



ESG REPORT 2023



# ESG

## REPORT 2023





# Introducing **ESG report**

Transparency, commitment, competence, global sustainable approach, and a holistic way to manage the business are the main characteristics of Tsubaki Nakashima.

During the last 3 years (that is, in the period of validity of our 2021 – 2023 Mid-Term Strategy).

**TRANSFORM  
NEXT2023**

we have strengthened the organization, trained, involved, raised awareness, and linked our people to a profoundly sustainable vision, adhering to specific and rigorous international models which have been and will be our guide in the years to come.

The Sustainability Management System has given us discipline and method, the commitment of the management and our factories has generated results that have gone beyond expectations and the CO2 reduction plan.

Now we look to the future in a much more organic way and with the optimism that we have seen a great cultural change and extremely encouraging results; our commitment is to ensure that the plan designed, and which reaches 2030 is simply implemented. This way we can say that we have truly done our part to make the world more sustainable.

environmental social governance

# Introducing

# Introducing ESG report

For Tsubaki Nakashima that Statement coincides with the ESG Report and represents the result of the commitment to notify its stakeholders of the performances and results achieved in general and in the sustainability area. The Statement contains data and information referring to Tsubaki Nakashima Co. Ltd. and its subsidiaries as of December 31, 2023 (hereinafter “Tsubaki Nakashima” or “TN”).

THE REPORT IS BASED ON A MULTI-STAKEHOLDER APPROACH involving the joint analysis of actions taken in respect of the main stakeholders with whom the Company interacts. For the details on the material topics, see the specific paragraphs.

The Report, drawn up in the first quarter of 2024 and for some specific areas (for example, the organizational structure communicated at the end of 2023 and operational from 1st January 2024) describes the 2024 status since if this were not the case it would risk reporting obsolete information and not useful for readers

The Report has been prepared in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (GRI) and with the Japanese Guidelines (Security Report 2023).

environmental social governance

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The Sustainability Report is drawn up according to a system of indicators (KPI - Key Performance Indicators) which measure the Company's performance and the degree of achievement of objectives previously established for areas in which the Company has major impact.

- The strategic decisions of the Company
- The established short-medium and long-term targets
- The analysis of the GRI's most recent Standards
- The Stakeholders' inputs
- The Continuous Improvement activities

<b>GRI 2</b>	General Disclosures 2021	<b>GRI 401</b>	Employment 2016	<b>GRI 416</b>	Customer Health and Safety 2016
<b>GRI 3</b>	Material Topics 2021	<b>GRI 402</b>	Labor/Management Relations 2016	<b>GRI 417</b>	Marketing and Labeling 2016
<b>GRI 201</b>	Economic Performance 2016	<b>GRI 403</b>	Occupational Health and Safety 2018	<b>GRI 418</b>	Customer Privacy 2016

<b>GRI 202</b>	Market Presence 2016	<b>GRI 404</b>	Training and Education 2016
<b>GRI 203</b>	Indirect Economic Impacts 2016	<b>GRI 405</b>	Diversity and Equal Opportunity 2016
<b>GRI 204</b>	Procurement Practices 2016	<b>GRI 406</b>	Non-discrimination 2016
<b>GRI 205</b>	Anti-corruption 2016	<b>GRI 407</b>	Freedom of Association and Collective Bargaining 2016
<b>GRI 206</b>	Anti-competitive Behavior 2016	<b>GRI 408</b>	Child Labor 2016
<b>GRI 301</b>	Materials 2016	<b>GRI 409</b>	Forced or Compulsory Labor 2016
<b>GRI 302</b>	Energy 2016	<b>GRI 410</b>	Security Practices 2016
<b>GRI 303</b>	Water and Effluents 2018	<b>GRI 411</b>	Rights of Indigenous People 2016
<b>GRI 304</b>	Biodiversity 2016	<b>GRI 413</b>	Local Communities 2016
<b>GRI 306</b>	Waste 2020	<b>GRI 414</b>	Supplier Social Assessment 2016
<b>GRI 308</b>	Supplier Environmental Assessment 2016	<b>GRI 415</b>	Public Policy 2016

# Precision for a changing and sustainable world

Tsubaki Nakashima is a manufacturing company that operates on three continents (Asia, Europe and America) and is strongly committed to serving its customers, creating a work environment in which its employees can feel motivated, respectful of available resources and environment, which does its part every day to contribute to a truly sustainable future; this way of being and acting is fundamental to the success of our 21 plants, in the countries and communities in which we operate.

We are a manufacturer of precision balls, rollers, ball screws and blowers, very high precision components for the metrology sector but also of medical devices with regional production and procurement, short lead times and accurate, through a network of production and well-organized sale that meets the needs of our customers.

Considering that 2023 is the final year of the Mid-Term Strategy 2021- 2023, we can say that in these 3 years the company has been redesigned, and that the strengthening of the Asian market also in terms of footprint (I recall here the construction of a second, modern and sustainable factory in India and that of a new factory in Thailand), the new presence in the Medical Device Business sector in Europe with the acquisition of Rispa in Italy, and the remodeling of the Rollers Business, with the closure of 2 factories in the Netherlands and the quadrupling of that in Bosnia, have fully fulfilled our commitments, all with truly exemplary attention to the sustainability of processes, products and future profits.

The five pillars of our management style, which we call the Management Principles, remain the same

**Sustainability**, as the simultaneous achievement of economic prosperity, creation of a healthy, safe, and low environmental impact environment, where everyone is equal, with equal rights and duties, equal opportunities. In our vision, ZERO impact, in a holistic sense, is fundamental: Vision Zero for us means zero accidents, zero damage to people and environment, but also zero inequalities and zero lack of knowledge, equal opportunities for our employees.

The highest **QCDS** (Quality, Cost, Delivery, and Service), to be the best-in-class, customer and market-oriented partner for our customers, by continuously improving products, processes, and services.

**One Team Spirit**, which is the basis of our corporate culture, of our corporate identity, which in 2023 was effectively strengthened with a new brand identity that allowed all of us and our stakeholders to identify ourselves and identify Tsubaki Nakashima as a strong company, with a strong image and clear ideas.

**Transformation**, that is, being more and more a global company with an international mentality every day, precisely by continuously transforming our organization to always be one step ahead, capable of seizing opportunities to be better, stronger, and more aware

The orientation towards continuous **Growth**, in terms of commercial solidity and profit, to anticipate market needs, satisfy customer expectations, find new customers, new markets and new business opportunities

# CEO letter



## Precision for a changing and sustainable world

As Tsubaki Nakashima, we are aware of the responsibility we have towards the people who work for us and the world around us.

This is why in 2023 we worked hard for sustainable development that will allow us to improve the performance of our plants, in all respects; and we achieved all the CO2 reductions' targets set up in 2021.

The Sustainability Committee has not only defined the strategies and guidelines for sustainable development but has also worked with ALL our plants on energy efficiency plans, better use of resources, respect for the environment, reduction of environmental impacts.

Our Sustainable Development Model, developed in 2021 and based on three fundamental pillars - Integrated Governance System; Sustainable Monozukuri; Communication and Brand identity - has begun to unfold all of its enormous potential in its true meaning and if on the one hand it has consolidated the foundations of Corporate Governance, on the other it has allowed us to set the cornerstones on which industrial and on processes.

The new Carbon Footprint (set up in 2022 and based on Science Based Target Methodology), helped us to identify the opportunities in terms of innovative technologies and energy purchasing and at developing a specific "Green Electricity" and "Waste recycling" Strategy, successfully applied in 2023.

Obviously, our commitment will continue in the next years, but we are extremely confident that the 2030 target (CO2 reduction) will be achieved.

An important element that measures the results achieved, in addition to the KPIs that we will see in this Report, is the company's decision to disclose our impacts on the environment and natural resources and take action to reduce negative impacts through the CDP.



This tells us that we are on the right track and how much effort we will put into achieving excellence.

We believe that transparency, openness, and risk management, as well as the efforts we are making to transform our Company will allow us to be stronger, to protect and improve our company's reputation, boost our competitive advantage, uncover risks and opportunities, and track and benchmark progress.

Tsubaki Nakashima reiterates its support for the United Nations Sustainable Development Goals (SDGs) and our environmental sustainability goals are in line with global sustainability targets (Paris Agreement)

A clear strategy, a deep and convinced commitment to achieving it, the results of our actions and the increased trust of our stakeholders, combined with our daily commitment, the work of our women and our men will not only allow us to overcome the adversities of these years, but will create the conditions for responsible, sustainable and profitable development.

Director and Representative Executive Officer, CEO  
*Koji Hirota*



**MISSION**  
the WHY  
+  
**VISION**  
the WHAT  
+  
**MANAGEMENT PRINCIPLES**  
the HOW  
=  
**TN POLICY ACTION!**



BUILDING THE  
**TRUST** OF OUR  
**STAKEHOLDERS**  
**GROWING AND THRIVING**  
WITHIN OUR  
**COMMUNITIES**  
AND HELPING TO  
**CREATE**  
**A MORE SUSTAINABLE**  
**WORLD**

OUR  
**MISSION**

OUR  
**VISION**

ACHIEVE  
**PROFITABLE AND**  
**SUSTAINABLE GROWTH**  
WITH AN UNWAVERING COMMITMENT  
TO **IMPROVEMENT, PRODUCT**  
AND CREATING **EXCELLENCE**  
**SHAREHOLDER VALUE**  
WITH AN INCREASING DEDICATION TO  
**SUSTAINABILITY**  
WITHIN ITS LEADERSHIP, OPERATIONS,  
EMPLOYEES  
AND INVESTMENTS.



We will TRANSFORM our Company on a CONTINUOUS basis to make the best products in the world, in a SUSTAINABLE WAY.

We aim to become a TRULY GLOBAL COMPANY with an international mindset, deeply TRANSFORMING our organization to stay one step ahead of the curve.

We aim to be a Company that continues to achieve SUSTAINABLE AND PROFITABLE GROWTH.

We will create a team world-oriented culture - ONE TEAM SPIRIT - convinced that the VALUE of our people is the sum of their COMPETENCES, HUMILITY AND ABILITY to achieve results, with POSITIVE ATTITUDE.

With our creativity we will PROVIDE OUR CUSTOMERS WITH HIGHEST QCDS (quality, cost, delivery, service), drawing ideas from our stakeholders.

**MISSION**  
the WHY  
+  
**VISION**  
the WHAT  
+  
**MANAGEMENT PRINCIPLES**  
the HOW  
=  
**TN POLICY ACTION!**

- PROFITABLE AND SUSTAINABLE VALUE
- OPERATIONAL EXCELLENCE

## GROWTH

- GLOBAL REACH, LOCAL DEPTH
- BEST IN-CLASS TRANSFORMATION
- DX TRANSFORMATION

## TRANSFORMATION

- COMPLIANCE
- VISION ZERO

## SUSTAINABILITY

- MARKET ORIENTED
- CONTINUOUS IMPROVEMENT

## QCDS

- TN CULTURE
- $V = [C^2 + H + A] \times A$

## ONE TEAM

# ACTION!

**TSUBAKI NAKASHIMA** Policy represents the actions we'll take to ensure our Vision, Mission and Management Principles are executed: aligned around People, Planet and Prosperity, we'll continue to measure our performance and improve all aspects of what we do.

TSUBAKI NAKASHIMA WILL **CONTINUE TO IMPROVE** ITS OWN INTEGRATED CORPORATE GOVERNANCE SYSTEM, ORGANIZATION, PROCESSES, PRODUCTS, AND SERVICES **AIMING TO CONTINUE TO GROW** AS AN **ENVIRONMENTALLY RESPONSIBLE AND ETHICALLY AWARE BUSINESS**. THE COMPANY THEREFORE REAFFIRMS ITS COMMITMENT TO **TRANSPARENCY** AND **GOOD GOVERNANCE**, PARTICULARLY IN MATTERS OF SUSTAINABLE AND PROFITABLE GROWTH, ATTENTION TO OUR STAKEHOLDERS, AND THE COMPANY'S **VISION ZERO'S APPROACH** (ZERO ACCIDENTS, ZERO OCCUPATIONAL ILLNESSES, ZERO WASTES, ZERO INEQUALITIES, ZERO LACK OF KNOWLEDGE). TSUBAKI NAKASHIMA VISION IS TO **MAINTAIN AND IMPROVE ITS POSITION AS A LEADING MANUFACTURER** OF HIGH-QUALITY, HIGH-PRECISION COMPONENTS THROUGH **SUSTAINABLE, CONTROLLED AND PARTICIPATORY PROCESSES**, WITH A HIGH FOCUS TO THE **CUSTOMERS** AND ALL **STAKEHOLDERS NEEDS** AND TO **GLOBALLY PREVENT ALL NEGATIVE IMPLICATIONS**. THE IDENTIFICATION OF THE EXPECTATIONS OF THE STAKEHOLDERS, THE ANALYSIS OF THE REQUIREMENTS AND NEEDS, THE DEFINITION OF ATTAINABLE CHALLENGING AND MEASURABLE OBJECTIVES, THE DEFINITION OF CLEAR TIMEFRAMES AND RESOURCES MUST GUIDE THE COMPANY TOWARDS CONTINUOUS AND SUSTAINABLE IMPROVEMENT (**PEOPLE, PLANET AND PROSPERITY**), INTEGRATING THE SYSTEMS IN USE AND ALIGNING THE INTEGRATED CORPORATE GOVERNANCE SYSTEM WITH **INTERNATIONALLY RECOGNIZED STANDARDS** TO HELP ENSURE THAT TSUBAKI NAKASHIMA **SERVES THE ROLE THAT SOCIETY EXPECTS**. IN PARTICULAR, THE COMPANY IS COMMITTED TO PROVIDING **SAFE AND HEALTHY WORKING CONDITIONS**, RESPECTING THE **ENVIRONMENT**, AND RESPONSIBLY USING THE AVAILABLE **NATURAL RESOURCES**, IN FULL COMPLIANCE WITH THE STATUTORY, REGULATORY, ORGANIZATIONAL AND CUSTOMER REQUIREMENTS, ASSESSING RISKS TO THE PRODUCTS, SERVICES, ENVIRONMENT AND TO ITS **EMPLOYEES**, SETTING **TARGETS** AND MEASURING THE **PERFORMANCE**, AND ENCOURAGING THE **ACTIVE PARTICIPATION** OF **EMPLOYEES AND THEIR REPRESENTATIVES**.

# POLICY





## COMPANY PRESENTATION

Tsubaki Nakashima is a global Company producing a broad range of high-quality industrial precision balls, rollers, cages, and sheet metal parts used for bearing and other applications. Tsubaki Nakashima is a known brand in Medical and Hygiene equipment and Ceramic business. We strive to constantly increase the quality of our products and achieve zero defects. In refining our manufacturing processes, we have developed in-house both proprietary grinding machines to achieve sphericity and our own inspection machines to ensure consistent quality for our customers.

## COMPANY STRUCTURE

Tsubaki Nakashima Co. Ltd. is headquartered in Katsuragi, Nara - Japan, with offices in Osaka, Singapore, and 21 plants in 11 Countries: Japan, Italy, Poland, Slovakia, UK, Bosnia, China, Thailand, India, Taiwan, and United States as of January 1st, 2024. This enables Tsubaki Nakashima to respond to various Customer needs, local procurement, quick delivery, and superior Customer support.

### The following are some key facts about the company

*Company name:* Tsubaki Nakashima Co., Ltd.

*Stock exchange listing:* Tokyo Stock Exchange – Prime Market

*Total number of issued shares at the end of the period*

*(including treasury shares):* December 31, 2023: 41,599,600 shares.

*Code number:* 6464

*URL:* <http://www.tsubaki-nakashima.com/en/>

*Representative:*

Koji Hirota, Director and Representative Executive Officer, CEO

*Contact:*

Hisashi Tate, Director and Executive Officer, Senior EVP, CFO

The corporate structure of the company is made up of a high-level company organized by a Board of Directors made up of 7 members and by a Management Committee (made up of 6 members).

# Who we are



# OUR HISTORY

**1934**

Founded by Kosabuto Chikamori, Toyo Steel Ball Seisakusho started manufacturing steel balls for bicycles.



**1939/1941**

Launched as a joint-stock company as Toyo Steel Ball Manufacturing Co. Ltd., began manufacturing and sale of chrome steel balls, the cornerstone of steel balls for bearings.



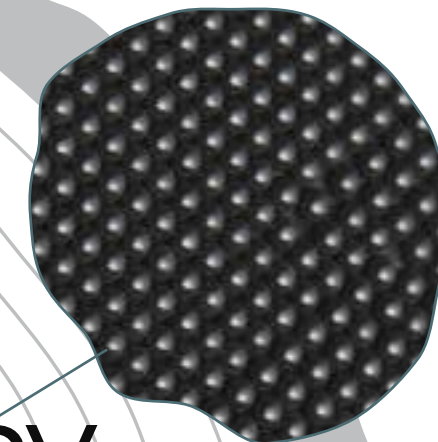
**1959/1961**

Started manufacturing and sale of ball screws. Went public on the OTC market in Osaka. Listed on the second section of both the Tokyo and Osaka Stock Exchanges.



**1973**

Started manufacturing and sale of ceramic balls, using spherical surface processing technology.



**1988/1990**

Acquired Tsubaki Steel Ball Co. Ltd. in Japan, and the assets of Hoover Group's steel ball division in the United States. Listed on the first section of both the Tokyo and Osaka Stock Exchanges.



**2002/2006**

Established Taicang Plant in China, acquired Krasnik Plant in Poland and Chongqing Plant in China.





# OUR HISTORY

**2010/2013**

Established Taiwan Plant, India Plant and acquired United Kingdom Plant and Thailand Plant.



**2015**

Opened Osaka Office as a group headquarter in Japan. Established Korea Distribution Center. Re-listed on the first section of the Tokyo Stock Exchange.



**2017**

Acquired Precision Bearing Components Group of NN Inc. (7 plants).



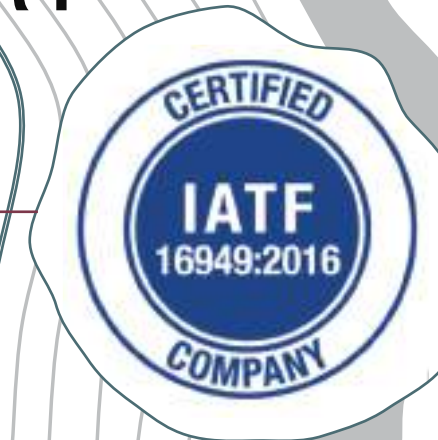
**2020**

Released Sustainability Report (current ESG-Environment Social Governance Report) for the first time.



**2021**

Certified IATF 16949. Established a Sustainability Committee to become a sustainable and profitable company.



**2022**

Transferred to the Prime Market of Tokyo Stock Exchange and obtained the first CDP (Carbon Disclosure Project) score.





**FROM NOW ON  
WE DRESS  
LIKE THIS!**



**TSUBAKI  
NAKASHIMA**

2023  
new brand



**ESG  
2023**

GEN

STR

Q

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IND

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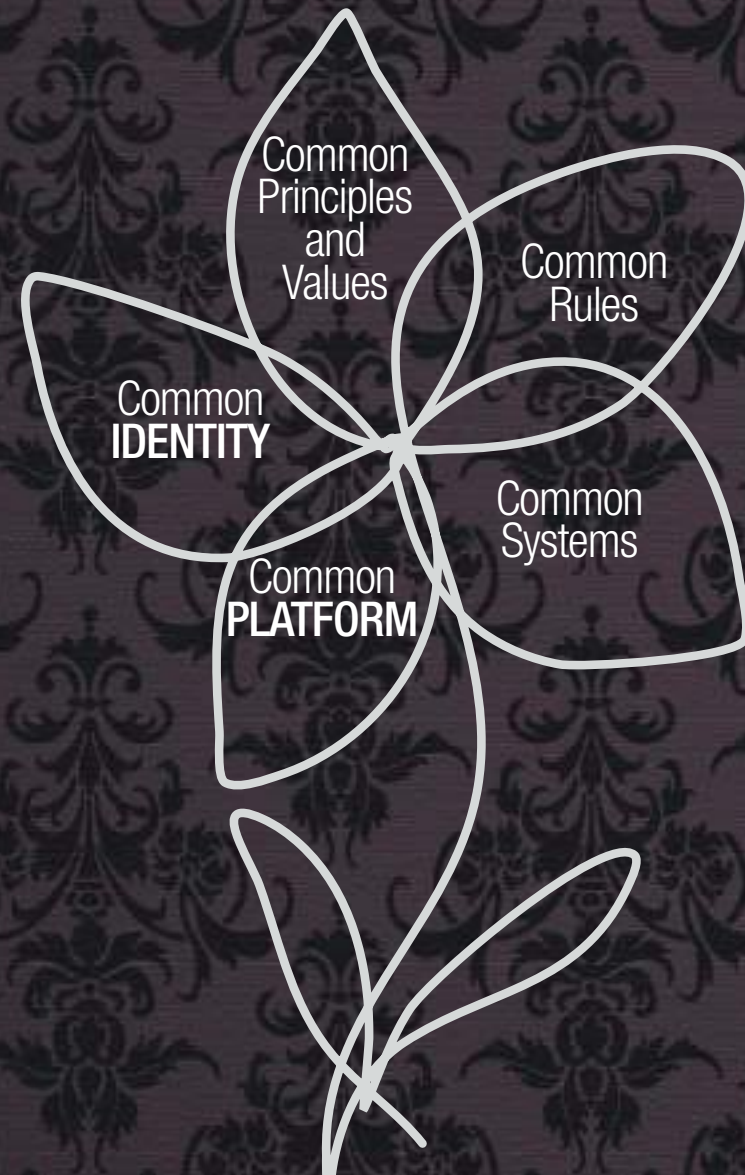
NOTE

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When we began the journey to build a new Tsubaki Nakashima in 2018, we began by defining the vision, mission, values, and management principles, we defined an organization based on skills and independent of the nationality of its members, we defined its rules of operation (Corporate Governance), we wrote the Management Systems, we introduced the IT platforms.

The final step was to work on the identity and on the brand, as an element to seal the change and to further define common ground



One of the 3 Sustainability related pillars of our Transform Next 2023 Strategy is the Communication, specifically Internal, External and Institutional Communication.



For us, Corporate identity is

- how Tsubaki Nakashima presents itself to internal stakeholders (including all the employees, investors, and partners of the company) and external stakeholders (including customers, consumers, media, etc.) and
- how Tsubaki Nakashima looks, behaves, and communicates

2023  
new brand

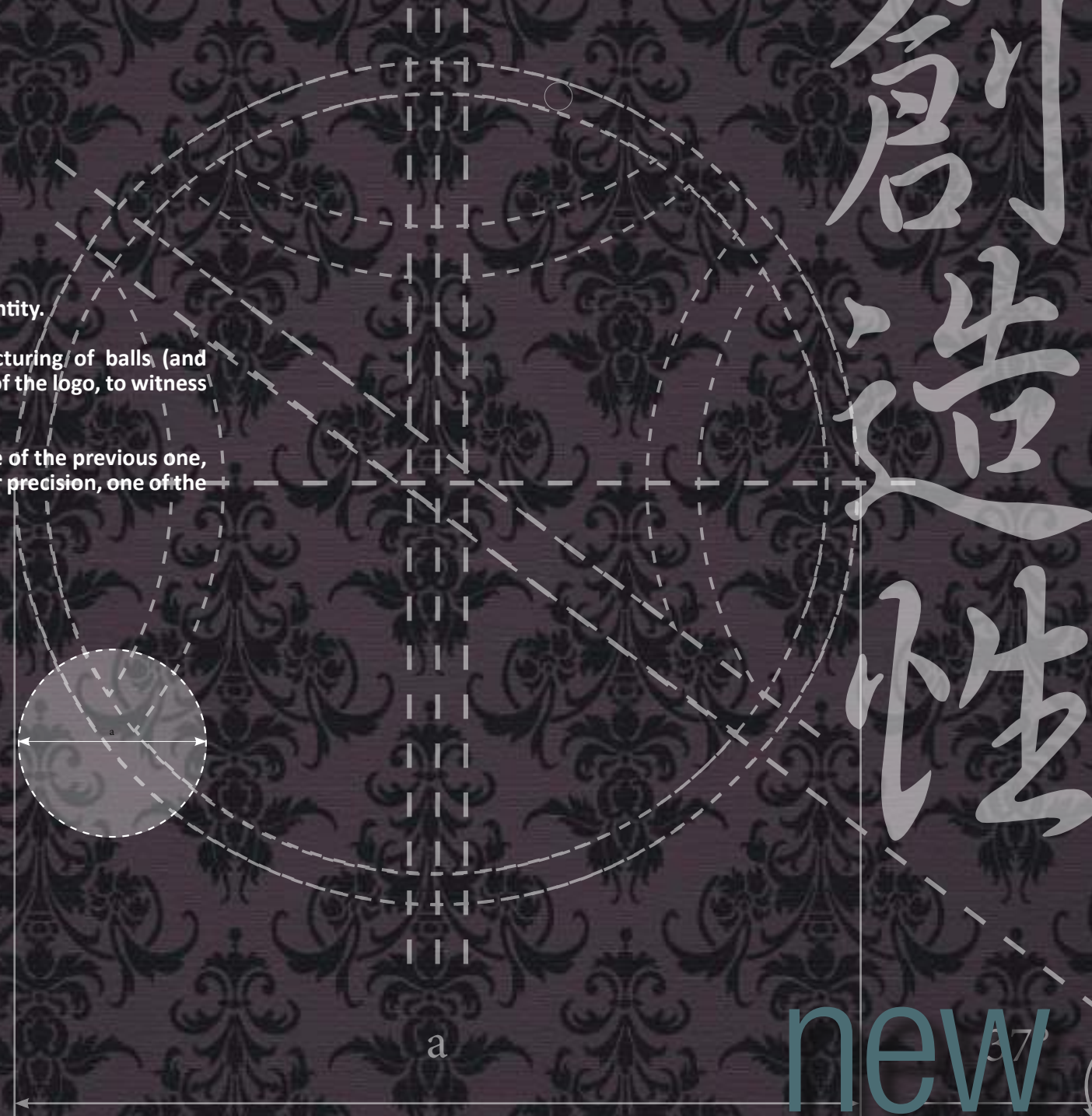
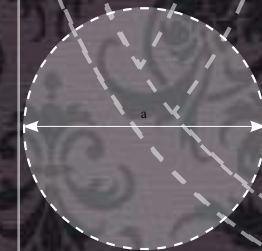


# Corporate communication and genesis of the new logo

The concepts that give birth to the new identity.

The core of the company is the manufacturing of balls (and rollers), so we focused on the round shape of the logo, to witness this item.

Besides this, the new logo refines the shape of the previous one, to obtain a perfect circle, that is a symbol for precision, one of the topics that the company is focused on.



But a new Brand Identity is not only the logo, but much more than that: it is a way of acting, always, of presenting one's company on every occasion, of making it visible to everyone, of "dressing" people and the factories themselves in a new, fresh, modern dress. It is a system of rules that concern many aspects, from the way to use the logo to the uniforms, from business cards to the backgrounds to be used in conference calls (the Brand identity Guidelines) but also how to design workspaces, factories (the so-called Plant Identity), to finally arrive at our Website and the creation of a common platform (Global Intranet) that would collect the rules, systems and tools.

Today and with satisfaction we can say that the Brand Identity has really changed the way we experience the company and are proud to be part of it: the factories have done and continue to compete to improve the working environments and our employees are the best ambassadors of this new way of being Tsubaki Nakashima.

2023  
new brand





The new logo comes from a connection with the past and with the deep identity of the company, but glances at tomorrow, evolving its round shape and round lines towards the future. Institutional colors are set, TN blue grey and TN purple red, which values are determined in different color scales to allow perfect replications in all the contexts.

2023  
new brand



As for the colors, an institutional lettering is set, reminding the historical use of Helvetica font families, renewing and refining it to obtain a strong identity, both in the logo and in everyday use for titles in texts. About body copies, as you can see, the chosen font is Calibri, with which this ESG report is written. All these rules are kept in the branding identity and plants guidelines.

Sharing the corporate guidelines allowed all plants in the world to be connected and to widespread and develop the company identity, through colors, signs, use of the logo, gadgets, clothes. This harmony conveys a strong improvement in the One Team feeling and in the perception of the company as seen by its employees and its stakeholders.

2023  
new  
brand



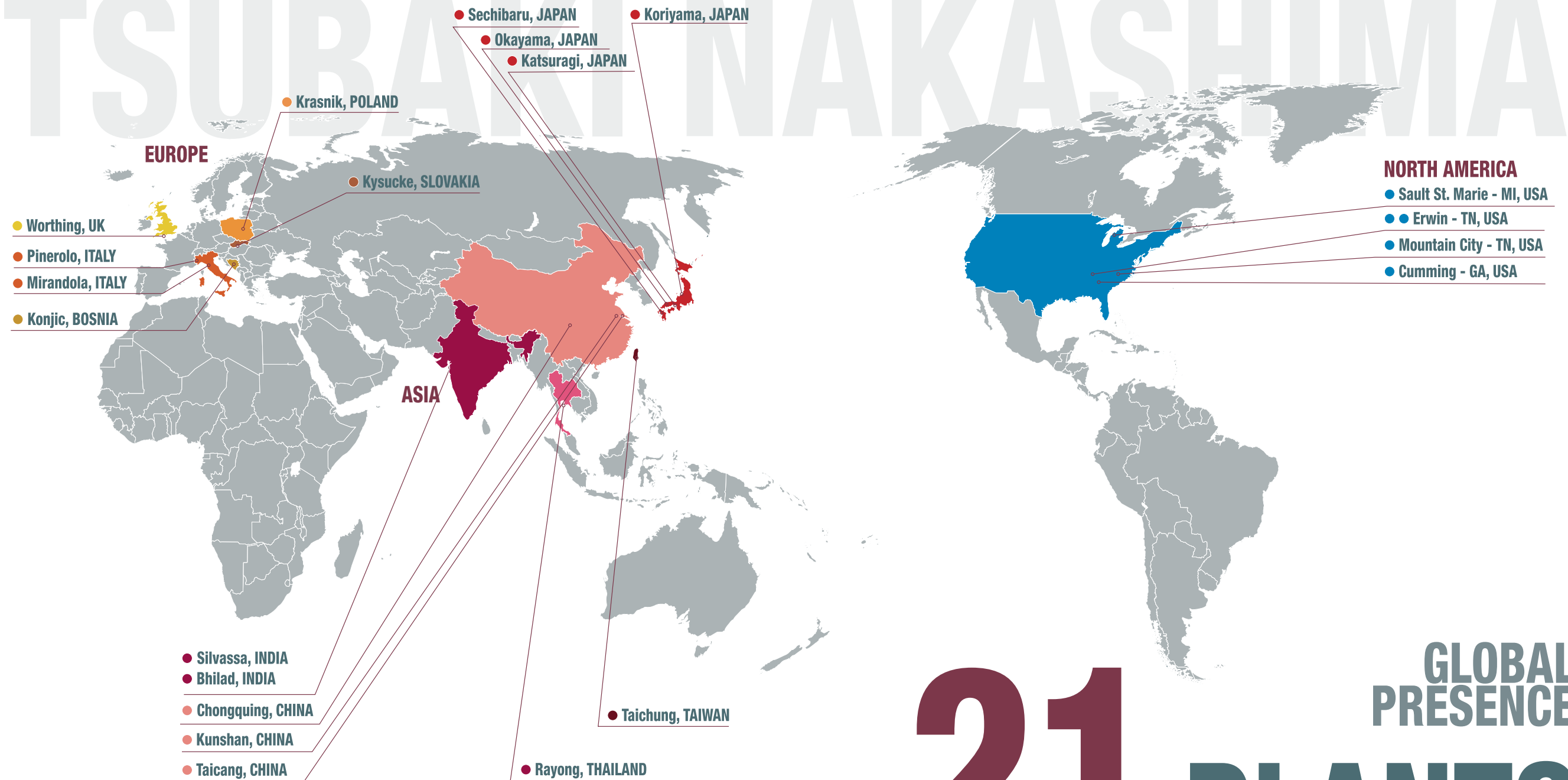


The process of re-branding is declined into many items and offers the chance to all the plants to convey harmony in a common, recognizable company identity.

## 2023 new brand



# TSUBAKI NAKASHIMA





During this very difficult three-year period, which saw health and energy crises heavily hit the entire world and Tsubaki Nakashima too, the Company worked and invested to build new plantfactories, to restructure its business, literally re-establishing entire regions and divisions and laying the foundations for a sustainable and profitable future. There are many challenges that await Tsubaki Nakashima, in a rapidly changing economy, with new technical, technological, and digital solutions, as well as new business opportunities.

With 2024 organizational changes, effective January 1st, the Company wants

**1** to be the Best-in-Class and to increase TN's corporate value by developing ball products which outperform others and providing them to customers, thus achieving higher profits.

**2** to realize the turn-around of the Americas Business and restructuring the Linear Business Reform, by the end of FY2024.

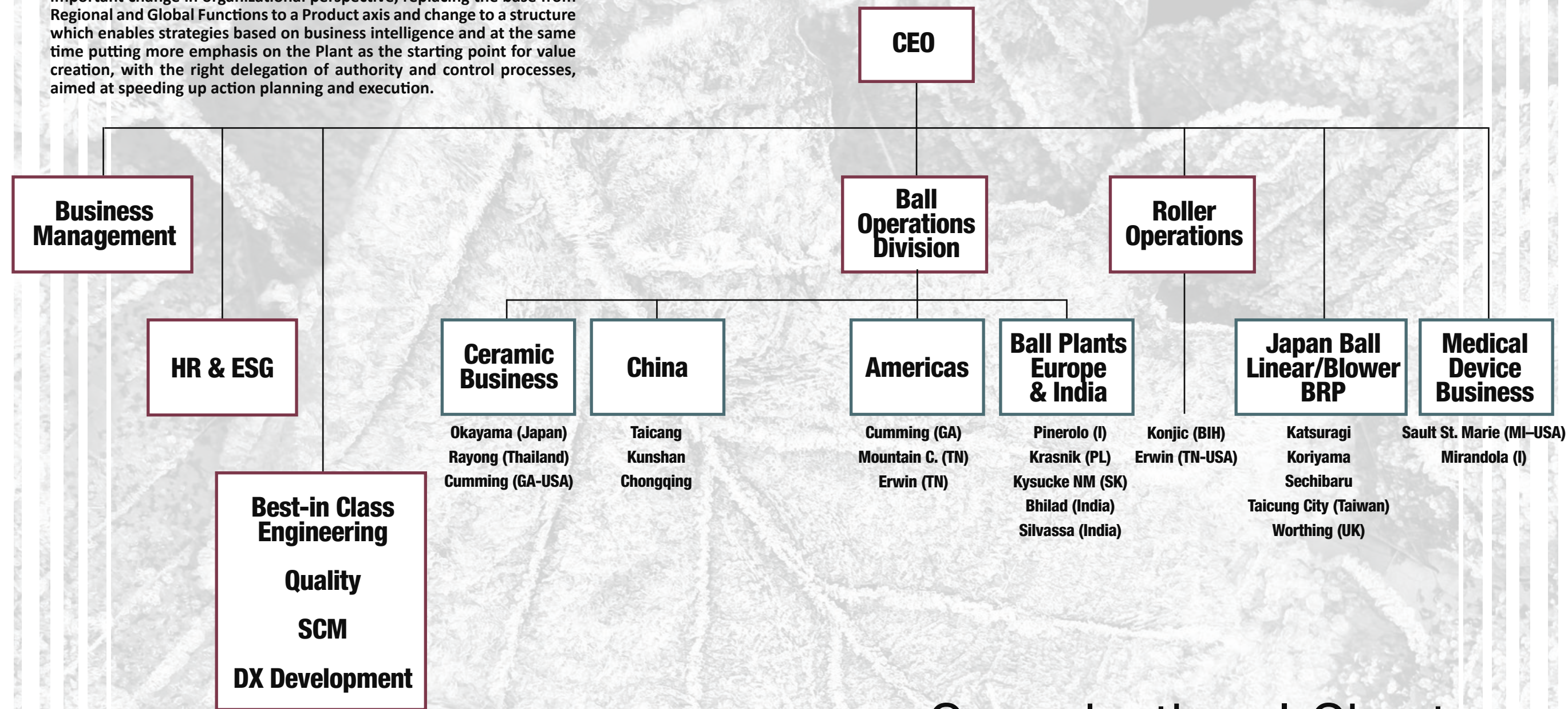
**3** to review TN Ball Business (Cr Steel/Ceramics) from the perspective of the market/customer and transform each plant into a homogenous profit structure, strengthening Marketing and Product management to increase the profit margin of XS, S, L and XL sizes, balancing Customer satisfaction and profitability through evolution of global production flow and establishing regular strategic dialogue with key Customers to understand their strategies and trends, and to build a base on which TN can respond.

**4** entering an era in which DX (Digital Transformation) will determine the success or failure of corporate growth, while TN must first accelerate digitalization.

# Organization



To achieve these objectives, Tsubaki Nakashima decided to make an important change in organizational perspective, replacing the base from Regional and Global Functions to a Product axis and change to a structure which enables strategies based on business intelligence and at the same time putting more emphasis on the Plant as the starting point for value creation, with the right delegation of authority and control processes, aimed at speeding up action planning and execution.



# Organizational Chart



# PRODUCTION

To be the Best-in-Class and to increase TN's corporate value by developing ball products which outperform others and providing them to customers.

GEN

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SUST

SOC

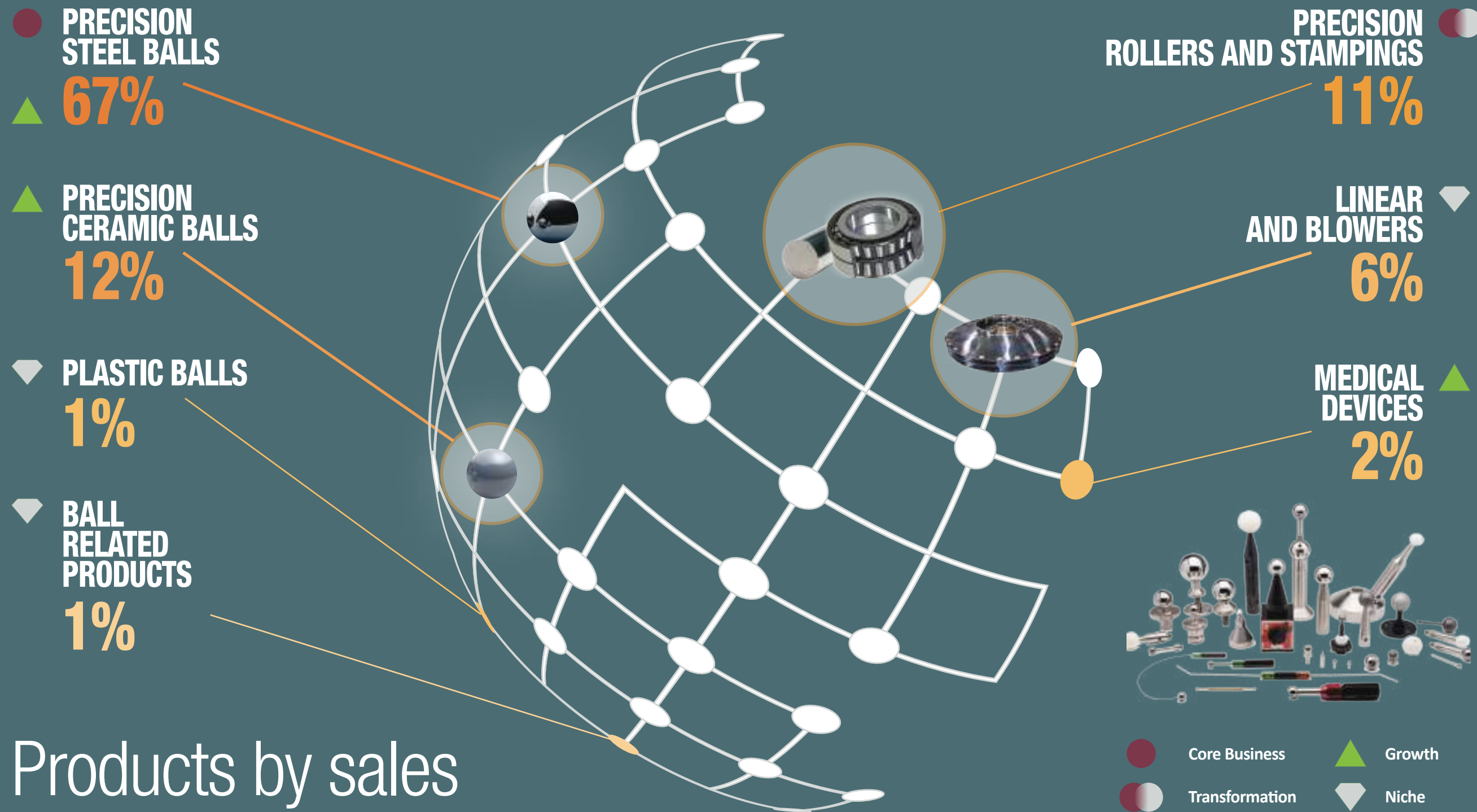
SUPP

IND

CRED

NOTE







Tsubaki Nakashima  
manufactures production  
equipment in-house  
owns a dedicated factory for

Almost all equipment other than  
the ball header process  
can be manufactured in-house

All equipment including ball headers  
can be overhauled

## Role of equipment factory

### MAINTENANCE OF BEARING BALL PRODUCTION EQUIPMENT

#### 1 Manufacturing

Design / manufacture and new development  
of production equipment

#### 2 Improvement and maintenance

Perform improvements and maintenance as needed

#### 3 Equipment supply

Supply production equipment to overseas production bases

### NEW PRODUCTION AND MODIFICATION OF JIGS AND TOOLS

#### 1 Jigs and tools

Process (molds, polishing machines) and play  
the cornerstone of production

#### 2 Supply

Supply jigs and tools to overseas production bases

#### 3 Improvement

Utilize technology to make improvements that meet needs

### INFRASTRUCTURE DEVELOPMENT

#### 1 Maintenance of electricity supply equipment

#### 2 Periodic inspection and maintenance of cranes in the factory

#### 3 Energy saving efforts

# EQUIPMENT FACTORY IN-HOUSE

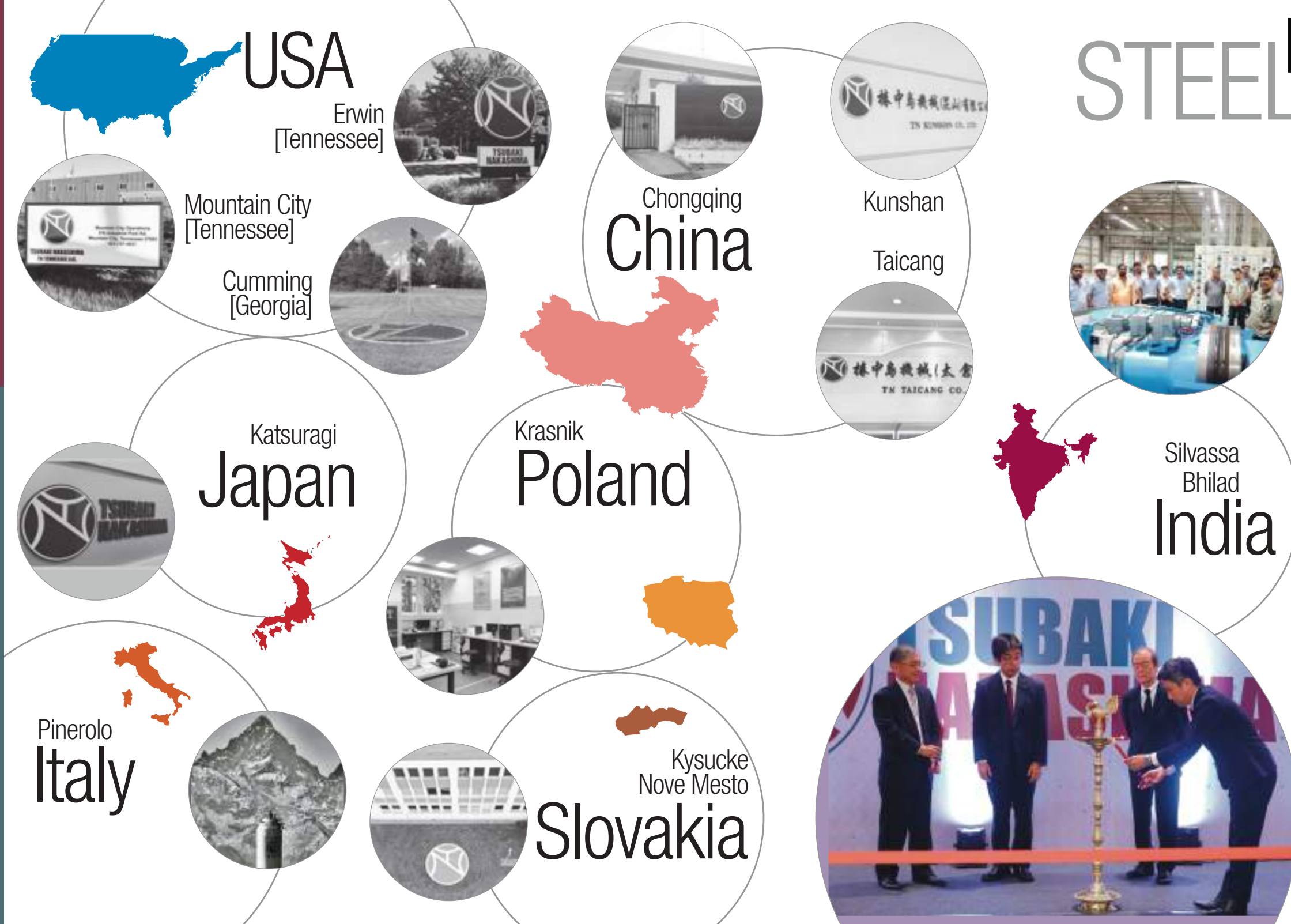


# STEEL PRECISION BALLS

Precision steel balls are used in cars and every kind of commercial vehicles – trucks, trains, airplanes - , in many industrial machineries including robots, and in a variety of products for everyday use; these include home electronics such as air conditioners, refrigerators, and vacuum cleaners to ensure a quiet operation. The high precision of our precision components ensures the highest durability and quality to meet our diverse client's needs.

Our high carbon chrome steel bearing balls provide high hardness, superior resistance to fatigue, outstanding wear resistance, and exceptional dimensional stability to excel in all bearing applications.





# STEEL PRECISION BALLS

A very important event happened in 2023 was the construction of new plant in India (Bhilad), which was announced on November 12, 2021.

In the Indian domestic and the Asian (ASEAN) markets, growth in automobile production volume and demand for machine tools are expected to increase in line with GDP growth. In addition, many companies are reviewing their production bases and supply chains in response to various circumstances in recent years.

Under these circumstances, the Company has received strong requests from its customers for a stable supply of high-quality products to the Indian domestic and ASEAN markets, as well as for service support on a global basis.

By constructing and operating a second plant in India (Bhilad), the Company responds to the above demand and position it as a core production base capable of meeting demand not only in the Indian domestic market but also in the ASEAN markets and strive to expand sales through enhanced customer support.

*[Pictures taken from the inauguration ceremony November 1, 2023]*





# PRECISION CERAMIC BALLS

Fine ceramics are light and tough; in addition to having excellent insulating properties, they have excellent wear resistance, heat resistance and corrosion resistance.

Taking advantage of these characteristics, our ceramic balls are used in bearings for spindle motors of machine tools, turbochargers, and dental drills that rotate at high speeds. Ceramic balls are also used as check balls in metering pumps for fluid control in water treatment and food applications.

Our ceramic balls are indispensable for creating the future for environmentally friendly applications such as wind power generators, electric vehicles, and semiconductor manufacturing equipment that supports 5G technology.

Fine ceramics are classified into two types, non-oxide, and oxide types.

Silicon nitride (non-oxide) and Aluminium oxide (oxide type) are the most common materials which are about half the weight of steel and twice as strong.





# PRECISION CERAMIC BALLS

Silicon nitride has excellent mechanical properties for use in Hybrid Bearings such as lower thermal expansion, high rigidity, and wear resistance.

Silicon nitride balls are used in full ceramic and hybrid-ceramic bearings in applications where ultra high-speed rotation is required. The density of silicon nitride is less than half that of steel, reducing the centrifugal force during bearing rotation which enables faster operating speeds.

**Silicon nitride balls** have an insulating property which is highly effective in preventing electrolytic corrosion. This makes Silicon Nitride balls the optimal solution as a countermeasure against premature bearing failure in electric motors.

The non-magnetic property of silicon nitride is ideal for use in applications subjected to a magnetic field. Using steel balls in these applications may disturb the magnetic field or effect the rotating torque. Silicon nitride balls bearings are ideally used in semiconductor manufacturing equipment and medical diagnostic equipment where magnetic fields are present.

**Aluminium oxide balls** have proven capabilities with superior wear performance in corrosive environments and high temperature conditions.

The material resists oxidation and is tolerant to high moisture environments, salt solutions, and many chemicals; typical applications include pumps, valves, and flow meters.



USA

Cumming  
[Georgia]

Rayong  
Thailand

Okayama  
Japan


The Global Ceramic Business Division produces in Japan, Thailand, and USA.

In 2023 we opened a new Plant in Thailand, in Rayong



# ROLLERS

Our industry position as the largest independent manufacturer of precision rollers allows TN the flexibility to offer products matching a wide range of customer specifications.

Our products are used in a growing number of applications, including transmissions, engines, pumps, wheel bearings, mining, heavy industry, and railway.



# ROLLERS

As the world's largest independent producer of **Tapered rollers (TRB)**, we manufacture rollers in a range of sizes, materials, and profiles according to customer specification. Tapered rollers, typically found in automotive, wind, rail and industrial applications, carry both radial and axial loads and can carry higher loads than ball bearings due to the line contact between the roller and raceway.

**Spherical rollers:** the current manufacturing program consists of near net shape headed and heat-treated blanks. Typically found in industrial applications, spherical roller bearings are designed to accommodate heavy radial loads, as well as heavy axial loads in both directions. Our rollers are manufactured to extremely tight tolerances, improving the overall quality and performance of a spherical bearing.

We manufacture **Cylindrical rollers (CRB)** on a global scale and offer a variety of materials, diameters, and profiles according to specification. Typically found in automotive, wind, rail and industrial applications, cylindrical rollers facilitate a rigid rotation around a defined centerline.

We have a long history of **Needle rollers** production and supply a diverse global customer base. Main applications are in the automotive and industrial markets, such as rocker arm pivots, pumps, compressors, and transmissions.



USA

Erwin  
[Tennessee]



Konjic  
Bosnia



Krasnik  
Poland



The Division comprises three Roller plants, in Bosnia, Poland and USA.



# ROLLERS

Our strategy – started in 2021- intends to position the company for growth on TRBs and CRBs, with the strengthening of Operations and Technology, through the consolidation of functions of high-cost roller plant in the Netherlands to Bosnia and an intensive project transfer activities in a short period of time (transferring of 27 production lines) with 20M EUR investment to enlarge our Bosnia plant from 4k to 16k sqm, hiring & training of 220 people. In 2023 we focused on process capability and redesign of the organization to support future growth and in the next years we want to be considered as the Best-in-Class Supplier in Europe.

In America, the strategy is to strengthening Operations to support growth in Core Products (CRBs for Hydraulic, Industrial and Gas applications and TRB Feasibility)

Konjic  
Bosnia



## EUROPEAN ROLLERS OPERATION

The Bosnian Rollers plant, since 2014 belonging to TN, absorbed in 2022 the Netherlands Rollers production. The second and last production Facility ceased production by the year end 2023.

When the decision was made to close the plants, TN had to let the 250 employees go, and was determined to do this in the best social way possible, by applying the “No one is left behind” principle. After the official announcement to the stakeholders TN set up a Social Plan package, together with the Labour Unions. Also, the Works Council was involved to check and study the reasons for closure and were needed to formally approve the Plant closures. Both Unions and Works Council finalized their involvement and agreed with the closures and the way TN set up the support to the people losing their jobs.

# ROLLERS

A particularly important project, due to the potential negative consequences for employees, was that of the closure of 2 plants in the Netherlands, the Roller's Plant, and the Sheet Metal Parts Plant, in Veenendaal. The Project was significantly called: LEAVE NO ONE BEHIND.

LEAVE  
NO  
ONE  
BEHIND



The **Social Plan** pack consisted of the following:

An employee survey connecting the plans of the employee with the timing of the lay off with the possibility to help the transfer of equipment and knowledge to the Bosnian plant.

An exit allowance (severance) based on Dutch legislation incl. a generous multiplier.

- Personal financial advice
- Personal legal advice
- Personal pension advice
- Personal outplacement training
- Personal education budget

As an extra the HR manager organized a job market with local companies presenting themselves as a possible new employer and offering their job openings. Around twenty-five companies attended this job market.

This job market in combination with the outplacement services was extraordinarily successful and over 98% of the employees either found a new job or were able to retire at an earlier date than formally. Some people started their own company or took the opportunity to plan extra training to improve their labor market position or even commenced a career switch.

The buildings and the land of the Dutch facility have been sold to the Municipality, enabling them to develop the land to the needs of the community.

We can conclude that, even though a lot of our former employees had to go through the mourning process of losing their job and enter a period of uncertainty, TN was able to support them in this difficult phase in working live and guide them to see new challenges and by the approach described above TN's complied with its Social Governance policies.







# MEDICAL DEVICE BUSINESS



**Tsubaki Nakashima acquired all outstanding shares of Rispa Srl, an Italian plastic resin molding manufacturer, on July 31, 2023.**

As the most effective way to promote the growth of the “Medical Device Business,” one of the pillars of its growth strategy, by acquiring a resin molding manufacturer with strong development technology and growth potential, the Company Tsubaki Nakashima brings into its group the ability to design and manufacture molds at low cost based on technical capabilities and sales channels in Europe and accelerates its profit improvement and global sales expansion.

TN Rispa (ISO 13485 e ISO 9001 certified) is a high-tech Company, focused on providing “out of the box” solutions for the production of plastic components. Its “One-stop-shop” can support the entire manufacturing process of a medical device component, from design to full manufacturing, in a dedicated clean room.

Located in the heart of the Biomedical District of Mirandola, TN Rispa is at the service of some of the major biomedical companies with technologically advanced “custom made” solutions.

## Market served

■ Medical in all areas, but with strong focus on custom made diagnostic consumables as well as surgery and transfusion technology, pulmonary and blood management.

■ Beverage, Cosmetic and Packaging in general.

USA



Sault Saint Marie  
[Michigan]



The Division comprises two plants, in Italy and USA (Michigan).

# MEDICAL DEVICE BUSINESS

Our plant in Sault Saint Marie (Michigan) is specialized in high quality injection molding of plastic tubes, petri dishes and other plastic disposables, using the state-of-the-art injection molding and clean room technology with advanced skills where tight tolerance, special color, clarity or light transmittance and lot-to-lot integrity. Some specialty injection molded plastic parts can be manufactured in our Class 8 Compliant, ISO 13485:2016 Certified, FDA registered clean room.

General ISO 9001:2015 production of solid plastic balls for medical diagnostic tests and devices are manufactured to OEM specifications with typical size range between 1/16” and 1” diameter. Tsubaki Nakashima engineers assist Customer’s design engineers in product selection to determine the optimal material, size, dimensional and surface characteristics for the specific application.

In Michigan we produce solid plastic balls, which are a light-weight alternative to metal balls. Less than 1/6 the weight of metal and the weight of aluminum, advances in plastic material formulations and thermoplastic products can even outperform metal in certain applications. The balls can be used in applications requiring light weight, noise reduction, corrosion resistance or color. Common applications are lightweight bearings, check valves, and plug balls.

Mirandola  
Italy







# METROLOGY PRODUCTS

Our UK facility TN-UK is dedicated to production and design of metrology products utilizing specially manufactured balls in a range of materials that meet the most demanding engineering requirements across all industries. Form matters in the world of metrology and the balls produced by TN-UK can be supplied with a maximum error of  $0.08\mu\text{m}$ . TN-UK is a trusted supplier to some of the world's largest metrology OEM's. TN-UK Laboratory can supply UKAS certified measurement via our UKAS accredited calibration laboratory.



# LINEAR & BLOWERS

**Blowers for the Iron & Steel Industry:** the iron and steel industry require stable operation under harsh conditions of high temperature and high pressure. We provide safe and reliable products that are resistant to wear and corrosion, high temperature and special gases (e.g. COG, LDG, BFG).

**Blowers for electric power production:** Electricity demands increase year after year. Stable power supplies will become even more important as global power requirements expand. Our proven track record of products and services within nuclear and thermal power plants demonstrates our commitment to our customers to meet those rigorous demands.

**Blowers for wind tunnels.** Wind tunnels provide valuable flow data that continue to improve upon designs of automobiles, motorcycles, sportwear, and buildings. Tsubaki Nakashima blowers provide consistent and accurate wind flow that support the evolution of this technology.

**High Pressure Blower** (Stainless steel). Multi-stage impeller is a centrifugal fan covering a wide range of applications such as a blower.

**Fan for Metro:** The vanes of the turbo type fans follow the design of an airplane wings. This fan has been proven to have the highest efficiency with minimal noise among all centrifugal blowers.



Japan



Taichung City  
Taiwan



Tsubaki Nakashima  
produces Ball Screws,  
Ball Ways and Blowers  
in Japan and Taiwan

**Ball Screws.** We have an unparalleled lineup of small to large products, heavy load products, and high precision rolled products. These are often used in machine tools, electric injection molding machines, semiconductor manufacturing equipment, industrial robots, and advanced medical equipment.

**Tsubaki Nakashima's Ball Ways.** The features of this product are 4 equal load capacities in 4 directions, high moment load capacity, tube type, while also providing long life, high rigidity, and high-speed running. This product has an established reputation for ease of centering in machinery. Like Ball Screws, Ball Ways are used in a wide range of industries.



As our CEO, Koji Hirota, wrote in his introductory letter to the ESG (Environmental, Social, and Governance) Report, 2023 was the closing year of the Strategic Plan called “Transform Next” which was based on three directions:

- Expansion of the Ceramic Business
- Expansion and Global Development of Medical Device Business
- Expansion and strengthening in Asian markets

together with the improvement of the solid and sustainable foundation on which the guidelines are based, as well as, more generally, the entire company:

- One Team Management System
- Vision Zero approach
- Transformation and sustainable projects through responsible use of energy, sludge recycling, improvement of material yield and ergonomics

**TRANSFORM**  
**NEXT**2023

**Mid-Term**  
**STRATEGY**  
**2021-2023**



# Mid-Term STRATEGY 2021-2023

We already mentioned Vision Zero, which is a holistic way to define ambitious targets, envisioning a Company continuously improving, where there are not any inequalities and where knowledge is considered a strategic asset.

The One Team Management System is now available on the new Global Intranet, where the entire Governance System is defined and shared

And many Sustainable Projects were developed with a Long-Term horizon, guaranteeing the achievement of the Sustainability Target until 2028, of which Carbon Footprint is the key



Before talking about the actions and investments implemented to achieve the objectives of the strategic plan, although greatly influenced, and in some cases even negatively, by the great crises and conflicts that have affected the entire world in recent years, we want to mention the aspects that most contributed to the achievement of those specifically relating to ESG issues, in 2023

## ENVIRONMENT

■ The full implementation of **Global Sustainability System**, applied in every plant

## SOCIAL

■ **TN Academy**, now conveyed through the E-learning Platform called Talent LMS

■ The **full implementation of a software** ("Checker") to manage internal auditing, safety, health, Environment, Energy and System's inspections, and related corrective actions

■ **Renewed HR Processes** like Goals and Objectives, Survey, Performance Evaluation

## GOVERNANCE

■ **Integrated Corporate Governance**

■ The renewed **Quality Management System**

■ **Risk Management Committee**, reformed at the end of 2023

■ **Sustainability Committee**, reformed at the end of 2023

# ESG



## SALES GROWTH

But now let's see what results were achieved in 2023 and they should be added to those already described in the previous ESG Reports 2021 and 2022.

and a precise  
**STRATEGY  
TO OFFSET  
THE INFLATION  
AND ENERGY COSTS  
INCREASED**

Mid-Term  
**STRATEGY  
2021-2023**

# RESULTS

## BUILDING A FOUNDATION FOR THE FUTURE

### RESTRUCTURING OF EUROPEAN ROLLER BUSINESS

Withdrawal the roller business from the Netherlands > Gaining cost competitiveness by consolidating Bosnia.

### INDIA'S SECOND PLANT COMPLETED

### Major EXPANSION OF CERAMIC BALL SUPPLY CAPACITY

to support rapid progress in EV: major expansion of production capacity in Thailand, in the meantime securing of raw materials and diversifying of sourcing.

### ACQUISITION OF TN RISPA

able to make a step forward in the European medical Device Business Strategy in Europe, and in the meantime adding new technical knowledge to the Michigan Plant in USA .

### MONOZUKURI INNOVATION

developed at mother factory in Katsuragi, Japan.



**On October 18, 2023, Tsubaki Nakashima announced the entry into a business alliance agreement with Advantage Advisors Co., Ltd.**

As a manufacturing company, TN places “safety, quality, and environment” at the top of its management priorities and seeks to carry out its business activities in harmony with society, local communities, and nature. TN is accelerating the globalization of medical products and other products that meet the needs for high-quality healthcare in response to the COVID-19 and the aging of the population toward the realization of a decarbonized society in the future.

The Company is working daily to steadily implement its management strategy, achieve further profitable growth, and become a shining company that continues to create corporate value.

## ADVANTAGE ADVISORS

Under these circumstances,  
**TN’s current management policies include:**

- A** strengthening sales by reviewing unprofitable products and other measures and restoring earning power by rebuilding the U.S. and Linear Businesses, and
- B** improving development speed, streamlining, and strengthening development resources, investing in human resources, and strengthening DX initiatives in order to become a *Best in Class* manufacturing company.

Under these circumstances the Company has selected **Advantage Advisors**, which has a track record of providing strategic advice to several listed companies, as a business partner with which we believe we can receive advanced management support regarding our initiatives such as recruiting, strengthening business management systems, promoting M&A, in addition to fundraising, and thus enhance our corporate value.

By utilizing the know-how received from Advantage Advisors, Tsubaki Nakashima will actively promote the consideration and steady implementation of various measures to improve its business performance, like

- 1** Recruiting
- 2** Strengthening business management systems
- 3** Promotion M&A (including capital tie-ups)
- 4** Other services as separately agreed upon by the Company and Advantage Advisors



## GLOBAL QUALITY

The continuous attention to our Customer's needs is a key point in TN Quality philosophy. This approach brings to a close collaboration with our customers that turns into a trustful and strong relationship.

Tsubaki Nakashima strongly believes that our customers are a great asset for the company because it is thanks to them that the group is prompted to constantly look for a design new processes, new methodology and new technologies; the goal is to offer to clients the best solution in terms of products, flexibility and price for achieving the TN strategy of best manufacturing company of rolling elements.

TN Quality is focused on understanding deeply customer requirements and how to transfer them into TN's process and organization; starting from 2018 the TN group has defined a specific approach to manage Customer Specific Requirements (CSR) where all processes are involved from Sales to Quality.

# Quality



# QUALITY VISION

Tsubaki Nakashima is committed to put in place an organization and resources to achieve our goals and commit to continuous improvement, fully compliant with the highest ethical and quality standards. In this way we reach the satisfaction of our customers, employees and shareholders. This commitment is supported by Group Quality System and related Group Quality Manual which outlines the operation of the company with all its internal processes.



# GROUP QUALITY SYSTEM

TN Group Quality System, as **main goals**, has to:

- **Satisfy norms and customer specific requirements**
- **Achieve excellent quality and service performance**
- **Develop with the customers innovative products solutions**
- **Analyse and reduce risks, develop opportunities**

A management review is conducted yearly at plant, region and group level according to specific procedure; The minimum content of the review is about Audits results, Customers data (satisfactions, feed-backs, claims), Processes KPIs, risk/opportunities assessments results, review of actions. In addition to management review a monthly quality review is organized to review the performance results of the site and to update the improvement plan.

Processes are directly assured by centralized Quality functions and are common to all entities of TN Group. Auditing centralized system ensure that processes produced the expected results and ensure that the resources are aware of requirements.

Follow-up of performance indicators, allowing evaluating efficiency and effectiveness of processes, are defined every year during the management review and during monthly review.

TN Global Quality Management System covering 100% of TN plants accordingly to ISO 9001 and IATF 16949 Automotive standards; The Global QMS was extended to cover the AS 9100 Aerospace and ISO 13845 Medical Device standard in specific plants.



# GLOBAL QUALITY KPI

Tsubaki Nakashima, working constantly on improvement, was able to significantly improve the main Global Quality KPI's in the last 5 years (average year improvement > 6%).

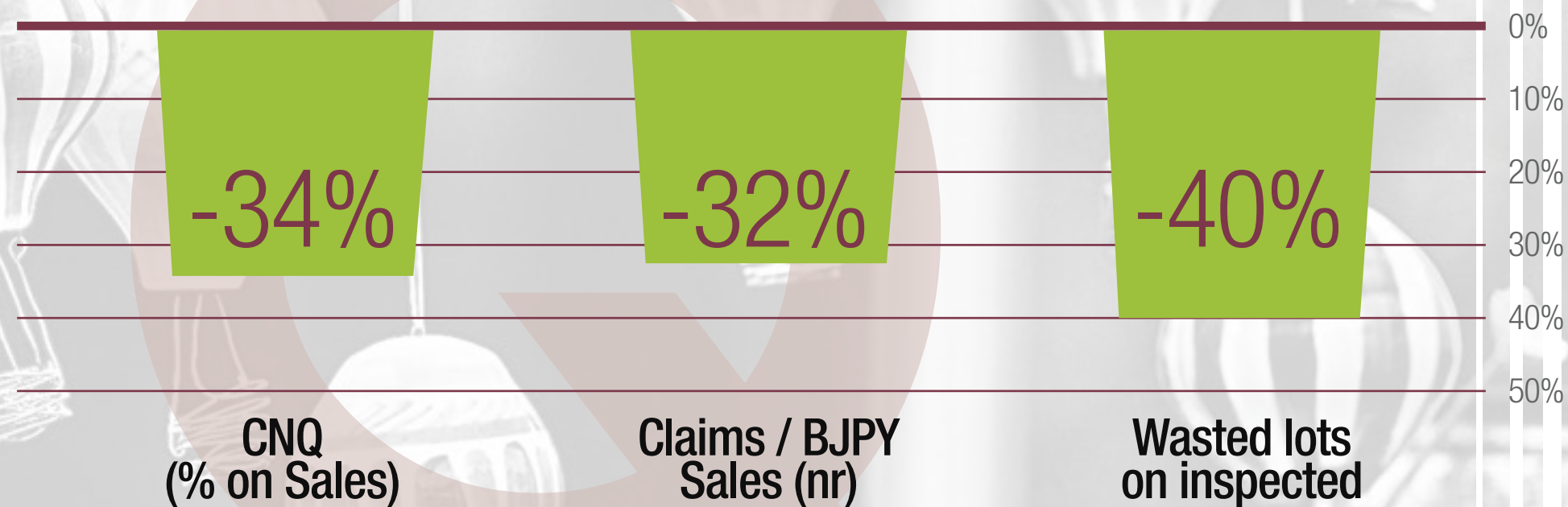
TN continuously monitors complaints versus products supplies and in 2023 reached a level of one incident per 18 billion JPNY.

The level of results reached was strengthened by Quality Improvement Plan launched in 2018 and continuously pursued as continuous improvement project.

The project is based on four axis:

- Standardize through the adoption of specific tools like Quality Standards, 5S, Kaizen, A3, etc
- Maximize the effect through lessons learned and sharing best practices between sites
- Respect the standard through *zero tolerance* policy, applying integrated auditing system and processes
- Improve through “best in class” approach aimed at reaching the excellence

2023  
VS 2019





# MAIN GLOBAL QUALITY ACTIVITIES

Started the  
**HARMONIZATION  
OF STEEL BALL  
INSPECTION  
PROJECT**

Gave priority to  
**TN INDIA  
IMPLEMENTATION**

Eddy current  
**INSPECTION  
REINFORCEMENT**

Definition of  
**HT INSPECTION  
POINTS**

Study of  
**ALTERNATIVE  
INSPECTION  
METHOD**

**PRODUCT / PROCESS  
INNOVATION  
STRATEGY**

Steel balls and rollers

Completed  
**DETAILED PLAN  
FOR THE INNOVATION  
PROJECT**

Started  
**PROJECTS  
WITH HIGH PRIORITY**  
in the related sites

**MARKET TREND  
RESEARCH**  
on rolling steel products



# MAIN GLOBAL QUALITY ACTIVITIES

Operational support to  
**TN BOSNIA**  
ON STABILIZATION  
OF QUALITY  
PERFORMANCE

Defined common  
**MANAGEMENT**  
SYSTEM DOCUMENTS  
ORGANIZATION AND  
TRAINING METHODOLOGY

Transferred and updated the  
**RISK MANAGEMENT**  
PROCESS IN INTRANET  
SYSTEM APP

**REGULAR 2 MONTHLY**  
**FOLLOW-UP/REVIEWS**  
with each site on  
**KPI TREND AND**  
**IMPROVEMENT ACTIONS**

**CONTINUOUS SUPPORT**  
**TO CUSTOMERS**  
**AND SITES**

on customer complaints  
and field returns analysis



# GLOBAL LABORATORY

TN is working to be leader in the customer services also through Central Laboratory with 2 operative units in Japan and Italy. The scope is giving high level of analysis/testing services and supporting innovation, development and training activities for the entire organization.

Our mission is:

- to offer analysis and testing services using reliable facilities and qualified staff.

- to provide fast, accurate, professional and efficient services using the most advanced methods in a way that reflects full compliance with international quality standards.

304

Total  
analysis / Testing (nr.)

## 2023 CENTRAL LABORATORY PERFORMANCE

43.260

Japan Unit KPI  
avg cost / activity (JPY)

117

Japan Unit OTD (%)

715

Italy Unit KPI  
avg cost /activity  
(Euro)

93

Italy Unit OTD (%)

### STRATEGIC CENTRAL LABORATORY GOALS

- Offering a wide range of analysis/testing services and methods with the greatest accuracy and speed.
- Endorsing the laboratories to be a centre of excellence and a source of references.
- Establish a cooperation and laboratory network connected to Customers, Suppliers, Universities and Research centres.
- Extending laboratory services to cover all tests that serve the industrial research sectors.
- Enhance the ability of human resources to reach the extent that satisfies the customers' needs effectively.





The ASTM selected 2 technical publications (STP) from TN in collaboration with Politecnico of Torino on bearing steel technology. The STP information is applied in the new ASTM International manual Rolling Bearing Steel: Design, Technology, Testing, and Measurements (MNL83) that published in 2023.  
<https://www.astm.org/stp1649-eb.html>



Paper presented during the International Conference on Ceramic Coating and Surface Engineering in december 2023 in Amsterdam by W.A.S.E.T.



Published in Materials Volume 21, March 2024, 100540 an article on development of Cold Spray HEA coating in collaboration with Politecnico of Torino and Trinity College of Dublin.

# EVENTS



Opening ceremony of the **POLITECNICO DI TORINO JAPAN HUB** IN KYOTO



Participation to seminar: *Universities and Industrial Collaboration between Japan and Italy*



# INTERNATIONAL EVENTS AND PARTICIPATION IN EXTERNAL INITIATIVES

Tsubaki Nakashima seeks to contribute to the achievement of a sustainable society through its business activities and thereby become an indispensable company. For this reason, we endorse and take part in numerous international congresses and meetings to share what we are doing and to learn from others.

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NOTE



International Trade Show - MEDICA 2023



Our  
**MEDICAL DEVICE  
BUSINESS TEAM**  
participated in the two  
most important  
**MEDICAL  
SECTOR FAIRS**  
in the world



National Trade Show AACC 2023

# INTERNATIONAL EVENTS AND PARTICIPATION IN EXTERNAL INITIATIVES



And very recently, at the beginning of 2024 TN Michigan was awarded the **INDUSTRIAL ACHIEVEMENT AWARD** from the Economic Development Corporation and Chamber of Commerce (Sault Saint-Marie, Michigan).



Our China Region's President, Mr. Zhang Li received the prestigious **SKF AWARD** for the best and most reliable suppliers.

FiORP – International Foundation for the Organizational Risk Prevention



Franco Dutto presented *Pequeno Bestiario Organizacional*, an ironic journey within organizations .



Universidad Autonoma de Chile, Santiago, Chile - *Artificial Intelligence and Augmented Humanity*



## CUSTOMER AND SUPPLIERS

During 2023, Tsubaki Nakashima collaborated with its customers in order to improve its environmental impacts and sustainable development strategy. Through workshops, brainstorming, and benchmarking with clients, Tsubaki Nakashima has aligned itself regarding customers' sustainability goals, and certainly this sharing of ideas has supported the company's sustainable development. In this regard, we mention the "Supplier Sustainability Innovations Automotive Europe Summit" workshop held and organized by Schaeffler in Buhl-Germany in September 2023 where Tsubaki Nakashima together with other suppliers presented its sustainability strategy with a focus on energy efficiency projects. On that occasion it was possible to network with many other suppliers on issues related to environmental sustainability.



Mrs. Stefania Lamparelli,  
Global Sustainability Manager

Cosimo Colasanti,  
Americas Region President,  
and Brian Jennings,  
Americas Region Senior Sales  
Director, participated in the  
inauguration of the new SKF  
plant in Mexico



An important delegation of Japanese Businessmen visited our new Plant in Bosnia i Herzegovina



## INTERNATIONAL EVENTS AND PARTICIPATION IN EXTERNAL INITIATIVES



Tsubaki Nakashima has been awarded as one of the most important investors in Bosnia i Herzegovina.



And the Best Investor in Konjic.

## MEMBERSHIPS



**UNIONMECCANICA TORINO**  
Franco Dutto is a member of the Council



**ABMA – American Bearing Manufacturers Association's**  
Evelise Faro is a Board Member



**JAPAN INVESTOR  
RELATIONS ASSOCIATION**



We have a membership of **JAPANESE BEARING INDUSTRY ASSOCIATION** and **CHINA BEARING INDUSTRY ASSOCIATION**.

## PUBLICATIONS 2023



Prevención Integral:  
Blog “La vida es una esfera”

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NOTE



# RELATIONSHIPS WITH SCHOOLS

Tsubaki Nakashima has always cultivated relationships with schools and universities at a local level; we think it is a corporate duty to share our way of producing and managing the individual companies of the group with those who will be the employees of tomorrow, offering doctorates, but also training internships to students of different levels, opening our factories to visits of students from primary, secondary and university schools



Bosnia



Slovakia

## BOSNIA I HERZEGOVINA

In Bosnia I Herzegovina we set up an entire information room in Konjic secondary school, with computers provided with donations from some of our corporate executives.

## ITALY

We hosted 15 students for 2.550 training hours.

## SLOVAKIA

In Slovakia we sponsored a competition between students of a technical secondary school.

## KATSURAGI (JAPAN)

In Katsuragi, Japan, we were honored about the visit of an elementary school.

We have entered into collaboration agreements with the Polytechnic of Turin (Italy and Japan), the Universitat Polytechnica de Catalunya (Spain), the University of Dublin (Ireland), the University of Bratislava and the University of Zilina (Slovakia), the East Tennessee State University (USA)

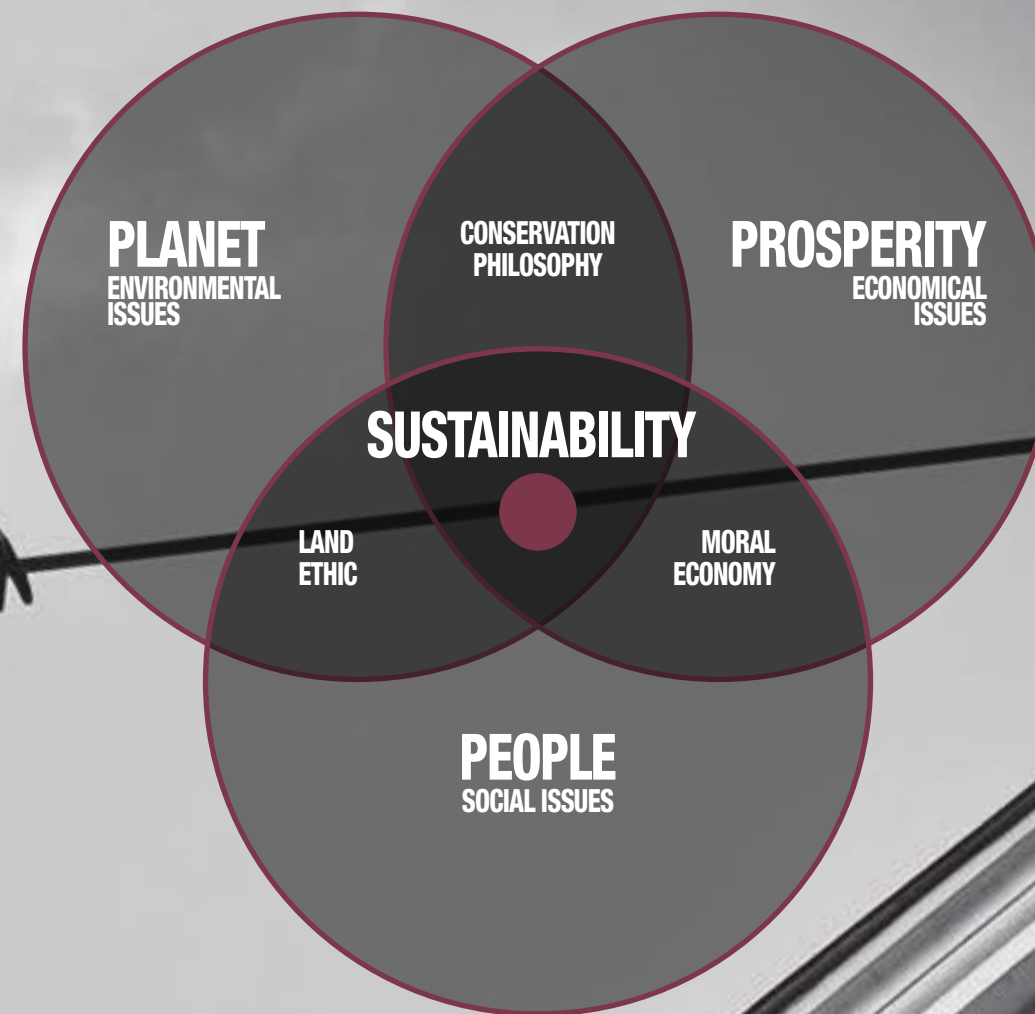


Japan



**SUSTAINABILITY** as the simultaneous achievement of **ECONOMIC PROSPERITY** (for instance, growth and profit), the creation of a **HEALTHY, SAFE AND LOW ENVIRONMENTAL IMPACT** environment, where everyone is **EQUAL**, with equal rights and duties, equal opportunities. **Then, the attitude, the results and the merit will make the difference.** But to do it, we needed a lighthouse and most of the **17 UNITED NATIONS SUSTAINABILITY DEVELOPMENT GOALS** are perfectly fit for that.

# GOVERNANCE



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In Tsubaki Nakashima we started from the **MANAGERIAL STATEMENTS**, from the construction of conceptual pillars, on which to base the **HIGH-LEVEL POLICIES AND PROCEDURES** (One Team Management System, base of the Corporate Governance), real guidelines for all our plants around the world. But also, to make available **SYSTEMS**, based on **ISO STANDARDS** (Quality, Environment, Health and Safety, Energy, Ethics), which would allow a disciplined and standardized management. Lastly, the **MEASUREMENT OF PERFORMANCES** which presupposes the identification of functional objectives for the achievement of the sustainability targets.

TARGETS  
AND KPIS

SYSTEMS

POLICIES

STATEMENTS



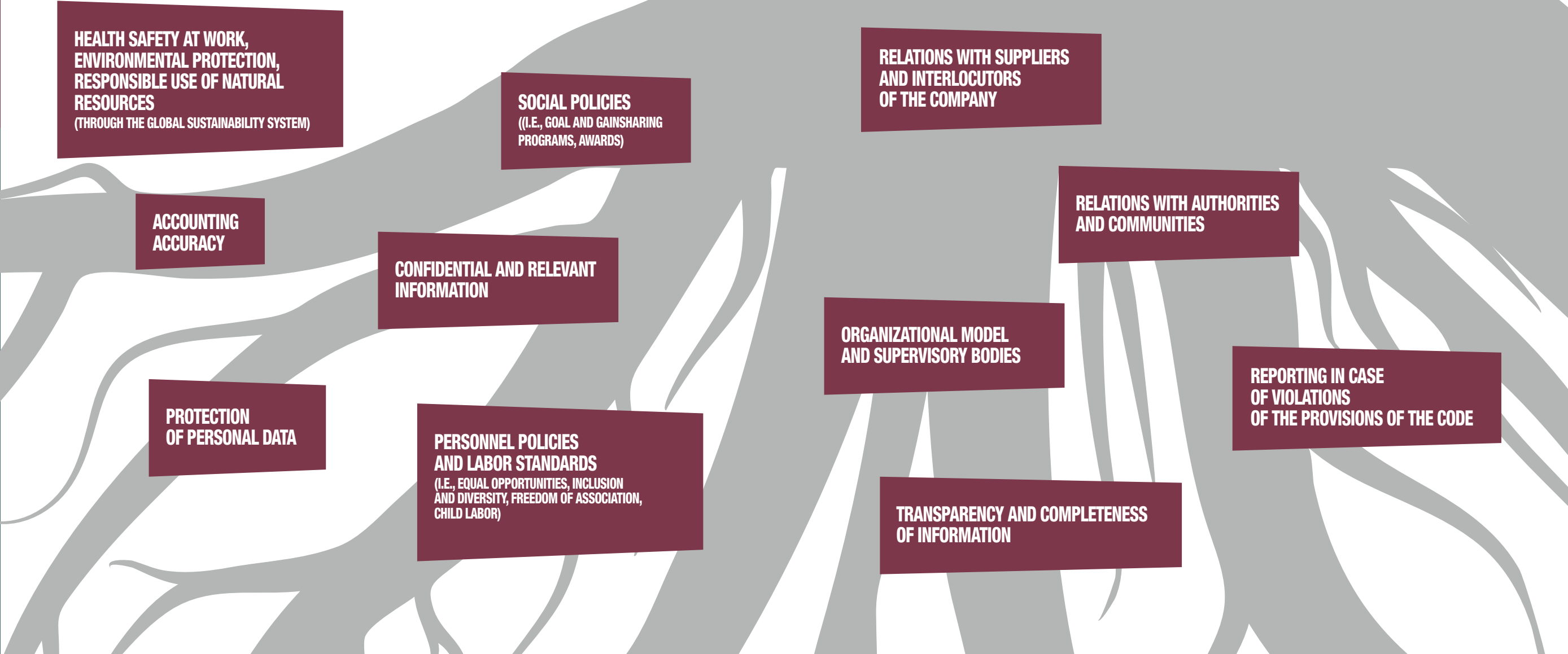
## CODE OF BUSINESS ETHICS

- MANUAL OF COMPLIANCE
- CODE OF BUSINESS ETHICS
- NON-RETALIATION POLICY - WHISTLE-BLOWER
- CONFLICT OF INTEREST
- DATA PROTECTION
- TRACKING REGULATIONS
- PROTECT WELL-BEING
- CREATE POSITIVE RELATIONSHIPS
- LABOR STANDARDS
- CHILD LABOR
- NONDISCRIMINATION AND EQUAL OPPORTUNITIES
- INCLUSION AND DIVERSITY
- ASSOCIATION, BARGAINING, WORK ORGANIZATION
- TSUBAKI NAKASHIMA AWARDS
- GOALS AND OBJECTIVES - PERFORMANCE EVALUATION
- GOAL AND GAIN SHARING PROGRAM
- BONUS SYSTEM, ACCRUALS AND RELEASE OF ACCRUALS
- ONBOARDING POLICY
- BLOGGING AND SOCIAL MEDIA - EMAILING AND INTERNET POLICY
- TRAVEL POLICY
- GLOBAL MOBILITY PROGRAM
- COVID-19 - GUIDELINES BASED ON ISO 45005-2021
- CLIMATE CHANGE AND GHG EMISSIONS
- EDUCATIONAL ASSISTANCE PROGRAM
- COMPANY CARS EU – SUSTAINABILITY



Tsubaki Nakashima has adopted a **MANUAL OF COMPLIANCE, CODE OF BUSINESS ETHICS AND RELATED POLICIES** addressed to all those who have employment, collaboration, consultancy, or other relationships with the Company. The Manual of Compliance, Code of Business Ethics and related policies dictates the rules of correctness and transparency that distinguish the company's work and is based on a series of principles with values, which are then declined within the code:

# CORPORATE GOVERNANCE 2023





Our **CORPORATE GOVERNANCE SYSTEM** consists of the Board of Directors, Nomination Committee, Compensation Committee, and Audit Committee as supervisory bodies. Management Committee, Sustainability Committee and Risk Management Committee are business execution bodies. We have adopted the organizational design of a company with a nominating committee, etc., because we believe that the separation of supervision and execution is a means of enhancing corporate value by strengthening the supervisory function and ensuring prompt management.

The **BOARD OF DIRECTORS**, consisting of 7 Directors (including four outside Directors), makes decisions on basic management policies and supervises the execution of business by the Executive Officers. Each of the outside Directors has his or her own area of expertise and based on their extensive experience and wide range of knowledge, they provide advice and exchange opinions on management, thereby fulfilling the supervisory function.

The **NOMINATION COMMITTEE** consists of two outside Directors (including the Chairman) and one inside Director, and most of the committee members are outside Directors to ensure the appropriateness of nominations. The Nomination Committee decides the details of proposals for the election and dismissal of Directors.

The **COMPENSATION COMMITTEE** consists of two outside Directors (including the Chairman) and one inside Director and has a system to ensure the appropriateness of remuneration; it determines the basic policy on remuneration, etc. for Directors and Executive Officers and the amount of remuneration for everyone.

The **AUDIT COMMITTEE** is composed of three outside Directors, each of whom has a different area of expertise, and is appointed based on the belief that audits from various perspectives are possible. The Audit Committee audits and supervises the execution of business by the Directors and Executive Officers and decides on the content of proposals for the appointment and dismissal of the accounting Auditor to be submitted to the General Meeting of Shareholders. In addition, we have established a system in which a full-time assistant to the Audit Committee assists the Audit Committee.

# GOVERNANCE

To conduct business and grow on a global scale, the Group is working to strengthen its highly transparent and objective Integrated Corporate Governance System. In addition, we have established a Management system with a sense of unity by realizing a group company management function with efficiency and expertise.

## COMPLIANCE PROMOTION SYSTEM

Under the supervision of the President and Representative Executive Officer, who is in charge of overall management, compliance is promoted mainly by the Executive Officer in charge of HR, Compliance & Sustainability (CHRO). In addition, an Internal Audit Office has been established directly under the President and Representative Director to conduct internal audits and confirm the status of compliance. In addition, an assistant to the Audit Committee has been established under the direct supervision of the Audit Committee to audit the compliance status of directors and other officers. The Internal Audit Office, the Audit Committee assistant, and the accounting auditor share information as necessary to strengthen cooperation.





The Risk Management procedures, designed to improve Quality, Health and Safety, Environment, Energy and to address urgent and relevant issues (in all the business fields, including the Sustainability part) are applied to all risks that are present in the different Organizations and which could potentially harm the stakeholders, including workers, impact the environment, the energy management and reputation, liability, business in general.

# RISK MANAGEMENT SYSTEM

All our Risk Management Procedures are based on International Standards and **are present in the 2 Tsubaki Nakashima's Management Systems:**

**1 QUALITY MANAGEMENT SYSTEM (QMS):** Procedure MGT\_07\_08 Risk Management Process and Committee (RMC) – ISO 31000 and IATF 16949

**2 GLOBAL SUSTAINABILITY SYSTEM (GSS):**

***Procedure GSS – T2 - 6.1.2 - Hazard identification and assessment of risks and opportunities – ISO 45001:***

this risk assessment procedure, designed to improve Health and Safety, is applied to all risks that are present in the unit/plant and which could potentially harm the employees. In the Procedure, reference is made to all the activities carried out within the unit/plant and/or involving TN Employees – including Temps- in the unit or out of it.

***Procedure GSS – T2 – 6.1.2 Environmental Aspects – ISO 14001:***

this procedure refers to the overall activities carried out by the Tsubaki Nakashima unit/plant including new and/or modified services, products, activities, of which the organization has direct control and those activities which the organization can only influence. The scope is also to evaluate and minimize all possible environmental impacts in each stage of a product's life, defining the responsibility for ensuring that the impact within each and every part of that lifecycle is as small as possible.

***Procedure GSS-T2-6.1-6.6 Energy Assessment – ISO 50001:***

this procedure refers to the overall activities carried by out the TSUBAKI NAKASHIMA unit/plant including new and/or modified services, products, activities, of which the organization has direct control and those activities which the organization can only influence, defining the Significant Energy Use (use of Energy that determines a substantial consumption of energy and/or which offers a significant improvement potential in the energy performance), Energy Baseline (Quantitative reference which provides a comparable basis for the energy performance), EnPI (Energy Performance Indicator), Energy Review and Energy target as quantifiable objective of energy performance improvement.



# RISK MANAGEMENT COMMITTEE

Specifically, where there are other potential corporate risks besides quality issues, this is the subject of the RMC; compliance and serious industrial accidents are considered first.

As said, one of the RMC Focuses is on developing the plants' ability to assess the urgency and scalability of the events they detect

- 1 at a very early stage and
- 2 correctly and not only on the risk decision matrix.

Ensuring that the plant can act strongly and autonomously is the Essence of Supervision by the Global Functions and in particular Quality.

RISK MANAGEMENT COMMITTEE (RMC) has the prerogative of identifying and addressing potential risks to the Management at an earlier stage, and resolve those issues, as well as taking actions for preventing risks, but also to make the plants and the entire organization aware of quality and compliance issues, including potential matters: events are not confined to the plant alone.





# TN ATMOSPHERE

## APPROACH TO SUSTAINABILITY

Products provided by the Tsubaki Nakashima Group, including precision balls, contribute to improving the energy performance and efficiency of final products. For this reason, we believe that not only supplying high-quality products, but also giving **DUE CONSIDERATION** to the environment in the manufacturing process will help reduce the environmental impact of the entire value chain.

# SUSTAINABILITY



Tsubaki Nakashima shall continue to improve its own organization, processes, products, and services, **AIMING AT REACHING ZERO defects, zero accidents and zero environmental impact and the improvement of the energy performance by means of:**

# TN ATMOSPHERE

- the involvement, participation and co-responsibility of the employees and workers representatives where they exist, collaborators and suppliers and other relevant parties with the intention of making them aware of their individual duties, also through specific communication initiatives, while promoting a healthy and safe behavior, and being aware of the rational use of energy
- embracing the philosophy of the 5 Z's of sustainability approach, we strive to have Zero accidents, Zero occupational illnesses, Zero wastes, Zero inequality and Zero lack of knowledge
- the implementation of all that is necessary to guarantee the safeguarding of the environment and health and safety in the workplaces
- the development of production processes, oriented to continuous improvement of the safety, environmental and energy standards, to reduce and eliminate the negative impacts in an economically feasible manner, by making provision for the acquisition of products and services with a view to improve the energy and environmental performances
- the commitment to preventing defects, accidents, and environmental impacts rather than identifying them
- a constant respect for company, customer and governmental health and safety, environmental and energy requirements
- a continuous improvement of the management and performances of health and safety, environmental and energy matters by locating the necessary resources in order reach the set objectives and targets, using adequate monitoring and evaluation tools.

All the above to satisfy the requests and expectations of our employees, customers and shareholders in the best possible way, increasing the reputation of the company and strengthening our leadership position.



# TN ATMOSPHERE

## USE OF RESOURCES AND SUSTAINABILITY

Tsubaki Nakashima consumes resources and, in the process of conducting business activities across the life cycles of its products and services, emits GHGs and other emissions to the air, land, and water. Following the specifications indicated by the ISO 14001: 2015 standard and our Integrated Corporate Governance, we have assessed the environmental impacts of our business activities across the value chain to **REDUCE OUR IMPACTS.**

## LIFE CYCLE THINKING

Tsubaki Nakashima defines an eco-considerate product as one for which environmental impacts are considered from product conception to mission completion; that is, at every phase of the life cycle, from design and manufacturing to transport, usage, and recycling.

## Think

Tsubaki Nakashima takes a life-cycle thinking approach in efforts to minimize customers' environmental impacts by providing products that offer environmental performance. Almost all our products are 100% recyclable – we use steel, plastic, glass, ceramic, aluminum, and other material that could have a second life.

## Choose

In the Minimum Technical Standards set up, we focus our attention on Management of Chemical Substances in manufacturing, replacing hazardous substances with non-hazardous and recycle them into the process, as much as possible.

## Create

Climate Change Policy, Pollution Prevention & Chemical Management



# TN ATMOSPHERE

## Deliver

Transport / Value Chain – Our motto is Global Reach and Local Depth, working to serve our Customers close to their factories, also to reduce transportation and material handling.

## Use

responsible use of natural resources, as well as of other resources is key, in our approach.

## Recycle & Reuse

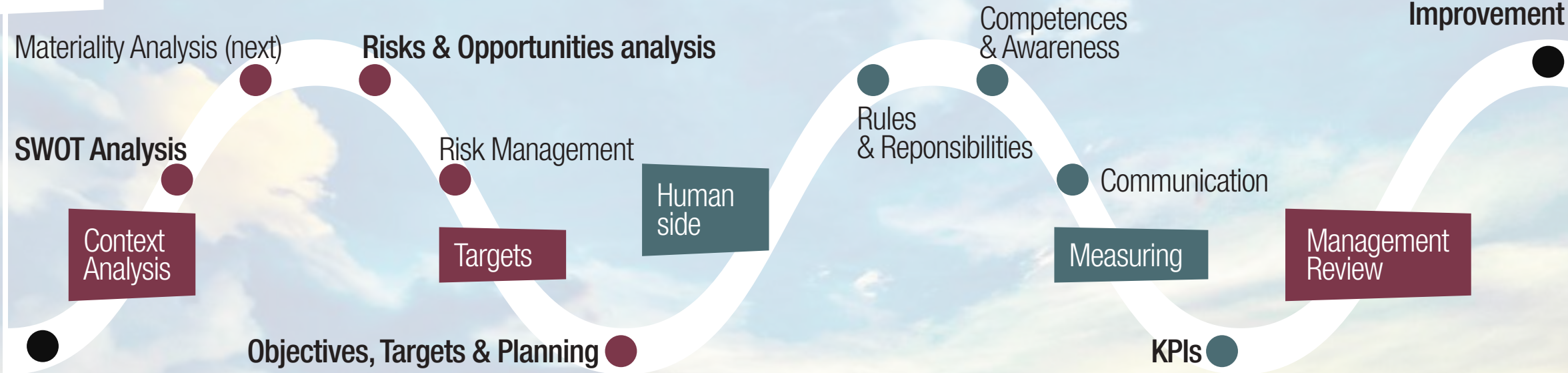
Oil, coolants and other substances are recycled as much as possible.

**ALL OUR  
PRODUCTS ARE  
RECYCLABLE,  
ALMOST 100%.**

Through the creation of eco-considerate products, we are cooperating with our Customers to expand our environmental impact mitigation efforts beyond Tsubaki Nakashima's doors. The Group's core product, precision balls, are basically manufactured and delivered in regions close to customers for local production for local consumption in order to reduce emissions, as well as prevent damage and breakage caused by long-distance transportation. Although the procurement of raw materials, manufacturing, sales, and after-sales service are carried out at each site according to the characteristics of each product and region, important visions and directions in business operations such as purchasing, quality assurance, and technology development are formulated at the Tsubaki Nakashima Headquarter and communicated to each site.



## Process Map



# SUSTAINABILITY COMMITTEE

All the strategies and activities are reviewed by the Sustainability Committee, which is responsible for assisting the Management Committee by fulfilling a preparatory, consultative and advisory role in assessments and decision making processes with regard to Environmental, Social and Governance issues, related to Tsubaki Nakashima business and its engagement with all stakeholders, the Corporate Governance of the Company, and the review of scenarios envisaged in the preparation of the Medium Term and Business Plans, based also on the analysis of significant issues for the creation of long-term value.

Sustainability Committee has the objective to plan, coordinate and implement the Sustainability initiatives and measures, in accordance with TN Policy, as well as review and adapt it to the global standards and trends.

**Members are the Chief Human Resources Officer (Chair), the Chief Financial Officer, the Chief Transformation Officer, The Director of Supply Chain, and the Global Sustainability Manager.**

In addition to the usual reporting (status of projects and objectives, risk and opportunities, new tendencies, or requirements), TN SC is an “agora” - a gathering place, in the ancient Greece - where requests, needs, concerns, plans and proposals are put on the table in a preventive and constructive way.

Every activity that involves resources is brought to the attention of the SC in advance to guarantee coherence and coordination, in the interests of the Company and its Stakeholders

Tsubaki Nakashima Sustainability Committee gives a lot of emphasis to communication and marketing activities, in addition to the very well-structured ones relating to the technical part.

All Sustainability related activities are regulated by the rules of the Global Sustainability System



CORPORATE SOCIAL RESPONSABILITY THEMES	ESG	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
Products and Services	ENVIRONMENT			✓	✓		✓
Business Operations aligned with global social trends				✓	✓		✓
Productivity Improvement - Motus 4.0					✓		
Productivity Innovation and Competitiveness							
Strategic Marketing							
Effective use of energy and resources							
Climate change							
Contributing to the environment (procurement, products)				✓			✓
Respect of human rights	SOCIAL	✓			✓	✓	
Diversity					✓	✓	
Training and development, employees engagement				✓	✓		
Supply Chain				✓			
Product Quality and Development							
Relationships with the local communities and other initiatives	GOVERNANCE		✓				
Compliance							
Management Systems							

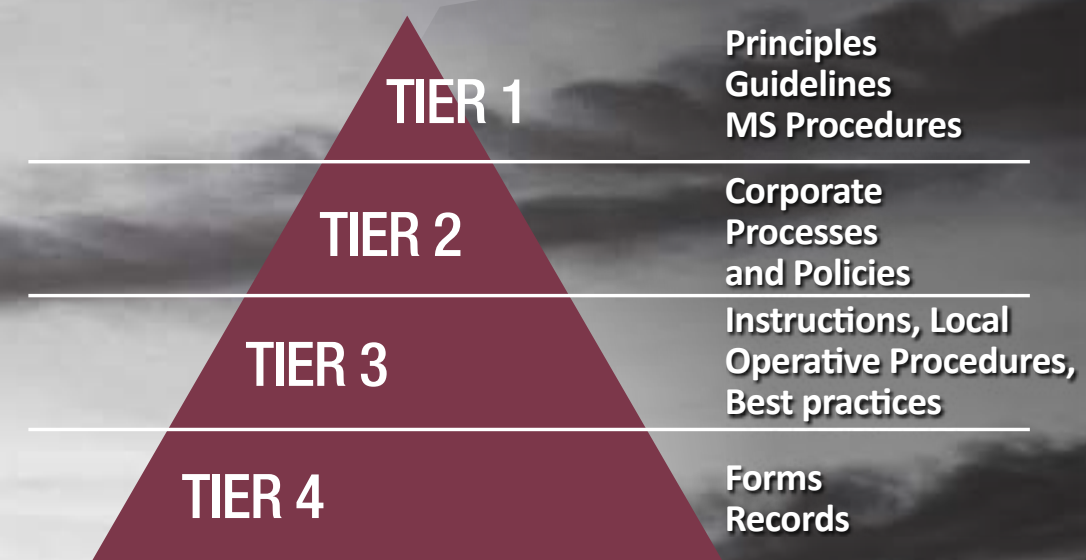
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
	✓	✓		✓	✓	✓		✓		✓
	✓							✓		✓
	✓	✓								✓
										✓
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									✓	✓
		✓			✓				✓	
			✓						✓	
									✓	✓

SDG  
TICK NOTES

70 ✓



# GLOBAL SUSTAINABILITY SYSTEM



When, a few years ago, we designed the conceptual and action flow to make the company truly global and equipped with a solid and shared governance system, we imagined starting from the principles, then developing a single system and making available an IT platform (or more than one) for the Human Resources and Sustainability part

As we have already mentioned (and will repeat), the Global Sustainability System bases its foundations on international requirements (ISO Standards), and aligns itself with the second important System, that of Quality. The System is at 4 levels, from the Management Manual to the formats to be used, passing through the management procedures, the operational ones, the work instructions

While Tier 1 and Tier 2 are the exclusive responsibility of the Corporate and cannot be modified by individual organizations, which however can propose improvements and/or modifications, obviously, Tiers 3 and 4 are the responsibility of the individual Plants. Many Tiers 3 and 4 documents are available in the system, but they are to be considered guidelines, the implementation of which is optional, in form, but not in substance.

Like all ISO Systems, the flow is the classic one which starts from the definition of the Process Map, to then analyze the Context in which the company operates, identify the Risks and Opportunities also deriving from the Risk Assessments (of Safety and Health, environmental and linked to the use of resources), define the targets that are intended to be achieved, the responsibilities, the times and resources necessary, the systems for measuring performance and the countermeasures in case of delays and/or failures, to then produce Report to allow Management (at different levels) to act with a view to continuous improvement



# GLOBAL SUSTAINABILITY SYSTEM

## CONTEXT ANALYSIS

Materiality analysis  
(next)

SWOT analysis

Risks & Opportunities  
analysis

Risk Management

## TARGETS

Objective,  
Targets  
and Planning

## HUMAN SIDE

Roles  
& Responsibilities

Competences  
& Awareness

Communication

## MEASURE

Audits  
and Actions

KPIs

## REVIEW

Management  
Review

### Process Map

Without claiming to go into detail about the Process Map in this and in the next pages, we are interested in highlighting the methodological rigor that drives our every step.

REPORTS  
and continuous  
improvement



# PROCESS MAP ANALYSIS SUSTAINABILITY SYSTEM

## RESOURCES

All employees  
and TN organizational levels

## SOURCES

- Law & regulations
- GRI Standards
- GHG Protocol
- CDP Standard
- ISO Standards
- Authorities
- Unions – Work Council
- Certification's Body
- External Stakeholders (Customers, Suppliers, Communities)
- Corporate bodies
- Regions and Plants
- Employees

## All TN PROCESSES

## INPUT

- Business Plan
- TN Policies
- MT Plan
- P&L
- Law requirements
- Agreements with Unions/Work Council
- Social changes
- Factor of production and technology
- Idea's/proposals
- Customer Specific Requirements
- Organizational Analysis
- R&O Analysis
- Specific technical inputs (see next page)

## ACTIVITIES

- Support Risk Assessments and Environmental Aspect's analysis
- Define Roles and responsibility
- Create Training tools (TN Academy and Talent LMS)
- Maintain Global Sustainability System
- ESG Report and IR support
- Maintain Minimum Technical Standards
- Perform Audits (in presence or remotely, where possible)
- GSS Training
- Specific Global Sustainable Development activities (see next page)

## OUTPUT

- Compliance with the Laws and Regulations
- Certifications
- Safe Work conditions
- Respect the environment
- Energy Savings
- Sustainability Awareness Training
- Sustainability - Accountability
- POAs (according to the local laws)
- Other Sustainable Development outputs (see next page)

## RECEIVERS

- Authorities
- Corporate Bodies
- Regions and Plants
- Employees
- Unions – Work Councils
- Sustainability Committee
- Customers
- Suppliers
- Investors

## All TN PROCESSES

## TOOLS

- Risk Assessment
- Software Checker
- Management Systems based on international Standards
- Safety Engineering Manual
- Minimum Technical Standards
- Intranet and SharePoint

## KPIs

- KPIs from R&O analysis
- KPIs from OneTeam Software (HR Processes)
- Specific KPIs (see next page)

## RISK ASSESMENT(S)

- Iso 5002 – Energy Assessments
- R&O Analysis
- GSS-12.6.1-Risk Management-General
- GSS-12.6.1.2-MGT\_07\_02\_Risk Management Process and Committee (RMC)
- GSS-12.6.1.2-Environmentale Aspects
- GSS-12.6.1.2-Safety&Health-Identification and Assesment of the Risk



# ADDENDUM

## GLOBAL SUSTAINABLE DEVELOPMENT

### RESOURCES

All employees  
and TN organizational levels

### SOURCES

(previous page)

### SPECIFIC TECHNICAL INPUTS

- Energy consumptions
- Raw materials consumptions
- Waste disposal
- Water consumption
- Energy prices
- CO<sub>2</sub> reduction targets
- Sustainability Roadmap
- Customers Sustainability Requests

### SPECIFIC GLOBAL SUSTAINABLE DEVELOPMENT ACTIVITIES

- KPIs & results calculation & monitoring
- Monthly, Quarter and Yearly reviews
- Sustainable Committee presentations
- Sustainability workshops
- Sharing best practices with Customers and Suppliers
- IR Support
- Coordinate and support plants in developing Sustainability projects
- Customers Sustainability questionnaires

### OUTPUT

- Monthly/quarterly yearly reports
- Sustainability Targets achievement
- Sustainability roadmap updates and reviews
- Projects development action plan & status
- Customers compliance about sustainability
- Environmental performances
- Suppliers

### RECEIVERS

(previous page)

### TOOLS

(previous page)

### SPECIFIC KPIs

- Carbon Footprint
- CO<sub>2</sub> total emissions
- Energy intensity
- Water footprint
- % of recycled waste
- % of green energy

### RISK ASSESMENT

(previous page)



# SWOT ANALYSIS

As regards the analysis of the context, the tool we use is that of the SWOT Analysis, even as early as 2024 we will be working on the analysis of double materiality, also taking into account the fact that in Europe the non-financial reporting regulations have changed with the Corporate Social Responsibility Directive (CSRD) which will impact 3 of our production sites.

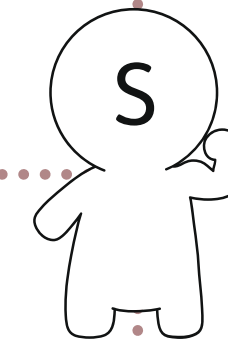
Our SWOT Analysis has been developed by the Sustainability Committee, and validated by the Management Committee

**INTERNAL  
ORIGIN**  
ATTRIBUTES OF THE  
ORGANIZATION

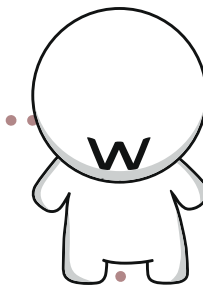
**INTERNAL  
ORIGIN**  
ATTRIBUTES OF THE  
ORGANIZATION

**HELPFUL**  
TO ACHIEVING  
THE OBJECTIVE

**HARMFUL**  
TO ACHIEVING  
THE OBJECTIVE



**STRENGTHS**



**WEAKNESSES**

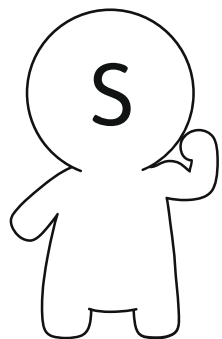


**OPPORTUNITIES**



**THREATS**



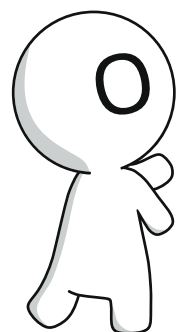


## STRENGTHS

- Concrete commitment of the company and top management  
Company is oriented to Sustainability
- Robust sustainability strategy
- Global Sustainability System  
and Minimum Technical Standards, global integration
- Target approval process with SBTi ongoing and CDP  
participation – reliable & transparent targets and results
- Sustainable Development structure,  
Sustainability Committee
- ESG report
- Robust sustainability Actions, KPIs and monitoring system
- Demonstrate a clear willingness of Tsubaki Nakashima  
toward all investors in achieving CO2 reduction results
- Good results achieved already in 2023
- 2024-2028 investments for sustainability projects  
already approved

## SWOT ANALYSIS

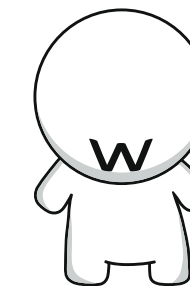
# SWOT



## OPPORTUNITIES

- New regulations pushing the organization to enlarge the view
- In Japan, “Sustainability-related policies and initiatives”  
are now required to be included in securities reports  
and other documents.
- Customers and opportunities to grow;  
sustainability means a greater chance of getting new business.
- Integrate Carbon Footprint into quotation/offer process  
and track % of quotes selected for that
- Improving competitiveness through more sustainable products
- New technologies able to reduce energy and natural  
resources’ consumption
- More recycling culture

- Old plants and old machines; some limits to implement  
the best technology and or sustainable solutions
- The benefits of sustainability-related projects  
are not understood, in some cases
- Energy Management not always perceived  
as an opportunity to be more competitive
- In some cases, limited technical skills in the plants
- Difficulty to collect reliable data about waste,  
raw materials emissions, use of chemical products etc.
- Ability to monitor financial impacts of sustainability  
risks and opportunities
- Allocation of sustainability investments to other projects  
as they are deemed more important and higher priority
- Succession planning for Sustainability related roles



## WEAKNESSES

The result of this SWOT is a document called **RISK AND OPPORTUNITIES ANALYSIS**, in which all the elements are analyzed in detail: stakeholder’s involvement, potential success or failure, potential consequences, positive and negative, measuring systems (Occurrence and Severity), action identified and as well as the KPIs to be included in the **GOALS AND OBJECTIVES**, which is the consequent step, allowing us to track the trend on monthly basis.

- Increase of costs necessary for the  
sustainability transformation
- Increased costs related to green energy certificates
- Evolving regulatory landscape impacting  
sustainability compliance.
- Green energy availability
- Natural disaster
- Customers without a real interest in Sustainability
- Suppliers not in alignment with TN’s sustainability goals
- Loss of reliability with investors and customers due to failure  
to meet expected targets.
- Intense competition may challenge the  
company’s sustainability leadership



## THREATS



# STAKEHOLDERS

Tsubaki Nakashima places great importance on maintaining and building relationships of trust with its stakeholders based on long term collaboration.

We engage with a diverse group of stakeholders around the world, including the people who manufacture our products (our employees, our contractors, our agents), the communities we work in, the Customers and Suppliers that we work with and the Investors who make our work possible.

Through these collaborations, we are working toward co-creating an equitable and regenerative future. We aim to center our business strategy, investments, engagement and reporting on the environmental, social and governance (ESG) topics that are most important to our business and our stakeholders across our value chain.

As we seek to accelerate our progress — and leverage our size and scale to benefit people, the planet, and our business — our ESG priorities guide our actions in a cohesive, compelling and risk-minded manner. In order to have a common but also specific approach to our Stakeholders and respecting the ISOs requirements, we are dividing them into two main categories: internal and external.



## INTERNAL STAKEHOLDERS

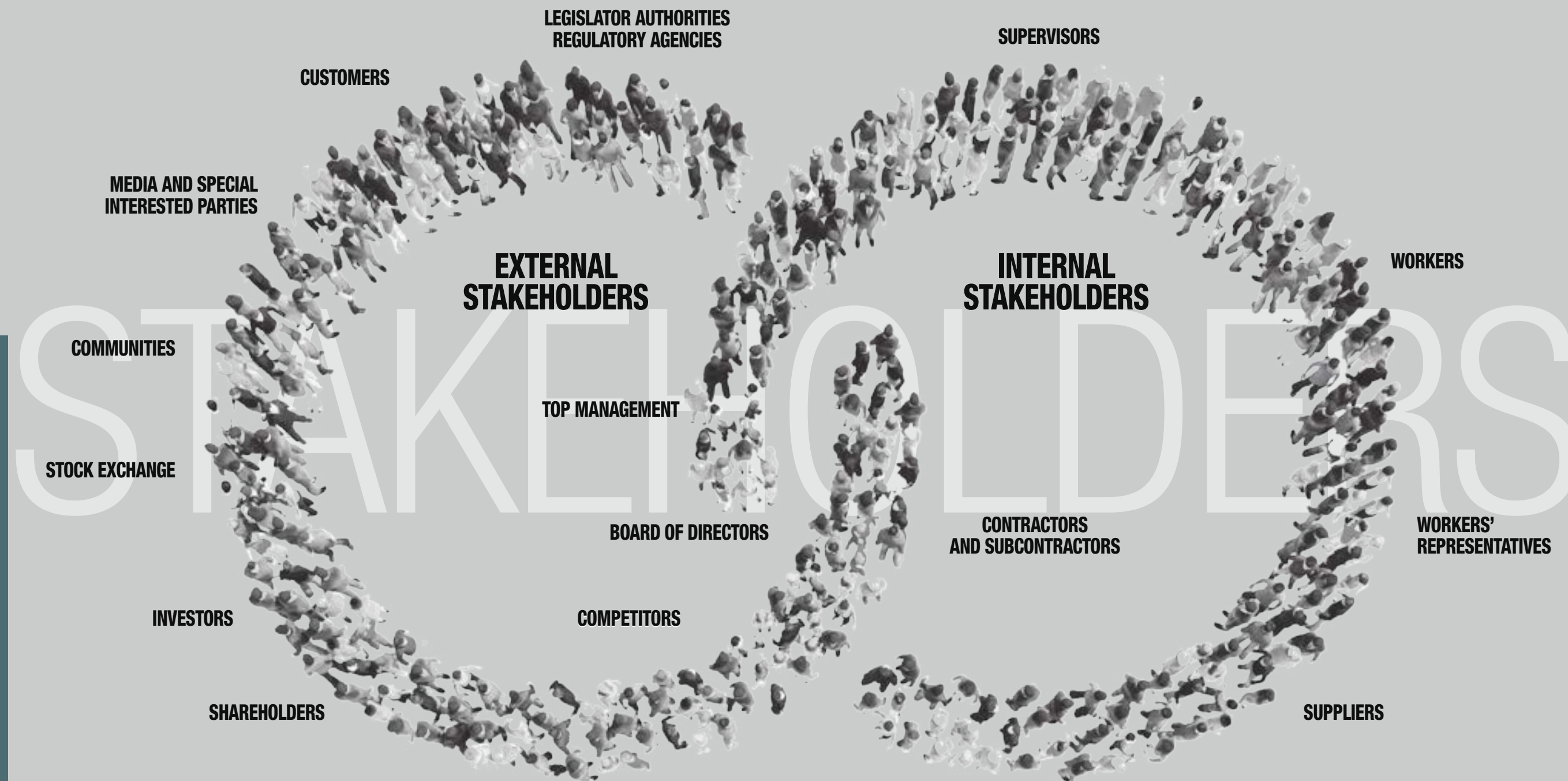
are represented not only by shareholders and company management, but above all by employees and collaborators, the heart of the company, who are in direct contact with customers every day, representing Tsubaki Nakashima. The company strongly believes in the integration and concrete motivation of its employees by stimulating training at 360° and in particular on fundamental issues such as safety at work and the principles established by the highest ethical standards. Shareholders and company management guide the strategy and operations of the Company in compliance with and sharing ethical and moral principles.

## EXTERNAL STAKEHOLDERS

include suppliers and contractors, who are selected through a precise evaluation system, as well as based on compliance with the principles governed by our QMS and GSS: being a supplier of Tsubaki Nakashima means committing to extend the same ethical principles that guide the company also to its supply chain and along the entire value chain. A relevant external stakeholder is the Customers.

Both categories of stakeholders (internal and external) have legitimate expectations regarding the work of Tsubaki Nakashima and, in relation to the most relevant stakeholders, the possibility of expressing opinions and suggestions, both in clear and anonymous (i.e. Surveys), through various sharing tools made available by the company and with periodic meetings. Thanks to these listening processes, the company has the opportunity to understand their needs and evaluate them to improve its activities and its impact on them. In general, stakeholder involvement takes place in compliance with the principle of inclusiveness, through which Tsubaki Nakashima undertakes to encourage the active participation of all internal stakeholders in corporate life and strategic decisions.







# SUSTAINABILITY

## THE JOURNEY TO ACHIEVE THE TAILOR-MADE SUSTAINABILITY STRATEGY FOR TSUBAKI NAKASHIMA

Tsubaki Nakashima strongly believes in the **sustainable transformation** of its processes and products. From several years Tsubaki Nakashima has pursued the path of sustainable development, and it has taken a proactive standing in fighting climate change.

The needs to transform our Company, that is listed on the stock exchange, in a sustainable direction arise from external factors such as national and international climate change regulations, progressive demands from stakeholders to reduce their carbon footprint, opportunities to expand their business in sustainability-conscious markets, and also from internal factors such as the increased willingness of investors to bet on sustainable companies, greater risk avoidance and management, the need to seek efficiency in areas not always well explored, such as the management of available resources, and more **generally from a sense of ethics and morality towards its employees, communities and future generations.**

Consequently, the definition of a clear long-term strategy, an investment plan in plant modernization and process innovation, the research for alternative energy sources, including self-produced ones, the definition of a precise organization with new roles and competencies, a management system based on international standards and careful analysis of results, and a precise internal and external communication strategy allow for greater competitiveness, expansion of markets, greater attractiveness (investors, candidates, customers, suppliers) and above all profit, hence solidity and future perspectives.

Tsubaki Nakashima's sustainability journey will not stop until carbon neutrality has been achieved in the true meaning of the word "Sustainability" which means "simultaneous achievement of economic prosperity, in a healthy and socially equity environment for current and future generations."

Focusing on the aspects of climate change, for Tsubaki Nakashima, the necessity and a sense of urgency has grown to develop a sustainability strategy so as to improve processes and facilities not only from the standpoint of CO2 reduction and carbon footprint but also from the standpoint of profit and innovation. This is where **profit, sustainability, and innovation are merged into a single strategy, which is the roadmap for sustainable development and is perfectly rooted in the overall sustainability system we have developed to properly guide the company's sustainable growth.**

Through the implementation of this strategy, successful results have been achieved in terms of CO2 reduction, cost savings, improved production efficiency, and clearly technological and innovation progress.

Innovation and technological development are thus the tools through which **Tsubaki Nakashima** pursues continuous improvement and **contributes to a more sustainable future and business growth.**



# SUSTAINABILITY

## 2022

During **2022** Tsubaki Nakashima developed a sustainability strategy that was based on achieving the **2030 CO<sub>2</sub> emission reduction target**

This strategy was based on 4 different pillars:

Adopt innovative technologies to **produce green energy**

Reduce **energy consumption**

**Purchase green energy** thanks to the renewable energy certificates

Challenge: **improve the general efficiency** of TN plants through high utilization

## 2023

this sustainability strategy was revised in light of:

Studies and **analyses** developed

Sustainability **projects** developed and results achieved

## STRATEGY UPDATE

Updating the **2030 CO<sub>2</sub> emission reduction target** with the new methodology proposed by SBTi

**Technological innovation** in the field of sustainability

Workshops, comparison and benchmarking with the sustainability strategies of **customers** and other **industries**



Therefore, thanks to the expertise acquired, the careful analysis of the responses of our factories to the projects developed, and the continuous benchmarking with other companies, the strategy has been modified by adding a new pillar related to the electrification of our plants. The strategy turns out to be tailor-made for the Tsubaki Nakashima plants and this has been demonstrated by the excellent results obtained during 2023 related to the improvement of the carbon footprint and the important reduction of CO2 emissions achieved.

In order to transparently demonstrate and measure Tsubaki Nakashima's real commitment, a public disclosure was made in 2023 on setting CO2 reduction targets in line with the Paris Agreement and thus the methodology proposed by Science Based Target.

In addition, driven by continuous improvement and in order to be increasingly accurate and reliable in calculating our emissions, Tsubaki Nakashima decided to adopt the "market-based" method for calculating emissions related to electricity consumption. This made it possible to analyze the specific emission factors of our electricity suppliers. The result we obtained is that the fuel mix used by our electricity suppliers is more sustainable than the averages of the different countries where our plants are located.

The next chapters will disclose the new CO2 reduction targets, the new sustainability strategy and the recalculation of CO2 emissions with the new "market-based" factors, as well as the projects developed and the results obtained.

# SUSTAINABILITY

Defines and promotes best practice in emissions reductions and net-zero targets in line with climate science

Develops standards, tools and guidance to enable companies to set science-based targets in line with the latest climate science

Through its validation services arm, assesses and validates companies' targets

The SBTi mobilizes the private sector to take the lead on urgent climate action.

## Science Based Targets initiative

The Science Based Targets initiative (hereafter SBTi) is a corporate climate action organization that enables companies worldwide to play their part in combating the climate crisis. SBTi develops standards, tools and guidance which allow companies to set greenhouse gas (GHG) emissions reductions targets in line with what is needed to keep global heating below catastrophic levels and reach net-zero by 2050 at latest.

The SBTi is incorporated as a charity, with a subsidiary which will host our target validation services. One of the partner of SBTi is Carbon Disclosure Project (hereafter CDP), organization that monitors the environmental impacts of companies, and which Tsubaki Nakashima already joined in 2022.

SBTi's main purpose is to communicate strongly and clearly that we must urgently increase ambition in the fight against climate change.

For this reason, SBTi shows companies how much and how quickly they need to reduce their greenhouse gas (GHG) emissions to prevent the worst effects of climate change.

# SBTi



During 2023 Tsubaki Nakashima commits to set **NEAR-TERM SCIENCE BASED TARGETS.**

Tsubaki Nakashima’s commitment to SBTi is a significant milestone for the Sustainable Development of the company. By embracing sustainability and setting ambitious Science Based environmental goals, Tsubaki Nakashima is taking a proactive standing in fighting climate change and contributing to a more sustainable future and growth. The SBTi that are ambitious and transparent CO2 reduction goals provide Tsubaki Nakashima with a clear framework to assess its environmental impact and create strategies that contribute to a sustainable future. These targets include emissions from a company’s operations, supply chain, and products, ensuring a comprehensive approach to mitigate climate change. SBTs that are independently verified, giving stakeholders confidence in the organization’s commitment to reducing its carbon footprint. The commitment made by Tsubaki Nakashima aligns with the growing trend of companies recognizing the need for urgent action and embracing their role in protecting the environment for future generations.

Because of its commitment to Science Based Target, Tsubaki Nakashima recalculated its scope 1 and scope 2 CO2 emission reduction targets. The targets set in 2019 and used in previous years were still in line with SBTi’s methodology but due to the following changes the recalculation was necessary

# SUSTAINABILITY

1

Commitment and new methodology proposed by SBTi: SBTi’s new methodology includes more demanding targets.

2

Market based methodology for Scope 2 emissions and then new emission factors for electricity. The new emission factors used are specific to the electricity suppliers of our plants and thus proved more accurate (market-based method) than those used so far, which instead reflected a country average (location-based method).

Therefore, Tsubaki Nakashima recalculated 2024 – 2030 absolute CO2 emissions targets in light of:

## CO<sub>2</sub> TONS

OLD TARGETS	YEARS	NEW TARGETS
-------------	-------	-------------

172.844	2024	98.100
166.140	2025	92.346
159.436	2026	86.591
152.731	2027	80.837
146.027	2028	75.082
139.323	2029	69.328
132.619	2030	63.573

-27,5%	-42%
VS. 2019	VS. 2022

3

New baseline year: the year 2022 was chosen as the baseline year because it is appropriate to choose one of the most recent years.

The recalculated targets have not yet been validated by SBTi because Tsubaki Nakashima is analyzing its own scope 3 emissions, indirect emissions, which are a mandatory requirement of SBTi. In this regard, in addition to the scope 1 and scope 2 targets, a target for scope 3 emissions will also be set. This is another important milestone in the fight against climate change because setting a target on indirect emissions (scope 3) means involving Tsubaki Nakashima’s entire supply chain in its sustainability strategy.



# SUSTAINABILITY

Tsubaki Nakashima's new strategy for sustainable development is based on the key concept of sustainable corporate growth. Therefore, all pillars have the dual purpose of limiting CO2 emissions and environmental impacts of plants and improving our organization's efficiency, profit, innovation, and competitiveness.

Compared with the strategy developed last years, the pillar related to the electrification of our plants has been added, and the pillar related to green energy production technologies has been changed because as of today, given the technological development and given the peculiarities of our plants, only solar photovoltaic is agreed upon and applicable.

OLD STRATEGY	NEW STRATEGY
Reduce energy consumption	Reduce energy consumption
Adopt innovative technologies to produce green energy	Photovoltaic systems
Purchase green energy thanks to the Renewable Energy Certificates	Purchase green energy thanks to the Renewable Energy Certificates
Challenge: improve the general efficiency of TN plants through high utilization	Challenge: improve the general efficiency of TN plants through high utilization
	Electrification of TN plants
-27,5%	-42%
CO <sub>2</sub> tons by 2030	CO <sub>2</sub> tons by 2030

# NEW STRATEGY

The following is the explanation pillar by pillar of Tsubaki Nakashima's sustainable development strategy:

## REDUCE ENERGY CONSUMPTION

Energy efficiency projects allow Tsubaki Nakashima's plants to reduce and optimize the energy consumption. Through new machineries, through optimized use of our equipments, through careful maintenance, through monitoring our consumption, and through the adoption of innovative energy efficiency technologies the energy consumption of our plants will decrease. Thus, these projects aim to reduce Scope 1 and Scope 2 emissions and have the benefit of improving plant efficiency by reducing energy costs. Energy efficiency measures are constantly evolving, we are learning from our plants and we are testing and implementing energy efficiency projects that have led us to a 5% decrease in energy intensity (energy consumption / production) by 2023.

## PHOTOVOLTAIC SYSTEMS

Photovoltaic systems will be used to produce zero-emission electricity. Solar energy, being a natural source, so the electricity produced will be green energy. Therefore, through the widespread installation of photovoltaic systems in our plants we will reduce Scope 2 emissions (emissions related to electricity consumption) and also increase our share of green energy. These projects are a concrete commitment to our green transition.

## PURCHASE GREEN ENERGY THANKS TO THE RENEWABLE ENERGY CERTIFICATES

Purchasing green energy is a skillful tool for lowering Tsubaki Nakashima's Scope 2 emissions. In addition, through corporate green power purchase, electricity suppliers will be increasingly incentivized to build new renewable energy power plants (wind farms, photovoltaic parks, hydroelectric power plants etc..) so we believe that this is also a key pillar in fighting climate change at the forefront and in our green transition. This tool will be especially useful in our

plants where, due to geographical characteristics (solar irradiance/weather/exposure) and/or construction characteristics (roofs), it is not possible to install photovoltaic systems.

## CHALLENGE: IMPROVE THE GENERAL EFFICIENCY OF TN PLANTS THROUGH HIGH UTILIZATION

Through better utilization of our factories (optimized productivity, optimized work weeks and break days based on customer demands, etc.) we will go on to reduce CO2 emissions. In fact, the environmental sustainability of our plants is also related to production efficiency. The more efficient the production, the more sustainable the plant. Here, this pillar is the perfect example of how Tsubaki Nakashima's sustainable growth not only impacts CO2 emissions but also profit and competitiveness.

## ELECTRIFICATION OF TN PLANTS

In order to lower the Scope 1 emissions to ZERO (emissions related to the use and combustion of fossil fuels in our factories), the sources of emissions must be directly eliminated as currently there is not yet a certified, international mechanism with reasonable prices for the purchase of "green" fuels (for example bio methane or bio gas). In our plants, the facilities that consume fossil fuels and thus cause Scope 1 emissions are mainly: furnaces and atmosphere gases, handling forklifts, and ambient heating equipment. Therefore, electrification projects are aimed at converting these facilities into electric systems so that green electricity can be used or produced by photovoltaic plants or purchased. This pillar is perfectly in line with and driven by technological innovation in the electric sector. Therefore, through electrification, not only will CO2 emissions be reduced but also technological improvement of our factories will be achieved.

**Despite the new, much more restrictive targets, the new sustainability strategy turns out to be in line and compliant. Its effectiveness has been tested on the results achieved in 2023, which will be shown in the next chapters.**



# CARBON DISCLOSURE PROJECT



Carbon Disclosure Project (hereafter CDP) is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. The world's economy looks to CDP as the gold standard of environmental reporting with the richest and most comprehensive dataset on corporate and city action. The aim of CDP is to see a thriving economy that works for people and planet in the long term. CDP focus investors, companies, cities and governments on building a sustainable economy by measuring and acting on their environmental impact.

The main values of CDP are:

- CDP defaults to transparency
- CDP places accountability at its heart
- CDP learns and improves
- CDP believe in succeed together

As the world takes steps towards building a climate safe, deforestation free, water secure future, ambitious corporate action is more crucial than ever. Disclosure through CDP provides the bedrock for this. As the world's most comprehensive dataset, CDP's data both fuels and tracks global progress towards building a truly sustainable economy for people and planet.

As well as meeting the demands of your investors and customers, reporting your environmental data through CDP enables Tsubaki Nakashima to protect and improve its company's reputation, boost its competitive advantage, uncover risks and opportunities, and track and benchmark progress. In a world where mandatory disclosure is gaining momentum, disclosing through CDP also helps Tsubaki Nakashima get ahead of regulation.

For that reason, during 2023 Tsubaki Nakashima participated in CDP questionnaires for climate change (full version) and water security (minimum version). CDP questionnaires enables Tsubaki Nakashima to progress towards environmental stewardship through benchmarking and comparison with peers, in order to continuously improve its climate governance.

Tsubaki Nakashima obtained Level B- for the "Climate Change" category, which, in addition to being the third level of eight, is also higher than the Asia regional average of C, and higher than the Metal products manufacturing sector average of C.

Strengths that emerged from the CDP: Business Strategy, Financial Planning & Scenario Analysis, Energy, Governance, Scope 1 & Scope 2 emissions, Targets, Value chain engagement.

The score received shows that the sustainability strategy has been set up correctly and is strong and reliable. Tsubaki Nakashima has already started the process of improvement to score better and fill in the gaps in the areas where it received the lowest scores.

Tsubaki Nakashima obtained Level C for the "Water security" category, which is in the Awareness band. This is the same as the Asia regional average of C, and the same as the Metal products manufacturing sector average of C. Water impact does not appear to be a key indicator for the organization with respect to CO2 emissions for that reason Tsubaki Nakashima currently focuses its attention on reducing GHG emissions but nevertheless it also keeps the water consumption under control.



During 2023, several workshops related to environmental sustainability were carried out. The purpose of these on-site workshops was to increase the plants' awareness of climate change and environmental sustainability issues. In addition, on-site analyses were performed to evaluate the implementation of the sustainability roadmap and to study and follow-up on the opportunities for improvement.

# SUSTAINABILITY

To follow up on the workshop carried out in 2022 and to measure the effectiveness of the actions and projects developed as a result of the workshop, in 2023, the plants in Georgia (US) and Poland were visited again. Huge improvements were identified that confirmed the effectiveness of the projects developed and the sustainability strategy implemented. More strategic projects were then analyzed and proposed with a view to continuous improvement that will be developed in the coming years.



## Georgia

2 Projects already developed  
5 Energy efficiency projects analyzed for continuous improvement

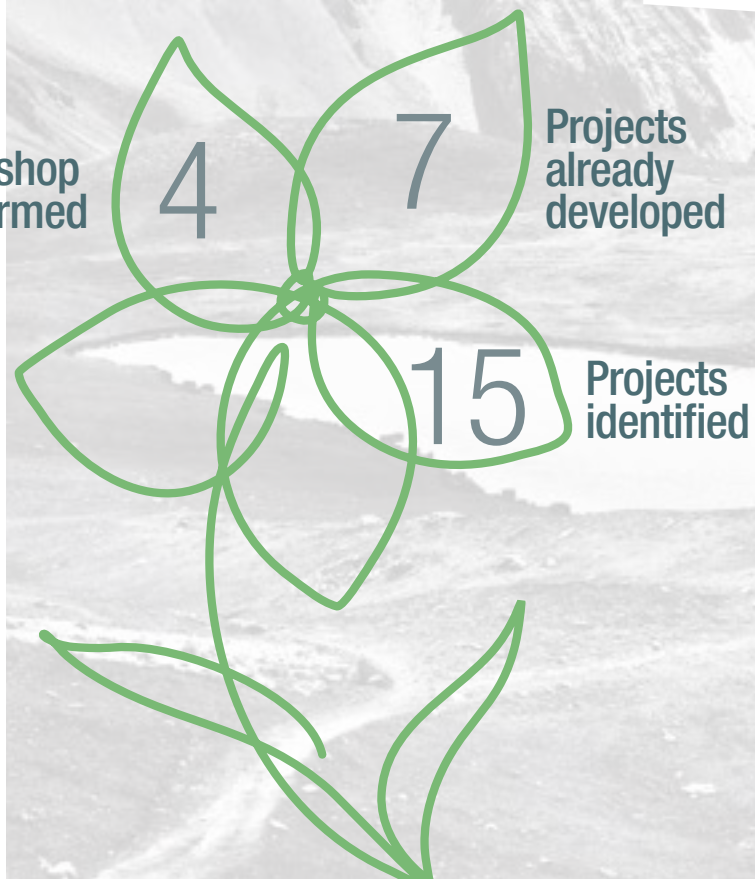
- 840 CO<sub>2</sub> tons/y

## Poland

5 Energy efficiency projects already developed  
4 Energy efficiency projects analyzed for continuous improvement

- 1.596 CO<sub>2</sub> tons/y

Workshop performed





In 2023, plants producing for the medical sector were also visited, since this business has potential growth in the coming years. Again, with a view to sustainable and profitable growth, the two plants in Michigan (US) and Italy were analyzed in order to identify opportunities to improve sustainability and to measure the adherence of the sustainability strategy to these production processes, which are very different from the production of steel balls. Thanks to the performed analyses, the strategy appears to be effective and partially already implemented in these plants. It is reported that the Italian plant is in line with all 5 pillars of the strategy in that:

- All the energy efficiency best practices are already implemented;
- Photovoltaic system is already installed on the roof of the plant;
- 100% of green energy purchasing through Guarantess of Origins (GOs);
- High production efficiency;
- The plant is already electrified (fossil fuels consumption).

# SUSTAINABILITY



Michigan  
- 840  
CO<sub>2</sub> tons/y

6 Energy efficiency projects identified

Italy

TN Rispa is the first plant with no CO<sub>2</sub> emissions



31 Sustainability Projects Developed in 2023

- 15.962

CO<sub>2</sub> tons/y  
(+ 114% vs 2022)

39% Green energy  
(+ 13% vs 2022)

-20 GWh of energy consumption

China Installation of a photovoltaic system in Kunshan plant

2,5 MWp installed - 774  
CO<sub>2</sub> tons/y

751 MWh of green energy produced in 2023 (Sep-Dec)

Green energy Purchasing through International Renewable Energy Certificates - IRECs in China - Taicang Plant

-10.300  
CO<sub>2</sub> tons/y

To demonstrate Tsubaki Nakashima's concrete commitment to fighting climate change and meeting promised targets, during 2023, several projects were developed. Thanks to the sustainability projects developed, 15.962 emissions of CO<sub>2</sub> tons were avoided, and Tsubaki Nakashima's carbon footprint improved by 8% with respect to 2022. With an eye toward continuous improvement and thanks to the experience gained and the results achieved in 2022, 31 projects were implemented in 2023 compared to 26 implemented in 2022, which, however, resulted in CO<sub>2</sub> emission reduction benefits of +114% compared to 2022.

Despite budgeted sustainability projects, after the Q2 results the carbon footprint and CO<sub>2</sub> emissions were not in line with expectations and especially the promised targets. For this reason, Tsubaki Nakashima decided to allocate additional investment and 3 special projects were developed in August 2023 aimed at recovering the plan and achieving the CO<sub>2</sub> reduction targets promised to investors and customers. As a result of the allocation of these extraordinary funds and the development of the 3 special projects, excellent results were achieved and most importantly, the promised 2023 targets were met. This is a clear and strong evidence of the whole organization's commitment to sustainable development.

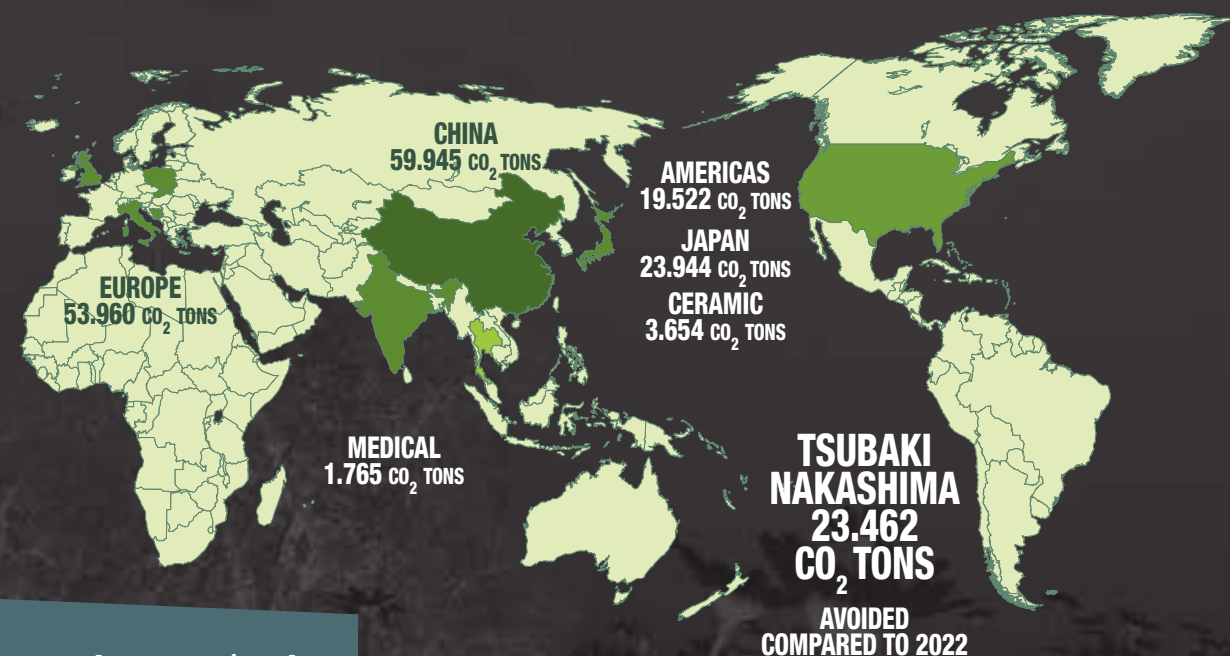


# KPIs

Tsubaki Nakashima has set up and monitors several KPIs to measure its sustainability performance and the effectiveness of sustainability strategy.

CO2 emissions [CO2 tons]: the total CO2 emissions of Scope 1 & Scope 2 are monitored on a monthly basis and calculated taking into account the guidelines provided by the GHG Protocol and the ISO 14064. During 2023, Scope 2 emissions, that are mainly related to electricity consumptions, are calculated using both the Location Based and Market Based methodologies. Market Based methodology results to be more accurate and it is more in line with the real situation. That is why from 2024 onward it will be used as the primary method for calculating Scope 2 CO2 emissions. Considering the updated guidelines and target calculation method proposed by SBTi, and considering the change in calculation methodology for Scope 2 emissions, the 2030 CO2 emissions reduction target of Tsubaki Nakashima was updated and it is presented in the next section.





Carbon footprint [CO<sub>2</sub> tons/tons]: Tsubaki Nakashima carbon footprint is calculated taking into account Scope 1 & Scope 2 emissions and the production expressed in tons. This KPI reflects the sustainability of Tsubaki Nakashima factories and targets are set up taking into account the planned CO<sub>2</sub> reduction and the organization's future rate of production.

## LOCATION BASED RESULTS

\*During 2022 the Americas region also included the medical plant located in US Michigan. From 2023 onward, the medical plant is in the new "Medical" region. In order to make a proper comparison, the 2022 results for the Americas region were recalculated excluding the medical plant; this explains the difference in the carbon footprint values from what was reported in the previous 2022 ESG report.

CO<sub>2</sub> TONS / TON  
2022 2023 %  
2023  
VS 2022

2,56 2,41 -6%

1,40 1,44 2%

31,40 28,80 -9%

2,16 1,79 -20%

1,69 1,57 -7%

3,89 4,38 +11%

1,88 1,74 -8%



JAPAN



EUROPE



CERAMIC



CHINA



AMERICAS\*



MEDICAL\*



TSUBAKI NAKASHIMA

CO<sub>2</sub> TONS / TON  
2022 2023 %  
2023  
VS 2022

1,14 1,10 -3%

1,02 1,04 1%

21,5 19,3 -11%

1,20 0,99 -20%

0,92 0,81 -14%

1,28 1,52 +15%

1,11 1,03 -8%

## MARKET BASED RESULTS

# 2023 CARBON FOOTPRINT



#### Category 4

### Upstream transportation

we started to calculate and analyze the emissions related to the transportation of raw material from our suppliers' warehouses/factories to our plants. In this case, the "Distance-based method" was used with the emission factors given by the "DEFRA" database.

#### Category 1

### Raw materials

considering the huge estimated impact of these emissions, we decided to proceed with the "Supplier-specific method" which is the most accurate and reliable. For this purpose, a questionnaire was sent to all raw material suppliers to fill out regarding the carbon footprint for products sold to Tsubaki Nakashima; this carbon footprint, expressed in CO<sub>2</sub>tons/tons, was then multiplied by the amount of material purchased in 2023. The emissions for the two main raw materials that are purchased are shown below: steel wire and ceramic blanks (semi-finished ceramic ball material). These analysis is not only useful in order to estimate the CO<sub>2</sub> emissions but it is an indicator that we will keep relevant for future business continuity and procurement strategies.

#### Category 9

### Downstream transportation

we started to calculate and analyze the emissions related to the transportation of products from our plants to our customers' warehouses/plants. As for the upstream transportation, the "Distance-based method" was used with the emission factors given by the "DEFRA" database.


in 2023 Tsubaki Nakashima started the screening and calculation of scope 3 emissions (i.e. indirect emissions linked to the supply chain). We started by calculating the emissions that we consider most impactful and most significant for our organization: raw materials, transportation, and waste. The calculation methodologies adopted that follow the guidelines proposed by the GHG Protocol are explained in these pages.

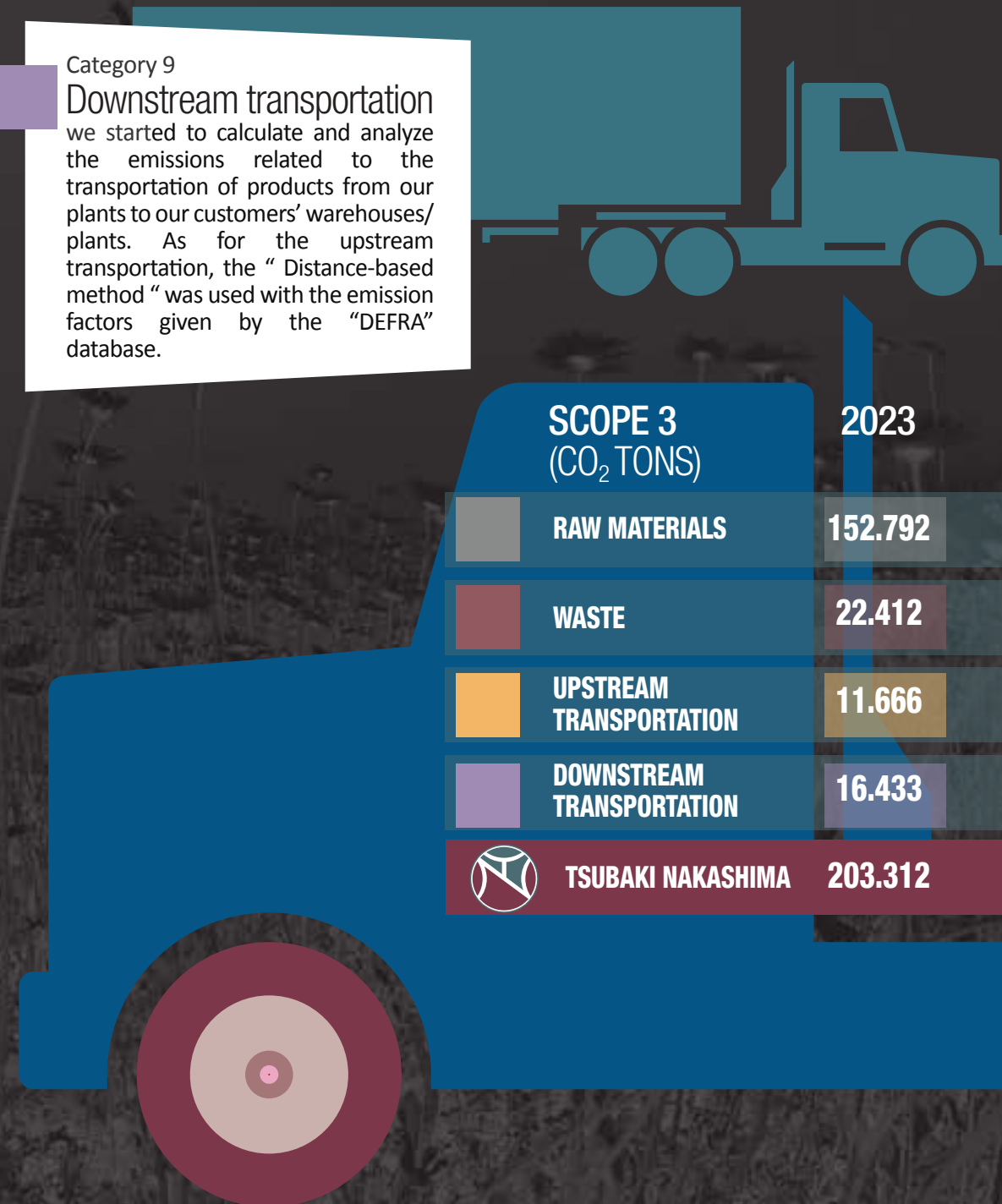
#### Category 5

### Waste generated in operations

also in this case, as with the raw material, it is strategic for us to analyze emissions related to waste since we are analyzing circular economy projects that will therefore lead to significant improvements. In this case, the "Waste-type-specific method" was used with emission factors derived from the Ecoinvent database or from specific sector studies/papers and our main wastes were considered.

# SCOPE 3 EMISSIONS CO<sub>2</sub> TONS

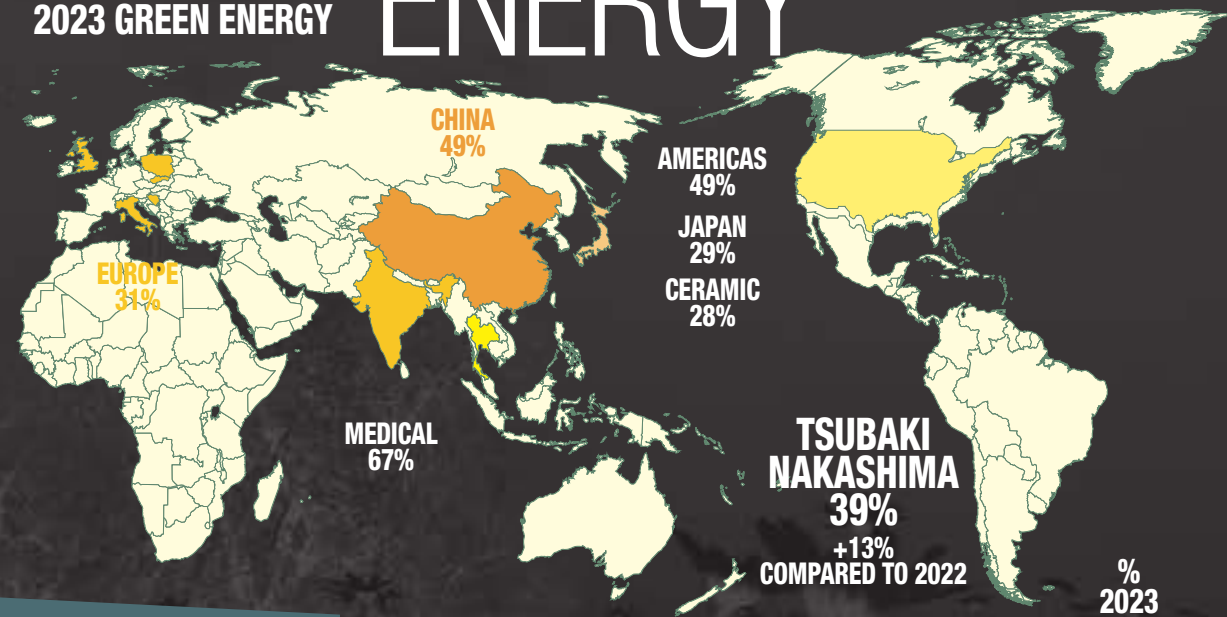
SCOPE 3 (CO <sub>2</sub> TONS)		2023
RAW MATERIALS		152.792
WASTE		22.412
UPSTREAM TRANSPORTATION		11.666
DOWNSTREAM TRANSPORTATION		16.433
 TSUBAKI NAKASHIMA		203.312





## 2023 GREEN ENERGY

# ENERGY



**% of green energy:** this indicator is useful to monitor the amount of green energy consumed by the organization and to properly set the strategy on purchasing and self-producing green energy and to monitor the results obtained. Tsubaki Nakashima plans to consume 100% renewable electricity by 2040. The % of green energy is calculated by taking into account the country-specific fuel mix, green energy purchased through Renewable Energy Certificates, and self-generated green energy from photovoltaic systems installed in the plants.

### Energy Intensity [MWh/tons]

this KPI is the ratio between energy consumption and production expressed in tons and this is an indicator of the energy efficiency of Tsubaki Nakashima factories. The lower this KPI and the higher is the energy efficiency of Tsubaki Nakashima.

	2022	2023	% 2023 VS 2022
JAPAN	3,54	3,96	+11%
EUROPE	2,45	2,22	-10%
CERAMIC	44,0	43,9	-1%
CHINA	2,11	2,08	-2%
AMERICAS*	3,12	2,69	-16%
MEDICAL*	5,94	7,07	+16%
TSUBAKI NAKASHIMA	2,62	2,49	-5%

\*During 2022 the Americas region also included the medical plant located in US Michigan. From 2023 onward, the medical plant is in the new "Medical" region. In order to make a proper comparison, the 2022 results for the Americas region were recalculated excluding the medical plant; this explains the difference in the carbon footprint values from what was reported in the previous 2022 ESG report.

## +5%

energy efficiency  
(compared to 2022)

## 39%

Green Energy  
(+13% compared to 2022)

# WATER

## -4%

water footprint  
(compared to 2022)

## 25

millions liters  
of water saved  
(compared to 2022)

	2022	2023
JAPAN	3,3	3,9
EUROPE	2,9	3,0
CERAMIC	2,7	3,8
CHINA	3,4	2,3
AMERICAS	0,4	1,84
MEDICAL	2,5	0,2
TSUBAKI NAKASHIMA	2,8	2,7

Water footprint [m3/tons]: is the ratio between water consumptions (m3) and the production expressed in tons. Tsubaki Nakashima currently monitors this indicator as another key aspect of a company's sustainability, but because no major deterioration is found, a long-term target has not been set but only annual targets for monitoring. In addition, this indicator does not appear to be a key indicator for the organization with respect to CO2 emissions and carbon footprint for that reason Tsubaki Nakashima currently focuses its attention on reducing greenhouse gas emissions but it also keeps the water consumption under control.

Tsubaki Nakashima water consumption in 2023 was equal to 252 million liters. Considering that, in average, one person consumes 237 liters of water per day, Tsubaki Nakashima water consumption during 2023 is equivalent to the annual water consumption of about 2,800 people.

The water footprint of Tsubaki Nakashima during 2023 was equal to 2,7 liters/kg (i.e. m3/tons) and this value is very low compared, for example, to the water footprint of beef production 15,000 liters/kg.










# RECYCLED RATE

## -3.468

tons of waste  
produced  
(compared to 2022)

### WASTE RECYCLED (TONS / TONS)

	2022	2023	% 2023 VS 2022
 JAPAN	67%	74%	+7%
 EUROPE	34%	50%	+16%
 CERAMIC	41%	52%	+11%
 CHINA	42%	23%	-19%
 AMERICAS*	32%	46%	+14%
 MEDICAL*	24%	29%	+5%
 TSUBAKI NAKASHIMA	41%	48%	+7%

**Recycled rate** reflects the percentage of recycling waste. In order to calculate this KPI the most important categories of waste are taken into account. One of the goal for 2023 is to develop projects to recycle our production sludge.

In 2023 Tsubaki Nakashima has defined a collaboration with the Polytechnic of Turin for a Ph.D. on waste (sludge) recovery from a circular economy perspective. Such a project will not only help improve the KPI of recycling but will be an added value for the company, turning a cost into a benefit.

# SUS TAIN ABIL ITY

# 永 久



# SECURITY REPORT

## What is the security report is? Brief description

During 2023 Tsubaki Nakashima integrated climate change aspects within the Security Report following the guidelines proposed by TCFD – Task Force on Climate-Related Financial Disclosures.

Tsubaki Nakashima in its statements, vision, mission and policy, demonstrate a clear commitment to contribute to a decarbonized society, achieving Carbon Footprint's neutrality by 2050. The Company believes that not only supplying high-quality products, but also giving due consideration to the environment and use of natural resources in the manufacturing and demand chain processes will help reduce the environmental impact of the entire value chain.

For that reason, Tsubaki Nakashima takes a life cycle thinking approach in efforts to minimize customers' environmental impacts by providing products that offer environmental performance and carried out a scenario analysis to understand risks, opportunities and impacts of climate change on the Company and its business, and especially to examine the resilience of the sustainability strategy and, if necessary, further countermeasures. As a time period, we took into account 2030, the year in which we need to achieve our near-term goals with SBTi, and 2050, the year in which we would like to achieve carbon neutrality. Considering instead the scenarios we selected two different climate change scenarios: 1.5°C scenario (scenario to which our goals will be aligned, established by the Paris Agreement) and 4°C (low carbon and decarbonization will not be promoted and physical risks will increase). Risks and opportunities were indicated in the below table.

SCENARIO	FACTOR		CHANGE	R / O *	COUNTERMEASURES
1,5 °C	Conversion to EV		Decreased demand for bearings' steel balls	Risk	Achieve sustainable business growth by expanding sales in ceramic business and develop strategy for green steel balls production.
			Increased demand for bearings' ceramic balls	Opportunity	One of the pillars of the medium-term strategy of Tsubaki Nakashima is the development and growth of ceramic balls business to support the EV markets.
	Raw materials costs	Risk	Increase in raw materials costs due to changing input prices (energy costs etc..)	Risk	Develop a robust sustainability strategy with raw materials suppliers.
	Customers' sustainability requirements		Loss of business opportunities due to delays in decarbonization	Risk	Tsubaki Nakashima developed a tangible sustainability strategy and joined also SBTi to adapt its sustainability goals and targets with respect to the Paris Agreement targets and then the 1.5°C scenario.
	Carbon tax and carbon pricing		Increase in cost due to the introduction of carbon tax	Risk	Tsubaki Nakashima sustainability strategy is based on decarbonization of its plants and one of the pillars is strictly related to the electrification of the plants by eliminating fossil fuels consumptions.
			Increased demand for energy-saving and low-emissions bearings	Opportunity	Tsubaki Nakashima sustainability strategy is based on decarbonization of its plants and to the development of environmentally friendly and highly efficient bearing balls.
4 °C	Renewable energy		Increase in electricity costs due to use of renewable energy	Risk	One of the sustainability KPIs of Tsubaki Nakashima is the specific energy consumption and we are improving YoY this parameter. Moreover, two of the five pillars of our sustainability strategy can be adopted to mitigate this risk: energy efficiency improvements, photovoltaic systems installation in our plants.
			Install renewable energy systems	Opportunity	Installation of renewable energy systems and specifically photovoltaic systems is the second pillar of the sustainability strategy. Such plants not only generate zero-emission electricity but also generate economic benefits and make our factories more independent of fluctuations in commodity prices in the markets.
	Weather-related disasters		Risk of shutdown due to damage of our suppliers or our plants	Risk	Implement the pillars of our sustainability strategy and involve our suppliers as well.



# MANAGEMENT OF WATER DISCHARGE

## Negative environmental impacts in the supply chain and actions taken

As mentioned in the description of the Global Sustainability System, one of the fundamental tools for understanding the context in which one operates is risk assessment, in particular the Assessment of Environmental Aspects referred to in requirement 6.1.2 of the ISO 14001 standard. Given the variegation of suppliers and supply chains and taking into account that the Carbon Footprint Scope 3 will be calculated and disclosed in 2024, it is each individual factory that, evaluating the environmental aspects, identifies the type, the potential impact, the relevance, the actions to mitigate its impacts and the way to measure the achievement of results, with a view to continuous improvement

## Management of water discharge Related impacts

In every Tsubaki Nakashima Co. Ltd (TN (Tsubaki Nakashima)) Plant we establish a program to ensure that wastewater generated by its operations is managed in accordance with all applicable local, regional, state, and national environmental laws and regulations, and TN Global Sustainability System (GSS) policies.

But before defining the plan, it is in the Evaluation of Environmental Aspects (6.1.2 of the ISO 14001 regulation) that aspects and impacts are identified, their significance is defined, and specific actions are created to minimize them by a certain date.

Each wastewater management program has the following elements

- Identification of all wastewater streams generated by Plant operations, including process wastewater, cooling water, stormwater runoff, and domestic sewage
- Identification of the composition, generation rate, location, point of release or mixing with other surface waters, and ultimate discharge point of each wastewater stream
- Procedures to control, and verify control of discharges, as required by applicable laws, regulations, and TN GSS policies
- A plan to reduce the total volume of, and the concentration of contamination present in, each wastewater stream
- Procedures to identify wastewater streams that require permits (prior to the permits being required)
- Procedures for obtaining permits. Permits must be kept current, and each Plant must ensure that it follows permit conditions
- Procedures to update program as processes are deleted, added, or changed
- A plan for preventing foreseeable contamination of wastewater streams
- A plan for responding to an accidental release or discharge that includes containment procedures, names of response personnel, response equipment and materials, and required notification procedures.

As for all the other Company's Policies, the Audit Plan has the scope to check the level of conformity and, eventually, define corrective actions



# BIODIVERSITY

During 2023, Tsubaki Nakashima started the learning process regarding Biodiversity. For that reason, we don't currently have any targets or KPIs related to biodiversity. However, Tsubaki Nakashima has worked to improve its understanding of the impact and dependencies of biodiversity as well as associated risks and opportunities. Thanks to the specific tool developed by WWF, Biodiversity Risk Filter, we started the assessment of:

**PHYSICAL RISKS** that are driven by the ways in which a business and its supply chains depend on and can be affected by both natural and human-induced conditions of land- and seascapes, and how pressures might deteriorate ecosystem services in the future.

**REPUTATIONAL RISKS** that can result from a company's actual or perceived negative impacts on biodiversity and people. Reputational risk represents stakeholders' and local communities' perceptions of whether companies conduct business sustainably or responsibly with respect to biodiversity and can ultimately affect brand value and market share, among other factors. Adverse effects on business could emerge from, for example, damages to the corporate brand and thus declining sales, or greater investor scrutiny and thus declining share price.

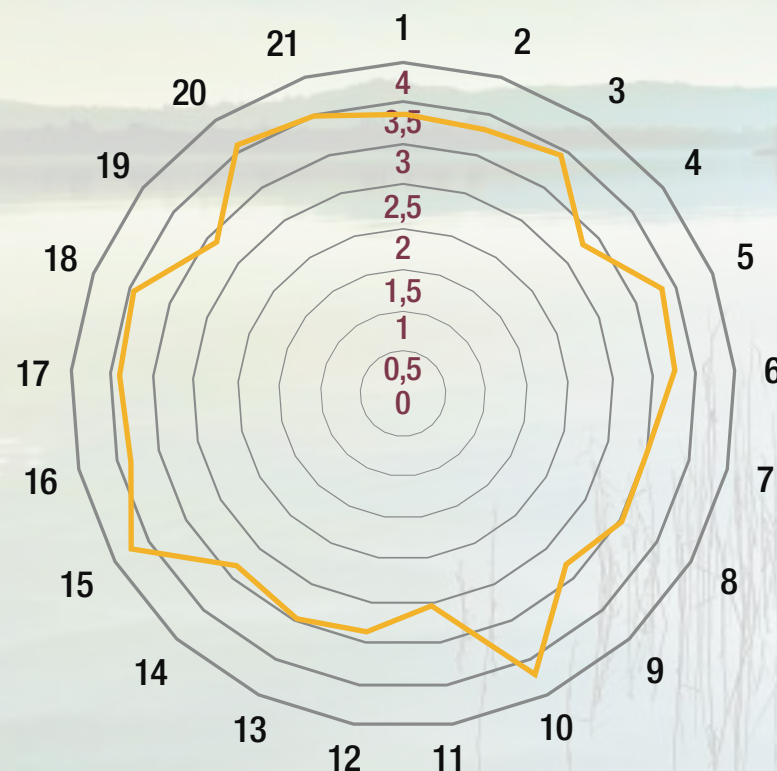


# PHYSICAL RISKS

Tsubaki Nakashima carried out both an assessment based on the geographical location of plants and also an assessment based on the organization's specific market sector. The results obtained are shown in these pages.



**PHYSICAL RISKS:** the map shows the globalizations of different plants that are classified based on physical risks (red: high risk, light yellow: low risk).



PHYSICAL RISKS FOR GEOGRAPHICAL LOCATIONS			
N	PLANT	LOCATION	RISK VALUE
1	Katsuragi plant	Katsuragi - Japan	3,35
2	Koryiama plant	Koryiama - Japan	3,35
3	Okayama plant	Okayama - Japan	3,40
4	Rispa	Mirandola - Italy	2,88
5	Sechibaru plant	Sechibaru - Japan	3,35
6	TN Bosnia	Konjic - Bosnia and Herzegovina	3,25
7	TN Chongqing	Chongqing - China	3,00
8	TN Georgia	Cumming Georgia - USA	2,98
9	TN Italy	Pinerolo - Italy	2,88
10	TN Kunshan	Kunshan - China	3,75
11	TN Michigan	Sault Ste. Marie Michigan - USA	2,53
12	TN Polska	Krasnik - Poland	2,88
13	TN Rayong	Rayong - Thailand	3,00
14	TN Slovakia	Kysucke Nove Mesto - Slovakia	2,88
15	TN Taicang	Taicang - China	3,75
16	TN Taiwan	Taichung City - Taiwan	3,40
17	TN Tennessee Erwin	Erwin Tennessee -USA	3,38
18	TN Tennessee Mountain City	Mountain City Tennessee - USA	3,38
19	TN UK	Worthing West Sussex - UK	2,88
20	TN India Silvassa	Silvassa - India	3,58
21	TN Tennessee Mountain City	Konjic - Bosnia and Herzegovina	3,58

As we can see from the charts, based on the geographical location, the fourth plants with the highest physical risks are TN Kunshan and TN Taicang in China and the two plants in India.



# REPUTATIONAL RISKS

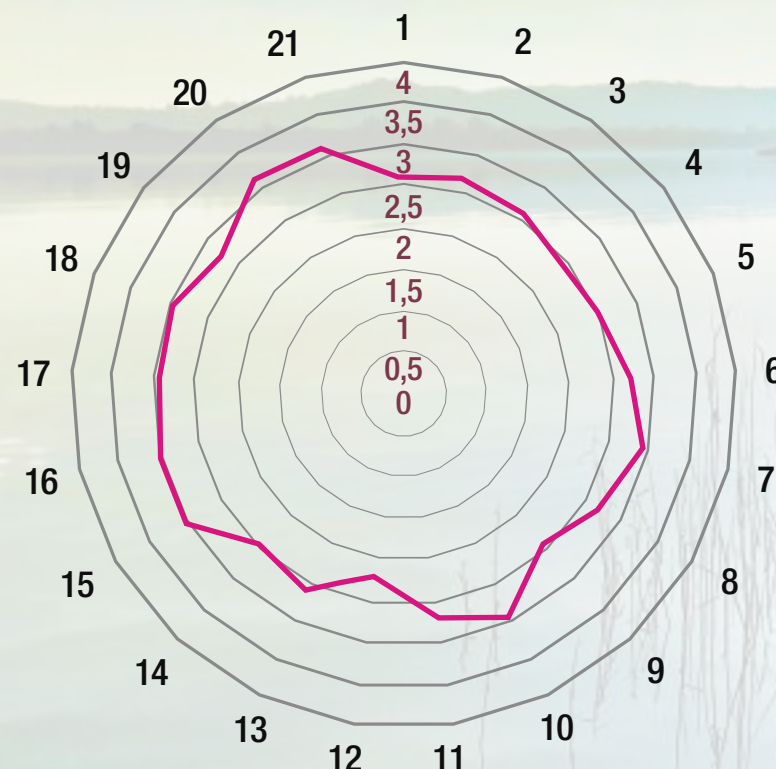
As was done for physical risks also for reputational risks map, table and graph are shown.



REPUTATIONAL RISKS

By comparing the two analyses performed, it appears that the plants on which we will have to start focusing our analyses, which are those at the greatest risk of biodiversity, are:

- TN Kunshan
- TN Taicang
- TN India (2 plants)
- TN Chongqing
- TN Taiwan
- TN Tennessee (2 plants)



REPUTATIONAL RISKS FOR GEOGRAPHICAL LOCATIONS

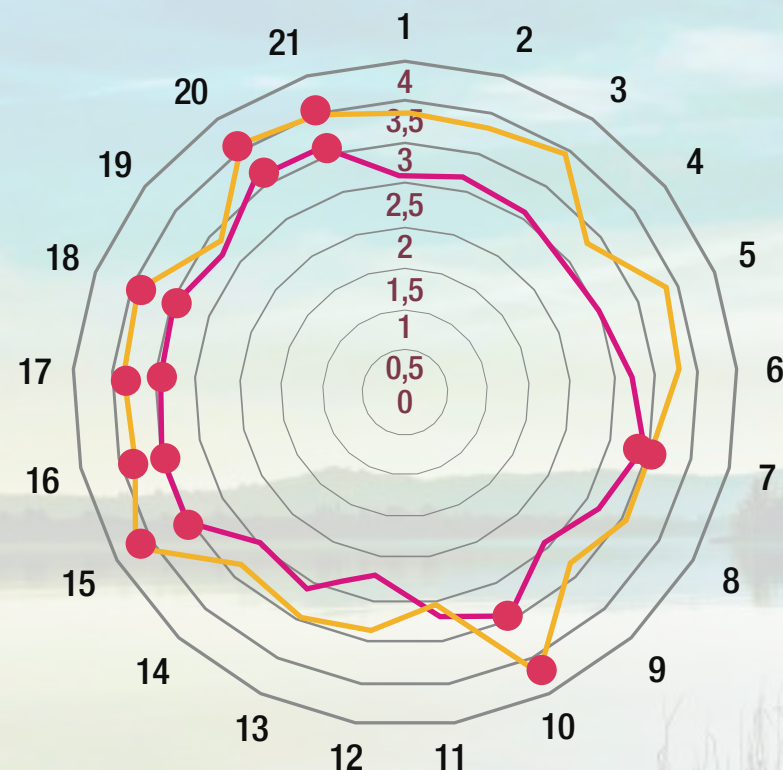
N	PLANT	LOCATION	RISK VALUE
1	Katsuragi plant	Katsuragi - Japan	2,62
2	Koryiama plant	Koryiama - Japan	2,62
3	Okayama plant	Okayama - Japan	2,62
4	Rispa	Mirandola - Italy	2,50
5	Sechibaru plant	Sechibaru - Japan	2,62
6	TN Bosnia	Konjic - Bosnia and Herzegovina	2,77
7	TN Chongqing	Chongqing - China	2,95
8	TN Georgia	Cumming Georgia - USA	2,69
9	TN Italy	Pinerolo - Italy	2,38
10	TN Kunshan	Kunshan - China	2,95
11	TN Michigan	Sault Ste. Marie Michigan - USA	2,69
12	TN Polska	Krasnik - Poland	2,17
13	TN Rayong	Rayong - Thailand	2,58
14	TN Slovakia	Kysucke Nove Mesto - Slovakia	2,44
15	TN Taicang	Taicang - China	2,95
16	TN Taiwan	Taichung City - Taiwan	2,95
17	TN Tennessee Erwin	Erwin Tennessee -USA	2,94
18	TN Tennessee Mountain City	Mountain City Tennessee - USA	2,94
19	TN UK	Worthing West Sussex - UK	2,75
20	TN India Silvassa	Silvassa - India	3,12
21	TN Tennessee Mountain City	Konjic - Bosnia and Herzegovina	3,12

As we can see from the charts, based on the geographical location, the six plants with the highest reputational risks are TN Kunshan, TN Chongqing, TN Taicang in China, TN Taiwan, and the two plants in Tennessee (USA).



# PHYSICAL+REPUTATIONAL RISKS

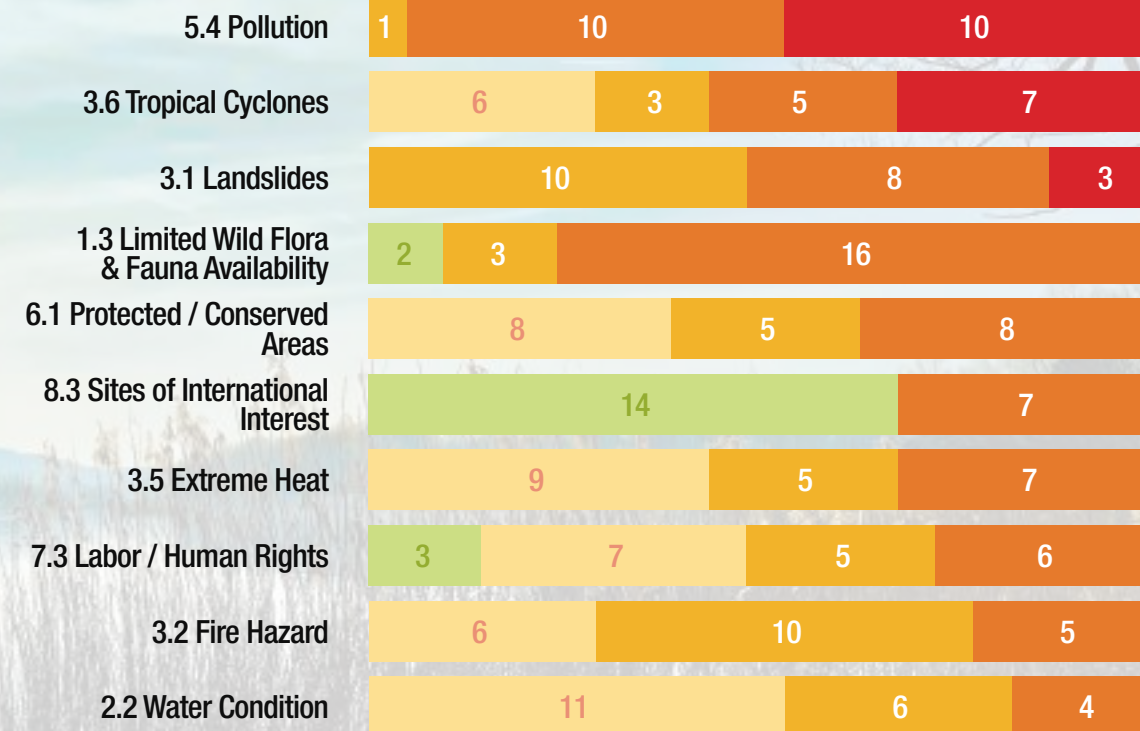
N	PLANT
1	Katsuragi plant
2	Koryama plant
3	Okayama plant
4	Rispa
5	Sechibaru plant
6	TN Bosnia
7	TN Chongqing
8	TN Georgia
9	TN Italy
10	TN Kunshan
11	TN Michigan
12	TN Polska
13	TN Rayong
14	TN Slovakia
15	TN Taicang
16	TN Taiwan
17	TN Tennessee Erwin
18	TN Tennessee Mountain City
19	TN UK
20	TN India Silvassa
21	TN Tennessee Mountain City



— Physical Risks  
— Reputational Risks

# RISK INDICATORS

NUMBER OF SITES BY TOP 10 RISK INDICATORS



Thanks to the tool used, by attributing the organization's market sector and the locations of the various plants, the 10 most impactful biodiversity drivers for Tsubaki Nakashima were also identified.

GEN

STR

Q

SOC

GOV

SUST

SOC

SUPP

IND

CRED

NOTE



# RISK INDICATORS

## TOP 5 INDICATORS ARE DESCRIBED BELOW:

- 1 Pollution (5.4):** this indicator is based on nutrient, pesticide and air pollution. Pollution is an important driver of biodiversity and ecosystem change throughout all biomes. A high risk score for this indicator is a result of high impact of your industry on biodiversity through this pressure in combination with high location risk scores.
- 2 Tropical Cyclones (3.6):** this indicator assesses the predicted maximum wind speed on a 50-year return period. Storms can impact companies and value chains through a variety of ways, including building and property damage, flooding or power outages, which may lead to temporary or permanent company closures and loss of revenue. A high risk score for this indicator is a result of high dependency of your industry on the absence or mitigation of this natural hazard in combination with high location risk scores.
- 3 Landslides (3.1):** this indicator assesses the potential threat of rainfall - and earthquake-triggered landslides. Landslides impose significant risks to human lives and economic activities. Landslides have become more prevalent because of anthropogenic disturbances, such as land-cover changes, land degradation and expansion of infrastructure. These are further exacerbated by more extreme precipitation due to climate change, which is predicted to trigger more landslides and threaten sustainable development in vulnerable regions. A high-risk score for this indicator is a result of high dependency of your industry on the absence or mitigation of this natural hazard in combination with high location risk scores.
- 4 Limited Wild Flora & Fauna Availability (1.3):** this indicator refers to the unavailability of commercially harvested species. A high risk score for this indicator is a result of high dependency of your industry on this resource in combination with a high location risk score.
- 5 Protected/Conserved Areas (6.1):** this indicator is based on overlap of the assessment units with protected areas (PA). Reputational risk will be influenced heavily by proximity to protected areas, particularly as these two designations are used in corporate and financial safeguards. A high risk score for this indicator is a result of high impact of your industry on PAs in combination with high location risk scores.

The assessment conducted in 2023 shows that Tsubaki Nakashima's impact on Biodiversity is mainly related to Pollution and land protection/conservation. In the coming years, all impacts will be analyzed in detail and a strategy will be defined to mitigate all the highest biodiversity-related risks. In any case, **from this first assessment, it denotes that Tsubaki Nakashima's sustainable development strategy is already in line and able to mitigate the highest and most impactful risk indicator, which is precisely the one concerning pollution (5.4).**





# COMMITMENT TO PEOPLE



To create success and efficiency we need to co-operate as One Team. This requires that we operate, train and protect our people according to common rules. Let's start with the PEOPLE VISION and MISSION of Tsubaki Nakashima's people: what we want to achieve is to create a multi ethnic and monocultural organization.

**VISION**  
CREATE A MULTI-ETHNICAL  
AND TN MONOCULTURAL ORGANIZATION

**MISSION**  
Foster differences to create added value and give new and growth perspectives, balance the interests of the parties by maximizing their mutual benefit, integrate and help people grow, creating a safe, fair work environment where everyone is valued and valued for what they give.



# COMMITMENT TO PEOPLE

In simple words this means that every-one is treated in an equal way, has equal chances to develop independently from their gender, race, language, and cultural background. We want to install the best blend of our people's talents to become successful in adding value to our stakeholders and to achieve profitable growth.

We set standard of behavior for team members and all stakeholders while at work, helping all the employees to us comply with applicable laws and regulations, guiding the decision-making process, reinforcing the commitment to impeccable character.

As part of the Tsubaki Nakashima team, each employee takes care of himself/herself and each other and Tsubaki Nakashima promotes safety, health, and social responsibilities because people matter – not just to the Company, but to fellow team members, friends, families, and communities.

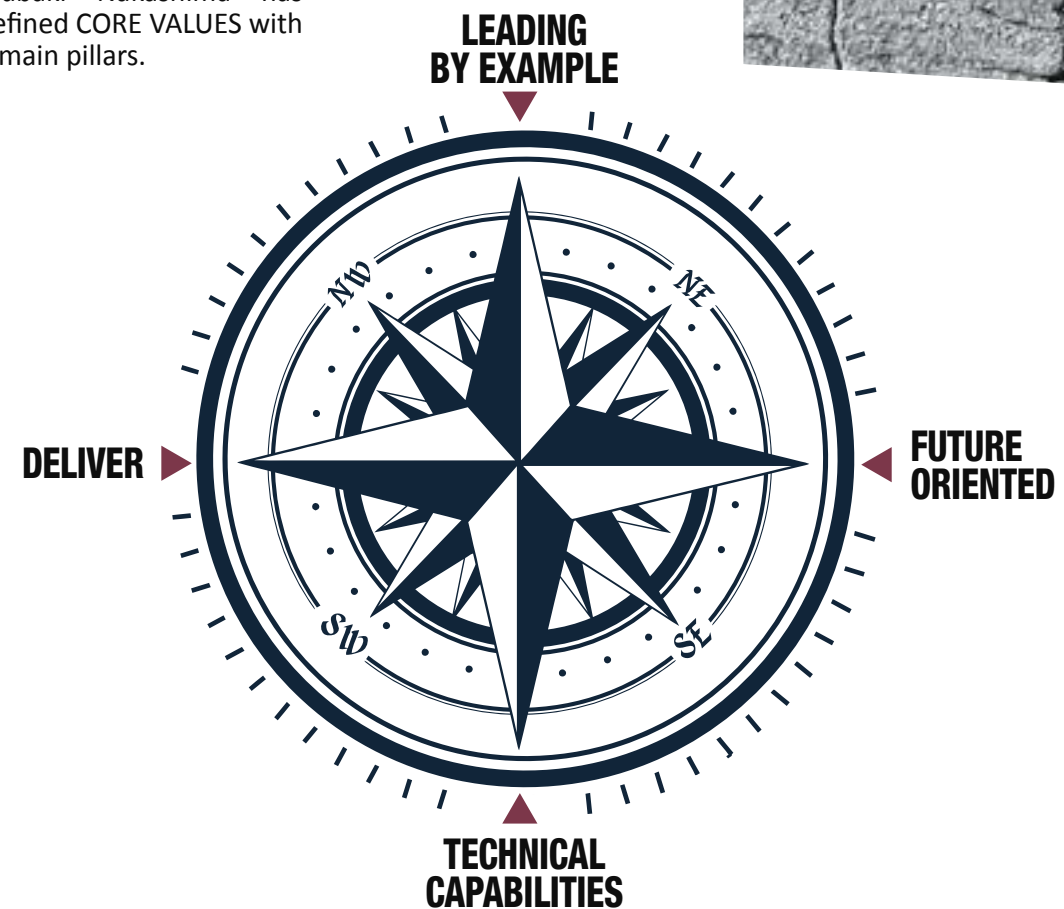
We value the power of Individual and Collective know-how: we grow the business and in parallel improve the work environment by building positive and enduring relationships.

We appreciate and favorite the contribution of every team member in every location. It is the variety of talent, ideas, opinions and experiences – what we call the “TN Collective know-how” – that gives a broader understanding of the marketplace and the world around. It is how we build high-performance teams and deliver innovative solutions for customers. In everything the Group does, diversity is a competitive advantage, and it drives creativity, innovation, decision making and ability to serve our Customers.

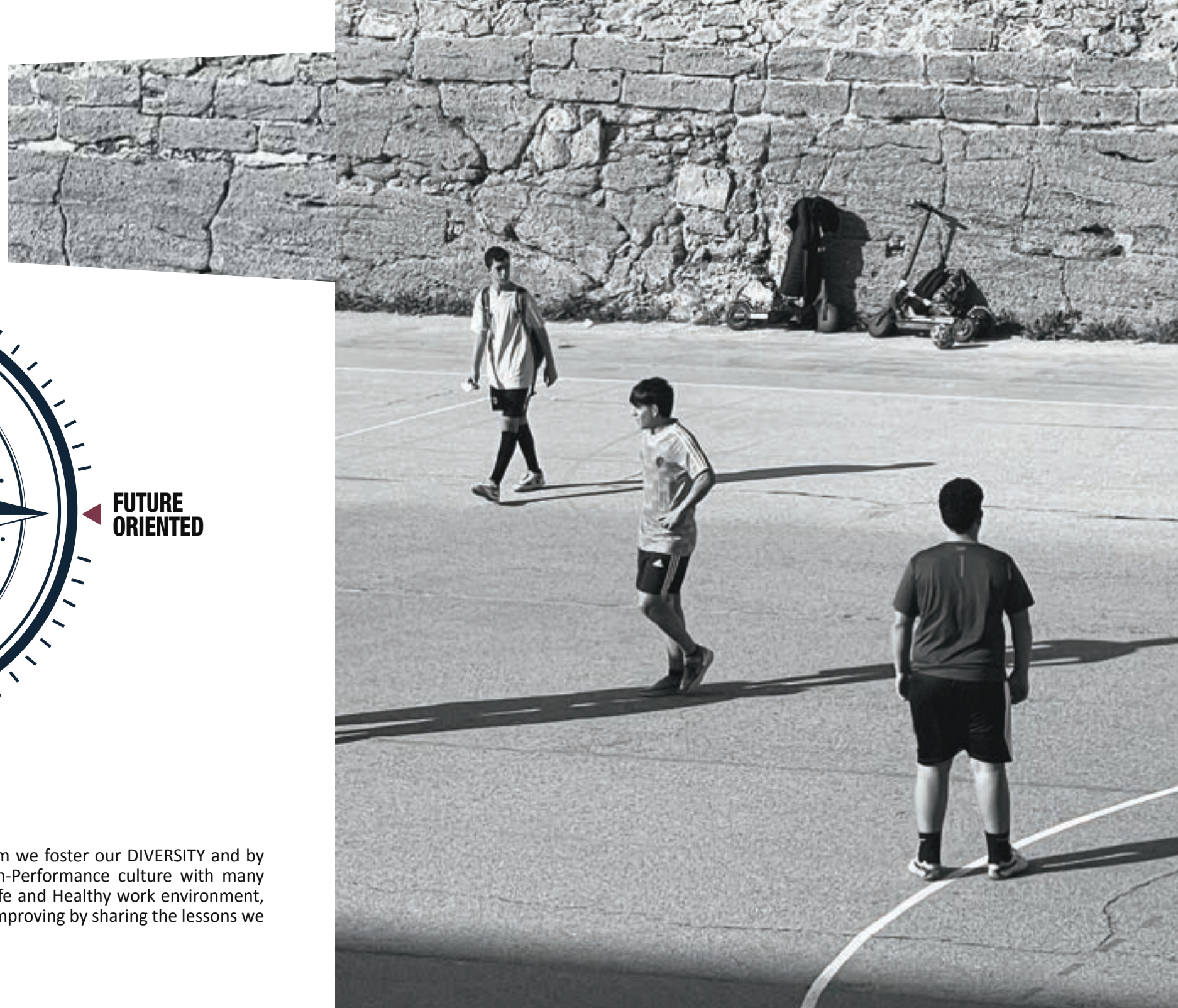


# COMMITMENT TO PEOPLE

To realize this Vision  
Tsubaki Nakashima has  
defined CORE VALUES with  
4 main pillars.



These are anchors for our attitude and behaviours. As a Team we foster our DIVERSITY and by sharing our diverse know-how we are able to reach a High-Performance culture with many innovations. Being a Manufacturing company, we install a Safe and Healthy work environment, which is our top priority. We are continuously learning and improving by sharing the lessons we have learned with all our plants.





# COMMITMENT TO PEOPLE

## Generations

We recognize and value integrated strategies for the development and management of the needs of the different generations that work together within the organization.

## Gender

We value gender balance and the over-coming of any stereotype, discrimination or prejudice, in order to create the best conditions in which each person can express themselves. TN is committed to increasing the strengthening of awareness initiatives at all levels and promotes policies and actions aimed at promoting equal opportunities, work-life balance, the sharing of family responsibilities and the removal of potential obstacles, including those related to sexual orientation.

One of the principles in Tsubaki Nakashima is to respect the Universal Declaration of Human Rights and to promote HIGH LABOR STANDARDS, by applying our Code of Conduct. As part of EVERY EMPLOYEE'S Onboarding procedure, they receive the Code of Business Ethic's documents.

We have plants and offices in Japan, United States, Italy, Poland, Slovakia, Bosnia, China, Thailand, India, and Taiwan, and in each of these countries, local employees take the lead in conducting activities.

Our respect to our people is expressed by the diversity in our company, with its plants over the globe and with **37 different nationalities**.

**We foster a gender balance, without obstacles, as well as integration and inclusion of people with disabilities.**

Every-one has talents and Tsubaki Nakashima wants to make full use of everyone's skills and competences.

In all our Teams and Plants, we meet different generations and different cultures.

## Disability

We recognize equal opportunities for all its people regardless of sensory, cognitive and motor disabilities. In this context, it is committed to implementing concrete measures to promote the integration and inclusion of people with disabilities, making full use of their talent and skills in the Company and thus contributing to the removal of cultural, sensory and physical barriers.

## Interculturalism

We are committed to promoting and systematizing the mix of different cultures within it through the promotion of an intercultural vision and open to multi-level discussion, based on organizational and social cooperation.





# COMMITMENT TO PEOPLE

## 2.968 EMPLOYEES HAVE A PERMANENT CONTRACT

2023 - ACTUAL SITUATION												
CLASSIFICATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC
Direct	1.649	1.688	1.672	1.667	1.678	1.686	1.664	1.659	1.673	1.655	1.654	1.651
Direct temporary	346	339	358	360	351	348	332	333	329	334	345	355
<b>TOTAL DIRECT</b>	<b>1.995</b>	<b>2.027</b>	<b>2.030</b>	<b>2.027</b>	<b>2.029</b>	<b>2.034</b>	<b>1.996</b>	<b>1.992</b>	<b>2.002</b>	<b>1.989</b>	<b>1.999</b>	<b>2.006</b>
Indirect Hourly	572	561	561	557	560	553	548	554	554	555	555	551
Indirect Salaried	428	431	414	420	423	422	434	435	442	446	439	442
Indirect Temporary Hourly	55	57	66	63	69	76	65	61	58	58	63	64
Indirect Temporary Salaried	28	30	28	28	27	31	38	39	41	40	41	39
<b>TOTAL INDIRECT</b>	<b>1.083</b>	<b>1.079</b>	<b>1.069</b>	<b>1.068</b>	<b>1.079</b>	<b>1.082</b>	<b>1.085</b>	<b>1.089</b>	<b>1.095</b>	<b>1.099</b>	<b>1.098</b>	<b>1.096</b>
SG&A Hourly	71	71	74	75	75	78	79	73	71	71	71	71
SG&A Salaried	251	251	248	250	250	254	250	260	259	260	264	253
SG&A Temporary	23	22	24	24	25	24	31	26	25	26	24	24
<b>TOTAL SG&amp;A</b>	<b>345</b>	<b>344</b>	<b>346</b>	<b>349</b>	<b>350</b>	<b>356</b>	<b>360</b>	<b>359</b>	<b>355</b>	<b>357</b>	<b>359</b>	<b>348</b>
<b>TOTAL PLANT EMPLOYEES</b>	<b>3.423</b>	<b>3.450</b>	<b>3.445</b>	<b>3.444</b>	<b>3.458</b>	<b>3.472</b>	<b>3.441</b>	<b>3.440</b>	<b>3.452</b>	<b>3.445</b>	<b>3.456</b>	<b>3.450</b>

### GRI 401

As of December 31, 2023, Tsubaki Nakashima had 3450 employees, of which 2006 direct workers, 1096 indirect workers and salaried workers, and 348 SG&A employees.



## 3.450 EMPLOYEES

The percentage of female staff varies from geographical area to geographical area, but also depending on the type of product and the mechanical processes carried out, and on the local culture, especially for what is concerning India. Summarizing the data by area, in Japan (in the 4 factories and the Osaka headquarters) female staff amounts to 16%,

in Taiwan it rises to 23%, in Thailand it is close to 44% and in China (3 factories) it stands at 21 %. Moving westwards, we find India with a presence of only 1%, while in Poland we reach 22.5%, in Slovakia 20%, in Italy (2 factories) 21%, in Bosnia Herzegovina 26%, in UK by 27% and in Holland by 25%. In the 4 US factories, the percentage amounts to 18%



# COMMITMENT TO PEOPLE

## GRI 407

The most important of our management principles is respect for others, respect for the laws and the territory where we operate. Freedom of association and discussion with company representatives is fully protected and regulated by specific policies contained in our governance system. In all countries where local legislation provides for the stipulation of collective agreements (CLA, CBA), national and/or company, and employees wish to join the Union, respect for them and the willingness to discuss constructively on any topic that both inherent to the employment relationship and the working conditions is total. Specifically, in the countries where it is foreseen, we can say that 100% of our staff is protected. Where workers' representatives are present, information but also discussion and discussion meetings are held regularly. However, where they are not present, management organizes information sessions on strategies, trends, and results at least once a year.

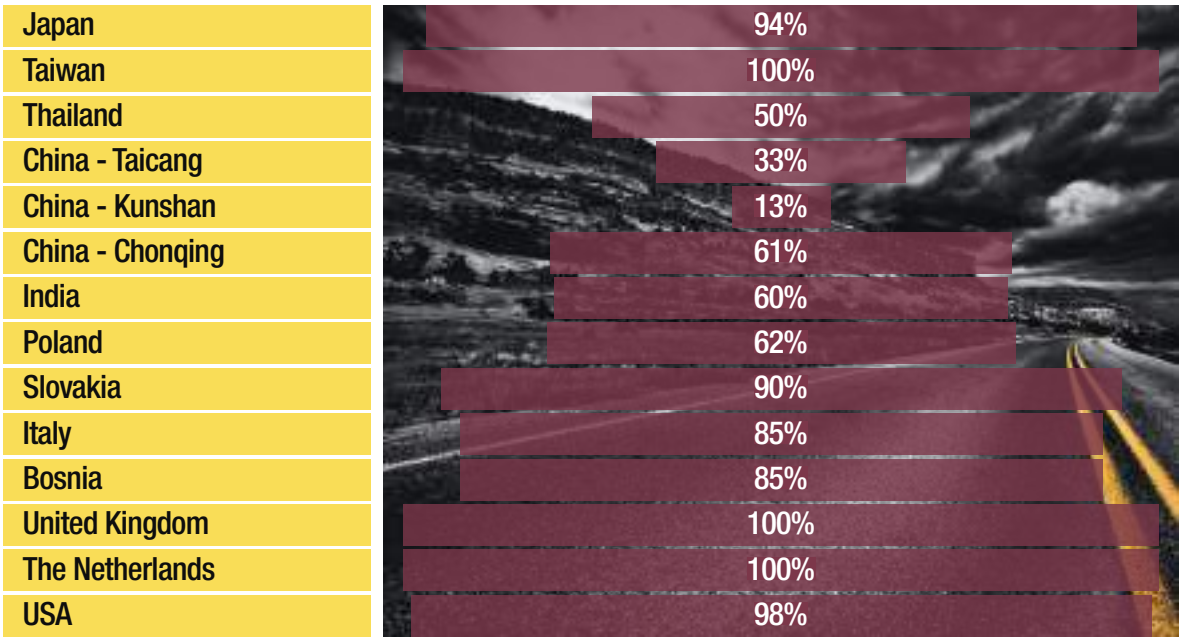
## GRI 202

Our approach to compensation and benefits, and related policies, ensures that employees are being paid fairly, and describes terms for workers' compensation, allowances, benefits, and bonuses (short-term and long-term incentive plans) at different levels of our organization. Compensation and benefits can be subject to differing Countries' laws and regulations, but there is a deep and strict alignment with the Company's culture, Corporate Governance and Management Principles. Tsubaki Nakashima is strongly committed, because we believe that only with a holistic approach can we truly create a work environment where everyone can find their own motivation to achieve results. Our approach to compensation and benefits, and related policies, ensures that employees are being paid fairly, and describes terms for workers' compensation, allowances, benefits, and bonuses (short-term and long-term incentive plans) at different levels of our organization. Compensation and benefits can be subject to differing Countries' laws and regulations, but there is a deep and strict alignment with the Company's culture, Corporate Governance and Management Principles. Clear rules concerning compensation and benefits increase employee motivation. We believe that the promise of rewards and recognition for high-performing employees encourages people to work harder to meet both personal and company goals and objectives. Effective and fair compensation also enriches your company culture, employees are more likely to recommend working for your organization and this further increase company loyalty and reduces employee turnover.



In every Country where we operate, the **RATIO** of Standard entry level wage compared to minimum wage is at 100%; this not only guarantees fair treatment to those, especially young people, approaching the world of work for the first time, but constitutes a solid basis for salary improvements linked, in addition to the adjustments required by local laws or collective agreements, to the improvement of competence and professionalism, and career opportunities. A second truly determining factor for Tsubaki Nakashima is the relationship with the communities and the territory in which we operate. In our hiring policies, we favor - with equal professionalism - local staff; but while for direct and indirect workers, as well as salaried workers, this is quite widespread, we also measure our ability to attract (or develop) local management or those who then move close to the factories, progressively integrating into local communities. The table below demonstrates what has been said:

### Proportion of management hired from the local communities (within a radius of 50 km/30 miles)





## GRI 401-3

For Tsubaki Nakashima, well-being is one of the keys for a healthy Company.

Our policies set additional expected standard of behavior for team members and all stakeholders while at work, helping all the employees to us comply with applicable laws and regulations, guiding the decision-making process, reinforcing the commitment to impeccable character. It includes requirements driven by law, and requirements driven by Tsubaki Nakashima Code of Business Ethics, philosophy, and culture and by Tsubaki Nakashima management statements.

As part of the Tsubaki Nakashima team, each employee takes care of himself/herself and each other. Tsubaki Nakashima promotes safety, health, and social responsibilities because people matter – not just to the Company, but to fellow team members, friends, families, and communities.

Tsubaki Nakashima shares a commitment to the idea that doing what is right extends into the communities where the Group operates. As such, Tsubaki Nakashima cares for the work environment and upholds human rights, regardless of local business customs. Specifically, when we focus on people, it means that we respect and abide by all applicable employment laws in the markets where we operate. If an employee has any questions regarding applicable employment laws, he/she can consult with Tsubaki Nakashima Human Resources Team.

Our Labor Standards Policy is aligned with the principles established within the Universal Declaration of Human Rights and in combination with TN (Tsubaki Nakashima) Managerial Statement and Code of Business Ethics and reinforces the commitment to ensuring all internal and external stakeholders are treated with dignity and respect. As part of due diligence when entering acquisitions, new operations, and other contractual arrangements, we seek to abide by the requirements set out in this document to ensure any labor standards and human rights issues are identified and assessed.

We believe that a good work environment means:

- 1** Physical environment: all places of work, all sites, and areas where work is carried out
- 2** Set of rules: the methods of performing the job's functions
- 3** Corporate conditions: Company values, Company policies and protocols, Leadership style, Employer's programs for employees (e.g.: training, recreation, and engagement), Job benefits (e.g.: salary, STI, LTI, health insurance, dental insurance, pension systems...), Job conditions (terms of employment, flexibility), Social behaviors (G&O, PE, Teamwork, openness, transparency, social and individual dynamics), Job satisfaction and Employee opinions

As said, Tsubaki Nakashima operates in full compliance with employment laws and regulations in all districts in which it operates. This includes laws governing wages, working hours, overtime, statutory employee benefits and many others. The Company compensates employees competitively relative to the industry and respective local labor markets.

## COMMITMENT TO PEOPLE

'A better corporate citizen' forms part of Tsubaki Nakashima's Management Principles and "Integrity, Respect and Honest Communication, Courage" inspire our Leaders, at all levels. As part of this commitment, Tsubaki Nakashima recognizes its responsibility to ensure its people can enjoy a work-life balance and are provided with opportunities to develop professionally.

The GRI standard 401 – 3 specifically mentions elements of the benefit's package are applying in most of the Countries:

- 1 Life insurance:** 10 plants
- 2 Health care** (public and/or private), in every Country
- 3 Disability and invalidity** coverage, in every Country
- 4 Parental leave**, in every Country except India (where the employees' population is 99% men)
- 5 Retirement provisions**, in every Country
- 6 Canteen**, in 13 plants
- 7 Gifts**, in every Country
- 8 Uniforms**, in every plant excluding one





## GRI 404

Tsubaki Nakashima recruits, develops, and promotes personnel based on merit and strives to maintain a work environment free from discrimination and harassment.

In Tsubaki Nakashima, for the DEVELOPMENT OF OUR PEOPLE, we have established and improved an education and training system and we are continuously working to provide opportunities for all employees to acquire the knowledge, skills, and techniques necessary to perform their duties accurately and promptly, both inside and outside the workplace. In Vision Zero, this is Zero lack of Knowledge.

We believe that the **VALUE OF OUR MANAGERS** should be the ratio between **COMPETENCIES**, **HUMILITY** and **ABILITY** to operate. However, only our **ATTITUDE** can be the right multiplier to achieve or not the success.

$$V = (C^2 + h + A) \times A$$



## TRAINING AND EDUCATION



In the process of creating professionalism and skills, the most important part is that of defining the expectations, contents and boundaries of a function, at any level; and then of the system of organizational relationships. For this reason, in Tsubaki nakashima, we use two tools in particular:

- 1 Job Descriptions
- 2 Definition of the minimum technical requirements and Gap Analysis

Immediately after the Gap analysis, a process of training and acquisition of skills begins which is expressed and monitored through corporate tools (Performance Evaluation and the training platform called Talent LMS) but above all factory tools (normally the so-called Skill Map)

But before getting into the specifics, one of the most important and subsequent phases of introducing a new employee into the organization is the onboarding process.

The minimum requirements of TN's onboarding process are:

- 1 Preparation for the employee's first day: documentation, tour of work area, uniforms, equipment, designated work area ready, introduction to managers, peers, subordinates, PPEs, etc.
- 2 Training program - including company overview, review of job description, goals and objectives, pertinent work-instructions, on-the-job training program, key areas of interaction.
- 3 Goals Deployment - clear goals and objectives should be assigned to the employee in One Team (or if the process has been closed for the year), SMART goals should still be documented and deployed.
- 4 Follow-up sessions with the manager and HR should be formally conducted to document the employees' and manager's feedback re. the onboarding processes. TN requires at least 2 follow up sessions - one after the training plan is completed, and one after the employee completes 3 months in the organization.

COMMITMENT  
TO PEOPLE



# MAPPING AND TRAINING OF WORKERS

Plant managers and Management Team Members are requested to test the knowledge and technical skills (specific to each machine / stage of the production/other specific processes) which are also constantly mapped and monitored in order to ensure maximum effectiveness and quality of work performed and therefore to verify and guarantee the compliance with the customer requirements.

The form, content and mapping of the analysis can differ from plant to plant, but the content must be the same. The Department Supervisors analyze the skills of each employee, confirming the competencies described in the “Skill Map” (or Training Plan) or planning the needed training activities in order to determine the real status quo in terms of expertise, performance and reliability, and contains the date in which the evaluation was done and the effectiveness of the training.

The Mapping starts from a formalized and described process for the key roles (those identified in the Performance Evaluation) and for some well-defined indirect employees. The local HR Office is responsible for the information collecting process that, combined with the analysis of training needs and, if applicable, Competency Assessment, would form the Training and Development Plan.

Training is provided in case of:

- A** new employees (On-boarding)
- B** job change (job rotation, change of channel/department, etc.)
- C** new methodologies / machines / tools
- D** new work-instructions, procedures, policies, systems, customer requirements
- E** recovery/development because of the Performance Evaluation

## TRAINING TIME

# TRAINING PLATFORMS

## TN Academy

Since 2023, TN Academy has been migrated to a specific software, called TALENT LMS where, at the time of drafting this Report, the status is the following:

1 MONTH

27 DAYS

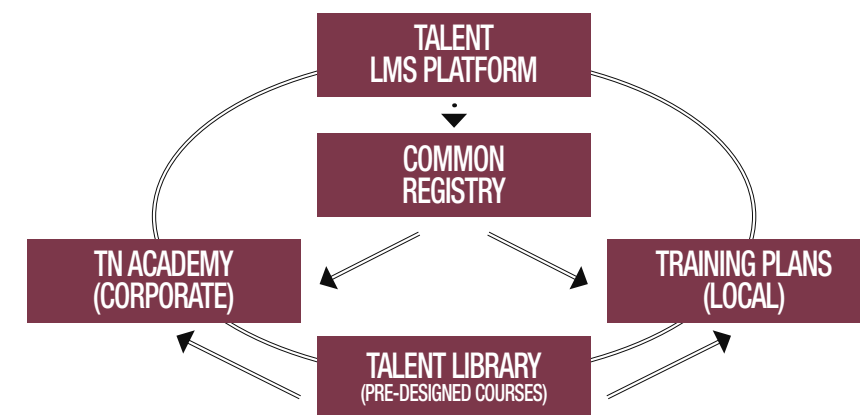
14 HOURS

TSUBAKI NAKASHIMA ACADEMY (TN ACADEMY) aims to improve the value we create for the customer, make our employees aware and prepared and offer growth opportunities, building their loyalty to the company.

The CHALLENGES OF TN ACADEMY we had to face were many: large number of participants, distribution of plants across different time zones, prerequisites of knowledge for participation in TN Academy, thorough knowledge of company policies, ethics and vision, varying training and induction strategies and procedures across the plants.

The SOLUTION we identified for the development of TN Academy, as well as a more agile management of training at local level, and specifically the on-boarding processes, was a

- A** learning management system available online for all plants, with a
- B** common training platform – identical courses globally,
- C** training library available on the platform and
- D** corporate trainings as well as plant-specific trainings all under one system



## LEARNING STRUCTURES

272 COURSES

32 GROUPS

22 BRANCHES

9 TESTS

3 SURVEYS

## COURSE COMPLETION RATE

6.096 ASSIGNMENTS

3.506 COMPLETIONS

57.5% COMPLETED

0 NOT PASSED

190 IN PROGRESS

## POTENTIAL SAVINGS

457 LESS COMMUTE HOURS

53.01 K\$ TRAINING SAVINGS

327 BETTER SKILLED PEOPLE

-7.39 Mg CO<sub>2</sub> ENVIRONMENTAL IMPACT



## DIVERSITY AND EQUAL OPPORTUNITY

### GRI 404-3:

#### Percentage of employees receiving regular performance and career development reviews

All employees (100%) who are included in the Goals and Objectives processes are consequently involved in the Performance Evaluation processes, at least once a year and in a formal manner. As regards the other employees, considering that every year there is a salary analysis which evidently has as its basis the evaluation of the technical-professional skills of the employees, we can say that 100% of the people are evaluated using objective criteria.

### GRI 408: Child Labor

There are no employees under 18 years of age in any of the factories.

### GRI 405:

Ratio of basic salary and remuneration of women to men: in our company, given the same job and function performed, there are no salary differences between men and women, as established by international and local regulations.

% of women in positions of responsibility/leadership - NOTE: responsibility means for example: team leader, shift leader, supervisor, head of department, manager, executive.

Even considering that our industrial sector and company history, combined with the local culture that differs from country to country, does not have a significant percentage of female personnel in our factories, many women, and in this case also very significant percentages, hold positions of responsibility at various levels.

The highest levels are reached in USA and China (20 - 30%) but above all in Thailand where the percentage reaches 70%.

Women and non-Japanese members are represented in our very diverse Committees

In the Management Committee (6 members), 3 are not-Japanese of which one is a woman

In the Sustainability Committee (5 permanent members), 3 are not-Japanese of which two are women.

The Chair of our Risk Management Company is a not-Japanese woman

### GRI 406:

#### Non-discrimination

In 2023 we received one complaint concerning a potential Incidents of discrimination.

Although Policy 3&4 relating to the “Non-retaliation and Whistle Blower process” allows each employee a protected approach, in this case the former employee preferred to expose herself only after having terminated the working relationship. The Company conducted a double internal investigation to ascertain the truth, finding no discriminatory behavior. Despite this, the former employee continued, and the case will be heard in 2024 .

## SMART

### Purposes

Leverage a single tool for identification of performance relative to assigned goals and relevant competencies for the prior year

Everyone has goals that support overall Goals

Create, maintain aligned global performance evaluation process

Evaluate and develop one set of competencies across Tsubaki Nakashima

Simplicity

### Goals and objective process

Translate financial targets in individual and specific tasks

Address the issues we have in every organization

(e.g.: Quality, Forecast accuracy, OEE, Productivity...)

Goals must be connected to the strategy (MTP) and BP

Goals must be the result of a discussion between employee and manager

### SETTING TARGETS AND EXPECTATIONS EVALUATE PERFORMANCES AND COMPETENCIES

The criteria for evaluating employees who work a full day and employees who work shorter hours are identical. This was done to ensure a level playing field when it comes to advancement and promotions. Employees are evaluated (Performance Evaluation and Competency Assessment process) based on their achievements with respect to goals (Goals and Objectives Process) and based on their behaviors and competences, with respect to the Tsubaki Nakashima Competencies.

Every target must align with the S.M.A.R.T. PHILOSOPHY

Each target (Goals and Objectives – G&O - Process) is discussed between the first level manager and the employee and supervised by the second level manager; the relevant HR Manager must confirm that the targets meet the required requirements. A mid-term review is carried out mid-year to confirm or modify the targets.

The Performance Evaluation (PE), on the other hand, is a much more complex process because it does not examine the results set the previous year, but evaluates the individual's skills, identifies competences, strengths and weaknesses, provides an action, experiential and training plan, to fill gaps and/or improve.

While the G&O process is started by the first level manager, the performance evaluation begins with the employee himself which is analyzed in a meeting with the manager and viewed by the second level manager.

The elements related to the assessment of competencies, are 4 and take into consideration both behavioral competencies (Leading by Example) and future orientation (Growth, Transformation), but also the technical competencies specific to the tasks and role performed (Technical Capabilities) and the ability to meet expectations and achieve expected results (Delivery).

These are the cardinal points of our every action, which is why they are represented graphically by a compass.





# EMPLOYEES' SATISFACTION SURVEY 2023



# EMPLOYEES' SATISFACTION SURVEY 2023

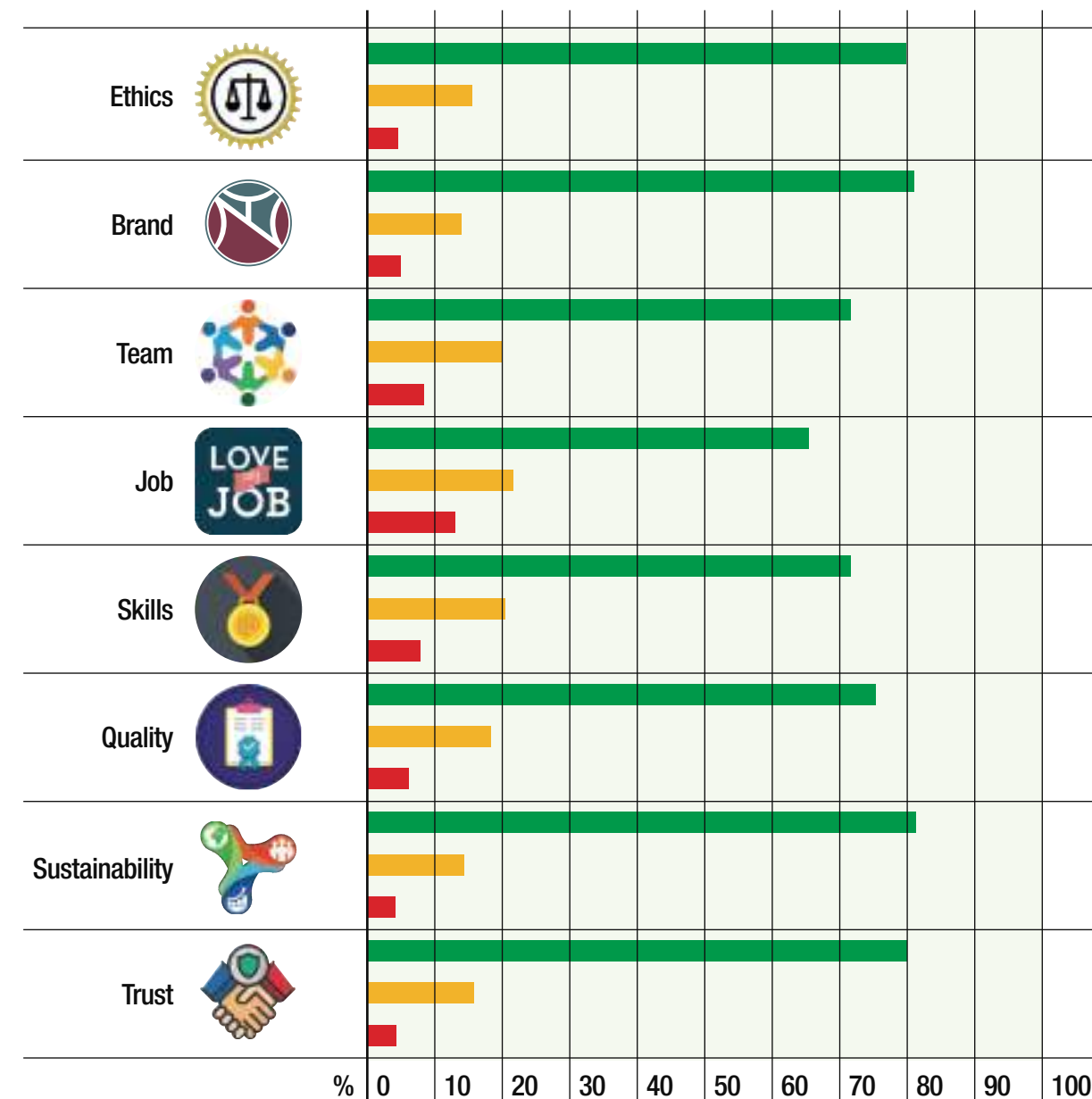
The success and growth Tsubaki Nakashima have experienced has been the direct result of our commitment to maintaining a culture that places integrity and the fair treatment of associates, customers, suppliers, competitors and investors at the core of all our business dealings. This continued emphasis on integrity, trust, participation and credibility will allow us to build upon our reputation as a First-class Market Leader, creating value and future for the Company and for all our employees.

The opinion of our employees, open, honest and sincere, helps to improve working conditions, relationships, performances, financial results. This is the reason why, every other year, we conduct an internal Survey (which is fully anonymous) to collect opinions, different points of view and suggestions.

Once the results have been collected, they are analyzed by each individual organization, discussed in specific meetings, corrective and improvement actions defined which are published and monitored.

In 2023 we decided to improve the previous Surveys, asking 35 questions, divided into 8 different categories – comparable with the past questionnaires.

The participation (70%) was in line with 2021 Survey and better than the 2019's one (62%)



As can be seen from the graph, the percentage of consensus is very high: excluding those who partially agree with the proposed statements and considering only those who agree or totally agree, the minimum % is 65% in the case of the My Job category, to reach over 81% of the Brand Identity and Sustainability categories. If we also take into account the "Partially Agree" category, the % reaches the minimum of 87% (My Job) up to more than 90% for all the other categories. Compared to previous years, we improved in every area. It means that our employees are satisfied with the Company, appreciating the effort we made to improve. We will continue to create actions and to listen the voice of our People



# TN AWARDS 2023



# TN AWARDS

## BEST RUN PLANT

Tsubaki Nakashima aims to recognize and reward excellence across the Organization, inspiring us to be better, to think bigger and to continue to grow, profitably through the TN Best Plant Award, which recognizes the continuous pursuit of excellence in every aspect of the business including customers, employees, and environment.

For Tsubaki Nakashima is important to recognize those in our organization who have really made a difference, and to consider, in addition to the ability to generate profit while keeping the promises of the Business Plan, the 4 Cardinal Points of our Performance Evaluation's process.

WINNER 2023

**TJO**  
**GLOBAL CERAMIC**  
**BUSINESS**  
OKAYAMA, JAPAN



- ★ The contribution to earnings of 178MJPY, which was generated by overcharging BP.
- ★ Appropriate support for the slump in TSR and the response to the increase in TAG-C production, while making facilities and materials available.







# TN AWARDS

## BEST RUN PLANT 2023

### TJO (Okayama, Japan)



# BX AWARDS

## BE EXCEPTIONAL AWARDS

BX (Be eXceptional) Awards is recognizing the results of peers and colleagues in our group who have achieved excellence and serve as inspiration and example for others. We want to inspire and celebrate positive behavior, results, and successes.

Thriving as a Company and acting as a worldwide leader in our business segment can only be realized by showing exceptional results and world-class excellence in all the things we do, independent from the role we fulfill in the Corporate – Region/Division - Plant or level of responsibility we hold. Our goal is that every employee steps on board and feels the spirit of being part of a winning team.

Every employee of Tsubaki-Nakashima (except Regional or Divisional Presidents, Global Function's Heads and Management Committee Members) can nominate candidates for the BX Award. No one knows better than you as to whom amongst your peers needs recognition for the extraordinary efforts and results, they deliver to the company.

To create profitable growth the content needs to Be eXceptional

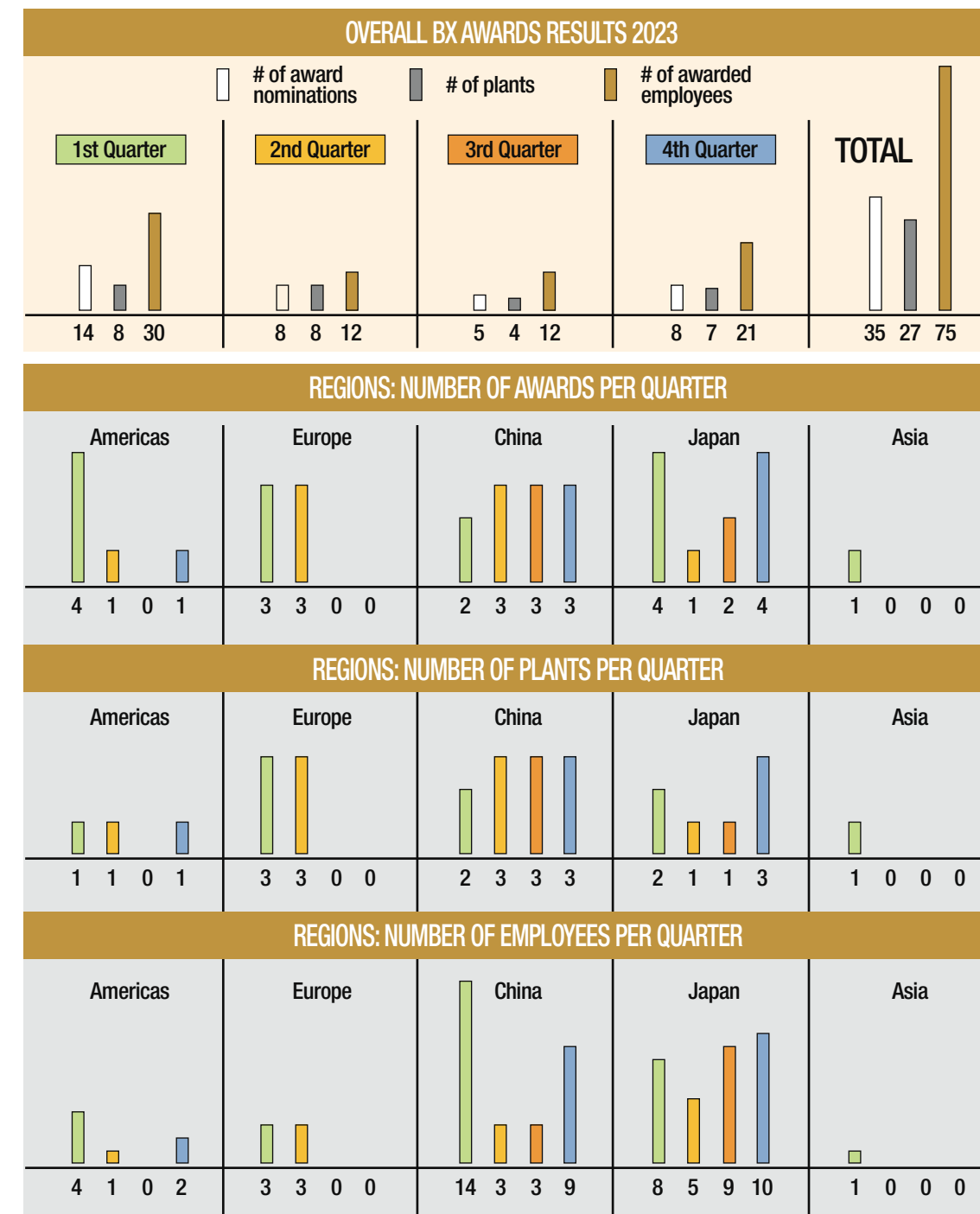
- ★ The biggest contributor was Japan (32 candidates) which participated in each quarter, as well as China
- ★ The most consistent - China, which contributed nomination of at least three employees each quarter
- ★ The most awarded employees in one quarter – was China

WINNERS

# 75

## AWARDED EMPLOYEES

IN 2023





# INITIATIVES

**TSUBAKI  
NAKASHIMA**





# INITIATIVES FOR COMMUNITIES



## THANKSGIVING FOOD DRIVE

The drive collected >300 lbs of food for those that need it. We partnered with Calvary Cares, an Erwin Food Pantry of Calvary Baptist Church, for the distribution. Don Pate, former NN Maintenance Tech, runs the program



## USA

Erwin  
[Tennessee]

## THE ANGEL TREE

Fifteen Unicoi County Children were represented on our Tsubaki Nakashima's tree, and available for "adoption": an initiative to collect money for the local community.

## STAFF THE BUS

Donation of school supplies for teachers and students (cleaning wipes, notebooks, pens, pencils, tissue).



## LIVE UNITED



## TREAT THE TROOPS

The "Treat The Troops" campaign was a huge success thanks to the generosity of our awesome employees and a monetary donation from the company.

## STAFF THE BUS



## USA Cumming [Georgia]

## HOLIDAY TOY DRIVE

Donation of toys for local children in need.



## USA

Sault Saint Marie  
[Michigan]





# INITIATIVES FOR COMMUNITIES

## ITALY Pinerolo



SPONSORING  
LOCAL INITIATIVES



**TSUBAKI NAKASHIMA  
BIG WALKING IN PINEROLO**  
collecting money for the  
local associations – 17.500  
Euros distributed (3.200  
participants),



## FOOD FOR ANIMALS

Collection of food and other accessories for homeless dogs and cats under the care of the local association "TULIMY"- in English "We cuddle" .



## POLAND Krasnik



## EARTH DAY

Campaign to promote ecology among employees and residents. Distributed free seedlings of trees, shrubs and balcony plants. Planted several trees and shrubs.

## SLOVAKIA Kysucke Nove Mesto

## FOOD FOR ANIMALS.



SHOPPING FOR CHRISTMAS  
COLLECTION FOR FAMILIES



# INITIATIVES FOR EMPLOYEES

## DECEMBER HOLIDAY LUNCH



**USA**  
Cumming  
[Georgia]

## EMPLOYEE OF THE MONTH



## EMPLOYEES CHRISTMAS PARTY



## EMPLOYEE APPRECIATION COOKOUT



**USA**  
Sault Saint Marie  
[Michigan]

## LUNCH BAG GIFT for all employees



## SHARING CELEBRATIONS



## SHRINE CIRCUS



**USA**  
Erwin  
[Tennessee]

## MANAGEMENT TEAM DINNER



## ST. VALENTINE'S CANDIES for all employees





# INITIATIVES FOR EMPLOYEES

PARTY



**CHINA**  
Kunshan

EMPLOYEE AWARD



LANTERN FESTIVAL



WOMEN'S DAY



OFFICE  
RELOCATION  
CEREMONY

OFFICE  
CHRISTMAS DECOR



EMPLOYEE  
BIRTHDAY PARTY



**CHINA**  
Chongqing

EMPLOYEE AWARD



WOMEN'S DAY



**CHINA**  
Taicang



# INITIATIVES FOR EMPLOYEES

PLAYING BASEBALL TOGETHER



**JAPAN**  
Katsuragi

**EMPLOYEES' REWARDS,  
RECOGNITION**  
and encouragement to refer  
qualified candidates

**INDIA**



FAREWELL PARTY



**NETHERLANDS**  
Veneendaal

CHRISTMAS  
LUNCH

**ITALY**  
Pinerolo



TEAM  
BUILDING FOR  
MANAGERS AND  
SHIFTLEADERS

**POLAND**  
Krasnik



**SLOVAKIA**  
Kysucke  
Nove Mesto

CHRISTMAS PARTY







# SAFETY & HEALTH

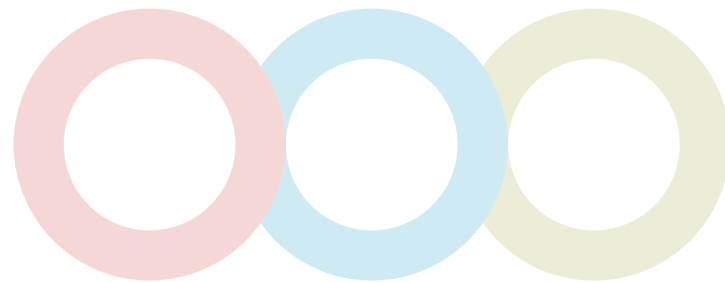


# SAFETY & HEALTH

## GRI 403:

Tsubaki Nakashima believes that providing and maintaining a safe and healthy work environment and promoting physical and mental well-being are the foundation of a healthy company. Accordingly, understanding that safety and health are the lifeblood of the company, we have instituted safety and health systems and activities at our sites around the world, so that our employees and partners can enjoy working as part of a team in a healthy environment and in the knowledge that they are safe and secure.

In our Vision Zero Approach, this is the ZERO ACCIDENTS, ZERO OCCUPATIONAL ILLNESSES and, for some extend, ZERO WASTES





# SAFETY & HEALTH

The core component of this effort is the Tsubaki Nakashima Global Sustainability System (GSS), according to the 3 most important ISO Standards (ISO 14001, ISO 45001 and ISO 50001) of which one of them is ISO 45001 (OCCUPATIONAL HEALTH AND SAFETY), established in 2018 and progressively deployed in all the factories.

GSS (in its SH portion) is covering safety, health, disaster prevention, and facilities; this original Tsubaki Nakashima program is based on an occupational safety and health management system that also conforms to International Labour Organization (ILO) guidelines.

According to all the ISO standards we refer to here, the management flow is rigorously applied and begins (as described in the figure) with the process map and the context analysis - for which we use the SWOT Analysis -, the identification of the Risks and Opportunities which in turn generates the Targets that are intended to be achieved and the KPIs to measure their achievement, up to the final act which is the Management Review.

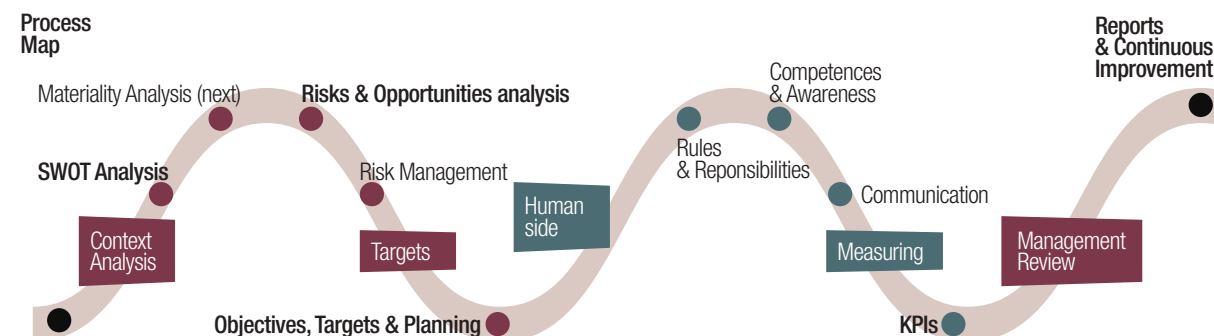


Since that program came into effect, we have enforced the GSS Manual and Procedures and manage our workplaces with the idea that every workplace is responsible for maintaining its own safety.

The Global Sustainability System has been implemented in each of our factories, it is available on the Global Intranet platform.

in its most updated version, together with more than 40 training courses on the GSS and on every single aspect of safety, health and the environment, practical examples, and 43 Minimum Technical Requirements (considered a level 3 of the system, where level 1 is the Manual, level 2 is the management procedures and level 4 the forms and modules) which establish the guidelines for complete and correct management of technical aspects, ranging from the Machine Guarding to Atmospheric emissions, from Electrical Safety to Wastewater management.

Another extremely important tool is the Safety Engineering Manual, based on International Technical Standards, a detailed guideline which helps the plants to guarantee safe machineries and workplaces.





# SAFETY & HEALTH

An extremely important part of the GSS is that relating to risk analysis: this is the reason why for years the Company has asked each plant to use two tools created specifically to guarantee a complete, rigorous and serious risk assessment. The Tools are:

- the Safety and Health Risk assessment toolkit and
- the Environmental aspects and impacts assessment
- available on the Global Intranet.

Energy Assessments (based on ISO 50002) are managed directly by the Central Sustainability Office, through specific workshops and improvement and investment plans

Once the system has been implemented and fully operational, both the system itself and the work environments (therefore safety, health protection and the environment, as well as the rational use of resources, in particular energy ones, must be kept under control.

For this reason, a very sophisticated and electronic inspection and audit system has been implemented, available in 6 languages and available to all plants.

AUDITED IP

**37**

+236%

ACTIVE AUDITORS

**25**

+212%

FINDINGS

**311**

+180%

C. A. SOLVED

**255**

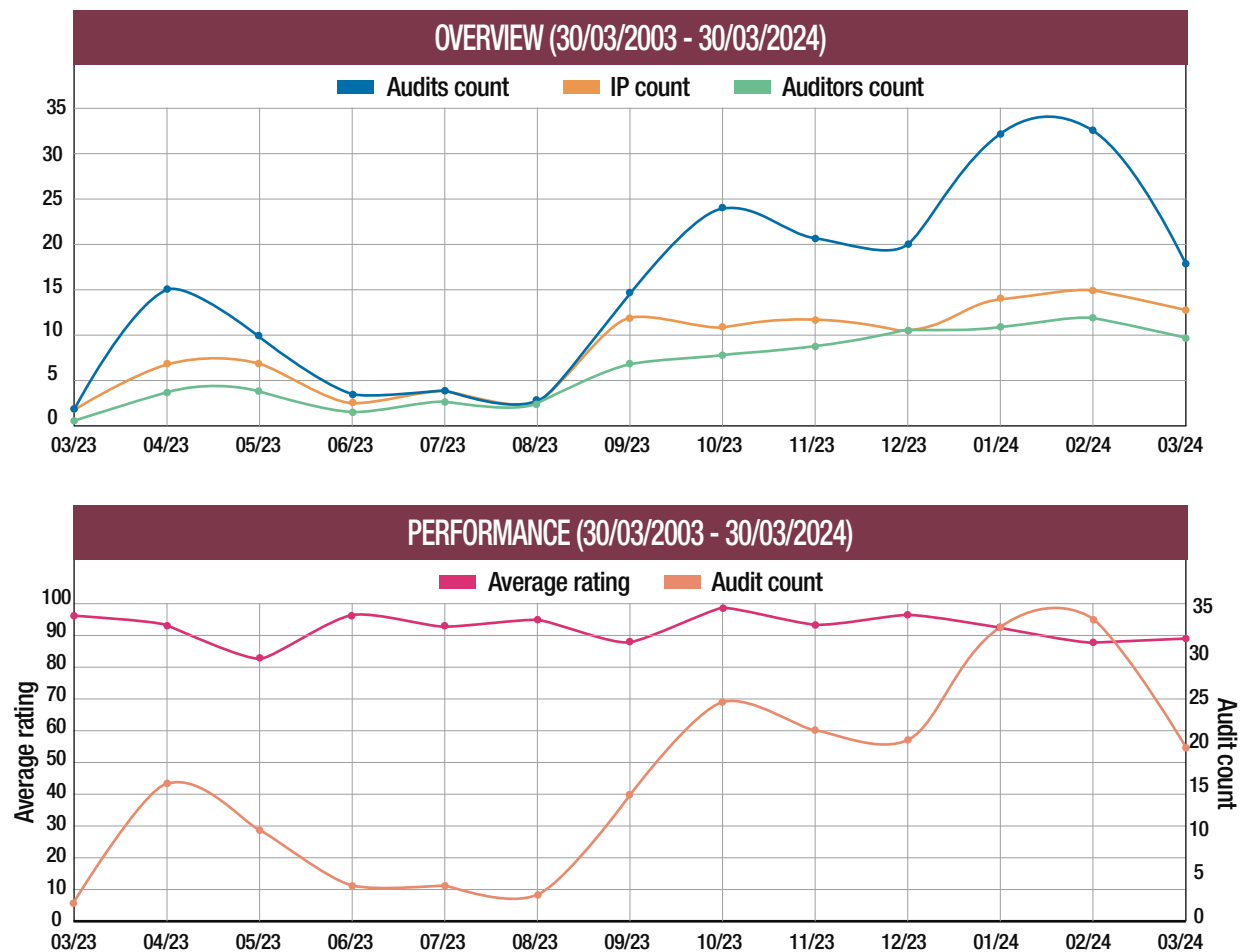
+183%

AVERAGE RATING

**92%**

+46%

At the time of publication of this report, and looking at the period March 2023 - March 2024, we can say that attention to internal auditing has grown exponentially





# SAFETY & HEALTH

# ACCOUNTABILITY PYRAMID

STAFF  
SUPPORT

MANAGEMENT  
COMMITTEE

FINANCE

HR  
& SUSTAINABILITY

MAINTAINANCE

ENGINEERING

SALES  
AND BUSINESS  
DEVELOPMENT

SUPPLY  
CHAIN

CEO

GM - PRESIDENT

PLANT MANAGER

HEAD OF  
DEPARTMENT

SUPERVISOR  
TEAM LEADER / SHIFT LEADER

WORKER

DIRECT  
RESPONSIBILITY



# SAFETY & HEALTH

TN believes that an effective system must be effective regardless of the Certification paths; we are interested in ensuring that safety is maximum, and that health and environmental protection are maximum, that each plant focuses not only on the production and quality of products, as well as on customer satisfaction, but on the rational use of resources. For this reason, each plant is free to choose whether to be certified or not, considering certification as an additional element to a solid and serious reality, not just something to show at the entrance.

But the presence of certifications (ISO 14001, 45001 and 50001) is very massive, with 24 certifications achieved and scheduled



## NUMBER OF ENVIRONMENTAL, SAFETY & ENERGY CERTIFICATIONS - ACHIEVED AND PLANNED

Japan	4
Taiwan	1
Thailand	1
China	3
India	2
Poland	1
Slovakia	3
Italy	3
Bosnia	2
United Kingdom	0
Usa	4



# INJURIES, ACCIDENTS AND OCCUPATIONAL ILLNESSES

INJURY FREQUENCY AND SEVERITY TABLES (2023)			
AREA	PLANT	FREQUENCY	SEVERITY
Japan	TJB	0,89	0
	TJO	0	0
	TJS	9,6	0
	TJL	0,6	1,7
Taiwan	TJT	0	0
China	TCT	0	0
	TCC	0,5	145
	TCK	0,4	17
Europe	TSI	0,6	4,3
	TEN-R	0	0
	TEP	0	0
	TEU	0	0
	TEI	0	0
	TES	1,9	16,1
	TEN-SMP	0	0
	TEB	0,3	1,1
	TAG	1,1	23
America	TAE-B	3,8	90
	TAE-R	1,3	132
	TAC	3,5	17
	TAM	0	0
Thailand	TSR	0,7	0

As regards occupational diseases, they were not found again in 2023, thanks to the numerous initiatives aimed at containing noise, avoiding manual handling of loads and eliminating and/or reducing exposing people to risks of contact or inhalation with dangerous substances, also through their elimination and replacement with non-hazardous substances.

In 9 of the 21 plants, there were no accidents at work; in 13, the number of accidents decreased compared to the previous year, and in 15 we decreased the Injury Severity.





Tsubaki Nakashima analyzes all occupational injuries and accidents, identifies causes, and makes plans for preventing similar incidents. Occupational accidents, including the NEAR MISSED, are reported in the form of PRELIMINARY ACCIDENT REPORT AND ROOT CAUSE ANALYSIS which describes accident causes, countermeasures, and actions that all sites are to take to prevent similar accidents in the future. These reports are placed on One Team Software and discussed with employees.

## INJURIES, ACCIDENTS AND OCCUPATIONAL ILLNESSES

- Occupational health services are available in most factories and preliminary visits are always carried out to guarantee suitability for carrying out the work activity.
- The participation, consultation and communication of workers on health and safety at work is not only guaranteed but encouraged, through workshops, safety kaizens, meetings of local sustainability committees and with questionnaires.
- The training of workers on health and safety at work is always guaranteed with specific courses, and safety, health and sustainability are always present in the annual training plans, with a focus on the promotion of workers' health and well-being in general, even outside of work.
- We can say that 100% of our employees are therefore covered by an occupational health and safety management system, i.e. the GSS which we have already mentioned several times

In the pictures in this page and top right: first-aid and fire fighting training in Okayama (Japan).

## TRAINING



During 2022, and thanks to the decrease in travel difficulties following the pandemic, training courses on safety and health were held - with 31 modules and different topics, audits and awareness acquisition in the field involving 75 managers and supervisors in Japan, 25 in Thailand and over 150 in Europe. In 2023, there are plans to extend the training to America and China, thus covering the entire organization. The Talent LMS e-learning platform will make it possible to use all the training material (and course videos) both for on-boarding new employees and for refresh training.

The company works every day with its employees and collaborators to increase awareness of the importance of behaving safely and respectfully of one's physical integrity, health and the environment in which one lives. The photograph below expresses an extremely simple and effective concept: every worker, entering the factory, can see who the main actor of the safety guarantee is, in a mirror...





# SAFETY AND ENVIRONMENTAL INITIATIVES



**FIREFIGHTING TRAINING**



## JAPAN Koriyama

**HEAT SHIELDS**  
on the roof to protect our employees.



**NOISE MONITORING**



**CLEAN THE ROAD**



## JAPAN Katsuragi



**NEW SLUDGE PROJECT**

Thanks to our continuous research, Tsubaki Nakashima has developed a new methodology for recycling iron sludge, without heat or use of briquetting machines. The processed sludge produced by this method is directly used as a steel material at steel companies, and the sludge has been reborn as special steel products such as steel wheels for cars.

**FIREFIGHTING TRAINING**



## JAPAN Okayama

**FIRST-AID TRAINING**





# SAFETY AND ENVIRONMENTAL INITIATIVES



## NEW SLUDGE PROJECT

in 2023, we started a pilot project of water sludge granulation. This process involves the recovery and reuse of water coolant while granulating the sludge resulting from the processing of steel balls and needles. The resulting granulate is recycled in steelworks.

In 2023, we recovered 200,000 liters of coolant and granulated over 50% of the produced water sludge.

At the end of 2023, we started briquetting oil sludge. This process consolidates our sludge and then recycles in steel mills.

## POLAND

Krasnik



## SLOVAKIA

Kysucke  
Nove Mesto

## TREE PLANTING





# SUPPLIERS



# SUPPLIERS & SUSTAINABILITY

During 2023 Tsubaki Nakashima developed additional projects to engage suppliers in sustainable development and in the green transition. We believe that all of our suppliers must be committed to the same challenges as we are facing, in other words, those related to sustainability. We also believe that it is powerful to share and support each other in this journey. For that reason, in addition to the sustainability self-assessment questionnaire, already sent in 2022 and useful to evaluate Social, Governance and Environmental impacts of our main suppliers, during 2023 Tsubaki Nakashima developed:

## SUPPLIERS' CODE OF CONDUCT

Through the code of conduct developed compliance is required of all our suppliers regarding:

DRIVING  
INTEGRITY  
IN BUSINESS  
DEALINGS

HEALTH  
AND SAFETY

ANTITRUST  
AND  
COMPETITION  
LAWS

ENVIRONMENTAL  
RESPONSIBILITY

ANTI-  
CORRUPTION  
AND ANTI-  
BRIBERY LAWS

DRIVING  
INTEGRITY  
THROUGH OUR  
ACTIONS

GIFTS  
AND  
ENTERTAINMENT

CONFLICTS  
OF INTEREST

SANCTIONS  
AND EXPORT  
CONTROL  
LAWS

PROTECTION OF  
INFORMATION  
AND  
INTELLECTUAL  
PROPERTY

SOURCING  
MATERIALS  
FROM AREAS  
OF CONFLICT

DRIVING  
INTEGRITY  
WITH GOOD  
COMMUNICATION

DRIVING  
INTEGRITY  
WITHIN OUR  
WORKPLACE

REPORTING  
CONCERNS  
AND NON-  
RETALIATION

RESPECT  
FOR LABOR  
STANDARDS AND  
HUMAN RIGHTS

CONFLICT  
WITH OTHER  
REQUIREMENTS

DIVERSITY  
AND  
INCLUSION

It is mandatory that all suppliers adhere to the developed code of conduct, which is therefore a powerful control tool for assessing the minimum requirements in the ESG area of our suppliers.

# SUSTAINABILITY DATA

In order to assess and measure in detail the environmental sustainability of suppliers Tsubaki Nakashima decided to develop an ad hoc carbon footprint questionnaire. As the work of screening suppliers' CO2 emissions is onerous considering the large number of suppliers, as a first step it was decided to engage the raw material suppliers as they are also estimated to be responsible for most of the supply chain-related CO2 emissions. The specific carbon footprint of all raw material suppliers was then assessed in 2023 and they were then also engaged and informed of Tsubaki Nakashima's sustainability goals.



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# CREDITS



The new logo and brand of the company, as well as the graphic design and development of the contents in this publication were thought and created by **MARIO BOIS**, Italian eclectic artist, that expresses his creativity in different fields, being: graphic designer, actor in theatre and film industry, journalist, director, author and poet. He played the main character in "FIORI", movie nominated among the three finalists at Italian Golden Globe in Rome in 2022. Since 2021 he's glad to be called to work at new strategies and ideas for an efficient, creative and impressive corporate identity and communication for Tsubaki Nakashima.

In 2023 the ESG Report 2022 was awarded the IDA (International Design Awards) with bronze award for the category "annual reports".



The pictures collected in this edition have been taken by **FRANCO DUTTO**, CHRO of Tsubaki Nakashima. You have appreciated them in most of the pages of this report.

"If it is true that photography is a means of expression that allows us to convey emotions, tell stories and share experiences, and is a way to communicate without words, the images in this Report represent the eyes with which I looked at the world I visited, the people I met, the places where we are present. And they are the it's the human treasure that I want to share, leaving Tsubaki Nakashima after many successful years."

