Sustainability Report 2024

Version 1.2

TBM

Our mission, "Building Bridges to the Future We Want," guides us in addressing resource challenges and pursuing a decarbonized society as part of our goal for a "Sustainability Revolution."

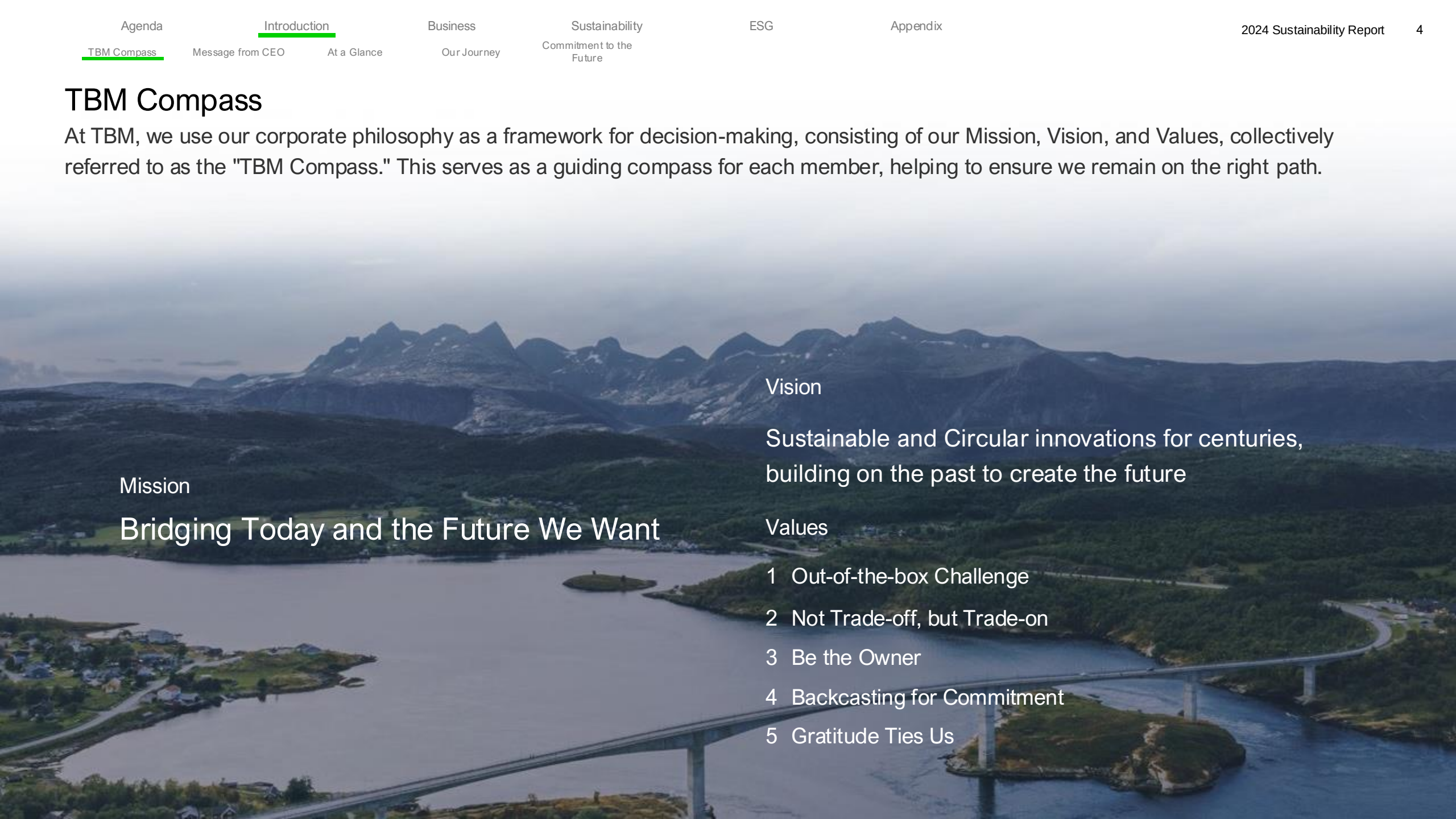
This report shares our initiatives and progress with our stakeholders, and we hope it helps you understand our activities and vision for the future.

You will find links in the report for more detailed information. Internal links lead to related pages, while external links are clearly marked.

Introduction

TBM Compass

At TBM, we use our corporate philosophy as a framework for decision-making, consisting of our Mission, Vision, and Values, collectively referred to as the "TBM Compass." This serves as a guiding compass for each member, helping to ensure we remain on the right path.



Mission

Bridging Today and the Future We Want

Vision

Sustainable and Circular innovations for centuries, building on the past to create the future

Values

1. Out-of-the-box Challenge
2. Not Trade-off, but Trade-on
3. Be the Owner
4. Backcasting for Commitment
5. Gratitude Ties Us

Message from CEO

Focusing on our two core businesses, the LIMEX business and the resource circulation business, we aim to drive further innovation in values, systems, and technologies, working towards the realization of TBM Pledge 2030 and the sustainability revolution beyond.

In 2023, we experienced the hottest year on record, while also witnessing a significant rise in global interest in sustainability, including decarbonization. We are united in our mission of "Bridging Today and the Future We Want," focusing on our two core businesses: the LIMEX business and the resource circulation business. We are committed to achieving our TBM Pledge 2030, our target for the year 2030. We will actively pursue new businesses and partnerships to contribute to mitigating climate change and resource challenges, as well as drive the "Sustainability Revolution."

Our journey towards this "Sustainability Revolution" will be full of challenges. However, we believe that by tackling these challenges with a strong sense of mission, we will create inspiring moments that foster our growth and welcome more people on board. We will return to our TBM compass and strive to build a company that contributes to the happiness and success of our customers, employees, and all stakeholders involved with us.

Decarbonization and the circular economy are vast and complex areas with significant potential for exploration. Solving these challenges requires employees with diverse backgrounds and expertise to work together passionately towards a common goal. Everyone should feel empowered to take on challenges, while their colleagues actively support them, celebrating achievements together. We have focused on diversity and inclusion (D&I) initiatives, and aim to further cultivate such a workplace environment.

In August 2024, we celebrated our 13th anniversary since our founding. We sincerely appreciate the ongoing support from our customers, shareholders, and all stakeholders. Together with our stakeholders, we will continue to drive innovation in values, systems, and technologies, working towards the realization of the sustainability revolution. We appreciate your continued understanding and support.

Nobuyoshi Yamasaki
Representative Director and CEO

At a Glance

Celebrating our 13th anniversary since our establishment in August 2011, we have surpassed 300 employees and have partnered with over 10,000 companies and organizations that have adopted LIMEX. We will continue to focus on creating even greater social value through the growth of our business.

Human Resource

326
# of employees
As of December 2023

26%
Female employment rate
As of December 2023

10%
Female manager rate
As of December 2023

40%

13.0days
Parental leave rate for male employees and average days taken
As of 2023

3.9/5
Engagement score
Average for the first and second halves of 2023 (out of 5 points)

Environment

54% reduction
Scope 1 & Scope 2 emissions
Progress towards GHG emission reduction targets / Performance in 2023 compared to the base year (2020)
>Learn more TBM Pledge 2030 (P32)

43% increase
Scope 3 emissions
Progress towards GHG emission reduction targets / Performance in 2023 compared to the base year (2020)
>Learn more TBM Pledge 2030 (P32)

4,039 t-CO_2eq
GHG emission reduction
2023 estimate for LIMEX business only. Excludes resource recycling. Calculation methods may change.

98%
Renewable energy in total electricity usage
As of 2023

4% achieved
Handling volume
Progress rate in 2023 towards the Go Circular target of TBM Pledge 2030, aiming to handle 1 million tons of LIMEX and plastic by 2030.

10% achieved
Handling countries
Progress in 2023 towards the Go Circular goal of TBM Pledge 2030, which aims to have LIMEX and plastic handled in 50 countries by 2030.

Business

350 companies
# of printing partners
As of December 2023

150 companies
# of molding partners
As of December 2023

250 companies
# of recycling partners
As of December 2023

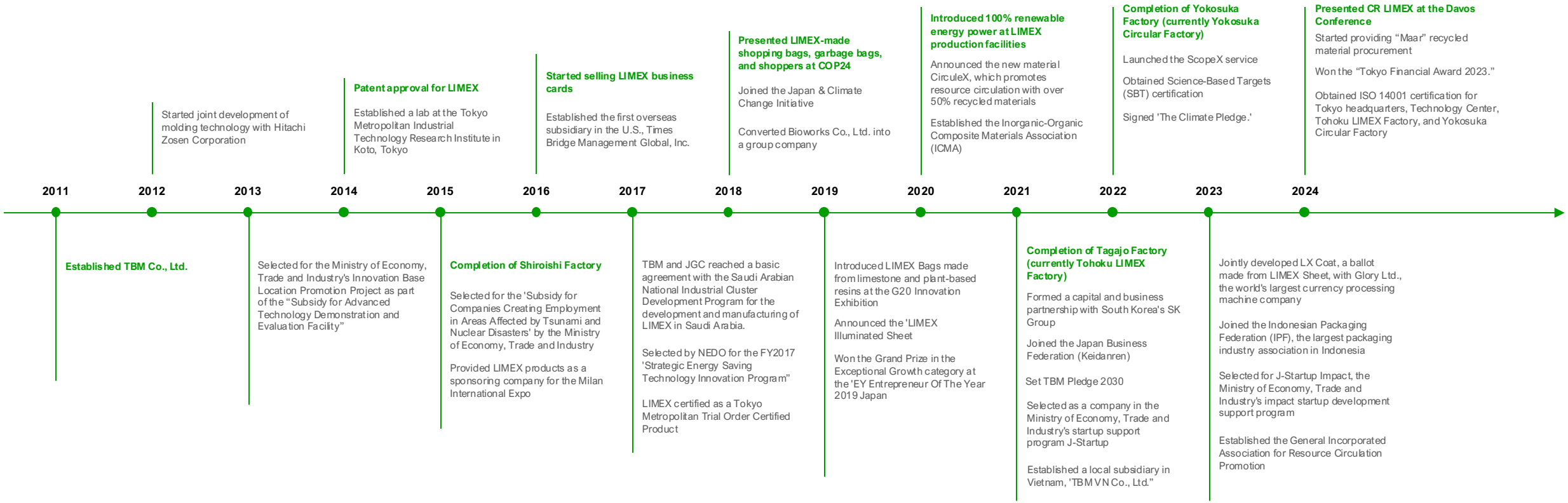
52 countries

248 patents
# of countries with registered patents and # of patents
As of July 2024

10,000+
# of companies adopting LIMEX material
As of November 2022, including registered business locations

Our Journey

Our journey has been challenging, and we are grateful for the support we have received from so many people along the way. We will keep taking on new challenges in our quest to achieve a sustainability revolution.



> Learn more TBM's history (external site)

Commitment to the Future

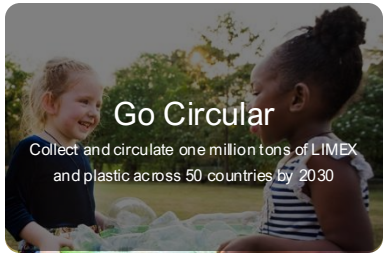
We are setting specific targets to realize our mission of “Bridging Today and the Future We Want.” Our business development will be guided by our commitment to unconventional challenges.

TBM Pledge 2030

Carbon negativity by 2030

We are aiming to go carbon negative by 2030, significantly reducing greenhouse gas (GHG) emissions.

- Achieve net-zero GHG emissions from TBM
- Reduce GHG emissions across our value chain by 50% (compared to 2020)
- Reduce GHG emissions across society



By collecting and recycling one million tons of LIMEX and plastic, we are striving to drive the overall resource circulation and waste reduction in our society.

- Value Innovation
- Structural Innovation
- Technological Innovation

Progress in 2023

GHG emissions from TBM (Scope 1・Scope 2)

54% reduction

compared to 2020

GHG emissions from the value chain (Scope 3)

43% increase

compared to 2020

4% achieved

against one million tons

10% achieved

against 50 countries

The Climate Pledge 2040

Achieving net zero carbon

We have a responsibility to stop climate change, and we believe that achieving net zero carbon (effectively reducing GHG emissions to net zero) will have a significant impact. We have signed The Climate Pledge, initiated jointly by Amazon and Global Optimism, committing to achieve net zero carbon by 2040.

Implementation Items

- Regular measurement and reporting of GHG emissions
- Implement decarbonization strategies in line with the Paris Agreement through business transformation and innovation, focusing on efficiency improvements, renewable energy, material reduction, and other carbon emission reduction strategies
- Add essential, lasting and quantifiable offsets that benefit society, achieving carbon neutrality for remaining emissions and effectively reaching zero annual carbon emissions by 2040

> Learn more The Climate Pledge（external site）

THE CLIMATE PLEDGE

Business

LIMEX

Our mission is “Bridging Today and the Future We Want,” aiming to solve resource issues and achieve a decarbonized society. Through innovation in three areas —”Technologies,” “Systems,” and “Values”— we are driving a “Sustainability Revolution.” The core of this revolution is LIMEX.

About LIMEX

LIMEX is a recyclable material designed with environmental sustainability in mind, primarily composed of inorganic substances like calcium carbonate. It is made by combining calcium carbonate with thermoplastic resin and serves as an alternative to conventional plastic and paper. Up until now, LIMEX has used calcium carbonate derived from limestone, a widely available resource, helping reduce reliance on scarce resources such as petroleum, forests, and water.

In January 2024, at the World Economic Forum Annual Meeting (Davos), we introduced CR LIMEX, which uses calcium carbonate produced by capturing CO_2 emissions, rather than relying solely on limestone. This carbon recycling technology aims to further reduce CO_2 emissions over the material’s entire lifecycle.

>Learn more CR LIMEX Development（P14）

Why LIMEX?

1. Global Resource Shortages

The day we deplete the Earth’s yearly supply of resources is known as “Earth Overshoot Day.” In 2023, it fell on August 2nd. This means that humanity is placing a burden on the planet that far exceeds its ability to regenerate resources and absorb CO_2 within a year, borrowing from the future generations. Moreover, with rising global populations and improving living standards, particularly in emerging economies, it is projected that by 2060, the world's plastic consumption will triple, and paper consumption will double or even triple. To maintain a sustainable planet and pass it on to future generations, it is crucial to balance resource use and CO_2 emissions. Through LIMEX technology, we contribute to a sustainable world by preventing resource depletion and reducing CO_2 emissions.

2. Global Demand

Concern over global warming and environmental issues is growing worldwide, and the international community has adopted the Paris Agreement to tackle these challenges collectively.

Additionally, countries are establishing rules to promote sustainability, and companies are setting their own goals. By 2030, the market for circular economy-related industries addressing resource issues is expected to grow to $4.5 trillion, while the market for decarbonization-related industries is projected to reach $3.9 trillion. These are areas where demand is expected to increase, and by transitioning the materials used in various products to environmentally friendly alternatives, we believe we can create significant social impact.

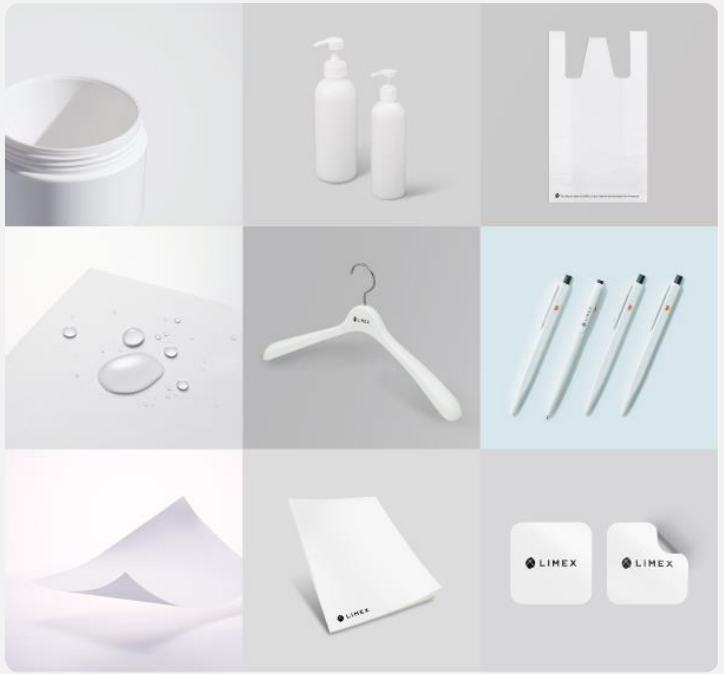
3. Strengths as a Japanese Manufacturing Company

Japan's chemical and material industries have traditionally had a high export ratio, excelling in quickly delivering high-value-added materials that meet market needs due to their advanced technical capabilities and well-established ecosystem. By inheriting the strengths of Japan’s manufacturing sector—our “Technologies," “Systems," and “Values"—and collaborating with numerous companies, we aim to combine these with the added value of sustainability to expand the LIMEX business globally.

> Learn more LIMEX Business (external site)

LIMEX

LIMEX Pellet



LIMEX Products

Innovations Brought by LIMEX

1. Conservation of Resources with High Depletion Risk
LIMEX is primarily made from calcium carbonate. Since calcium carbonate can be made of limestone that are abundant globally and can also be produced from CO_2, and because LIMEX does not require large amount of water during production like paper does, it contributes to conserving resources at high risk of depletion, such as petroleum, water, and forests.

2. Reduction of GHG Emissions
Compared to petroleum-based plastic, LIMEX can reduce GHG emissions, including CO_2, by more than 25% through its lifecycle, depending on the product.

3. Contribution to Building a Circular Economy
As LIMEX can be recycled as raw material for new products (material recycling), it promotes resource circulation.

With global population growth expected to increase demand for materials, we aim to position LIMEX, which utilizes calcium carbonate, as a new global material alternative to plastic and paper. By making LIMEX a widely used material, we hope to contribute to the realization of a sustainable society.

LIMEX Business

Solving global challenges of climate change and resource depletion, we are committed to promoting the adoption and circulation of environmentally conscious materials to accelerate the shift toward a decarbonized and circular society.

Managing Executive Officer, CSO
General Manager of LIMEX Division
General Manager of Digital Solutions Section

Taichi Yamaguchi

Overview of the LIMEX Business

LIMEX is a unique material developed by us in Japan, serving as an alternative to plastic and paper. It is a composite material consisting of over 50% inorganic fillers, such as calcium carbonate. The remaining components include resins and additives, which are formulated, compounded, and molded using our proprietary technology.

We also produce LIMEX pellets, which are granulated, and LIMEX sheets, which are formed into uniform sheets, both sold as intermediate products.

We have focused on directly delivering LIMEX as a final product to end-users.

To promote LIMEX on an extraordinary scale and with speed, we believe it is essential to deliver the final products directly to customers, allowing them to experience the value of LIMEX firsthand and gain high appreciation. As a result, this approach will increase opportunities for intermediaries to handle LIMEX as well. As of November 2022, over 10,000 companies and organizations (including registered business locations) have adopted LIMEX.

Expansion of the LIMEX Ecosystem

One of the key features of LIMEX is its compatibility with existing equipment for manufacturing and molding. In Japan, we operate our own factory in Tagajo City, Miyagi Prefecture, and have also established a fabless supply chain model. As of December 2023, approximately 350 printing companies and 150 molding manufacturers have partnered with us to promote various products made from LIMEX, allowing us to scale up and meet diverse customer demands.

Internationally, our network of LIMEX partner companies is expanding, with joint ventures and offices in Vietnam, South Korea, and the United States, as well as collaborations with sales partners in China, Thailand, Indonesia, India, and the United Kingdom. Through innovations in "technologies," "systems," and "values," we aim to create a society that widely promotes environmentally friendly products on a global scale, striving to "repaint the world together."

Future Outlook

While we have been envisioning our future, we have diligently carried out essential activities for the growth of our business, including LIMEX research and development, building a manufacturing and supply chain system, and establishing sales channels and organizations. As a result of these efforts, we have strengthened our technical foundation and organizational capabilities alongside numerous successful implementations. We feel that the time for significant advancement is coming.

We will focus on full-scale global expansion, entering new industrial applications, and developing CR LIMEX, leveraging Japanese technologies to explore markets worldwide. Our vision is "Bridging Today and the Future We Want. Sustainable Circular Innovation for the Next 100 Years." This vision reflects not just what our business should look like, but what our people and organization should strive to be.

By focusing on limestone, a resource abundant since ancient times and present in every region, and incorporating modern technological innovations, we are committed to driving sustainable innovation through our LIMEX business, using calcium carbonate derived from CO_2 to confront the future we aspire to achieve.

LIMEX Business

Our LIMEX team, composed of members with diverse backgrounds and expertise, collaborates seamlessly across development, production, and sales to drive the expansion of LIMEX every day. Here are some of our recent highlights.

Tohoku LIMEX Factory

The Tohoku LIMEX Factory, established in 2021, serves as our mass production base for LIMEX. In its construction, we aimed to create jobs in Miyagi Prefecture as part of revitalization support, receiving funding from the Ministry of Economy, Trade and Industry's "Subsidy for Job Creation in Tsunami and Nuclear Disaster-Affected Areas." At this factory, we focus on mass-producing LIMEX sheets, manufacturing high-quality LIMEX pellets, and developing advanced LIMEX products. We also plan to expand LIMEX manufacturing technologies and systems globally through licensing. Moving forward, we will strengthen our mass production capabilities and advance the development of new products, such as adhesive stickers, labels, and posters. Our goal is to accelerate the spread and evolution of LIMEX from Tohoku to the world, contributing to the realization of a "Sustainability Revolution" and a decarbonized, circular coexistence society.

Production Division
Tohoku LIMEX Factory
Assistant Factory Manager

Hiromi Watanabe

The Tohoku LIMEX Factory aims to leverage diverse perspectives and strengths, including those of women, in our pursuit of sustainability to create a positive impact on the world. We are committed to growing alongside our local community and working together as a factory to protect the future of our planet.

>Learn more Tohoku LIMEX Factory（External site）

LIMEX Business

CR LIMEX Development

We are collaborating with overseas CCU (Carbon Capture and Utilization) companies to develop CR LIMEX, a carbon recycling technology that captures CO_2 emissions from factories and repurposes it as carbon compounds. At the Davos Meeting in January 2024, we presented LIMEX products manufactured applying the technology. By reducing CO_2, the technology has the potential to produce LIMEX products made from calcium carbonate that are carbon negative, meaning the amount of GHG removed and absorbed exceeds that emitted from economic activities. We believe this could significantly contribute to global decarbonization. We are committed to continuing our development efforts to make CR LIMEX products widely used in our daily lives as soon as possible.

> Learn more About CR LIMEX (External site)

Driving Global Expansion

In 2021, we established a local subsidiary, TBM VN Co., Ltd., in Vietnam. Vietnam is a major exporter of plastic packaging and is rich in limestone, the primary raw material for LIMEX. The country features numerous suppliers of raw materials and pellet manufacturers, along with well-developed infrastructure and production facilities. Through our local subsidiary, we are deepening collaborations with local manufacturing partners to enhance price competitiveness and strengthen production capabilities, while also expanding our sales channels to domestic molding manufacturers. Additionally, we are developing new applications for LIMEX material and engaging in transactions of recycled materials with overseas recyclers, further promoting the global expansion of LIMEX. Moving forward, we aim to build supply chains in various countries and regions, starting with Vietnam, to facilitate our continued global expansion.

Next Generation Business Division

Kenshi Takahashi

We are actively working on the development and widespread adoption of CR LIMEX. We have made significant progress and are just one step away from commercialization. We are committed to launching it soon to create a meaningful impact on society as a carbon-negative material.

TBM VN Co., Ltd.
Managing Director

Hai Nguyen

Vietnam today is a production hub of CaCO3* filler MB for the World and is moving towards a circular economy. I am happy to see that we have a lot of business opportunities ahead, not only in Japan but also in Vietnam and the World, for a greener future for mankind.

*CaCO3 stands for calcium carbonate, which is abundantly found in limestone. Filler masterbatch is a concentrated mixture primarily used in plastic manufacturing, where resin is blended with a high concentration of CaCO3.

Resource Circulation

Another core of our businesses is resource circulation. There is a global demand for a transition to a circular economy that reduces the consumption of natural resources and minimizes environmental impact. We aim to establish a new model for resource circulation and expand it worldwide, contributing to the realization of a sustainability revolution.

Resource Circulation Society

The concept of a resource circulation society is proposed as an alternative to the traditional model of mass production, mass consumption, and mass disposal., enacted in 2000, states that “circulative resources must be put into cyclical use to the greatest extent possible, in light of the need to reduce environmental load by decreasing the quantity disposed of” and “the cyclical use and disposal of circulative resources must be undertaken properly so as not to pose impediments to environmental conservation.” This framework envisions a society where the consumption of natural resources is minimized, and environmental impact is reduced as much as possible.

Why is a Circular Economy Necessary?

1. Achieving Carbon Neutrality

There is a global demand for a transition to a circular economy that reduces the consumption of natural resources and minimizes environmental impact to achieve carbon neutrality, where GHG emissions and absorption are balanced to zero. In Japan, the Basic Act for Establishing a Sound Material-Cycle Society is advancing this initiative. The aim is to utilize local resources, such as recycled and renewable resources, to reduce the input of natural resources and the amount of waste disposed of, thereby realizing a circular economy.

2. Intensifying Competition for Resources

Global economic growth and population increase have raised concerns about intensified competition for limited resources. The supply constraints of materials and resources, triggered by the COVID-19 pandemic and the situation in Ukraine, have underscored the importance of securing resources steadily within one's own country or neighboring regions, as well as the need for efficient utilization and recycling. For Japan, a resource-poor nation that relies heavily on imports, transitioning to a circular economy represents an opportunity for sustainable resource use, economic growth, and enhanced industrial competitiveness.

3. Environmental Changes Related to Plastic

In 2022, the disposal methods for domestic plastic waste in Japan were 22% through material recycling (reusing waste as raw materials for new products), 63% through thermal recovery (recovering thermal energy from incinerated waste), 7% through incineration, 6% through landfill, and 3% classified as other methods. With increasing regulations on the import of plastic waste in various countries, it has become urgent to enhance domestic waste processing and resource recovery. The government has set a milestone to double the recycling of plastic by 2030. In June 2024, an interim report required automobile manufacturers and packaging producers to formulate plans for utilizing recycled plastic and report their achievements.

Globally, the recycled plastic market is projected to grow significantly, with an average annual growth rate of 8.3% until 2030.

Emerging Values from Resource Circulation

1. Cultivating New Values in Waste Management

In Japan, the multi-stream method, where consumers sort recyclables, is widely adopted. Conversely, the single-stream method, which involves collecting recyclables together and sorting them at a facility, is gaining attention. We continue to explore more efficient sorting and collection methods to increase the volume of circulating resources.

2. Emerging Value in the Use of Recycled Materials

We are committed to dispelling the notion that recycled materials are of inferior quality by pursuing optimal performance and properties. By incorporating traceability—from material procurement to production and consumption—we aim to enhance the value of recycled materials.

At the Yokosuka Circular Factory, we are creating a profitable business model centered on the production of high-value recycled materials. We plan to scale and expand this model across multiple locations while balancing both speed and efficiency.

> Learn more Resource Circulation Business（External site）

Resource Circulation Business

While the resource circulation business is expected to grow, there remains a substantial gap between current Japanes market and the global demand. Through our resource circulation business, we aim not only to expand the market but also to shift perspectives, ultimately driving change on a global scale.

Executive Officer
General Manager of Resource Circulation Division
General Manager of Maar Department
General Manager of Recycling Plant Department

Jun Sugita

Resource Circulation Business Overview

Our resource circulation business focuses on four key areas, "Resource Production," "Resource Circulation Platform," "Plant Operations," and "Development and Sales of Recycled Materials and Products."

In the "Resource Production" category, we purchase waste plastic and renewable resources at competitive prices, then sell them to end-users and recyclers. Building a robust network with resource suppliers and securing a diverse and substantial volume of materials is crucial for maintaining our competitive edge. The Maar Department team actively engages across the country, continuously matching suppliers with users to create successful partnerships.

The "Resource Circulation Platform Business" leverages digital transformation (DX) to visualize traceability and environmental impact, supporting the efficient procurement and trade of recycled materials. By utilizing the insights gained from transactions with partner companies and the expertise of field sales teams, we provide a service that matches sellers (resource suppliers) with buyers (procurement partners) on a digital platform.

In the "Plant Operations Business," we launched the world's first plant capable of automatically sorting and recycling both waste plastic and used LIMEX products in Yokosuka in 2022. Traditionally, recycling has focused on post-industrial recycling (PIR), which reuses materials generated during the product manufacturing process. However, we aim to expand post-consumer recycling (PCR), which involves recycling products that have already been used in the market, to create a high-value resource circulation business.

In the "Development and Sales of Recycled Materials and Products" business, we collaborate with partner companies and the Yokosuka Circular Factory to develop products based on customer requirements using the waste plastic and other resources we collect. While the optimal physical properties, color, volume, and other elements required by our customers can be complex, we see tremendous potential in this business, especially in increasing the added value of recycled materials.

Driving Forward the Vision of 'Go Circular'

As part of the "TBM Pledge 2030," we have set a goal to circulate one million tons of LIMEX and plastic across 50 countries by 2030. For example, the volume of transactions in the Maar business last year was about 35,000 tons. Considering that other companies in the industry took several decades to reach the 100,000-ton scale, the fact that we have achieved this in just about three years since the business fully launched is a testament to the hard work and dedication of each team member, tirelessly running around to make it happen.

At the same time, if we liken the goal of circulating one million tons to climbing a mountain, we have not even reached the first stage, and the summit is still far ahead. While we have aimed for "10 years' worth of growth in one year," this mindset remains unchanged as we move forward. We want to not only strengthen our current efforts but also take on new challenges in innovation to accelerate our growth trajectory even further.

In the past few years, people from both within the industry and those from entirely different fields have been drawn to our vision and approach, joining us to take on this challenge. We are confident that bold ideas and actions from such a diverse group will become a significant strength as we continue to expand our business in the future.

Resource Circulation Business

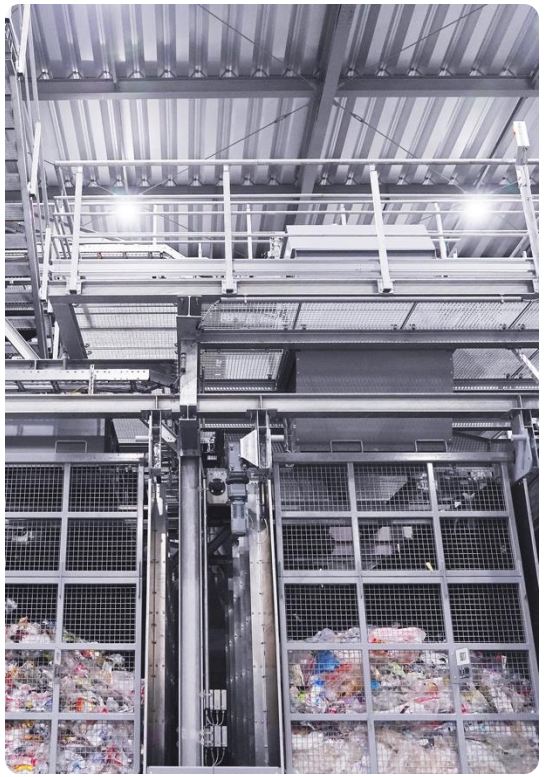
In the resource circulation business, a diverse team with various expertise is continuously taking on new challenges that break away from conventional precedents. Here are some recent key topics.

Yokosuka Circular Factory

The Yokosuka Circular Factory, established in November 2023, automates the sorting and washing of collected post-use LIMEX and plastic to produce recycled pellets that serve as materials for new LIMEX and plastic products. Utilizing near-infrared technology, the factory's material detection and sorting technology automatically separates LIMEX from other materials such as plastic and paper. This unique program was developed in collaboration with major overseas sorting machine manufacturers. Leveraging this automated sorting, we are partnering with Yokosuka City to promote the collection of container and packaging plastic as well as product plastic throughout the city, aiming to enhance the distribution of LIMEX products and standardize collection items. We aim to expand the pioneering resource recycling model of the Yokosuka Circular Factory, contributing to the realization of a decarbonized society through resource recycling.

Resource Circulation Division
Yokosuka Circular Factory
Tatsuya Ito

At the Yokosuka Circular Factory, we are promoting a sustainability revolution from Yokosuka to the world. I feel a sense of fulfilment in enhancing recycling technology and contributing to environmental protection. I aim to contribute to Japan's resource recycling as an initiative for future generations.



> Learn more Yokosuka Circular Factory（External site）

Resource Circulation Business

“Maar Recycled Material Procurement" Matching Platform

The "Maar Recycled Material Procurement" platform matches companies that generate waste plastic with those looking to purchase it. In 2023, the number of companies selling recycled materials grew to 110, with sales reaching 37,797 tons. Benefits of purchasing recycled materials through "Maar Recycled Material Procurement" include promoting fair pricing based on a comprehensive database, streamlining billing processes for greater efficiency, and supporting traceability for final products with DPP* compatibility. In May 2024, the platform received a special jury award at the public-private co-creation acceleration program "Social X Acceleration." We aim to normalize sustainable manufacturing utilizing recycled plastic and enhance both resource and regional circulation by streamlining recycled material procurement.

> Learn more Special Jury Award at the Social X Acceleration （External site）

Resource Recycling Council （RRC）

In 2023, RRC was established in collaboration with government agencies, while we take on the role of secretariat as part of its GX promotion strategy. As of August 2024, over 180 participants are involved, including directors, large corporations, startups, financial institutions, experts, and local governments. The RRC focuses on activities that promote a circular economy, including social validation and implementation, policy proposals, and information sharing and dissemination. By welcoming key figures involved in environmental administration, resource circulation rule-making, startup support, and sustainability management as directors, the RRC aims to advance the practical implementation of effective resource circulation models. It will also propose necessary policies and legal frameworks while sharing and communicating its activities, contributing to the expansion of the resource circulation market.

Resource Circulation Division
Maar Department
Kazuki Igarashi

Our goal is to grow the service and establish a norm where economic and environmental sustainability coexist in resource circulation. While I feel pressure regarding business growth, I find motivation in the responsibility and high expectations that come with it.

Communication Division
Policy and External Affairs Department
Asami Takezawa

Our department was established in 2024 as a sector responsible for creating new markets and maximizing social impact through rule-making. We will promote new materials, resource circulation, and new business initiatives in collaboration with multi-stakeholders, paving the way for the future.

*DPP (Digital Product Passport): A system that collects manufacturing and environmental information throughout the entire value chain, enabling all stakeholders to understand the environmental aspects of materials and products before engaging in transactions.

Challenge into New Fields

The name of TBM is derived from the initials of "Times Bridge Management." It reflects the aspiration to create a company that will be a bridge across time for centuries to come. We aim to contribute to the happiness of humanity by continuously challenging ourselves in new fields of business.

GHG Emission Visualization Service "ScopeX"

ScopeX is a cloud service that visualizes GHG emissions, including CO_2. We use the Life Cycle Assessment (LCA) analysis method to evaluate the environmental impact throughout the life cycle of products, from raw material procurement to disposal, which has informed the development of LIMEX and CirculeX materials. Additionally, it has focused on visualizing Scope 3 emissions related to the transportation of LIMEX, working to reduce GHG emissions within its own value chain. Leveraging this knowledge and expertise, ScopeX was developed to support corporate activities aimed at achieving a decarbonized society, and it is being utilized by a wide range of users.

Bioworks Co., Ltd.

Bioworks Co., Ltd. develops, manufactures, and sells bio-based plastic called "Plax™," made from plant materials such as sugarcane. It became part of our group in 2018. Plax™ uniquely addresses challenges related to durability, heat resistance, and dyeability during fiber processing. Under specific conditions in composting environments, it hydrolyzes and ultimately biodegrades into water and CO_2 through microbial action (industrial composting facilities are recommended). Aiming to realize a sustainable circular society, Plax™ is gaining global attention not only for replacing existing synthetic fibers and plastic products but also for its expansion into new applications.

> Learn more Bioworks Co., Ltd.（External site）

Digital Solution Section

Junkichi Ito

The strength of our team lies in ability to leverage our extensive experience in environmental measures, governance, and initiative responses implemented within our own company. We can solve our customers' environmental challenges in ways that IT companies and environmental consultants cannot, delivering unique value.

Bioworks Co., Ltd. Executive Officer, CSuO

Sumika Tabara

Under the Sustainability Vision of "Creating a new ecosystem where the joy of creation and the richness of wearing continue," we aim to contribute to the sustainability reform of the apparel and textile industry, which is facing challenges due to the environmental burden of mass production and mass disposal.

Challenge into New Fields

CEO Audition - NEXT Unicorn -

In collaboration with the Japan CEO Association, we hosted the "CEO Audition - NEXT Unicorn." The government has designated 2022 as the "Year of Startup Creation," aiming to create 100 unicorn companies (private startups valued at over $1 billion) and 100,000 startups, with the goal of making Japan a leading hub for startups. We are also addressing global challenges by seeking CEOs who aspire to become unicorn companies. By providing the necessary environment and support for business activities, we aim to increase the number of like-minded individuals who can make a positive impact on the world and work together to achieve the "Sustainability Revolution."

> Learn more CEO Audition - NEXT Unicorn - （External site）

Business Overview

Through the dual efforts of the LIMEX business and the resource circulation business, we aim to drive innovation in “Technologies,” “Systems,” and “Values” to achieve a decarbonized and circular society.

Our Business Development

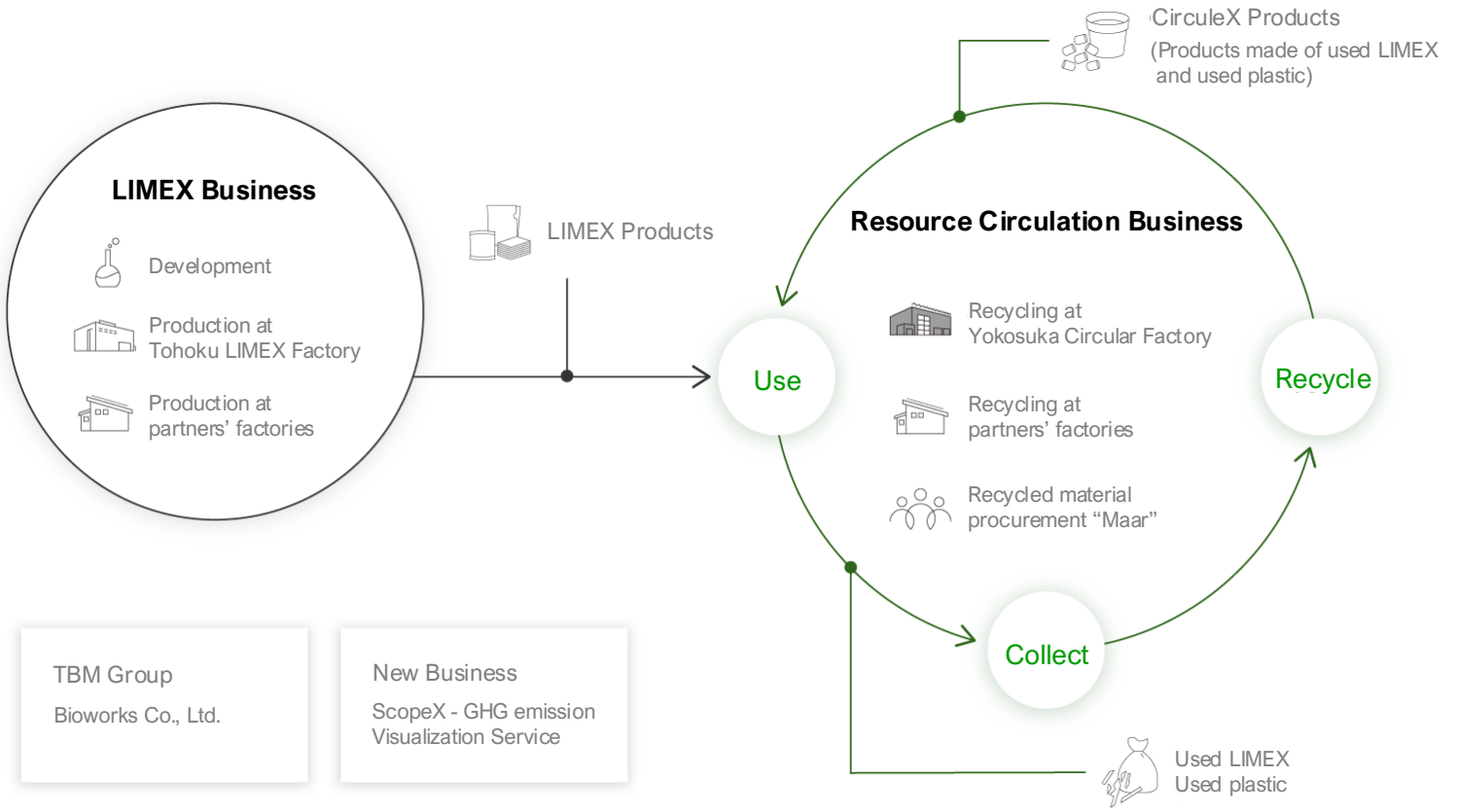
We are focused on achieving a decarbonized and circular society through its core businesses.

In the LIMEX business, we engage in the development, manufacturing, and sales of LIMEX products. This includes both in-house production at the Tohoku LIMEX Factory and production through partnerships in a "fabless" model. To promote LIMEX, the company aims to enhance the added value of its products produced in-house while strengthening and expanding relationships with partner companies to increase production volume and product lineup.

In the resource circulation business, we are establishing systems for the collection and recycling of LIMEX and plastic. At the Yokosuka Circular Factory, advanced technologies are already in place for the automatic sorting of used LIMEX and plastic, followed by their collection and recycling. Plans are underway to expand this new recycling system both domestically and internationally. Through the re-use of used LIMEX and plastic as raw materials for "CirculeX," and the coordination of resource circulation via the "Maar" service, we are committed to promoting material recycling and contributing to the realization of a circular society.

Additionally, we will actively pursue new business ventures and partnerships by leveraging the expertise it has developed over the years.

Our Business Model



2023 Highlights

We view the reduction of GHG emissions and the depletion of resource usage as critical societal challenges that need to be addressed. Through our business activities, we aim to provide value not only to our customers but also to all stakeholders involved.

Aiming for a Transition to a Sustainable World

1. LIMEX Material Utilization by Over 10,000 Companies

By using our products and services, these companies will benefit from functionality and value equal to or exceeding that of conventional products, while contributing to the reduction of GHG emissions in their business activities.

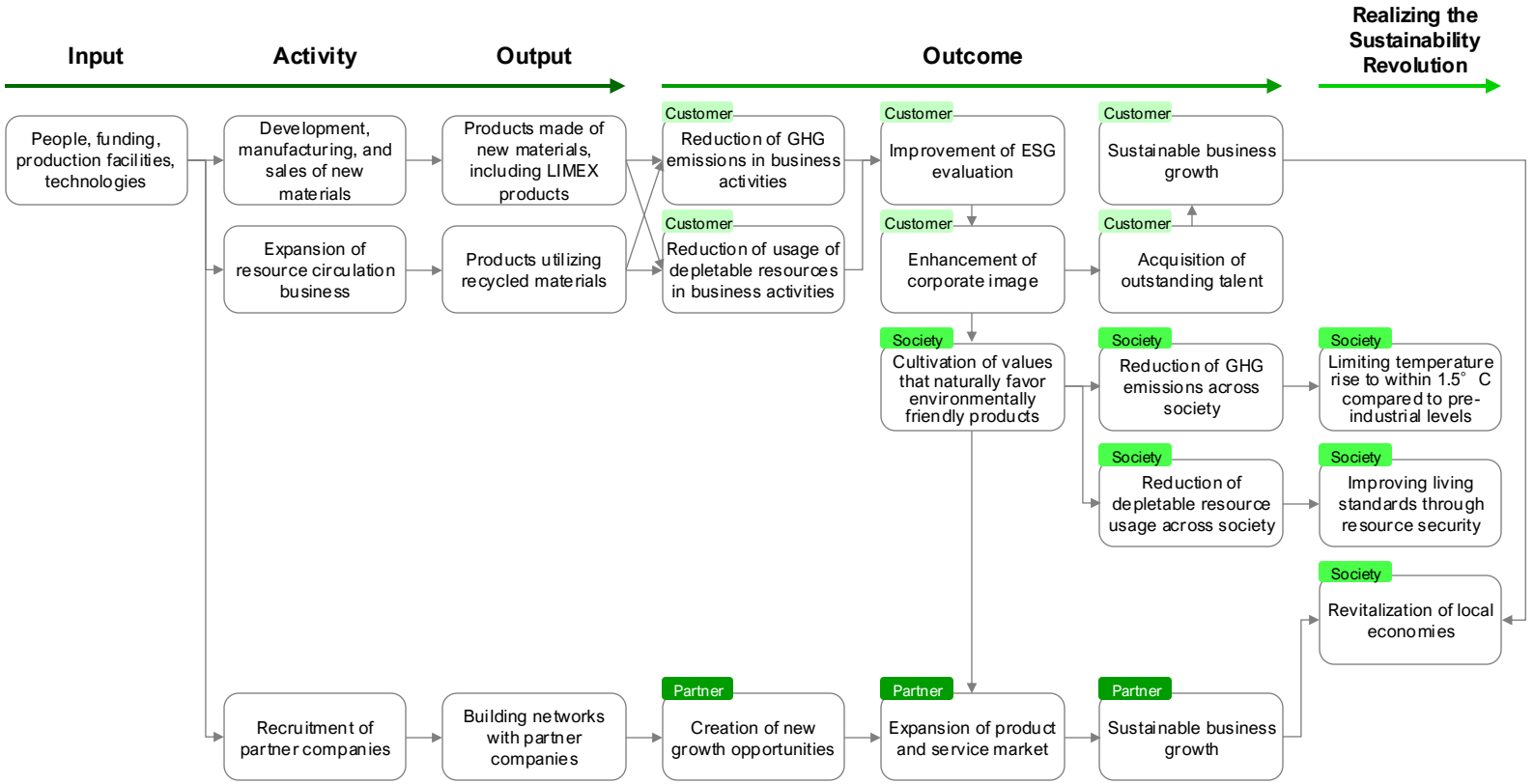
2. Partnerships with Approximately 750 Companies

In efforts to promote LIMEX products, we have established manufacturing partnerships with about 350 printing companies and 150 molding manufacturers, as well as about 250 recycling partners. We aim to continue growing alongside our partners to expand our social impact.

3. Introduction of CR LIMEX

In January 2024, we announced CR LIMEX, which utilizes carbon recycling technology as a substitute for limestone, the traditional primary raw material for LIMEX. This technology captures and reuses CO_2, making it one of the key technologies for reducing CO_2 emissions, garnering attention both domestically and internationally. We are committed to the widespread adoption of CR LIMEX to further advance the realization of a decarbonized society.

Our Pathway to Desired Social Impact (Logic Model)



Foundation for Better Business

To achieve "Sustainable and Circular innovations for centuries," the corporate division is working on establishing a foundation for business expansion. Here, we will introduce initiatives related to the systems, technologies, and values that support our operations.

Environmental Management System Certification

In May 2024, we obtained the international standard certification "ISO 14001:2015" for Environmental Management Systems (EMS) at four sites, including our own production facilities. ISO 14001 is an international standard established by the International Organization for Standardization (ISO) regarding EMS. The EMS analyzes environmental risks, such as air and water pollution, associated with business activities and establishes necessary rules to comply with for risk reduction. It also involves setting environmental goals and action plans to work toward achieving these targets. Regular internal audits are conducted to promote continuous improvement of the EMS and processes, as well as to raise awareness about environmental issues.

>Learn more Obtained certification for the international standard for EMS "ISO 14001:2015" (External site)

Sustainability Division Expert

Yu Arakawa

We believe it is essential to continuously pursue high standards in reducing environmental impacts and complying with environmental regulations. Through the operation of our EMS, we aim to further enhance our environmental performance.

Intellectual Property Management

As of July 2024, we hold 248 patents, 230 trademarks, and 3 copyrights both domestically and internationally, establishing a system that integrates intellectual property with the development and global expansion of LIMEX products. In 2022, we were awarded the "Minister of Economy, Trade and Industry Award (Intellectual Property Utilization Venture)" as part of the "Intellectual Property Achievement Award," presented by the Japan Patent Office for effectively utilizing the intellectual property system to contribute to smooth operations and development. The company has an intellectual property function as part of its management, enabling strategic intellectual property responses aligned with its business policy. We also hold numerous intellectual property rights overseas (140 patents, 179 trademarks, and 3 copyrights as of July 2024), considering markets and licensing partners to promote global expansion, particularly in the areas of technology export and licensing agreements.

Corporate Planning Division Business Administration Department

Hiroshi Nakamura

I am responsible for all aspects related to intellectual property(IP). In large corporations, IP roles are usually specialized and only cover specific areas, but at TBM, I can take full responsibility from start to finish. This makes it a rewarding and very exciting environment to work in, even amidst a busy schedule.

*4 locations: Tokyo Headquarters, Technology Center, Tohoku LIMEX Factory, and Yokosuka Circular Factory.

Foundation for Better Business

D&I Initiatives

Since 2019, we have initiated efforts in Diversity & Inclusion (D&I) to create an internal environment where employees can thrive. These efforts include conducting training for new employees and the entire company on D&I, creating opportunities to learn about D&I through internal communications and portals, hosting participatory D&I events, producing and distributing stickers, participating in LGBTQ job fairs and events, and communicating our D&I initiatives and views on LGBTQ issues externally. Additionally, we have received recognition as a "D&I Award" Best Workplace, reflecting our commitment to these values.

> Learn more "Established D&I Policy" (External site)

The atmosphere in the office on International Women's Day

LIMEX Division Manager
Yukiko Murakami

We aim to "contribute globally." It is essential to create an environment where diverse individuals with high aspirations can thrive. We strive to address structural inequalities and foster a sense of ownership among each employee, empowering them to be active participants in shaping the organization.

Sustainability

Sustainability Promotion Framework

We integrate sustainability into both management decision-making and business operations through close collaboration between the Sustainability Committee, the Sustainability Division, and cross-functional promotion teams organized by division, location, and theme.

Sustainability Promotion Framework

We have established the Sustainability Division as the sector responsible for planning and executing initiatives to promote sustainability. We collaborate with various divisions, group companies, and overseas offices, and each year, we systematically launch new initiatives across the group.
In August 2023, we also appointed a CSuO (Chief Sustainability Officer) as the new executive officer in charge of sustainability. The CSuO serves as the chairperson of the Sustainability Committee, further strengthening our framework to drive agile sustainability management.

Recent Key Achievements in Sustainability Initiatives

- We have obtained ISO 14001 certification for our Environmental Management System at four locations including Tokyo Headquarters, Technology Center, Tohoku LIMEX Factory, and Yokosuka Circular Factory.
- We have obtained approval under the SuMPO/Internal-PCR system for the carbon footprint calculation rules related to LIMEX products from the Sustainable Management Promotion Organization.

  > Learn more "First Approval under the SuMPO/Internal-PCR Certification System" (External site)

- We have revised the Code of Conduct and Environmental Policy and established of the Human Rights Policy and Procurement Policy. We have developed the above standards and policies, clearly outlining the actions we must take in addition to respecting international standards and complying with legal regulations.
  Training on these standards and policies was conducted for all employees, with a completion rate of 88%.

  * Completion rate = # of participants / # of eligible participants

  > Learn more "Policies and Terms" (External site)

- We have reviewed the materiality established in 2019.

Sustainability Committee

We have established a Sustainability Committee as an advisory body to the CEO. Important initiatives related to sustainability promotion are discussed and reported to the management meeting and the board of directors, proceeding under their guidance and supervision. The Sustainability Committee also includes external advisors who provide advice and recommendations on overall sustainability management.

Recent Key Discussion Topics

- Development and operation of the Environmental Management System
- Monitoring of the sustainability goals outlined in the 'TBM Pledge 2030'
- Efforts related to GHG reduction contributions
- Review of materiality

Executive Officer, CSuO
Sustainability Division
Tokuro Hatori

We will continue to lead TBM in fulfilling the challenges of our members and everyone involved in creating a sustainable society, building bridges to the future we aspire to reach.

Materiality

“The most important challenges we must address by 2030” has been identified as our materiality. We reviewed our materiality from both the perspective of enhancing capabilities, which serve as a source of value creation and ultimately improve corporate value, and the impact we aim to have on the environment and society.

Materiality 1

Fostering an organization and individuals that continuously take on bold challenges

To realize the world we aim for and to ensure continued growth for centuries to come, we see the development of talent and the creation of an organization that consistently challenges itself against high goals as crucial themes. At the same time, we believe that securing ethical business practices and financial soundness will establish a strong foundation for our business, allowing us to gain the trust of our stakeholders and continue to take on new challenges.

Materiality 2

Achieving TBM Pledge 2030

“Bridging Today and the Future We Want” - we are taking on the challenge of solving environmental and social issues in collaboration with our customers and suppliers. We aim to achieve TBM Pledge 2030 through innovations in technologies, systems, and values, working toward a decarbonized and circular society.

What is a materiality?

There is no single common definition of materiality, but it often refers to important issues that contribute to the long-term enhancement of corporate value. Through analysis of our business and the internal and external environment, consideration is often given to the matters that should be addressed from the perspectives of both our company and the stakeholders surrounding it.

Our Materiality

In the materiality identification process, we defined materiality as “the most important challenges we must address by 2030” and engaged in discussions around it.

Materiality Identification Process

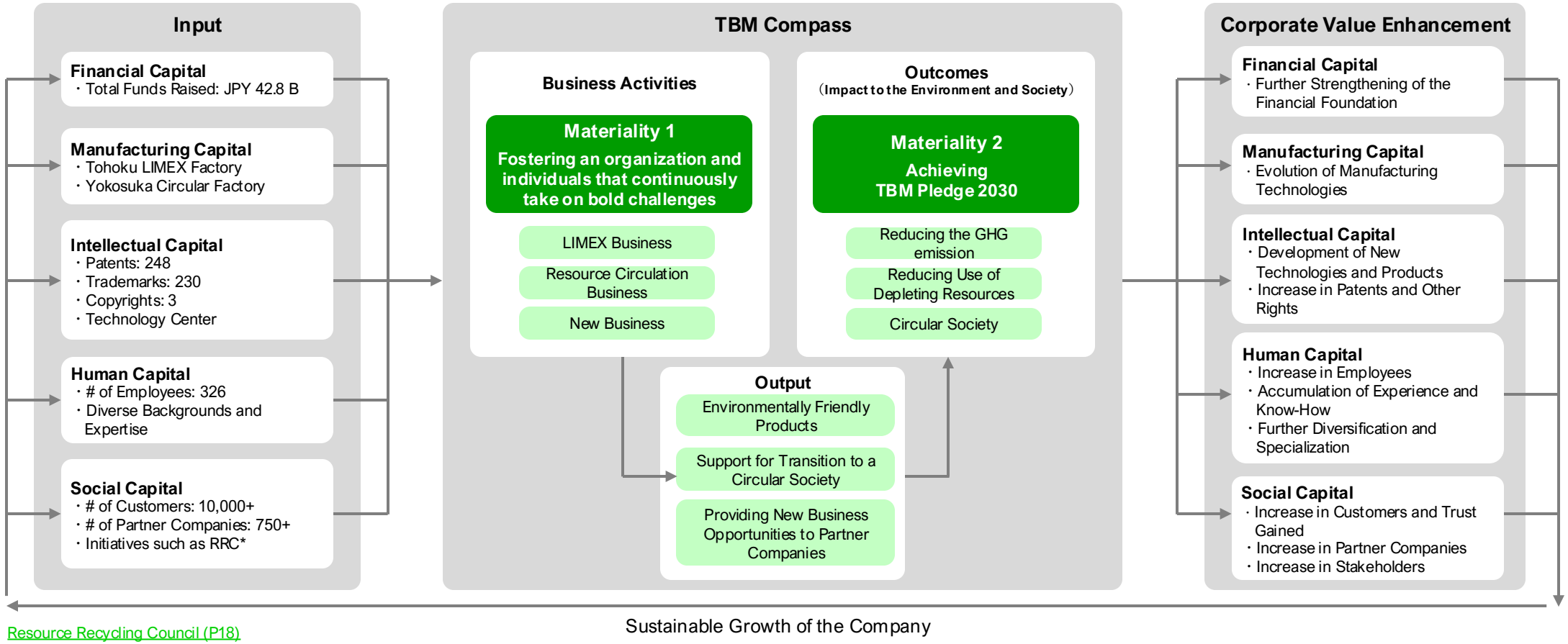
While broadly referencing sustainability guidelines and incorporating issues raised in previous dialogues with stakeholders, we extracted and evaluated the environmental and social challenges relevant to our company against the above definition.

*Guidelines SASB Materiality Finder, GRI, SDGs, ISO 26000 and others

Materiality and Value Creation Process

By leveraging each capital and conducting business activities in accordance with TBM Compass, we aim to maximize our impact on the environment and society as well as enhance corporate value.

Materiality and Value Creation Process



*RRC Resource Recycling Council (P18)

Materiality and SDGs

The SDGs (Sustainable Development Goals) consist of 17 goals and 169 targets adopted at the UN Summit in September 2015 to address global challenges by 2030. We aim to solve the social issues outlined in the SDGs through our efforts on materiality.

Materiality	Main Category	Subcategory	SDGs
1. Fostering an organization and individuals that continuously take on challenges	Circular People Management	Embodiment of TBM Compass	
		Happiness and Growth of Members	
		Diversity and Inclusion	
	Foundation Building	Promotion of Safety, Health, and Disaster Prevention	
		Risk Management and Compliance	
		Corporate Governance Effectiveness	
	Securing Opportunities for Further Challenges	Gaining Trust from Stakeholders, Including Customers	
		Maintaining Financial Soundness	
2. Achieving TBM Pledge 2030	Go Carbon Negative	Reduction of GHG Emissions	
		Increase in Contributions to GHG Emission Reductions	
	Go Circular	Promotion of LIMEX and Increase in Resource Circulation	
		Contribution to Global Resource Circulation	
	Meaningful Innovation	New Technologies Development for Future Generations	
		New Businesses and Partnership Development	
		Involvement in Rule-Making	
		Advocacy for Behaviour Change	

Materiality 1: Fostering an organization and individuals that continuously take on bold challenges

To realize the world we envision and ensure sustainable growth for centuries to come, we consider developing talent and foste ring an organization that continuously strives for high goals as essential priorities. At the same time, we believe that maintaining ethical business practices and financial stability will build a strong foundation, enabling us to earn the trust of our stakeholders and pursue further challenges.

Circular People Management

To realize the world we envision and ensure sustainable growth for centuries to come, developing talent and creating an organization that continuously strives for high goals are essential priorities.

TBM Compass

To fulfil our mission of “Bridging Today and the Future We Want,” we are committed to fostering a culture that embodies TBM compass (P4). We focus on internal communication for organizational development through initiatives such as Same Boat Meeting, our monthly all-company gathering, and TBM Camp, which helps individuals understand the company’s direction and refresh their perspectives.

Happiness and Growth of Members

We provide growth support through onboarding training (one month for new graduates and three days for mid-career hires) and bi-weekly one-on-one meetings. In terms of compensation, the annual salary increase rate for 2023 was 2.88%, surpassing the average increase rate for small and medium-sized enterprises in the manufacturing and chemical sectors.

Additionally, we have a track record of granting stock options—rights to purchase shares at a predetermined price—multiple times across all positions, creating a system where employees can feel that their efforts contribute to enhancing corporate value.

Diversity and Inclusion

To create an environment where everyone can thrive, we participate in International Women’s Day and communicate initiatives like the “D&I Newsletter” within the company. We also promote a workplace culture that respects each other's differences, such as addressing each other by the names each individual wishes to be called. Additionally, we provide D&I training during onboarding and have developed guidelines for interviewers to help prevent inadvertently hurting candidates during recruitment processes.

Materiality 1: Fostering an organization and individuals that continuously take on bold challenges

Foundation Building

To build a solid foundation for our business, it is essential to create a safe workplace, engage in ethical business practices, and implement effective governance. Moving forward, whether in Japan or abroad, we will strive to maintain peace, fairness, and our own credibility in the regions where we operate.

Safety, Health and Disaster Prevention

In 2023, we established a new company-wide Safety, Health, and Disaster Prevention Committee, bringing together representatives from each business location to enhance information sharing and raise awareness across the company. This committee meets four times a year. Additionally, we regularly conduct inter-plant patrols led by on-site personnel.

> Learn more Safety and Health Promotion System and Education (External site)

Risk Management and Compliance

For daily risk management, the Board of Directors, under the leadership of CEO, collectively oversees the management system, with General Manager of Administration Division providing support. Regarding compliance, we have revised and established our Code of Conduct and Human Rights Policy this year and conducted compliance training for all employees. Additionally, we will operate our business with consideration for transition risks related to decarbonization policies and the increasing severity of weather-related disasters.

> Learn more Compliance and Risk Management（External site）

Corporate Governance Effectiveness

We are a company with a Board of Auditors. The Board of Directors, composed of internal directors with expertise in the business and external directors with an objective perspective, makes decisions on important matters and oversees the execution of directors' duties. We will continue to work on further enhancing our corporate governance.

> Learn more Corporate Governance and Internal Control（P41）

Securing Opportunities for Further Challenges

Our business is built on the trust of all our stakeholders. To continue taking on new challenges, it is essential to uphold and further strengthen the trust we have earned.

Trust from Stakeholders, Including Customers

To gain the trust of stakeholders, including our customers, we strive to provide accurate information and create opportunities for dialogue. We place particular importance on engaging in conversations with residents and municipalities living near our factories.

Maintaining Financial Soundness

We have raised a total of 42.8 billion JPY in funding with support of our shareholders and investors. We are committed to maintaining our financial soundness, valuing every yen.

Materiality 2: Achieving TBM Pledge 2030

“Bridging Today and the Future We Want” - we are tackling environmental and social challenges alongside our customers and suppliers. We aim to achieve TBM Pledge 2030 through innovations in technologies, systems, and values, working towards the realization of a decarbonized and circular society.

Go Carbon Negative

We aim to achieve carbon negativity by 2030. To promote decarbonization across society through our products and services, it is essential to build a carbon-negative value chain.

Reduction of GHG Emissions

We aim to achieve zero GHG emissions (Scope 1 and Scope 2) by 2030. In 2023, we reduced emissions by 54% compared to 2020. Due to increases in production volume and the expansion of the calculation scope, GHG emissions in our value chain (Scope 3) increased by 43% compared to 2020, against our goal of halving these emissions.

Increase in GHG Emission Reduction Contributions

In 2023, the GHG emission reduction contribution from the sale of LIMEX products reached 4,039 t-CO_2eq. We actively utilizes life cycle assessment (LCA) to scientifically and quantitatively evaluate the environmental impacts of our products and services throughout their life cycles or at specific stages. Particularly during the development and manufacturing phases, we quantify the environmental impact of products using LCA, allowing us to understand the characteristics and improvement potential of environmental burdens for each product and to verify the effectiveness of improvements.

Go Circular

We aims to circulate one million tons of LIMEX and plastic across 50 countries by 2030. As a manufacturing company, the use of resources is essential for our continued operations. However, the traditional approach to resource consumption is not sustainable for building a sustainable society and economy. To promote resource circulation throughout society through our products and services, it is necessary to develop materials and utilization technologies, as well as to establish a circular system.

Promotion of LIMEX and Increase in Resource Circulation

In relation to the goal of collecting and recycling one million tons of LIMEX and plastic by 2030, the achievement rate in 2023 was 4%.

Contribution to Global Resource Circulation

Regarding the goal of circulating LIMEX and plastic in 50 countries by 2030, the achievement rate in 2023 was 10%.

> Learn more TBM Pledge 2030（External site）

* The GHG emission reduction contribution is an estimate for the LIMEX business only and does not include the resource recycling business. The calculation method may change in the future.

Materiality 2: Achieving TBM Pledge 2030

Meaningful Innovation

To achieve the society and economy that we envision, continuous innovation is essential. We aim to create new values, technologies that lead to problem-solving, and the systems that support them, all while harmonizing with what already exists to realize a decarbonized and circular society.

New Technologies Development for Future Generation

At our Technology Center, we aim for sustainable manufacturing by leveraging our unique know-how in developing eco-friendly materials. We are committed to innovating Japan-origin technologies on a global scale. Recently, we have made progress with the practical application of sealant films for food packaging, collaborated on the development of ballot papers, and announced CR LIMEX, which utilizes CO_2 captured from the atmosphere.

> Learn more
- Joint development of ballot papers "LX Coat" (External site)
- Sealant films for food packaging using LIMEX (External site)
- Presentation of CR LIMEX at the Davos Meeting (External site)

New Businesses and Partnership Development

We are striving to expand our business in the sustainability sector through the development of new businesses and partnerships. Recently, we have engaged in a wide range of collaborations, from those related to product development to initiatives supporting decarbonization.

> Learn more
- Partnering in the "TEAM EXPO 2025" program (External site)
- GHG reduction initiative partner for ScopeX: Dataseed (External site)
- Collaborating with Epson Sales (External site)
- Business partnership with BYWILL (External site)

Engagement in Rule-making

In August 2023, we established the "General Incorporated Association for Resource Circulation Promotion." We will actively engage in rule-making by collaborating with various partners, including companies, local governments, experts, government agencies, and related organizations, to formulate necessary measures and legal frameworks for the creation of a sustainable circular society and the realization of a decarbonized society.

> Learn more
- Resource Recycle Circulation (P19)

Behavior Change Through Communication

To achieve a decarbonized and circular society, it is essential for individual behavior changes to drive transformation across society. We aim to widely disseminate our technologies and systems, making a positive impact on society and contributing to the transition to a decarbonized and circular economy. To this end, we actively share information about our products and initiatives. We also consider it our mission to increase the number of people engaged in environmental issues, offering classes at local schools and hosting factory tours.

> Learn more
- Environmental Education: "LIMEX and Recycling" (External site)

A Company that Makes People

We have been hiring new graduates since 2021. After joining, regardless of their skills or years of experience, members challenge themselves alongside colleagues from various age groups and backgrounds to achieve our vision. In this piece, we hear from members of our first cohort, now in their fourth year, about their current challenges and their experience at TBM.

Building the Foundation Through HR Development

Rimi Inoue
People & Culture Section

I joined the company because I want to realize our mission and build an organization that values diversity. In the People & Culture Section, I manage company meetings and training programs for new hires and management, and I am involved in promoting D&I and recruitment communications. I find daily fulfilment in creating spaces for sharing challenges and inspirations. Moving forward, I aim to strengthen the foundation of our organizational growth and contribute to developing individuals who envision the future and continue to take on challenges.

New Challenges in the Creative Team

Hodaka Koji
Communication Division
PR Marketing Department

I visited Fukushima during my student years and realized that what we take for granted in daily life is not actually guaranteed. This experience motivated me to join the company to help realize its vision for the future. For three years, I worked in HR, focusing on enhancing the recruitment customer experience and onboarding processes. In 2024, I transitioned to the Brand Creative Team through the internal transfer program. Currently, I handle graphic design for owned media and release images, as well as inquiries related to logos and promotional displays. Despite my lack of design experience, I am grateful for the environment that supports my aspirations and creates opportunities for new challenges, and I am committed to helping create a new sense of normalcy.

Transferred to Overseas Sales via Internal Job Posting

Minori Kitagawa
LIMEX Division

I joined the company with the goal of "leading global sustainability with Japanese technologies." After three years in domestic sales of blow molded products, I was transferred to overseas sales in 2024 via the internal job posting, focusing on markets like Indonesia and the Philippines. Our overseas sales involve a wide range of tasks, and I am grateful for the opportunity to have such decision-making power and global challenges at my mid-20s. Moving forward, I aim to increase case studies abroad and contribute to solving global environmental issues with our technologies.

A Company that Makes People

Supporting Overseas Expansion as a Finance Expert

Eri Kawaguchi
Administration Division
Accounting and Finance Department

I'm part of the Finance and Accounting Department, focusing on accounts receivable management. I also work daily with local team members to build a robust management system and provide accounting support for our subsidiary in Vietnam. Currently, I'm involved in a transfer pricing project, which requires a deep understanding of international taxation and local tax regulations. While it's a challenging topic, I find it rewarding. The Vietnam subsidiary is our first local entity in Southeast Asia, and I believe it will serve as a model for accelerating our overseas business. I'm committed to accumulating knowledge and experience to contribute to our future global expansion.

Involved in Environmental Business as a Legal Expert

Shoma Kurokawa
Administration Division
Corporate Department

I was drawn to the comapny for the opportunity to contribute to environmental business that benefits the Earth and humanity. In my second year, I transitioned from the General Affairs Team to establish an independent Legal Team, where I now handle a wide range of legal tasks, including reviewing about 500 contracts (both Japanese and English) annually. Additionally, I promote the digitization of legal processes, build a company-wide compliance framework, and provide legal support for new business and project launches, conducting legal research and collaborating with other divisions and external lawyers on various legal matters.

Training Session at the Time of Joining

> Learn more Times Bridge Media #NewGraduates Article Summary (External site)

ESG

E（Environmental）

GHG Emissions				2020	2021	2022	2023
Scope 1			t-CO_2eq	475	512	463	447
Scope 2			t-CO_2eq	742	1,326	232	110
Location based			t-CO_2eq	1,018	1,988	2,547	4,125
Scope 1+Scope 2			t-CO_2eq	1,217	1,838	695	557
Scope 3	Category 1	Purchased Goods and Services	t-CO_2eq	4,218	7,358	11,284	13,787
	Category 2	Capital Goods	t-CO_2eq	14,696	27,318	1,143	1,479
	Category 3	Fuel- and Energy- related Activities	t-CO_2eq	284	454	514	817
	Category 4	Upstream Transportation and Distribution	t-CO_2eq	312	194	272	646
	Category 5	Waste Generated in Operations	t-CO_2eq	250	247	145	2,863
	Category 6	Business Travel	t-CO_2eq	25	40	63	188
	Category 7	Employee Commuting	t-CO_2eq	53	77	62	106
	Category 8	Upstream Leased Assets	t-CO_2eq	-	-	-	-
	Category 9	Downstream Transportation and Distribution	t-CO_2eq	57	43	113	244
	Category 10	Processing of Sold Products	t-CO_2eq	-	-	-	-
	Category 11	Use of Sold Products	t-CO_2eq	-	-	-	-
	Category 12	End-of-Life treatment of Sold Products	t-CO_2eq	478	1,245	3,444	9,607
	Category 13	Downstream Leased Assets	t-CO_2eq	-	-	-	-
	Category 14	Franchises	t-CO_2eq	-	-	-	-
	Category 15	Investments	t-CO_2eq	-	-	-	-
Scope 3			t-CO_2eq	20,372	36,977	17,040	29,736
Total			t-CO_2eq	21,589	38,814	17,735	30,293

GHG Emissions Reduction Contribution*			t-CO_2eq	-	-	-	4,039

*The GHG emissions reduction contribution is an estimate based solely on the LIMEX business and does not include the resource recycling business. The calculation method may be subject to change in the future.

E（Environmental）

Scope 3		Calculation Method
Category 1	Purchased Goods and Services	GHG Emissions = Σ { (Quantity or monetary data of purchased or acquired products/services) × (Emission Intensity*) } * Based on Inventory Database IDEA Ver3.2. Some heavy calcium carbonate is calculated independently based on the Inventory Database IDEA Ver3.2, while CCU calcium carbonate reflects the supplier's actual emissions
Category 2	Capital Goods	CO2 Emissions = Σ { (Price of newly acquired capital goods (Construction cost)) × (Emission Intensity*) } * Emission Factor Database for calculating greenhouse gas emissions through the supply chain (Ver3.1) (Ministry of the Environment)
Category 3	Fuel- and Energy- related Activities	CO2 Emissions = Σ { (Quantity data of energy purchased) × (Emission Intensity*) } * Based on Inventory Database IDEA Ver3.2
Category 4	Upstream Transportation and Distribution	CO2 Emissions = Σ { (Ton-kilometers of transport) × (Emission Intensity*) } * Based on Inventory Database IDEA Ver3.2. Domestic transport is assumed to be 500 km, and maritime transport is assumed to be 4,781 km
Category 5	Waste Generated in Operations	CO2 Emissions = Σ { (Waste treatment/recycling amounts by type and disposal method) × (Emission Factor by type and method*) } * Based on Inventory Database IDEA Ver3.2. Emission factors are set by waste type and disposal method
Category 6	Business Travel	CO2 Emissions = (By mode of transport) Σ { (Travel expense reimbursement) × (Emission Intensity*) } * For transport modes, based on Emission Factor Database for calculating greenhouse gas emissions through the supply chain (Ver3.1) (Ministry of the Environment). For accommodation, based on Inventory Database IDEA Ver3.2
Category 7	Employee Commuting	CO2 Emissions = (By mode of transport) Σ { (Travel expense reimbursement) × (Emission Intensity*) } * Based on Emission Factor Database for calculating greenhouse gas emissions through the supply chain (Ver3.1) (Ministry of the Environment)
Category 8	Upstream Leased Assets	(Not Relevant) Our company does not own upstream lease assets, so this category is deemed not relevant
Category 9	Downstream Transportation and Distribution	CO2 Emissions = Σ { (Ton-kilometers of transport) × (Emission Intensity*) } * Based on Inventory Database IDEA Ver3.2. Domestic transport is assumed to be 500 km, and maritime transport is assumed to be 4,781 km
Category 10	Processing of Sold Products	(Not Relevant) Many of our products are intermediate materials, making it difficult to obtain reliable data on end product customers and uses. Following WBCSD's guidance on GHG emissions calculation and reporting in the chemical industry, which states that due to the diversity of applications and customer composition, it is difficult to obtain reliable figures, chemical companies are not obligated to report Scope 3 Category 10 emissions; hence, this category is deemed not relevant
Category 11	Use of Sold Products	(Not Relevant) The products we sell do not require energy during use, so there are no GHG emissions during usage. Therefore, this category is deemed not relevant
Category 12	End-of-Life treatment of Sold Products	CO2 Emissions = Σ { (Waste treatment/recycling amounts by type and disposal method) × (Emission Intensity by type and method*) } * Based on Inventory Database IDEA Ver3.2. It is assumed that 50% of the shipment volume is general waste and the remaining 50% is industrial waste incinerated
Category 13	Downstream Leased Assets	(Not Relevant) Our company does not own downstream lease assets, so this category is deemed not relevant
Category 14	Franchises	(Not Relevant) Our company does not have a franchise business, so this category is deemed not relevant
Category 15	Investments	(Not Relevant) Our main business is not in finance, so this category is deemed not relevant

E（Environmental）

				2020	2021	2022	2023
Energy		Purchased Electricity	MWh	2,287	4,544	5,776	9,358
		Heat	Converted to MWh	0	101	166	155
		Gasoline, Diesel, Kerosene	Converted to MWh	107	148	145	163
		City Gas, LPG	Converted to MWh	2,134	2,362	2,176	2,151
		Total	Converted to MWh	4,529	7,155	8,263	11,827
Ratio of Renewable Energy in Electricity			%	33	37	93	98
Water	Total Water Withdrawal	Public and Industrial Water	㎥	5,340	9,675	11,381	12,912
		Groundwater	㎥	0	0	148	19,865
		Total	㎥	5,340	9,675	11,529	32,777
	Total Wastewater	Sewage Water	㎥	2,684	7,077	8,654	29,504
		Industrial Waste	㎥	68	248	248	215
		Release into Rivers	㎥	2,511	1,776	1,905	2,789
		Total	㎥	5,263	9,102	10,806	32,508
	Total Consumption		㎥	77	573	723	269
Waste (excluding general waste)		Incineration	t	0	5	7	1
		Recycled	t	372	769	496	5,189
		Unknown	t	0	1	0	0
		Total	t	372	774	503	5,190
CDP Response Score	Climate Change		-	B	B	B	B
	Water Security		-	B	B	B	B

S（Social）

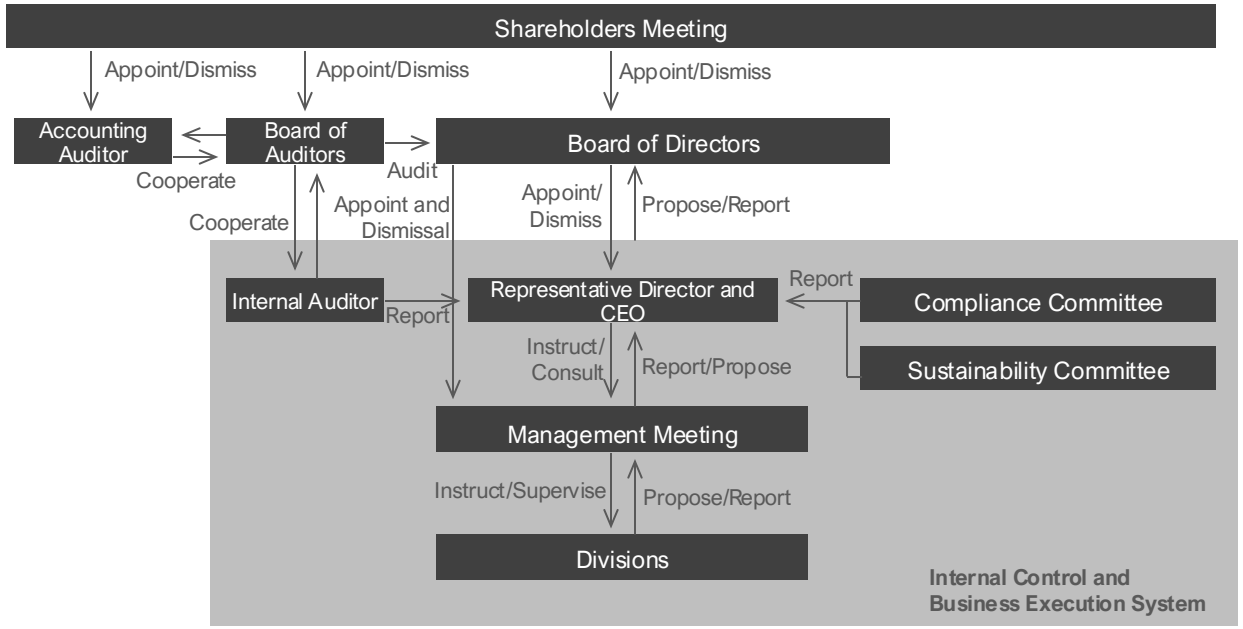
Human Capital			2023
Basic Employee Information	# of Employees*	Regular Employees	281
		Non-Regular Employees	45
		Total	326
	# of Employees by Age Group*	20s	71
		30s	129
		40s	79
		50s	36
		60s	11
Occupational Safety and Health	# of Work Accidents (including fatalities)		10 (0)
Job Satisfaction	Engagement Score (out of 5 / 1H & 2H Average)		3.9 p
Diversity	Female Ratio*	Female Employee Ratio	26.1 %
		Female Manager Ratio	10.3 %
		Female Director Ratio	20.0 %
	Employment Ratio of Persons with Disabilities*		1.8 %
	Gender Wage Gap	Overall	71.9 %
		Full-time Employees	84.3 %
		Part-time Employees	51.9 %
Paid Leave	Annual Paid Leave Utilization Rate		66.5 %
	Average Number of Days Taken		8.5 days
Childcare Leave, etc.	Male Ratio of Taking Childcare Leave		40.0 %
	Average # of Days of Childcare Leave Taken by Male		13.0 days

*As of December 2023

G（Governance）

Governance and Internal Control

We are a company with a board of auditors. The board of directors, composed of internal directors knowledgeable about the business and external directors who offer an objective perspective, makes important decisions and supervises the execution of the directors' duties.



Directors and Auditors（As of June 2024）		External
Directors	Nobuyoshi Yamasaki	
	Koji Sakamoto	
	Takashi Kobayashi	
	Tadato Kataji	●
	Minoru Sugimori	●
	Yoshie Usuba	●
	Eiko Nakazawa	●
	Lee Jung Hwan	●
Auditors	Koichi Kato	●
	Masaru Mizuno	●
	Daiki Takada	●

Executive Officer（As of June 2024）	Position
Taichi Yamaguchi	Managing Executive Officer and CSO
Takayuki Sasaki	Managing Executive Officer and CMO
Seigo Nakashima	Senior Executive Officer and CFO
Tokuro Hatori	Executive Officer and CSuO
Tomoya Nakamura	Executive Officer and CKO
Hironari Sakai	Executive Officer
Shinya Naganogawa	Executive Officer
Jun Sugita	Executive Officer
Momo Nakatani	Executive Officer

G（Governance）

Organization Roles

Board of Directors

The Board of Directors decides on important matters for the company and supervises the execution of directors' duties. In accordance with the Board of Directors Regulations, meetings are held monthly, along with additional extraordinary meetings as needed. The Board deliberates on matters stipulated by laws and the Articles of Incorporation, as well as fundamental management policies, mid-term management plans, annual business budgets, and other significant issues related to sales, business operations, contracts, organization, human resources, labour, and assets. To enhance auditing functions and transparency, auditors attend the meetings. The number of directors is limited to 16, with their terms ending at the conclusion of the annual shareholders' meeting within the fiscal year in which they were appointed. Election of directors is determined by shareholders holding at least one-third of voting rights who attend the shareholders' meeting, and decisions require a majority of the votes of those present.

Auditors / Board of Auditors

Auditors attend the Board of Directors' meetings in accordance with the Auditor Regulations. They report to the Board of Directors if there is a risk that the directors' duties may violate laws or the Articles of Incorporation, thereby helping to prevent illegal situations, fulfilling shareholder trust, and contributing to the enhancement of the company’s social credibility. The Board of Auditors meets monthly, with additional extraordinary meetings held as needed.

Additionally, as needed, auditors will listen to the current status of operations at the head office and various business locations, review minutes from important meetings, examine internal approval documents, and investigate accounting records and documents. The number of auditors is limited to four, and their term ends at the conclusion of the annual general meeting of shareholders for the last fiscal year ending within four years after their appointment. Selection is determined at the shareholders' meeting, where shareholders holding one-third of the voting rights must be present, and a majority of the votes from those present is required.

Accounting Auditor

The accounting auditor conducts audits at the head office, factories, and other necessary locations in accordance with the Companies Act. Additionally, the accounting auditor is appointed at the shareholders' meeting based on the company's articles of incorporation, with a term of one year.

Compliance Committee

The Compliance Committee is established as necessary to investigate compliance violations and other related matters. The committee chair is the head of the management division, and other members are appointed by the head of the management division, who reports to the representative director.

Sustainability Committee

The Sustainability Committee meets quarterly to review the previous quarter's sustainability efforts, plan for the next quarter, discuss responses to external environmental changes, and develop and operate management systems. The committee chair is the Chief Sustainability Officer (CSuO), and its members include the Representative Director and CEO, members of the Sustainability Division, and external advisors.

Management Meeting

The Management Meeting is held monthly to assess the company's current situation, discuss future strategies, and develop organizational operations. It reviews and prepares important matters for the Board of Directors and provides recommendations in response to inquiries from the Representative Director and CEO. The meeting consists of the Representative Director and CEO and executive officers who serve as division heads.

Governance Data		2023
Organizational Structure	External Directors*	60%

*As of December 31, 2023

Appendix

Company Overview

Company		TBM Co., Ltd.
Representative Director and CEO		Nobuyoshi Yamasaki
Establishment		August 30, 2011
Capital		JPY 100 million (including capital reserve, JPY12,035,460,000 as of December 31, 2023)
Number of Employees		326 employees (including 281 full-time employees as of December 31, 2023)
Business Activities		Business activities promoting the development and manufacturing, sales, and resource circulation of environmentally friendly materials and products
Locations	Tokyo Headquarters	15F Toho Hibiya Building, 1-2-2 Yurakucho, Chiyoda-ku, Tokyo 100-0006
	Technology Center	1F (Lab) / 2F (Reception) J-Pro Machiya Building, 1-38-16 Machiya, Arakawa-ku, Tokyo 116-0001
	Kanagawa Office	3F Yokohama Daiichi Yuraku Building, 3-35 Onoe, Naka-ku, Yokohama, Kanagawa 450-6411
	Central Japan Office	11F Dainagoya Building, 3-28-12 Meieki, Nakamura-ku, Nagoya, Aichi 450-6411
	Western Japan Office	20F Shin-Osaka Prime Tower, 6-1-1 Nishinakajima, Yodogawa-ku, Osaka 532-0011
	Tohoku LIMEX Factory	117-13 Ipponyanagi, Yawata, Tagajo, Miyagi 985-0874
	Yokosuka Circular Factory	58-9 Shinmei, Yokosuka, Kanagawa 239-0832
Domestic Subsidiaries	Bioworks Co., Ltd.	7F Lab Building, Keihanna Plaza, 1-7 Hikaridai, Seika-cho, Soraku-gun, Kyoto 619-0237
Overseas Subsidiaries	TBM VN Co.,Ltd	4F, NO3-T7 Building, Ngoai Giao Doan Area, Xuan Tao Ward, Bac Tu Liem District, Ha Noi, Viet Nam
	SK TBMGEOSTONE Co.,Ltd	27, Godeung 1-gil, Iwol-myeon, Jincheon-gun, Chungcheongbuk-do, Korea
	Times Bridge Management Global, Inc	8605 Santa Monica Blvd 80071, West Hollywood, CA, 90069-4109, United States

Tohoku LIMEX Factory

Yokosuka Circular Factory

External Evaluations and Initiatives

Recent Major Evaluations from External Organizations

EY Entrepreneur Of The Year 2019

Awarded the Grand Prize in the Exceptional Growth category at the Entrepreneur Awards hosted by EY Japan, a program that aims to promote Japanese entrepreneurs on the global stage.

PRIDE Index 2022

Received Gold certification in the PRIDE Index, an evaluation metric for initiatives related to LGBT+ and other sexual minorities (hereafter referred to as LGBT+).

D&I Award 2022

Awarded the Best Workplace certification, the highest rating in the D&I Award, Japan's first recognition system for companies promoting Diversity & Inclusion (D&I).

CSA Award ～Companies Creating "Next-Generation Talent" Recommended for People in Their 20s

Received the CSA Award, hosted by the En Human Resources Education Foundation, for "Companies Creating 'Next-Generation Talent' Recommended for People in Their 20s." Our culture, which allows individuals in their 20s to take on challenging tasks in significant roles, was highly evaluated.

J-Startup Impact

Selected by the Ministry of Economy, Trade and Industry as one of 30 companies expected to serve as role models for impact startups, aiming to solve social and environmental issues while achieving sustainable economic growth and realizing new visions.

Tokyo Financial Award 2023

Received the ESG Investment Award in the "Tokyo Financial Award 2023," hosted by the Tokyo Metropolitan Government, for being an outstanding company in promoting ESG investment and practicing the SDGs.

Intellectual Property Achievement Award

Received the Minister of Economy, Trade and Industry Award in the 2022 Intellectual Property Achievement Awards, presented by the Ministry of Economy, Trade and Industry and the Japan Patent Office, as a venture that effectively utilizes intellectual property.

2022 Logistics Award

Our initiative, in collaboration with Hacobell Inc., to realize a real-time visualization system for indirect CO2 emissions (Scope 3) was awarded the Special Award at the 2022 Logistics Award, hosted by the Japan Logistics Systems Association.

Main External Initiatives

World Economic Forum (Davos Meeting)

TBM participates as a member of the World Economic Forum's Unicorn Community, proposing solutions to global challenges through active exchanges of ideas with other companies.

Japan Business Federation (Keidanren)

TBM actively participates in activities aimed at achieving a sustainable society by accelerating global business development and building networks with member companies and organizations.

Science Based Targets initiative（SBTi）

TBM has set scientifically-based targets for reducing greenhouse gas emissions to achieve the goal of limiting the rise in global average temperature to 1.5° C and has obtained SBTi certification.

GX League

The GX League is a platform for companies to collaborate with government and academia in anticipation of achieving carbon neutrality by 2050 and driving social transformation. We have expressed our support for the foundational concept of the GX League.

>Learn more Past Awards (External site)
Affiliated Industry Associations and Activities (External site)

Editorial Policy and Revision History

Editorial Policy

Issue Date

September 2, 2024

Period

2023 (from January 1, 2023, to December 31, 2023). Some content may include information from before the period or from recent developments.

Scope

TBM Co., Ltd.

The calculation of GHG emissions includes its subsidiary, Bioworks Co., Ltd.

Reference Guidelines

Ministry of the Environment, Environmental Reporting Guidelines 2018

IIRC International Integrated Reporting Framework

Value Co-Creation Guidance 2.0

Guidance for Impact Companies on Disclosure and Dialogue in Capital Markets - Version 1

SASB Materiality Finder

ISO 26000 "Guidance on Social Responsibility

Caution Regarding Forecasts

The future-oriented statements in this report are based on information available to the company at the time of preparation. They contain risks and uncertainties and do not constitute a promise by the company to realize these forecasts. Actual performance may differ from future forecasts due to various factors, including changes in the economic environment and trends in the services provided.

Revision History

Version	Date	Revised Content
1.0	September 2, 2024	Version 1.0 Issued
1.1	September 9, 2024	Updated information regarding governance
1.2	October 2, 2024	Revised font and titles

Contact Us

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Version 1.2