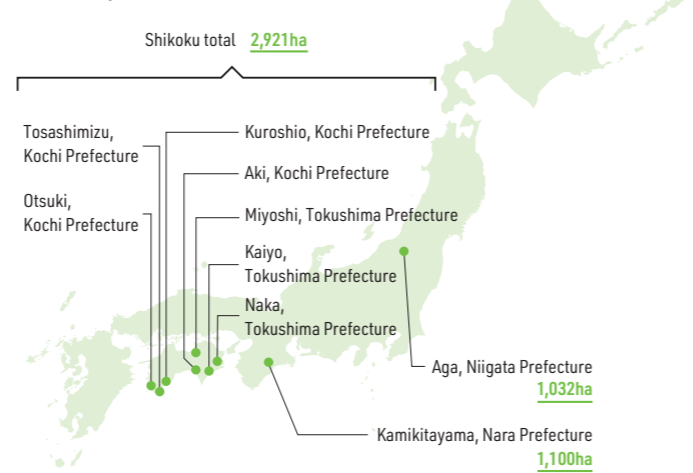
We own a total of 5,053 hectares of forest land across four prefectures including Tokushima Prefecture. We enhance the value of these forests by increasing productivity through effective management and developing timber and forestry product businesses in collaboration with local forestry operators. We are working on a system for stabilizing domestic timber supply through digital forestry information management with Kokusai Kogyo Co., Ltd.'s laser remote sensing and surveying technology, while forming alliances with local raw forest product manufacturers and timber mills through capital participation. We aim to create a new forestry value chain, where low-grade wood is used for biomass energy production, forests are managed for carbon offset, with forest investment funds and trade of forest real estate, for the transformation of Japan's forestry and timber-related industries into growth industries.

### ► REDD+\* business

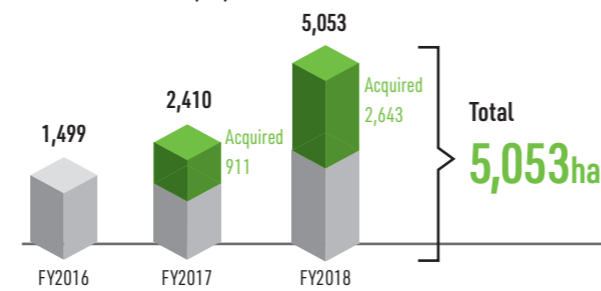
Overseas, we promote REDD+ with YL Forest Co., Ltd., in the mangrove forests of South Sumatra, Indonesia. Conservation of mangrove forests not only mitigates climate change through the absorption of CO<sub>2</sub>, but also plays a role in climate change adaptation by conserving biodiversity, cushioning high tides and tsunamis, and preventing coastal erosion. We also play a part in the education and awareness raising of local residents, creating forest management-related job opportunities and contributing to the development of local economies.

\*REDD+: Reducing Emissions from Deforestation and Forest Degradation-plus

### Forest acquisition and utilization



### Owned forest land (ha)



森林.net  
<https://www.shin-rin.net/>  
 Promoting real estate transactions via shinrin.net (Released in late August 2019)

### FY2019 plan

Sales **¥18,700 million**

Operating profit **¥910 million**

### CO<sub>2</sub> reduction contributions

Approx. **32,000 tons/year**

\* Calculated by JAG based on figures as of end-June 2019 according to the guidelines issued by the Ministry of the Environment and the Ministry of Economy, Trade and Industry

## Risk identification and opportunities

Megatrend is likely to have a significant impact on society, including various aspects of forestry. In particular, heightened environmental awareness accompanying the shift to a low-carbon society will require business operators to respond sincerely to issues that impact biodiversity and the lives of residents. We have identified the following related risks, which we may convert to new business opportunities through prompt and appropriate action.

### 01 Regulations and reputational risks

The global shift to a low-carbon society has led to increasingly rigorous standards concerning forestry product use. In 2017, the Japanese government implemented the Clean Wood Act, which aims to curtail illegal logging while promoting the use of legally harvested timber. Even where legal, deforestation with negative impact on the sustainability of local economies, for example for the purpose to grow soft commodities (i.e. agricultural products other than grain), is accompanied by significant reputational risk. To reduce such risk, JAG Forest Co., Ltd. actively works to be certified by internationally recognized forest management institutions, and to date has received certification for its management of forest land in Miyoshi, Tokushima Prefecture (898.26 hectares excluding areas defined as shared forest) in the category of "artificial and secondary forest management for coniferous and broad-leaf wood harvest." Such efforts will continue in the future, along with our efforts to keep in close communication and to build strong ties with local communities to realize sustainable forestry.

### 02 Risk of forest degradation due to shortage of forestry workers

Forests require regular thinning and maintenance as well as post-logging supervised growth, but forests that do not receive proper silviculture are increasing with the aging of forest owners and exodus of younger people to urban areas. Spreading awareness of the multifaceted functions and potential value held by forests and forestry in general, and the importance of forestry in solving global climate issues, is key to attracting new forestry workers. Improving the relatively harsh work environment through the introduction of high-performance and cutting-edge technologies and a shift to digital forestry information management to the point where jobs in forestry become attractive to both youth and women is also crucial.

We actively take part in spreading awareness of the value of forestry and revitalizing regional forestry businesses by serving as guest instructors at seminars around the country and through in-house training.

### 03 Risks arising from changes in Japanese society

The demand for construction timber is declining with the generally contracting housing market, preferences are shifting from detached wooden homes to steel-and-concrete apartments, and residential high-rise buildings are increasingly popular in regional cities. We work to identify or create new uses for forestry products and build businesses around them, including their use in non-residential construction, cross-laminated timber (CLT) construction methods strong enough for high-rise construction, use of new materials such as cellulose nanofiber, and the use of woody biomass for energy.

### 04 Risks arising from the uncertainty in international policy outlooks

We are already producing J-Credit carbon credits through our Company-owned forests in Miyoshi, Tokushima Prefecture and Kuroshio in Hata, Kochi Prefecture, leveraging our knowledge and experience in carbon credits, and investigating the optimal scheme to do so through REDD+ in South Sumatra, Indonesia.

The Paris Agreement approved the use of market mechanisms, and we see the global move toward carbon pricing and rising carbon credit prices as a business opportunity in the push to keep global temperature increases below 2 degrees Celsius. However, working with a system governed by international frameworks such as the Paris Agreement and affected by political and economic situations in countries carries certain risks.

The Paris Agreement specifically recommends REDD+, but uncertainty remains over details governing the global management of post-CDM<sup>\*1</sup> mechanisms and other collaborative approaches such as the joint crediting mechanism (JCM).

We have been preparing for the registration of carbon credits in the compliance<sup>\*2</sup> and voluntary<sup>\*3</sup> markets under the Paris Agreement, in order to take full advantage of the credits produced from REDD+. We aim to continue to produce carbon credits that can be used flexibly depending on changing circumstances.

\*1 Post-CDM: An international management mechanism that follows the clean development mechanism (CDM) adopted as one of the Kyoto Protocol mechanisms. CDM allows developed countries to acquire carbon credits through emissions reductions in developing countries through approved joint projects.

\*2 Compliance market: Markets handling carbon credits issued according to legally-binding policies

\*3 Voluntary market: Market handling carbon credits outside of the compliance market

Basic policy

JAG's basic policy for corporate governance is to create a culture and environment focusing on balancing sustainable corporate growth with stakeholder interests, strengthening its governance structure as a socially responsible company in line with its corporate philosophy.

Adoption of a holding company structure

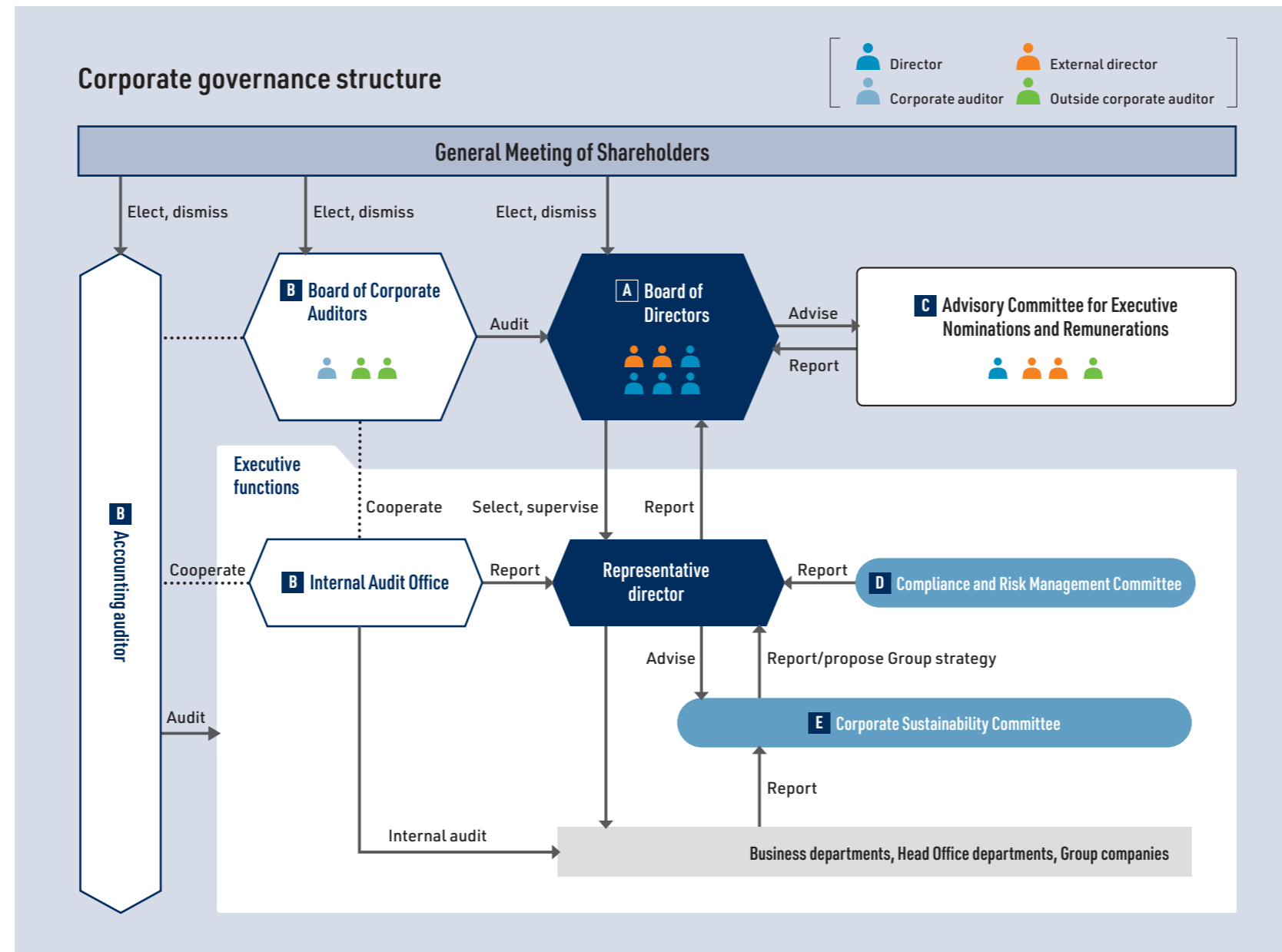
We have adopted a holding company structure in which Group subsidiaries are responsible for business execution. The Group evaluates and supervises subsidiaries from the standpoint of shareholders, in order to ensure the strategic use of management resources and practicality of governance in the Group's operations. Business execution is based on a clear delineation of management responsibilities, aimed at building a structure that realizes timely and proper decision-making.

A Management structure

The Board of Directors comprises six directors, including two external directors, who offer advice from a third-party perspective in the interest of shareholders. As the Group's highest decision-making authority, the board decides on matters set out in laws, regulations, and the Articles of Incorporation, as well as other important agenda items, while also supervising the execution of duties.

B Auditing structure

We employ a threefold auditing system comprising a Board of Corporate Auditors, accounting auditors, and internal auditors to avoid incidents that could potentially harm the company's trustworthiness. As a company with corporate auditors, each of the Group's corporate auditors supervises the execution of overall duties by directors from an independent standpoint. We have three corporate auditors including two outside auditors. Ernst & Young ShinNihon LLC serves as our accounting auditor, while our internal auditors are designated representatives from the Company who audit the activities of the executive departments.



C Voluntary establishment of an Advisory Committee for Executive Nominations and Remunerations

The Board of Directors receives reports via the voluntary Advisory Committee for Executive Nominations and Remunerations, chiefly comprising of external officers, regarding the nomination and remuneration of directors in order to decide on the candidates and remuneration of directors. The committee has four standing members nominated by the Board of Directors, of which the majority (i.e., three members) are either external directors or outside corporate auditors. Nominations of directorial candidates are based on an ongoing consideration of the ideal characteristics of the post (i.e., credentials, track record) and the most suitable candidate from the standpoint of contributing to the development of the Company. Reports and decisions on director remuneration are made with the goal of enhancing the objectivity and transparency of decisions.

D Promotion of compliance

All officers and employees of the Group abide by the laws and regulations and follow ethical standards of behavior to promote business activities that are conducted with integrity and fairness. We have enacted the Code of Conduct of JAG, which defines the values and conduct to be shared across the entire company, and we strengthen our system through rigorous compliance and the setting up of internal reporting (whistleblowing) rules, aimed at realizing our sustainable growth and development as a company that is trusted by society.

For more detail, please refer to the URL below (Japanese).  
 URL <https://www.japanasiagroup.jp/ir/compliance.html>

D Basic framework of risk management

We assess risks based on their impact on business and likelihood of occurrence, ensuring full awareness of risks that could significantly impair management while we carry out countermeasures and monitor their status. We will continue to strengthen our risk management and to address ever-changing risks arising from changes in the social landscape or business environment, through reassessment of our internal governance structure and operations.

For more detail, please refer to the URL below (Japanese).  
 URL [https://www.japanasiagroup.jp/ir/finance/risk\\_information.html](https://www.japanasiagroup.jp/ir/finance/risk_information.html)

E Corporate Sustainability Committee

In order to promote group-wide sustainability initiatives, we have appointed a sustainability officer who will be responsible for these initiatives, and formed a Corporate Sustainability Committee to oversee company-wide activities. The committee is positioned as an advisory council to the representative director,

and deliberates on the formulation of policies, strategies, and initiatives related to group-wide sustainability, and also plays a role in monitoring the execution of sustainability promotion plans.

Developing crisis management measures (business continuity management)

We bolster our business continuity structure during non-emergency periods by backing up systems that are necessary for business continuity and taking measures to protect infrastructure at key business sites. We utilize a mass e-mailing system to check up on the safety of all employees and their families when events of a certain level of severity occur. Our crisis management measures include business continuity plans (BCPs) covering threats and damages caused by large-scale earthquakes and other disasters and outlining actions to be taken to prioritize the survival and safety of employees, and a business continuity management (BCM) structure to ensure the continuity of important operations.



BCP table-top exercise

Certified for resilience

The Resilience Certification is an acknowledgement of organizations contributing to national resilience by the National Resilience Promotion Office, Cabinet Secretariat, Japan, under related guidelines enacted in February 2016, and is awarded to businesses that carry out business continuity initiatives that align with national resilience. Kokusai Kogyo Co., Ltd. was certified among the first batch of organizations in FY2016, and has successfully renewed its credentials every year since.



Directors



(Front row, left to right) Sandra Wu Wen-Hsiu, Tetsuo Yamashita (Back row, left to right) Takaki Fuchita, Yoshiaki Kiyomi

**Tetsuo Yamashita**  
Chairman and CEO

Joined the former Ministry of Finance in 1978. Took part in multinational official development assistance (ODA) operations. Joined Nomura Securities Co., Ltd. in 1981. Undertook investment banking operations centered on Asia. Founded Japan Asia Holdings Limited in Hong Kong in December 1998. Founded Japan Asia Holdings (Japan) Limited, the predecessor to Japan Asia Group, in 2001 and ever since has served in key roles including representative director of major Group companies and as chairman and CEO of Japan Asia Group, Ltd starting from 2013 (present).

Graduated from the Faculty of Business and Commerce and Faculty of Law (Department of Political Science) at Keio University. Completed a management professional training (MPT) course at Nomura-Wharton Management School and a multinational business institute (MBI) course at McKinsey & Co.

**Yoshiaki Kiyomi**  
Director

Joined the Mitsubishi Bank, Ltd. (currently MUFG Bank, Ltd.) in 1986. After working for Manulife Life Insurance Company, joined Japan Asia Holdings (Japan) Limited in 2005. Appointed director of Japan Asia Group, Ltd in 2008, representative director of Japan Asia FAS Limited (present) in 2013, and concurrently director of Japan Asia Group, Ltd in 2015 (present).

Graduated from the School of International Politics, Economics and Business at Aoyama Gakuin University in 1986.

**Sandra Wu Wen-Hsiu**  
Director

Co-founded Japan Asia Holdings Limited in 1998. After serving as representative director of major Group companies, appointed director (Overseas Department) and sustainability representative of Japan Asia Group, Ltd (present), and concurrently chairperson and CEO of Kokusai Kogyo Co., Ltd. (present).

Graduated from the Department of Chinese Literature at National Taiwan University. Completed the Advanced Management Program at Harvard Business School.

Appointed as member of the United Nations Global Compact Board, as well as board member of the Global Compact Network Japan (GCNJ) in 2018. In April 2019, appointed as member of the Advisory Committee on National Resilience (Disaster Reduction and Mitigation) by the Cabinet Secretariat.

**Takaki Fuchita**  
Director

Joined Kokusai Kogyo Co., Ltd. in 1981. Served as manager of the Tohoku Business Department, Technology Services Division and manager of the Business Department of Kokusai Kogyo Co., Ltd., and then manager of the Human Resources Department, Administration Division of Kokusai Kogyo Holdings Co., Ltd., before being appointed director of Kokusai Environment Solutions Co., Ltd. and manager of the General Affairs and Human Resources Department of Japan Asia Group, Ltd in April 2013 (present). Appointed executive officer and general manager of the Administration Division of Kokusai Kogyo Co., Ltd. in November 2016. Serving as director as well as manager of the Administration Division of Kokusai Kogyo Co., Ltd. since April 2018.

Graduated from the Department of Chemistry, School of Science and Engineering at Meisei University in 1981.



(From left to right) Satoshi Yasugi, Koji Tanabe

**Satoshi Yasugi**  
Director (External Director)

Joined Nomura Securities Co., Ltd. in 1970. After serving as corporate auditor of Japan Asia Holdings (Japan) Limited in 2005, appointed director of Japan Asia Group, Ltd in 2015 (present).

Served as visiting professor at Guanghua School of Management, Peking University, professor at the Department of Economics and Business Administration, Kagoshima Prefectural College, and professor at the Graduate School for the Creation of New Photonics Industries. Currently serves as professor at the Graduate School of Japan University of Economics.

Graduated from the First School of Law at Waseda University in 1970. Completed graduate studies at the Graduate School of Business (MBA) at Aoyama Gakuin University in 1976 and post-graduate studies in the Doctoral Program in the Graduate School of General Academic Research (PhD) at the University of East Asia in 2004.

**Koji Tanabe**  
Director (External Director)

Joined the Ministry of International Trade and Industry (now Ministry of Economy, Trade and Industry) in 1975. After serving as Director-General of the Chugoku Bureau of Economy, Trade and Industry as well as Director-General of the Research and Statistics Department, Economic and Industrial Policy Bureau of the Ministry of Economy, Trade and Industry, became professor at the Graduate School of Innovation Management at Tokyo Institute of Technology in 2005, honorary professor since 2017, and professor at the School of Environment and Society at Tokyo Institute of Technology (present). Appointed director of Kokusai Kogyo Holdings Co., Ltd. in 2008 and has served as director of Japan Asia Group, Ltd since 2012 (present).

Graduated from the Faculty of Science at Kyoto University in 1975. Completed his graduate studies in the Graduate School of Decision Science and Technology (PhD) at the Tokyo Institute of Technology in 2003.

Corporate auditors



(From left to right) Tatsuo Udo, Kenji Numano, Kazuo Kobayashi

**Tatsuo Udo**  
Corporate Auditor

Joined Dai-Ichi Kogyo Bank, Ltd. (currently Mizuho Bank, Ltd.) in 1974. Served as executive officer and head of Compliance Office at Kokusai Kogyo Co., Ltd. from 2006. Served as corporate auditor of Kokusai Kogyo Holdings Co., Ltd. since 2007 before being appointed as corporate auditor of Japan Asia Group, Ltd in 2012 (present) and corporate auditor of Kokusai Kogyo Co., Ltd. from 2015 (present).

**Kenji Numano**  
Full-time Corporate Auditor (Outside Corporate Auditor)

Joined Nomura Securities Co., Ltd. in 1960. After serving as executive vice president of Nomura Babcock & Brown Co., Ltd. and president of Singapore Nomura Merchant Banking Limited, appointed corporate auditor of Japan Asia Holdings (Japan) Limited in 2004. Serving as corporate auditor of Japan Asia Group, Ltd since 2009 (present).

**Kazuo Kobayashi**  
Corporate Auditor (Outside Corporate Auditor)

Joined Ishikawajima-Harima Heavy Industries Co., Ltd. (currently IHI Corporation) in 1982. Worked at Japan Associated Finance Co. Ltd. (currently JAFCO Co., Ltd.) and served as general manager at Biofrontier Partners, Inc. starting in 2001 before being appointed corporate auditor of Japan Asia Securities Co., Ltd. in 2003. Became external director of Aizawa Securities Co., Ltd. in 2015, and was appointed corporate auditor of Japan Asia Group, Ltd beginning in 2009 (present). Also concurrently serving as corporate auditor of JAG Energy Co., Ltd. and JAG Investment Management Co., Ltd. since June 2016.

# External Director Interview

**Q1** First, could you please give us an overview of your career and how you have been involved in the Japan Asia Group?

I have long worked for the Ministry of Economy, Trade and Industry, serving in roles to promote innovation, adopt information technology in government administration, and revitalize local economies. My work centered on improving Japanese society and invigorating its industries in an administrative capacity. Later, I served as a professor at multiple universities, focusing on research and education to create innovation and introduce new ways of transforming society. JAG is a company that strives to create sustainable communities and leverages technology to balance the solution of social issues with business profitability. The company has many principles that align with my own experience and thoughts. I am delighted to be able to participate in JAG's activities to help create better communities and societies for the future.

**Q2** Have you seen any changes in the Board of Directors meetings ever since being appointed as external director?

I believe the eight years I have served as director has been a period of reform at JAG toward a new phase of development. During this period, the management team worked to shift from its reliance on public projects in the Geospatial Information business, expand the Green Energy business, and newly enter the Forestry Revitalization business, while disposing of the financial services business. The Board of Directors meetings revolved around formulating and executing the policies to drive this reform. The board has drawn up management strategies and taken steps to bolster the business structure to ensure growth, aimed at realizing the Group's mission of "creating green communities."

JAG is a company that creates the future, striving to grow sustainably through its contribution to solving social problems by leveraging technology. Today's society is dubbed "Society 5.0" and global movements have taken shape to promote the United Nations' sustainable development goals (SDGs). JAG earnestly strives to execute the principle advocated by Keidanren in its Charter of Corporate Behavior to "deliver on SDGs through the realization of Society 5.0."

**Q3** What do you consider important in performing your role as external director?

The role of an external director is first to perform the auditing function over business execution from the standpoint of a representative of shareholders, and to work to ensure sustainable growth in corporate value. In addition, an external director also participates in management decision-making as a member of the Board of Directors. In order to fulfill this role, I believe it is important for external directors to gather and provide information that cannot be obtained from inside the Company and raise questions to the CEO and Board of Directors, as well as to urge them to make the proper management decisions.

In recent years, innovation in the digital technology industry has made great progress, while disasters triggered by climate change have become more pronounced. Against this backdrop, the area of business where JAG can contribute has expanded significantly. From this perspective, I believe it is vital to properly assess risks, and to promote ambitious activities to expand into new business areas and bolster the corporate structure.

**Koji Tanabe**  
External Director  
Japan Asia Group Limited



**Q4** What is your view on the assessment of the effectiveness of the Board of Directors?

I believe the assessment of the effectiveness of the Board of Directors is a continuous process under which we regularly verify whether the overall board is functioning properly, and based on those results take appropriate measures such as improving the problems and maximizing our strengths. At JAG, external directors serve as standing members of an effectiveness assessment committee and carry out an effectiveness assessment of the Board of Directors each year. In FY2018, based on the results of the assessment, we introduced a performance-linked stock compensation program as an incentive for executive directors to contribute to the improvement of longer-term earnings and enhancement of corporate value.

**Q5** Please share your message to shareholders with us.

JAG is a company that strives to solve social issues through technological innovation and create businesses of the future. We are one of the very few companies that position activities toward realizing SDGs as the core of our business. Furthermore, the management team is actively involved in working toward SDGs to create a bright future through technology. I would like our stakeholders to know that JAG was one of the early movers in the efforts to realize the SDGs and have already established a solid track record in this domain among Japanese companies. The actual circumstance in Japan is that even though the government and economic circles are aware of the issues that need to be tackled, progress has remained stagnant. By expanding our activities on this front in Japan and overseas, I anticipate that JAG will be able to sustainably enhance its corporate value while also contributing to solving problems in global society.

**Q6** What is your view on the management risks inherent in new businesses?

I believe the greatest risk in management is the risk of not acting because of being afraid of risks. I believe that it is important to embark on new challenges while weighing both risks and returns to stay abreast of the rapid changes in society. Setting goals based on principles, executing those goals, and making changes based on results, while constantly moving forward—I believe this is how we should manage our new businesses. The age we live in is void of simple solutions. What is important in this kind of backdrop is to unswervingly execute on our business principles. New businesses are in a sense moved forward in the midst of continuous trial and error. JAG will continue to evolve. It will tackle new challenges and face many obstacles, but that will be the driving force of its success. In fact, that is how innovation takes place. We ask for your continued support and understanding toward JAG as we continue to evolve while embracing new challenges.

# Participation in Global Initiatives

## Participation in the United Nations Global Compact

In June 2018, Sandra Wu Wen-Hsiu, director of JAG, Ltd and chairperson and CEO of Kokusai Kogyo Co., Ltd., was appointed to the United Nations Global Compact Board by the UN Secretary-General António Guterres. She also became board member of Global Compact Network Japan (GCNJ) in September 2018. JAG is actively carrying out "voluntary efforts by corporations and organizations to be good corporate citizens by exercising responsible, creative leadership and to build a global framework for sustainable growth" as advocated by the Global Compact.



Appointed to the United Nations Global Compact Board

## GCNJ Report on Japanese Companies and SDGs



Interview from February 2019



Speaker at the Global Platform for Disaster Risk Reduction (GP19)

## Strengthening preparations for climate-related disclosure in response to TCFD recommendations

Kokusai Kogyo Co., Ltd. was one of the first Japanese companies to endorse the recommendations made by the Task Force on Climate-Related Financial Disclosures (TCFD), established by the Financial Stability Board (FSB) in 2017. The TCFD recommendations urge companies to disclose information on the risks and opportunities that climate change will bring to businesses in the medium to long term, as well as their financial impact, in order to reduce the overall risks of instability in financial markets.

Within Japan, the TCFD Consortium was established on May 27, 2019 as a forum for debate on how companies could effectively disclose information and how financial institutions could use that information in making proper investment decisions with 164 companies and financial institutions supporting the TCFD recommendations, JAG among them, participating. (The Ministry of Economy, Trade and Industry, the Financial Services Agency, and the Ministry of the Environment also participate as observers.)

JAG will proactively disclose information on resilient corporate management strategies for a low-carbon society, and their financial impact, based on a framework conforming with TCFD recommendations.



TCFD Consortium

## Personnel training

The key to value creation is to cultivate talented employees. Based on this understanding, the basic principle of the human resources department is to respect character and diversity, while continuing to develop employees. Amid tough economic circumstances requiring constant change, we believe we must start with the development of as many talented employees as possible who can lead the Group's development and create value.

Our basic approach in personnel training is "to grow through work." Our efforts are underpinned by a group-wide training policy in which each employee voluntarily and proactively seeks personal growth to realize a transformation in management.

As part of this initiative, we implement training courses that are open to employees of all ages, career length, and business experience. We conduct training courses that are not bound by precedents, aimed at developing employees who can think flexibly at all times.



**Takaki Fuchita**

Director  
Manager of Personnel & General Affairs  
Japan Asia Group Limited

### JAG Future Project

JAG Future Project is an original training program targeted at employees aged 39 and below over a period of six months. The training program includes both lectures and case studies under the instruction of a graduate school professor. Through the program, participants not only gain managerial knowledge such as theories on management strategy, but are also encouraged to apply what they learn on the ground, so that they become leaders in the creation of new businesses.

## Promotion of diversity

We view the value of promoting diversity as follows.

- 1 Creating a culture of respecting others and listening to different opinions.
- 2 Maximizing results through synergies between employees who are each unique in their own ways, and growing sustainably as a company that is appreciated by society.
- 3 Carrying out initiatives to promote the active hiring and career development of female workers, foreign workers, and people with disabilities, as well as the participation of elderly workers, while also ensuring smooth communication between labor and management to proactively advance a work-life balance that would help create a workplace environment that enhances job satisfaction.

We are executing business management that bolsters our ability to respond to the diversifying needs of the market and related risks through the promotion of diversity described above. Our goal is to create a workplace where diverse personnel can fully exhibit their skills and contribute to greater productivity and creativity in business, helping create new products and services. By doing so, we will be able to attract talented new employees, improve customer satisfaction, and gain greater trust, leading to broader recognition outside of the Company. In addition, we believe that positive business results will raise employee motivation and reduce turnover.

At JAG, we strive to achieve growth and create sustainable green communities, supported by the recruitment of personnel

who can bolster our overseas business. Our efforts are reflective of the Company philosophy to squarely face the different cultures and customs of each region and tackle issues with a sense of ownership. We recruit personnel from a large pool of candidates who seek to create new businesses through proactive efforts and unique ideas and aspire to grow together with the company, and we work to develop our employees into talented individuals capable of shouldering the Company's future. JAG continues to work to solve the global challenges outlined in the SDGs, such as hunger and poverty, issues related to water, ocean, and land, racial discrimination, and climate change, aiming to become a company that contributes to society through its business activities.

## Respect for work-life balance

We are taking various measures so that all our employees can improve their work productivity while also lead fulfilling personal lives, striking a balance between work and life (i.e., work-life balance).

### Examples of respecting work-life balance

\*Some of the following examples are from Kokusai Kogyo Co., Ltd. and JAG Energy Co., Ltd.

<p><b>Encouraging no-overtime days</b></p> <p>We shortened the working hours on every Wednesday by setting the end of the day at 17:00 instead of 17:30, and we especially encouraged employees to take advantage of these no-overtime days in the months of June, August, October, and December in FY2018.</p>	<p><b>Implementation of child nursing care leave</b></p> <p>We implemented nursing care leave to allow employees to stay at home when their children are being hospitalized or are injured. Employees with children not yet old enough to attend elementary school can take up to five days off per year for one child, or up to 10 days off per year for two children or more.</p>	<p><b>Babysitter subsidy</b></p> <p>The company subsidizes up to ¥2,200 per day for babysitting provided by entities affiliated with All Japan Childcare Services Association, infant nursing, after-school care, nursery school pickup, and other services.</p>	<p><b>Review of employment system related to childcare</b></p> <p>We have extended the period for shorter working hours applicable to employees with children up to the fourth grade of elementary school (on a trial basis).</p>
<p><b>Assistance for employees returning back to work after childbirth or maternity leave</b></p> <p>We have implemented "wiwiv" services to assist employees who are returning to work after childcare leave to allay their concerns about maintaining their skills.</p>	<p><b>Family care support</b></p> <p>We extended the period for family care leave from 93 days (prescribed by law) to up to one year (on a trial basis).</p>	<p><b>Introduction of flex hours</b></p> <p>We introduced flex hours to encourage each employee to manage their own schedule and work in ways that are most productive for them outside of the core hours between 11:00 and 16:00.</p>	<p><b>Support for employees whose spouse is transferred abroad</b></p> <p>If the spouse of an employee is transferred abroad, our internal regulations allow the employee to take a long-term leave of absence.</p>

## Creating a friendly working environment

As part of our activities to innovate the workplace culture, we aim to introduce work style reforms and create an environment that fosters people who can think and act on their own.

Work style reforms have included the prohibition of late-night work, recommendation of early morning work, as well as the introduction of flex hours. We are also working to enhance our remote communication tools including videoconferencing. At the Marunouchi Office, we have rolled out an unassigned seating system, and we have also set up a satellite office that can be used by employees of different departments, as a space for meeting new people and exchanging information.

We also recommend and carry out workshops, get-together meetings, and club activities on an ongoing basis, so that employees can form connections that go beyond department, age, or career.



Marunouchi Office

## Protecting the safety of employees

We use the safety confirmation tool **Genavis Safety Confirmation Mailing Service** (which we also offer as part of our Group's service) to check the safety of our employees during disasters. This service can be used to check the safety of employees, identify their current location, and send messages on actions to be taken under unpredictable and chaotic conditions during emergencies in disasters (e.g., collapsed building, fire outbreak, power outage). It is an effective initial response of a business continuity plan (BCP) in the event of a disaster.

\* For more detail, please refer to the URL below (Japanese).  
[URL https://biz.kkc.co.jp/software/sc/hotmap/](https://biz.kkc.co.jp/software/sc/hotmap/)



## Third-Party Opinion

### Creating earth's infrastructure

Contrary to the dwindling population in Japan, the global population is growing at a rate of 220,000 people per day or 80 million people per year. We have particularly witnessed a regime change in the history of the world and humankind over the past quarter century, which more or less overlaps with the years passed since JAG was established and its youngest employees were born. Not only has the number of passengers of Spacecraft Earth increased by two billion people, the share of the population that consumes a large amount of energy, water, and food has surged from just around 700 million people in developed countries, mainly in Europe, the United States, and Japan, to several billion people, driven by the economic growth of emerging countries with sizable populations.

One way the sprawling growth of the human population has manifested in international relations has been the formation of the Group of Twenty (G20) in addition to the Group of Seven (G7). Humankind has become a driver of global risk that is grave enough to write off any progress made in addressing climate change and biodiversity ever since the Earth Summit in 1992. The sustainable development goals (SDGs) appear to have finally become mainstream in Japan, but I believe that the country has yet to fully recognize the urgency and the speed required in meeting these goals.

Global warming will cause temperature zones and their ecosystems to shift toward the north and south poles by about six kilometers every 10 years (this means that vegetation around you is shifting about 1.7 m, or about the length of your height, every day to the north), and available fresh water is expected to shrink by half in the next 50 years. Now, 99% of the world's animals are humans and their livestock. Every day, about five times the area covered by the Yamanote Line of tropical forests, which can be considered the "earth's lungs" (absorbing CO<sub>2</sub> while producing one-fifth of the world's oxygen), is burned down due to land conversion for increasing food production. Some raise alarms that if this continues at the same rate, half of the Amazon rainforest will be desertified in the next dozen or so years. In addition, seven million people die annually for reasons linked with air pollution caused by carbon fuel (nearly 20,000 people every day or more than five times the 1.3 million annual deaths in the world due to traffic accidents). These and other factors are threatening the "earth's infrastructure" such as its air, water, soil, forests, and ocean, which many of us take for granted.

This, indeed, is the global context in which JAG is carrying out its business operations. JAG is almost like a department store of solutions for the SDGs, showcasing comprehensive ways of addressing problems linked to renewable energy, disaster prevention and resilience, as well as forest preservation (REDD+). The earnestness with which JAG faces its fields of contribution may perhaps be greater than employees realize. The keyword for the SDGs "outside-in," which means that we must conceive business ("in") starting with social issues that must be solved ("out"), is the essence of JAG's business model.

Stronger resilience of cities will create greater leverage toward achieving the SDGs. More than half of the world's population is now concentrated in the cities. Furthermore, internal displacement caused by climate change, disasters, and conflict increases by 28 million people a year or an average of 80,000 people a day, with most of the displaced population flowing into the cities, leading to an increase of 190,000 people per day in the urban population. Cities served as a shelter to protect humankind

### Shinichi Takemura

Professor, Kyoto University  
of Art and Design  
Director, Earth Literacy Program



from the forces of nature in the past, but they have become the largest threat to both humankind and the earth. (It goes without saying that cities are the greatest factor aggravating the problems addressed by the SDGs such as poverty, malnutrition, water, and hygiene).

However, there is hope. The estimate that "over 60% of the land projected to become urban by 2030 is yet to be built" (United Nations Global Assessment Report on Disaster Risk Reduction) is a risk for the future, but at the same time it is an expression of the opportunity that "we can still mitigate risk if we change the design and framework of cities that are being planned right now." If 60% of the newly created cities are based on renewable energy, water conservation, local production for local consumption, and disaster reduction, and artificial cities evolve into an "organ of the earth" that contributes to the climate adjustment and reproduction of earth just like forests and coral reefs, the enormous impact of humankind can shift gears into a driving force that makes positive advancements together with the earth.

The rapid growth of renewable energy over the past 10 or so years that has exceeded expectations (reaching a power generation capacity of more than five times the total capacity of all nuclear reactors in the world) serves as proof that the speed of improvements are accelerating at almost the same rate as the speed of degradation in the global environment.

Another strength of JAG is its background in finance. For example, some say that the Syrian Civil War, the Arab Spring, and other issues causing instability in the Middle East are underpinned by a number of mixed factors, including climate change, drought, and water or food crises, aggravated by speculative money (sharp rise in grain market prices) and the impact of the US ethanol policy (competition between food and fuel).

Not only is this systematic approach from a global perspective essential to modern business, the appropriate channeling of excess capital liquidity, and the role of finance to provide realistic investment targets for the future will likely continue to grow. There must be a role that can be played only by JAG precisely because it possesses expertise in both actual operations related to the SDGs and in finance.

Furthermore, JAG can leverage the advancements in automotive technologies such as AI and autonomous driving to bolster its strengths in the geospatial information and urban disaster prevention domains. For example, JAG can help create a social framework in which general-use automotive transportation units (such as the Toyota e-Palette) can be dispatched immediately like an "immune cell of the city" during emergencies depending on the disaster protection needs. Automotive and transportation systems, as well as renewable energy storage devices, must evolve into "devices that guarantee people's security and safety."

The essence of innovation is "to get rid of old ways of binding and create new ways of binding." I await eagerly to see JAG's "garden" of diversity to foster the sprouting and growth of new businesses for the next generation.

## Dialogue with Shareholders and Investors

### Dialogue with shareholders and investors

JAG plans opportunities for communication and carries out ongoing dialogue with shareholders, in order to convey our operating performance fairly and accurately so that shareholders can assess us appropriately. The forums for communication include briefing meetings for shareholders, earnings briefing meetings for analysts, institutional investors, and financial institutions, one-on-one meetings with institutional investors on investor roadshows, as well as briefing meetings with retail investors.

We thoroughly take into consideration the opinions and advice we receive from shareholders during our internal meetings and make use of them for the improvement of our IR activities and business management.

Note: Earnings briefing meetings are recorded on video and are distributed via the company website to ensure transparency and fairness for all investors and shareholders.

URL <https://webcast.net-ir.ne.jp/37511905/5lo7XlEluw/index.html>



Earnings briefing meeting in November 2018



Annual General Meeting of Shareholders in June 2019

### Briefing meeting for shareholders (FY2018)

June 25, 2019

### Earnings briefing meetings

November 22, 2018 and May 17, 2019

### One-on-one meetings

(Engagement with analysts and institutional investors)

A total of 17 meetings with sell-side analysts, buy-side analysts, and fund managers

### Introduction of a shareholder benefits program

We have introduced a shareholder benefits program (Amazon gift card), aimed at enhancing the attractiveness of the Group's shares and having more people own the Group's shares over the longer term while also showing our gratitude toward our shareholders for their continued support.

Number of shares owned	Length of ownership	
	Less than three years	Three years or more
1,000-1,999 shares	¥1,000	¥2,500
2,000 shares or more	¥2,000	¥5,000

\*Please see the company website for more detail.





## Overview of consolidated results for FY2018

### Operating results

In the fiscal year ended March 31, 2019 (FY2018), JAG posted consolidated net sales of ¥102 billion, exceeding ¥100 billion for the first time, thanks to newly consolidating Xacti Corporation (including three subsidiaries) into the Geospatial Information business in April 2018.

The main drivers contributing to sales growth were increased sales at Kokusai Kogyo Co., Ltd. in the Geospatial Information business and JAG Energy Co., Ltd. in the Green Energy business, in addition to the above-mentioned consolidation of Xacti Corporation.

Business performance at Kokusai Kogyo Co., Ltd. and the Green Energy business was robust and achieved year-on-year growth in operating profit, but consolidated operating profit declined year on year to ¥1,733 million, affected by the operating loss booked at Xacti Corporation. In terms of extraordinary income and losses, we booked gains on sale of non-current assets and bargain purchase, but recognized losses due to the write-down of production equipment at Xacti Corporation and losses related to business structure reforms. As a result, loss attributable to owners of the parent was ¥2,491 million.

### Segment performance

In the Geospatial Information business, led by Kokusai Kogyo Co., Ltd., we received steady large-scale orders related to resolving social issues such as measures against aging social infrastructure and natural disasters, resulting in further improvements in productivity and business performance exceeding the previous fiscal year. Orders have reached record-high levels, and the orders backlog carried forward to the next fiscal year has remained at an elevated level, suggesting that business performance will remain steady in FY2019.

The Green Energy business has also posted strong results. As of March 31, 2019, we operated 83 solar power plants with an output of 195MW across the nation as part of our electricity sales business using the feed-in tariff (FIT) system. This business has grown to become our most stable source of earnings. Sales were ¥28,070 million and operating profit was ¥3,701 million, both significantly exceeding our initial targets and achieving record-high operating results.

### Yoshiaki Kiyomi

Director  
Japan Asia Group Limited



Meanwhile, Xacti Corporation posted sales of ¥22,648 million and an operating loss of ¥2,010 million. These operating results were the main reason behind the decrease in the Group's consolidated profits, with the losses widening beyond our initial expectation, affected by the ongoing decline in the digital camera market.

The Other business recorded sales of ¥1,632 million (up ¥951 million year on year), thanks to the full-year earnings contribution from Sakazume Seizaisho Co., Ltd., which became a consolidated subsidiary in November 2017. The segment booked an operating loss of ¥102 million due to various expenses spent in advance of building the business, but this was a ¥203 million improvement year on year, owing to the divestment of Japan Asia Asset Management Co., Ltd. during the fiscal year under review.

KHC Ltd., which operates a wooden house business, listed its shares on the Second Section of the Tokyo Stock Exchange on March 19, 2019. The company mainly operates in the Harima region of Hyogo Prefecture, and markets multiple housing brands with different concepts. The company's strength is its steady earnings as well as its original design and development capabilities tailored to each region in the design and construction of wooden built-to-order homes, sale of land and building in lots, and brokerage business. Going forward, KHC plans to expand its business scope to the medium- to large-sized wooden building market in the residential and non-residential sectors.

### Financial position

The Group's consolidated total assets as of March 31, 2019 stood at ¥172,344 million, up ¥17,223 million from a year earlier. The primary reason for the rise in total assets was the consolidation of Xacti Corporation, which resulted in increased notes and accounts

receivable-trade, inventories, and property, plant and equipment, as well as increased assets related to solar power plants that were completed during the year under review. Meanwhile, total liabilities amounted to ¥140,148 million, up ¥16,687 million from a year earlier. The rise in total liabilities mainly reflected increased notes and accounts payable-trade related to business operations at Xacti Corporation, and increased interest-bearing debt used to fund the construction of the solar power plants. The balance of interest-bearing debt consisting of both long- and short-term loans payable stood at ¥93,192 million as of March 31, 2019.

However, as this amount includes funds procured under a project financing scheme for the construction of solar power plants, we believe the balance of interest-bearing debt in real terms for corporate financing still remains within a properly managed level. In addition, we believe that our financial stability and soundness have improved further through shifting part of the working capital we had sourced by the issuance of short-term corporate bonds to long-term bank borrowings. Moreover, net assets totaled ¥32,196 million as of March 31, 2019, up ¥536 million from a year earlier. Although retained earnings declined due in part to the booking of a loss during the period under review, this decline has been more than offset by the valuation difference on available-for-sale securities owned as part of our efforts to strengthen collaborations with startups as well as an increase in non-controlling interests following the listing of KHC Ltd.'s shares, thereby maintaining the stability of net assets. In terms of consolidated cash flows, cash flows from operating activities amounted to ¥2,552 million, up ¥1,698 million from a year earlier. Cash flows from investing and financing activities were well balanced, with cash and cash equivalents rising by ¥2,072 million year on year.

### Business plan and strategy for FY2019

We forecast net sales of ¥109,000 million and operating profit of ¥2,600 million for FY2019.

### Geospatial Information

►Sales: ¥74,000 million; Operating loss: ¥1,100 million

At Kokusai Kogyo Co., Ltd., we anticipate solid business performance, supported by bright spots in the external environment such as ongoing public project spending on building a resilient country and addressing urgent problems in society following the previous fiscal year, as well as an abundant orders backlog carried forward. Meanwhile, at Xacti Corporation, despite the tough market environment, we aim to continue to follow through on structural reforms to regain profitability early on. A review of sales prices and negotiation of procurement prices are also expected to contribute to regaining profitability. On another front, we are planning to develop our original brand products with a focus on 5G generation.

### Change in segments

Starting from FY2019, we will transfer KHC Ltd. from the Green Energy business to the newly established Forestry Revitalization business. By doing so, we hope to make further progress in building a forestry value chain in the Forestry Revitalization business and contribute to maintaining and expanding demand for domestically produced wood.

### Green Energy

►Sales: ¥16,270 million; Operating profit: ¥2,900 million

Construction of nine solar power plants is currently underway (total operating capacity of 34MW), and we plan to complete the construction in sequence within FY2019. As we expect the market for renewable energy will continue to receive tailwinds, we aim to continue to find additional opportunities for solar power plant development, and we will continue to deliberate on development of biomass and wind power plants.

### Forestry Revitalization

►Sales: ¥18,700 million; Operating profit: ¥910 million

We aim to expand the business scope of the Forestry Revitalization business, which has newly added KHC Ltd., by further reinforcing JAG Forest Co., Ltd.'s data-driven forestry business and leveraging the newly launched forest real estate brokerage business. We also plan to achieve our full-year segment targets through the business expansion of Sakazume Seizaisho Co., Ltd., which operates a JAS-certified sawmilling factory.

### Current medium-term management plan

Under our current medium-term management plan through FY2020, we have been rebuilding our business portfolio, placing priority on achieving net sales of ¥150,000 million. We have been working to create a business foundation that is resilient to macroeconomic trends through the divestment of our financial service business, the consolidation of Xacti Corporation, and the development of the Forestry Revitalization business. However, we have decided to review our numerical target for the medium-term management plan through FY2020 as a result of multiple internal considerations on various topics, including rapid changes in the competitive conditions and the impact of sluggish earnings at Xacti Corporation.

Our achievements thus far include the enhanced adaptability of our earnings structure to the risks of macroeconomic swings by withdrawing from the financial service business, and the creation of a stable source of earnings through the development of solar power plants. However, there are still challenges that we will continue to work on, including the overseas expansion of the Geospatial Information business, ongoing expansion of the renewable energy business, and realizing profitability of Xacti Corporation.

### Toward sustainable growth

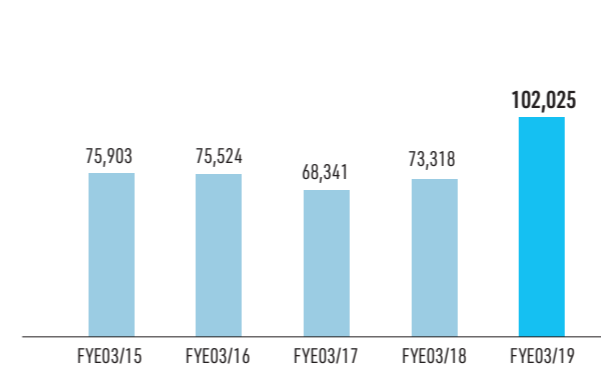
JAG aims to pursue further growth while placing businesses related to addressing climate change and the SDGs at the heart of our operations with the goal of challenging ourselves in creating a transformation in society. In addition to forging stronger ties with startups that possess a high level of technology, we aim to create our next earnings driver by expanding our stable source of earnings through the promotion of our power plant development business leveraging renewable energy, turning our Forestry Revitalization business highly profitable early on, and making a full-fledged expansion into overseas markets.

Overview	FY2017		FY2018		YoY		
	Results (¥ million)	% of net sales	Results (¥ million)	% of net sales	Change (¥ million)	Change (%)	
<b>Net Sales</b>	73,318	100.0	102,025	100.0	28,706	39.2	
<b>Operating profit</b>	3,153	4.3	1,733	1.7	(1,420)	(45.0)	
<b>Geospatial Information</b>	Sales	48,040	65.5	72,322	70.9	24,282	50.5
	Operating profit	498	1.0	(1,865)	(2.6)	(2,363)	—
<b>Green Energy</b>	Sales	24,596	33.6	28,070	27.5	3,473	14.1
	Operating profit	2,961	12.0	3,701	13.2	739	25.0
<b>Forestry Revitalization and Other Business</b>	Sales	680	0.9	1,632	1.6	951	139.7
	Operating profit	(306)	(45.0)	(102)	(6.3)	203	—
<b>Ordinary profit</b>	1,426	1.9	(193)	(0.2)	(1,620)	—	

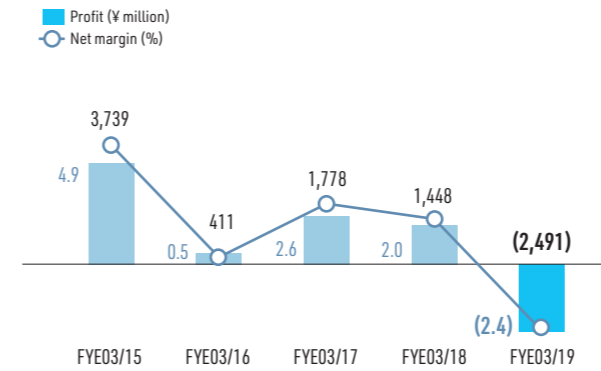
Millions of yen (unless otherwise stated)

Fiscal year	FYE03/15	FYE03/16	FYE03/17	FYE03/18	FYE03/19
Net sales	75,903	75,524	68,341	73,318	102,025
Gross profit	25,466	23,482	22,158	19,238	20,945
Operating profit	5,352	3,887	2,740	3,153	1,733
Ordinary profit	3,737	2,563	1,592	1,426	(193)
Profit (loss) attributable to owners of the parent	3,739	411	1,778	1,448	(2,491)
Capital expenditure	12,200	7,180	10,757	23,227	10,690
Depreciation	1,684	1,893	2,030	2,831	4,229
<b>Fiscal year end</b>					
Current assets	84,901	79,171	76,027	71,825	74,199
Cash and deposits	27,739	30,528	36,917	31,932	26,071
Notes and accounts receivable-trade	27,919	27,080	28,378	29,814	33,752
Non-current assets	36,612	41,787	50,785	81,300	96,034
Property, plant and equipment	26,988	32,467	40,805	66,767	74,118
Intangible assets	951	469	609	2,845	4,126
Investments and other assets	8,671	8,850	9,370	11,686	17,790
Total assets	121,898	121,563	127,522	155,121	172,344
Current liabilities	70,568	50,106	44,939	46,514	53,211
Non-current liabilities	23,923	43,182	53,027	76,946	86,936
Net assets	27,348	28,213	29,555	31,660	32,196
Interest-bearing debt (excluding lease obligations)	50,575	55,605	67,627	89,333	93,192
Cash flows from operating activities	7,216	3,555	(1,906)	853	2,552
Cash flows from investing activities	(7,658)	(16,376)	(8,431)	(25,614)	(3,672)
Cash flows from financing activities	6,634	8,001	13,154	19,657	3,204
Cash and cash equivalents at end of period	24,595	19,762	22,537	17,449	19,522
<b>Shares</b>					
Per-share data (yen)					
Earnings per share (EPS)	142.13	14.96	65.87	54.12	(92.77)
Book value per share (BPS)	1000.90	963.28	1020.10	1046.81	989.06
Dividends	-	30	20	10	10
Total number of issued shares	27,648,880	27,652,880	27,652,880	27,652,880	27,763,880
<b>Financial ratios</b>					
Operating margin (%)	7.1	5.1	4.0	4.3	1.7
Net margin (%)	4.9	0.5	2.6	2.0	(2.4)
Equity ratio	21.7	21.9	21.4	18.1	15.4
Return on equity (ROE; %)	15.6	1.6	6.6	5.2	(9.1)
Payout ratio (%)	-	200.5	30.4	18.5	-
<b>Non-financial data</b>					
Number of employees (consolidated)	3,072	3,107	2,983	3,059	4,765
Number of directors	5	7	8	6	6
(of which, external directors)	(1)	(2)	(2)	(2)	(2)

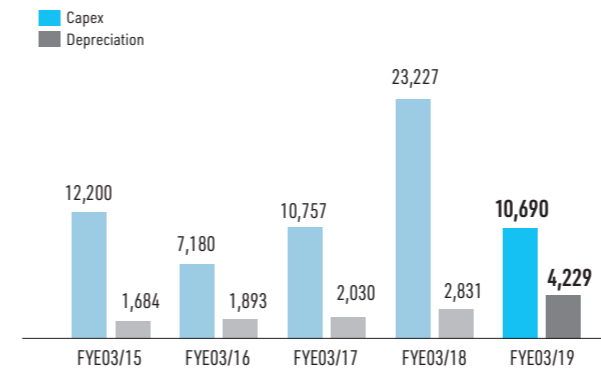
## Net sales (¥ million)



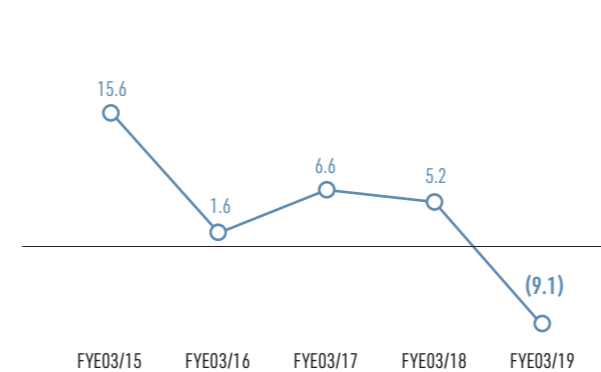
## Profit and net margin



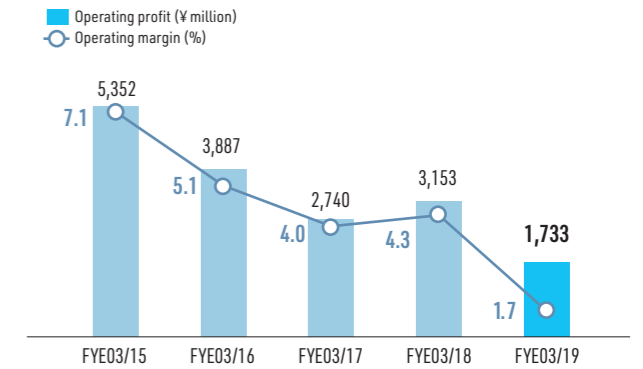
## Capex and depreciation (¥ million)



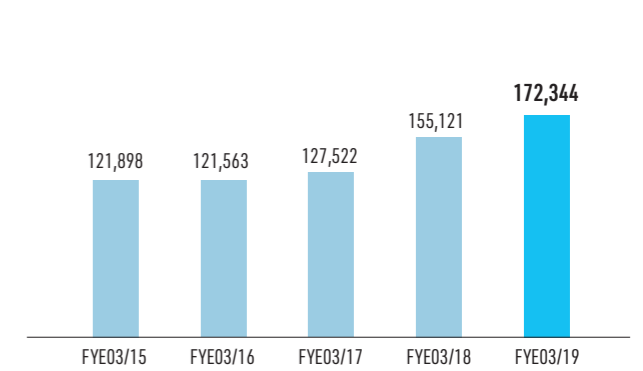
## ROE (%)



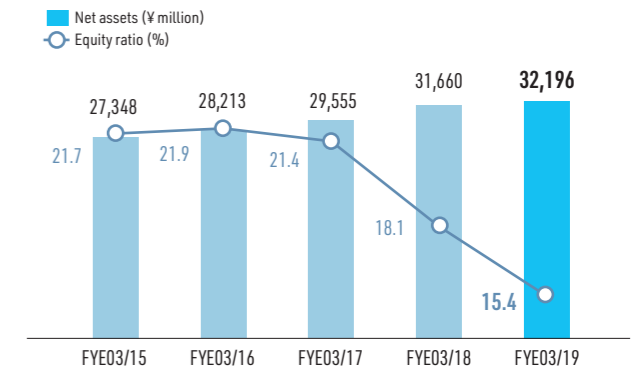
## Operating profit and operating margin



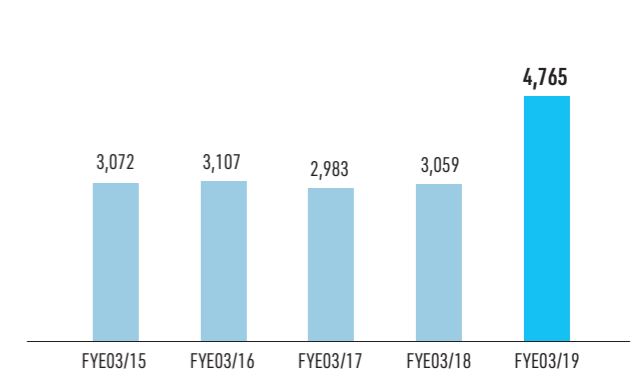
## Total assets (¥ million)



## Net assets and equity ratio



## Number of employees (consolidated)



# Consolidated Financial Results

Japan Asia Group Limited and consolidated subsidiaries  
Fiscal years ended March 31

## Consolidated balance sheets

	Millions of yen	
	March 31, 2018	March 31, 2019
<b>Assets</b>		
<b>Current assets</b>		
Cash and deposits	31,932	26,071
Notes and accounts receivable-trade	29,814	33,752
Merchandise and finished goods	78	302
Work in process	486	1,597
Raw materials and supplies	99	2,987
Real estate for sale	6,235	6,415
Short-term loans receivable	15	124
Accounts receivable-other	1,523	1,029
Other	1,700	1,074
Allowance for doubtful accounts	(60)	(56)
<b>Total current assets</b>	<b>71,825</b>	<b>74,199</b>
<b>Non-current assets</b>		
Property, plant and equipment		
Buildings and structures, net	5,412	6,012
Machinery, equipment and vehicles, net	32,608	37,358
Land	15,694	17,040
Leased assets, net	8,898	10,210
Construction in progress	3,246	2,327
Other, net	906	1,168
<b>Total property, plant and equipment</b>	<b>66,767</b>	<b>74,118</b>
<b>Intangible assets</b>		
Goodwill	1,820	2,282
Other	1,025	1,843
<b>Total intangible assets</b>	<b>2,845</b>	<b>4,126</b>
<b>Investments and other assets</b>		
Investment securities	4,199	8,185
Long-term loans receivable	124	30
Leasehold and guarantee deposits	1,272	1,475
Deferred tax assets	899	1,037
Other	5,867	7,523
Allowance for doubtful accounts	(677)	(462)
<b>Total investments and other assets</b>	<b>11,686</b>	<b>17,790</b>
<b>Total non-current assets</b>	<b>81,300</b>	<b>96,034</b>
<b>Deferred assets</b>		
Deferred organization expenses	0	0
Business commencement expenses	1,994	2,109
<b>Total deferred assets</b>	<b>1,994</b>	<b>2,109</b>
<b>Total assets</b>	<b>155,121</b>	<b>172,344</b>

	Millions of yen	
	March 31, 2018	March 31, 2019
<b>Liabilities</b>		
<b>Current liabilities</b>		
Notes and accounts payable-trade	4,687	8,269
Short-term loans payable	7,337	12,907
Current portion of bonds payable	8,977	1,175
Current portion of long-term loans payable	7,521	10,996
Current portion of projects finance loans	4,829	4,464
Lease obligations	874	1,023
Accounts payable-other	6,967	6,163
Income taxes payable	571	667
Provision for bonuses	811	2,072
Provision for bonuses for directors (and other officers)	7	-
Provision for loss on order received	125	308
Provision for shareholder benefit program	9	7
Valuation reserve for inventory purchase commitments	-	153
Other	3,792	5,002
<b>Total current liabilities</b>	<b>46,514</b>	<b>53,211</b>
<b>Non-current liabilities</b>		
Bonds payable	4,245	4,802
Long-term loans payable	24,003	27,710
Projects finance loans	32,419	31,135
Lease obligations	8,901	10,175
Deferred tax liabilities	612	2,217
Retirement benefit liability	3,096	6,372
Asset retirement obligations	2,677	3,367
Other	989	1,154
<b>Total non-current liabilities</b>	<b>76,946</b>	<b>86,936</b>
<b>Total liabilities</b>	<b>123,461</b>	<b>140,148</b>
<b>Net assets</b>		
<b>Shareholders' equity</b>		
Capital stock	3,995	4,024
Retained earnings	24,158	20,612
Treasury shares	(354)	(397)
<b>Total shareholders' equity</b>	<b>27,799</b>	<b>24,239</b>
<b>Accumulated other comprehensive income</b>		
Valuation difference on available-for-sale securities	331	2,147
Deferred gains or losses on hedges	(29)	(30)
Foreign currency translation adjustment	(36)	87
Remeasurements of defined benefit plans	(49)	135
<b>Total accumulated other comprehensive income</b>	<b>217</b>	<b>2,340</b>
Share acquisition rights	7	-
Non-controlling interests	3,635	5,616
<b>Total net assets</b>	<b>31,660</b>	<b>32,196</b>
<b>Total liabilities and net assets</b>	<b>155,121</b>	<b>172,344</b>

## Consolidated statements of income

	Millions of yen	
	FYE03/18	FYE03/19
Net sales	73,318	102,025
Cost of sales	54,079	81,079
<b>Gross profit</b>	<b>19,238</b>	<b>20,945</b>
<b>Selling, general and administrative expenses</b>		
Advertising expenses	609	610
Business consignment expenses	103	6
Rent expenses	1,629	1,842
Provision of allowance for doubtful accounts	(25)	7
Salaries and allowances	6,552	7,662
Provision for bonuses	430	836
Provision for bonuses for directors (and other officers)	7	-
Amortization of goodwill	134	207
Other	6,642	8,039
<b>Total selling, general and administrative expenses</b>	<b>16,085</b>	<b>19,212</b>
<b>Operating profit</b>	<b>3,153</b>	<b>1,733</b>
<b>Non-operating income</b>	<b>321</b>	<b>313</b>
<b>Non-operating expenses</b>	<b>2,048</b>	<b>2,240</b>
<b>Ordinary profit (loss)</b>	<b>1,426</b>	<b>(193)</b>
<b>Extraordinary income</b>		
Gain on sales of non-current assets	-	1,506
Subsidy income	-	412
Gain on sales of investment securities	714	33
Gain on step acquisitions	473	-
Gain on bargain purchase	52	147
Gain on liquidation of subsidiaries	38	-
<b>Total extraordinary income</b>	<b>1,278</b>	<b>2,099</b>
<b>Extraordinary losses</b>		
Impairment loss	-	1,784
Loss on reduction of non-current assets	-	366
Loss on sales of investment securities	10	18
Loss on valuation of investment securities	-	50
Loss on sales of shares of subsidiaries and associates	-	51
Loss on valuation of golf club membership	9	4
Business structure improvement expenses	-	242
<b>Total extraordinary losses</b>	<b>20</b>	<b>2,520</b>
<b>Profit (loss) before income taxes</b>	<b>2,684</b>	<b>(614)</b>
<b>Income taxes-current</b>	<b>800</b>	<b>909</b>
<b>Income taxes-deferred</b>	<b>65</b>	<b>276</b>
<b>Total income taxes</b>	<b>865</b>	<b>1,185</b>
<b>Profit (loss)</b>	<b>1,818</b>	<b>(1,800)</b>
<b>Profit attributable to non-controlling interests</b>	<b>369</b>	<b>691</b>
<b>Profit (loss) attributable to owners of the parent</b>	<b>1,448</b>	<b>(2,491)</b>

## Consolidated statements of cash flows

	Millions of yen	
	FYE03/18	FYE03/19
Cash flows from operating activities	853	2,552
Cash flows from investing activities	(25,614)	(3,672)
Cash flows from financing activities	19,657	3,204
Effect of exchange rate change on cash and cash equivalents	15	(11)
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(5,087)</b>	<b>2,072</b>
<b>Cash and cash equivalents at beginning of period</b>	<b>22,537</b>	<b>17,449</b>
<b>Cash and cash equivalents at end of period</b>	<b>17,449</b>	<b>19,522</b>

# Company Profile

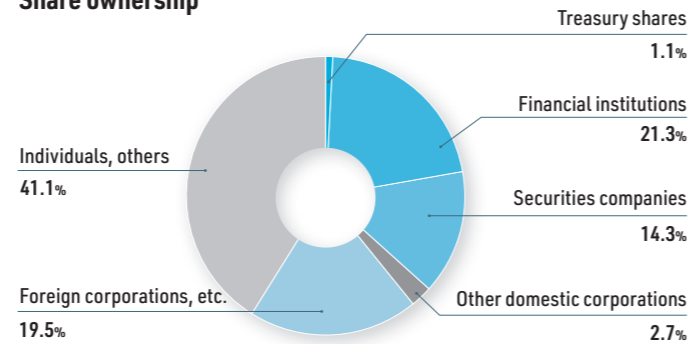
## Company overview (As of March 31, 2019)

Company name	Japan Asia Group Limited
Head office	Kokusai Building, 1-1, Marunouchi 3-chome, Chiyoda-ku, Tokyo, Japan 100-0005 Phone +81-3-4476-8000
Founded	March 1988
Capital	¥4,024 million
Number of employees	4,765 (consolidated)
Group companies	100 consolidated subsidiaries (as of May 31, 2019)
Stock listing	First Section of the Tokyo Stock Exchange
Stock code	3751

## Shares (As of March 31, 2019)

Total number of authorized shares	67,853,480
Total number of issued shares	27,763,880
Number of shareholders	9,242

## Share ownership



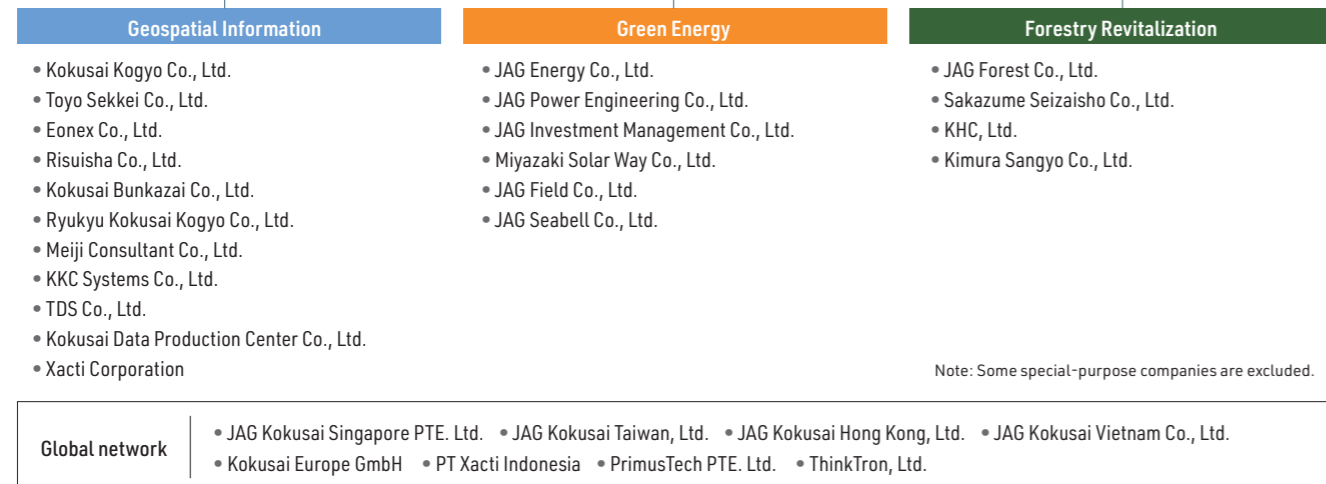
Note: "Other domestic corporations" include 11,190 shares held by Japan Securities Depository Center, Inc.

## Major shareholders (Top 10 companies and individuals)

Name of shareholders	Shareholding ratio (%)
Aizawa Securities Co., Ltd.	12.6
Japan Asia Holdings Limited	9.6
Master Trust Bank of Japan, Ltd. (Trust Account)	5.6
Japan Trustee Services Bank, Ltd. (Trust Account)	3.4
JA Partners Ltd.	2.5
Tetsuo Sato	2.2
Trust & Custody Services Bank, Ltd (Trust Account)	2.1
Nomura Singapore Limited Customer Segregated A/C FJ-1309	1.9
Mizuho Bank, Ltd.	1.8
Tetsuo Yamashita	1.8

Note: Shareholding ratios exclude treasury shares (308,845).

## Major Group companies (As of August 2019)



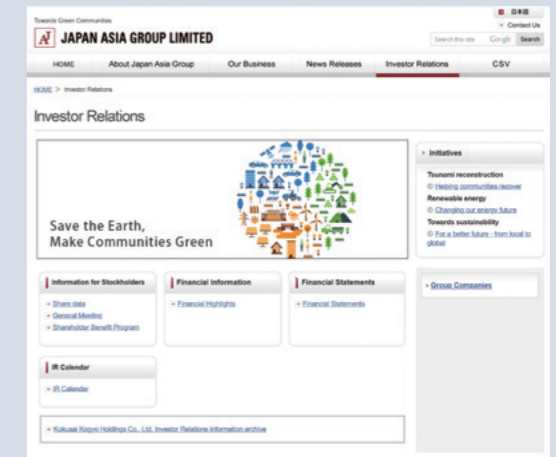
## Website guide

URL <https://www.japanasiagroup.jp/english/index.html>



## Investor Relations Information

URL <https://www.japanasiagroup.jp/english/ir/index.html>



## Geospatial Information

URL <https://www.kkc.co.jp/english/index.html>



## Green Energy

URL <http://www.jagenergy.jp/english/service/energy/solar/domestic/index.html>



## Forestry Revitalization

URL <https://www.japanasiagroup.jp/english/service/05.html>





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