

# JBIC Today

September 2021

Special Feature

## Challenge on Clean Energy

- ▶ JBIC's initiatives in anticipation of the energy transformation, connecting Japanese companies' capabilities to the world
- ▶ Collaboration with Companies with Outstanding Technologies and Networks  
JBIC Pursues Global Decarbonization
- ▶ Production, Transportation, Storage, Utilization  
Global Supply Chain Underpinning a Hydrogen-based Society
- ▶ Contributing toward Global Climate Change Measures by Supporting Environmental Initiatives in Asia, while Considering Individual Countries' Circumstances

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JAPAN BANK FOR  
INTERNATIONAL COOPERATION





# Production, Transportation, Storage, Utilization Global Supply Chain Underpinning a Hydrogen-based Society

Kawasaki Heavy Industries (KHI) has been working on hydrogen-related businesses for over 10 years. JBIC interviewed HARADA Eiichi, Managing Executive Officer of KHI, which is making progress toward the realization of a hydrogen-based society, from demonstration projects, including world-first trials, to large-scale demonstration projects and commercialization in 2030.

**New development of hydrogen technology using LNG technology  
Aiming to realize carbon neutrality without patience or sacrifice**



**HARADA Eiichi** Ph.D. in Engineering,  
Managing Executive Officer,  
General Manager, Hydrogen Strategy Division,  
Kawasaki Heavy Industries, Ltd.

KHI has been developing hydrogen-related technologies for quite some time, including the manufacture of hydrogen gas turbines and the development of liquefied hydrogen tank for H2 rockets. A major turning point came just before the Kyoto Protocol's first commitment period began in 2008. Amid rising expectations for renewable energies, we decided to take on the hydrogen challenge.

We focused on coal in Australia's Latrobe Valley. The abundance of the coal reserves does satisfy the criterion of availability in large quantities.

Price is another issue. To decrease the price, it would need to be used in massive quantities. At KHI, we decided that this problem could be surmounted by building a global hydrogen supply chain, namely to produce hydrogen, transport it to Japan, store it safely, and utilize it as energy. We are now working on this project with the aim of the commercialization in 2030.

At the supply chain's starting point of production, brown coal is treated at high temperatures to produce hydrogen gas, which is then liquefied. The CO2 generated by that process is stored at the brown coal mining site using Carbon Capture and Storage (CCS)

technology. For the transportation and storage stages, KHI has also developed a carrier to transport the liquefied hydrogen. For the utilization stage, we are considering various ways to utilize hydrogen, such as developing a co-generation system (CGS) using hydrogen gas turbines.

Our knowledge in liquefied natural gas (LNG) contributed greatly toward technological development. However, while natural gas changes to a liquid state at  $-162^{\circ}\text{C}$ , hydrogen gas needs to be cooled to  $-253^{\circ}\text{C}$ . This was a major departure from conventional technology.

The most challenging part of this project to that point had been the development of a liquefied hydrogen carrier. As this would be the first attempt to transport liquefied hydrogen in the world, there were no international standards. So we consulted Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and asked them to promote the establishment of international rules. Once approval was received from the International Maritime Organization (IMO) in 2016, building of the carrier accelerated, and demonstration trials at sea started in October 2020.

We have also been involved in setting up various organizations, such as the Japan Hydrogen Association (JH2A), to promote the adoption of hydrogen in society, and we joined the Hydrogen Council, a global initiative of 123 leading companies from around the world. In 2019, the latter organization announced a major target of growing the global hydrogen-related market to a scale of USD2.5 trillion in annual sales by 2050. Our hope is that, as more and more companies become involved in the Hydrogen Council, there will be more opportunities for the utilization of hydrogen, which will make the cost of using hydrogen more reasonable.

Reducing greenhouse gas emissions is an important theme. That hydrogen is initially expensive is an obvious fact. However, as many hydrogen-related technologies have been originated in Japan, the utilization of hydrogen will turn the cycle of the Japanese economy, which will, in turn, enrich the country. We are

confident that we will be able to realize a hydrogen-based society that achieves a balance between economic and environmental prosperity.



**Production** Photo: Kawasaki Heavy Industries  
Established the Hydrogen Technology Demonstration Center at the Harima Works in Hyogo Prefecture. KHI's technology in the handling of cryogenic materials and turbine technology are used in this facility.



**Transportation** Photo: HySTRA  
Developed a liquefied hydrogen ( $-253^{\circ}\text{C}$ ) carrier using KHI's technology cultivated in the production of  $-162^{\circ}\text{C}$  LNG carrier. In the future, KHI plans to build a larger carrier that will be powered by hydrogen.



**Storage** Photo: Kawasaki Heavy Industries  
Cryogenic liquefied hydrogen storage tank that maintains  $-253^{\circ}\text{C}$  conditions. With its vacuum-insulated, double-walled structure, this tank is designed to prevent temperature changes.



**Utilization** Photo: Kawasaki Heavy Industries  
Hydrogen gas turbine power generation facility. KHI has developed proprietary combustion technology that uses a mixture of hydrogen and natural gas, as well as 100% hydrogen.

# Contributing toward Global Climate Change Measures by Supporting Environmental Initiatives in Asia, while Considering Individual Countries' Circumstances

Today, countries around the world have set goals to achieve carbon neutrality between 2050 and 2060. Achieving such an ambitious goal may be difficult both technically and in terms of institutions if approached as an extension of the current situation, so what kind of efforts are these countries making? JBIC interviewed KOYAMA Ken, Senior Managing Director at the Institute of Energy Economics, Japan (IEEJ), who is an expert in the global energy situation.



**KOYAMA Ken, Ph.D.**  
Senior Managing Director, Chief Economist, the Institute of Energy Economics, Japan (IEEJ), and Adjunct Professor, the Institute of Innovative Research, Tokyo Institute of Technology  
Areas of research include analysis of the global oil and energy situation, analysis of energy markets and policy trends in the Asia-Pacific region, and energy security issues.

—For the past 18 months, the world has been at the mercy of the COVID-19 pandemic. Has energy policy also been impacted?

**KOYAMA** Definitely. In Europe, carbon neutrality through clean energy investment has been positioned as a long-term growth strategy of the Green Deal. With the added perspective of recovery from COVID-19, a three-pronged policy of climate change, long-term growth, and economic recovery has been proposed and endorsed by many countries. The United States now has the new Biden administration. If not for the COVID-19 pandemic, the US economy would likely not have suffered to such an extreme extent nor so many lives have been lost, and Donald Trump might have been re-elected as president. If that had happened, there would be no carbon neutrality policy in the US administration.

—Western countries and Japan are considering initiatives to achieve carbon neutrality by 2050, while China has set a target of 2060. What are your views of the respective situations in individual countries?

**KOYAMA** In the United States, the Congress holds the key. Implementing large-scale green energy investments requires a budget, which needs to be passed by the Congress. In the current Congress, the Democrats and Republicans are evenly matched and struggling for supremacy, which is making consensus-building difficult. China, meanwhile, will also probably take some longer time to realize carbon neutrality. In China, it may look like carbon neutrality will progress under the lead of the state, but that country in reality relies on coal for the most of its primary energy. China has achieved economic development with its abundant coal resources, so a complete shift away from coal will not be an easy task. There is a mountain of challenges for China to overcome to achieve its 2060 target. Japan, meanwhile, is currently in the process of developing its 6th Strategic Energy Plan. While Japan may be able to draw up a "vision" for targets, such as 46% reduction of greenhouse gas (GHG) emissions by 2030 and carbon neutrality by 2050, it also faces major challenges in formulating measures to realize that vision.

—How should companies view this situation? Does it represent a threat for them or an opportunity?

**KOYAMA** To realize carbon neutrality, we need innovation. Countries around the world are competing to have the superior technology over a long span of 30 or 50 years. Japan is attracting attention as the leader in CO2 free hydrogen and ammonia and could potentially come out on top in the domination of technology in these fields.

As well as exploring new technology, there is also a need to consider the best use of existing infrastructure and supply chains. Energy industries such as electricity and gas are deeply involved in GHG emissions reduction policy, but their infrastructure and supply chains require large investments and have long service lives. Instead of immediately replacing these existing assets, we may be able to curb the increase in costs by making best use of them while

transitioning. The question of how to use CO2-free fuels, such as by burning CO2-free ammonia and hydrogen by themselves or combining them with other fuels at thermal power plants, will not be an easy one to answer, but it is a challenge worth taking.

—What kind of innovations do you think will happen?

**KOYAMA** The first basic prescription in achieving carbon neutrality is promotion of energy efficiency improvement and energy savings together with promotion of non-fossil fuels, including renewable energies and nuclear power. Next prescription is electrification. Final energy consumption should be supplied by electricity as much as possible with the achievement of zero emissions in the power generation sector. These two prescriptions will enable substantial reductions in GHG emissions. Nevertheless, there are limits to how much existing technologies by themselves can achieve in reducing GHG emissions deeply enough to such extent of net zero emission, and technological innovation will be needed to overcome those limitations. Currently, hydrogen technology is attracting attention in Europe as well because hydrogen is essential to the realization of carbon neutrality. If Japan rests on its laurels, it will be difficult to maintain its current lead. Another technological trend attracting global attention is negative emissions, that is, technologies that directly reduce GHG. Specifically, these technologies include "direct air capture (DAC)," a technology that captures CO2 directly from the air and removes it, and "bioenergy with carbon capture and storage (BECCS)," a process of storing CO2 from biomass-fueled power generation underground.

—Both transitioning from existing technologies and developing new technologies are going to need tremendous amounts of investment, aren't they?

**KOYAMA** That's right. Financing will play an extremely important role in that regard. In Japan, initiatives based on the 6th Strategic Energy Plan will be taken, but there are limits to what private-sector companies can do by themselves, so public support will be needed. What will be required are measures to suit the circumstances of each country and region, so Japan should provide support for climate change initiatives in Asia, using technologies that have been cultivated to date. Providing financial support for these activities will be good for Japanese industry, for Japan, for Asia, and for the world, so I look forward to JBIC's support.

# Applying Common Management Criteria for Operation of both Head Office in Japan and Local Subsidiary in Thailand Realizing Self-directed Improvement with the Growth of Local Staff

## Oizuru Corporation

Oizuru Corporation produces and sells buffer packaging materials for a wide variety of products, including telecommunications equipment, medical devices, and automotive components. In its operations in Thailand, which began in 2002, the company is working to further expand its business by strengthening its product offerings in vacuum formed tray packaging materials.

### Manufacture and sale of highly functional packaging materials Resolving logistics challenges starts from the planning and designing stages

‘There is a growing number of Japanese companies that are using the COVID-19 pandemic as an opportunity to review their supply chains and establish second production bases in Southeast Asia in addition to those in China. As a company doing business at our local subsidiary in Thailand, this presents a significant opportunity for us,’ explains OIZURU Osamu, President and CEO of Oizuru Corporation, a manufacturer and distributor of packaging materials.

Oizuru Corporation established Oizuru (THAILAND) Co., Ltd. (OTC) in Thailand in August 2002 and has been pursuing business with automotive manufacturers and other customers. Despite demand plummeting in the first half of 2020 due to the COVID-19 pandemic, it is now recovering at an unexpectedly fast pace. The company is eager to use the changes in the post-COVID-19 business environment as a springboard for further growth.

Founded in 1958, Oizuru Corporation was started as a rubber product processing business by Mr. OIZURU’s father. In 1968, the company was chosen by Asahi Chemical Industry Co., Ltd. (now Asahi Kasei Corp.) as a designated processing plant for the buffer packaging material, “SUNTECH FOAM.” With this material, which offers excellent shock-absorbance and is suitable for the

transportation of delicate equipment, Oizuru Corporation started selling to a major electric appliances manufacturer located near its head office in Nishitama-gun, Tokyo. With the growth in exports of telecommunications equipment and office automation equipment, Oizuru Corporation continued to grow. In the 1990s, its operations expanded to target businesses in other domains, such as medical devices, analytical instruments, measuring instruments, and automotive components.

In 2013, it established a second plant in Iruma City, Saitama. Here, the company ventured into the development of a proprietary material that used corn starch as its main raw material. After perfecting this new material, “el-coco foam,” which generates fewer CO<sub>2</sub> emissions and curbs the generation of harmful substances in incinerating processes, the company began offering it as a packaging material for food products.

Oizuru Corporation’s strengths include its ability to offer integrated services from planning and design to mass-production and delivery and to resolve customers’ logistics-related problems with a wide variety of buffer packaging materials. The employees who are qualified packaging professionals with expert knowledge in material mechanics and structural dynamics develop optimal packaging specifications to suit its customers’ products and logistics environments.

Mr. OIZURU cites as an example a solution the company developed for a business that handles analytical instruments. ‘We used highly-functional buffer materials, instead of the cheaper polystyrene foam to minimize packaging volume, to curtail transportation and storage costs. With design that enabled the shortest buffer distance and minimized the quantity of buffer material used, we reduced logistics costs by 20%.’

### Expansion into Thailand with an attitude of “Things will work out once we get there” Striving to differentiate with packaging materials that use vacuum formed trays

Oizuru Corporation’s decision to expand into Thailand was prompted by the Toyota Motor Corporation’s choice of Thailand as one of its production bases under the Innovative International Multi-purpose Vehicle (IMV) project. Mr. OIZURU recalls, ‘The

companies we had been dealing with were transferring their production bases to Asia one after another. As well as these moves coinciding with the stagnation of our sales, we were hoping to make use of our experiences and technological capability overseas. Our customers had not actually asked us to make this move, but we thought that, with over 700 companies in the industrial park there, things would surely work out once we got there. Looking back now, it was quite a reckless move, was it not?’

Oizuru Corporation’s business in Thailand started to make headway when it started supplying to a Japanese company handling automotive components in 2004. Initially, it won the business with a proposal to reduce the customers’ costs by cutting the number of cardboard boxes from more than 100 varieties to 60 through standardization and by reviewing the material the boxes were made from. After that, Oizuru Corporation also captured demand from a Japanese office equipment manufacturer and other customers and steadily increased its sales.

What Oizuru Corporation focused on in the promotion of its business in Thailand was its commitment to organizational operation and on-site environment creation using common management standards for both head office in Japan and OTC. Head office has established an integrated management system covering quality management, environmental responses, and business continuity, and Oizuru Corporation will work on establishing the same system at OTC. OTC will also introduce the same core system and sales support tools as those used at head office. In doing so, OTC will strive to establish an environment in which individual activities can be visualized and the two sites can mutually raise the standard of their activities.

Advanced initiatives have been generated voluntarily by local staff who have a deep understanding of the philosophy of site management and quality management in Japan. For example, the plant used to employ a manufacturing system in which production was carried out for all products one process at a time, including cutting, pressing, assembly, and packaging, but it has now shifted to a system of producing single products one at a time by teams of five to eliminate waste in storage and transport. This “single-item flow” process has contributed to an improvement in production efficiency of 34%. Since then, OTC employees have continued to engage in self-directed improvement on a daily basis, such as the five members of a team swapping the processes they are responsible for regularly.

Back-office operations are also performing excellent management. Having built good relationships with suppliers, the female assistant manager in charge of purchasing and procurement shares the production plans and confirms delivery deadlines and quality meticulously before giving instructions.

‘Our five Japanese staff in Thailand develop the local staff by instructing them on key points of operation and management while building good working relationships with them through careful communication. Thanks to the efforts made by our excellent local staff, we have been able to overcome the various challenges we have faced,’ Mr. OIZURU explains.

Oizuru Corporation used to excel at packing materials using foam, but is now stepping up its vacuum formed tray operations. Vacuum formed trays are widely used for food containers, but the demand for this product is expanding to packaging materials for precision components.

In March 2021, OTC received a syndicated loan from the Japan Bank for International Cooperation (JBIC) and Mizuho Bank, Ltd. Funds equivalent to approximately THB24 million in total will be



Oizuru Corporation’s overseas business base in Thailand established in 2002



Inside the Thai plant

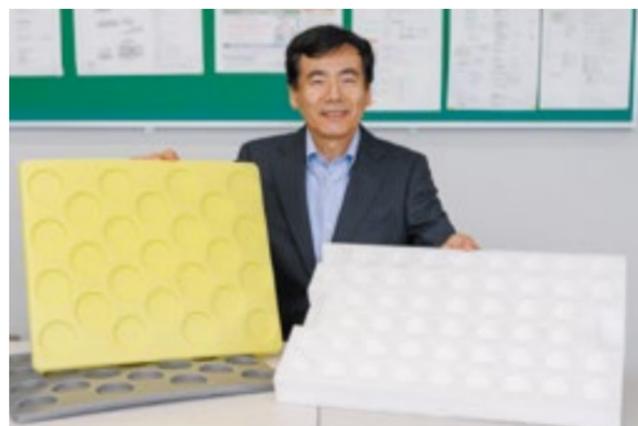
used to upgrade production facilities for vacuum formed trays. With the introduction of machinery to make molds, OTC hopes to differentiate itself from its competitors by establishing production systems that enable speedy delivery of products.

‘Someone from the Tokyo Metropolitan Small and Medium Enterprise Support Center suggested JBIC to us, and we were able to take advantage of a loan from JBIC for the first time. The loan is offered at a long-term fixed interest rate and can be funded in local currency, which allows us to avoid both interest rate volatility risk and foreign exchange risk, for which we are truly grateful. Because we were unfamiliar with the process, we kept making mistakes in the preparation of the application, but I really appreciated how kindly the people at JBIC responded to us,’ said Mr. OIZURU.

Mr. OIZURU’s main management focuses for the next decade will be “human resources” and “environment.” ‘I will devote my efforts to establishing a business in which our employees can sense their own growth through work and to initiatives for the 3Rs (Reduce, Reuse, Recycle).’ By building management foundations for sustainable growth, Oizuru Corporation aims to achieve further growth and become the “leading company in packaging.”

### Oizuru Corporation

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1188 Ooaza Hakonegasaki, Mizuhomachi, Nishitama, Tokyo  
URL  
<https://www.oizuru.co.jp/>  
Founded  
January 1958  
Capital  
JPY10 million  
Sales Volume  
Approx. JPY1.2 billion (Year Ended December 2020)  
President and CEO  
OIZURU Osamu  
Employees  
Japan: 60; Thailand 135  
Business  
Production of soft plastic and foamed products, packaging technology services including package design, processing, and technical testing, distribution processing service



President and CEO OIZURU Osamu

## The First Waste to Energy Project in Dubai, an Experience Full of Firsts I Hope to Make it a Model Case for Project Financing for Future Waste to Energy Projects



Deputy Director, Division 4,  
Social Infrastructure Finance Department

**TAKEUCHI Kanae**

I was responsible for the project financing for this project to build, own, and operate a waste treatment and power generation plant in Dubai's Warsan district for the treatment of waste and the generation and sale of electricity. In Japan, it is common to dispose of waste by incineration, but in many countries around the world, landfill is still the norm. In Dubai, which has achieved remarkable economic growth in recent years, most of the country's waste is buried in landfill, and it is facing an increasing shortage

of land for that purpose.

Moreover, Dubai relies on gas-fired generation for more than 90% of its power needs, so there is a growing need to promote the introduction of renewable energies and diversify electricity generation. This project aims to provide a solution called "Waste to Energy" to resolve these issues. This facility is one of the largest of its kind in the world and has the capacity to treat as much as 45% of the waste generated in Dubai.

ITOCHU Corporation and Hitachi Zosen Corporation, the two key players in this project, have abundant experience in waste treatment and power generation overseas. Hitachi Zosen has undertaken design, procurement, and construction in many projects to date, but for this project, it will also be involved in the plant's operation and maintenance. This project will serve as a foothold for infrastructure system exports by Japanese companies in the areas of waste treatment and power generation. JBIC also wants to support the overseas roll-out of Japan's advanced infrastructure technologies. This project is truly significant in that respect, and I believe it will become a kind of model case for the future.

Waste to energy projects have different business risks from ordinary power generation. Various factors affect the stability of power supply and the profitability of the business, such as whether sufficient volumes of waste can be collected, whether the waste is properly separated, and whether the quality of waste suitable for incineration can be

ensured. Moreover, as Dubai is one of the emirates that make up the United Arab Emirates (UAE), the credit risks that need to be assessed differ from those of national projects. Building a scheme based on these kinds of complex structural risks was a considerable challenge for us. To further complicate matters, we were unable to visit the site due to the COVID-19 pandemic, and all negotiations had to be conducted online. From my previous experience, I believed that communication between stakeholders was essential for this kind of negotiation, so I focused on sharing information with the parties concerned, both sponsors and lenders, and on making progress in the project with common goals and directions.

This will be Dubai's first waste to energy project. For JBIC as well, it will be our first risk-taking project in Dubai, and at the same time, our first project financing for a waste to energy project. Given its significance in the contributions it can make toward the realization of a circular, decarbonized economy, to be involved in a project that is so full of "firsts" and to help it reach the conclusion of such a satisfactory agreement makes me very happy both as a banker and as an individual human being, and it has been an invaluable experience. Going forward, we can expect to see more and more of these waste to energy projects around the world. JBIC hopes to contribute toward the realization of these projects by leveraging the knowledge and experience that this project will provide us.



Image of the waste to energy plant



<https://www.jbic.go.jp/en/information/press/press-2020/0329-014477.html>

## First Credit Line to Government of Republic of Benin under GREEN Operations I Hope to Contribute toward Solutions to Social Problems in Africa through Environmental Preservation Projects

I was assigned to work on the finance needed for environmental preservation projects in Benin by extending a credit line to the government of Benin. This is JBIC's first project in that country. JBIC has been strengthening its support to expand social and environmental-related investments in Africa since 2019, and this project is consistent with this policy.

As the credit line covers environmental preservation projects, JBIC is able to provide a wide range of funds for environmental projects of a highly public nature that are led by the government of Benin. One thing expected from this project is the improvement of Benin's electric power situation. Benin has an electrification rate of just 41.4% (70.8% in urban areas and 18% in rural areas). Progress has been particularly slow in rural areas, due to the country's undeveloped power grid. Various options are currently under consideration, including the introduction of an off-grid power system that combines compact power grids for limited areas with a solar power system. Some may have an image of JBIC as mostly financing large-scale projects, but with this credit line, we are able to provide funds in flexible ways to smaller projects like this.

In the Fourth Medium-term Business Plan released in June 2021, JBIC announced that it would "address global issues toward realizing sustainable development for the global economy and society" as a key focus area. To achieve this, "green finance," which provides support to projects related to renewable energy and smart energy for the realization of a

decarbonized society, and "social impact finance," which provides support to resolve social problems, are important. If clean and stable energy supply can be realized through this credit line, as well as the increase in electrification rate, it can be expected to have social impacts, such as power supply bringing about improvements in educational infrastructure and medical standards. In this respect, this project has aspects of both green finance and social impact finance.

Benin is located in Sub-Saharan Africa (south of the Sahara Desert), a region that faces challenges such as poverty and conflict, but it has a relatively stable political situation within the region. The government of Benin has some excellent people and is highly regarded internationally in the area of policy management. This is a country that is working on environmental policies in advanced ways, being quick to develop climate change action plans based on the Paris Agreement. JBIC has been working to build a relationship with the government of Benin, including inviting high-ranking officials from its Ministry of Economy and Finance to our JBIC seminar, an international exchange event that we hold every year (cancelled in 2020 due to the COVID-19 pandemic). It is a result of such people-to-people exchange efforts that this project has come to fruition.

Having dialogue with Benin's excellent policymakers through this project has been an invaluable experience for me. Based on my strong impression of Benin as a country with a high awareness of the SDGs (Sustainable Development Goals), I tried to tell them the social significance of this credit line as honestly and clearly as possible during the negotiation process.

As the talks proceeded, I was impressed by the Benin officials' passion in cherishing "people" for the development of the country. For example, most elementary schools in Benin's rural areas currently do not have electricity. If this project helps to improve the electrification rate of these schools and, in turn, the educational environment, it will lead to the development of the people who will lead the country into the future. I am honored to have been involved in a project that will contribute to the future of Benin.



Division 3,  
Oil and Gas Finance Department (then)

**HOHZOH Kaho**

GREEN (Global action for Reconciling Economic growth and ENvironmental preservation): Operations aimed at supporting projects recognized to have a positive impact on the preservation of the global environment, such as significant impacts in the reduction of greenhouse gas emissions, with the aim of preserving the global environment, including the prevention of global warming.

## First Credit Line to Government of Republic of Benin under GREEN Operations Supporting Environmental Preservation Projects in Republic of Benin

In March 2021, JBIC signed a general agreement with the Government of the Republic of Benin to provide a credit line of up to EUR30 million, of which JBIC's portion is EUR18 million. The credit line, JBIC's first extended to Benin, is intended to provide, through the Government of Benin, the funds necessary to implement environmental preservation projects in Benin under GREEN operations.



Helping Benin's sustainable development



<https://www.jbic.go.jp/en/information/press/press-2020/0325-014478.html>

# A “Hidden” Digital Innovation Giant Release of Report that Reveals the Real Power of the Nordic and Baltic Region

## Start-up Ecosystem Supported by Cutting -Edge Technology and Social Transformation

In April 2021, JBIC IG Partners and JB Nordic Ventures Oy (NordicNinja VC) co-published a report titled “Digital Innovation and Social Transformation – Case Study of Nordic and Baltic Region.”

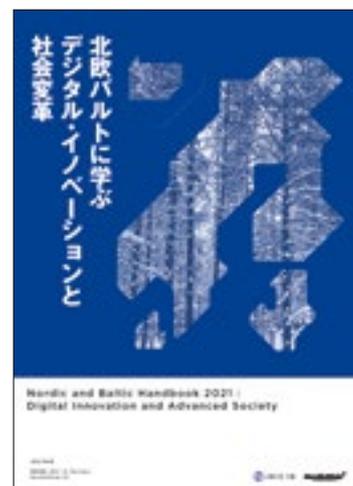
In 2017, the Japan Bank for International Cooperation (JBIC) and Industrial Growth Platform, Inc. (IGPI) established a joint venture, JBIC IG Partners, which invests in foreign companies through investment advice to funds. NordicNinja VC is the second fund established by JBIC IG Partners. Since its establishment in January 2019, it has invested in 13 companies in the Nordic and Baltic region. The report features abundant information and findings obtained over more

than two years of their activities.

The common images of the Nordic and Baltic region are “welfare” and “interiors,” but it has many other facets. The region has produced the largest number of unicorn companies per capita in the world outside Silicon Valley and leads the world in the advancement of social transformation in digital and ESG domains such as E-government.

The report describes the characteristics of the region from four perspectives, namely “start-up ecosystem,” “digital transformation of government and society,” “strong awareness of sustainable development,” and “effective utilization of human resources,” presenting them with the latest trends and interviews with locals.

‘This report is designed to provide an overall picture of the region, but what we want readers to focus on most is the section on sustainable development. The Nordic and Baltic region is a collection of small nations that has always been sensitive to the global agenda and ahead of the world in promoting sustainable development initiatives. There is much we can learn from the way they think



Brings together the latest trends in innovation and social transformation in the Nordic and Baltic region



**HIRAI Yasushi**

Director  
Division 3,  
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**SOHARA Tomosaku**

Investment Director, JBIC IG Partners  
Managing Partner, JB Nordic Ventures Oy (NordicNinja VC)

Visit the address below for the detail and download the PDF of “Digital Innovation and Social Transformation – Case Study of Nordic and Baltic Region” (available in Japanese only)

[https://www.igpi.co.jp/2021/04/20/report\\_jbicig\\_20210420/](https://www.igpi.co.jp/2021/04/20/report_jbicig_20210420/)

