



**TSUBAKI NAKASHIMA**  
**2022**

The background of the entire image is a dark gray field filled with a complex, overlapping pattern of thin, light gray circles. These circles vary in size and are positioned such that they create a dense, web-like texture across the right half of the image, while the left half is mostly solid dark gray.

# ESG

TSUBAKI NAKASHIMA

2022



# INTRODUCING ENVIRONMENTAL SOCIAL GOVERNANCE

2022 has been a difficult year for Tsubaki Nakashima for both exogenous and endogenous reasons. In particular, the economic and political instability linked to the war in Ukraine exponentially increased energy costs, impacting business and market in general.

From the point of view of sustainability and of the sustainable development strategies decided by the company in 2021, the results have been seen: **TSUBAKI NAKASHIMA HAS STRENGTHENED, AWARENESS OF THESE ISSUES HAS INCREASED, AND MANY ACTIVITIES HAVE BEEN UNDERTAKEN.** In our Mid-Term Strategy, we outline a policy of enhancing our contribution to and engagement with the SDGs (Sustainable Development Goals) through business activities. This policy is an expression of our commitment. **WE WILL CONTRIBUTE TO RESOLVING MAJOR SOCIAL ISSUES** by promoting a decarbonized and recycling-based society, and by establishing a resilient value chain, including promoting sustainable raw materials procurement.

Achieving a decarbonized society is a long-term endeavor, but we also believe **PROMOTING GHG (Greenhouse gas) REDUCTIONS WILL PRESENT NEW BUSINESS OPPORTUNITIES.**

We will aggressively promote businesses that contribute to global GHG (Greenhouse gas) reductions. With this ESG Report based on the GRI Standard, Tsubaki Nakashima wants to both illustrate the decisions taken in 2021 and developed in 2022, that started to impact the company – last year and in the years to come –, the organizational structures and resources deployed, the main results achieved in the year 2022 and the targets both in the long term (Medium Term Plan 2021 – 2023) and referring to the year 2023.

## INTRODUCING ESG REPORT &

This Report embodies **OUR AIM TO CONTINUE GROWING AS AN ENVIRONMENTALLY RESPONSIBLE AND ETHICALLY SOURCED BUSINESS**, therefore reaffirming our commitment to transparency, sustainability, and good governance, particularly in matters of sustainable and profitable growth, attention to our Stakeholders, and the Vision Zero's Approach (Zero accidents, Zero occupational illnesses, Zero wastes, Zero inequalities, Zero lack of knowledge).

# METHODOLOGICAL NOTE



## 5 INTRODUCING ESG REPORT

The Disclosure of Non-Financial Statement (hereinafter “Statement” or “ESG Report”) complies with the GRI Standard (see below) and with the local laws and regulations concerning the disclosure of non-financial information.

<b>GRI 2</b>	General Disclosures 2021	<b>GRI 3</b>	Material Topics 2021	<b>GRI 201</b>	Economic Performance 2016
<b>GRI 202</b>	Market Presence 2016	<b>GRI 203</b>	Indirect Economic Impacts 2016	<b>GRI 204</b>	Procurement Practices 2016
<b>GRI 205</b>	Anti-corruption 2016	<b>GRI 206</b>	Anti-competitive Behavior 2016	<b>GRI 207</b>	Tax 2019
<b>GRI 301</b>	Materials 2016	<b>GRI 302</b>	Energy 2016	<b>GRI 303</b>	Water and Effluents 2018
<b>GRI 304</b>	Biodiversity 2016	<b>GRI 305</b>	Emissions 2016	<b>GRI 306</b>	Waste 2020
<b>GRI 308</b>	Supplier Environmental Assessment 2016	<b>GRI 401</b>	Employment 2016	<b>GRI 402</b>	Labor/Management Relations 2016
<b>GRI 403</b>	Occupational Health and Safety 2018	<b>GRI 404</b>	Training and Education 2016	<b>GRI 405</b>	Diversity and Equal Opportunity 2016
<b>GRI 406</b>	Non-discrimination 2016	<b>GRI 407</b>	Freedom of Association and Collective Bargaining 2016	<b>GRI 408</b>	Child Labor 2016
<b>GRI 409</b>	Forced or Compulsory Labor 2016	<b>GRI 410</b>	Security Practices 2016	<b>GRI 411</b>	Rights of Indigenous People 2016
<b>GRI 413</b>	Local Communities 2016	<b>GRI 414</b>	Supplier Social Assessment 2016	<b>GRI 415</b>	Public Policy 2016
<b>GRI 416</b>	Customer Health and Safety 2016	<b>GRI 417</b>	Marketing and Labeling 2016	<b>GRI 418</b>	Customer Privacy 2016

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, 2022 (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 2022 ESG Report, prepared annually over the calendar year, respects the same deadlines as the Annual Financial Report.

The Report has been prepared in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (GRI) (in accordance-comprehensive option).

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 KPIs are defined based on:

- **THE ANALYSIS OF THE GRI**, an international organization which develops universally applicable guidelines for drawing up sustainability reports.
- **THE DEMANDS RECEIVED FROM STAKEHOLDERS.**
- **THE COMPANY HAS GAINED EXPERIENCE IN SUSTAINABILITY.**



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 **20 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.

## PRECISION FOR A AND

As social, industrial, technological and lifestyle changes proceed globally, we have decided to make **THE FOUNDATIONS OF BUSINESS VALUE REALIZATION** more solid and current:

**1. SUSTAINABILITY**, as the simultaneous achievement of economic prosperity, creation of a healthy, safe, and low environmental impact, 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 is zero accidents, zero damage to people and environment, but also zero inequalities and zero lack of knowledge, which means equal opportunities for our employees.

**2. THE HIGHEST QCDS** (Quality, Cost, Delivery, and Service), to be the best-in-class, customer- and market-oriented ball manufacturer by continuously improving products, processes, and services.

**3. ONE TEAM SPIRIT**, which is the basis of our corporate culture, of our corporate identity.

## CHANGING SUSTAINABLE WORLD

**4. 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, more aware. The armed branch of this transformation is the **MONOZUKURI** understood as a set of processes, which encompasses activities of thought, remodeling, organization, action, continuous improvement aimed at the creation of high-quality products.

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

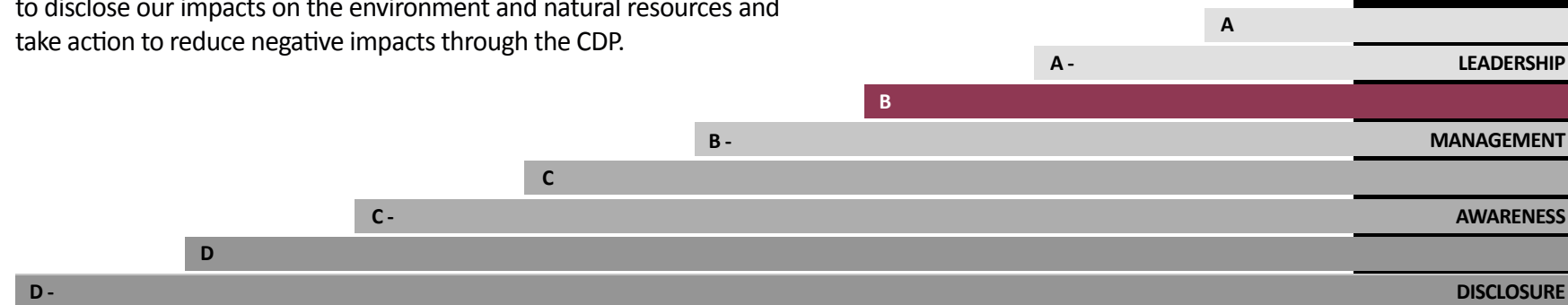
This is why in 2022 **WE WORKED HARD FOR SUSTAINABLE DEVELOPMENT** that will allow us to improve the performance of our plants, in all respects. The Sustainability Committee has not only defined the strategies and guidelines for sustainable development but has also started working with many of our plants on **ENERGY EFFICIENCY PLANS**, better use of resources, respect for the environment, reduction of environmental impacts; and 2023 will also involve those entities in which it was not possible to start operating this past year, also due to the restrictions caused by the pandemic.

In every plant today we can boast **HIGH-LEVEL PROFESSIONALS** in the Safety, Environment and Energy fields. 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.

In January 2022 we defined the Carbon Footprint (based on Science Based Target Methodology), during the year we developed specific Energy efficiency projects; in autumn we identified the opportunities in terms of innovative technologies and energy purchasing and at the end of 2022 we developed a specific *Green Electricity* and *Waste recycling* Strategy, which will be applied in the next years.

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.

未来



**CDP IS A NOT-FOR-PROFIT CHARITY** that runs the global disclosure system for companies to manage their environmental impacts. This project enables companies to progress towards **ENVIRONMENTAL STEWARDSHIP** through benchmarking and comparison with peers, in order to continuously improve their climate governance. Tsubaki Nakashima to certify and make its commitment to sustainability reliable and transparent joined CDP - Carbon Disclosure Project in 2022.

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. Tsubaki Nakashima obtained a high score regarding:

- **BUSINESS STRATEGY, FINANCIAL PLANNING & SCENARIO ANALYSIS**
- **TARGETS**
- **GOVERNANCE**

This means that the sustainability strategy has been set up correctly and is strong and reliable. Instead, the areas where Tsubaki Nakashima needs to improve are data collection and calculation of indirect Scope 3 emissions and the area related to green energy.

For both of these weaknesses, Tsubaki Nakashima has already started the **PROCESS OF IMPROVEMENT**; in fact, it is analyzing the CO<sup>2</sup> emissions of raw material suppliers and is analyzing the strategy for purchasing green energy and planning to install photovoltaic systems at its plants.

Scoring at CDP is **MISSION-DRIVEN, FOCUSING ON CDP'S PRINCIPLES AND VALUES** for a sustainable economy, and highlighting the business case to do this. The scoring represents the steps a company moves through as it progresses towards environmental stewardship, and they are:

- **DISCLOSURE**
- **AWARENESS**
- **MANAGEMENT**
- **LEADERSHIP.**

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). The vision, the awareness of the mission we want to accomplish, combined with our daily commitment, the work of our women and

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*

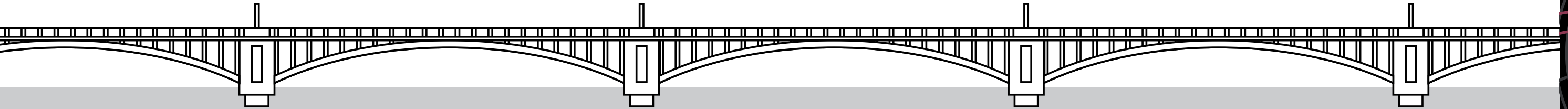
**MISSION**  
“THE WHY”

+

**VISION**  
“THE WHAT”

**MANAGEMENT**  
+ **PRINCIPLES**  
“THE HOW”

= **TN POLICY**  
“ACTION”



OUR  
**MISSION**

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

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**.

- PROFITABLE AND SUSTAINABLE VALUE
- OPERATIONAL EXCELLENCE

## GROWTH

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

## SUSTAINABILITY

- COMPLIANCE
- VISION ZERO

## QCDS

- MARKET ORIENTED
- CONTINUOUS IMPROVEMENT

- GLOBAL REACH, LOCAL DEPTH
- MONOZUKURI
- ORGANIZATIONAL REMODELING

## TRANSFORMATION

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

## ONE TEAM





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**.





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 **CHONG-QING** Plant in China.





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 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**.



## 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**, as well as the Japan's first manufacturer of ball screws for general industrial use, where the products are used in industrial machines, electric injection molding machines, semiconductor manufacturing equipment, industrial robots, and advanced medical equipment.

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 **20 PLANTS IN 12 COUNTRIES:** Japan, Italy, Poland, Slovakia, The Netherlands, United Kingdom, Bosnia, China, Thailand, India, Taiwan, and United States. 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**

**TOKIO STOCK EXCHANGE PRIME MARKET**

**TOTAL NUMBER OF ISSUED SHARES AT THE END OF THE PERIOD**  
(INCLUDING TREASURY SHARES)

**DECEMBER 31, 2022: 41.599.600 SHARES**

**CODE NUMBER**

**6464**

**URL** [HTTPS://WWW.TSUBAKI-NAKASHIMA.COM/JP](https://www.tsubaki-nakashima.com/jp)

**REPRESENTATIVE**

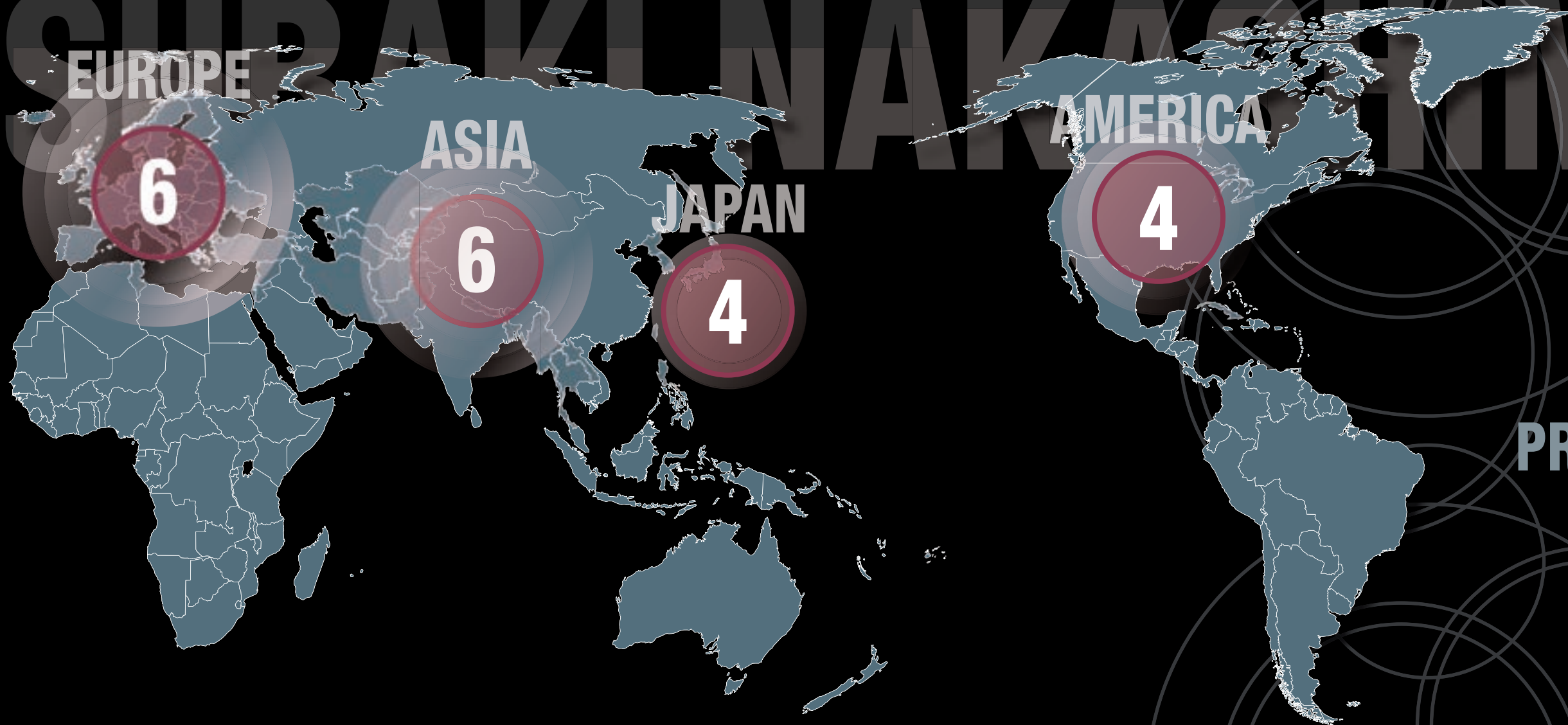
**KOJI HIROTA, DIRECTOR AND REPRESENTATIVE EXECUTIVE OFFICER, CEO**

**CONTACT**

**HISASHI TATE, DIRECTOR AND EXECUTIVE OFFICER, SENIOR EVP, CFO**

The Company's corporate structure is made up of a high-level company organized by a Board of Directors made up of 7 members and a Management Committee made up of 6 members.



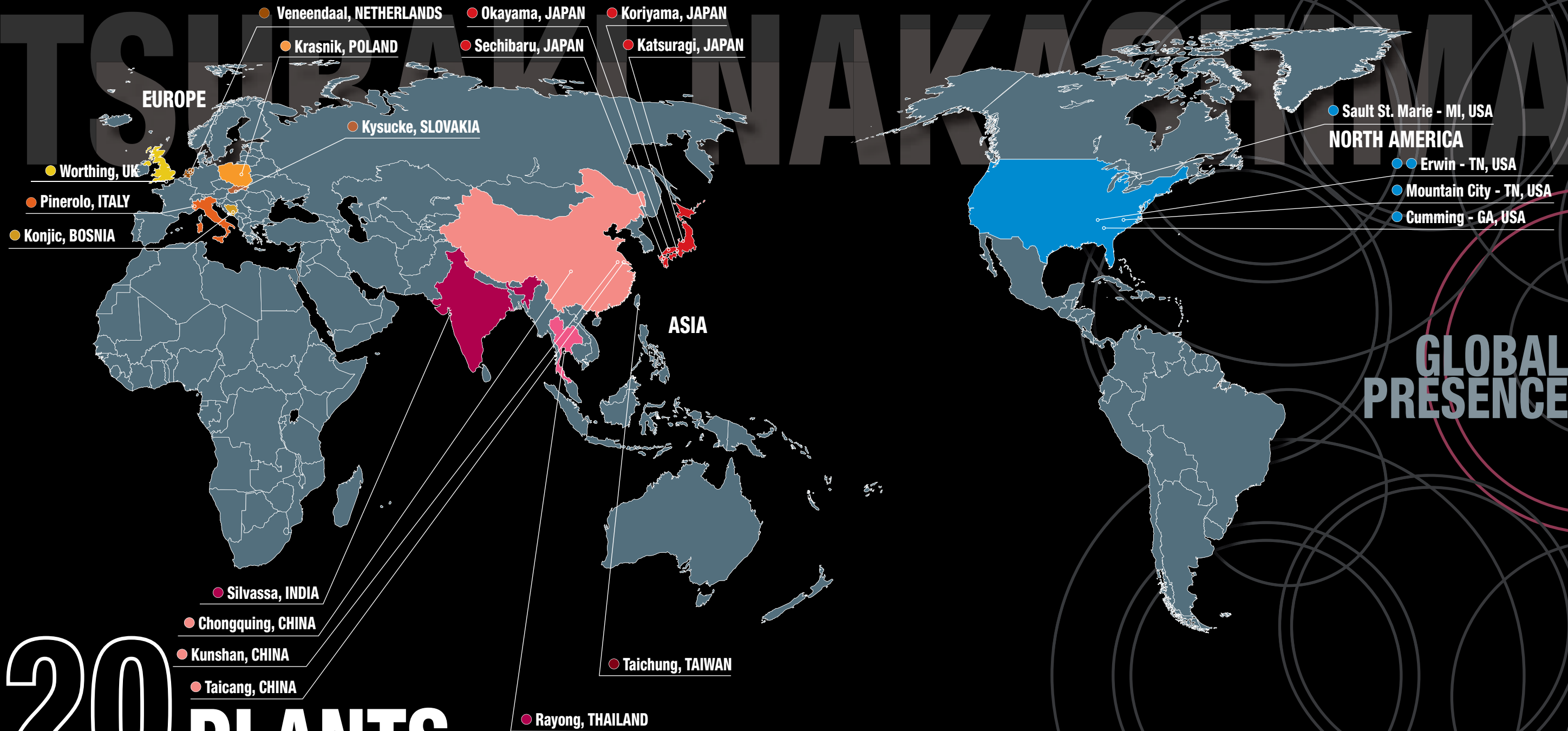


**GLOBAL  
PRESENCE**

**20 PLANTS**

Tsubaki Nakashima Co. Ltd. is headquartered in Nara, Japan, with offices in Osaka, Singapore, Seoul and 20 plants in 12 Countries: Japan, United States, Italy, Poland, Slovakia, The Netherlands, United Kingdom, Bosnia, China, Thailand, India and Taiwan. This enables Tsubaki Nakashima to respond to various customer needs, local procurement, quick delivery, and superior customer support.

# 20 PLANTS



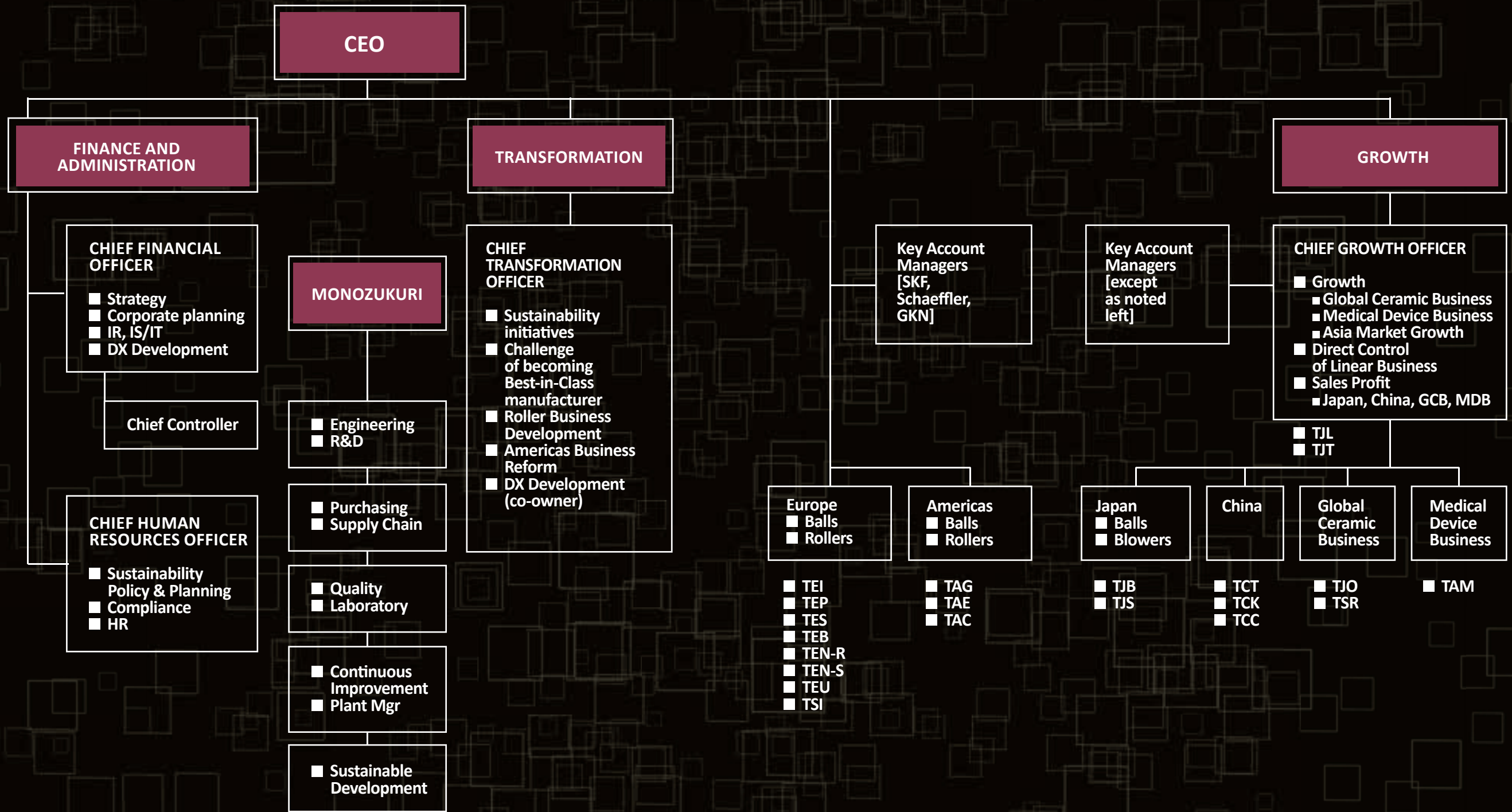


## THE COMPANY ORGANIZATION CHART (2023) AND ORGANIZATIONAL CONCEPT

Tsubaki Nakashima's Mid-Term Strategy –2021–2023- bears two important words, **TRANSFORM NEXT**, signifying the company's commitment to a continuous process of sustainable transformation and rationalization. For this reason, in 2022 and for the year to come, the last of the Mid-Term Strategy, our energies will focus on:

- Accelerating the **GROWTH**, strengthening the earning power of our Regions, and investing in Global Ceramic Business and Medical Device Business. Growth means Profit generation, Sales, Marketing, Business Development, new Geographical areas, Investments and People.
- **TRANSFORMING** the Company in a sustainable way, executing our strategic projects, reforming our business, significantly improving the chances of a successful transformation, focusing on bringing about change and operating to deliver transformation programs, sustainable infrastructures, technologies and methodologies, business reform and transformational leadership.
- Developing and streamlining of Planning & Promotion Structure for **MANAGEMENT CONTROL, M&A, PEOPLE MANAGEMENT** to drive sustainable strategies.





# OUR PRODUCTS

PRECISION  
STEEL BALLS  
**65%**

PRECISION  
CERAMIC BALLS  
**12%**

PLASTIC BALLS  
**2%**

SPECIALLY  
MANUFACTURED  
PRODUCTS  
**1%**

BALL RELATED PRODUCTS  
**1%**

PRECISION  
ROLLERS AND STAMPINGS  
**10%**

LINEARS  
AND BLOWERS  
**7%**

MEDICAL  
DEVICES  
**2%**



Core Business  
Transformation  
Growth  
Niche

# 35 OUR PRODUCTS





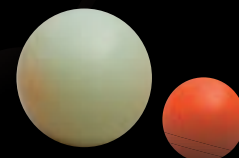
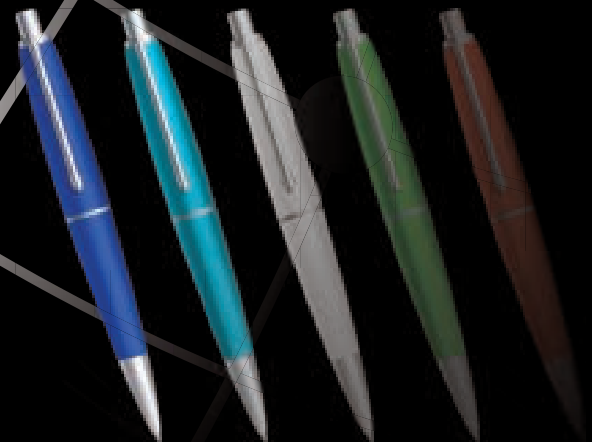
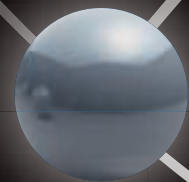
# PRECISION STEEL BALLS APPLICATIONS

YOU CAN FIND  
TSUBAKI NAKASHIMA  
STEEL BALLS IN  
**70% OF CARS**



# PRECISION CERAMIC BALLS APPLICATIONS

# OTHER BALLS APPLICATIONS





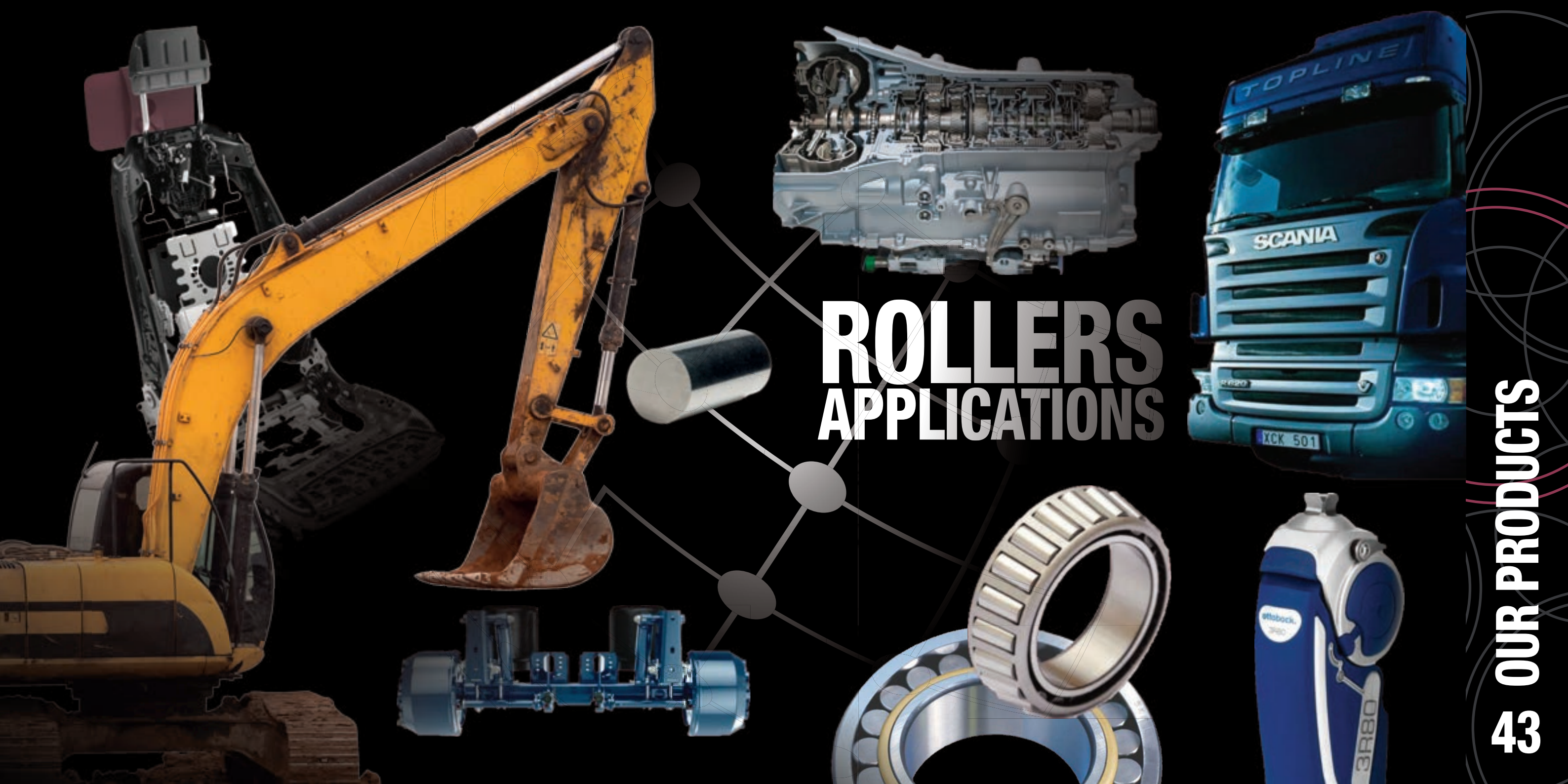


**MEDICAL  
DEVICES  
APPLICATIONS**

**SPECIALLY  
MANUFACTURED  
[BALL RELATED]  
PRODUCTS  
APPLICATIONS**

**41 OUR PRODUCTS**





# ROLLERS APPLICATIONS

43 OUR PRODUCTS



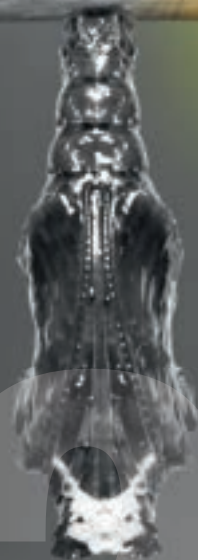
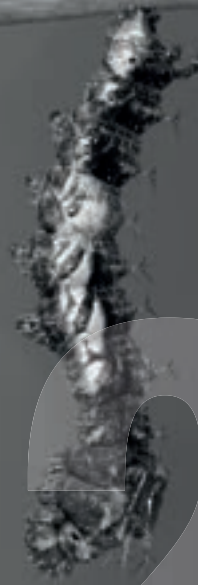
# LINEARS AND BLOWERS APPLICATIONS

45 OUR PRODUCTS



# TRANSFORM NEXT 2023

MID-TERM  
STRATEGY  
2021/2023

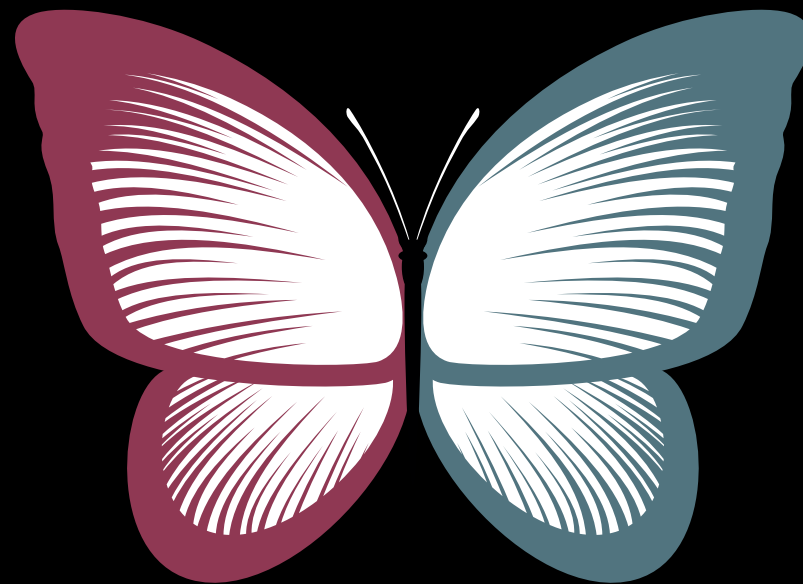


# 2021 2023

2023  
**NEXT TN'S VALUE**

MID-TERM  
STRATEGY  
2021/2023

**QUALITY  
COST** **DELIVERY  
SERVICE**



**CREATION  
FRAMEWORK**



**HIGHEST  
QUALITY  
AND WIDEST  
PRODUCT  
LINEUP**



**ACCUMULATION OF PRODUCTION  
KNOW-HOW BY IN-HOUSE  
EQUIPMENT**  
**SYNERGY GENERATION BY GLOBAL  
ONE MANAGEMENT TEAM**



**STRONGEST  
GLOBAL FOOTPRINT  
FOR LOCAL  
PROCUREMENT  
AND LOCAL SALES**



**STABLE  
PERFORMANCE  
WITH STRONG  
CUSTOMER  
RELATIONSHIP**

**OUTSTANDING  
POSITION**

**STABLE AND STRONG  
CASH FLOW  
GENERATION**

**IN A NICHE  
MARKET**

**ROBUST  
SHAREHOLDER  
POLICY**



# STRATEGY POLICY



## GROWTH STRATEGY

EXPANSION OF  
CERAMIC BUSINESS

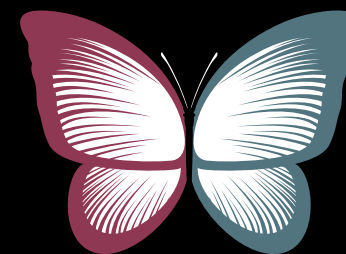
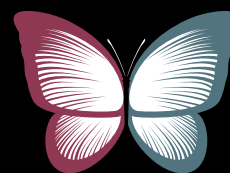
MORE FOCUS  
ON ELECTRICAL  
VEHICLES  
AND WIND ENERGY



EXPANSION AND GLOBAL  
DEVELOPMENT  
OF MEDICAL DEVICE  
BUSINESS



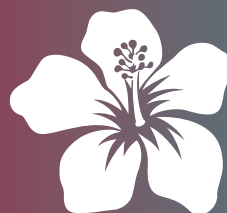
EXPANSION  
OF STRENGTHENING  
IN ASIAN  
MARKETS



ONE TEAM  
MANAGEMENT  
SYSTEM  
(INTEGRATED)



VISION  
ZERO  
APPROACH



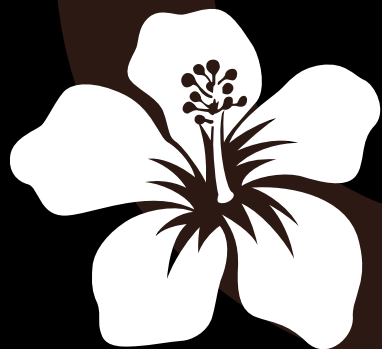
TRANSFORMATION AND SUSTAINABLE  
PROJECTS IN MONOZUKURI,  
THROUGH RESPONSIBLE  
USE OF ENERGY,  
SLUDGE RECYCLING,  
IMPROVEMENT  
OF MATERIAL YIELD,  
AND ERGONOMICS

## ENVIRONMENT SOCIAL & GOVERNANCE STRATEGY



VISION ZERO  
APPROACH

ZERO ACCIDENTS  
ZERO OCCUPATIONAL ILLNESSES  
ZERO WASTES  
ZERO INEQUALITIES  
ZERO LACK OF KNOWLEDGE



E

- GLOBAL SUSTAINABILITY SYSTEM
- QUALITY MANAGEMENT SYSTEM
- SUSTAINABLE DEVELOPMENT PROJECTS

- TN ACADEMY SUSTAINABILITY SAFETY AND HEALTH
- RISK ASSESSMENT AND EHS INSPECTIONS TOOLKITS

S

- E-LEARNING PLATFORM
- RENEWED HR PROCESSES

- INTEGRATED CORPORATE GOVERNANCE
- RISK MANAGEMENT COMMITTEE
- SUSTAINABILITY COMMITTEE

G



STATUS  
2022

SALES GROWTH  
STRATEGIES

- ACCELERATED THE GROWTH OF CERAMIC BUSINESS
- EXPANSION OF SALES IN MEDICAL DEVICE BUSINESS
- EXPANSION OF ASIAN MARKETS

SALES GROWTH  
PRECISE  
STRATEGY  
TO OFFSET  
THE INFLATION  
AND ENERGY  
COSTS  
INCREASED

BUILDING  
A FOUNDATION  
FOR THE  
FUTURE

- RESTRUCTURING OF EUROPEAN ROLLERS BUSINESS (WITHDRAWAL THE ROLLER BUSINESS FROM THE NETHERLANDS)
- LAYING THE GROUNDWORK FOR 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, SECURING OF RAW MATERIALS AND DIVERSIFICATION OF SOURCING
- MONOZUKURI INNOVATION AT MOTHER FACTORY (KATSURAGI, JAPAN)

SHAREHOLDER'S  
RETURN

- PERSISTENCE OF DIVIDEND POLICY: AIMING FOR AN ANNUAL DIVIDEND OF ¥ 30 PER SHARE

The **QUALITY AND CENTRAL LAB FUNCTION** is a fundamental element for achieving the strategic objective of becoming the best manufacturer of balls, through the tool of the Quality Management System (QMS) and through the activities aimed at eliminating or minimizing the risks for our Customers.

## GOALS AND OBJECTIVES

- **QMS IMPLEMENTATION**, implementing everywhere the basic procedures in order to mitigate Customer risks.
- **AUDITING SYSTEM** extended in every plant worldwide, giving the guidelines for a consistent monitoring of our day-by-day process control.
- **QUALITY DEPARTMENT** focused on special processes, working together with the Engineering Team in controlling and improving the harmonization in Heading, Heat Treatment, Peening, Scanning.

## OTHER KEYS ACTIVITIES

- Define internal **STANDARD ROLLING ELEMENT CLASS**, for different application.
- Continue the **BENCHMARKING ACTIVITIES** on Steel sources and High-Quality Balls.
- Extend the use of **RISK MANAGEMENT PROCESS**.
- Feasibility process and Engineering Change extended use; support to extend the use of **RFQ AND ECR** processes and awareness of **CUSTOMER STANDARDS**.
- Global **CUSTOMER FOCUS**.
- Global **ZERO CUSTOMER COMPLAINTS VISION**; extend use of customer complaints and 8 D report data base; measure the reaction performance and share the TN plant ranking of NCC/NPC; support the TN plants on customers discussions and opportunities of improvements.
- Support the organization to implement appropriate governance system of **SUSTAINABILITY**.





## OTHER KEY ACTIVITIES

- Analysis and benchmark to **IMPROVE OUR QUALITY**.
- **TN EXPANSION PROJECTS** supporting the new plants / projects in Quality excellence development.
- **TN / SKF INNOVATION PROJECT**.



- **SCHÄFFLER IOX PROJECT**; Support the cooperation Project started with customer; Quality and Laboratories as opportunity activities with Customer.
- To complete and edit the **FEASIBILITY STUDY FOR AEROSPACE PLANT** for rolling elements
- Support the TN Academy– Quality basic tools, QMS requirements, Customer needs/applications
- **GLOBAL QUALITY WORKSHOPS** meeting.
- Central Laboratory support activities.

## OTHER KEY ACTIVITIES

- **GLOBAL LABORATORY SUPPORT ACTIVITIES**

## 2022 MAIN TASKS

- **IMPROVE ONE TEAM CULTURE** inside the TN Central Lab.
- Continue support the Technical Mid-Term Strategy Transform Next 2023 in:
  - Process and Product Development
  - New suppliers / materials homologation
  - New NDT method for Ceramic
- Support sales exploration on new market opportunities and engineering on process/products innovation.
- Continue to provide **TECHNICAL GUIDANCE AND ACTIVITIES** for supporting the:
  - analysis and tests, root causes on internal products/processes issues, assessment of new opportunities and validate innovative products/processes solution, improve the knowledge and imagine of the company trough training, coaching and technical events with Universities collaboration (as sources of new talents).



## 2022 CENTRAL LAB PERFORMANCE

ITALY Unit  
KPIc (Analysis & Testing)

≤ 590 €/NR

ITALY Unit  
KPIs (OTD+Efficacy)

≥ 92%

JAPAN Unit  
KPIc (Analysis & Testing)

≤ 77.894 ¥/NR

JAPAN Unit  
KPIs (OTD+Efficacy)

≥ 93%





## 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 MEETING** to share what we are doing and to learn from others.







## 2022 CHINA INTERNATIONAL BEARING INDUSTRY EXHIBITION

It has been held in National Exhibition and Convention Center (Shanghai) from December 8 to 11, 2022. Covering an area of 55.000 sqm. During the exhibition, Shanghai International Bearing Summit Forum, the connection between production and demand, and a series of technical seminars will be held accordingly. Discuss about the development trend of bearings market and case studies.

## MESSE DUSSELDORF 2022



## PRESENTING OUR MEDICAL DEVICE BUSINESS



## JASIS 2022

(the initials of JASIS = Japan Analytical & Scientific Instruments Show) is the cutting-edge scientific instruments, analytical system & solution exhibition which will support the advances of science, analytical instruments and scientific equipment makers. As Asia's largest exhibition in this field, we will further strengthen collaboration with various leading industries and related organizations worldwide, to contribute to the advancement of science in the future and to find a place for business development.

## BEARING WORLD

Würzburg, Germany  
International Conference 2022  
FVA: Noise and process improvement



## ASTM - BEARING AND TRANSMISSION STEEL TECHNOLOGY SYMPOSIUM

New Orleans, USA

*ProceSSIONal slip and micro inclusion effect on fatigue life of bearing rolling element.*

*Simulating and validating the effect of distributed manufacturing surface defects.*

*Experimental and statistical study on the noise contribution*

*ProceSSIONal slip and micro inclusion effect on fatigue life of bearing rolling element*

Andrea Uva and Maria Anna Bafaro,  
Central Laboratory







## FIORP INTERNATIONAL FOUNDATION FOR THE ORGANIZATIONAL RISK PREVENTION

Annual ORP Congress, Cartagena de Indias, Colombia 2022 - Franco Dutto  
3000 participants, the most important event in Latin America about Safety, Health, and Wellbeing



## INTERNATIONAL SOCIAL SECURITY ASSOCIATION (ISSA) GLOBAL VISION ZERO BUSINESS COUNCIL

Vision Zero Summit Japan 2022 Dates: 11-13 May 2022  
Theme: *Redefining Safety, Health and Well-being for the New Normal* – Franco Dutto



**VISION ZERO  
DENMARK 2022**  
*Mental health  
and wellbeing at workplace*  
Franco Dutto

## MEMBERSHIPS



**ASSOCIAZIONE  
PICCOLE IMPRESE, TORINO**



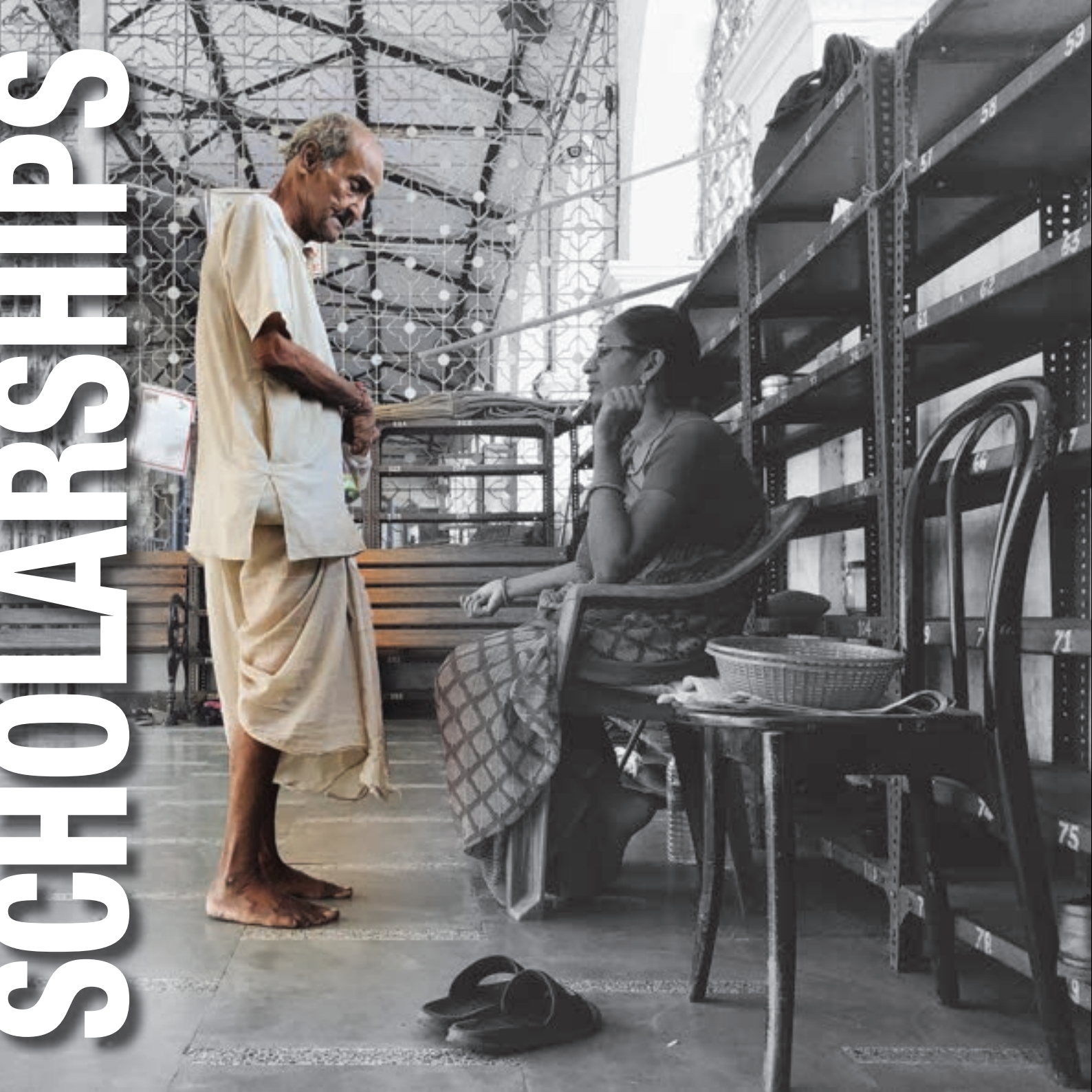
**UNIONMECCANICA, TORINO**

Franco Dutto is a member of their Councils



**ABMA - AMERICAN BEARING**  
Evelise Faro is a Board Member





## RELATIONS WITH SCHOOLS AND UNIVERSITIES: SCHOLARSHIPS AND TRAINING INTERNSHIPS

For many decades Tsubaki Nakashima, in its various local offices, has developed a **PROFOUND RELATIONSHIP WITH THE TERRITORY**, and in particular with schools of all levels and universities, giving not only the possibility to students to visit factories and with our employees, but above all to carry out training internships, experiencing in the field what it means to operate in an organized reality. Time spent as high school, college, and PhD students is rewarded with scholarships or expense reimbursements that allow students to feel valued for their contributions and treated with respect in an inclusive manner.

The number of students hosted each year is many hundreds.



Bosnia / Herzegovina [above]

Elementary school visiting Katsuragi, Japan [below]

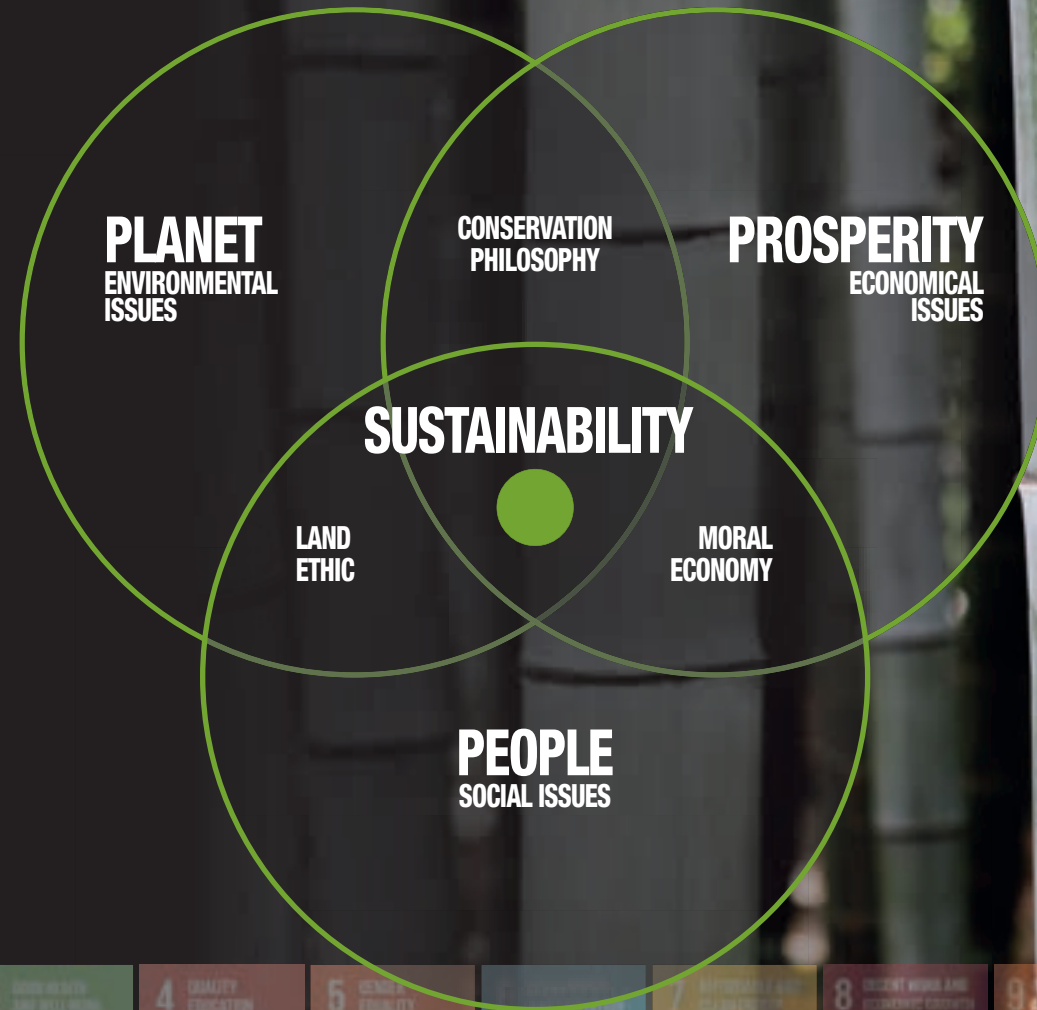




**SUSTAINABILITY** as the simultaneous achievement of **ECONOMIC PROSPERITY** (for instance, growth and profit), the creation of a **HEALTHY, SAFE AND LOW ENVIRONMENTAL IMPACT** environment, where everyone is **EQUAL**, with equal rights and duties, equal opportunities.

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.



## TARGETS AND KPIS

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.

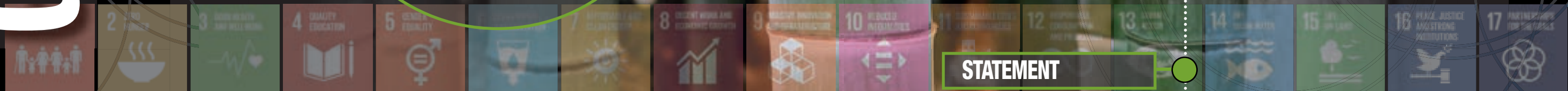
But also, to make available **SYSTEMS**, based on **ISO STANDARDS** (Quality, Environment, Health and Safety, Energy, Ethics), which would allow a disciplined and standardized management.

Lastly, the **MEASUREMENT OF PERFORMANCES** which presupposes the identification of functional objectives for the achievement of the sustainability targets.

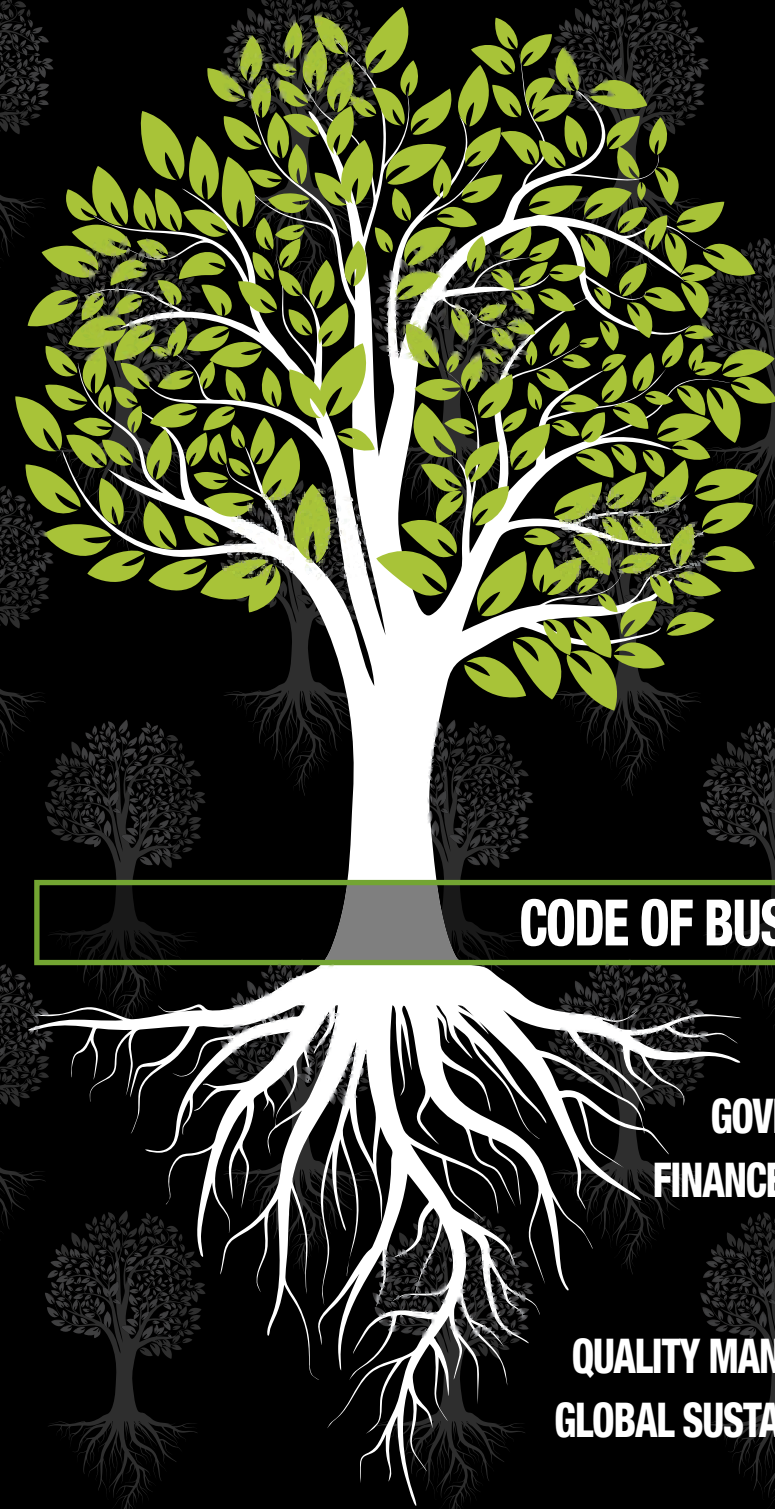
## SYSTEMS

## POLICIES

## STATEMENT







**OPERATIONS**

**STRATEGY**

**CODE OF BUSINESS ETHICS**

**CORPORATE  
GOVERNANCE POLICIES**

**FINANCE AND ACCOUNTING  
PROCEDURES**

**IT PROCEDURES**

**QUALITY MANAGEMENT SYSTEM**

**GLOBAL SUSTAINABILITY SYSTEM**

## 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



## CORPORATE GOVERNANCE 2022

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:

**HEALTH SAFETY AT WORK,  
ENVIRONMENTAL PROTECTION,  
RESPONSIBLE USE OF NATURAL  
RESOURCES**  
(THROUGH THE GLOBAL SUSTAINABILITY SYSTEM)

**ACCOUNTING ACCURACY**

**CONFIDENTIAL AND RELEVANT  
INFORMATION**

**PROTECTION OF PERSONAL DATA**

**PERSONNEL POLICIES  
AND LABOR STANDARDS**  
(I.E., EQUAL OPPORTUNITIES, INCLUSION  
AND DIVERSITY, FREEDOM OF ASSOCIATION,  
CHILD LABOR)

**SOCIAL POLICIES**  
(I.E., GOAL AND GAINSHARING  
PROGRAMS, AWARDS)

**RELATIONS WITH SUPPLIERS  
AND INTERLOCUTORS  
OF THE COMPANY**

**RELATIONS WITH AUTHORITIES  
AND COMMUNITIES**

**ORGANIZATIONAL MODEL  
AND SUPERVISORY BODIES**

**REPORTING IN CASE  
OF VIOLATIONS  
OF THE PROVISIONS OF THE CODE**

**TRANSPARENCY AND COMPLETENESS  
OF INFORMATION**





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.

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.



## 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.





## RISK MANAGEMENT PROCESS AND COMMITTEE

The main goals considered for the Risk Management process and Committee (RMC) are:

To provide to Management Committee timely and transparent notice of significant issues

To ensure fair and well considered handling of Customer claims and/or other relevant internal issues, minimizing potential impacts

To grow the (risk) consciousness of the entire Organization

The Risk Management process is a tool to manage the high potential future risk in advance.

In case the case happened already without alert and then the “risk probability” is 100% (because it has already) this process shall be used to analyze its connected impacts managing and minimizing the related future consequences.

In case this case will have no connected consequences, It's a fact and TN management shall follow the regular business flow process to manage and to negotiate the specific outcome.





## MAIN PILLARS OF RISK MANAGEMENT PROCESS ARE:

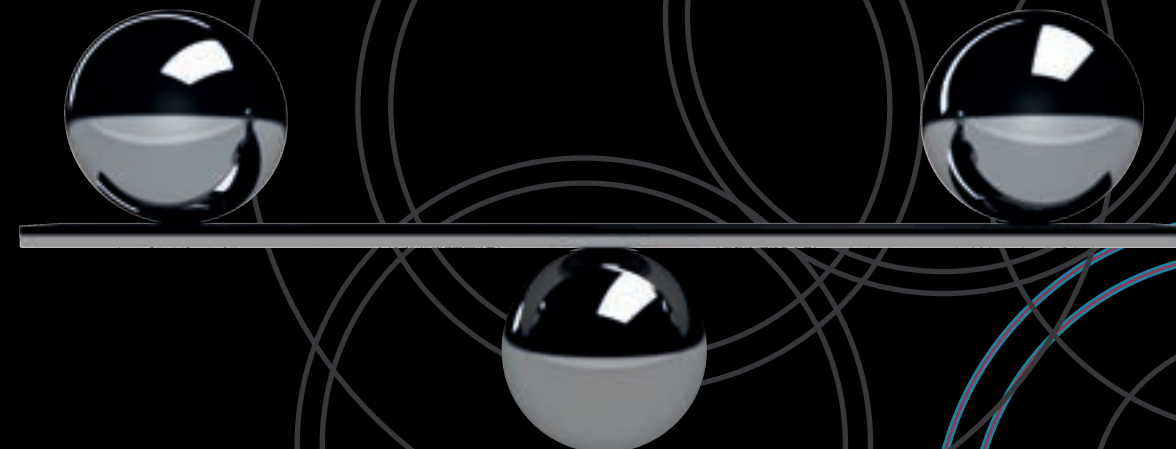
RISK MANAGEMENT APPROACH IS APPLICABLE TO ALL POTENTIAL ISSUES CONNECTED to each aspect of the business (Operations, Quality, Purchasing, Sustainability, Tax, etc); P.e. customer claims/alerts, warranty field returns, internal waste value, internal defect analysis, supplier quality performance, internal or external audit results, material shortage - cost supply issues, customer insolvency, environment analysis, etc.

To use the IATF Quality System to define procedures and rules to be applied (referring to international standards for Risk Management)

Risk Management process flow should mirror TN Organization with local, regional, global, "macro-region", corporate levels

To apply PDCA cycle and Risk Potential Severity, defining the time frame to complete Risk Management Process.

To better define Global Functions' role in short-medium and long term, raising Organization awareness through specific training sessions (i.e. during the next Global Meetings) and daily support







## RISK MANAGEMENT COMMITTEE

THE RMC MEMBERS ARE:

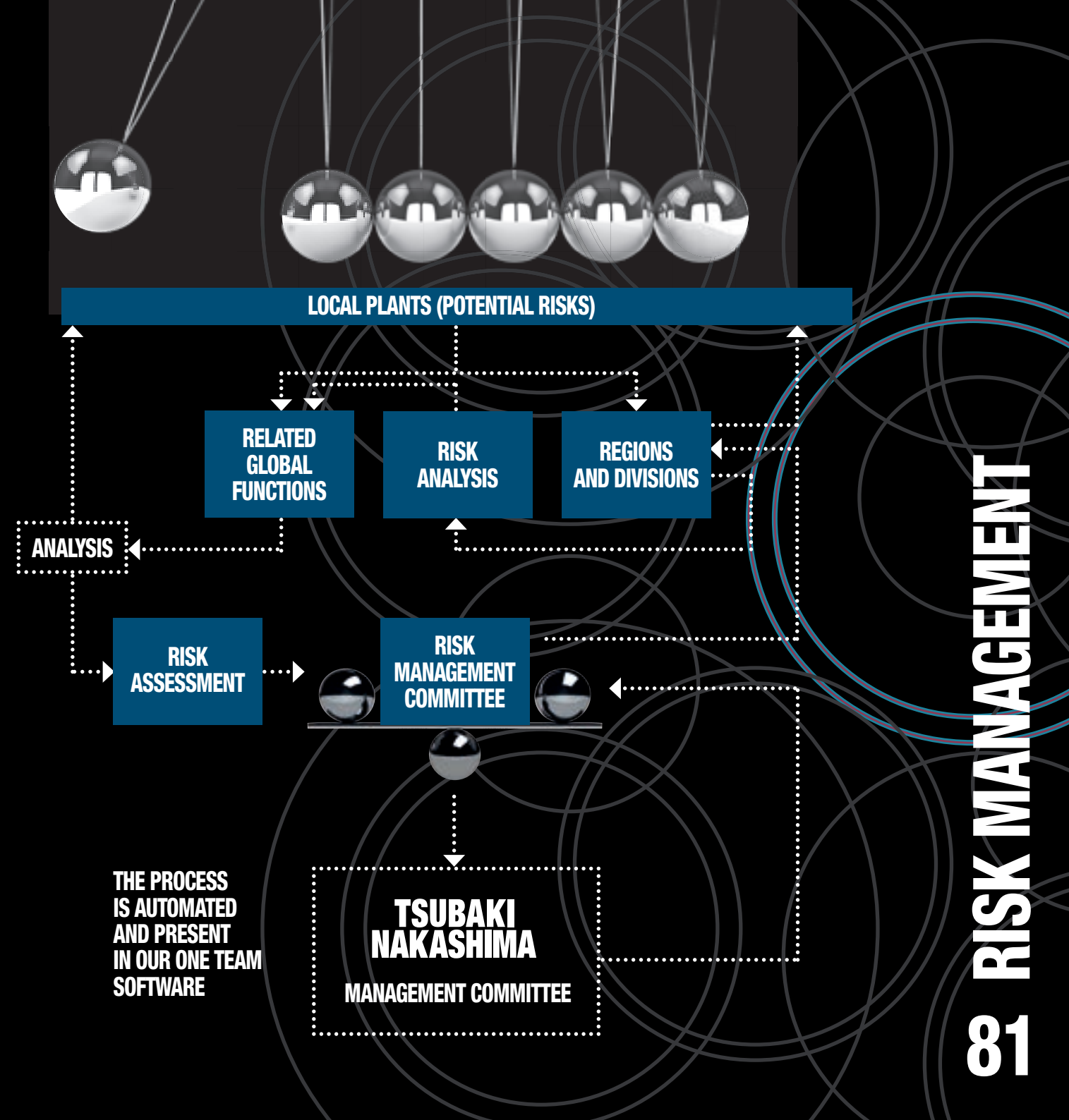
### 6 PERMANENT MEMBERS

CGO CHAIRMAN  
CTO RESPONSIBLE  
CFO  
CHRO  
MONOZUKURI  
QUALITY AND CENTRAL LAB  
(RMC ADMINISTRATOR)

REGIONAL/DIVISIONAL  
PRESIDENTS

OTHER PERTINENT GLOBAL  
OR CORPORATE FUNCTIONS

OTHER RELEVANT MEMBERS  
(BY COMPETENCE)







## ADDITIONAL BENEFITS (IS PHILOSOPHY)

Clearer visibility of the potential issues, but also of the managerial style/ approach to the risk, prevention, rapidity and effectiveness

Involve more (and increase effectiveness of support of) the Global Functions in the process of addressing issues, finding solutions, planning preventive and corrective actions

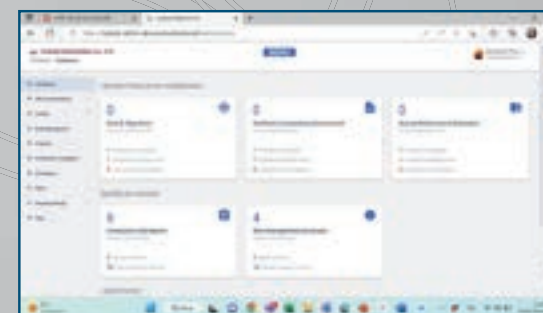
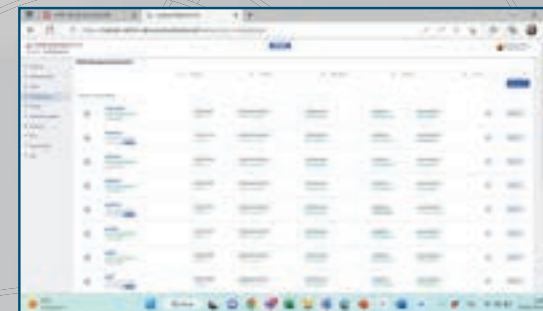
Have a Wider view and being a sort of glue between different parts of the Organization

Accelerate Best Practice implementation (already existing, in order to keep it simple and fast)

Reinforce the concept of organizational discipline

Help the Organization to grow in terms of risk prevention awareness and in terms of consistency

THE PROCESS  
IS AUTOMATED  
AND PRESENT  
IN OUR ONE TEAM  
SOFTWARE





## 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.





## OUR ENVIRONMENT

## OUR COMMITMENT

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:

- 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.



## 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.

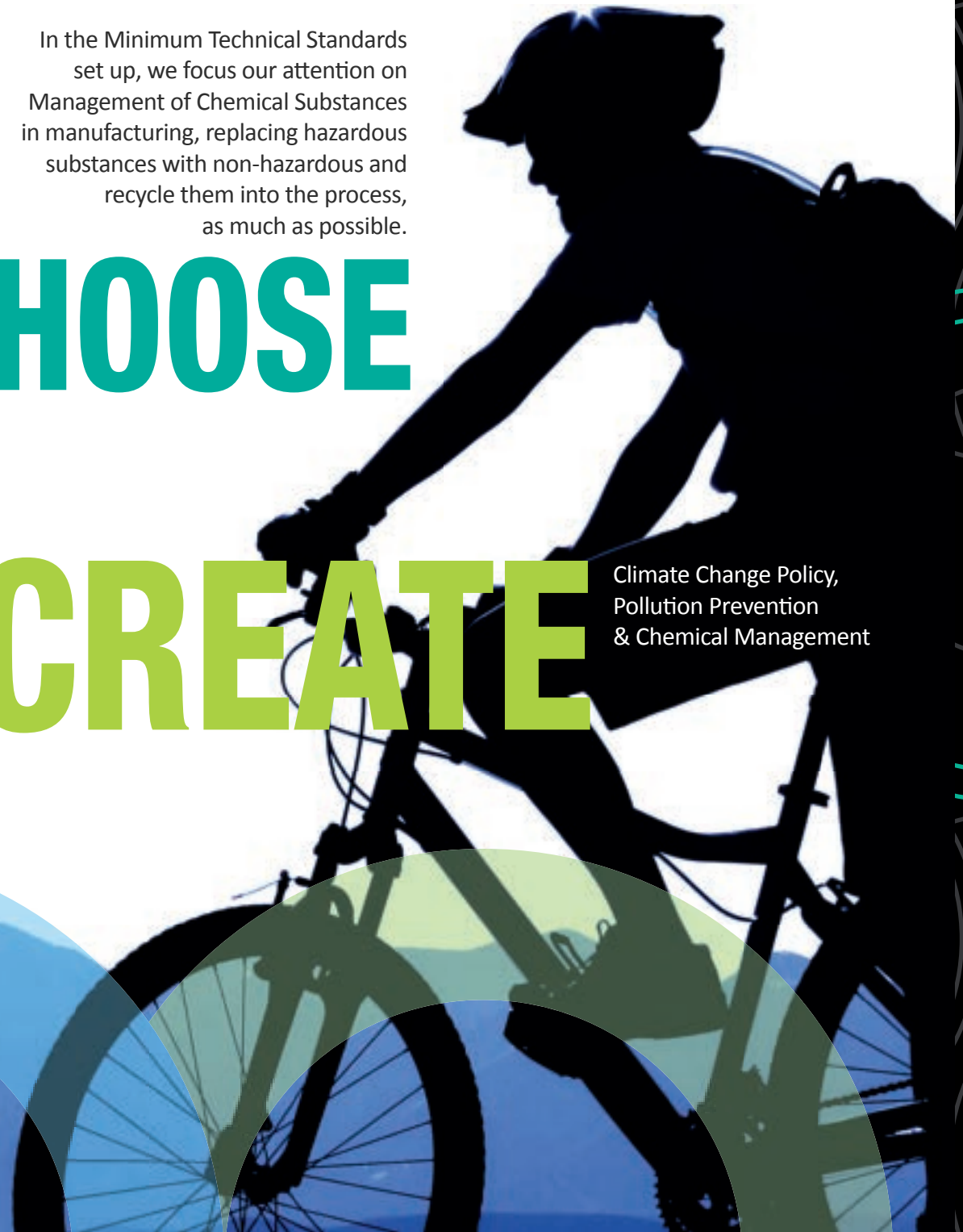


In the Minimum Technical Standards set up, we focus our attention on Management of Chemical Substances in manufacturing, replacing hazardous substances with non-hazardous and recycle them into the process, as much as possible.

## CHOOSE

## CREATE

Climate Change Policy,  
Pollution Prevention  
& Chemical Management





## USE

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.

## DELIVER

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.





## INDICATORS AND TARGETS

We are actively working to reduce environmental impacts throughout the value chain by leveraging our efficient, compact, and precision technologies to **IMPROVE THE ENVIRONMENTAL PERFORMANCE OF OUR PRODUCTS**, utilizing renewable energy, and enhancing our business activities in order to achieve our targets.

## RESPONSIBLE SOURCING OF MINERALS

Where minerals such as tin, tantalum, tungsten, gold (3TG) and cobalt are mined in conflict-affected or high-risk areas such as the Democratic Republic of Congo (DRC) and adjoining countries, the revenue from the mining and trading of these minerals is a source of funding for armed groups and anti-government forces carrying out atrocities and human rights abuses. Minerals sourced from such conflict-affected or high-risk areas have the potential to promote conflict, human rights violations and environmental degradation. Tsubaki Nakashima considers **MINING** to be an intensive process involving social and environmental risks, and believes the mining of metals and minerals, including conflict minerals (3TG) and cobalt mined in the DRC, as well as other minerals mined in other regions, must be managed. Tsubaki Nakashima’s policy is that we want **NO PART IN ANY HUMAN RIGHTS VIOLATIONS OR ENVIRONMENTAL DESTRUCTION**. While sourcing minerals that originate in conflict-affected or high-risk areas, we will not, by any means, tolerate, knowingly profit from, contribute to, assist with or facilitate the commission by any party of any form of human rights violations or abuses, or support operations that result in the degradation of socioeconomic and environmental stability.



As Tsubaki Nakashima, we recognize our responsibility to address the environmental and social impacts of our business.

Our **GLOBAL SUSTAINABILITY SYSTEM** – a multisite integrated system based on **ISO 14001, ISO 45001, AND ISO 50001** - has been implemented in all our factories in the world.

A responsible use of resources and energies, as well as tracking and reducing Green House Gas (GHG) emissions, will allow us to lessen our climate change impact and provide important opportunities to help drive momentum for global climate action.



The recently created **SUSTAINABILITY COMMITTEE** 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.





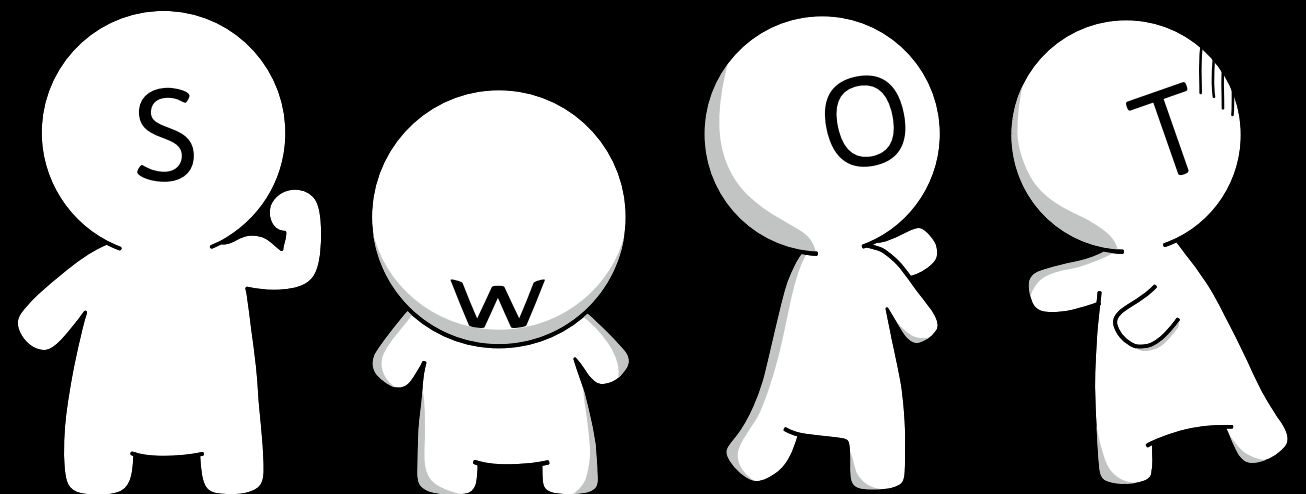
CORPORATE SOCIAL RESPONSABILITY THEMES	ESG	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
Products and Services	ENVIRONMENT			✓	✓		✓
Business Operations aligned with global social trends				✓	✓		✓
Productivity Improvement - Motus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

SDG TICK NOTICES

68 ✓





STAFF  
CUSTOMER BASE  
PRODUCTS/SERVICE  
FINANCIAL RESOURCES  
MARKET POSITION  
SALES CHANNELS  
PROFITABLE  
GROWING

STAFF  
MARKET POSITION  
PROFIT MARGINS  
TO LOW  
COMPETITIVE  
VULNERABILITY  
LACK OF NEW PRODUCTS  
FINANCIAL RESOURCES  
SALES CHANNELS

ECONOMY  
FAILING SALES  
NEW TECHNOLOGY  
LACK OF FINANCIAL  
RESOURCES  
INCREASED  
COMPETITION  
LOSE OF KEY STAFF  
DECREASING PROFITS  
CASH FLOW

ECONOMY  
FAILING SALES  
NEW TECHNOLOGY  
LACK OF FINANCIAL  
RESOURCES  
INCREASED  
COMPETITION  
LOSE OF KEY STAFF  
DECREASING PROFITS  
CASH FLOW

**TARGET  
DEFINITION**  
**SUSTAINABILITY**

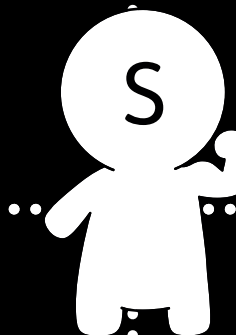
- CONTINUE TO BUILD A COMMON GROUND: COMPANY IDENTITY, VALUES AND PRINCIPLES, COMMON RULES AND POLICIES, BUSINESS DISCIPLINE, SUSTAINABLE PROJECTS
- MAKE THE LIFE EASIER: COMMONS SYSTEM, PLATFORM AND STANDARDS TO MANAGE HR, COMPLIANCE AND SUSTAINABILITY
- TN ACADEMY (SAFETY, SUSTAINABILITY, CORPORATE GOVERNANCE) E-LEARNING PLATFORM
- COMPENSATION-PAY PER PERFORMANCE
- SUPPORT "TRANSFORM NEXT 2023"
- APPLY GRI STANDARDS AND DISCLOSE BY CDP



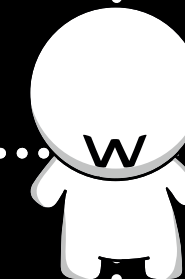
**INTERNAL  
ORIGIN**  
ATTRIBUTES OF THE  
ORGANIZATION

**HELPFUL**  
TO ACHIEVING  
THE OBJECTIVE

**HARMFUL**  
TO ACHIEVING  
THE OBJECTIVE



**STRENGTHS**

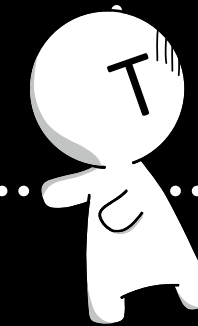


**WEAKNESSES**

**EXTERNAL  
ORIGIN**  
ATTRIBUTES OF THE  
ENVIRONMENT

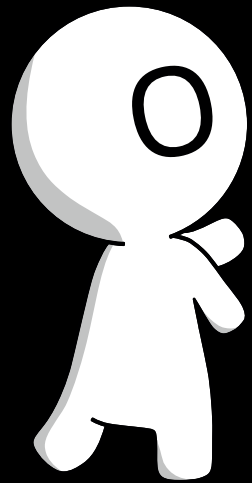


**OPPORTUNITIES**

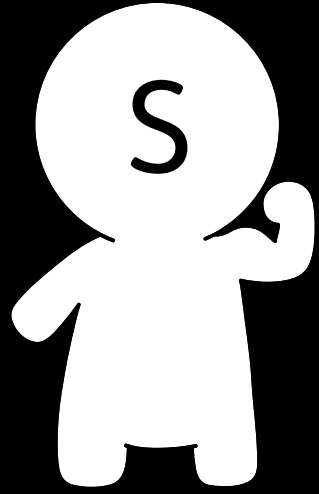


**THREATS**

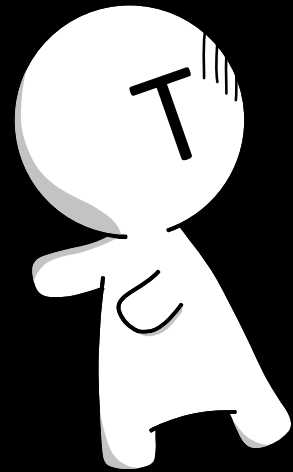




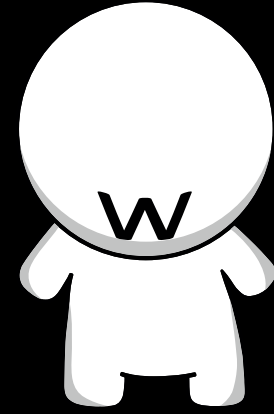
- PRESSURE FROM STAKEHOLDERS TO BE MORE SUSTAINABLE
- "GREEN" INCENTIVES (POTENTIALLY)
- DIGITALIZATION
- ESG (GRI) AS A NEW STANDARD TO IMPROVE
- CDP DISCLOSURE
- E-LEARNING PLATFORMS FOR TRAINING



- HIGH SUPPORT FROM THE CEO
- COMPANY IS ORIENTED TO SUSTAINABILITY
- PROCESS TO STANDARDIZE SYSTEMS, MATERIALS, EQUIPMENT, MACHINES, MANUFACTURING FLOW
- GLOBAL SUSTAINABILITY SYSTEM AND MINIMUM TECHNICAL STANDARDS - ROAD TO FULL INTEGRATION
- SUSTAINABLE DEVELOPMENT STRUCTURE AND NEW ESH&E MANAGERS ALMOST EVERYWHERE
- TN ACADEMY



- HIGHER COST OF ENERGY AND NATURAL RESOURCES
- HIGHER COST OF WASTE DISPOSAL, LIKE GRINDING SLUDGE
- REDUCED MOBILITY DUE TO THE PANDEMIC (STILL APPLICABLE)



- OLD PLANTS AND OLD MACHINES INCREASE THE SAFETY RISKS AND USE OF ENERGY, AS WELL AS THE POTENTIAL ENVIRONMENTAL IMPACTS
- ENERGY NOT ALWAYS PERCEIVED AS AN OPPORTUNITY
- CULTURAL AND LINGUISTIC BARRIERS
- BEST PRACTICE AS OPPORTUNITY TO ACCELERATE THE GROWTH IN COMPANY CULTURE AND ACTIONS





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

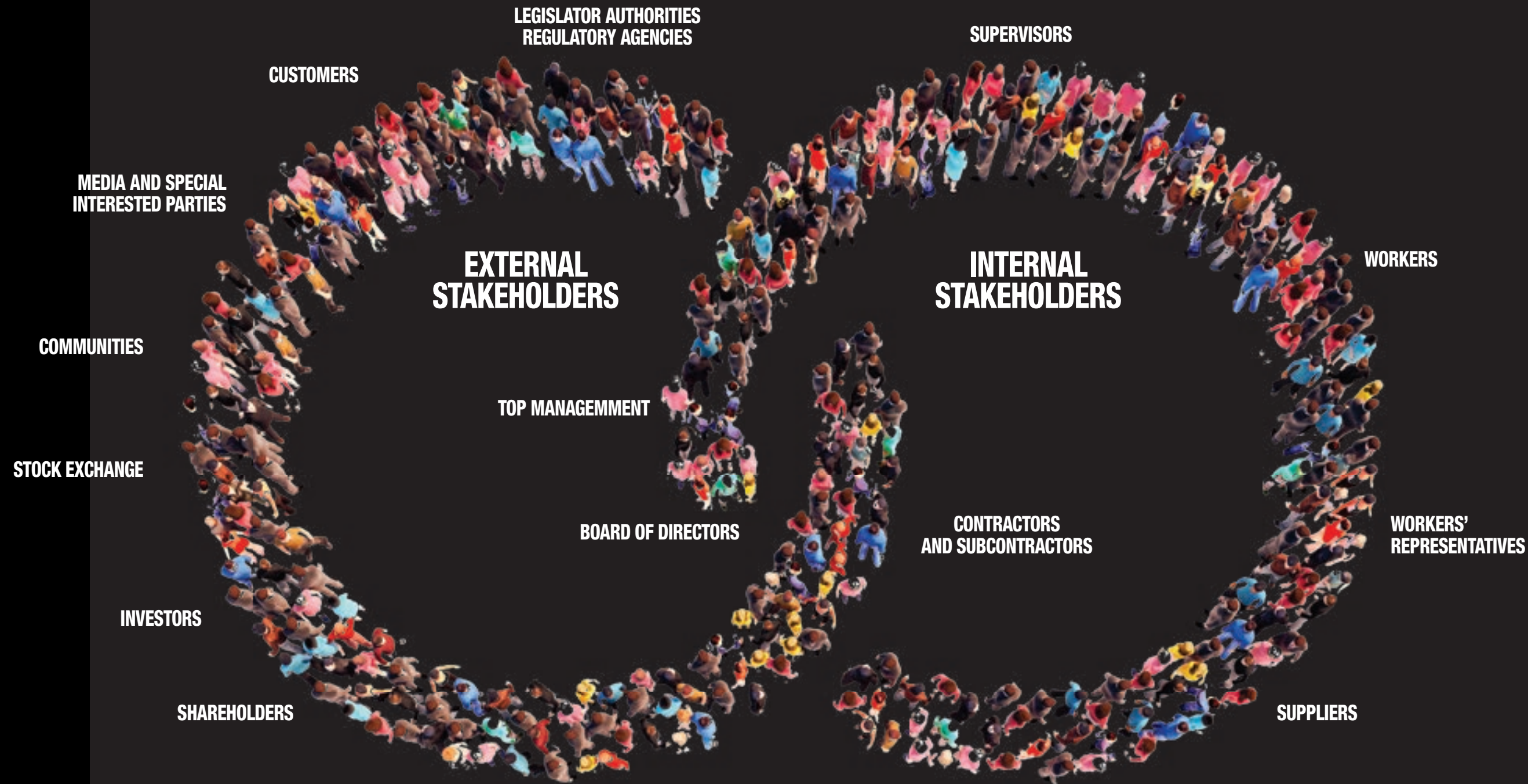
are represented not only by shareholders and company management, but above all by employees and collaborators, the heart of the company, who are in direct contact with customers every day, representing Tsubaki Nakashima. The company strongly believes in the integration and concrete motivation of its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







The Paris Agreement and the AGENDA 2030 of the United Nations aim to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels.

As a result, several global goals have been set to fight climate change:

- Global CO<sup>2</sup> emissions need to be reduced by 45% by 2030 from 2010 levels (last official data available)
- CARBON NEUTRALITY by 2050: carbon neutrality is a state of net-zero CO<sup>2</sup> emissions.

This can be achieved by balancing emissions of CO<sup>2</sup> with its removal.



## VISION ZERO

ZERO ACCIDENTS, ZERO OCCUPATIONAL ILLNESSES,  
ZERO WASTES, ZERO INEQUALITIES,  
ZERO LACK OF KNOWLEDGE

INTEGRATED  
CORPORATE  
GOVERNANCE

# G

GOVERNANCE

SUSTAINABLE  
DEVELOPMENT

# M

MONOZUKURI

INSTITUTIONAL  
INTERNAL  
EXTERNAL  
TN ACADEMY

# C

COMMUNICATION



## ENVIRONMENTAL STATE OF THE ART

Carbon footprint  
Water footprint  
Other relevant environmental impacts  
Setting environmental KPIs  
Benchmarking between plants

## ENVIRONMENTAL TARGETS ACHIEVED

Analysis of energy and environmental efficiency measures already carried out  
Calculation of savings/benefits obtained in terms of environmental impact  
Re-calculation of KPIs

## ENVIRONMENTAL TARGETS TO BE ACHIEVED

Calculation of multi-year environmental sustainability targets  
Calculation of GHG reduction goals with science-based targets  
Drawing up the environmental sustainability plan between plants

## MEASURES FOR ENVIRONMENTAL SUSTAINABILITY

Analysis of the needed interventions aimed at reducing the carbon footprint  
Analysis of the interventions aimed at reducing the water footprint

## ROAD TO 2030



-27.5% CO<sub>2</sub> TONS BY 2030 COMPARED TO 2019

AIMING TO ACHIEVE CARBON NEUTRALITY BY 2050

- REDUCE ENERGY CONSUMPTION
- ADOPT INNOVATIVE TECHNOLOGIES TO PRODUCE GREEN ENERGY
- PURCHASE GREEN ENERGY THANKS TO THE RENEWABLE ENERGY CERTIFICATES
- CHALLENGE: IMPROVE THE GENERAL EFFICIENCY OF TN PLANTS THROUGH HIGH UTILIZATION

## SUSTAINABILITY ROADMAP

## ENVIRONMENTAL DATA COLLECTION

1

## DEFINITION OF THE ENVIRONMENTAL STATE OF ART OF THE GROUP

2

## DEFINITION AND CALCULATION OF SUSTAINABILITY KPIS

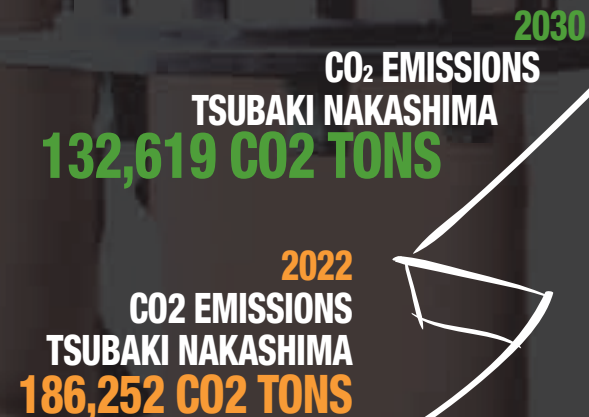
3

## DEFINITION OF SUSTAINABILITY TARGETS AND GOALS

4

## DESIGN THE SUSTAINABILITY PLAN FOCUS ON 2022 AND ROAD TO 2030

5

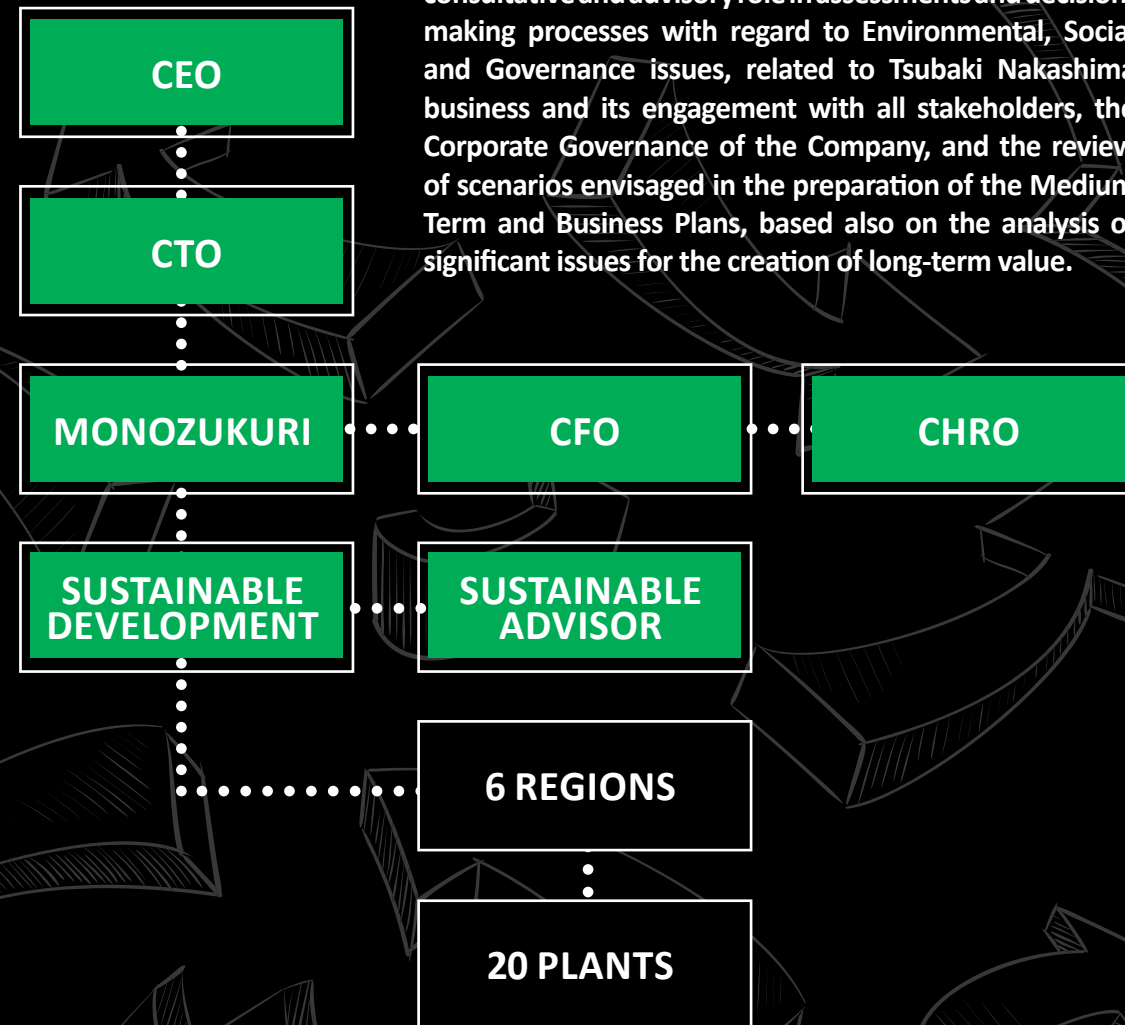


2030

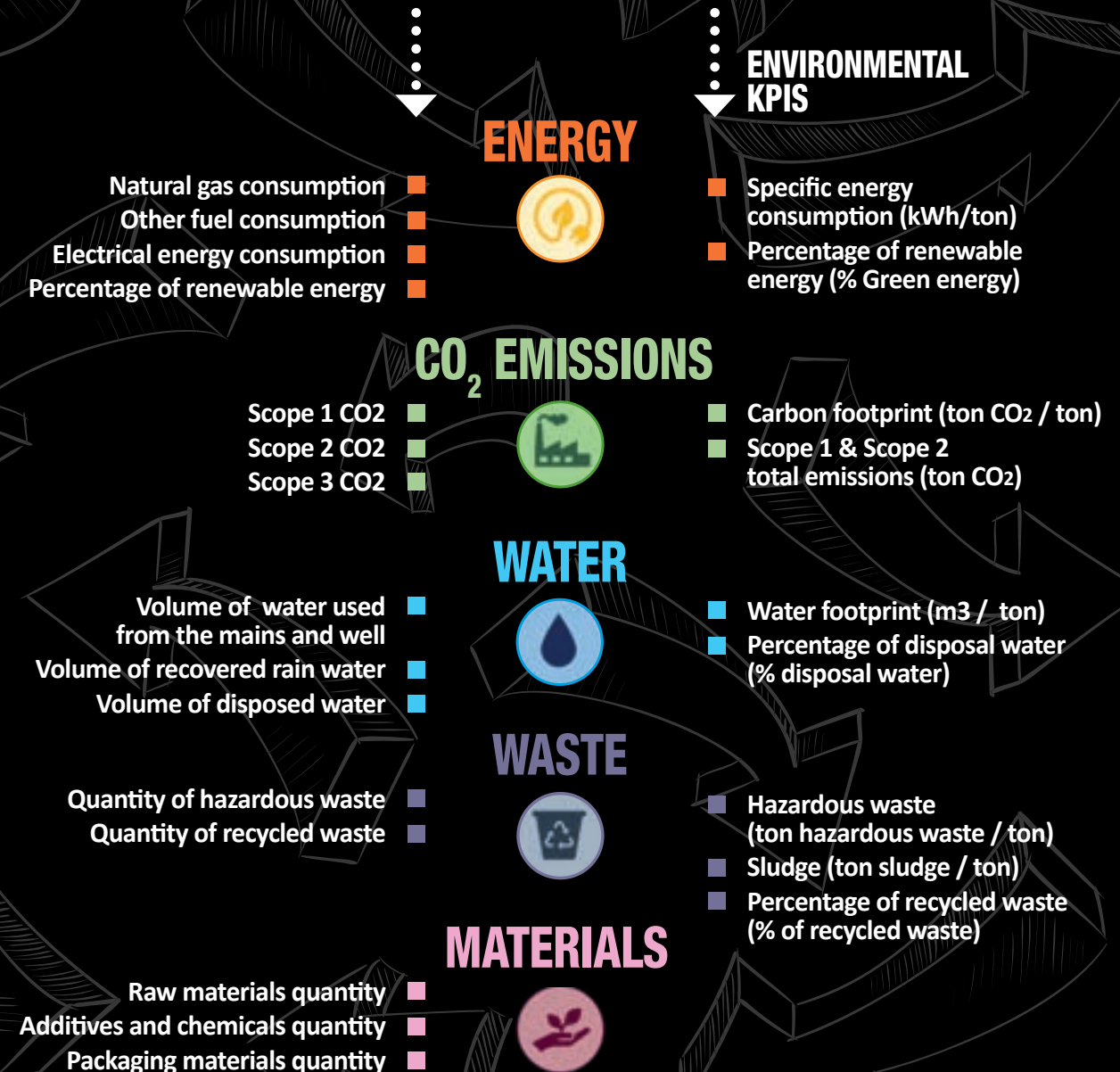


## SUSTAINABILITY COMMITTEE

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.



## WHAT IS IMPORTANT FOR ENVIRONMENTAL SUSTAINABILITY





Tsubaki Nakashima has set up and monitors several KPIs to measure its sustainability performance.

### CO<sub>2</sub> EMISSIONS [CO<sub>2</sub> TONS]

the total CO<sub>2</sub> 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. Scope 2 emissions, that are mainly related to electricity consumptions, are currently calculated using the Location Based methodology and considering the emission factors from ecoinvent database. One of the goal for 2023 is to monitor Scope 2 emissions by using the Market Based methodology that results to be more accurate. Tsubaki Nakashima has set up a 2030 target for the total CO<sub>2</sub> emissions (Scope 1 & Scope 2) by using the Science Based Target Initiative tool. Another goal for 2023 is to start to monitor Scope 3 emissions, especially those related to raw materials consumptions and transport.

### CARBON FOOTPRINT [CO<sub>2</sub> TONS/TONS]

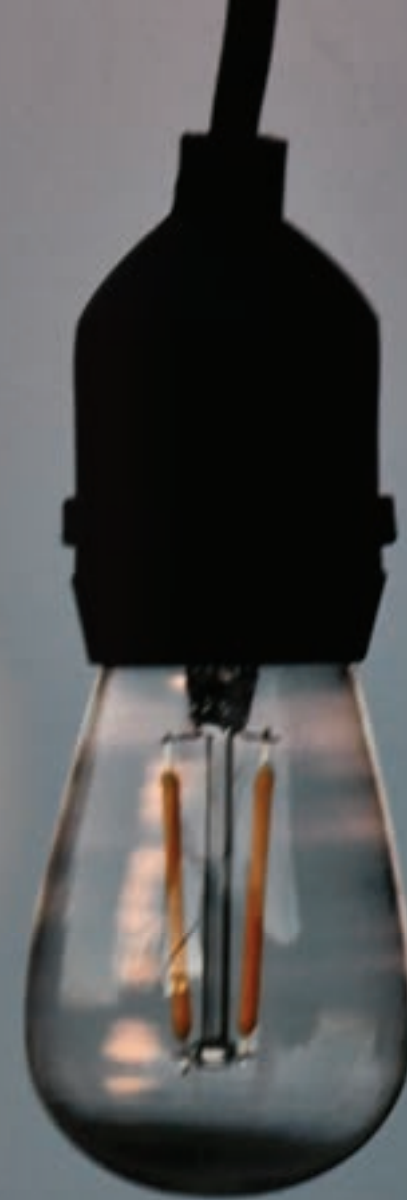
Tsubaki Nakashima carbon footprint is calculated taking into account Scope 1 & Scope 2 emissions and the production expressed in tons. This KPI reflects the sustainability of Tsubaki Nakashima factories and targets are set up taking into account the planned CO<sub>2</sub> reduction and the organization's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

### SPECIFIC ENERGY CONSUMPTION [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. The first point in the sustainability roadmap to achieve the CO<sub>2</sub> reduction goal is about energy efficiency, and that is why Tsubaki Nakashima, in addition to indicators on emissions, decided to also fix an indicator for energy consumption. Therefore, the targets set for this KPI reflect the projected CO<sub>2</sub> reduction, but also take into account self-production and green energy purchasing strategies.

### % OF GREEN ENERGY

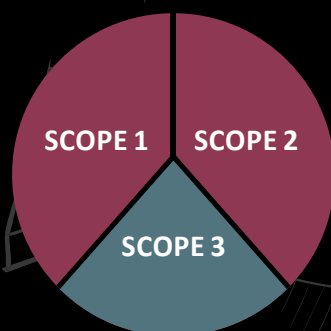
this indicator is useful to monitor the amount of green energy consumed by the organization and to properly set the strategy on purchasing and self-producing green energy and to monitor the results obtained. Tsubaki Nakashima plans to consume 100% renewable electricity by 2040.





## THE IMPORTANCE OF ENERGY EFFICIENCY

### CO<sub>2</sub> EMISSIONS CATEGORIES



SCOPE 1: DIRECT GHG EMISSIONS - NATURAL GAS, LPG, PROPANE COMBUSTION

SCOPE 2: INDIRECT GHG EMISSIONS FROM IMPORTED ENERGY (ELECTRICITY)

SCOPE 3: INDIRECT GHG EMISSIONS CAUSED BY THE ENTIRE VALUE CHAIN (RM, TRANSPORTS)

■ FULLY CONTROLLED BY TSUBAKI  
■ NOT UNDER CONTROL OF TSUBAKI

**TOTAL CO<sub>2</sub> EMISSIONS = SCOPE 1 + SCOPE 2 EMISSIONS**

$$\text{CARBON FOOTPRINT} \frac{\text{CO}_2 \text{ TONS}}{\text{TONS}} = \frac{\text{TOTAL CO}_2 \text{ EMISSIONS [ CO}_2 \text{ TONS ]}}{\text{TOTAL PRODUCTION [ TONS ]}}$$

**95% OF TSUBAKI NAKASHIMA'S CO<sub>2</sub> EMISSIONS COME FROM ELECTRICITY CONSUMPTION**

### ELECTRICITY EMISSION FACTOR EXAMPLES

1 MWH ELECTRICITY =		0,74 CO <sub>2</sub> TONS
		1,03 CO <sub>2</sub> TONS
		1,01 CO <sub>2</sub> TONS
		0,42 CO <sub>2</sub> TONS
		0,67 CO <sub>2</sub> TONS
		1,39 CO <sub>2</sub> TONS

The emission factor related to electricity varies for each country because it depends on the fuel mix used for the electricity production of each country!

### FOSSIL FUEL EMISSION FACTOR EXAMPLES

1000 M <sub>3</sub> NATURAL GAS	=	2,59 CO <sub>2</sub> TONS
1000 LITERS LPG	=	1,58 CO <sub>2</sub> TONS

The emission factor related to fossil fuels is the same for each country because the composition of natural gas and fuels does not vary!

### ROAD TO SUSTAINABILITY

There are many factors that influence the definition of targets:

**EXOGENOUS FACTORS** (for example, the closures due to Covid, the raw materials and energy crisis due to the war in Ukraine, the market, new applications, etc.) and **ENDOGENOUS FACTORS** (the closure and opening of new factories, new production lines, product mix, type of products, production increases, etc.).

During 2022 Tsubaki Nakashima developed 26 sustainability projects, started to purchase green energy, installed 3 new photovoltaic systems, and performed 10 sustainability workshops. All these activities avoided the emissions of 12,035 CO<sub>2</sub> tons. However, considering the rate of production growth and the startup of the new plant in Bosnia, this CO<sub>2</sub> reduction is equivalent to a 3% reduction in Tsubaki Nakashima's carbon footprint (i.e., 4,600 CO<sub>2</sub> tons reduction of total emissions compared to 2021).

For that reason, despite the development of these activities, CO<sub>2</sub> reduction has not been enough to reach the ambitious 2022 sustainability target of 169,204 tons CO<sub>2</sub>. Considering the above reasons, the target was found to be too aggressive, so the target for 2023 was adjusted by tending to the evolution of the organization. The final target to 2030 remains the same but the path to achieve it changes.

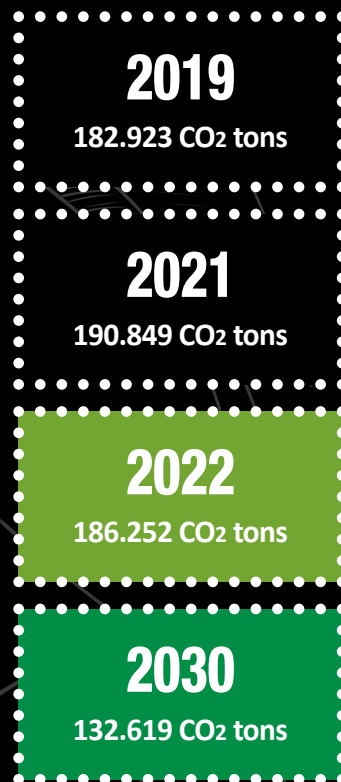


## ROAD TO SUSTAINABILITY

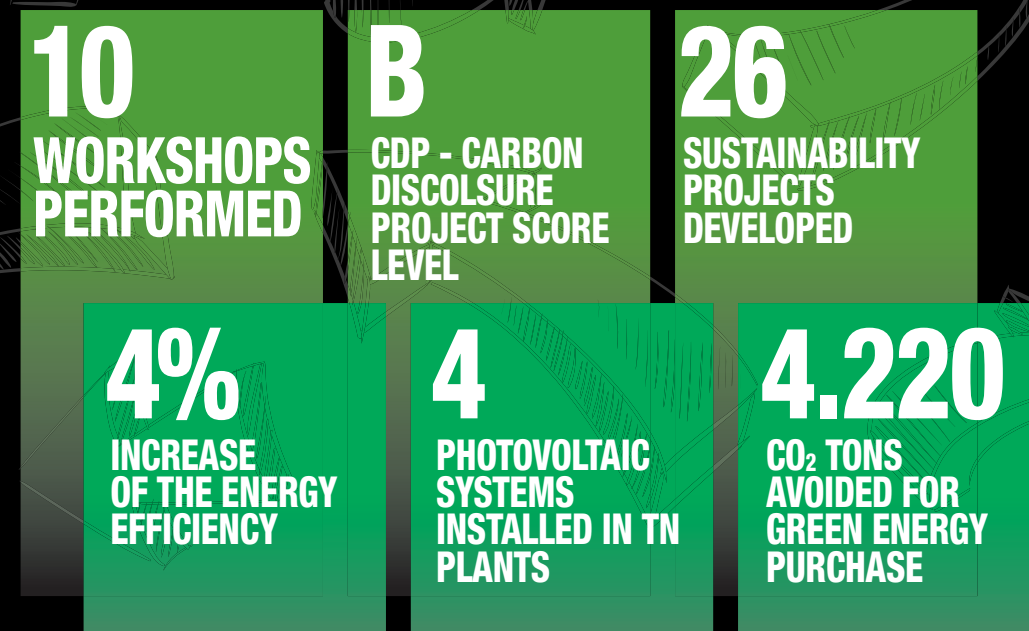
Tsubaki Nakashima strongly believes in the sustainable transformation of its products and production processes. For this reason, we decided to set the sustainability goals in line with those of the United Nations and the Paris Agreement on climate change using the methodology proposed by Science Based Target. Supporting this green transition for Tsubaki Nakashima is also a moral obligation, not only to our customers and suppliers, but also to shareholders, employees, and society at large. The first goal it has set is to reduce CO<sub>2</sub> emissions by 27.5% by the end of 2030, and the strategy for achieving this is based on concrete and tangible projects.

- IMPROVING ENERGY EFFICIENCY OF THE PLANTS
- THROUGH THE IMPLEMENTATION OF RENEWABLE ENERGY SYSTEMS
- THROUGH A STRATEGY FOR PURCHASING GREEN ENERGY SHARES

It is a not easy road, even though it is a real commitment, a challenging task that needs a lot of investments.



## SUSTAINABILITY IN NUMBERS





## 2022: SUSTAINABILITY WORKSHOPS

During 2022, 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, in each plant visited, on-site analyses were performed to evaluate the energy efficiency of the production process and several opportunities for improvement were subsequently analyzed. A summary of the improvement opportunities identified is given in the table below.

10

SUSTAINABILITY  
WORKSHOPS  
PERFORMED

10.132

MWH OF POTENTIAL  
ENERGY SAVINGS

32

SUSTAINABILITY  
PROJECTS  
IDENTIFIED

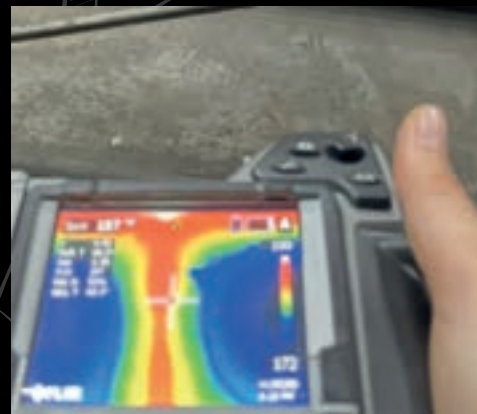
4.727

CO2 TONS  
OF POTENTIAL  
REDUCTION



INDIA





**USA**



**BEFORE**

**HEAT TREATMENT IMPROVEMENT  
AFTER THE WORKSHOPS**

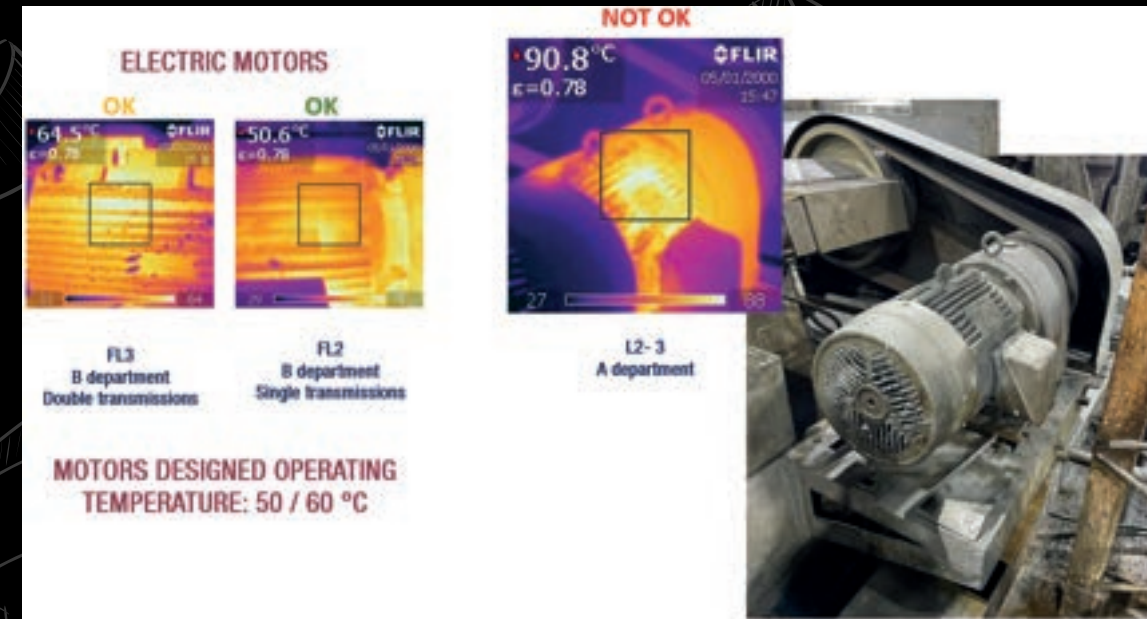
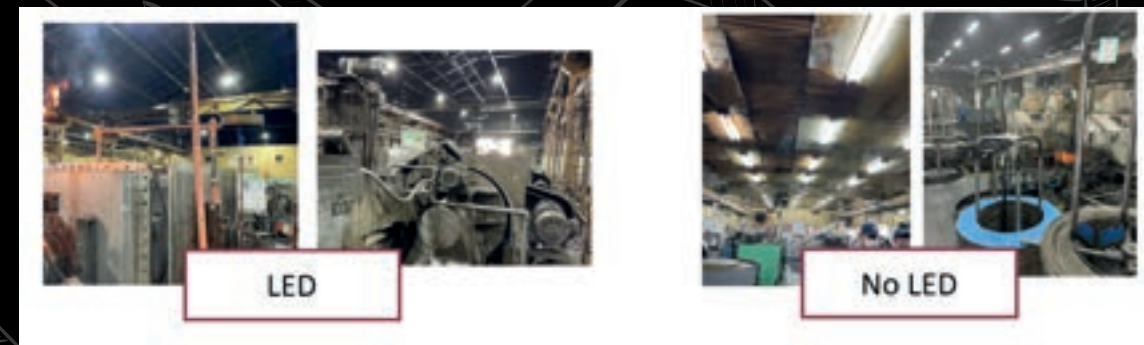


**AFTER**





JAPAN

MEASUREMENTS AND OPERATIONS  
DURING THE WORKSHOPS





## CDP CARBON DISCLOSURE PROJECT

CDP is a not-for-profit charity that runs the global disclosure system for companies to manage their environmental impacts. This project enables companies to progress towards environmental stewardship through benchmarking and comparison with peers, in order to continuously improve their climate governance. Tsubaki Nakashima to certify and make its commitment to sustainability reliable and transparent joined CDP - Carbon Disclosure Project in 2022. 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.

Tsubaki Nakashima obtained a high score regarding:

- BUSINESS STRATEGY, FINANCIAL PLANNING & SCENARIO ANALYSIS
- TARGETS
- GOVERNANCE

This means that the sustainability strategy has been set up correctly and is strong and reliable. Instead, the areas where Tsubaki Nakashima needs to improve are data collection and calculation of indirect Scope 3 emissions and the area related to green energy. For both of these weaknesses, Tsubaki Nakashima has already started the process of improvement; in fact, it is analyzing the CO<sup>2</sup> emissions of raw material suppliers and is analyzing the strategy for purchasing green energy and planning to install photovoltaic systems at its plants.



## 2022: SUSTAINABILITY PROJECTS DEVELOPED

During 2022, 26 projects related to the continuous improvement of environmental sustainability of Tsubaki Nakashima's plants were developed.

4.865

CO2 TONS  
AVOIDED  
IN EUROPE  
REGION

2.253

CO2 TONS  
AVOIDED  
IN CHINA  
REGION

222

CO2 TONS  
AVOIDED  
IN AMERICAS  
REGION

158

CO2 TONS  
AVOIDED  
IN GCB  
REGION

125

CO2 TONS  
AVOIDED  
IN JAPAN  
REGION

7.623

TONS  
REDUCED



GOAL  
ACHIEVED

## 2022: ENERGY EFFICIENCY

During 2022 to support the first milestone on the road to 2030 related to the reduction of energy consumptions, five specific projects useful for increasing the energy efficiency of Tsubaki Nakashima's production processes were analyzed.

As a result of the development of these projects within plants, the KPI related to energy efficiency increased by 4% in 2022 compared to 2021.

3%

OF ENERGY  
REDUCTION  
NEW ELECTRIC MOTORS  
& VSD INSTALLATION

2%

OF ENERGY  
REDUCTION  
COMPRESSED AIR  
LEAK REDUCTION

3%

OF ENERGY  
REDUCTION  
FURNACES  
INSULATION  
IMPROVEMENT

2%

OF ENERGY REDUCTION  
LAMPS REPLACEMENT  
WITH LED

1%

OF ENERGY REDUCTION  
PUMPING SYSTEM  
OPTIMIZATION

+4%

ENERGY  
EFFICIENCY  
(VS 2021)



GOAL  
ACHIEVED



**330 kW**

OF INSTALLED  
SOLAR PANELS  
IN ITALY

**65 kW**

OF INSTALLED  
SOLAR PANELS  
IN POLAND

**60 kW**

OF INSTALLED  
SOLAR PANELS  
IN INDIA

**5 kW**

OF INSTALLED  
SOLAR PANELS  
IN JAPAN

## 2022: INSTALLED PHOTOVOLTAIC PLANTS

**460 kW**

OF INSTALLED  
SOLAR PANELS  
IN TSUBAKI  
NAKASHIMA

**192**

CO<sub>2</sub> TONS  
AVOIDED





ITALY - PINEROLO PLANT



INDIA - SILVASSA PLANT



POLAND - KRASNIK PLANT



JAPAN - KATSURAGI PLANT

## 2022: GREEN ENERGY PURCHASING

In addition to the photovoltaic systems, during 2022 some of Tsubaki Nakashima's factories purchased green energy shares to promote the lowering of CO<sup>2</sup> emissions and the green transition:

**100%**

RENEWABLE  
ELECTRICITY  
SLOVAKIA PLANT

**100%**

RENEWABLE  
ELECTRICITY  
UK PLANT

**10%**

RENEWABLE  
ELECTRICITY  
KATSURAGI PLANT  
JAPAN\*

\*FROM NOVEMBER 2022

**10%**

RENEWABLE  
ELECTRICITY  
OKAYAMA PLANT  
JAPAN\*

**10%**

RENEWABLE  
ELECTRICITY  
KORIYAMA PLANT  
JAPAN\*

**4.220**

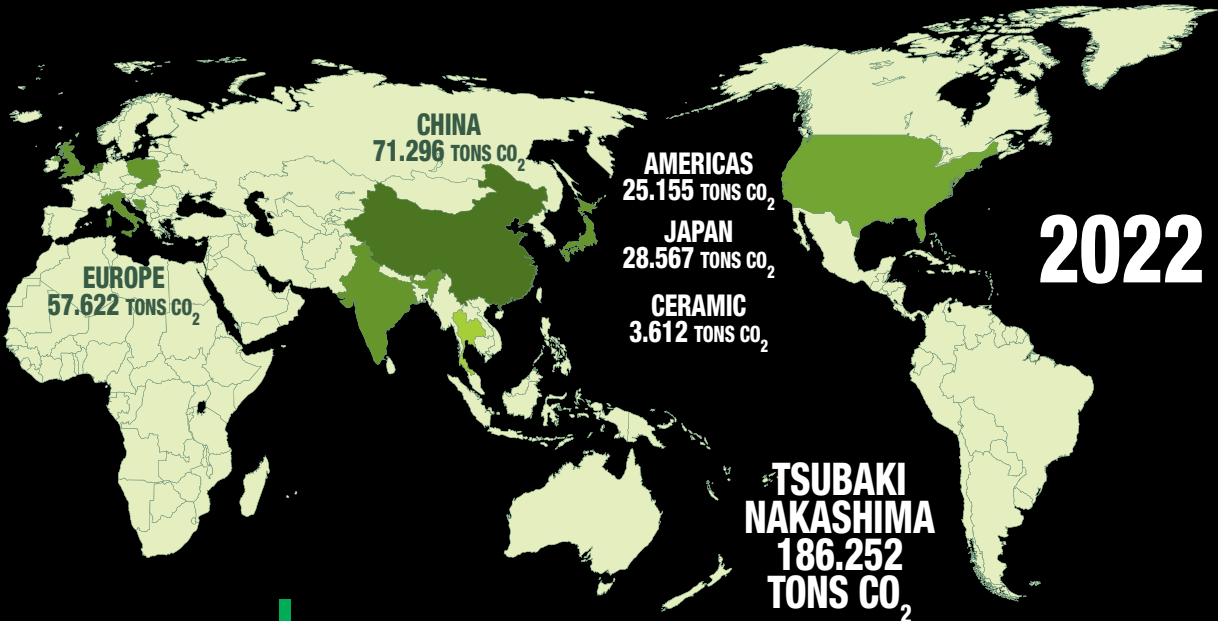
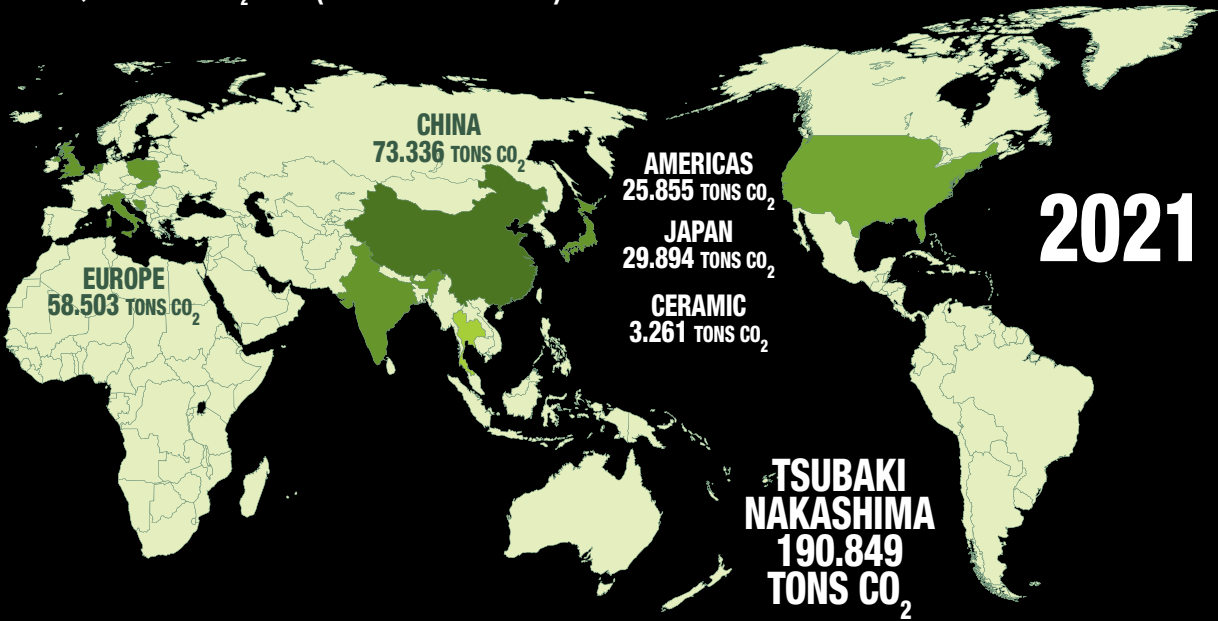
CO2 TONS  
SAVED



GOAL  
ACHIEVED









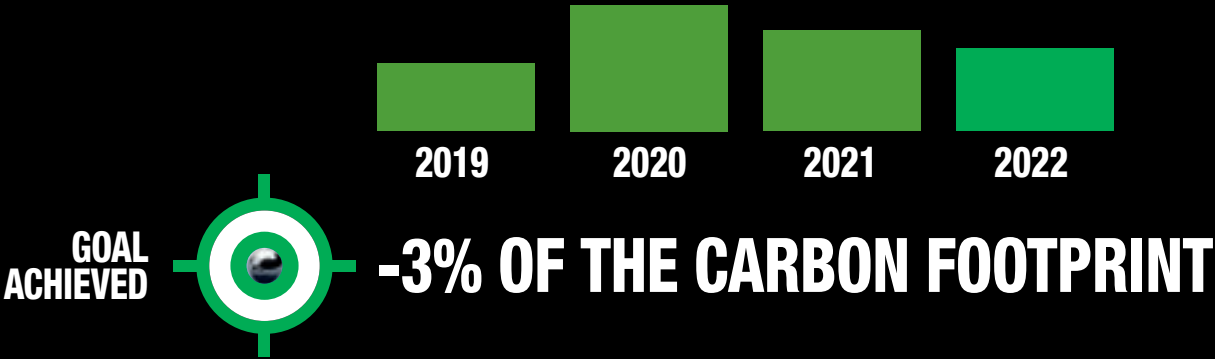
TOTAL QUANTITY OF CO<sub>2</sub> TONS (SCOPE 1 AND SCOPE 2) EMITTED



GOAL ACHIEVED  4.597 TONS CO<sub>2</sub> AVOIDED

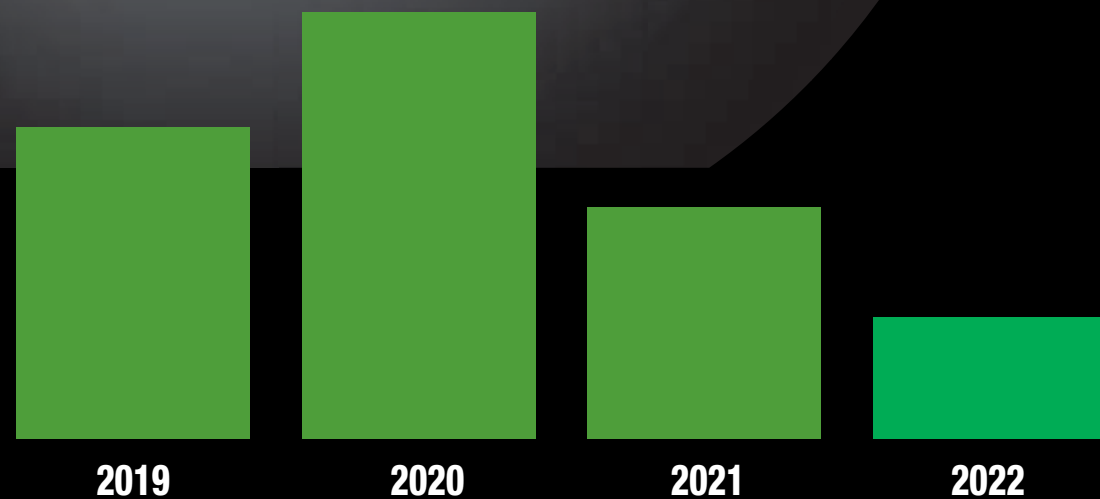
QUANTITY OF CO<sub>2</sub> TONS (SCOPE 1 AND SCOPE 2) PRODUCED PER TON OF PRODUCT

	CARBON FOOTPRINT (TON CO <sub>2</sub> / TON)	2021	2022
 JAPAN		2,3	2,6
 EUROPE		1,4	1,4
 CERAMIC		35,9	31,4
 CHINA		2,3	2,2
 AMERICAS		1,9	1,8
 TSN TSUBAKI NAKASHIMA		1,94	1,88











# ENERGY



GOAL ACHIEVED  **-4% OF SPECIFIC ENERGY CONSUMPTION**

QUANTITY OF ENERGY CONSUMED PER TON OF PRODUCT		
ENERGY INTENSITY (MWh / TON PRODUCT)	2021	2022
 JAPAN	3,1	3,5
 EUROPE	2,5	2,4
 CERAMIC	49,5	44,0
 CHINA	2,2	2,1
 AMERICAS	4,0	3,2
 TSUBAKI NAKASHIMA	2,7	2,6

**+ 4% OF ENERGY EFFICIENCY**









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 CO<sup>2</sup> emissions and carbon footprint for that reason Tsubaki Nakashima currently focuses its attention on reducing greenhouse gas emissions but in any case it also keeps the water consumption under control.

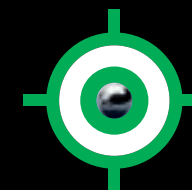
Tsubaki Nakashima water consumption in 2022 was equal to 277 million liters. Considering that, in average, un person consumes 237 liters of water per day, Tsubaki Nakashima water consumption during 2022 is equivalent to the annual water consumption of 3,215 people.

The water footprint of Tsubaki Nakashima during 2022 was equal to 2,8 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

## QUANTITY OF WATER CONSUMED PER TON OF PRODUCT

	WATER (M <sub>3</sub> / TON PRODUCT)	2021	2022
 JAPAN		3,3	3,3
 EUROPE		3,1	2,9
 CERAMIC		3,8	2,7
 CHINA		3,3	3,4
 AMERICAS		2,6	0,4
 TSUBAKI NAKASHIMA		3,1	2,8

GOAL  
ACHIEVED



-10%  
OF WATER FOOTPRINT









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.

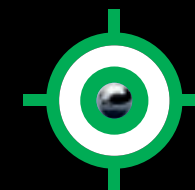
On whether or not waste is recyclable, as well as on the very definition of waste, as well as on whether or not it is dangerous, national regulations are very different from each other.

In some countries sludges are considered hazardous and non-recoverable waste, while in others it is the opposite; it is therefore necessary to keep the differences in mind when reading the data

## QUANTITY OF RECYCLED RATE

	2021	2022
 JAPAN	51%	67%
 EUROPE	33%	34%
 CERAMIC	28%	41%
 CHINA	36%	42%
 AMERICAS	10%	31%
 TSN TSUBAKI NAKASHIMA	31%	41%

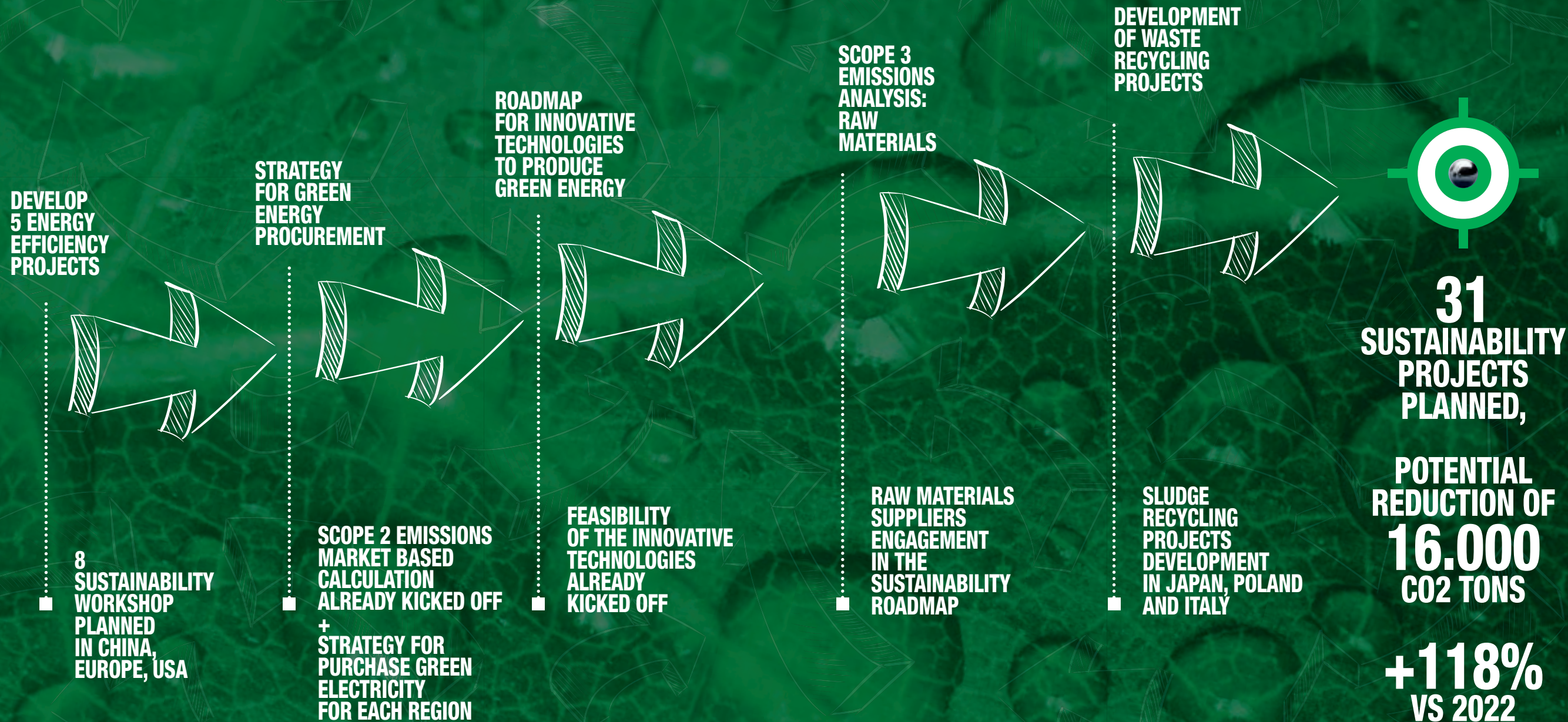
GOAL  
ACHIEVED



**+10%**  
**OF RECYCLED RATE**



# 2023 PROJECT





# OUR COMMITMENT TO PEOPLE





Tsubaki Nakashima operates, trains, and secures its People based on unified rules, with the aim of ensuring that all employees working around the world continue to move toward the future as One Team.

We have worked to create a multiethnic but monocultural work environment, with our corporate culture, our visions, approaches, systems, processes; and our culture embraces and harmonizes differences in race, language, tradition, habits, way of thinking.

## 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.

INTEGRITY  
AND  
ACCOUNTABILITY

RESPECT  
AND  
COMPASSION

PASSION  
AND  
COMMITMENT

PROXIMITY

VALUES

We set **STANDARD OF BEHAVIOR** for team members and all stakeholders while at work, helping all our employees 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.

# PEOPLE



## TSUBAKI NAKASHIMA DOES NOT ACCEPT CHILD LABOR

We are an organization committed to the **RESPECT OF HUMAN RIGHTS AND UPHOLDING LABOR STANDARDS**. This respect and commitment are central to the success of TN entities in all the communities in which it operates. Our Labor Standards Policy is aligned with the principles established within the Universal Declaration of Human Rights and in combination with TN Managerial Statement and Code of Business Ethics, reinforces the commitment to ensuring all internal and external stakeholders are treated with dignity and respect.

We have plants and offices in Japan, United States, Italy, Poland, Slovakia, the Netherlands, Bosnia, China, Thailand, India, and Taiwan, and in each of these countries, local employees take the lead in conducting activities. As a Corporate Group with global operations, we aim to **UTILIZE DIVERSE VALUES** in our business, and promote diversity by appointing suitable personnel to roles of responsibility regardless of nationality, promoting the career of women, and employing people with disabilities. In our Group we have 31 different nationalities. Diversity is key, always.

We value gender balance and the overcoming 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.

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.

## DISABILITY

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.

## GENDER

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

## GENERATIONS INTERCULTURALISM







## RECRUITMENT

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

## ASSOCIATION AND WORKER'S REPRESENTATIVES

Tsubaki Nakashima supports a person's right to come together with others to promote, pursue, and defend common interests, respecting the right of all people to join or not join a trade union to bargain collectively. We respect employees right to collective bargaining and ensures labor agreements are developed with employee representatives and, at a minimum, comply with local rules and regulations.

The business encourages open dialogue and transparency, so that management and unions are encouraged to work together, in compliance with non-disclosure principles, to achieve a prosperous outcome.



# COMPENSATION AND BENEFITS

**WE BELIEVE THAT A GOOD WORK ENVIRONMENT MEANS**

## PHYSICAL ENVIRONMENT

ALL PLACES OF WORK,  
ALL SITES, AND AREAS  
WHERE WORK  
IS CARRIED OUT

## 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

## SET OF RULES

THE METHODS  
OF PERFORMING  
THE JOB'S FUNCTIONS

Tsubaki Nakashima is strongly committed on these three fronts, 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 reduce employee turnover.



# TRAINING



For the **DEVELOPMENT OF OUR PEOPLE**, we have established and improved (every after year) 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 the 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.

This is the formula we apply in all the processes related to people (from hiring to future opportunities). In 2022, the average number of hours of specific training (excluding on-the-job training) per employee was 42 hours; greater in countries where personnel turnover was significant (USA, Slovakia) with peaks of 170 hours on average, lower in countries with stable personnel with work experience and profound technical and behavioral knowledge. In those cases, the training concerned the sustainability and occupational safety





**TSUBAKI NAKASHIMA ACADEMY (TN ACADEMY)** aims to enhance the customer value we create. To this end, we teach our Managers and Talents basic technology and skills and have them experience Monozukuri (the art and science of manufacturing) by performing specific manufacturing and managerial tasks step by step. This helps them tackle jobs from different angles.

In 2021 we focused our efforts on Manufacturing, Quality, People Management and Finance for non-specialists.

In 2022 we spent a lot of energy on Sustainability training and workshops, Corporate Governance, Safety and Health, with face-to-face training courses (including field audit exercises), or remotely as already happened the previous year.

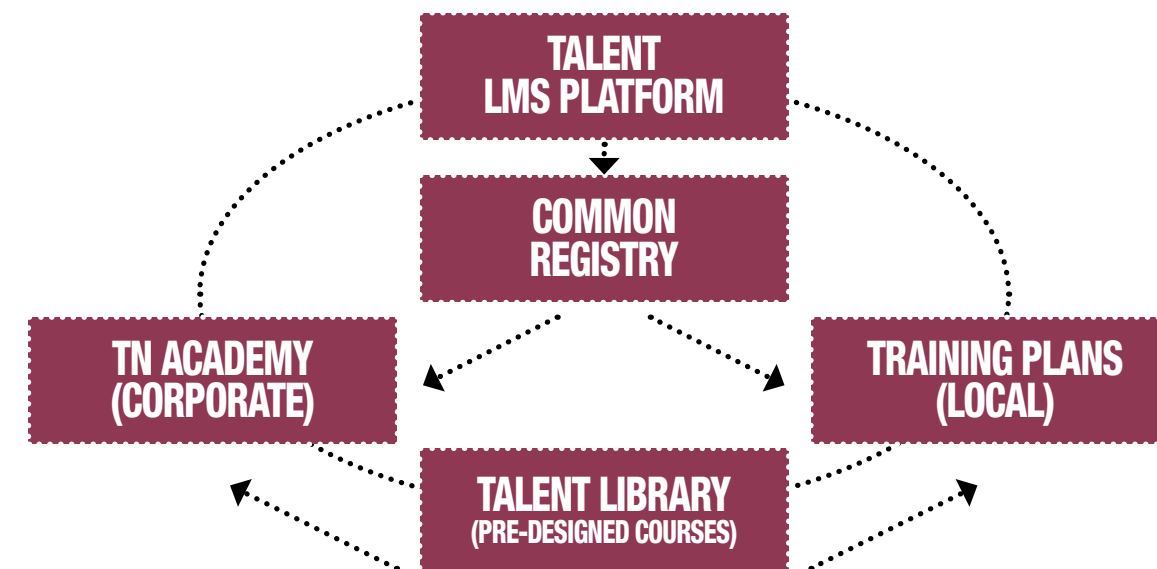


## NEW TRAINING AND DEVELOPMENT TOOL

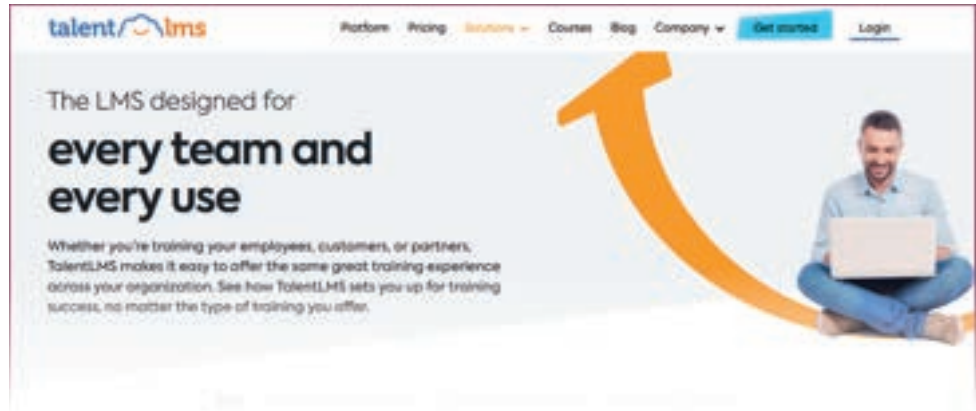
The **CHALLENGES OF TN ACADEMY** we had to face in 2022 were many: large number of participants, distribution of plants across different time zones, prerequisites of knowledge for participation in TN Academy, thorough knowledge of company policies, ethics and vision, varying training and induction strategies and procedures across the plants.

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

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



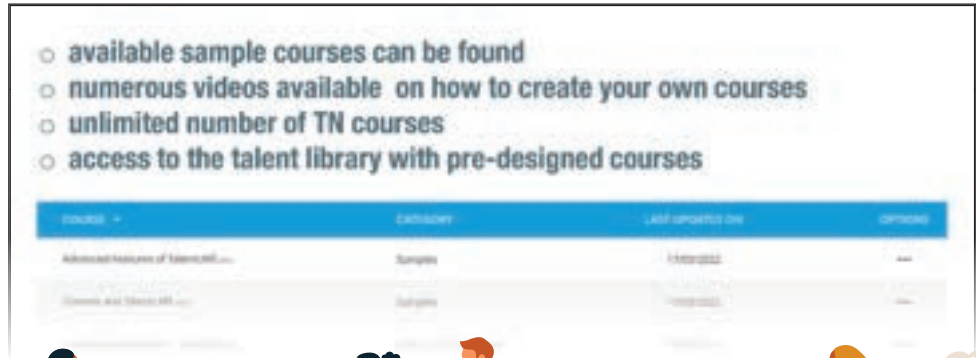




THE PLATFORM WE SELECTED IS TALENT LMS

Talent LMS will become the Tsubaki Nakashima Training Platform with common:

- On-Boarding Programs - partially ready
- Corporate Governance Training (Code of business ethics and related policies) already present
- Safety and Health training courses, based on our footprints – already present
- Sustainability training
- Quality Management System
- #Motus 4.0
- Finance for non-specialists



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 we identified in the last years and we changed in 2022.

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**

PURPOSES OF THE GOALS AND OBJECTIVE PROCESS

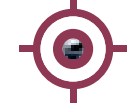
SMART



**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**



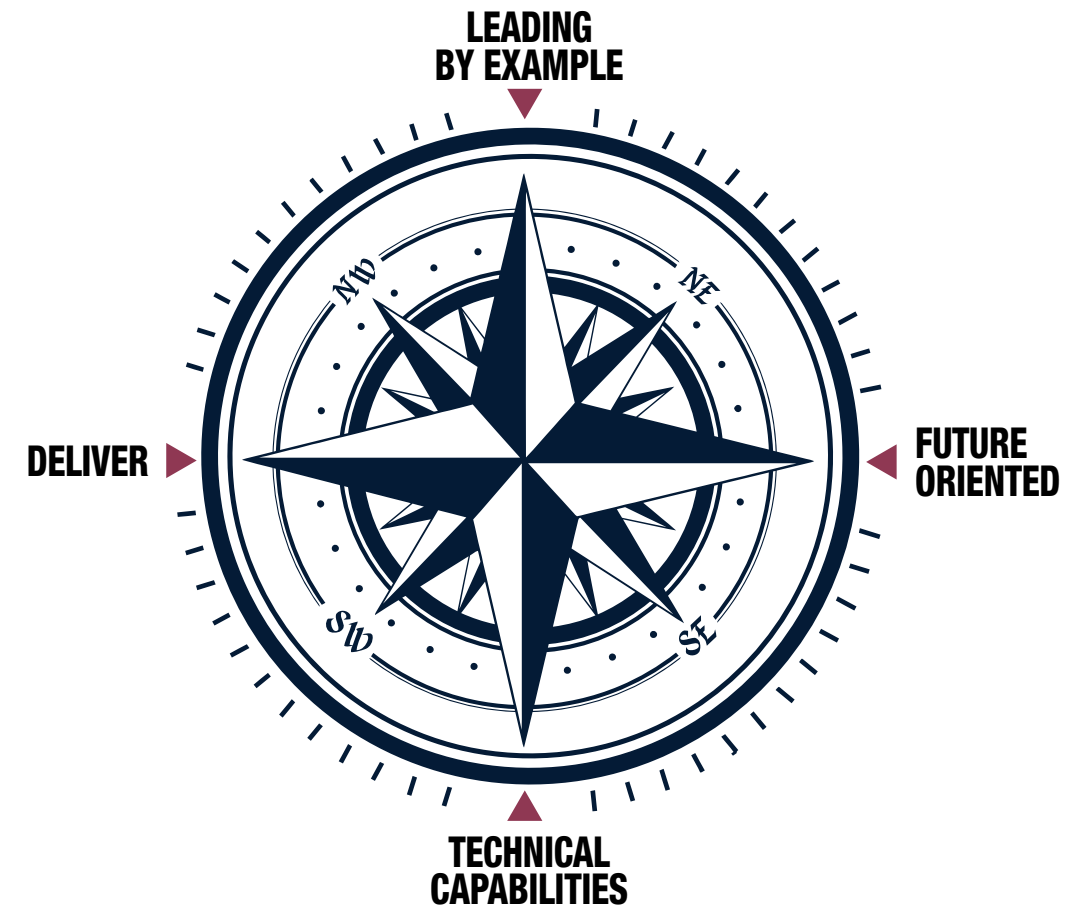
**GOALS MUST BE THE RESULT OF A DISCUSSION BETWEEN EMPLOYEE AND MANAGER**



During the Performance Evaluation and Competency Assessment 2021 we used a **SET OF ELEMENTS** which was able to translate the Managerial Statements in Managerial Competencies.

In order to be more focused on simplicity and alignment with the Mid-Term Strategy Transform Next 2023, we modified and updated the Managerial Competencies: the elements related to the assessment of competencies, which were 5 (Leading by Examples, Growth, People, Inspiration and Delivery) have become 4 taking into consideration both behavioral competencies (Ethical Leadership) and future orientation (Growth, Transformation), but also the technical competencies specific to the tasks and role performed and the ability to meet expectations and achieve expected results.

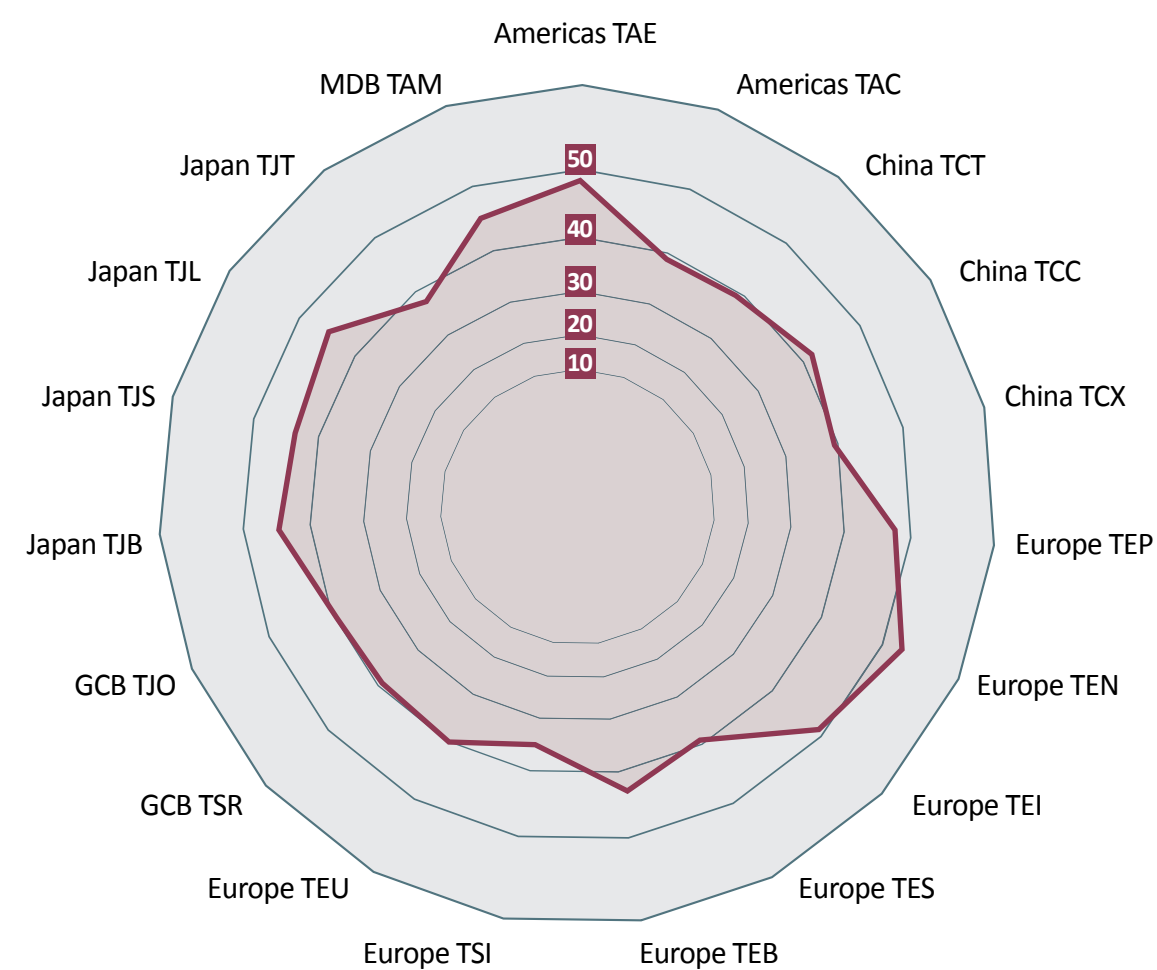
These are **NOW THE CARDINAL POINTS OF OUR EVERY ACTION**, which is why they are represented graphically by a compass





The median age in our plants guarantees experience, knowledge and commitment, everywhere

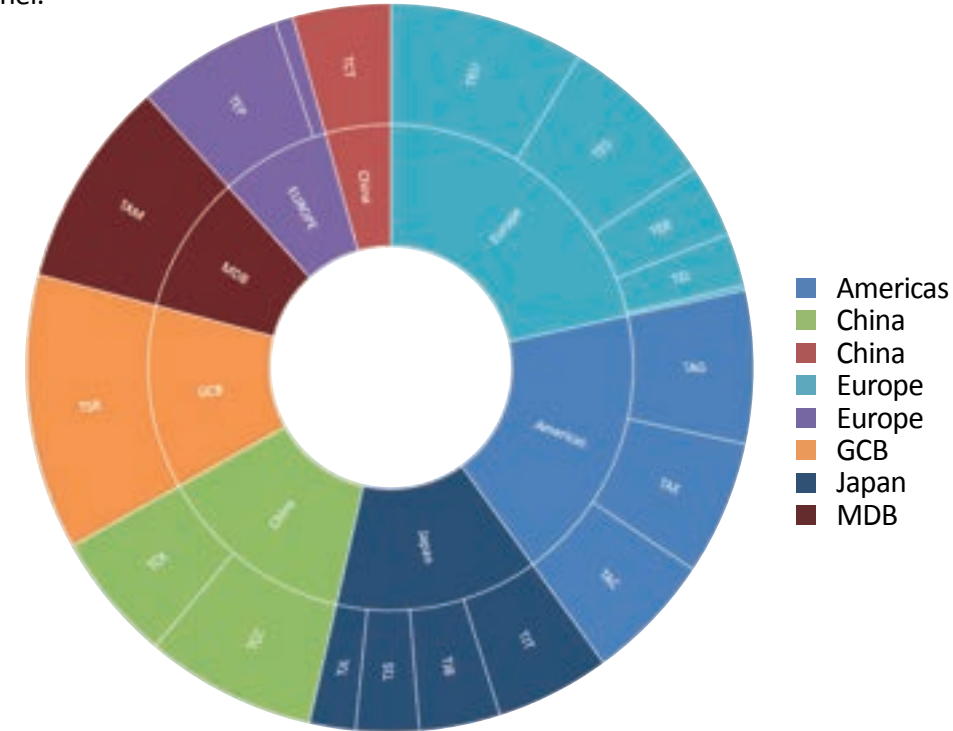
MEDIAN AGE: 46



The plants with the youngest staff are the Asian ones (India, Thailand, and Taiwan), which are moreover the most recent ones within our organization. Those with the most experienced staff are the Dutch and Italian ones, which have been founded for more than 60 years and are witnessing a progressive generational change, the American one of Erwin, where NN Inc. was founded in 1980. acquired in 2017 by Tsubaki Nakashima and the Polish one, also in this case with a very long industrial tradition behind it.

WORKFORCE COMPOSITION

Men represent 79% of the entire population and women 21%; Tsubaki Nakashima is a manufacturing company, and we believe that the efforts made in Ergonomics and Automation will continue to allow many women to join us, also in activities that were historically performed by male personnel.



The composition of the personnel varies greatly from plant to plant, both for reasons linked to the culture of the country (in some there are not even female candidates for worker positions, but only for white-collar categories) and for industrial history - it is necessary to compare these data with those of the chronological ages, to understand what the historical evolution has been. **IN MOST PLANTS, WOMEN PLAY KEY MANAGERIAL ROLES AS MANAGERS, DEPARTMENT HEADS, AND SUPERVISORS.**

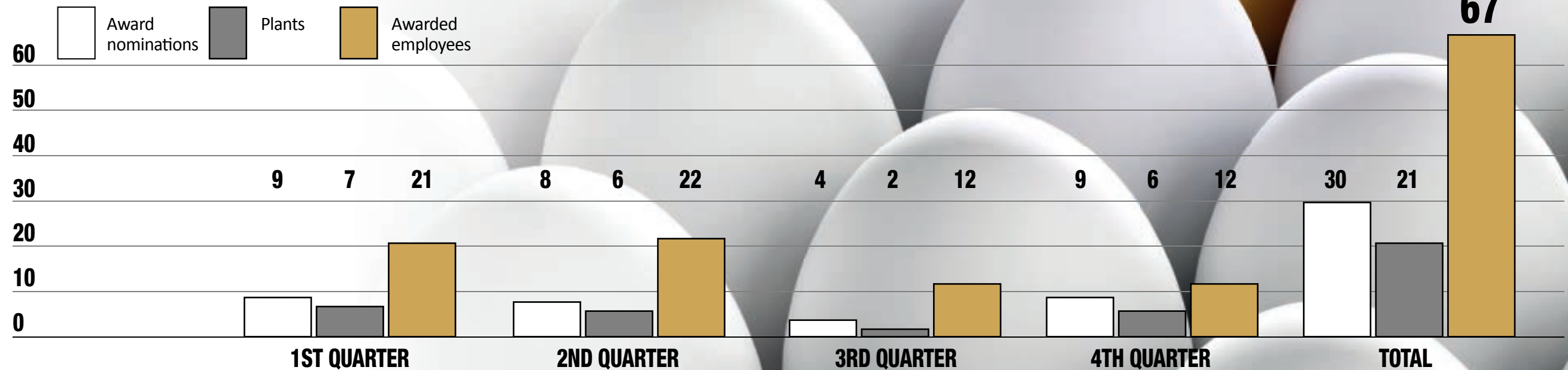


## BX - BE EXCEPTIONAL AWARD

BX Award 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 behaviour, 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 step on board and feels the spirit of being part of a winning team.



- **THE BIGGEST CONTRIBUTOR: JAPAN (40)**
- **THE MOST CONSISTENT: CHINA (3 PLANTS CONTRIBUTED PER QUARTER)**
- **THE MOST AWARDED EMPLOYEES IN ONE QUARTER: JAPAN**
- **PARTICIPATED IN EACH QUARTER: EUROPE, JAPAN**
- **REGIONS WITH NO SUBMISSIONS IN A QUARTER: AMERICAS, ASIA**

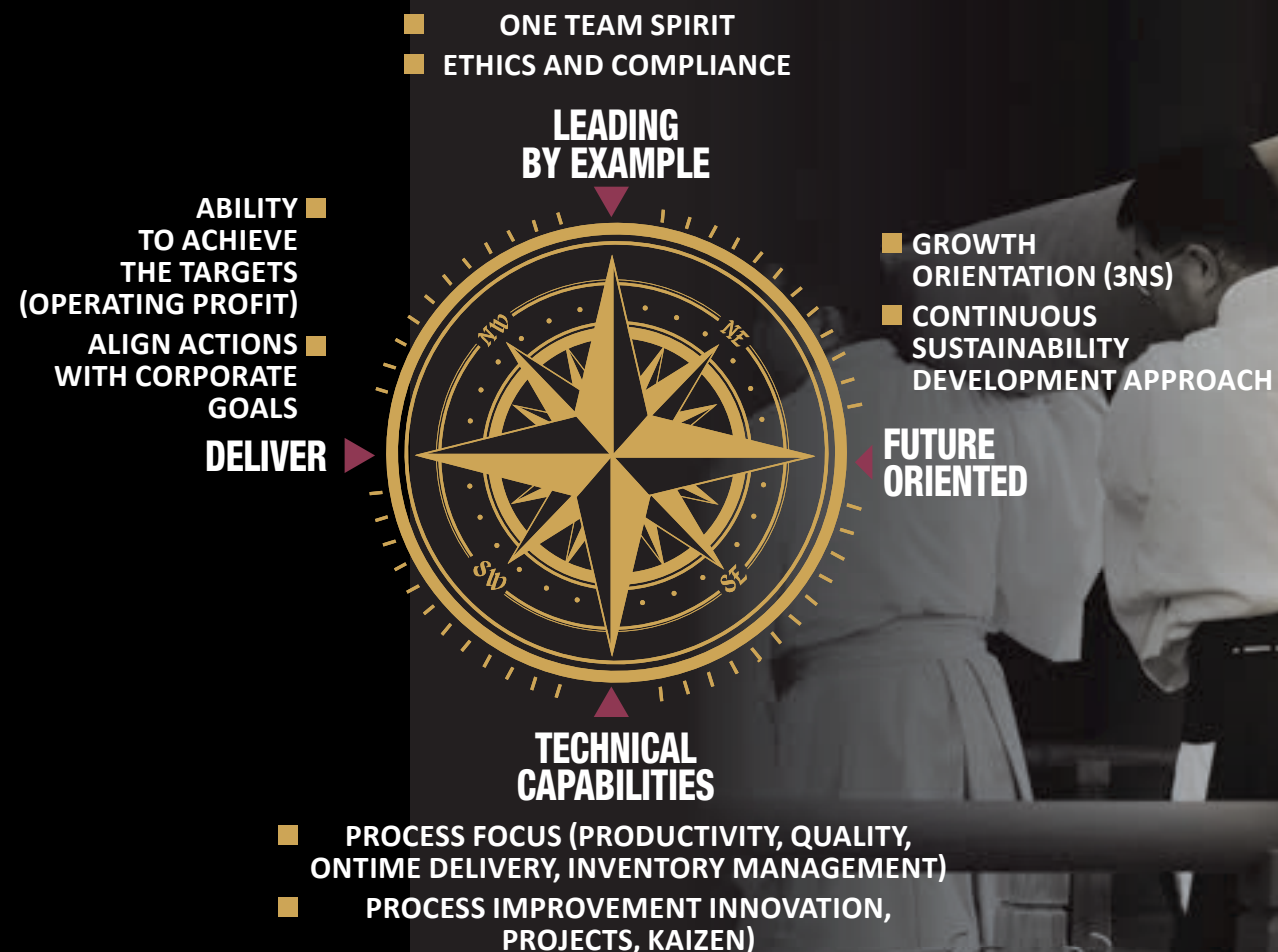




## BEST RUN PLANT AWARD

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.





## TJO, GLOBAL CERAMIC BUSINESS OKAYAMA, JAPAN

### BEST RUN PLANT AWARD

- Sales and OP will be overachieved.
- Continuous challenge of process improvement for acquisition of new business and for cost saving, and support to TSR's improvement activities as Ceramic ball mother plant.
- Energy saving activities are on going such as switching to LED lights, stop air leaking (Solar panels' installation planned in 2023).
- Supplier award from Schaeffler and NTN.
- IATF certified since 2021, ISO14001 certified since 2022





## TEU, EUROPE REGION WORTHING, UNITED KINGDOM



### BEST RUN PLANT AWARD

- Fully realized TEU strategy focusing on "BRP/TCB business" and achieved a PO of 22.8%.
- Improved and developed strong relationship with key customers.
- Created a new method to manage operational productivity by keeping "Cost of Non-Quality" low (YTD Nov, BP/0.6% vs Actual/0.2%), and improving *On-time Delivery* (Nov 2021/69.8% vs Nov 2022/91.1%) resulting in reduced sales back log.





# AMERICAS REGION TAG (GEORGIA), TAC - TAE (TENNESSEE) MEDICAL DEVICE BUSINESS TAM (MICHIGAN)



EMPLOYEE  
OF THE MONTH  
(TAG - TAM)



BARBECUE AND COOKING, JULY (ABOVE) - COMPANY PICNIC, AUGUST (BELOW) - (TAG)





# AMERICAS REGION TAG (GEORGIA), TAC - TAE (TENNESSEE) MEDICAL DEVICE BUSINESS TAM (MICHIGAN)

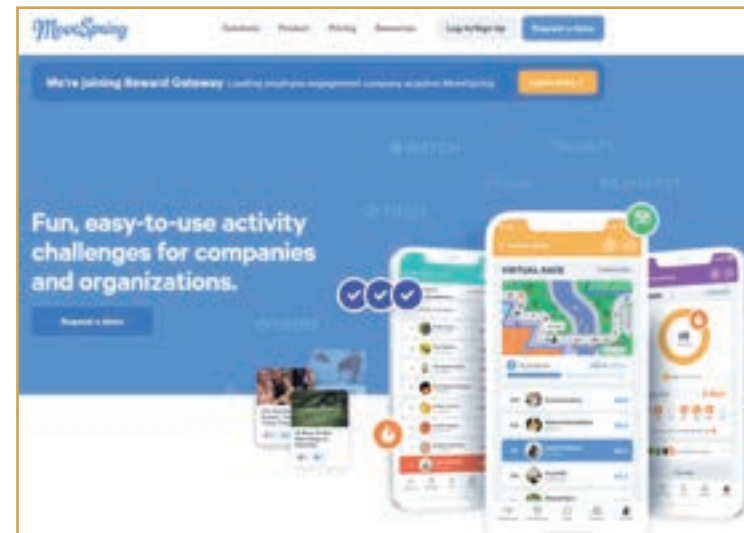


**SPOT RECOGNITION  
PROGRAM, AUGUST  
(ABOVE)**

**RECOGNITION  
FOR EMPLOYEES:  
5S, CONTINUOUS  
IMPROVEMENT  
(BELOW)  
(TAG)**

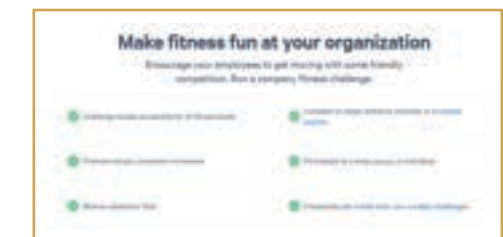


# WELLNESS INVOLVING ALL AMERICAN PLANTS



## ENCOURAGE SIMPLE, CONSISTENT MOVEMENT.

Connect a fitness tracker or smartphone to get stepping together. Compete in fun challenges that are accessible for every fitness level.



**EMPLOYEE  
APPRECIATION DAY, JULY**

**EMPLOYEE OF THE MONTH  
ANNIVERSARY AWARDS**

**VETERANS DAY  
RECOGNITION**

**VENDING BUCKS  
PROGRAM  
(TAE)**



**WATER AND COOLING BANDANAS  
DURING SUMMER HEAT**

**ICE CREAM MACHINE (TAE - TAM)**



## AMERICAS REGION TAG (GEORGIA), TAC - TAE (TENNESSEE) MEDICAL DEVICE BUSINESS TAM (MICHIGAN)



THANKSGIVING AND CHRISTMAS MEALS  
CHILDREN'S CHRISTMAS GIFT CARDS  
ANGEL TREE AT CHRISTMAS  
CHILDREN'S CHRISTMAS T  
REE ORNAMENT DECORATION CONTEST  
(TAG - TAE, LEFT) - (TAM, ABOVE)



EMPLOYEE'S CHILDREN  
SCHOLARSHIP PROGRAM (TAE)  
EMPLOYEE'S CHILDREN  
AT SCHOOL (TAM)  
SHRINERS CIRCUS TICKETS  
FOR EMPLOYEES (TAE)  
NORTHEAST STATE COLLEGE  
MACHINE TOOL TECHNOLOGY  
CLASS TOUR (TAE)  
AMERICAS REGION  
HANDS OUT YETI TUMBLERS  
WITH THE COMPANY  
NAME ENGRAVED  
TO ALL EMPLOYEES

VETERAN DAY (RIGHT)  
HALLOWEEN (BELOW LEFT)  
COOKING (BELOW RIGHT)  
(TAM)





## TSI (INDIA)

(FROM ABOVE RIGHT)  
15TH AUGUST  
YEAR END PARTY  
DUSSHERA CELEBRATION

## TSR (THAILAND)

(BELOW LEFT)  
TEAM BUILDING



## TEB (BOSNIA)

DEVELOPMENT  
OF NEW PERSONNEL  
AND VISITS TO THE FACULTY  
OF MECHANICAL ENGINEERING  
FROM SARAJEVO  
ARRANGING PRACTICE  
FOR NEW ENGINEERS  
AND STUDENTS



## TJB (JAPAN)

VISIT OF  
AN ELEMENTARY  
SCHOOL



## TCK (CHINA REGION) WOMEN'S DAY





## TEI (ITALY)



**CHRISTMAS  
PARTY  
(LEFT  
AND BELOW)**



**(FROM ABOVE LEFT)  
FUNDRAISING  
FOR CHILDREN IN HOSPITAL  
AT CHRISTMAS  
FUNDRAISING  
FOR POOR FAMILIES  
SPONSORSHIP  
SUPPORTING  
SOCIAL ASSISTANCE  
MOBILITY  
HELPING  
UKRAINE POPULATION**





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. The core component of this effort is the **TSUBAKI NAKASHIMA GLOBAL SUSTAINABILITY SYSTEM (GSS)**, according to the 3 most

important ISO Standards of which one of them is ISO 45001 (**OCCUPATIONAL HEALTH AND SAFETY**), established in FY2018 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. 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**.



Global Sustainability System  
(based on ISO 14001, ISO 45001  
and ISO 50001) applied  
in 20 plants and certified.

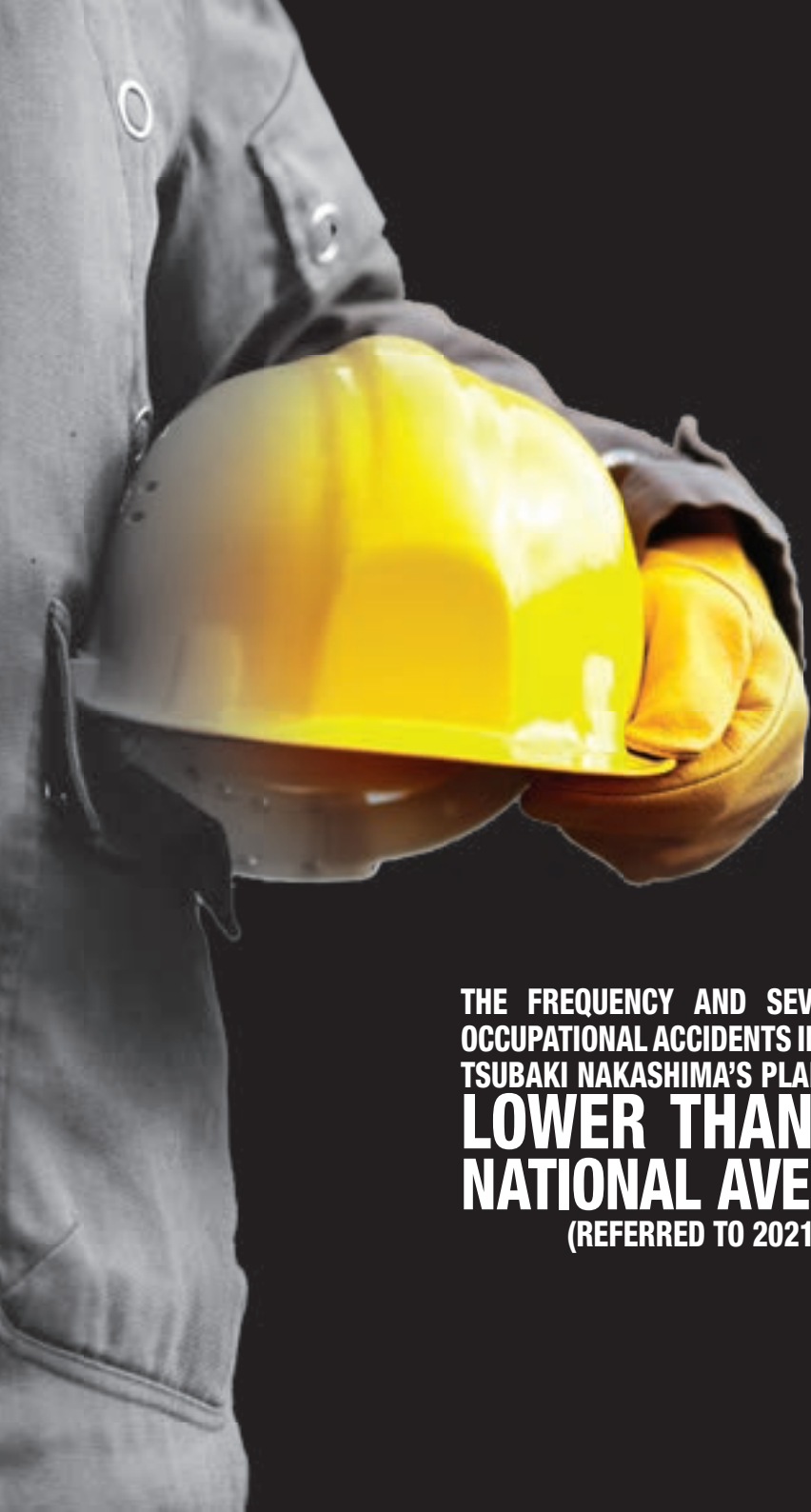


**14 PLANTS  
HAVE ISO 14001  
CERTIFICATION**



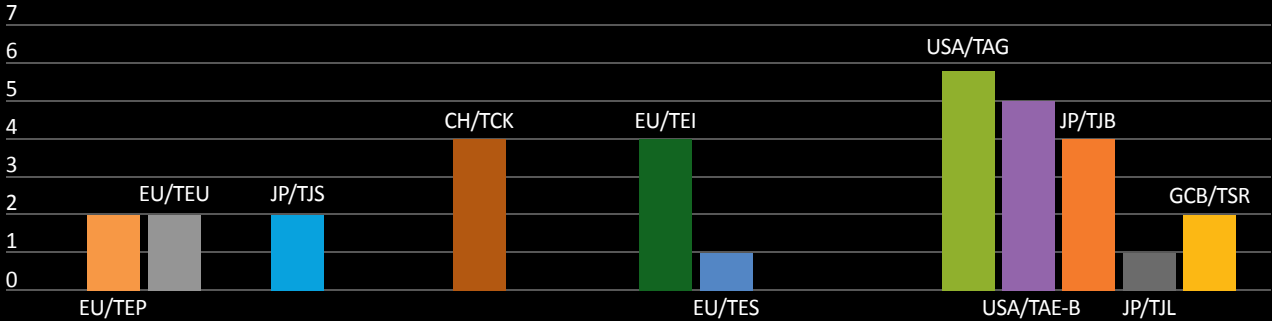
**5 PLANTS  
HAVE ISO 45001  
3 PLANTS  
HAVE ISO 50001**





THE FREQUENCY AND SEVERITY OF OCCUPATIONAL ACCIDENTS IN MOST OF TSUBAKI NAKASHIMA'S PLANTS WERE LOWER THAN THE NATIONAL AVERAGE (REFERRED TO 2021).

NUMBER OF INJURIES



INJURY FREQUENCY BY PLANT

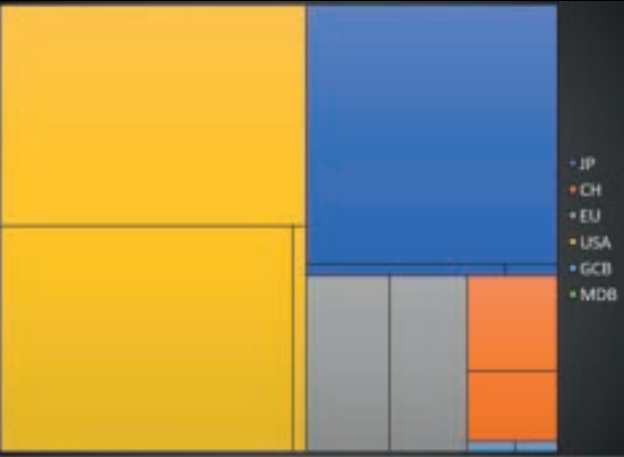
Injury/Illness Cases (Recordable + Lost days + Ergonomic injuries/illnesses events) x 200.000 / Total Worked Hours

0,5 1,1 0 2,5 0 0 1,3 0 0 0 2,4 1 0 0 0 0 4,6 3,8 4,2 0,9 1,6 0

TJB	TJL	TJT	TJS	TCT	TCC	TCK	TEN - R	TEN - SMP	TEB	TEI	TES	TEP	TEU	TSI	TAE - R	TAG	TAE-B	TAC	TJO	TSR	TAM
J	J	J	J	CH	CH	CH	EU	EU	EU	EU	EU	EU	EU	EU	US	USA	USA	USA	GCB	GCB	MDB

INJURY SEVERITY BY REGION

Injury Severity = Number of Lost Workdays x 200.000 / Total Worked Hours.





## SAFETY MANAGEMENT INITIATIVES

Tsubaki Nakashima seeks to improve its safety and health programs around the world by holding regular meetings at all the organizational levels to share information, discuss issues and opportunities to improve to achieve ZERO Accidents and ZERO Occupational Illnesses. At the Management Committee level, during the bi-weekly meeting, our Executives update one another about actions being taken and discuss issues to identify opportunities for improvement. At the Regional and operational level, Managers, Supervisors, Workers' Representatives and Sustainability Representatives also meet regularly to share information (Sustainability Committee). According to the Global Sustainability System, an annual Management Review has been prepared in every plant and consolidated at Global Level.

Starting in 2019, we have developed a system of internal standards, based on international technical regulations (ISO) pertaining to safety, health and the environment, which is called Minimum Technical Standard, in order to:



## MINIMUM TECHINCAL STANDARDS

is a method of establishing uniformity of minimum expectations, over 43 minimum techincal EHS & E standards developed.

- A Procedure containing the International Minimum Standards
- A Visual example of what we are talking about
- A detailed and complete training session, with pictures and drawings
- Each MTS has adjoining MTS implementation Checklist



## RAISING PEOPLE AWARENESS WITH ACCIDENT REPORTS

Tsubaki Nakashima analyzes all occupational injuries and accidents, identifies causes, and makes plans for preventing similar incidents. Occupational accidents 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 the intranet (One Team Software) and discussed with employees.



## PROFESSIONAL DEVELOPMENT THROUGH SAFETY AND HEALTH TRAINING

Tsubaki Nakashima considers safety and health training vital for protecting employees. The training curriculum is tailored to the position, roles, and responsibilities of employees. Training for non-management employees focuses on practical techniques such as risk assessment and hazard prediction. Training for managers and supervisors focuses on leadership. All Group companies use the Training Plan to include specific EHS training. Our Chief HR Officer provided training concerning the Global Sustainability System and Minimum Technical Requirements to the Management Committee, Regional Presidents and all the HR & Sustainability Team members.

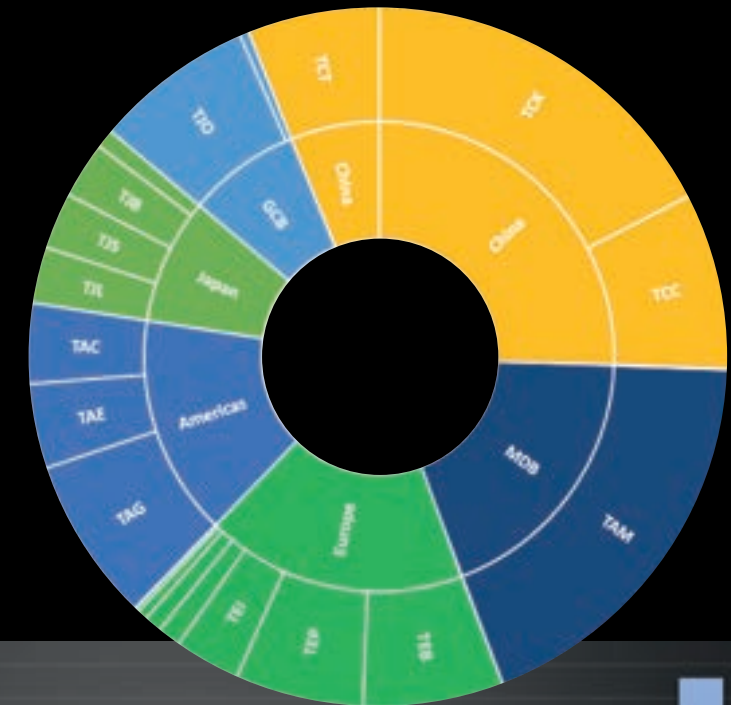


## SAFETY ENGINEERING MANUAL

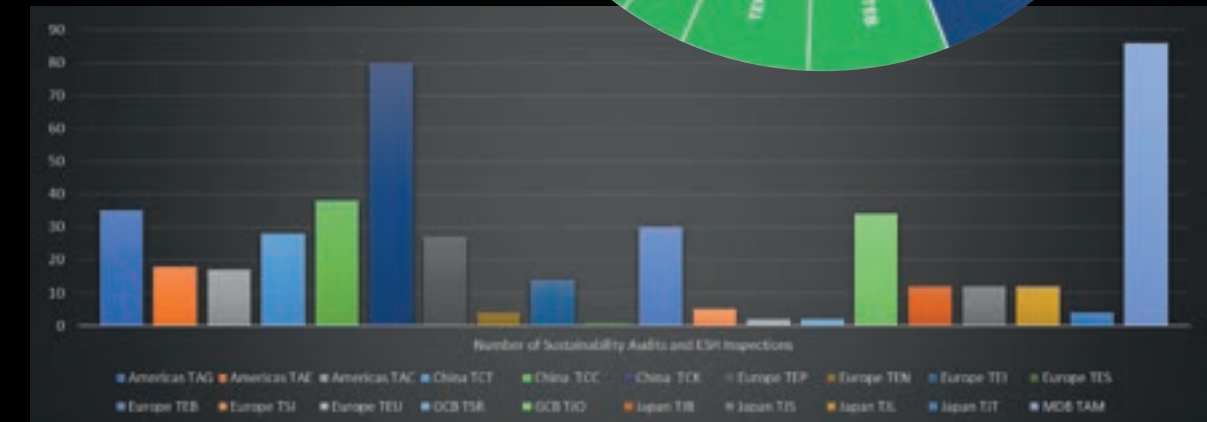
Our Safety Engineering Manual is a detailed guidance on how machine guarding, and electrical safety is to be set up and maintained to ensure employee protection.

In 2022, we implemented **TWO NEW TOOLS**: for environmental, safety and health inspection and a toolkit for safety and health risk assessment. This allows for an in-depth initial (and periodic) assessment, action plans for troubleshooting and improvement, and frequent monitoring of safety status. At the end of 2022 we then transformed the Safety & Health Inspection toolkit into software modeled on the Auditing system and preventive and corrective actions already adopted in the Quality Management System.

## SUSTAINABILITY AUDITS AND ENVIRONMENT AND SAFETY INSPECTIONS IN 2022



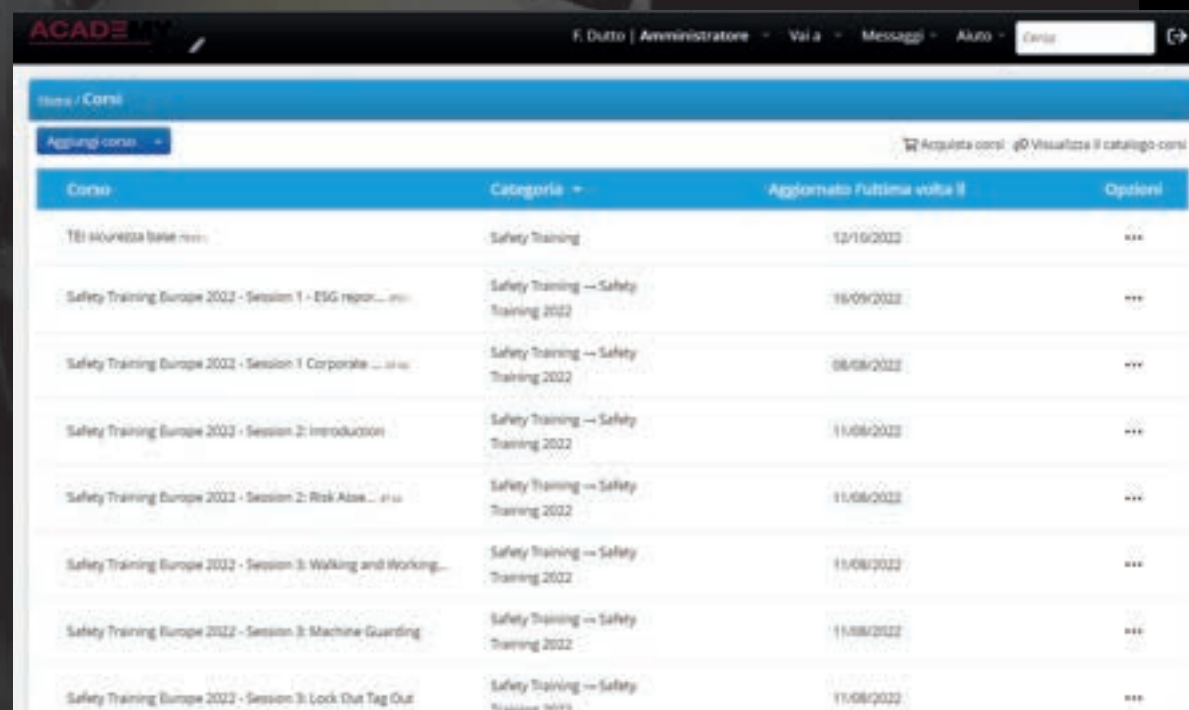
As can be seen from the graphs, the number of Inspections and Audits has been impressive and destined to grow in quantity and quality. We therefore expect a sharp decrease in accidents in the coming years





## SAFETY 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 screenshot displays the ACADEMY e-learning platform interface. At the top, there is a navigation bar with the ACADEMY logo and user information: F. Dutto | Amministratore. Below this, a blue header bar contains the text "Home / Corsi". A sidebar on the left includes a button "Aggiungi corso" and a search bar. The main content area shows a table of courses with the following columns: Corso, Categoria, Aggiornato l'ultima volta, and Opzioni. The table lists several safety training courses, including "TBI MOURNESA base", "Safety Training Europe 2022 - Session 1 - ESG report", "Safety Training Europe 2022 - Session 1 - Corporate", "Safety Training Europe 2022 - Session 2: Introduction", "Safety Training Europe 2022 - Session 2: Risk Assessment", "Safety Training Europe 2022 - Session 3: Walking and Working", "Safety Training Europe 2022 - Session 3: Machine Guarding", and "Safety Training Europe 2022 - Session 3: Lock Out Tag Out".

Corso	Categoria	Aggiornato l'ultima volta	Opzioni
TBI MOURNESA base	Safety Training	12/10/2022	...
Safety Training Europe 2022 - Session 1 - ESG report...	Safety Training → Safety Training 2022	10/09/2022	...
Safety Training Europe 2022 - Session 1 - Corporate ...	Safety Training → Safety Training 2022	08/08/2022	...
Safety Training Europe 2022 - Session 2: Introduction	Safety Training → Safety Training 2022	11/08/2022	...
Safety Training Europe 2022 - Session 2: Risk Assess...	Safety Training → Safety Training 2022	11/08/2022	...
Safety Training Europe 2022 - Session 3: Walking and Working...	Safety Training → Safety Training 2022	11/08/2022	...
Safety Training Europe 2022 - Session 3: Machine Guarding	Safety Training → Safety Training 2022	11/08/2022	...
Safety Training Europe 2022 - Session 3: Lock Out Tag Out	Safety Training → Safety Training 2022	11/08/2022	...

健康

## TCC (CHONGQUING) FIRE BRIGADE TRAINING



## TSI (INDIA)

**3 IMPORTANT PROJECTS IN THE FIELD OF WASTE REDUCTION, ELIMINATING LEAKAGES IN THE PRODUCTION DEPARTMENTS.**

**INTRODUCE RETURNABLE PACKAGING TO CUSTOMERS.**

## AMERICAS REGION TAC - TAE (TENNESSEE)

In 2022, both TAC and TAE improved their facilities to better comply with the standards of Tsubaki Nakashima, be at the forefront of innovative, creative, and inclusive ideas and suggestions, help create a safer environment, and build a team atmosphere.



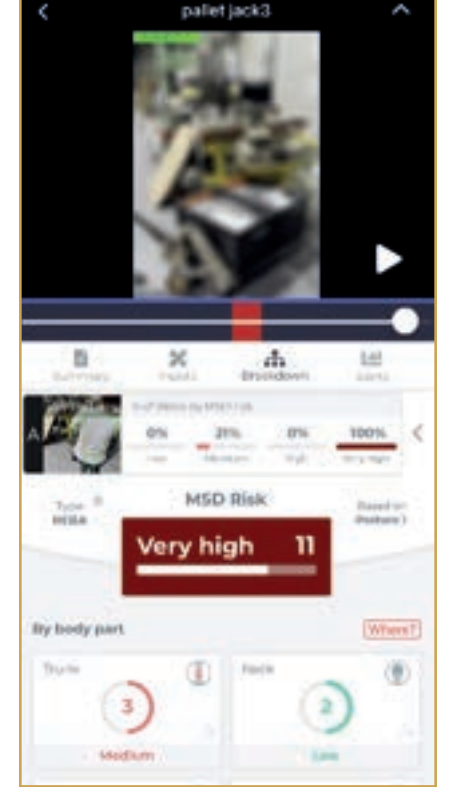
**(RIGHT) ERGO AI STUDY AND CORRECTIONS (VIA TUMEKE ERGO APP)**

**(LEFT) IMPLEMENTING FULLY ELECTRIC HOISTS/ELIMINATING PUSH-PULL MANUAL HOISTS FROM MOST ACTIVE AREAS.**

**INSTALLATION OF HIGH VIZ LOTO (LOCK OUT-TAG OUT) STATIONS IN HIGH-TRAFFIC AREAS.**

**IMPLEMENTATION OF KEVLAR PROTECTIVE SLEEVES PREVENTING DERMATITIS.**

**PARTNERED WITH XENA WORKWEAR ON PROPERLY FITTING PPE FOR ALL WOMEN IN THE WORKPLACE.**



**IMPLEMENTED HOT WORK PERMITS-CONTRACTOR SAFETY PROGRAMS-EMPLOYEE OF THE MONTH PROGRAMS.**

**REVAMPED TAC SAFETY/ SUSTAINABILITY TEAM WITH NEW EMPLOYEES, GREATER FOCUS AND MORE PRO-ACTIVE INTENSITY**

**MONTHLY SAFETY AWARD CONTEST IF NO INCIDENTS (TAC)**



## TAG (GEORGIA)

**NEW N PROPYL BROMIDE SYSTEM** to prevent pollution in the plant environment and protect people's health.

**NEW WIRE DRAWER** cleaning system in the heading department



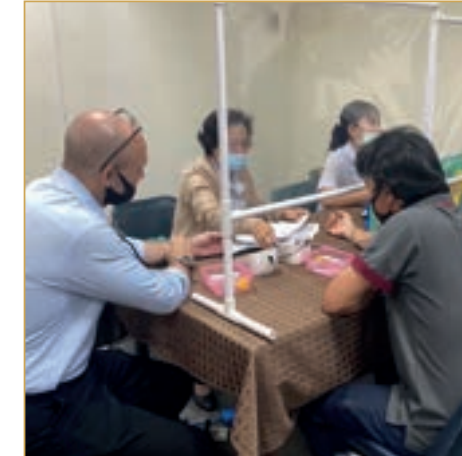
### TWO (2) SMOG HOG VENTILATION UNITS

put in place to eliminate unhealthy smoke and reduce the oil mist from contaminating and causing oil build up on machinery helping to reduce health effects and potential fires.



## TSR (THAILAND)

**CLEANING AREAS IN THE PLANT**  
**HEALTH CHECK**  
**DRUG TEST**  
 White factory project  
**FIRE TRAINING**





## TEP (POLAND)

**HONEY PRODUCTION  
BEE PROJECT  
SOLAR ENERGY POWER  
RENEWAL ACTIVITIES  
IN THE PLANT**



## TCT (CHINA)

**CLEAN THE WORLD**



## TJB (JAPAN)

**FIRST AID TRAINING  
AND FIRE DRILL**





In 2022 our efforts were concentrated in collecting Scope 3 data for our raw material suppliers, and to extending the ESG questionnaire to all of our suppliers through our local purchasing networks during 2023

During 2022 Tsubaki Nakashima has started to engage its **MAIN SUPPLIERS IN THE SUSTAINABILITY ROADMAP 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 really important to share and support each other in this journey. The purpose of this self-assessment questionnaire is to evaluate the Social, Governance and Environmental impacts of our main suppliers.

Following the guidelines of the GRI standard we evaluated several areas:

- ISO certifications
- Business ethics
- Child labour
- Forced labour
- Freedom of association
- Discrimination
- Working hours
- Compensation
- Safety and Health
- Environment
- Carbon footprint & sustainability goals
- Percentage of renewable energy used





**91%**  
RAW MATERIALS  
SUPPLIERS EVALUATED

**81%**  
ARE ISO 14001  
CERTIFIED

**29%**  
ARE ISO 50001  
CERTIFIED

**62%**  
MONITOR THEIR  
CARBON FOOTPRINT

**43%**  
MONITOR THEIR %  
OF RENEWABLE ENERGY

**62%**  
HAVE SET TARGETS  
FOR SUSTAINABILITY

## SUSTAINABILITY AND SUPPLIERS 2023

One of the goals for 2023 is to let the Suppliers understand our strategy and activities and understand theirs. For that purpose, we plan to analyze with the Suppliers:

- actions taken to address the significant actual and potential negative environmental impacts identified in the supply chain, and whether the actions are intended to prevent, mitigate, or remediate the impacts;

- how expectations are established and defined in contracts with suppliers to promote the prevention, mitigation, and remediation of significant actual and potential negative environmental impacts, including targets and objectives;

- whether suppliers are incentivized and rewarded for the prevention, mitigation, and remediation of significant actual and potential negative environmental impacts;

- practices for assessing and auditing suppliers and their products and services using environmental criteria;

- the environmental criteria for the assessment will be based on the contents of GRI 302: Energy, GRI 303: Water and Effluents, GRI 305: Emissions.





## ZERO VIOLATIONS!

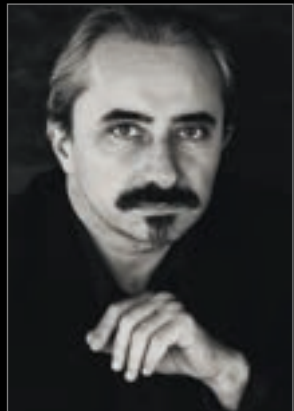
Through a specific tool for collecting data relating to sustainability (**ESG THROUGH NUMBERS**), obviously including Corporate Governance, and specifically the violations of the law contested by the Authority as well as access to the available Hot Lines, we monitor on a monthly basis what happens in our factories. Based on this we can state that during the year 2022 Tsubaki nakashima reported ZERO Violations of any law and local regulation, as well as ZERO Complaints from our Employees



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The graphic design and the graphic 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.

Many of 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.

Some other pictures are under license of **DEPOSITPHOTOS.COM**. Specifically: drawing of the bridge on pages 14-15 (© Alinart/Depositphotos.com), picture of the Tokio Exchange on pages 24-25 (© sepavone/Depositphotos.com, picture on page 37 of the Shinkansen (© vincentstthomas/Depositphotos.com) and of the blue car (© MaR1Art1/Depositphotos.com), picture of the subway on page 45 (© fransz/Depositphotos.com), picture of people on pages 102-103 (© Wirestock/Depositphotos.com).

# NOTES



