

Sustainability Report

Nippon Gases Europe

2019



Nippon Gases

Much more than a gas supplier

Nippon Gases, part of the **Taiyo Nippon Sanso Corporation**, is your strategic partner for industrial and medical gases. We offer our own technological solutions to a wide range of markets such as **aquaculture, automotive, chemicals, food and beverage, glass, healthcare and homecare, metal production and metallurgy, petrochemicals, pharma, steel, water and waste water treatment, welding and cutting and other**. Our technological offerings span from the most efficient supply option to tailored applications technology solutions for every customer or partner.

We are constantly improving safety, priority number 1 in our company, in our operations and at customer sites, due to the search for risk factors and behaviors and the strict observance of our safety principles by all our employees. **Nippon Gases** commitment to our customers, employees and associates and to the communities in which we operate is a reflection of our dedication to the environment and to sustainability.

Nippon Gases (hereinafter also referred to as, "Nippon Gases Europe", "NGE") part of the Taiyo Nippon Sanso Corporation (TNSC) is the brand name under which Nippon Gases Euro-Holding S.L.U. (also referred as "NGEH") and its subsidiaries operate in Europe.

This non-financial report includes information from Nippon Gases Europe for the period April 1st 2019 to March 31st 2020. Nippon Gases Euro-Holding S.L.U., is headquartered at Calle Orense 11, 28020 Madrid, under Spanish tax ID (CIF) B88128368.



Our Guiding Principles

We pledge to listen to the views of our stakeholders and to contribute—through our gas technologies and the collaboration with partners in other industries—to the creation of a spiritually and materially wealthy society.

The main priorities for our company are: Safety, Compliance, Environmental Sustainability, Employee Excellence, Customer Focus and Financial Results.

Our Vision






Our vision and aim is to be the best performing industrial gases company as seen by our customers, employees, neighbours and other stakeholders.




Our Philosophy

Market responsiveness and collaborative innovation based on the needs of the market, forging a better future through gases enhancing relationships between people, societies, and our planet.



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Eduardo Gil Elejoste

President of Nippon Gases



As “**The Gas Professionals**” we pride ourselves on our ability to act on customer feedback and to partner with a wide range of industries to help improve the quality of life. Market responsiveness and collaborative innovation are our two core values. These values are at the heart of everything we do as we shape the future through gas technologies, crafting a harmonious relationship between people, society and the planet. We are part of the **Taiyo Nippon Sanso Corporation**, where professionals come together.

Our priorities:

Safety, compliance, environmental sustainability, employee excellence, customer focus and financial results exemplify what our company stands for.

We believe that safety excellence can only be achieved through hard work and training resulting in every employee doing every task the right way - every day, every time. We believe that compliance excellence will be achieved through continuous training and every employee living our **Code of Conduct**.

Our products and technologies are used by our customers to improve the efficiency of their operations and to reduce their environmental footprint by increasing the sustainability of their activities. We can only achieve success in our company through an excellent organization, and this is only possible with excellent employees in our teams.

We strive to be a diverse and inclusive organization that attracts talented people from all over the world. Our customers, suppliers and other stakeholders can work with our safe, compliant, sustainable, diverse, inclusive and talented company in strategic long-term partnerships that will result in long-term value and sustainable financial results.

At the end of the last fiscal year the **COVID19** crisis suddenly changed our way of working, living and interacting.

At **Nippon Gases** we have taken this situation very seriously from the beginning and quickly implemented a good number of measures to preserve the health of our employees and their relatives, as well as maintain service to our customers.

We have been adapting our decisions and actions as the situation has evolved and we will continue to adapt to new challenges.

Some of the actions we have implemented to safeguard the health of our employees, their families, our customers, suppliers and partners are:

- **Minimize travelling** from day one.
- Employees who can work from home were told to do so. **Over 40% of all our employees are working from home.** The finding that we can work smoothly from home has made these days easier for everyone and is a good lesson for the future.
- Regional Crisis Management Teams have been in place from the start in the different Business Regions, implementing multiple additional measures depending on their needs.
- **Creation of contingency plans** for all production plants and sites.
- Definition of special procedures for **production, transportation, cleaning and disinfecting of medical gases cylinders.**
- **Extreme hygienic measures**, including daily disinfection of production plants and sites.

- Secure the availability of the necessary additional **Personal Protection Equipment (PPE)** at all our sites.
- **Complete separation** of shifts with cleaning activities at shifts changeovers.
- **Minimization of contact**, less contact with external people.

Our employees are showing their great discipline strictly following procedures to keep us and our families safe and to ensure business continuity as much as we can, whether it is in our plants, or supplying hospitals and other vital industries or working from home.

The dedication and commitment we are seeing reinforces what we already knew:

We are a great company, because we have a great team.

When this is over, and it will be over, there will be a tremendous upswing everywhere in the world and particularly in Europe.

People will emerge out of this highly testing situation with a great sense of relief, pride and victory. The current economic crisis will quickly reverse into a time of economic opportunities, optimism and growth.



People have always represented our companies' pride. In this difficult period more than ever.

During the Coronavirus outbreak, many of our colleagues were at the forefront making their contributions: in our plants where the gases needed for the intensive care departments of hospitals have been produced and distributed by our drivers throughout the countries, while our technicians were reinforcing oxygen installations at hospitals and medical centers.

Without forgetting all the other colleagues, who have been carrying out their activities in such a special time with commitment, sense of responsibility, passion and pride to feel part of a reality that has put themselves at the service of the entire community.



1. Nippon Gases Europe

Nippon Gases a highly experienced team contributing to the sustainable growth of industry in Europe. Industry is a key pillar of a healthy modern society providing qualified jobs, continuous training and development of its workforce, innovation, support to R&D, besides being at the root of the export potential of every country.

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1.1 Group presentation

Nippon Gases, one of the leading industrial and medical gases companies in Europe, is part of **Taiyo Nippon Sanso Corporation**, which has over **100 years** of experience and also boasts a major presence in **Japan, Southeast Asia, Australia, the United States and Canada:**

Operations in **28** countries with more than **19,000** employees around the world

Our presence in Europe positions us as a leading company:

with about **2,950** employees in Europe of which **27%** are women and operating today in **13** countries

Belgium, Denmark, France, Germany, the Netherlands, Ireland, Italy, Norway, Poland, Portugal, Spain, Sweden and the United Kingdom.

serving more than **150,000** customers achieving revenues close to **1,400 MM €** in the fiscal year 2019-2020

The main products supplied by **Nippon Gases** in various physical forms and purities are oxygen, nitrogen, argon, carbon dioxide, hydrogen, helium, carbon monoxide, gas mixtures, electronic gases, specialty gases and the services and technologies associated with the use of these gases and mixtures.

The main markets served by **Nippon Gases** are **chemicals, energy, environment, electronics, food & beverage, health and homecare, manufacturing, metals and petrochemicals.**

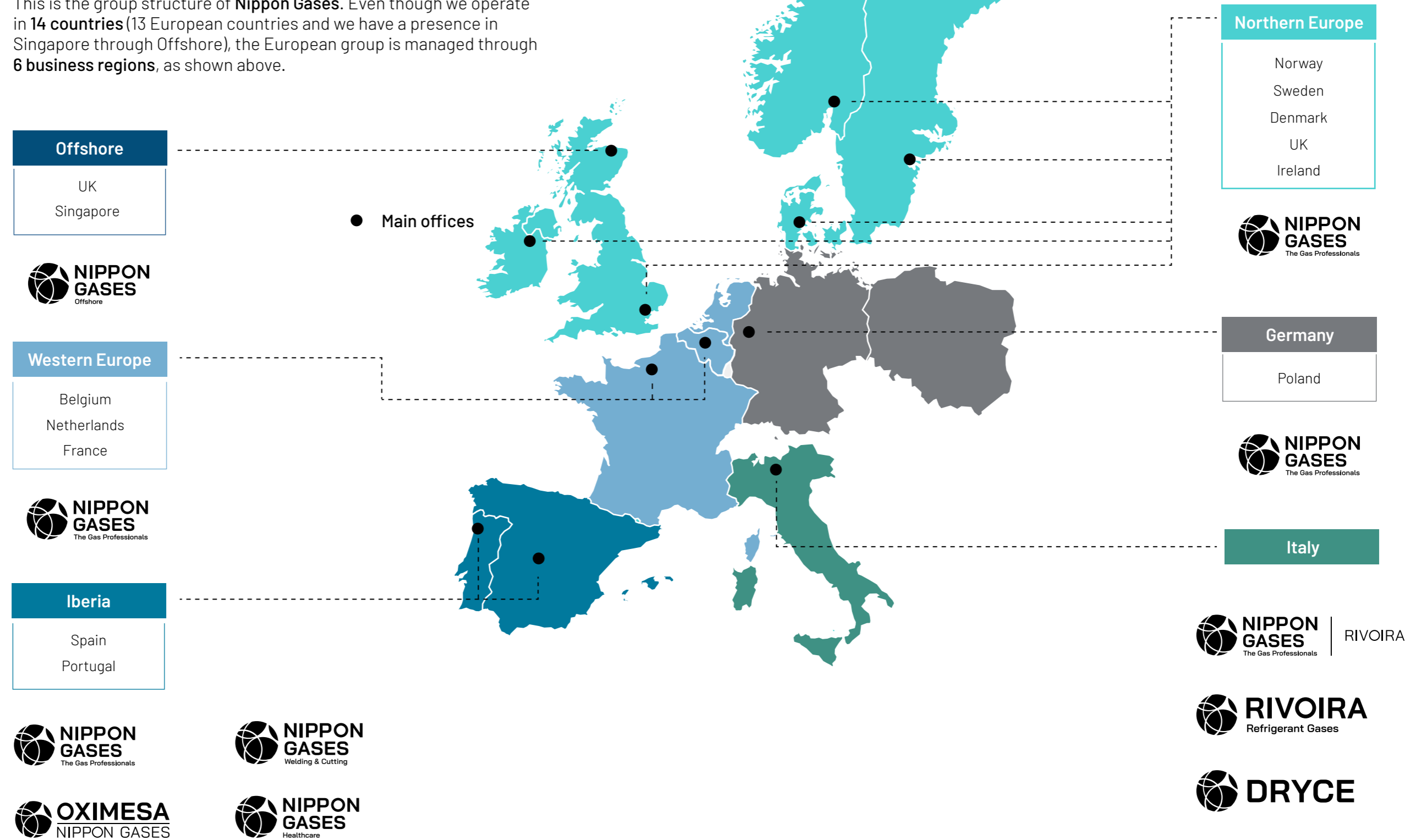
The high quality of our products, services and applications technologies is the basis of our success in the industries where we operate. Detailed needs analyses for each of our customers is the key to offering them the products, services and technologies that will optimize their processes most efficiently.

Improving the quality of life in terms of sustainable development goes hand in hand with our corporate mission, which is about more than transforming the future through gas technologies: it's about building relationships with people, societies, and the planet, according to our motto: "The Gas Professionals".

-  **14** Pipelines
-  Over **600** trucks
-  **7** Specialty Gases Laboratories
-  Over **2.6 millions** cylinders
-  **27** Air Separation Units
-  **40** Filling Stations
-  **6** Hydrogen plants
-  **19** Dry Ice Plants
-  **52** Small On-Site
-  **7** CO₂ Terminals
-  **12** CO₂ plants
-  **4** CO₂ Ships

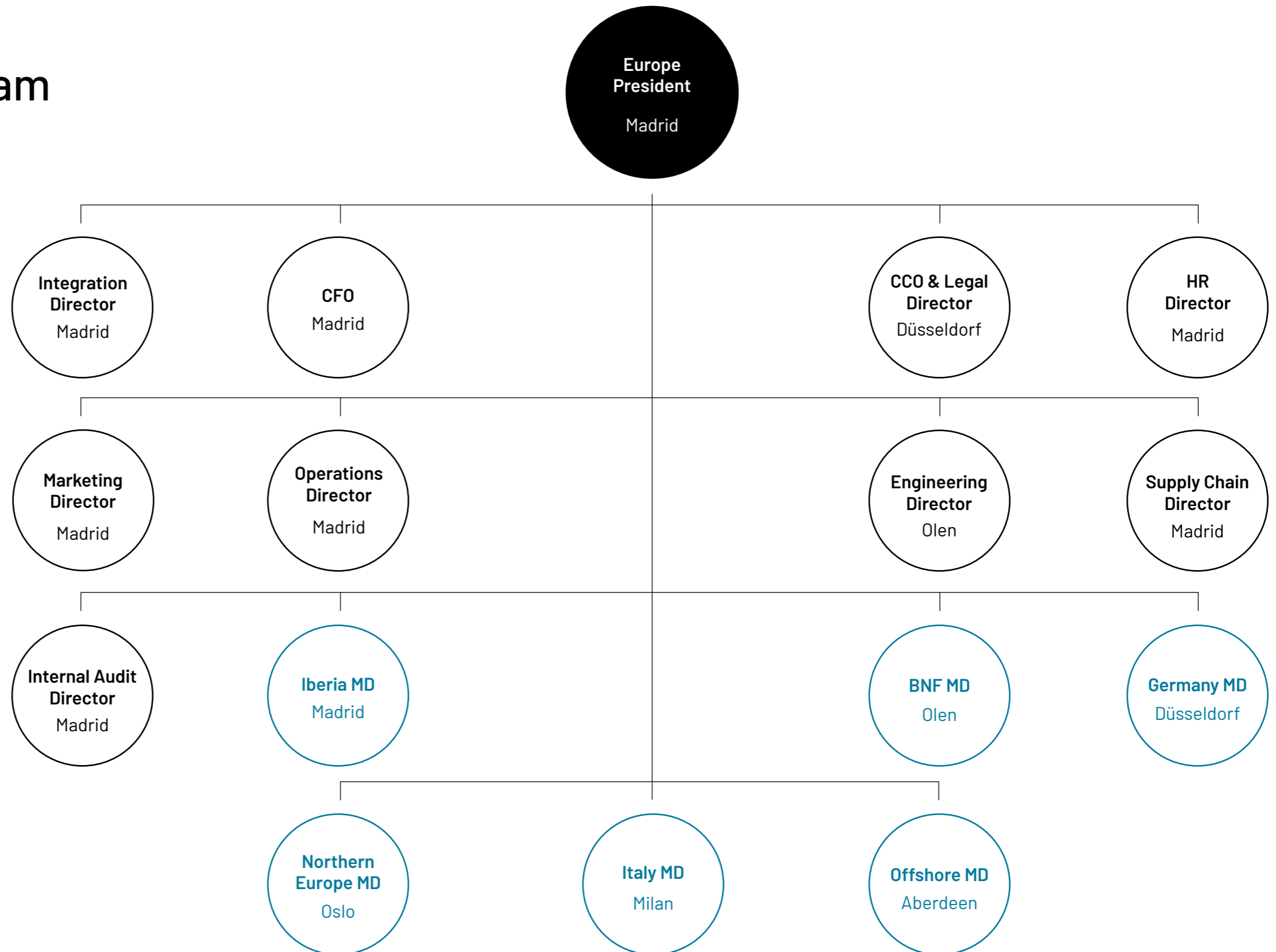
1.1.1 Group structure

This is the group structure of **Nippon Gases**. Even though we operate in **14 countries** (13 European countries and we have a presence in Singapore through Offshore), the European group is managed through **6 business regions**, as shown above.



Nippon Gases Management Team

The **Nippon Gases** Management Team is composed by the Euro-Holding Directors and **six regional** Managing Directors (MD).





1.1.2 Market position

Nippon Gases is the fourth-largest industrial gas company in Europe with an overall market share close to **9% in the continent**. Considering only the countries in which we are present, market share is around **16%**.

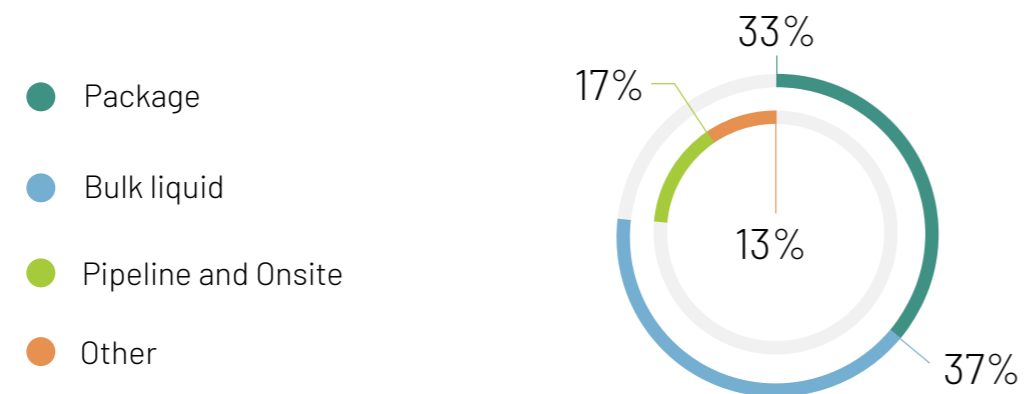
We are recognized as leaders in:

- Safety.
- Uninterrupted supply.
- Expertise in the industries we serve.
- Customer responsiveness.

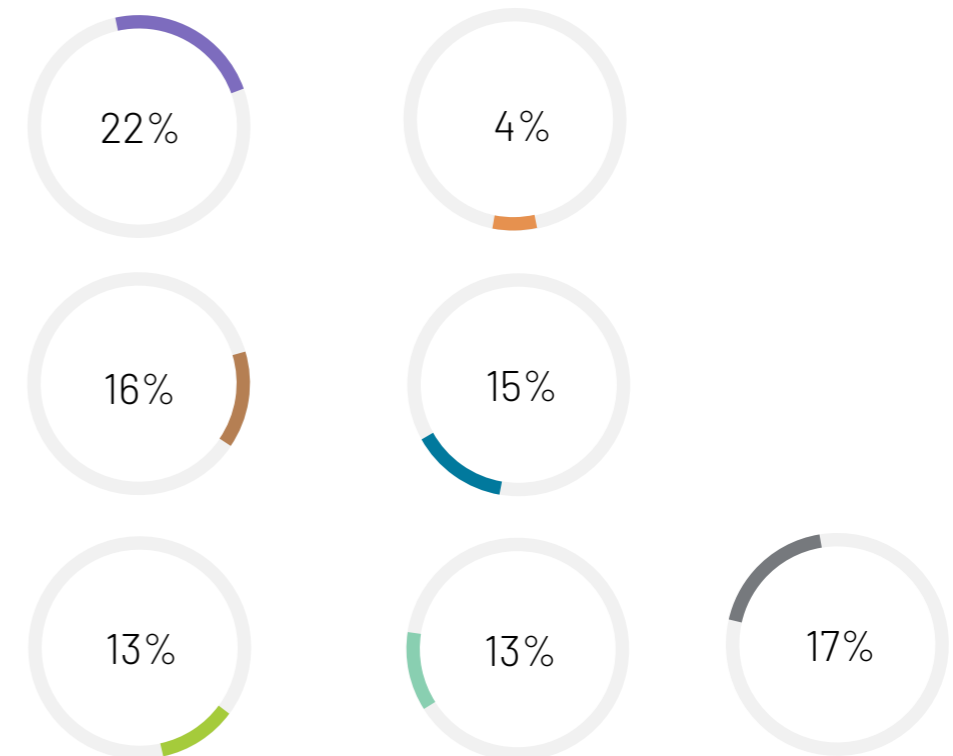
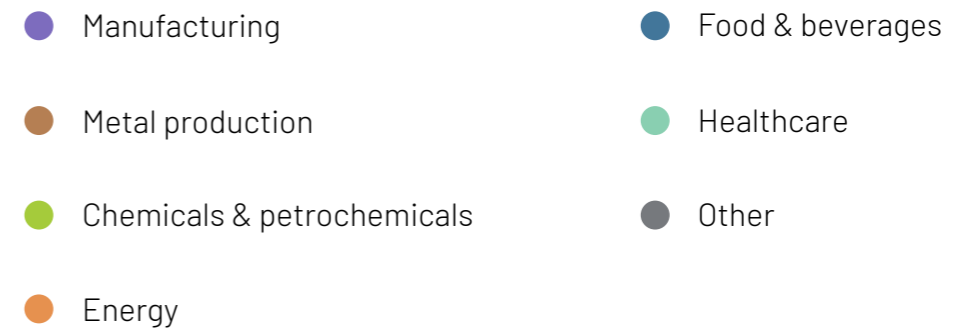
We help our customers to:

- Achieve safety and environmental sustainability standards.
- Increase productivity.
- Decrease energy consumption.
- Produce higher quality products.

Nippon Gases has a very balanced situation with regard to mode of supply:



Nippon Gases enjoys an open portfolio in terms of markets served, with **more than 40%** of its sales in resilient, counter-cyclical markets like food & beverage, health-and homecare, electronics or environment:



1.1.3 Philosophy & guiding principles

Since 1910, the TNSC Group, to which Nippon Gases belongs, has been adapting its operations to the needs of customers.

Our capacity to respond to the needs of the market and to innovate collaboratively are central values that guide all of our operations to build a better future through gas technologies, building positive relationships between people and societies, as well as with our planet.

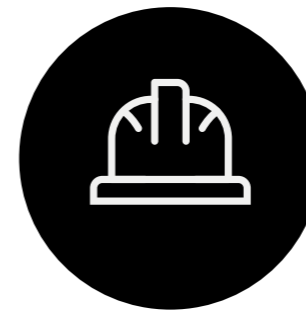
Our Philosophy

Market responsiveness and collaborative innovation based on the needs of the market, forging a better future through gases. Our vision and aim is to be the best performing industrial gases company as seen by our customers, employees, neighbors and other stakeholders.

Our Guiding Principles

The main priorities of our company are: **safety, compliance, environmental sustainability, employee excellence, customer focus and financial results.**

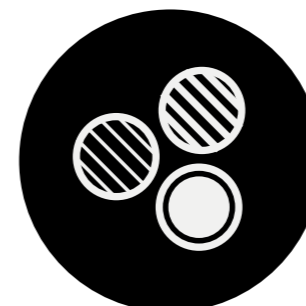
All Nippon Gases employees adhere strictly to our principles in safety, compliance and diversity & inclusion, as stated below, because they are part of our company DNA and are reinforced during the quarterly European Employee teleconferences by the President of Nippon Gases, thus setting the tone from the top of our company.



- All accidents can be prevented.
- Safety is the responsibility of line management.
- Every employee is responsible for his/her own safety.
- Every employee must stop a job if it cannot be done safely.
- Efforts in safety yield results in safety.
- Safety is a condition of employment.



- All compliance breaches can be prevented.
- Compliance is the responsibility of line management.
- Every employee is responsible for his/her own ethical behavior.
- Every employee must stop a job if it cannot be done ethically.
- Efforts in compliance yield results in compliance.
- Ethical behavior is a condition of employment.



- Diversity & Inclusion are essential to our work and workplace.
- Inclusion is a line-management accountability.
- You are responsible for being a model for inclusive behavior.
- Every employee must stop non-inclusive actions or conduct.
- Efforts in diversity & inclusion will increase engagement and improve business results.
- Inclusiveness is a condition of your employment.

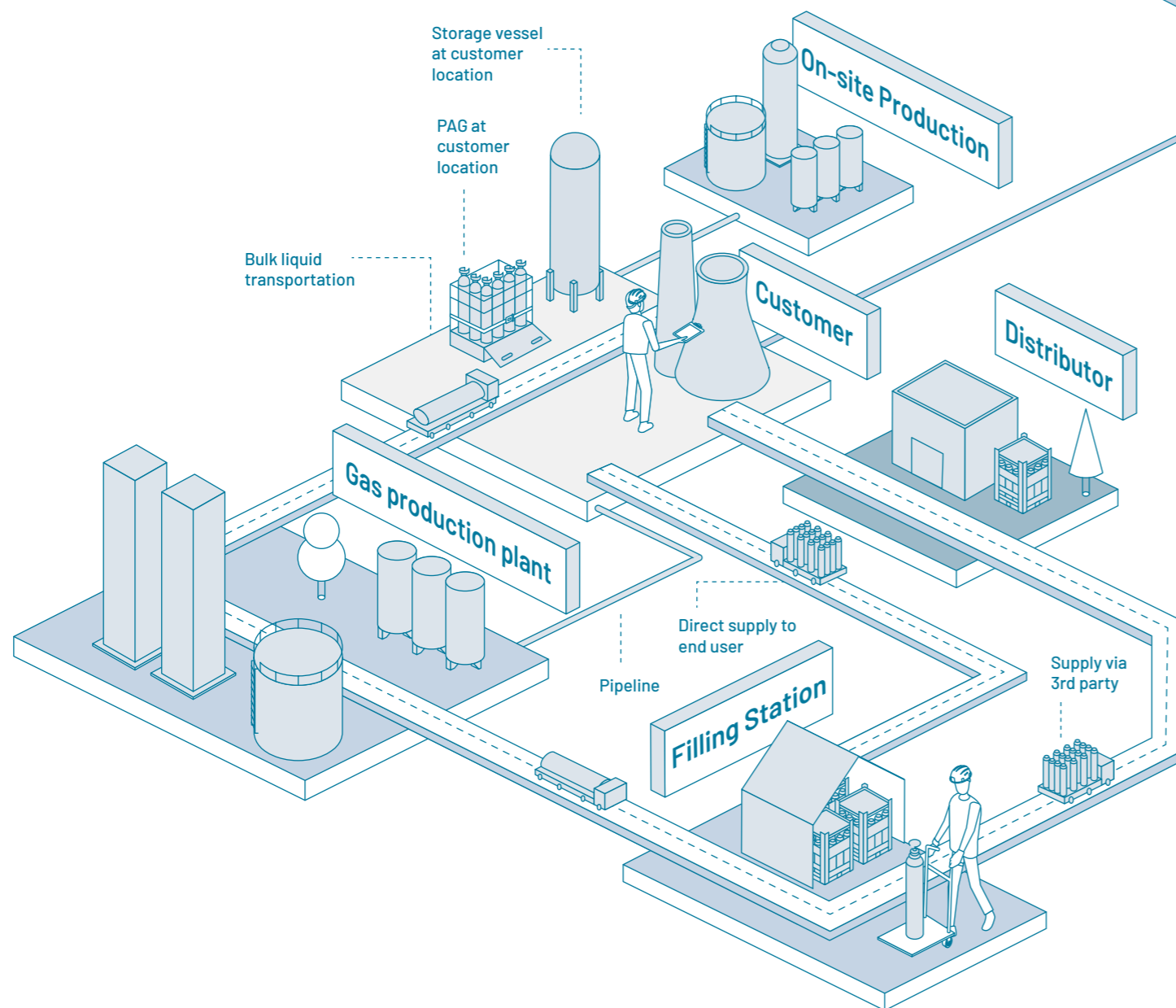
Business Philosophy	Core Approach	How
Management Philosophy	Main approach for all business lines.	<ul style="list-style-type: none"> - The principal task of management is to achieve short-term targets and at the same time prepare the organization for excellent long-term results. - Management has to create an environment of transparency and trust so that all issues can be discussed in an open atmosphere.
Management Philosophy Safety	Safety is the first priority of the company.	<p>Safety is achieved:</p> <ul style="list-style-type: none"> - Through extensive training programs. - Through operational discipline: every employee doing every task in the right way - every day, every time. - Knowing and living the safety principles. - Through a thorough and extensive site safety audit program.
Management Philosophy Compliance	To respond to the expectations of customers, society and other stakeholders, and our understanding of being a good neighbour in the community.	<p>Compliance is achieved:</p> <ul style="list-style-type: none"> - Through an extensive training program. - By every employee knowing and living the Code of Conduct. - By every employee knowing and living the Compliance principles. - Through a thorough compliance audit program.
Management Philosophy Human Resources	Nippon Gases is a diverse and inclusive company.	<ul style="list-style-type: none"> - Diversity & Inclusion are achieved knowing and living the diversity & inclusion principles. - We believe that the team that has the best players wins. We continuously upgrade the organization. - We empower our organization: we trust our employees; we delegate authority to them, and we regularly appraise them. - We continuously work on developing our in-house talent and getting the right talent on board. - We use every opportunity to have open communications with our employees. - We know our "A" players: those whose departure would damage the organization.



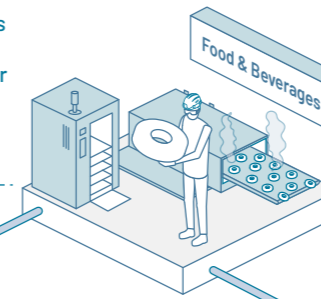
1.2 Business model

Our core competency - our ability to provide safe and reliable supplies of industrial gases - reflects technological development, production, supply and sales capabilities accumulated over the years since our creation. These capabilities are important assets that will continue to underpin sustainable growth in the years ahead.

The diagram below sets out the **Nippon Gases Business** and value creation model, including types of assets used in our supply chain.

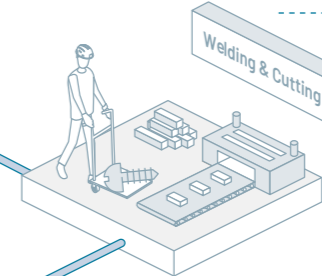


Quality and food safety are the pillars of solutions capable of keeping food fresh without the need for chemical additives.



Food & Beverages

Collaborate to reduce manufacturing cost, increase productivity and improve quality, maximizing its economic performance and minimizing its environmental impact.



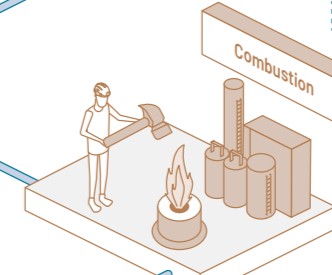
Welding & Cutting

We improve the quality of water through our solutions: Getting drinking water, reducing the pollution in wastewater or improving the water quality once it returns to its natural environment.



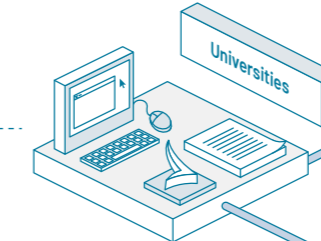
Wastewater

Our range of products, services and equipment are focused on optimizing fuel consumption and reducing CO₂, Co or NO_x emissions in steel mills and foundries.



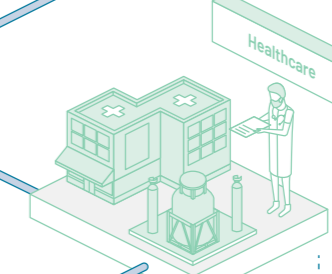
Combustion

We help hundreds of universities to take the lines of research further thanks to our pure gases and mixtures.



Universities

Our medical gases and respiratory therapy services contribute to the health of our society.



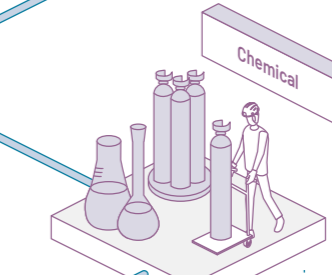
Healthcare

From supplies for dispensing carbonated beverages to molecular cooking.



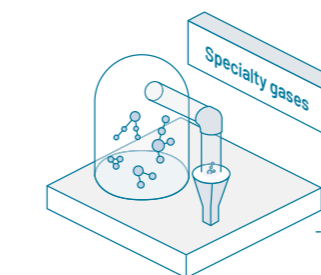
Hospitality

We work to develop new ways of improving processes, meeting environmental objectives and reducing production costs.



Chemical

From research and development to reaching full production in the pharmaceutical, laboratory and biotechnology sector.



Specialty gases

	On-site	Bulk	Package
Type of gases	- O ₂ , H ₂ , N ₂ and CO	- O ₂ , N ₂ , Ar, CO ₂ , He & H ₂	- All industrial gases - Non-cryogenic
End-markets	- Chemicals - Electronics - Energy - Glass - Petrochemicals - Refineries	- Manufacturing - Metal production - Chemicals & petrochemicals - Energy - Food & Beverages - Healthcare	- Manufacturing - Metal production - Chemicals & petrochemicals - Energy - Food & Beverages - Healthcare
Volumes	- Large (>50 tpd)	- Medium (1-50 tpd)	- Low (<1 tpd)
Delivery distance	- Up to 250 kms for pipeline networks - Low delivery distance for stand-alone/ individual customer supply	- Medium, c. 300 km	- Low <100 km

1.2.1 Inputs

Industrial gases primarily include atmospheric gases, produced by air separation and other gases which are produced or obtained from various industries and technologies. Our integrated business model incorporates various supply modes, including on-site, bulk and packaged gases.

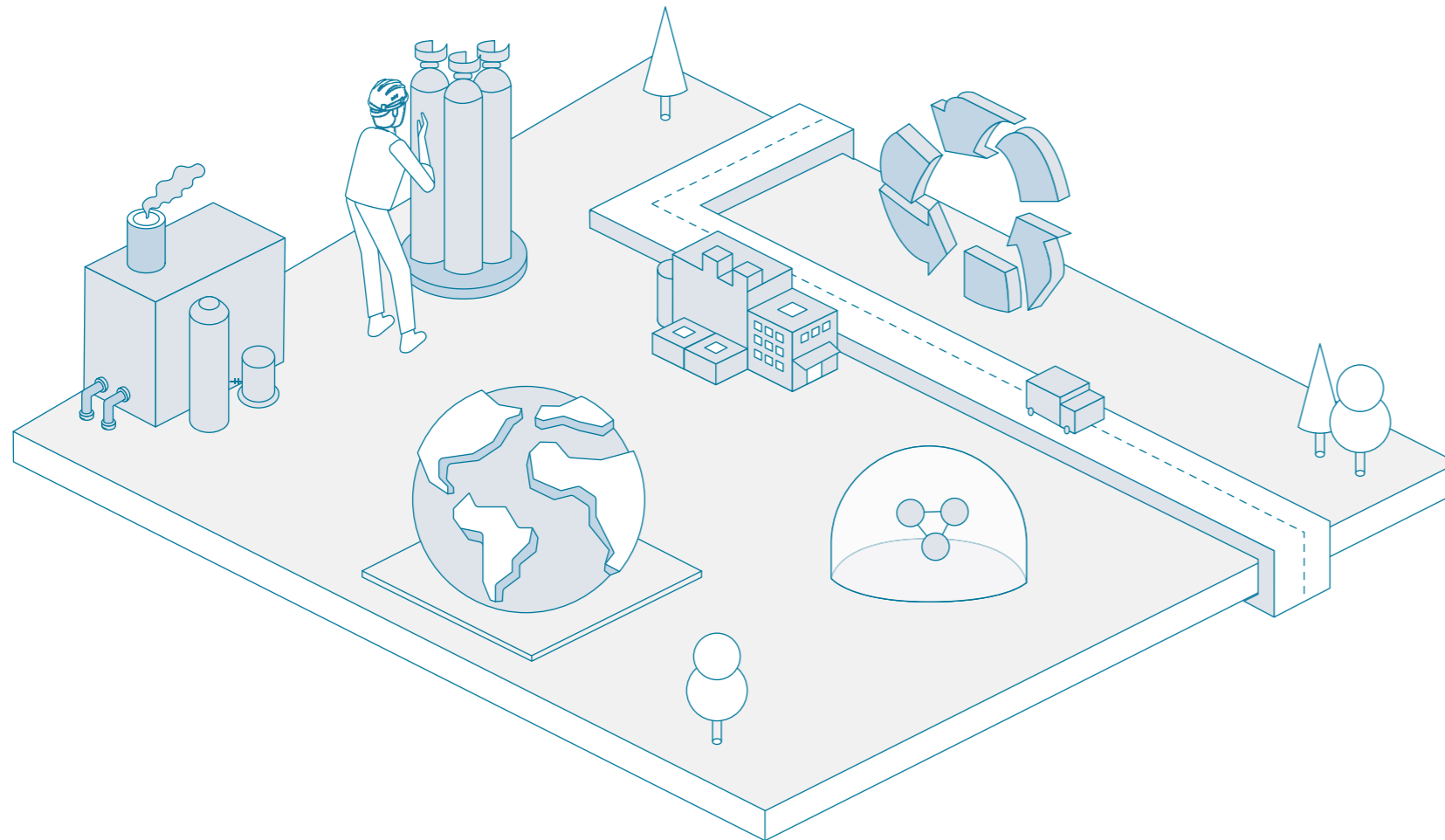
Our employees are a core stakeholder. We are committed to the well-being of our employees, having implemented through the European organization several initiatives to improve the work environment and the levels of wellness and commitment for everyone who is a part of the **Nippon Gases** organization.



1.2.2 Activities

The philosophy that permeates **Nippon Gases** seeks to provide solutions that actively contribute to the common objective of making our planet a cleaner and more sustainable world.

Nippon Gases "lean" approach helps our customers reduce waste, reuse materials, and increase productivity. Thanks to our services and equipment, they obtain process improvements that allow the transition to a carbon-neutral economy without penalizing production costs.



Clean water: a driver for a sustainable society

Nippon Gases has the experience and services needed to control and improve the processes in waste water treatment. Our **Mizu**[®] solutions combine the use of pure oxygen with equipment that improves oxygen dissolution.

Regardless of the type of industry, any aerobic biological treatment can be improved with the injection of oxygen, increasing the capacity of the wastewater treatment plant, being able to treat more load (volume and/or COD), eliminating odors, removing ammonia, and enabling seasonal intensive industries fulfil environmental requirements.

In water treatment our **Mizu**[®] O₃ technology guarantees the quality of drinkable water, replacing chemical-based solutions. This solution eliminates viruses and bacteria, allowing the reuse of treated water and contributing to the circular economy.

Furthermore, the use of CO₂ in this industry provides an efficient, safe and environmental solution, replacing dangerous acids and contributing to the objective of optimizing the natural resources.

Boosting the transition to a Low-Carbon Emissions Industry

For years, the oxy-fuel combustion solutions of **Nippon Gases**, have helped intensive energy consumers to reduce fossil fuel consumptions in their production process. However, the need to further reduce GHG emissions requires specific solutions for each industry. The use of **Hot Oxygen Burner (HOB)** technology and **Scopejet Burner** allows the use of fossil-free fuels having a direct impact in the reduction of CO₂ emissions in the production of aluminum, cement or metals among others.

In the steel industry the use of low-carbon oxy-fuel burners, together with **CCU (Carbon Capture and Utilization)** and the use of recovered CO₂ as chemical feedstock in classical blast furnaces, will lead to significant CO₂ emission reductions.

In other industries such as glass production, our thermochemical regeneration process provides a creative and environmentally efficient solution, reducing CO₂ emissions by up to 40% compared to classic regenerative air furnaces, and 60% compared to classic air recovery furnaces.



High-quality and affordable food products for a healthy society

The evolution of food-preservation technologies, both in fresh and frozen products, has been a step forward in terms of final quality and increased shelf life, all thanks to the applications of industrial gases in this sector.

The use of our technological solutions in the food industry makes it possible not only to increase the shelf life of products, but also to keep them safe and reduce production costs.

SanFresh is our **MAP (Modified Atmosphere Packaging)** solution that allows fresh and prepared foods to have a longer shelf life and to preserve their organoleptic characteristics, while our **CryoSan** freezing technology reduces production costs and product losses during processing.

The **Nippon Gases** SanIce solution secures the cold supply chain, reducing product contamination and enabling safer and optimized product logistics.

Other technologies such as helium detectors are used to verify product packaging integrity by preventing product loss and deterioration.

Anticipating new manufacturing industry technologies

While our **Sanarc**®, **Sancut**® and **LaserSan**® provide reliable and high-quality pure gases and mixtures in the traditional metal fabrication industry, **Nippon Gases** has developed an integral solution for the needs of fast-developing 3D printing technology.

The **3DPro**® line, in combination with our **MiruGas**® service, guarantees that all the parameters that affect the printing process are controlled, providing total traceability during the fabrication process.





Digitalization a basis for innovation

Digitalization plays a very significant role in sustainable development, as digital transformation of multiple sectors, especially energy, water and transport, among others, are determining factors in the management of climate change. A clear example of the services offered by **Nippon Gases** that contribute to this common goal is **SansoScan®**, a system that allows for a better management of aluminum melting furnaces, reducing fuel consumption, minimizing emissions and improving their production.

At **Nippon Gases** we are committed to innovation to improve our services in every industry in which we operate. Our treatment plant simulation technology allows us to better understand our customers' systems and provide them with a customer service that is tailored to their real needs.

As a matter of fact, our commitment to digitalization and innovation goes further than that. The digital solutions of **Nippon Gases** such as the traceability system or **MiruGas®** have contributed significantly to facilitate our customers' access and control of the parameters of their gas installations, as well as offering data on all of the products they consume.

Not only do we develop digital technologies for different markets to help our clients achieve their sustainability goals, but we also enable the electronics industry to advance thanks to a stable supply of nitrogen and electronics material gases, as well as total solutions.

We support our customers in this transformation through the installation of special piping for high-purity specifications, essential in the electronics industry, as well as related equipment including exhaust gas abatement systems and cylinder cabinets, among other high-tech elements.

Good health and well being

Nippon Gases Healthcare, our medical division, contributes to the health of the population by producing medical pure gases and mixtures following European pharmacopeia. Medical oxygen, N₂O, breathing mixtures and helium are some examples of the most intensively used products.

Our **Plug&Breathe** medical oxygen cylinder is a user-friendly solution for patients and healthcare professionals.

With life expectancy increasing, homecare services are essential to guarantee quality of life for our elderly population.

Our homecare companies in **Italy, Portugal and Spain** provide respiratory homecare services to nearly

300,000
patients

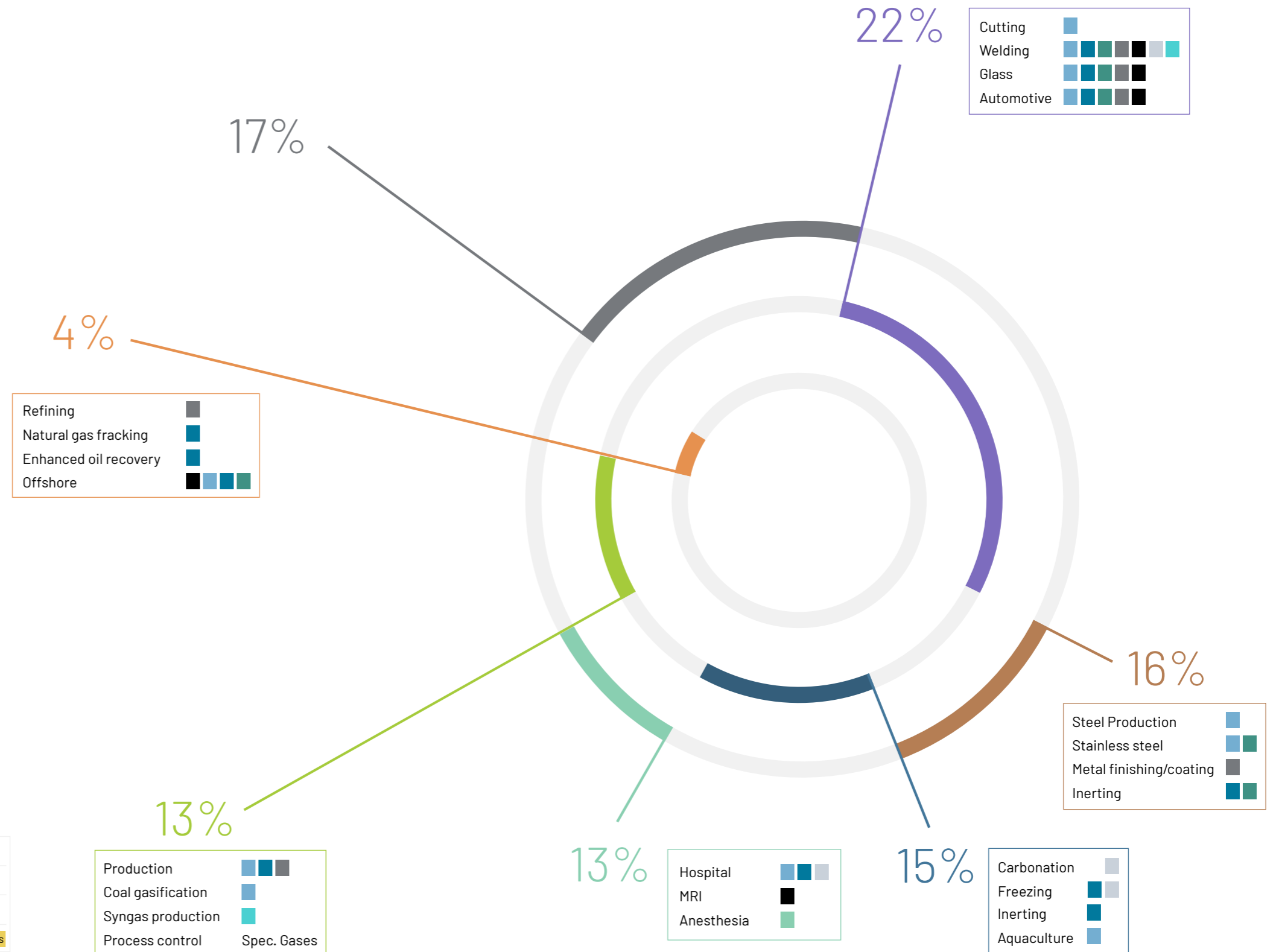
1.2.3 Outputs

The high quality of our products and services is the key of our work.

Our portfolio of customers runs the full gamut from those who need a few cylinders to big production plants such as steel mills, oil refineries and chemical or petrochemical companies with on-site production for their gas needs.

- Manufacturing
- Metal production
- Food & beverage
- Healthcare
- Chemicals & petrochemicals
- Energy
- Other

GASES	
Atmospheric	O ₂ N ₂ Ar
Process	H ₂ He CO ₂ CO
Rare	Xe Kr Ne
Spec. Gases	N ₂ O SiH ₄ High purity Blends



1.2.4 Stakeholders Engagement

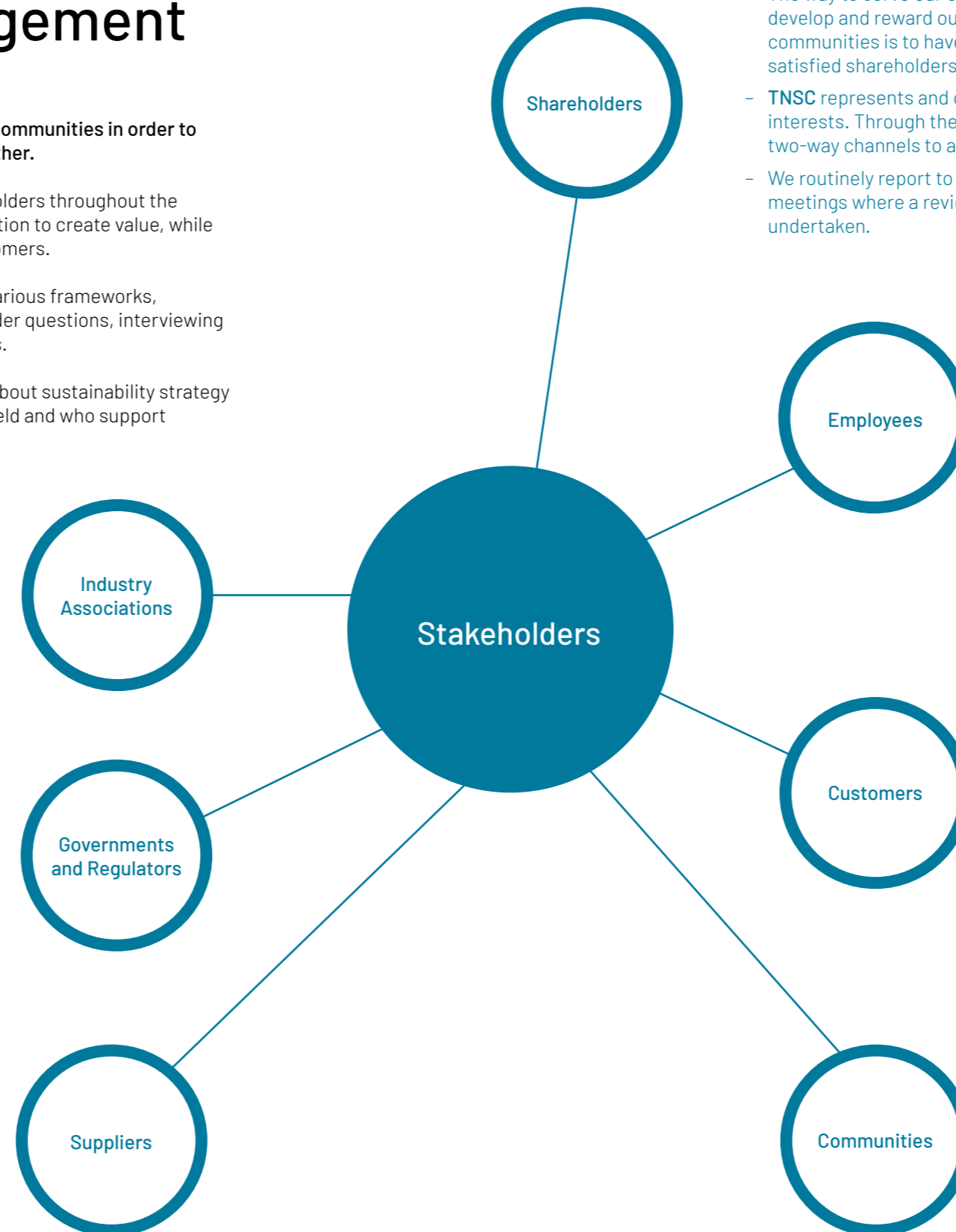
We engage our customers, employees, shareholders and communities in order to understand how we can benefit each other and grow together.

Meetings, presentations and ongoing dialogue with stakeholders throughout the year provide opportunities for understanding and collaboration to create value, while providing innovative and sustainable solutions for our customers.

We continually evaluate sustainability issues identified in various frameworks, standards, questionnaires, customer reports and stakeholder questions, interviewing internal and external stakeholders on sustainability matters.

Via our **Sustainability Committee** we support discussions about sustainability strategy and survey internal stakeholders who are experts in their field and who support company efforts.

- Participation in industrial associations ensures promotion and alignment with market sustainability initiatives and best practices.
- **Nippon Gases** actively participates in European and national industry associations through quarterly meetings.
- All **Nippon Gases** activities are reviewed to ensure compliance with legal requirements in an ethical and transparent manner.
- European and national regulations have a direct impact on our businesses and operations.
- **Nippon Gases** participates in the preparation and updating of regulations through the membership in industry associations, which also help to maintain open dialogue with local and regional authorities.
- **Nippon Gases** focus on environmental supply chain management means engaging with suppliers proactively in order to promote increased environmental responsibility and by using clean technologies.
- The supplier periodic qualification reviews offer an opportunity to evaluate supplier performance as per **Nippon Gases** standards.



- The way to serve our customers with excellence, develop and reward our employees, and support our communities is to have a profitable company with satisfied shareholders.
- **TNSC** represents and channels the shareholders' interests. Through the quarterly reviews, we have two-way channels to align interests.
- We routinely report to **TNSC** through the quarterly meetings where a review of main business areas is undertaken.

- **Nippon Gases** is committed to providing a work environment where our employees can grow and thrive.
- We communicate and promote communications with our employees for continuous personal development as well as sustainability initiatives.
- **Nippon Gases** promotes benefits that reward performance and provide opportunities for a work-life balance.
- Communication is continuous in a two-way channel through management discussion and through the web communications portal.
- At **Nippon Gases** we approach our customers for innovative thinking and solutions to their most pressing operational challenges. Finding a value solution may become a partnership effort. Key sustainability concerns of our customers vary by business, but typically focus on how our products can help them improve energy efficiency and reduce their environmental impact.
- We focus on continuing to operate as a safe, reliable and quality product supplier to our customers.
- We monitor the safety and quality incidents our customers experience when using our products and work to improve conditions in such cases.
- Communication is permanent through the sales and application teams and the customer service personnel.
- The stronger the local community liaison is, the stronger and more stable a platform we have from which to run our business.
- **Nippon Gases** is committed to boosting community engagement initiatives and being a good neighbor.
- Communication is boosted by participation in community activities.



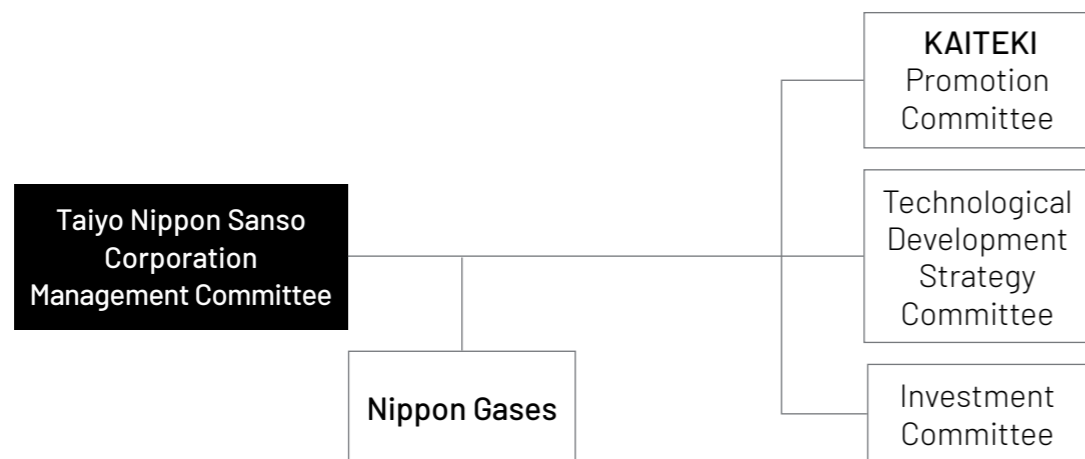
1.3 Sustainability / Corporate responsibility

Sustainability - "the avoidance of the depletion of natural resources in order to maintain an ecological balance" - and sustainable development - "the development that meets the needs of the present without compromising the ability of the future generations to meet their own needs".

1.3.1 Internal framework

Nippon Gases is the European subsidiary of the Taiyo Nippon Sanso Corporation (TNSC).

As has been established by TNSC's Board of Directors in accordance with the basic management policy of the Taiyo Nippon Sanso Corporation, the TNSC Management Committee deliberates on and approves important management matters pertaining to the execution of duties by the president (CEO).



The **Management Committee** has created three ancillary bodies to support its activities: the **KAITEKI¹ Promotion Committee**, the **Technological Development Strategy Committee** and the Investment Committee.

The **KAITEKI Promotion Committee** identifies key issues, establishes sustainability indicators and monitors related achievements with the aim of contributing to the realization of **Mitsubishi Chemical Holdings KAITEKI** vision.

1. The **KAITEKI** vision defines **TNSC's** approach to **ESG (Environmental, Social and Governance)** and **SDGs (Sustainable Development Goals)**.
2. **TNSC** has elected to follow the **Task Force on Climate-related Financial Disclosures (TCFD)** guidelines.
3. Activity of disclosure of non-financial information (ESG) is aligned with **TCFD** guidelines.
4. **KAITEKI** Promotion Project Committee (**KAITEKI Team**), established in April 2015, is at the center of sustainability efforts.
5. **KAITEKI** Team are now setting non-financial targets (KPIs) in a medium-term plan for the next five years.
6. The disclosure form and method will be the "Integrated Report" issued every October.

KAITEKI is an original concept from the **MCHC Group** that identifies a way forward in the sustainable development of society and the planet, in addition to serving as a guide for solving environmental and social issues.

KAITEKI Team is coordinating with **Mitsubishi Chemical Holding Corporation (MCHC)** for the reporting of and strategy regarding sustainable development.

Nippon Gases, as part of **TNSC group**, follows the corporate strategy.

Nippon Gases is approaching the sustainability requirements by publishing the **Sustainability Report** on its 2019 activities.

Nippon Gases has set up a **Sustainability Committee** to support the development of sustainability activities and a quarterly review of progress concerning sustainability targets during the **Business/CRB (Compliance Review Board)** review meetings.

(1) KAITEKI means "the sustainable well-being of people, society and our planet Earth."

1.3.2 Highlighted measures / actions

The **United Nations' Sustainable Development Goals** are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice.

Here are the **UN Sustainable Development Goals** that **Nippon Gases** has selected as the main drivers for its sustainability strategy in four main areas:

- Company governance and compliance
- Global environment
- Society
- People

Together with these eight SDGs, described in next page, we create a vision of the main targets to be accomplished by **Nippon Gases for 2020**. In 2019 no targets were defined.

Nippon Gases' SDG targets are set by the **Sustainability Committee** and include all business and multiple functions. Additionally, the **Sustainability Committee** reviews progress concerning the sustainability targets at its quarterly meeting.

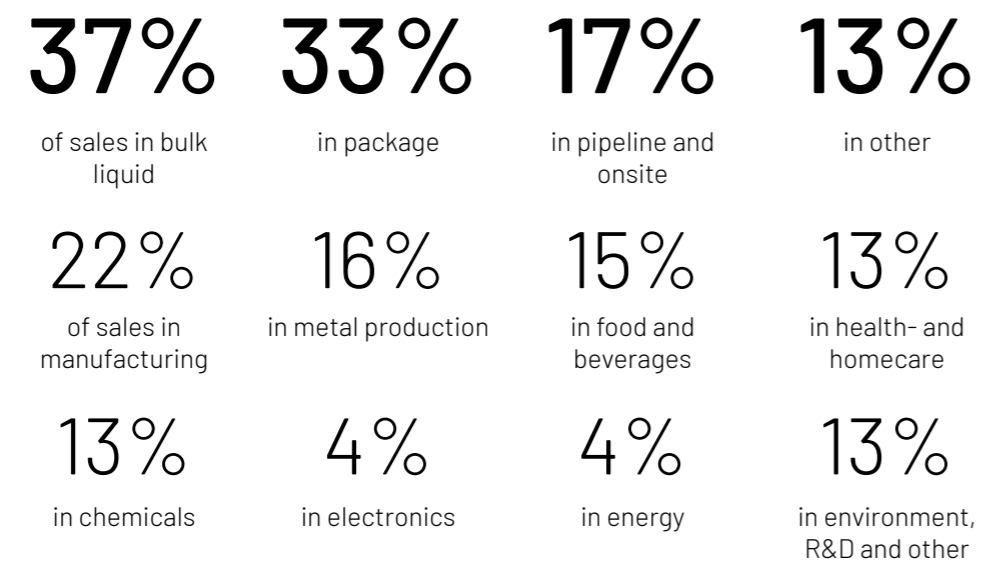


SDG Goals	Target
Priority Area	Company governance and compliance
	<ul style="list-style-type: none"> - Maintain corporate governance guidelines and perform a strong culture of compliance and ethics. - 100% commitment to the Code of Conduct by required employees. - Sustainable review of all potential integrity cases.
Priority Area	Global environment
	<ul style="list-style-type: none"> - 5% bulk transportation GHG intensity improvements (cumulative 2020-2023). - Promote cost-reduction projects, generating sustainable development savings equivalent to 40,000 Tons CO₂eq (cumulative 2020-2023).
	<ul style="list-style-type: none"> - Integrate all production sites into the Zero Waste Program. - 100% water management system for main consumer facilities during period 2020-2023.
	<ul style="list-style-type: none"> - Include environmental assessments in 75% of the European assessments.
Priority Area	Society
	<ul style="list-style-type: none"> - Increase the # of internships to 3% of total population with main focus on operations & engineering and gender equality. - Increase in the coming 3 years community engagement initiatives 5% YOY (# projects, # participants, # spend).
	<ul style="list-style-type: none"> - By implementation of our environmental gas application solutions, contribute to GHG emissions reduction by our customers, while keeping their production cost competitive and fulfilling EU policy related to fossil fuel reduction. - Increase the participation and resources devoted to technology development clusters and promote close cooperation with suppliers focused on clean technologies and the circular economy, plus special efforts to support local companies and start-ups.
Priority Area	People
	<ul style="list-style-type: none"> - The RI-rate (Recordable Injury rate) should be better than the average RI-rate of the 7 largest member companies of the EIGA. - < 1 preventable Product Vehicle Accidents (PVA) per one million km (determination of preventability according to the EIGA Doc 914_Road Vehicle Accident Statistic).
	<ul style="list-style-type: none"> - Improve the female employee population overall to 30% by 2025. - Improve the female specialist and managerial employee population to 28% by 2025. - Initiate a European female mentoring project, resulting in a 70% promotion rate to managerial positions by 2023.



1.4 Strategy

Industrial Gases are and will continue to be an essential contributor in Europe’s journey toward a more sustainable and lower carbon society. Our company is a well-balanced industrial gases company:



At the same time, we are well positioned in 13 strategic European countries. Strategically, we seek to maintain the efficient balance of supply portfolio and markets served, and we will continue to build density in areas where we are strong, while simultaneously looking for growth opportunities in new areas.

By effectively making use of the properties of industrial gases, we develop and offer gas solutions which contribute to increased production efficiency and decreased energy consumption and waste. Due to the nature of the industrial gases businesses and our growth in the healthcare sector across Europe, **Nippon Gases** is contributing to improving the environment and helping society. Each **Nippon Gases** subsidiary contributes to major environmental and societal challenges, such as the climate and air quality.

Our growth will be balanced between investment projects, applications and technology opportunities, as well as new opportunities to do things that we are not doing today. For example, investing in new technologies that improve our customer integration and optimize our operational processes and our commitment to reach certain **Sustainable Development Goals (SDGs)** introduced by the UN to eradicate poverty, protect the planet and guarantee prosperity for all by 2030.

Nippon Gases’ primary focus today is supporting the successful implementation of **TNSC’s** medium-term plan and the four key strategies of Ortus Stage 2.

The Ortus Stage 2 medium-term management plan outlines basic strategic policies and carries over four key strategies from its predecessor, Ortus Stage 1, which are “structural reform,” “innovation,” “globalization” and “M&A.”

Through the execution of these strategies, **TNSC** aims to become a stronger, better company by further expanding our global businesses, and further enhancing the profitability of the Group.

Ortus Stage 2 identifies four key challenges:

- **Expand domestic gas business.** Chart sustainable growth by maximizing synergies between our gas business and our gas-related businesses, including equipment and services, in Japan, and strengthen profitability by restructuring production and logistics.
- **Promote globalization.** Capitalize on regional networks and competitive strengths to enhance comprehensive group capabilities, facilitating the further expansion of the scale of our operations.
- **Improve financial health.** Work to create a stable flow of cash provided by operating activities, facilitating the systematic reduction of interest-bearing debt and an improved net debt-to-equity ratio.
- **Step up safety, quality and compliance initiatives.** quality and compliance initiatives. Step up efforts to ensure safety, quality and compliance in Japan and overseas with the aim of establishing a stronger business foundation that will underpin sustainable growth.

Nippon Gases used the TNSC Ortus stage 2 plan to define its strategy for 2020.



Nippon Gases' main strategies:

Business growth

- Expand gas-related businesses such as equipment, in addition to the gas business in resilient markets / growth markets.
- Sustain growth of businesses in Europe (Acquisitions / Strategic Partnerships).

Safety, quality and compliance

- Strengthen safety, quality and compliance efforts.
- Strengthen corporate responsibility² strategy (People excellence / Customer focus / Productivity / Community).

Innovation

- Digital transformation / Technology edge.
- Technological disruptions.

Strengthening corporate functions

- Further improve human resources, information and finance strategies.
- Strengthen Integration with TNSC / MCC (Total TNSC Integration TTI).

(2) Nippon Gases doesn't have a formal Corporate Responsibility Plan, however we have committed ourselves to several different employee-oriented action plans, such as training, health, diversity, and work-life balance.

In order to realize our strategy, we will:

First, our focus is on the acquisition of talent and the developing of requisite skills, in particular through **Nippon Gases'** unique GOL long-term people development program, which identifies and manages critical skills, supporting employees in their personal development throughout their career, particularly through training, with the continuing roll-out of improvement tools for the management of training. Our employees are the backbone of our business and we focus on developing and retaining our talent.



Key managers in our Purchase and Productivity departments are actively supporting purchase and business development across the **TNSC Group** to include coordinated global strategies in support of structural reform.

Furthermore, we are integrating **TSNC's** innovative engineering functions. We thus maximize the group's power by augmenting collaboration with the **TNSC Group**.



Additionally, we are increasing coordination with **TNSC Group** companies in the electronics and semiconductor area, with a focus on the major international manufacturers in support of the Total Electronics initiative and the Group's drive to grow sales with these major customers. We expect to continue seeing brisk growth in the years ahead. Guided by the Total Electronics strategy, we will take steps to reinforce our marketing capabilities, build a reliable supply chain and enhance our responsiveness to the needs of strategically important customers.

Nippon Gases' M&A efforts will continue to be focused on identifying acquisition opportunities for high-quality distribution businesses in key European markets.

What's the hot topic for Nippon Gases this year?

Talent, talent and talent. The team that has the best players wins. We need to make sure our best people continue to consider us the best place to work. We are an attractive company with excellent opportunities for outside talent as well.

Quote from Eduardo Gil Elejoste- President of **Nippon Gases** in Gasworld article April 1, 2020



Tax Strategy

Nippon Gases' approach to tax matters is clear and completely aligned with the Group's ethics & compliance philosophy. Its guiding principles can be summarized as follows:

- Absolutely strict compliance with local applicable laws and regulations.
- Advisors' guidance where there is complexity or uncertainty.
- Business customers and suppliers' alignment to ensure transactional taxes accuracy.
- Complete collaboration with local tax authorities.

Since the nature of **Nippon Gases'** business is fundamentally local, we generate our income and pay our taxes in the 13 countries in Europe where we operate. And in the more limited cross-border transactions in our business, **Nippon Gases'** approach is always to comply with OECD transfer pricing guidance principles.

Our tax contribution in each country is substantial and similar in scope with a total figure in Europe around Euro 210 million, which mainly includes income taxes (circa Euro 100 million) and Value Added Tax (around Euro 96 million), plus other taxes (Energy & Municipal). It is a significant contribution across the continent.

2. Corporate Governance

Our governance structure is lean and clear, we pursue our Management Philosophy and our Principles.

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2.1 Governance structure

Basic approach and management policy:

Our corporate philosophy is
“market-driven collaborative
innovation: improving the
future through gases”

In line with this philosophy, we have outlined the following management policy, which guides our corporate activities and our efforts to ensure sustainable growth and increase corporate value:

“We pride ourselves on our ability to act on customer feedback and to partner with a wide range of industries to help improve quality of life. Market responsiveness and collaborative innovation are our two core values. These values are at the heart of everything we do as we shape the future through gas technologies, crafting a harmonious relationship between people and society, as well as with the planet.”





From the perspective of fulfilling our responsibility as a corporate citizen, we have also formulated the **Nippon Gases Group Code of Conduct** to guide the conduct of all group officers and employees in terms of compliance with laws and regulations and corporate ethics, in line with which we continue to promote conscious actions designed to respond to the expectations of customers and society at large.

Relationship with Parent Company

On December 3, 2018, **Nippon Gases** was acquired by the now parent company **Taiyo Nippon Sanso Corporation** as a result of the merger between Praxair and Linde. **Taiyo Nippon Sanso Corporation** agreed to respect our independence and fully supports and cooperates with **Nippon Gases** in accordance with its Group Management Regulations. On a day-to-day basis, **Nippon Gases** functions independently with autonomous management, financial, sales and other corporate functions. In addition, three TNSC executives have been appointed to the Board of Directors of **Nippon Gases Euro-Holding S.L.U.**, thus assuring the sole shareholder's direct supervision of the company's management.

Background to Adoption of the Current Structure for Management Execution

We provide air gases (oxygen, nitrogen and argon) and other industrial gases to customers in various industries around the world and carry out a wide range of activities in diverse business areas. For this reason, business judgments, decision-making and oversight must be based on expert knowledge derived from the experience of working closely with the industry to facilitate the effective assessment of a wide range of risks from multiple perspectives.

Our current management structure centers on the Board of Directors, which is responsible for making decisions related to business execution above a certain scale, including those regarding M&As and investments.

Therefore, Corporate Governance is driven by:

1. **Formal legal structure:** to fulfil legal requirements and to execute business decisions which were made in accordance with the internal approval processes.
2. **Internal approval process:** driven by the value and financial impact.
3. **Reporting processes:** driven by business lines and corporate functions.
4. **A strong leadership:** supported by our corporate values.

The decision-making process is delegated to the management of the company and is, to a large extent, centralized by having appointed responsible key management functions on the European level. Instead of a formal escalation of material business matters through the various shareholder levels, the group has established a more business-focused Corporate Governance system in which certain key management members have an "authorization to approve" ("**ATA Process**").

Approval process

The objective of the **ATA Process** is to achieve seamless business operation while ensuring that business decisions of a certain magnitude are appropriately escalated. The **ATA Process** applies to the European business as a whole and is not restricted to a specific country. This means that the key management members with authority to approve usually oversee certain areas of business or operations on a European level. Local teams have implemented the **ATA Process** accordingly.

The **ATA Process** does not follow corporate entities or bodies, but rather business functions / lines. If necessary, the approver consults the corporate function (e.g. legal or tax) with internal experts. The **ATA Process** does not deal with the question of who signs for which entity with legally binding effect. This is managed and executed in accordance with local legal requirements.

2.1.1 Highest governance body

The Nippon Gases Euro-Holding S.L.U. Board

The **Nippon Gases Euro-Holding S.L.U.** Board of Directors is responsible for making decisions regarding basic management policies and key matters related to business execution, which include formulating key management indicators and medium- to long-term strategies, as well as supervising the execution of business activities.

The Board has oversight of key aspects of the corporate governance structure in areas including director independence, appropriate board committees, board effectiveness, outreach to the parent company and alignment with parent company goals and long-term strategy, and adherence to a comprehensive sustainability program.

Board members are appointed by the sole shareholder, the parent company.

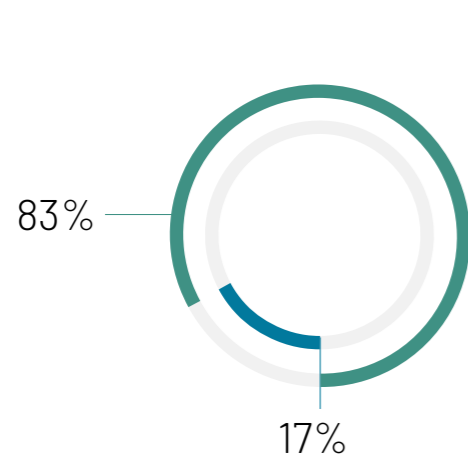
The Board of Directors and implementation of company policy is monitored, with a focus on our commitments to diversity & inclusion, safety, health, the environment, human rights, corporate citizenship, and the prevention of bribery and corruption.

It is the view of **Nippon Gases** that non-financial issues are a component of the company's values, culture and performance expectations. It has established non-financial goals in the areas of safety, compliance, sustainability, human resources, productivity, strategy and integration.

A diverse and effective Board

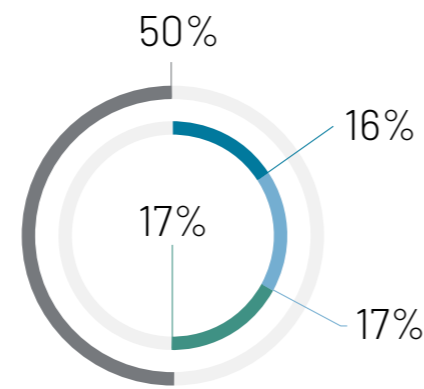
Gender diversity

- Female directors
- Male directors



Nationality

- Germany
- USA
- Spain
- Japan



Eduardo Gil Elejoste
Chairman of the Board

- 1981 Joined Argon S.A.
- 1992 Director Marketing responsible for Spain and Portugal, Argon S.A.
- 1996 Director Business Development responsible for Europe, Praxair España S.L.
- 2000 Director Marketing responsible for Europe, Praxair Euroholding S.L.
- 2004 CEO, Germany, Praxair Euroholding S.L.
- 2006 CEO, Germany and Benelux, Praxair Euroholding S.L.
- 2008 Praxair España S.L.; CEO, Praxair Portugal S.A.
- 2016 President, Praxair Euroholding S.L.
- 2018 Chairman and President, TNSC Euro-holding S.L.U. (now Nippon Gases Euro-Holding S.L.U.) (current).
- 2019 Board Member of the TNSC Company (current).



Yujiro Ichihara
Member of the Board

- 1974 Joined the TNSC Company.
- 2005 Executive officer, deputy general manager of Business Planning Division and General Affairs Division.
- 2008 Senior executive officer and general manager of General Affairs Division.
- 2010 Managing director and general manager of General Affairs Division.
- 2012 Senior managing director and general manager of Corporate Administration Division.
- 2013 Executive vice president, director, and general manager of Corporate Administration Division.
- 2014 Executive vice president and director, with responsibility for Corporate Administration, Division and Corporate Planning & Global Operations Division.
- 2014 President and representative director, CEO TNSC (current).



Tsutomu Moroishi
Member of the Board

- 1984 Joined Nippon Sanso Corp.
- 1991 The Thermos Company USA.
- 2006 General Manager, TNSC Secretarial office.
- 2007 General Manager, TNSC Corporate office.
- 2013 General Manager, TNSC IR.
- 2014 General Manager, TNSC Global Operations.
- 2015 Corporate officer, TNSC Global Operations.



Alan D Draper
Member of the Board

- 1993 Certified Public Accountant, Lumsden & McCormick, LLP.
- 1996 Internal Auditor, Praxair, Inc.
- 1999 Financial Analyst and Subsidiary Controller, Praxair, Inc.
- 2000 Senior Financial Analyst, Praxair, Inc.
- 2001 Finance Manager, Praxair, Inc.
- 2002 North Region Controller, Praxair, Inc.
- 2004 Director Volume and Revenue Analysis, Praxair, Inc.
- 2005 Director of Accounting & Operations Controller, Praxair, Inc.
- 2009 Finance Director, Praxair Surface Technologies, Inc.
- 2014 Vice President Finance & Operations Excellence, Praxair Surface Technologies, Inc.
- 2017 Vice President Finance, Praxair Euroholding S.L.
- 2018 Chief Financial Officer, Nippon Gases Euro-Holding S.L.U.



Dr. Annette Kaffsack
Member of the Board

- 2005 Director Legal and Compliance Germany and Benelux Industrial Gas and the Coating Business.
- 2007 Director Legal and Compliance Germany, Benelux, Scandinavia and UK Industrial Gas and Coating Business. The same responsibility since 2007 for the Joint Venture with Yara in since 2013.
- 2009 Director Legal, Administration and Quality and Compliance: additional responsibility for Quality for the German Industrial Gas Business.
- 2013 Director Legal Europe and Chief Compliance Officer Europe.
- 2018 Member of the Board of Directors Nippon Gases Euro-Holding S.L.U. and Company Secretary Nippon Gases Euro-Holding S.L.U.
- 2018 General Manager Nippon Gases Deutschland Holding GmbH.



Todd Kuroiwa
Member of the Board

- 1984 Joined Nippon Sanso Corp.
- 1999 Director of Technology, Messer Nippon Sanso GmbH & Co.KG.
- 2005 VP, Linde Nippon Sanso GmbH & Co.KG.
- 2008 General Manager, Taiyo Nippon Sanso Corporation, Electronics Marketing.
- 2015 SVP, Matheson Tri-Gas Inc. Electronics.
- 2017 VP, Taiyo Nippon Sanso (China) Investment Co., Ltd. for Total Electronics.
- 2019 Director Integration, Nippon Gases Euro-Holding S.L.U.

2.1.2 Committees

The European Business Team (EBT)

In accordance with the basic management policy of **Nippon Gases** as established by the **Nippon Gases Euro-Holding S.L.U.** Board of Directors, the European Business Team (EBT) meets, under the leadership of the European President, at least four times per year – once after every quarter, and often a fifth time for budgeting purposes and if there is a strategic plan in need of review or other specific items. Mainly comprising the regional Managing Directors and the European functional Directors, the EBT reviews safety and compliance matters, business results, business forecasts, investment proposals, risks and opportunities, HR matters and other issues requiring attention at any given time.

Compliance Review Board (CRB)

The **Compliance Review Board (CRB)**, under the leadership of the **Chief Compliance Officer (CCO)**, meets every quarter and as required. All managing directors report on their local CRB meetings and the CCO on all other compliance-related issues, including incidents/potential cases, precautions taken and training processes. The members of the European CRB are the President of **Nippon Gases**, the Managing Directors of the local businesses and the European Directors for Finance, HR, Legal and Operations. The CRB identifies and assesses risks unique to **Nippon Gases**, verifies measures aimed at reducing these risks, and reports on risks that have manifested as issues. The committee also periodically verifies the appropriateness of risk-management systems through risk-reduction activities.





Sustainability Committee

The Sustainability Committee, led by the Operations/Sustainability Director and formed by the **Nippon Gases** managing staff, meets quarterly. The Sustainability Committee is responsible for:

- Reviewing and making recommendations on strategy and commitments regarding **Nippon Gases'** sustainable development.
- Coordinating with the **TNSC KAITEKI Promotion Committee** when establishing sustainable strategy, indicators and defining ESG goals and targets.
- Monitoring the performance of **Nippon Gases' Sustainability KPIs** related to SDGs, as well as compliance, safety, quality, supply chain, human resources, environmental, energy and community.
- Promoting and coordinating the publication of the annual Nippon Gases Europe Sustainability Report.

Capex Committee

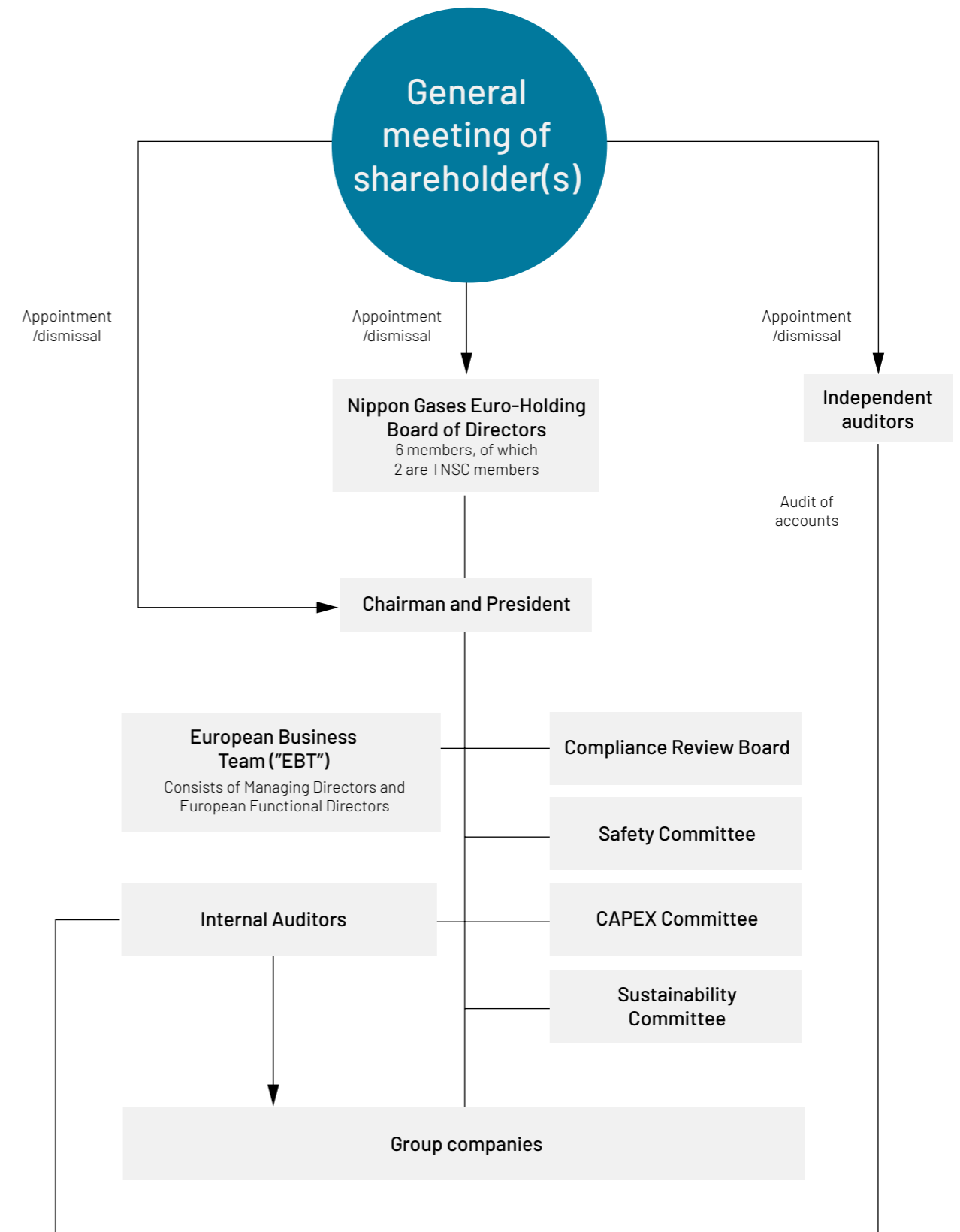
The Capex Committee, formed by the European President, the CFO, the Operations Director, the Integration Director, the Engineering Director and other European directors as needed, meets monthly to review and approve or reject investment projects presented by the regional businesses.

Safety Committee

The European Safety Committee, under the leadership of the HSE Director, meets every quarter. Members of this Committee are all Heads of Safety of the different European regions, the Operations/Sustainability Director and representatives of **TNSC**.

The Committee is responsible for the development and implementation of the European Safety Plan. In addition, incidents are discussed and corrective measures are agreed and initiated.

The Safety Committee is also responsible for the further development of the HSE manual.





2.2 Governance performance

2.2.1 2019 performance

We have been enjoying favorable economic conditions, with good GDP and IP growth in most countries in recent years, and our company has been performing strongly. Today, however, European society, its industry and its general economy is being impacted by the **COVID-19** outbreak, with very negative consequences that remain difficult to quantify at the present time.

Our company, which is positioned in very diverse and resilient markets (40% of sales), is a lean and efficient organization, and our cost controls and financial discipline will enable us to react quickly to changing economic conditions.

The current year is the first full fiscal year for the European business in the **TNSC Group**. Other than delivering excellent safety, compliance and financial results, the most important thing is the fast, smooth and “no surprises” manner in which we became part of the **TNSC Group**.

To accomplish this, we have been working on a three-pronged approach: (a) separation from our prior company (completed); (b) integration into **TNSC** (completed); and (c) extracting synergy benefits (ongoing).

In regard to the last item, we have been working to extract the following synergies:

- A. Electronic gases (full cooperation with **TNSC**, with global customers and optimization of our electronic gases plant in Belgium).
- B. Engineering (work has started with **TNSC** Engineering and a number of opportunities are being analyzed).
- C. Applications technology (work is underway in food & beverage, combustion, additive manufacturing, water and waste-water and other opportunities).
- D. Productivity program to be extend within group companies.

Furthermore, in the setting of annual performance-based variable compensation targets and goals, the NGEH Board determined that selected strategic and non-financial factors will be considered in determining potential variable compensation awards to recognize that these factors are critical to measuring our business success.

Based on management assessment of the degree of achievement in each goal and considering their relative importance to **Nippon Gases’** long-term success, in April 2020 the NGEH Board determined that **Nippon Gases’** performance with respect to non-financial goals was favorable and awarded a 35% positive adjustment to the variable compensation award determined by the financial goals.

The table below illustrates the basis for which non-financial awards were determined in 2019.

Examples of strategic and non-financial goals	
Control & compliance	Double down on compliance culture by, for example, reviewing and establishing a European Code of Conduct.
Integration, people, development and retention	Develop and retain talent to have a pipeline of future leaders.
Safety and environment	European leader in safety performance, received the EIGA safest Category 1 company award for 2019 (won 8 years in a row and 15 out of the last 17 years).



2.3 Risk management

2.3.1 Internal framework

We have established a system for ensuring appropriate business practices and are reinforcing internal control by clarifying decision-making authority and business processes, among other issues. We have also established Compliance and Safety Risk Assessment, and Management Committees with the aim of reinforcing compliance and ensuring the effectiveness of our internal control system.

At **Nippon Gases**, we have completed a three- point risk analysis:

- Risks to the quality of our products and services.
- Environmental risks.
- Health and safety risks to our employees and to our processes (this review was conducted within the framework of the Seveso regulation and the national HSE regulations).

2.3.2 Risk management model

Nippon Gases performs an annual business risk assessment aimed at taking a comprehensive look at the risks faced as a company. These surveys are prepared by the managing directors of the different regions and the functional leaders, and result in a risk map for **Nippon Gases**, highlighting priority issues. Both internal operational risks as well as risks in the **Nippon Gases** value chain are evaluated. This is a bottom-up survey of potential risks, and it specifically addresses a range of human rights risks such as employee safety, welfare and working conditions. Employee safety and welfare is always represented among **Nippon Gases**' top risks and substantial management resources are allocated to this area. The results of these surveys are presented to the European Business Team in the second quarter of the fiscal year, and potential risks related to corruption are an explicit focus. Afterwards, on a European level, a summary is made of the key risks, which are subsequently reported to the parent company.

Goals of the risk assessment are:

- Align risk appetite/tolerance and strategy.
- Link growth, risk and return.
- Enhance risk response decisions.
- Minimize operational surprises and losses.
- Identify and manage cross-enterprise risks.
- Provide integrated responses to multiple risks.
- Seize opportunities.
- Rationalize capital.
- Seek to include a wide range of strategic and operational risks.
- Continue to build risk ownership culture and organizational capabilities around identification and evaluation of risks.
- Establish a regular cadence of risk management activities and updates.

2.3.3 Risk identification

The key risks identified in 2019 are the following:

- **Economic slowdown:** influencing negatively on customers' level of demand.
- **Impairment charge due to economic downturn:** country or market risk premium changes, major economic downturn impacting projections, or significant political headwinds from anti-business governments.
- **Lack of business continuity plans:** including risk assessment process to determine activation of business continuity management to best manage unplanned incidents, and gain visibility into potential disruptions before they occur.
- **Succession Planning/Risk of discontinuity and loss of knowledge:** high rotation due to retirement and challenges in attracting new talent.
- **Energy release or major safety issue:** Major incidents or energy releases could have a negative impact on the community and employee safety and welfare.

Actions taken in 2019:

- Presentation by the Internal Audit department
- Review of emerging regulatory issues in Human Rights
- Nippon Gases Compliance Review Board (CRB)
- Complaint Management

Presentation by the Internal Audit department

A presentation was made by the internal audit department to the EBT with the aim of reinforcing the significance of business risk assessment. The goal was to encourage team participation, especially in identifying risks relating to sustainable development.

Risk identification was introduced through the business risk map, a "heat map" that asks respondents to define potential risks in terms of their likelihood and severity. These include risks relating to human rights (physical security, employment and labor law, health and safety and sourcing) within **Nippon Gases** operations or supply chain.

Review of emerging regulatory issues in Human Rights

It is the job of the CCO together with the businesses and HR to keep up to date with emerging regulations in the area of human rights.

Human rights and the EU CSR (Corporate Social Responsibility) directive remained a focus in 2019 in the countries where **Nippon Gases** operates.

Nippon Gases Compliance Review Board (CRB)

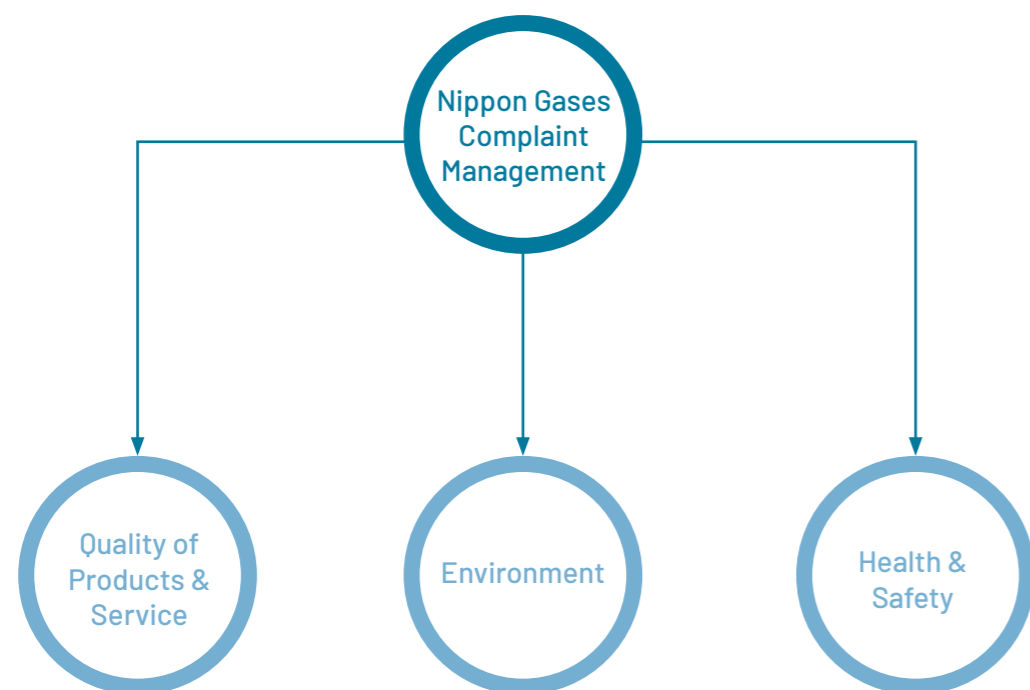
In 2019 there were 11 reports to review, of which none related to potential human rights issues, and **Nippon Gases** has no knowledge of systematic discrimination by **Nippon Gases** employees against **Nippon Gases** employees or third parties or potentially vulnerable groups on the basis of race, color, religion, gender identity or expression, political opinion, national origin, age, disability, pregnancy or sexual orientation, and it has no knowledge of reports of unfair compensation or hours of work, lack of access to a safe and sanitary work environment, restrictions on the right to choose employee organizations, or the use of child, compulsory or forced labor.

All of these are protected under **Nippon Gases Standards** of business integrity and/or human rights policy. Reports to the hotline are reviewed locally by the business CRBs and by the Corporate CRB. The hotline system in place means any **Nippon Gases** employee who receives a comment, complaint or claim by any means of communication (email, hotline phone number, etc.) must register it.

Complaint Management

At **Nippon Gases**, we have a complaint system in place through which any **Nippon Gases** employee who receives a comment, complaint, or claim by any means of communication (e.g. email, phone call...) must register it in an incident database, whose data is consolidated in monthly reports for all of Europe.

This registry includes the review and follow-up work carried out on the causes of the incident and the level of safety, environmental or quality implementation, the staff in charge and their areas of responsibility, as well as preventive or corrective actions taken, if any.



3. Ethical conduct

Nippon Gases as a company and each employee, manager and director as individuals strive to be ethical in all business endeavours.

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3.1 Ethics & compliance

3.1.1 Internal framework

Nippon Gases Compliance Culture supported by a comprehensive compliance program. **Nippon Gases Compliance Program** is framed by the Code of Conduct.

This Code summarizes our core compliance values and principles. The Code states our commitments as a director, manager or employee of **Nippon Gases** to compliance. It also describes our compliance culture towards our business partners and stakeholders and our understanding of what it means to be a good neighbor in the community.

The Code explains what the reporting channels are for any potential compliance violation. The Code is available in different European languages, in print and online versions. All directors and managers and most employees of **Nippon Gases** are asked to confirm that they have read and understood the Code of Conduct each year.

Reporting lines for any allegations are:

- The manager / the management.
- Human Resources department.
- Legal department.
- Local Compliance Champion and/or the Chief Compliance Officer Europe.
- E-mail.
- Hotline.

The **hotline** is managed by an external service provider, available in local languages and the caller chooses whether to remain anonymous or provide their name.

Investigation rules are:

- Cases have to be kept as confidential as possible.
- Reaction within 48 hours (working days).
- Cases should be closed within 30 days.
- Reporting and tracking system.
- Investigation should be performed by the Compliance Team supported by other employees / departments incl. external consultants on a case-by-case basis.

Nippon Gases Compliance program and the **Code of Conduct** is supplemented by policies on specific conduct. The most important policies are on:

- Reporting and investigating possible compliance violations.
- Competition law including correct conduct towards competitors.
- Gifts, entertainment and sponsoring.
- E-mail writing and management.
- Document management including retention of documents.

The **Compliance Training Program** oversees training for new employees, bi-annual general compliance training for the majority of employees, the yearly re- certification process of the **Code of Conduct** and occasional other needs.

Reviewing of all compliance matters is carried out by local Management teams and the European Management team on a quarterly basis and/or on occasion. The compliance metric measures:

- Training and communication.
- Punishment.
- Compliance Program Operation.
- Integrity/Compliance Issues.

Nippon Gases has established a **Compliance Organization**, headed by the **Chief Compliance Officer Europe**.

3.1.2 Fair competition, anti-corruption and bribery

Supporting fair competition is a major focus of **Nippon Gases'** compliance precaution actions. For this purpose, **Nippon Gases** has developed detailed guidelines, conducts regular training and broadcasts messages to remind employees of the importance of correct competitive behavior. The guidelines mainly deal with who is allowed to communicate with competitors, on which topics, and how contacts with competitors have to be reported and reviewed.

Also, to avoid any corruption and/or bribery cases, **Nippon Gases** has clear rules and protocols on making or accepting gifts, entertainment and sponsoring, setting clearly defined values.

81,000 €

Contributions to not-for-profit organizations

Total number of governance body members and employees that have received compliance training:

5,151

Participants

40

different training sessions

Total number and nature of confirmed incidents of corruption and/or anti-trust matters: **none**.

Public legal cases regarding corruption and/or anti-trust matters: **none**.

3.1.3 Prevention of money laundering

Due to the nature of our business and the relationship with business partners, the risk of money laundering activities is very low.

To maintain sensitivity regarding this matter, the finance department sends out regular alerts.



3.1.4 Respect for Human Rights

Nippon Gases has published a human rights policy and a statement in accordance with the UK's 2015 Modern Slavery Act.

We support the spirit and meaning of the Universal Declaration of Human Rights, the United Nations Global Compact and the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, and promote respect for human rights in the workplace and the creation of adequate working environments.

We seek to do business with partners - customers, suppliers and contractors - who share the same commitment to human rights as we have.

We consider respect for human rights to be fundamental: non-compliance, depending upon the circumstances, may result in serious disciplinary action up to and including termination of employment.

Human rights violations complaints: **none**.



3.1.5 Extraordinary compliance initiatives

In addition to regular compliance training, **Nippon Gases** regularly sends compliance messages to its employees as a general precautionary measure or as a means to raise awareness. Furthermore, **Nippon Gases** undertook a Compliance Commitment Week in June 2019.

The week was introduced by an announcement together with a presentation by Eduardo Gil Elejoste, the President of **Nippon Gases**, and was accompanied by messages from the General Managers and the local compliance champions. The request went out so that every meeting held that week, regardless of where and with whom, started with five to 10 minutes' talk about compliance.

Total meetings

307

197 internal meetings
and **110** with external
participants

Total participants

1,496

1,190 participants from
the company and **306**
external participants

This initiative of the **Compliance Commitment Week** showed how actively each individual has dealt with and familiarized himself/herself with our compliance principles and requirements, and how well and sustainably our compliance culture has been established to date.

3.2 Customers

3.2.1 Internal framework

Policies

Nippon Gases management maintains its commitment to the safety, quality and environmental management systems already implemented, defining policies that are communicated to all personnel and ensuring that they are understood and applied.

A general policy is defined which is then adapted at each **Nippon Gases** unit.



The General Quality Policy refers to the following main areas:

- Management focus on customers and stakeholders.
- Excellence in people and operations.
- Continuous improvement.
- Employee commitment.
- Compliance with standards.
- Communication.

Manuals and procedures

Nippon Gases Management System is supported by the information documented in manuals in which we can find: the development of activities (Procedures) and the documents that demonstrate the results achieved (Records).

Different levels of documentation:

- Standards: documents that describe technical requirements that **Nippon Gases Group** companies must comply with. Those are issued either at a worldwide or European level and managed by dedicated Corporate and European management staff teams.
- Manuals for the Management Systems or for Operating activities including:
 - **Procedures:** documents on the different **Nippon Gases** companies' detailed processes and implementations.
 - **Specifications:** documents on standardized properties.
 - **Forms:** documents that provide common document frameworks such as draft templates for permits and certificates.
 - **Guidelines:** documents that detail working instructions.
 - **References:** documents that provide vital references for compliance with standards and/or procedures.

The Manuals and Procedures indicate the organization and processes by which the company is governed as it advances in terms of safety, quality, environment, food safety and energy-efficiency management systems. The particular procedures of each management system are included in the corresponding Company Management Manual.

3.2.2 Customer relationships

Interacting with customers

Nippon Gases management systems have drawn up different communication channels in order to get continuous feedback from customers and find out what their requirements or complaints are, as well as to establish an efficient administrative flow for the correct functioning of the business.

Ways to communicate with customers include:

- Web page.
- Customer service telephone and general contact email.
- Customer visits.
- Fairs and seminars.
- Telemarketing and market prospecting.
- Call centers.
- Customer feedback systems (complaints, surveys, information from the commercial organization, etc.).
- Other.

Satisfaction Feedback and Complaint Management

At **Nippon Gases**, we have a complaint management system in place through which any **Nippon Gases** employee who receives a comment, complaint or claim from a customer by any means of communication (mail, phone, etc.) must register it in a European information system, indicating what occurred, when, where and who the actors were, as well as the identification of the product, site, business area and application.

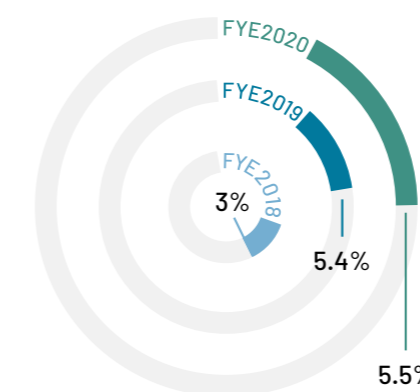
A staff member will be designated to oversee the complaint until the issue is dealt with, and they will analyze, classify and evaluate the incident, determining the root cause and finally deeming what actions should be taken to avoid repetition and the staff responsible for the implementation thereof. This person is also responsible for the monitoring and following-up of corrective actions.

Every month, Quality Management draws up a report on incidents registered, including customer complaints, which is shared with the quality and operational staff of all the companies in Europe in order to share such problems and experiences and consider how to avoid their occurrence at each site.

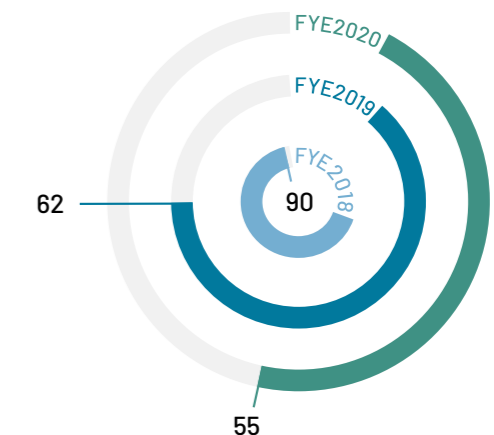
Additionally, Quality Management monitors periodically how the reports were managed, the trend of the different type of the reported complaints, its seriousness and recurrence in order to consider taking additional actions. During FYE2020 only one serious customer complain was received and it was successfully resolved.

Customer Complaints KPIs:

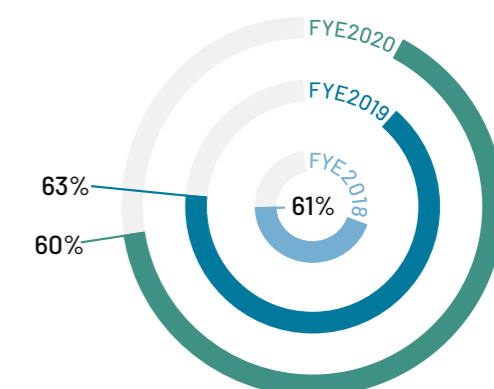
% of customer complaints related to product out of specification:



Average days of resolution of closed complaints:



% of complaints reports investigated and closed out within 90 days of the incident:



Each country has its system through which to receive periodical feedback from customers by means of customer satisfaction surveys. The surveys are managed in a coordinated way by Communications, Quality and/or Commercial departments at the different companies, using questionnaires for a target group of customers depending on the information needs regarding customer perception and market trends.

The results of the surveys are internally evaluated and communicated to the interested departments in charge of the necessary actions to correct or improve relevant products and services according to customer perception.

Health and Safety always comes first

The safety of customers when using our products is essential for **Nippon Gases**, and the **Nippon Gases HSE** manual includes a chapter that sets out all necessary requirements regarding product safety, covering the following areas:

- New product risk assessments.
- Product design safety management.
- Product hazard communications.

All our products are labeled according to the EU 1272/2008 Classification, Labelling and Packaging, which brought the Globally Harmonized System (GHS) into force in Europe. Safety Data Sheets are provided for all our products.

As a result of our risk-assessment, sales to a customer or sale of a product for a specific application may be approved or denied.

For high-risk chemicals we have implemented a customer qualification process to manage the security and risks involved in the use of such products.



3.3 Supply chain

Sustainable Supply Chain Management means engaging with suppliers proactively in order to promote increased environmental responsibility and using clean technologies.

Evaluations of new vendors are mainly made by market reference checks and in some cases reinforced by these methods:

1. Historical: former suppliers with quality historical rate.
2. References: from other TNSC areas.
3. Audit: direct inspection.
4. Samples/Proof Of Concept/Pilot: directly tested by the impacted business.

Historically, there has been very few reevaluations due to the very low numbers of conformities we had experienced.

3.3.1 Supply Chain procedures

The best supply chain impact on the environment comes when suppliers work on extending the commitment to responsible business practices by integrating fair working conditions and good environmental practices throughout the chain in order to promote increased environmental responsibility.

From the procedural point of view, we follow different steps to bring about this positive impact:

- Development of a strategy.
- Risk assessment.
- Establishing dialogue with suppliers.
- Communication to costumers, consumers and other stakeholders.





3.3.2 Responsible Supply Chain

Besides legal and procedural compliance, we also focus on strategic and continuous environmental improvements with suppliers with a direct impact on the supply chain, from gas manufacturing to the time products are delivered to end customers.

Working with environmental supply chain management not only improves our environmental impact, but also provides a number of business advantages:

- Improved business & public image.
- Reduced risk of legal non-compliance.
- Attracting of environmentally aware customers.
- Improved productivity and efficiencies.
- Improved quality.
- Reduced number of defaults.
- Improved environmental management.
- More sustainable products.
- Inclusion of ESG criteria in procurement procedure.
- Supervising systems (e.g. assessments, audits).
- Innovation in supply chain.

Nippon Gases is currently developing the ESG criteria for the evaluation of the suppliers.

Supplier type	Monitoring
Critical to sustainable development Supply chain direct Environmental impact Logistics suppliers	<p>We measure the logistical impact with a consolidated KPI, the Km/Ton for each product for higher transport efficiency. From our productivity group we have a complete process to identify and develop projects in order to improve transport efficiency. During this last-year more than 150 projects used this approach.</p> <p>Logistic Solution Partner Selection: The selected European supplier is based on its capacity to provide a safe and efficient transport service, therefore minimizing the environmental impact.</p>
Critical to sustainable development: Chain Indirect environmental impact Energy Suppliers and main equipment ASU's suppliers	<p>Engaging with Energy Suppliers. A sustainable approach in the discussion with energy suppliers to ensure the best matching of our production requirements and market opportunities. We explore opportunities such as PPA (Power Purchase Agreement) to increase our share of renewable energy.</p> <p>Plant Performance Monitoring System. In the main energy consumers in our separation plants, we continually optimize energy usage in the different processes.</p> <p>Energy Improvement Projects. From our Productivity group we have a continuous process to identify and develop projects in order to optimize efficiency working closely with equipment manufacturers. Last year we launched more than 180 projects.</p>
Remaining Suppliers: biggest group in number more than 2,000 suppliers, smallest in operating volume spend	<p>To facilitate the monitoring of impact on quality and in terms of the environment, Nippon Gases is developing a web portal where we will be able to communicate and monitor suppliers on a continuous basis.</p> <p>Through the web portal we will be able to implement Supplier Performance System based on the acronym TARGETS:</p> <p>T. Total Cost of Ownership: purchase price of a particular asset plus operating costs and better understanding of vendors' costs and how they deal with them.</p> <p>A. Assurance of Supply: measures expected lead time vs real lead time deviations.</p> <p>R. Responsiveness: measures unexpected needed lead time vs. real.</p> <p>G. Global Reach: global capability in terms of standard products, pricing, single point of contact, etc.</p> <p>E. Environmental, Quality & Safety: clear and practiced environmental policies in place & quality. Measures quality deviations and checks safety issues with the products.</p> <p>T. Technology: frequency of new developments in the market. Right of first access to the developments.</p> <p>S. Social & legal compliance. Clear and practiced compliance policies in place. Currently the follow-up system is the Non-Conformity Management System.</p>



3.3.3 Supply Chain Innovation

Supplier Non-conformity Management Ongoing Process

A non-conformance means that something did not happen as required. It could be in a product, service or process, when the result does not meet the specifications or requirements in some way.

Requirements might be defined by the customer, a regulatory body, or in the internal procedures of the local affiliate. **Nippon Gases** has a process under which any employee who receives a comment, complaint, or claim related to quality, environmental concerns or safety must report it and ensure it is registered in a European database.

This system captures what is happening, when products and services are received or in operation in our sites or at customer sites.

Reported Non-Conformities	2017	2018	2019
Internal	62	51	41
External	34	10	7
Safety	4		
Total	100	61	48

The non-conformities are classified as internal if they occur inside the fence before the product leaves the factory or as the product, service is received; external means they were detected at the customer's site or are safety-related non-conformities.

We are focusing in reducing safety related incidents first even though the total number of reported non conformities is very low in Europe.

On-going focus to provide economical and innovative solutions through: waste, water, energy and fuel reduction, and promoting the development and use of new "clean" technologies as much as available.

Choosing the most efficient way of reducing energy costs (KWh) and working with partners who may be able to decrease Air Separation Plant Costs by investing in designing the most efficient equipment: compressors, turbines, intercoolers, etc.

Looking at distribution software suppliers who might be able to assist in the reduction of fuel consumption on an ongoing basis by using state-of-the-art demand forecasting and routing algorithms.

Implementing in the coming future, currently in the define phase, a supplier portal where all suppliers could enter all related info to the status of different indicators that will enable us to closely follow-up and monitor their performance in all key supply chain functional areas including the ESG related ones.

4. Human capital

Our highly skilled and experienced workforce is the key stone of the success of Nippon Gases. We are highly dedicated to continuously develop and improve them.

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4.1 Internal framework

Our Human Resources strategy at Nippon Gases.

To achieve the mission, vision and goals of **Nippon Gases**, the Human Resources Department pursues the following objectives:



HR **Nippon Gases** strives to foster these processes by adapting best HR practices and by digitalizing all processes to the greatest possible extent.

1. Attract & engage the best possible talent

The majority of the recruitment is done in-house, using all possible channels. Tools like LinkedIn, university recruitment and employee referral are often used. We also focus more and more on taking on board trainees who, in cases of good performance, become permanent employees.

2. Retain the workforce

Having a well-balanced salary and benefits package is seen by **Nippon Gases** as a strong retention argument. On an annual basis, all salary levels and benefits packages are audited and adapted based on evolving market practices. On a quarterly basis our attrition rate is evaluated and, based on the outcome and including other factors, the compensation & benefits practices can be adapted.

3. Develop & improve leadership skills

Growing our People to Grow our Business is not just a motto in our company – it is a reality. We work hard to retain our employees by offering a good working environment, while in return asking them to invest time and effort in developing themselves so we always have the best team possible. The GOL (Growing Our Leadership) program is under development and being rolled out across the organization, with topics like optimizing diverse talent, understanding our business and taking initiative as the key focuses. Also, the Cornerstone Essentials database supports HR in this journey. Safety and compliance training remains as important as ever.

4. Develop a high-performance culture

Our PDP (Personal Development Plan) process is the main contributor in developing our high performance culture. The combination of business & competency goals and a personal development plan is one of our performance drivers. The link with variable compensation increases the value of the program.



5. Promote diversity

Diversity is one of our key values. Active recruitment, training, talent identification and development in a bias-free environment has made it possible to improve our female contingents in all regions and at all levels.

Our company slogan “there are no male positions in **Nippon Gases**” is a successful driver of this change.

6. Promote community engagement

Nippon Gases is engaged in a wide variety of projects at the local level (where we have production facilities), as well as in a countrywide context. Our Community Engagement (CE) activities are completely based on **Nippon Gases** volunteers.

Nippon Gases offers financial sponsorship to projects or provides supporting equipment. CE projects are mainly in the area of educational support, health and social outreach.

7. Good direct communication style

Communicate, communicate, communicate. You can't communicate and listen enough. Our intranet, the employee teleconferences with the leadership, the quarterly **Nippon Gases Magazine (Konnichiwa Europe)**... play an important role. It is in our DNA to keep the door open to listen and talk to each and every employee.

8. Work-life balance

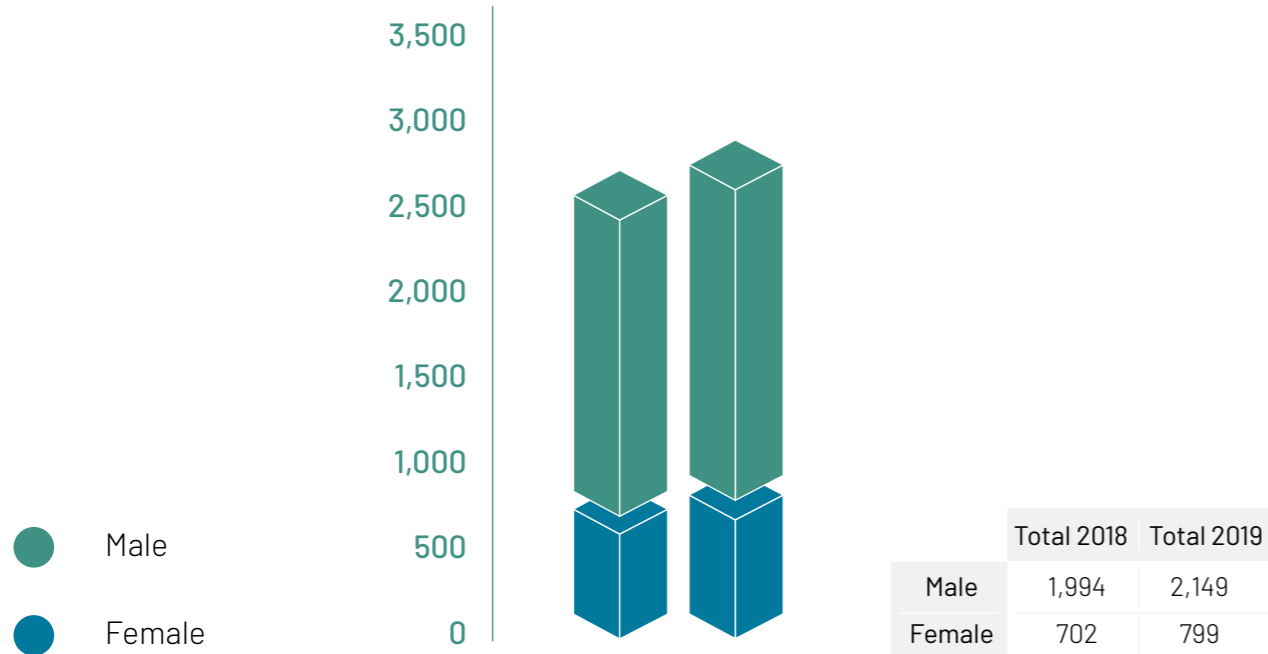
We know that only by respecting the personal life of employees and their leisure time, they can be the best players and performers during work time – and this allows all of us to be rested and to stay safe at work.

4.2 Headcount

- The workforce population is distributed across the regions in accordance with their specific business needs. There are differences in average age and seniority across the different regions, with average seniority and age higher, today, in the northern than in the southern regions.
- Company headcount rose in recent years, mainly due to the changes in local legislation on temporary workers and external labor force. The company complies with these local laws and has incorporated temporary and external workers into the permanent labor force.
- **Nippon Gases** complies in all regions with the relevant legislation on the employment of disabled persons. We employ 44 disabled persons, representing 1.5% of the total population.
- Trainees and internship hiring is promoted within **Nippon Gases**, as we see this as a strong source of attracting young and diverse talent. During FY 2019 we employed 72 trainees, of whom 15 were hired permanently.

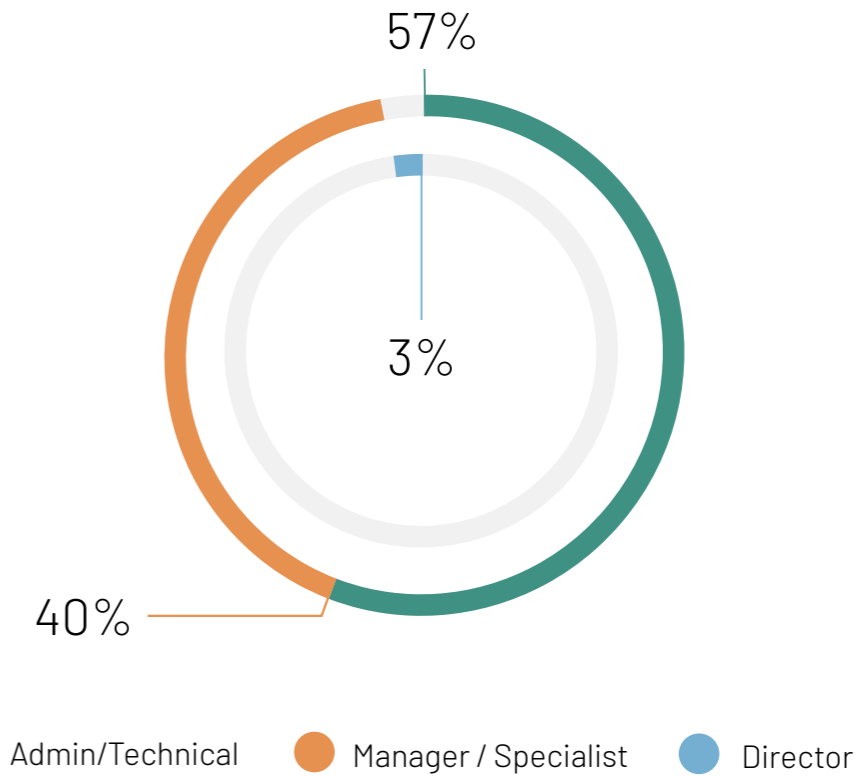
	Contracts by gender						Contracts by gender				
	2018				Total 2018		2019				Total 2019
	Indefinite contracts		Temporary contracts				Indefinite contracts		Temporary contracts		
Full-time	Part-time	Full-time	Part-time		Full-time	Part-time	Full-time	Part-time			
Female	618	76	7	1	702	Female	694	102	3	0	799
Male	1,952	31	11	0	1,994	Male	2,073	52	24	0	2,149
Total	2,570	107	18	1	2,696	Total	2,767	154	27	0	2,948

Employees by gender



	Contracts by professional category						Contracts by professional category				
	2018						2019				
	Indefinite contracts		Temporary contracts		Total		Indefinite contracts		Temporary contracts		Total
	Full-time	Part-time	Full-time	Part-time			Full-time	Part-time	Full-time	Part-time	
Admin Technical	1,407	79	14	1	1,501	Admin Technical	1,545	118	26	0	1,689
Director	78	0	0	0	78	Director	81	0	0	0	81
Manager / Specialist	1,085	28	4	0	1,117	Manager / Specialist	1,141	36	1	0	1,178
Total	2,570	107	18	1	2,696	Total	2,767	154	27	0	2,948

Employees by contract



	Contracts by age						Contracts by age				
	2018						2019				
	Indefinite contracts		Temporary contracts		Total		Indefinite contracts		Temporary contracts		Total
	Full-time	Part-time	Full-time	Part-time			Full-time	Part-time	Full-time	Part-time	
<25	36	2	1	0	39	<25	42	11	4	0	57
26-30	153	3	5	1	162	26-30	169	7	4	0	180
31-35	273	7	4	0	284	31-35	296	8	6	0	310
36-40	308	13	4	0	325	36-40	349	23	2	0	374
40-45	412	16	2	0	430	40-45	428	18	2	0	448
46-50	425	15	1	0	441	46-50	437	21	5	0	463
51-55	458	14	1	0	473	51-55	492	20	3	0	515
>55	505	37	0	0	542	>55	554	46	1	0	601
Total	2,570	107	18	1	2,696	Total	2,767	154	27	0	2,948

4.2.1 Employee turnover

Turnover rate at **Nippon Gases** comes from three sources: voluntary and involuntary exits and retirees. The turnover rate is calculated from 12-month running totals. Depending on the measuring point, all terminations effective 12 months before are considered. Percentages are based on the 12-month running total divided by the headcount figure at the measuring point.

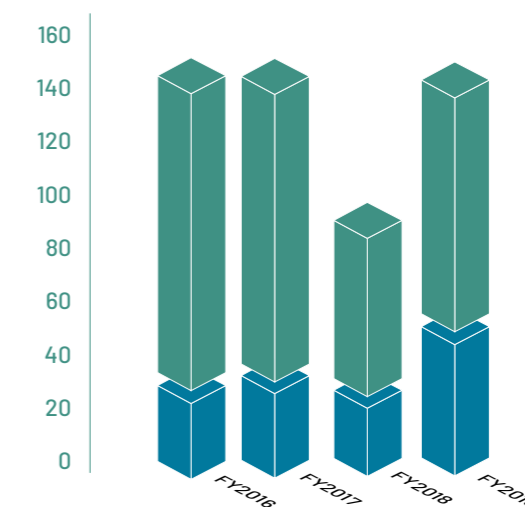
Although the company has gone through a considerable amount of changes in recent years, the turnover rate remained stable at a low level. A rise in retirement must be expected due to the age structure of our employees. To be prepared for these changes, the company is focused on the development of its own talent and working on knowledge-transfer programs to ensure smooth transitions.

Age	Involuntary turnovers by age	
	FY2018	FY2019
<25	0	0
26-30	0	4
31-35	3	4
36-40	3	3
41-45	0	2
46-50	4	10
51-55	4	3
>55	3	13
Total	17	39

Category	Involuntary turnovers by gender/category											
	FY2016			FY2017			FY2018			FY2019		
	F	M	Total	F	M	Total	F	M	Total	F	M	Total
Directors	0	3	3	0	0	0	0	0	0	2	1	3
Admin/ Technical	7	39	46	8	22	30	2	6	8	12	12	24
Specialist / Managers	4	9	13	6	15	21	1	8	9	4	8	12
Total	11	51	62	14	37	51	3	14	17	18	21	39

Quarter	Turnover rate last 12 months				
	Q4 - FY2018	Q1 - FY2019	Q2 - FY2019	Q3 - FY2019	Q4 - FY2019
Voluntary	1.93%	2.24%	2.25%	2.24%	2.72%
Involuntary	0.64%	0.86%	0.88%	1.12%	1.36%
Retirement	1.10%	1.12%	1.07%	0.83%	0.80%
Total	3.68%	4.21%	4.20%	4.20%	4.88%

Total turnover by Gender



- Male
- Female

	FY2016	FY2017	FY2018	FY2019
Male	111	112	66	89
Female	35	33	31	56

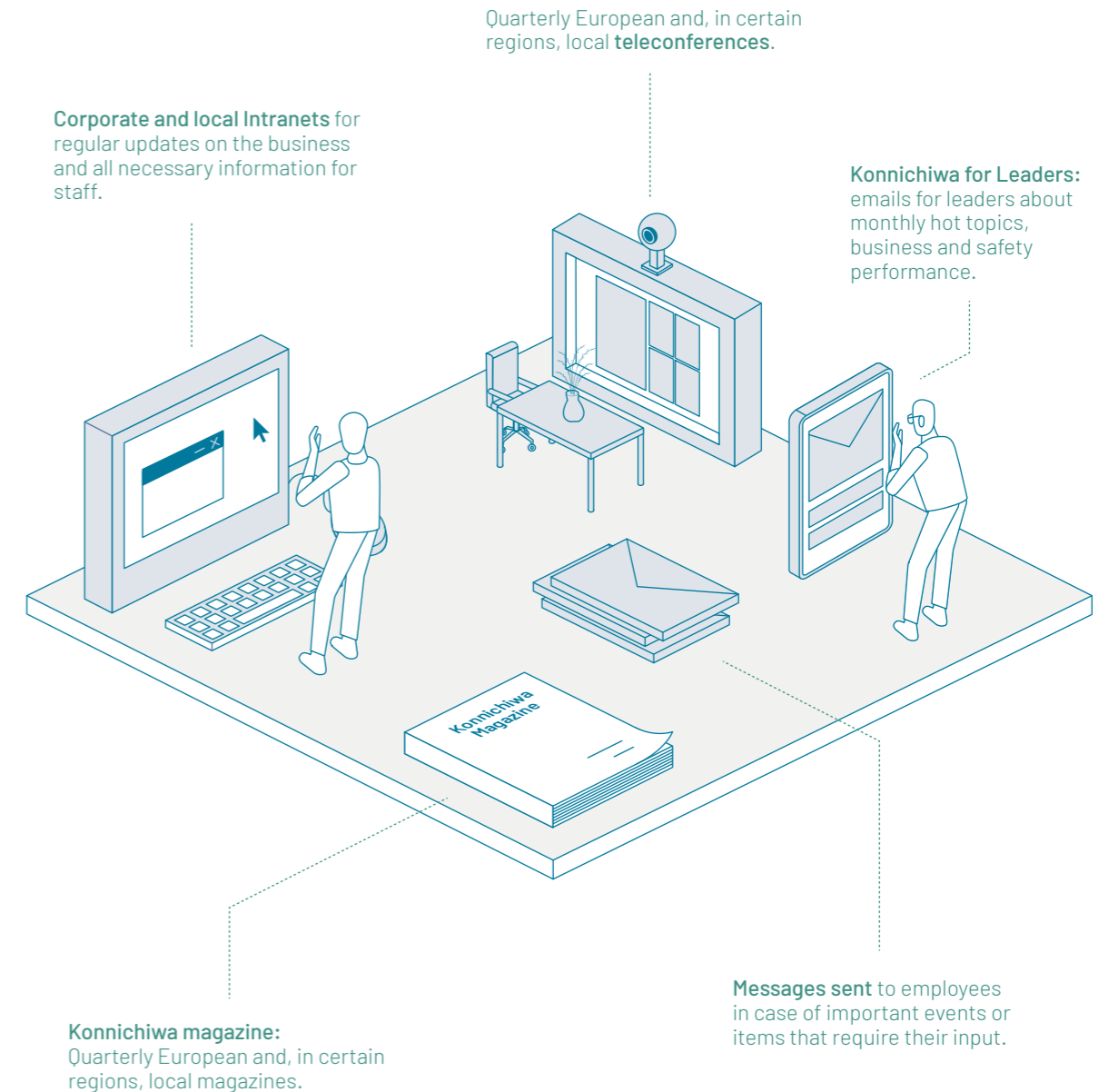
4.3 Communication

Communication is what keeps a company alive: Sharing what is going on, exchanging experiences, learning from each other, celebrating successes, keeping ourselves safe, growing from our own and others' mistakes.

All of this, and so much more is based on having and encouraging an open and honest communication in all levels and senses. It is not only about communicating; it is also about listening. In 2020 we will organize our **Employee Engagement Survey at Nippon Gases**.

As a result of the last global survey (held in 2013 within our former company with a participation of approx. 74%), we strongly fostered our communication channels and initiatives.

To guarantee fluid communication in our company, we have set up various channels:





4.4 Training

As well as technology, we know that the most important channels are the informal ones: the ongoing and open communication between manager and employee. Leaders are encouraged to maintain a continual conversation, and to coach the employees in their teams. It is in our DNA to keep the door open to listen and talk to each and every employee.

Naturally, this is also our approach to the relationship with works councils and employee representatives.

Actions taken / ongoing:

- 141 articles published in WeConnect from 1st April to 31st March.
- LinkedIn corporate page update is ongoing.
- New corporate intranet under development.
- Employee satisfaction (surveys and action plans) and engagement (initiatives) in process of being executed in May 2020.
- All legal requirement towards industrial relations at the European and country levels are fulfilled.

Nippon Gases complies with all national legislation organizing industrial relations in the countries where we are present. Works councils, health & safety committees, and employee representatives are in place, always according to local regulations. They meet with the local management, based on existing agreements, on a regular basis. Topics discussed in works councils and health & safety meetings are defined by law and collective agreements. The main items discussed at works council meetings are the financial status of the company, manpower changes, and other employee-related questions. At health & safety meetings, topics like potential safety hazards, safety incidents and improvement proposals at local facility level are discussed.

In 2019 we put in place a new European Works Council agreement, installed a Comité Social et Economique (CSE) in France, and started up the process of installing a works council in the Netherlands.

More than 94% of our employees are covered by a collective agreement, whether it be on a local, industry or national basis.

Grow Our People to Grow Our Business is our philosophy. To foster this growth, almost 2,000 employees³ participate in the Personal Development Plan which consists of:

- **Performance:** business and competency goals to provide direction and alignment. It creates a clear focus on priorities and a personal contribution to the company results.
- **Development plan:** we understand development as part of our day-to-day job and encourage employees to develop themselves through new challenges, not necessarily merely through in-class training. Every eligible employee creates an annual development plan to improve their skills in three ways:

70%

Of actions will involve on-the-job development:

new responsibilities, projects and assignments.

20%

Of actions will involve development through relationships such as a mentorship, shadowing or learning from a colleague.

10%

Of actions will be through classroom and online training.

(3) Employees who are not eligible for the PDP are those who have been less than 3 months in the company and those who, due to the collective labor agreement, are subject to different performance assessment processes.



To foster training actions last year we implemented a new learning system called PeopleHub (based on the Cornerstone platform) with a package of 1,387 online resources in different languages covering a diverse range of skills: marketing, leadership, management, productivity, personal development and technology. PeopleHub offers powerful online courses that can be completed by employees when it best works for them. They are normally short-duration courses that are sometimes combined with classroom training. Since it was implemented in November 2019, 255 different soft skills courses have been completed in PeopleHub by 722 employees.

The mandatory courses included in the online platform during this year are the Code of Conduct, Credit Card Policy and How to Act against Phishing.

All training records are transitioning to PeopleHub, including training completed in formats different to the online courses. As the transition will be fully implemented in 2021, current information about training apart from online courses is not consistent across Europe.

At the end of fiscal year 2019 we launched a special training program for our leaders, as growing our leaders has a direct impact on the growth of all of our employees. This one-year program is called Growing Our Leadership (GOL) and helps leaders develop their skills in people management, global business overview and strategy, working in a VUCA (Volatile, Uncertain, Complex, Ambiguous) world, and developing the initiative to innovate.

A high amount of training hours are dedicated to safety. Safety is our company's top priority, next to compliance, and we work hard to guarantee secure working conditions. One of the ways we do this is through a robust training program.

Specific safety training courses are in place for new employees, as well as in a continuous format, to ensure that policies are followed and understood by all. In addition, every single employee attends an annual safety course:

The Safety Excellence Journey.

Safety training	
# of employees receiving safety training	100%
# of safety training hours	27,249
# of safety training hours / employee*	10.8

(*) Oximesa not included

Training hours completed in PeopleHub:

	Soft Skills		Mandatory training	
	Female	Man	Female	Man
Technicians & administratives	4.85	1.59	167.24	209.54
Specialists	40.36	117.15	118.57	307.65
Managers	21.44	37.22	28.07	108.52
Executives	6.65	17.26	11.05	47.78
Total by gender	73.3	173.22	324.93	673.49
Total	274		998	

During the course of FY 2019, Nippon Gases spend **881,840€** on external training courses.

4.5 Compensation

The company has a level system in place, linking reference salary amount and bonuses to the survey values of a globally recognized salary survey company. Actual base salaries and bonuses are based on these values by level.

Base salary increases can come from:

- Annual merit cycle, where the outcome of performance evaluation (goal realization and development plan progress) is taken into consideration.
- Promotional and market value adjustment.
- Statutory increases.

Based on the individual performance of the employee (performance evaluation system), in combination with the performance of the European business and/or regional business (depending on the employee's level) for a selected group of levels and regions, "pay for performance" is defined. Eligibility and goal settings are described in the relevant documents.

All regions have benefit packages, which may differ depending on the employee's employment level, collective labor agreement or tenure (including legacy plans). But no distinction is made based on other indicators (such as gender, part-time / full time status or age).

Nippon Gases primarily focuses on pension and medical plans as ways to improve the well-being of our employees.

Nippon Gases strives for gender equality in pay.

Raw FY2019 data on gender pay gap **Nippon Gases**:

Nippon Gases España S.L.U.	-7.07%
Oximesa S.L.U.	-1.84%
Rest of Nippon Gases	-11.08%

The raw pay gap is calculated from the total annual base salary and annual bonus target (considered everybody with FT employment). Due to the strong gender diversity efforts made in recent years, the pay gap has reduced significantly. With the upcoming wave of retirements in the coming five years across the whole of Europe, we expect a further reduction in the pay gap.



4.5.1 Work-life balance

Work-life balance is very important to **Nippon Gases**. Needless to say that in all regions, we comply with the local legislation related to work-life balance. (e.g. working hours, part-time employment and paternity leave...).

The working schemes of employees at **Nippon Gases** can be divided into two groups: operations-related departments and the rest. In operations-related departments, shifts, weekend work and fixed working times are defined, mostly by collective agreements. In the non-operational departments, glide times and daily / weekly working time is defined in collective agreements or internal work rule documents. Working hours are recorded either on paper or electronically.

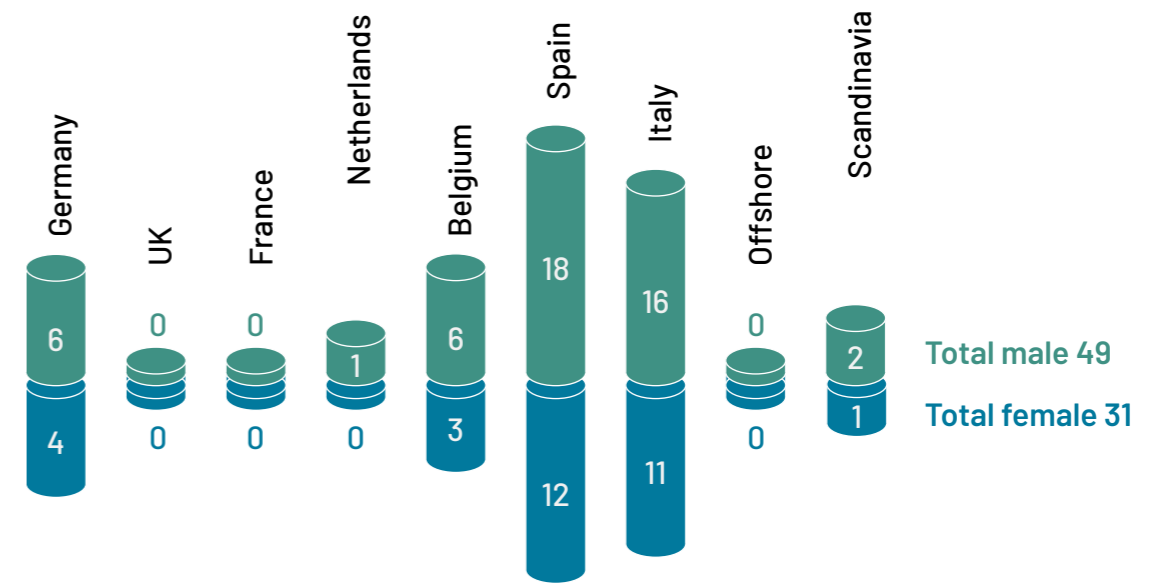
Nippon Gases supports an open communication between all categories in the organization. Work-life balance is truly benefiting from this approach. Mutual agreements between the managers and the employees do improve the work-life balance.

On top of this, different countries have put additional agreements in place with employees related to annual working time:

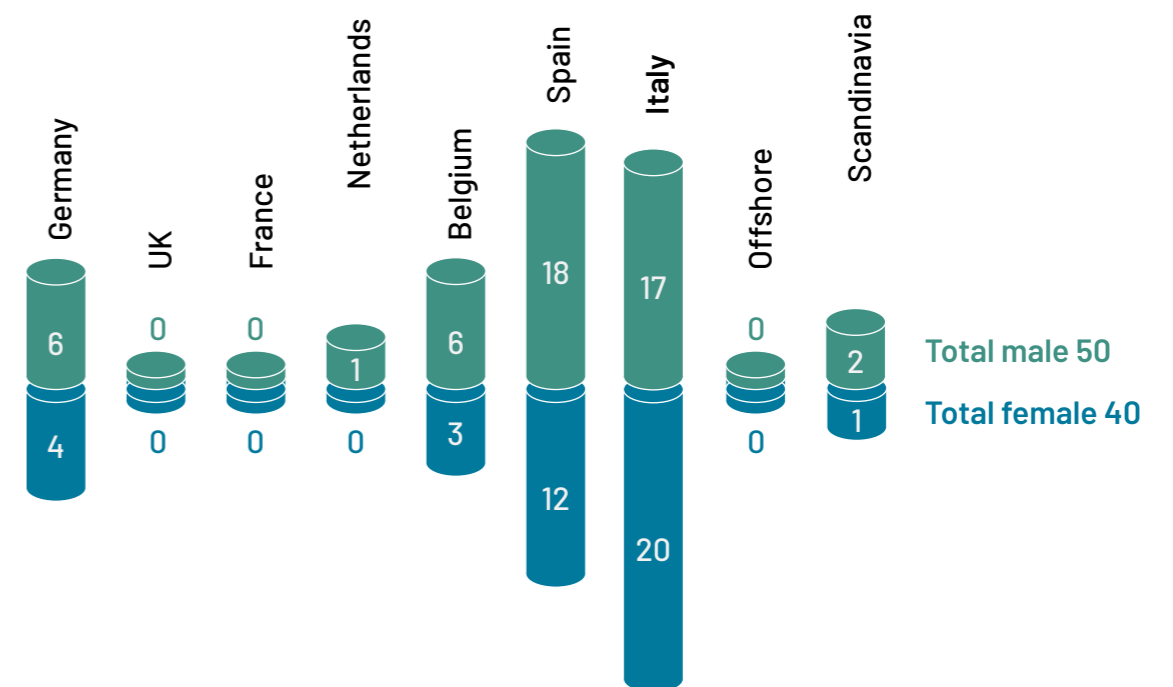


Nippon Gases complies with all the theme vacations offered in the regions (e.g. parental, palliative...).

Total number of employees that were entitled to parental leave by gender.



Total number of employees that took parental leave by gender.



4.6 Equality of opportunity

Every employee goes through a yearly performance assessment based on objective criteria, as well as having calibration sessions. This ensures that no discrimination due to non-objective criteria takes place.

We are continually striving to promote diversity, especially among women and young employees. We have robust trainee programs in place to support diversity. To promote gender diversity, we make sure they gain visibility in opting for promotions. In this sense, over 40% of employees promoted in 2019 were women

Our Human Rights Policy guarantees equal opportunities in recruitment, job assignment, promotion, employability and occupational development. No relevant complaints were raised during the last 12 months within **Nippon Gases**.

Due to our continuous focus on diversity, over 27% of our employees (all categories) today are women, and almost 26% work in specialist and managerial positions.

4.6.1 Non discrimination

Both our Human Resources Policy and Code of Conduct state clearly that no discrimination for whatever reason is accepted within the organization. Nor is harassment of any kind. Different channels for the reporting of discrimination or harassment are in place, and each reported case is investigated in detail by trained professionals from within the organization.

During FY2019, no case of discrimination was reported via **Nippon Gases'** reporting channels.

Nippon Gases has adapted all necessary workplaces for disabled employees, in conjunction with the authorities.





4.7 H&S management

The protection of our employees and the environment are of particular importance to **Nippon Gases**.

We comply with all relevant regulations, and strive to maintain and improve our performance year-on-year in the areas of: occupational safety, process safety, environmental protection, quality, food safety and medical product safety. We plan to achieve significant improvements through effective management practices and economically justifiable applications of technology.

All technical, commercial and organizational processes are designed and monitored in such a way that regulations and contractual agreements can be fulfilled.

Together, we are

“The Gas Professionals”

and we all have the same goal:

“Improving the future through gases”

The quality of our products and services, safety, health and protection of the environment and the continual quest to improve our energy-related services have always been, and will remain, our highest priority. This aspiration is an essential part of our culture, and is reflected in our vision, mission, guiding principles and core values.

The **Nippon Gases** philosophy demonstrates our commitment to being a leader in safety performance in the area of industrial gases.

Our goals are zero accidents and zero injuries for our employees, maintaining the safe operation of our plants, providing safe products to our customers, and being a good neighbor within the local community.

For this reason, we devote a high priority to raising awareness and developing a better understanding within our organization in the following ways:

- Designing and developing products that can be safely manufactured, transported, used and disposed of or recycled without posing unacceptable risks to people or the environment.
- Maintaining a safety management system in accordance with the Major Accidents Ordinance to prevent major accidents and minimize their effects on people and the environment.
- The safe operation of our production facilities.
- A continuous improvement of our safety management and corresponding reporting with regard to our goal of the absolute prevention of accidents, injuries, personal and environmental damage through our processes, products and services.



All employees are therefore obliged to work and act safely in a result-oriented manner to ensure absolute customer satisfaction and to comply with the following principles:

- | | |
|--|--|
| <p>1. All accidents can be prevented.</p> | <p>4. Every employee must stop a job if it cannot be done safely.</p> |
| <p>2. Safety is the responsibility of line management.</p> | <p>5. Efforts in safety yield results in safety.</p> |
| <p>3. Every employee is responsible for his/her own safety.</p> | <p>6. Safety is a condition of employment.</p> |

All our efforts increase safety for our employees, products, processes and services. They are a basic requirement for every job and every workplace.

The **Safety Management System** is described in the **European HSE Management Manual**, which applies to 100% of our European locations. This system integrates internal policies and governmental regulations. In general, our internal policies are stricter than governmental regulations.

There is a complete library of standards in our **HSE Management System**.

The main Elements of the HSE-Manual are:

- Safe System at work.
- Emergency preparedness and response.
- Process Safety Management.
- Product safety / Product Stewardship.
- HSE Assessments.
- HSE trainings.
- Incident reporting and Investigation.
- Contractor management.
- Transportation Safety.

Safety, **PRIORITY NUMBER 1** in our company, is constantly improving due to the search for risk factors and behaviors, and the observance of our safety principles by all our employees.

Our commitment to safety is integral, so we apply this premise in all our products - development, design and distribution - as well as human and environmental control.

The main risk identified in our business is the mechanical integrity of our production units. To control this risk, **Nippon Gases** has implemented a comprehensive risk management program containing elements such as risk management studies and mechanical integrity programs.

The main types of work-related accidents are related to manual handling (of gas cylinders) and slip-trip-fall incidents.



We enjoy close collaboration with our internal and external supply chain partners, plus active measurement of external risk factors, safety performance and compliance metrics, as well as periodic review. All the above ensure that we remain fully informed and empowered to supply our products and services in line with our customers' and our own expectations.

We have an extensive range of health & safety measures, starting with our safety principles. From this basis, we conduct safety assessments and structured safety training whilst promoting safety at every level. For example, every meeting starts with a safety topic, and each year we undertake a Safety Excellence Journey.

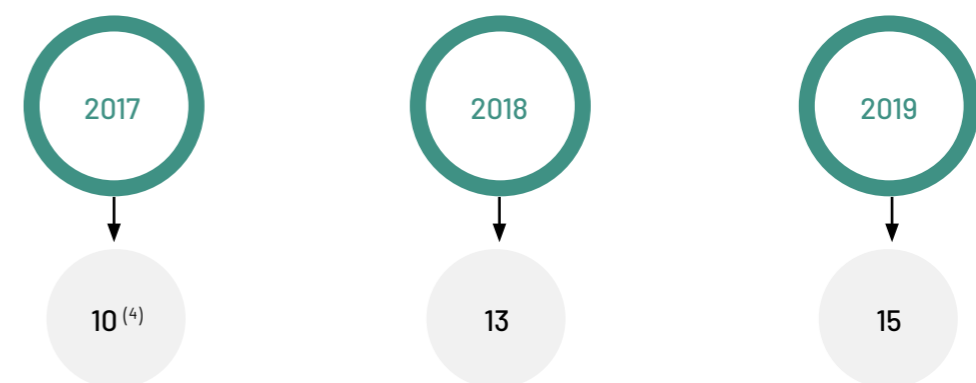
Nippon Gases has taken a series of measures to prevent work-related injuries and fatalities. The strong commitment to safety across the **Nippon Gases** organization throughout Europe is manifested in the six safety principles.

A more specific example is the extensive internal HSE regulations, compliance with which is regularly checked via HSE assessments.

If potential for improvement is found, either special measures and safety campaigns are launched, or the internal HSE standards are revised.

Our internal European HSE assessment organization audited 15 plants over the past year to check compliance with internal standards. The senior management of the respective countries and the European Business Team received the results of these assessments, which did not throw up any significant safety issues.

HSE Assessments



(4) do not include two safety reviews for a Joint Venture Company.

Extensive safety training, Job Safety Analysis, risk assessments or Europe-wide minimum requirements for PPE are further measures that help prevent accidents. We have launched and implemented several safety related initiatives and campaigns, such as these three examples:

- **Manual handling initiative:** an initiative to focus on one of the main risks identified: the manual handling of gas cylinders and dry ice blocks.
- **Walk-Observe-Talk:** a program in which non-safety specialists make a plant/department tour (walk), observe what is wrong from their point of view and discuss this with the plant/department leader (talk). This program is performed in addition to the standard safety tours by HSE professionals and provides "fresh eyes" and a different viewpoint.
- **Safety Excellence Journey:** a program in which the entire company undertakes a journey to safety excellence. It consists of presentations, descriptions of accidents and group discussions. It was conducted at 106 locations throughout Europe under the direction of a member of local management.



Any recordable accident or illness that results in one or more day(s) away from work as a result of a work-related accident or exposure is recorded as Lost Time Injury (LTI) and is a KPI.

In addition, our policy states that all incidents and near-misses must be reported and investigated. They are reviewed on a European level on monthly base.

Serious incidents like:

- LTI (Lost Time injury).
- MTC (Medical Treatment Case).
- FPE (Fatality Potential event).
- HSVA (High Severity Vehicle Accident).
- RO (Rollover).
- PST1 (Process Safety Incident Tier 1).

Are discussed monthly at the European Business Team (EBT) meeting, and are also reviewed in detail at a meeting with the European President.

In addition, Health Safety and Environmental KPI's and metrics linked to the annual Personnel Development Plan (PDP) and salary review are set at all functional levels.

Work-injury related absenteeism is managed by both line management and Human Resources, reported to senior management on a monthly basis and broken into trends to show areas of opportunity. Every case is investigated in detail according to internal standards.

Lost time injuries:

A Lost Time Injury (LTI) is defined as any recordable accident or illness that results in one or more day(s) away from work as a result of a work-related accident or exposure.

Number of Lost Time Injuries (LTI's) by gender

Number of LTI 2017 ⁽⁵⁾			Number of LTI 2018			Number of LTI 2019		
Woman	Man	Total	Woman	Man	Total	Woman	Man	Total
1	3	4	0	2	2	0	5	5

(5) The numbers of 2017 are for the calendar year.

There was a drop in the number of LTIs from 2017 to 2018, but with the increase from 2018 to 2019, the figures are back to the 2017 level. In 2019 two of the five incidents were slip-trip-fall incidents, two others occurred while handling gas cylinders in a filling plant. One incident happened in a workshop while material was being handled. For 2020 a cylinder-handling campaign and a Slip-Trip-Fall Awareness Campaign are foreseen to reduce these type of incidents.

LTI frequency rate

LTI frequency rate 2017 ⁽⁶⁾			LTI frequency rate 2018			LTI frequency rate 2019		
Woman	Man	Total	Woman	Man	Total	Woman	Man	Total
n/a	n/a	0.83	n/a	n/a	0.71	0	1.42	1.03

(6) The LTI frequency rate is defined as the number of lost time injuries or illnesses per 1,000,000 working hours.

The frequency rate is not calculated by Gender at Nippon Gases for 2017 and 2018.

LTI severity rate

LTI severity rate 2019		
Woman	Man	Total
0	42.75	31.07

The LTI severity rate is defined as the number of lost workdays per 1,000,000 working hours.

The figures for the severity rate can't be calculated for the previous years.



Number of MTC's by gender

A Medical Treatment Case (MTC) is defined as any work-related injury which requiring more than first aid and do not result in a LTI.

Number of Recordable Injuries (RI's) by gender

Number of RI 2017			Number of RI 2018			Number of RI 2019		
Woman	Man	Total	Woman	Man	Total	Woman	Man	Total
1	7	8	0	3	3	0	8	8

The Recordable Injury (RI) is defined as the summary of Fatality+ LTI+MTC
All Recordable injuries in 2019, (MTC+LTI) are minor, without serious consequences.

This is a confirmation for the excellent safety management system and performance of **Nippon Gases**, which is proud to receive the award 15 times in the last 17 years.

Absenteeism rate due to illness

Absenteeism rate 2018 ⁷			Absenteeism rate 2019		
Female	Man	Total	Female	Man	Total
5.43%	5.27%	5.32%	3.75%	3.75%	3.75%

(7) Absenteeism rate 2019 only for period 12/2018 - 03/2019

Absenteeism rate calculation: # of hours of illness / # of employees * annual working time by employee.
Hours of illness: only contains the hours absent due to illness, excluding maternity leave, labour accident and professional diseases.

The European Industrial Gas Association (EIGA) has awarded **Nippon Gases** again for the best safety performance (lowest RI rate) for the calendar year 2019 of the category 1⁸ industrial gas companies in Europe.

In 2019 we registered more than 210,000 working hours due to illness, which represents a reduction on the previous year in percentage terms. Nevertheless, a close follow-up is carried out in each business, based on national legislation.

No occupational diseases reported in 2019.

Fleet safety

Although the transportation of our liquid products throughout Europe is handled by contracted haulers, fleet safety is an important issue for **Nippon Gases**. This is shown on the one hand by the fact that a separate chapter in the HSE management is dedicated to this topic, and also by special measures that have been implemented. In addition, every High Severity Product Vehicle Accident (HSPVA) is investigated and reviewed by **Nippon Gases** and the hauler concerned.

Nippon Gases considers HSPVA, every vehicle accident that causes:

1. A fatality to any party.
2. Injury requiring treatment from a medical professional at a location away from the scene of the accident (e.g., hospital, clinic).
3. Damage to any vehicle involved in the accident that renders that vehicle un-drivable or causes it to be towed from the scene as a result of mechanical damage.
4. Product release from a cargo tank containing dangerous goods, or cylinders to be strewn over the accident site.
5. A rollover.

An extensive training program, to which the carriers are contractually obliged, is implemented. All Bulk Product Vehicles are also equipped with a Safety On-Board-Computer (OBC). This OBC monitors the driver's behavior. The results are sent directly to the hauler, who then evaluates them and initiates appropriate measures. The number of serious traffic accidents involving product transport vehicles has been massively reduced through continuous work in this program. Also the contractor-LTIs, which are mainly related to drivers, can thus be reduced significantly.

(8) Category 1 companies are the seven major industrial gas companies in Europe

Number of High Severity Vehicle Accidents

Number of HSVA 2017	Number of HSVA 2018	Number of HSVA 2019
3	7	1

Number of Contractor-LTI

Number of CLTI 2017	Number of CLTI 2018	Number of CLTI 2019
4	12	5

Contractor Safety is as important as Employee Safety for Nippon Gases.

The SDG Targets for the period 2020 to 2023 are:

- The RI-rate should be better than the average RI-rate of the Cat1-EIGA member companies of the EIGA.
- < 1 product vehicle accidents per one million km.



Health and Wellness



5. Environment

For us, a harmonious relationship between people, society and the planet is the way we want to work today and every day.

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5.1 Internal framework

In its **European Safety, Health and Environmental Standards** library, **Nippon Gases** devotes a full section related to its Policies in this vital area, including its environmental management responsibilities, the environmental management system, environmental key performance indicators and basic environmental training. This is the framework for **Nippon Gases** environmental activities.

Our work is driven by our commitment to sustainable development as well as taking on board emerging environmental regulations and higher standards of eco-efficiency.

That's why we are committed to turning ideas we have today into diverse solutions which optimize and refine processes, save valuable resources and protect the environment for the future. For us, a harmonious relationship between people, society and the planet is the way we want to work today and every day.

All employees must therefore commit to meeting environmental requirements, prevent pollution, reduce waste, and conserve energy and other key resources in all phases of our processes and services.

Nippon Gases' focus is on taking consistent precautions – to ensure safety and sustainability in our day-to-day work, in the operation of production facilities and in the distribution and storage of our products.

All our environmental and energy-conscious efforts increase eco-efficiency and are a basic requirement for every job and workplace.

To achieve this, the **Environmental Guiding Principles** of **Nippon Gases** demand that management on every level lead **Nippon Gases** along ethical pathways that increasingly benefit society, the economy and the environment, while adhering to the following precautionary principles:

- To lead our companies in ethical ways that increasingly benefit society, the economy, and the environment.
- To design and develop products that can be manufactured, transported, used, and disposed of or recycled safely.
- To work with customers, haulers, suppliers, distributors and contractors to foster the safe and secure use, transport and disposal of chemicals and to provide hazard and risk information that can be accessed and applied in their operations and products.
- To design and operate our facilities in a safe, reliable and environmentally sound manner.
- To promote pollution prevention, minimization of waste, and conservation of energy and other critical resources at every stage of the life cycle of our products.
- To cooperate with governments at all levels and organizations in the development of effective and efficient safety, health, environmental and security laws, regulations and standards.
- To support education and research on the health, safety, environmental impacts and security of our products and processes.
- To make continual progress toward our goal of no accidents, injuries or harm to human health and the environment from our products and operations, and to openly report our health, safety, environmental and security performance.

A World of Risks and Opportunities

At **Nippon Gases** we drive forward actions to reduce impact on the global environment and prevent pollution in compliance with local regulations. Due to the ever increasing number of environmental regulations, non-compliance is a fundamental risk we do not contemplate.

Due to the nature of our production, we do not see major environmental risks. Legal requirements and internal standards to mitigate environmental risks are followed. In general, the ever more stringent environmental legislation may, under certain circumstances, lead to restrictions in the production and marketing of some products. This also applies in the broadest sense to a possible change in our customer structure and general expectations of society regarding the industrial gas industry in general.

Our main opportunities are the Reduction of Energy consumption, water and waste, as well as improvements in transport optimization. **Nippon Gases** has participated in several initiatives promoting low-carbon activity.

European Productivity programs identify the **Sustainable Development** savings referring to electricity, fuel, water, steam and mileage.

Additionally, we are controlling and optimizing the process water consumption in the main activities controlled by **Nippon Gases**, such as air separation units and carbon dioxide liquefaction facilities.

Another area of optimization is related to the transportation of our goods. Initiatives have been launched to minimize our distribution carbon footprint by reducing the millage driven per tonne of driven product and to switch from diesel to alternative fuels.



5.2 Environmental management

Nippon Gases has established an **Environmental Management System (EMS)** to continually improve its environmental performance and to meet regulatory requirements while minimizing its environmental impact.

Manuals and procedures

Nippon Gases' EMS is based on the Principles of Sustainability as well as ISO 14001. If conditions make certification appropriate, full implementation of **Nippon Gases' EMS** should logically ensure that a site achieves ISO 14001 certification.

The **Nippon Gases Management System** is supported by the information documented in manuals containing: the development of its activities (procedures) and the documents that demonstrate the results achieved (records).

While **Nippon Gases** has no internal requirement to obtain ISO 14001 certification, businesses within **Nippon Gases** are free to certify individual facilities to ISO 14001 as business requirements dictate, building upon the **Nippon Gases EMS**.

# of sites with ISO 14001 certification	
Area	# of sites
Air Separation Unit	15
Filling station	25
CO ₂ Liquefier	5
Dry Ice Plants	6

Environmental Compliance:

In every region there is an **HSE organization** in which a dedicated environmental expert deals with all specific environmental issues. In addition, country environmental leaders, the **HSE Director Europe and the Operations & Sustainability Director** meet once per quarter at the European Environmental leaders meeting, allowing for further development of the environmental management system at **Nippon Gases** to be coordinated at the highest level.

Environmental compliance is monitored on a country level, with the local **HSE organization** performing **HSE** assessments reviewing compliance with permits.

Nippon Gases employees are actively involved in the different working groups and councils at the **European Industrial Gas Association (EIGA)**, which oversees the following up of environmental regulations. In the countries where a national gas association exists, **Nippon Gases** is also actively involved.

The compliance of our business with external regulations is reviewed by the local environmental authorities.

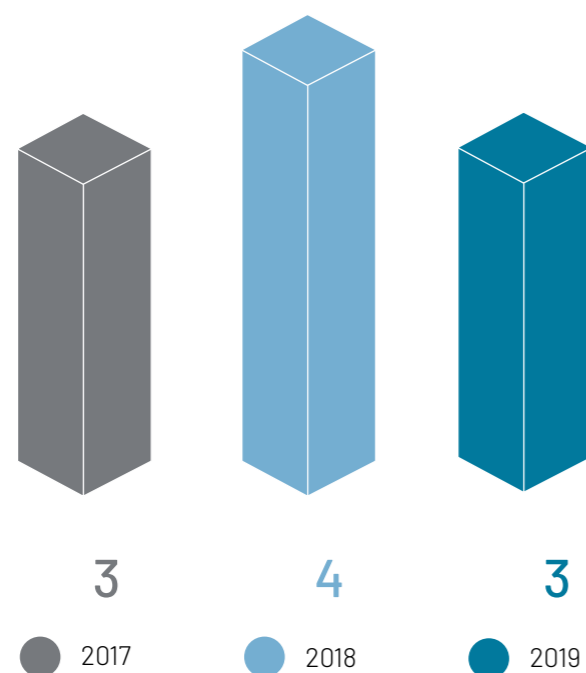
In the last fiscal year no significant fines or non-monetary sanctions for non-compliance with environmental laws and/or regulations were received.

In addition, the **European HSE assessment** team checks the compliance of the assessed facilities according to internal standards. No serious breaches were detected.



Last year our European HSE assessment organization conducted three environmental assessments for compliance with internal standards. The senior management from the respective countries and the European Business Team received the assessment results, which showed no significant environmental issues. Even so, there is a plan in place to increase the number of environmental assessments of European level as we wish to remain ever more vigilant.

Environmental Assessments



Environmental assessments were performed on facilities which have a major impact on the environment, not for sites such as small warehouses or logistics centers.

In addition to these European assessments, the local **HSE organizations** perform additional environmental audits, on top of the regular site visits from the external ISO 14001 certification body.

It should be noted, of course, that within the framework of ISO 14001 certification, both compliance with the legal regulations and the environmental management system as a whole are regularly checked and certified.

What is Nippon Gases' environmental impact?

There are several areas where the company's activities currently impact the environment.

The process of air separation and of filling cylinders are environmentally friendly processes; the main raw material is ambient air, and Scope 1 emissions are minor. Waste generation is minimal and the water in ASU is only used for cooling purposes with no external contaminants introduced into the water stream. The main emissions are related to the use of electrical energy and fuel for distribution trucks (for energy analysis see Energy management, chapter 6.3).

The focus of **Nippon Gases** is to continue improving existing facilities, while any new installation will always be evaluated with the best available technique (BAT) to minimize emissions.

Environmental related SDG targets (period 2020-2023):

Sustainable productivity

- Continue the existing Zero-Waste Program and integrate all production sites into it.
- 100% water management system for main consumer facilities 2020-2023.

Related to:



Environmentally responsible production and consumption

- Include environmental assessments in 75% of the European assessments.

Related to:



Climate Action

5.3 Energy management

Our efforts to contribute to the prevention of global warming are through optimizing energy consumption at gas production facilities and reducing the transport of our products.

5.3.1 Energy consumption

At **Nippon Gases in Europe**, energy is a key resource in the manufacturing of our products, and is therefore also at the center of our initiatives to optimize its utilization as we bid to combat climate change by helping to mitigate global warming. This is the central theme of our environmental protection efforts.

In this section we will describe the main processes through which we produce our products, how they are delivered to the end customer, and our various initiatives to optimize energy management in these activities:

Air Separation process to produce the air gases

Productivity - Cost Reduction Projects

Describing how **Nippon Gases** maintain their facilities at their optimum operation mode.

CO₂ Liquefaction and Purification Process

Transport of Liquid Products Optimization

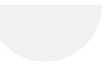
Transport is the second-largest source of GHG emissions.

CO₂ Shipping

A unique **Nippon Gases** transportation mode.

Energy Management Team

Defining the strategy behind the electrical supply for our sites.



Air Separation Process

For the production of **Nippon Gases'** core product, the so-called air gases (oxygen, nitrogen and argon) the main resource is electricity. CO₂ emissions attributable to the use of electricity used for this purpose account for 95% of total **Nippon Gases** CO₂ emissions.

Total electric energy consumed by **Nippon Gases** in all Europe in 2019: **2,882,404 MWh.**

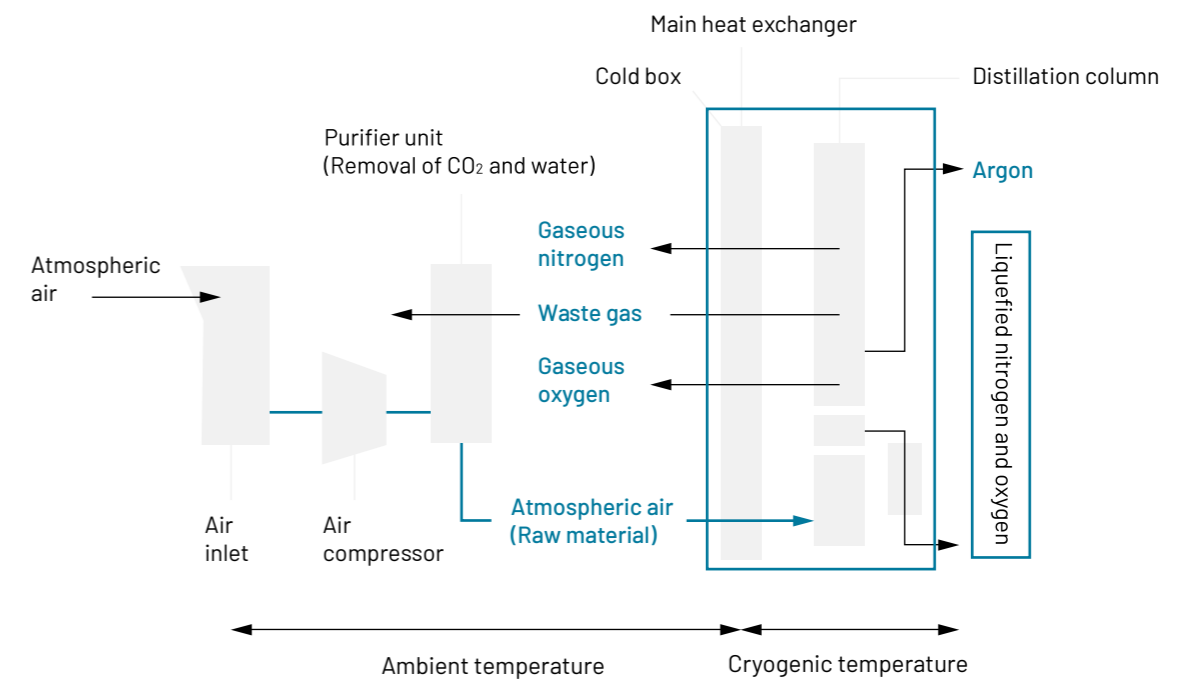
Energy	Electric MWh		
	2017	2018	2019
Europe	2,983,529	3,007,981	2,882,404
ASU %			95%
HYCO %			0.6%
CO ₂ %			5%

Energy	Steam consumption Ton		
	2017	2018	2019
Europe	89,179	85,648	78,165
ASU %			22%
HYCO %			0%
CO ₂ %			78%

Energy	Natural Gas Ttons		
	2017	2018	2019
Europe	21,614	18,136	18,975
ASU %			3%
HYCO %			97%
CO ₂ %			0%

Air separation units produce oxygen, nitrogen and argon by separating atmospheric air into its constituent gases. Air is first compressed, a process that is highly energy-intensive and thus uses a significant amount of electricity.

Compressed air is cooled almost to the point where the gas liquefies, after which it is ready for the distillation column. Here it is separated into its major components using a thermal distillation process. Nitrogen, which has a colder boiling point, concentrates in the gas and is withdrawn from the top of the column, while oxygen, which has a warmer boiling point, concentrates in the liquid and is withdrawn from the bottom of the column. Argon, which has an intermediate boiling point, is withdrawn from the middle of the column.



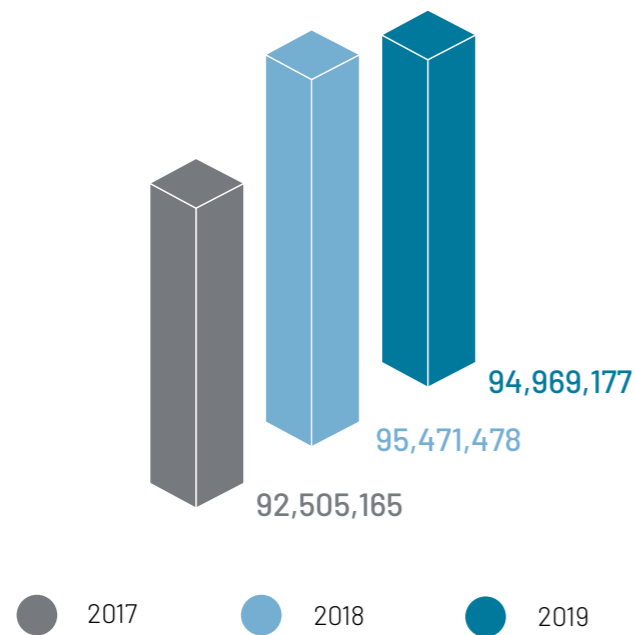


The products of the Air Separation Unit are mostly in gas phase. These products could be compressed and distributed by a pipeline system to our network of customers, which provides the lowest supply energy cost.

Additionally, the gas products can be liquefied by means of a liquefier system, with a pure nitrogen primary circuit that transfers cold to the air separation gases, which are stored at cryogenic temperatures in liquid phase.

These cryogenic liquid products are transported to our end customer. This second process has the additional energy usage of fuels used in the transportation.

Km driven for all products



One alternative to optimize supply to our end customer is investment in a dedicated onsite unit which will match the capacity and quality required by the customer's process. Most of these units run unmanned, remotely controlled by a Remote Operation Centre. In this case, the energy normally devoted to transport is saved.

For smaller applications or when the quality of the product requires a very strict control, the product can be delivered to the customer in cylinders containing compressed gas, and delivered by truck to the end customer.

Our efforts to contribute to the prevention of global warming center on reducing energy consumption. All the above processes are subject to optimization, and therefore we are taking steps to reduce the energy consumed per unit of production at gas production facilities, promoting energy-saving measures at various sites and striving to increase the efficiency of product transport.

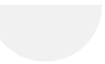
In fiscal year 2019, consumption of energy per produced unit by our air separation facilities was up 4% compared to fiscal year 2017, the base year used for this measurement. This rise reflects changes in the consumption rate of gases supplied by pipeline by major users.

Efficiency kWh/Eq O₂ Ton vs 2017



The main reason for this reduction in performance in 2019 was a lower demand from the European market during the second half of the year, which caused some of the main facilities to vent a portion of their product.

Nippon Gases is focusing its Cost Reduction Program to reduce energy consumption at production facilities, in particular at air separation facilities by replacing air separation unit components with new high-efficiency upgrades versions, and optimizing facility process control to better reflect demand.



CO₂ Liquefaction and Purification Process:

The atmospheric gases - oxygen, nitrogen and argon - are present in the air we breathe. The source is unlimited and is available wherever we need to capture and use it. In comparison, the sources of the so called “**process gases**”, such as carbon dioxide (CO₂), are limited, meaning the business and supply chain model for carbon dioxide is different to that of the air gases.

For **Nippon Gases**, and for our competitors, the CO₂ that we process and sell is always the by-product of another industry. In Europe the largest source is agricultural fertilizer production, followed by bioethanol. A proportion of the carbon dioxide marketed by **Nippon Gases** is sourced from Third Part Production (TPP) plants.

The CO₂ plants take a raw gas stream from the source plant, which is then compressed, purified and liquefied before it can be delivered to our customers. The liquefaction is achieved by condensing the gaseous CO₂ with a refrigeration system, typically using ammonia as the refrigerant.

In fiscal year 2019, the specific CO₂ equivalent emissions per ton of delivered product was 84% compared to the fiscal year 2017 ratio, the base year used for this measurement.

The evaluation of the carbon dioxide business excludes diesel used for road transportation of bulk CO₂, as this is included within the figures for the overall bulk transport emissions.

The actual molecules of CO₂ that are marketed do not constitute a “carbon footprint value”. Under the terms of the European Union Emissions Trading Scheme (EU-ETS), carbon dioxide is always counted as part of the emissions from the source plant, i.e. the fertilizer or bioethanol production plant.

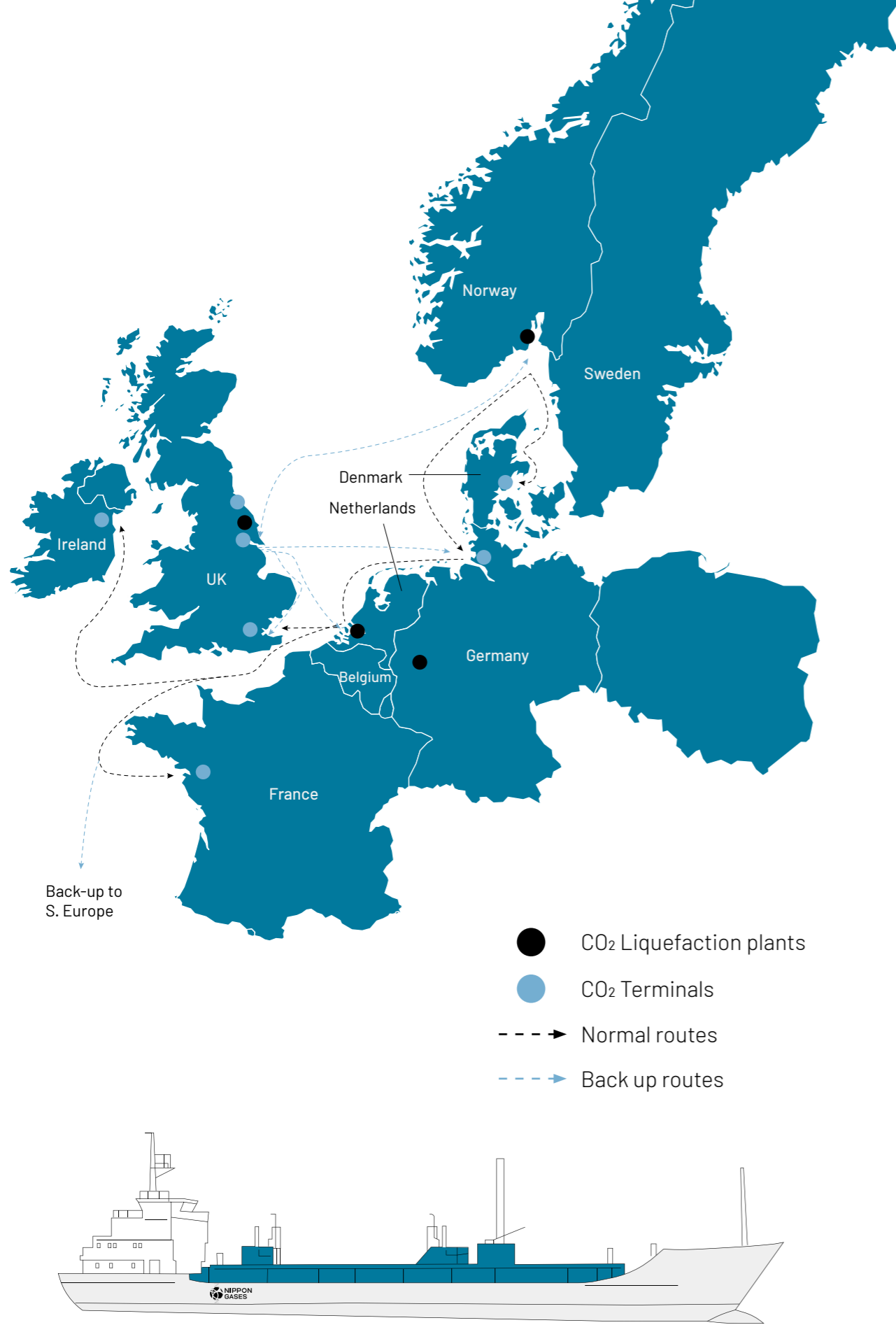
CO ₂ Liquefaction NGE	2017	2018	2019
Electricity Consumption MWh:	145,665	146,837	144,978
KgCO ₂ eq/Tonne CO ₂ delivered	100%	86%	84%

Ships NGE	2017	2018	2019
MGO Shipping k litres:	3,403	3,226	3,273
KgCO ₂ eq/Tonne CO ₂ delivered	100%	104%	111%

CO₂ Shipping

Because the CO₂ source plants are remote from some markets, it is necessary to transport relatively large quantities of liquid CO₂ to those markets that do not have a reliable local source. **Nippon Gases** owns and operates a fleet of four CO₂ tanker ships. Each ship can deliver a cargo of between 1,200 and 1,800 tonnes of liquid CO₂ per trip. The ships are powered by “diesel engines” fueled with Marine Gas Oil, MGO. Each year these ships transport in the region of 300,000 tonnes of liquid CO₂ from our production plants to our network of terminals around Europe.

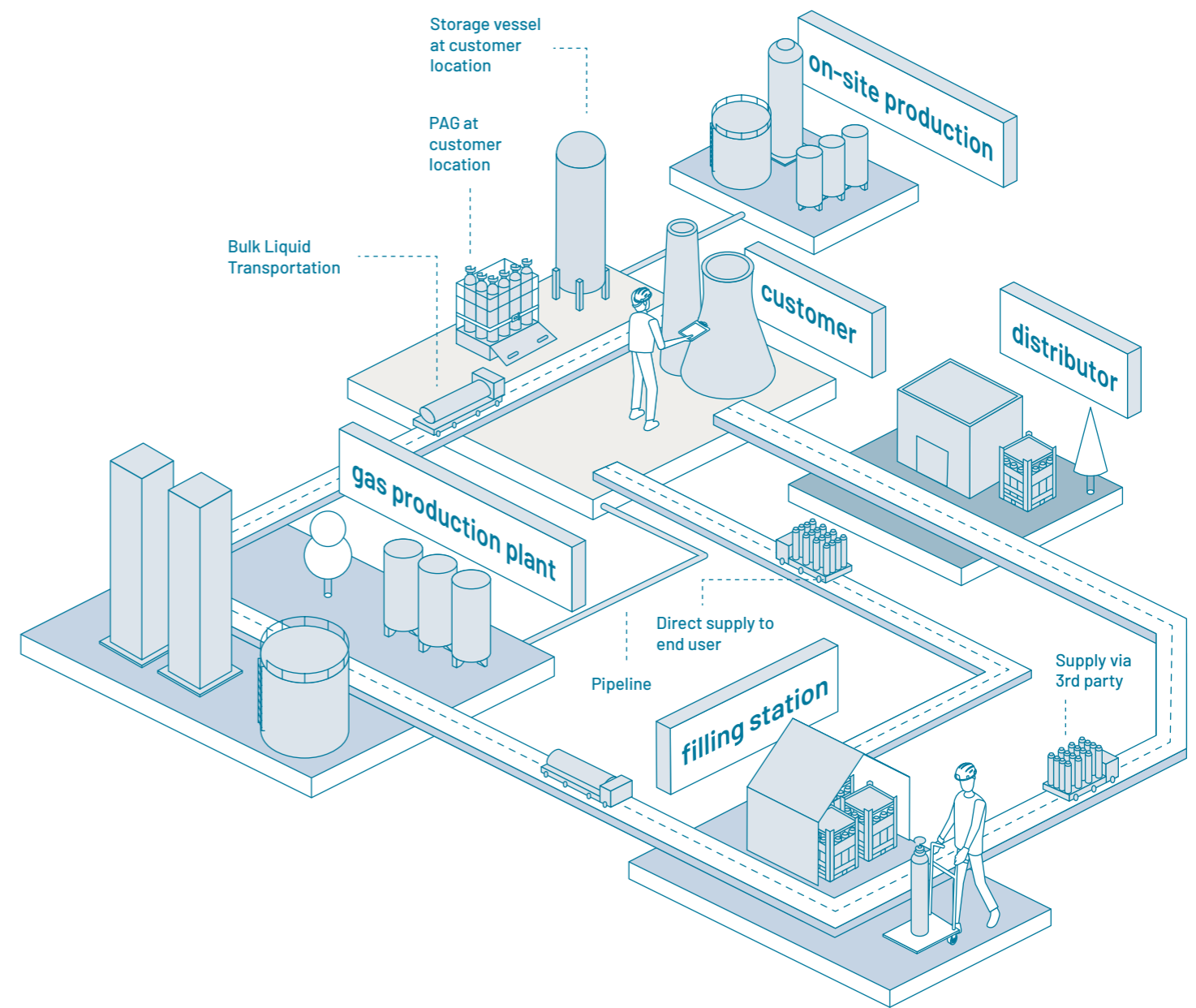
This unique mode of distribution ensures a more reliable supply to our CO₂ customers.



Transport of Liquid Products Optimization

Related to the transport of our air gases molecules produced at our main air facilities, 75% is distributed by pipeline, while the remaining 25% is distributed in liquid mode to end customers.

The transport of these liquid products from the air gases, plus the additional liquid CO₂, is performed daily by trucks which rack up more than 55 million km/year.





The deliveries are performed based on customer orders, and also by using forecasts of customer requirements based on the telemetry installed at customer tanks. A proper analysis of customer consumption forecasts provides an optimization opportunity to maximize the delivered volume.

A second area of optimization is driven by the proper planning of the delivery routing of the trucks, which minimizes kilometers driven in supplying end customers.

A new optimization system has been launched that will lead to combined savings in all liquid transportation costs of 5.5% compared to the current transportation cost (average 2017-2019). The implementation of the optimization system will be performed during 2020-2023 period.

Together with bulk transportation, we also reach the end customer by servicing the molecules in packages (high pressure cylinders), which also requires our transport fleet to drive an additional 25 million kilometers (2019 figure). The homecare business, in which our personnel visit patients' homes to carry out maintenance activities, also led to 15 million kilometers being driven.

Km driven for all products	2017	2018	2019
Europe	93,182,263	95,574,572	94,908,541
Bulk	56%	56%	59%
PAG	25%	27%	26%
Homecare	19%	17%	15%
Km / Ton Bulk	100%	102%	105%
Km / Cyl PAG	100%	100%	100%

The increase of mileage and the higher Km/Ton in bulk transportation were largely results of the CO₂ summer crises in 2018 and 2019, when several sources of CO₂ raw gas went out of production creating a shortage across the European market. The product that made up the shortfall had to be delivered from more remote sources.

Productivity: Cost-Reduction Projects

We have established a Cost-Reduction Group as a subsection of our Productivity program across the European business.

The Cost-Reduction Group promotes optimization in bulk production by identifying processes subject to improvement, defining the solution and facilitating the execution of cost-reduction projects.

In 2019, a total of 351 projects have led to sustainable development savings.

The total savings from these projects are 540 tonne of CO₂ emissions, 5 million liters of fuel, 34,000 MWh in energy, and 2,500 MWh in savings in steam.

These savings amount to 24,000 CO₂eq tonnes in 2019.





Energy Management Team:

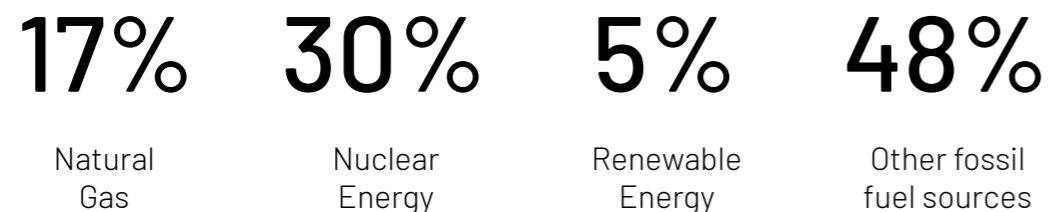
Energy, and electricity in particular, is the main resource in our manufacturing processes.

Energy management is performed at a country level, due to specific national regulations and existing market environments, with the aim of adapting energy supply contracts to our customers' consumption profiles, while optimizing the efficiency of our manufacturing processes.

Nippon Gases is interested in market schemes involving the use of renewable energy as part of the processes undertaken for industrial customers.

Energy providers in some countries offer Guarantee of Origin (GoO) certificates, which have an additional cost and vary according to the countries' renewable share. Most supply contracts allow the integration of GoO-certified energy, while this option is only activated upon explicit customer request, as the mark-up cost is passed on to them. However, this practice is not yet common in Europe.

The total electric energy consumed by ASU in 2019, 2,876,514 MWh, is the result of the energy supplier mix portfolio. The current share of the different resources of primary energy is:



Nippon Gases' mix shows that 52% of energy consumed is from low-carbon or renewable sources.

The 17% corresponding to Natural Gas energy has a lower impact in GHG - mostly methane with one carbon molecule - compared to other fossil fuel sources.

Key points

The group's electricity procurement.

52%

The percentage of electricity consumed by the group which is low-carbon or renewable.

In some countries we maintain a proactive approach to renewable electricity procurement through direct contracts with producers to allow us a medium- to long-term energy supply, increasing our renewable energy share.

Energy risk management is also evaluated on a country-by-country basis. In most energy portfolios we have a mix of short-term procurement (day-ahead) and medium/long contracts (forwards), which allows to benefit from market opportunities and hedge market price volatility. This strategy allows us to remain competitive and provide price stability for our products. Our current overall share of medium/long term contracted power stands at 75%.

As we have always placed the focus on energy usage optimization, all the **Nippon Gases** countries have joined an energy management program. In some countries, including Spain and Scandinavian sites, the air separation plants participate in the Certification of Energy Management system ISO 50001. In others - such as Germany - the entire organization is ISO 50001-certified, or affiliated to a country energy program as in Benelux EBO (Energie Beleidsovereenkomst), which is an agreement with government to make the necessary efforts to continuously reduce the energy consumption at our air separation units. Italy's approach to efficiency comprises a quadrennial Energy Assessment to ensure our plants continue running in an optimal mode.

Additionally, our production facilities participate in load shedding schemes to allow energy providers to better balance generation with market demand. This option is not available in all European countries.

Environmental related SDG targets (period 2020-2023):

Promote the execution of Cost Reduction projects to increase the efficiency of its production facilities.

Goal: Promote Cost Reduction projects, generating equivalent Sustainable Development savings.

Target: Reduction of energy equivalent savings in productivity projects of:

40,000

Ton CO₂eq in period (cumulative 2020-2023)

Goal: reducing the carbon footprint of liquid products transport by reducing

Target: **5.5%**

in period (cumulative 2020-2023). Base line average 2017-2019 emissions.

Related to:



Clean, Affordable Energy

5.4 Emission control

We categorize emissions according to their source.

On the one hand, emissions at our sites and, on the other, emissions deriving from the transport of our products by road. The lion's share of emissions are related with the burning of natural gas and diesel in transportation.

Facility-related emissions:

Emissions at our plants comprise:

- Noise and light pollution.
- Ozone-Depleting Substances (ODS) and Global Warming Potential Compounds (GWP).
- NO_x-Emissions.

Noise and light pollution:

Nippon Gases considers that its light pollution does not have a material impact on outdoor areas.

The operation permits are based on national and local regulations, which cover the impact of our facilities in terms of noise pollution.

Compliance with regulations is provided to the authorities upon request.

Ozone-Depleting Substances (ODS) and Global Warming Potential Compounds (GWP).

In addition to the relevant European legal requirements, **Nippon Gases** has internal standards relating to the use of these products. At **Nippon Gases** these are mainly used as a refrigerants in our cooling systems.

We monitor and review the consumption of ODS on an annual base. KPIs were defined and a new reporting system has been set up for reporting from 2020.

The CO₂ - equivalent from the use of Refrigerants is shown in the following table.

T CO₂ - eq (tons) from Refrigerants 2019

3,078

There are no figures available for the previous years due to change of the reporting scope.

Significant air emissions:

We do not have significant air emissions in our plants, except the emissions resulting from burning natural gas.

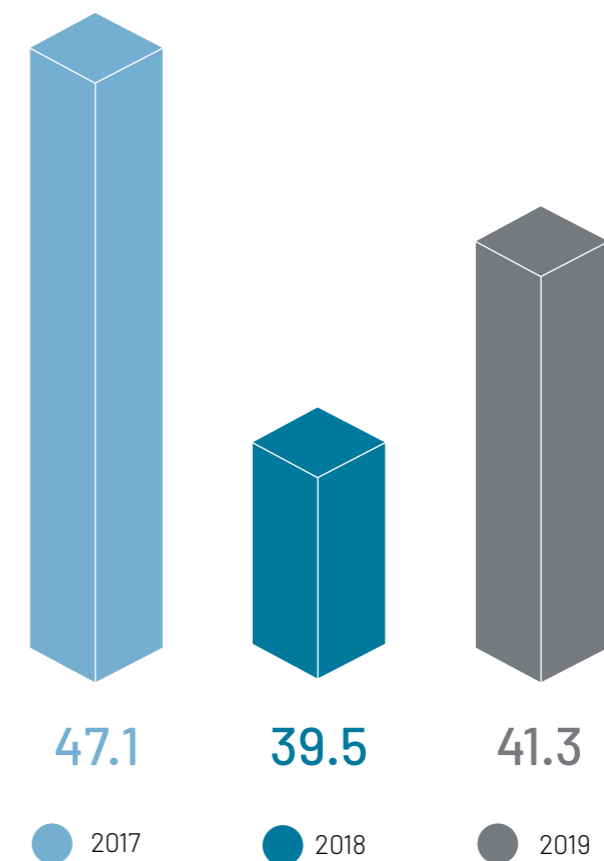
An additional area is the use of diesel fuel by transportation trucks, operated by contracted haulers.



Natural Gas is used in **Nippon Gases** mainly as process gas in the HYCO plants and as regeneration energy in the ASU plants.

The resulting NO_x emissions are calculated based in average emission factor of natural gas.

NO_x emission from NG (in metric tons)

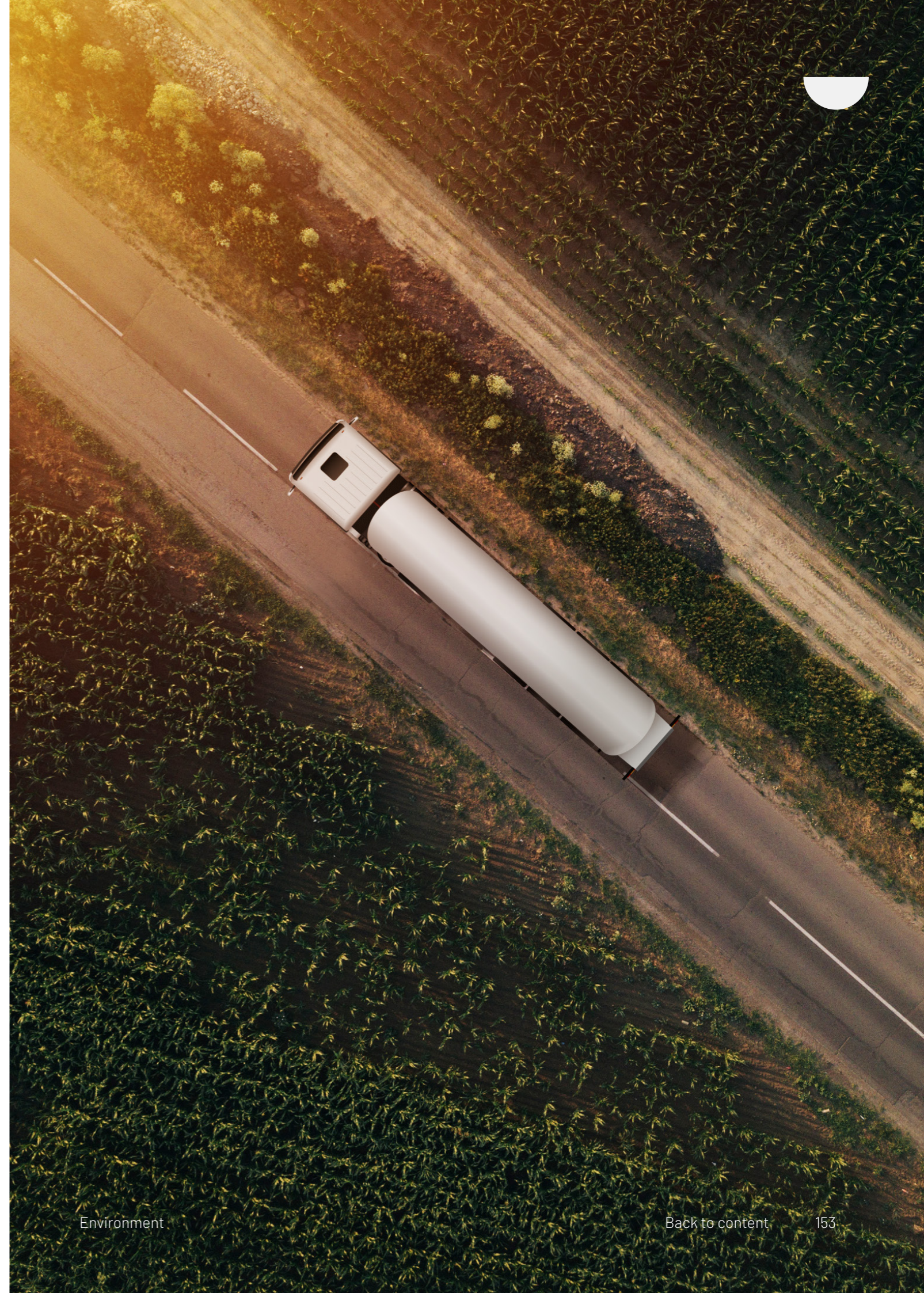


Emissions related to transport:

Transport trucks are mostly equipped with diesel engines, and the amount of diesel fuel used and measures taken to reduce this are described in this chapter. Around 95 million kilometers were driven in product transportation in the last year involving hundreds of different trucks. The calculation is based on average millage of the transportation fleet (see data in chapter 5.3.1.).

On top of the mileage optimization program described in chapter 5.3.1., we have started three other programs (in dedicated countries) to reduce transport-related air pollution.

- To promote haulers to use trucks from the best-available emission class.
- To substitute trucks with diesel engines with others that use LNG/CNG engines to reduce NOx and SOx emissions.
- To switch transportation of gases from road to railway, especially in countries where the CO₂-emission factor is very low due to a high proportion of renewable energy in their generation mix.





Natural Gas as a fuel for Transport Units

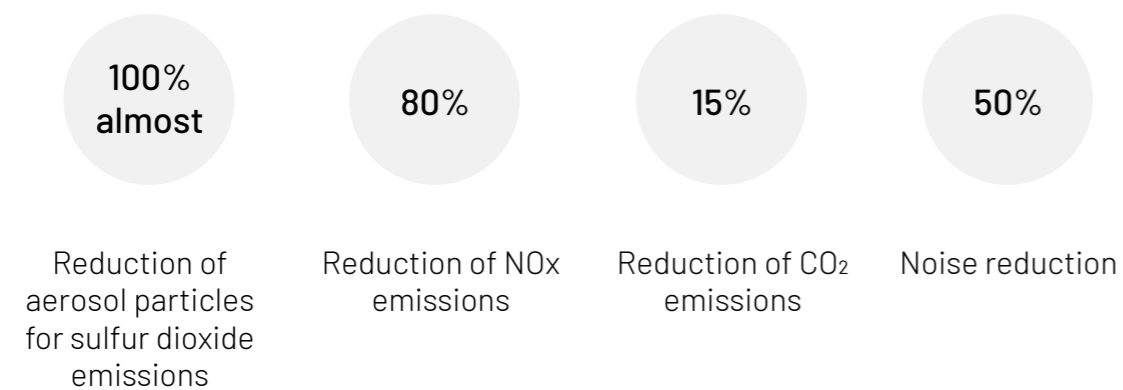
The Bulk and Package transport fleet has historically been 100% equipped with diesel engines. In several cities in Europe the threshold for atmospheric aerosol particles (EU regulation 80/779 "Air quality limit values and guide values for sulfur dioxide and suspended particulates") is permanently exceeded.

One way to reduce aerosol particles is the use of alternative fuel.

In 2019 **Nippon Gases Deutschland** put the following vehicles into service in Germany:



The environmental benefits are:



This was the result of a joint project between **Nippon Gases Deutschland** – involving several departments (logistics, fleet management, HSEQ) – and a single haulers.

This program will be replicated at other **European Nippon Gases** subsidiaries.

Package gas transport via railway

Scandinavia is a region with large distances and which is, in many areas, sparsely populated. Therefore, there is a demand for long-distance transportation of gas production units or cylinder filling stations to customers.

At **Nippon Gases in Scandinavia**, railroad transportation has been a key part of an environmentally friendly approach for many years. The railroad has been used for the transportation of different cylinder gases, as well as for bulk gases. The logistics of railroad transportation for cylinder gases are managed on a major scale in Norway. Gas cylinders are packed in containers or onto trolleys that are loaded on trains in Oslo for transportation to retailers in the north of the country with terminals situated in the larger towns of Bergen, Trondheim and Stavanger. The transportation to Trondheim by train is the newest of these rail routes and has replaced the use of a road semi-trailer. This route alone reduces road mileage by 96,320 km a year, which translated into a reduction of more than 110 Tons CO₂e⁽¹⁰⁾.

In addition to domestic rail, there are also more than 100 return shipments of packed gas by railroad between Norway and Germany and the Netherlands, each year.

In total more than 55% of the package gas transports in Norway are done by railroad!

(10) Calculation; 96320 km x 0.43 l/km x 2.66 kg CO₂/l.
Norwegian trains are powered by electricity and count as 0 kg CO₂/km.

5.5 Sustainable use of resources

5.5.1 Water usage

The production of industrial gases requires water to cool equipment such as gas compressors. Replenishing the water for this purpose constitutes the bulk of our water withdrawal.

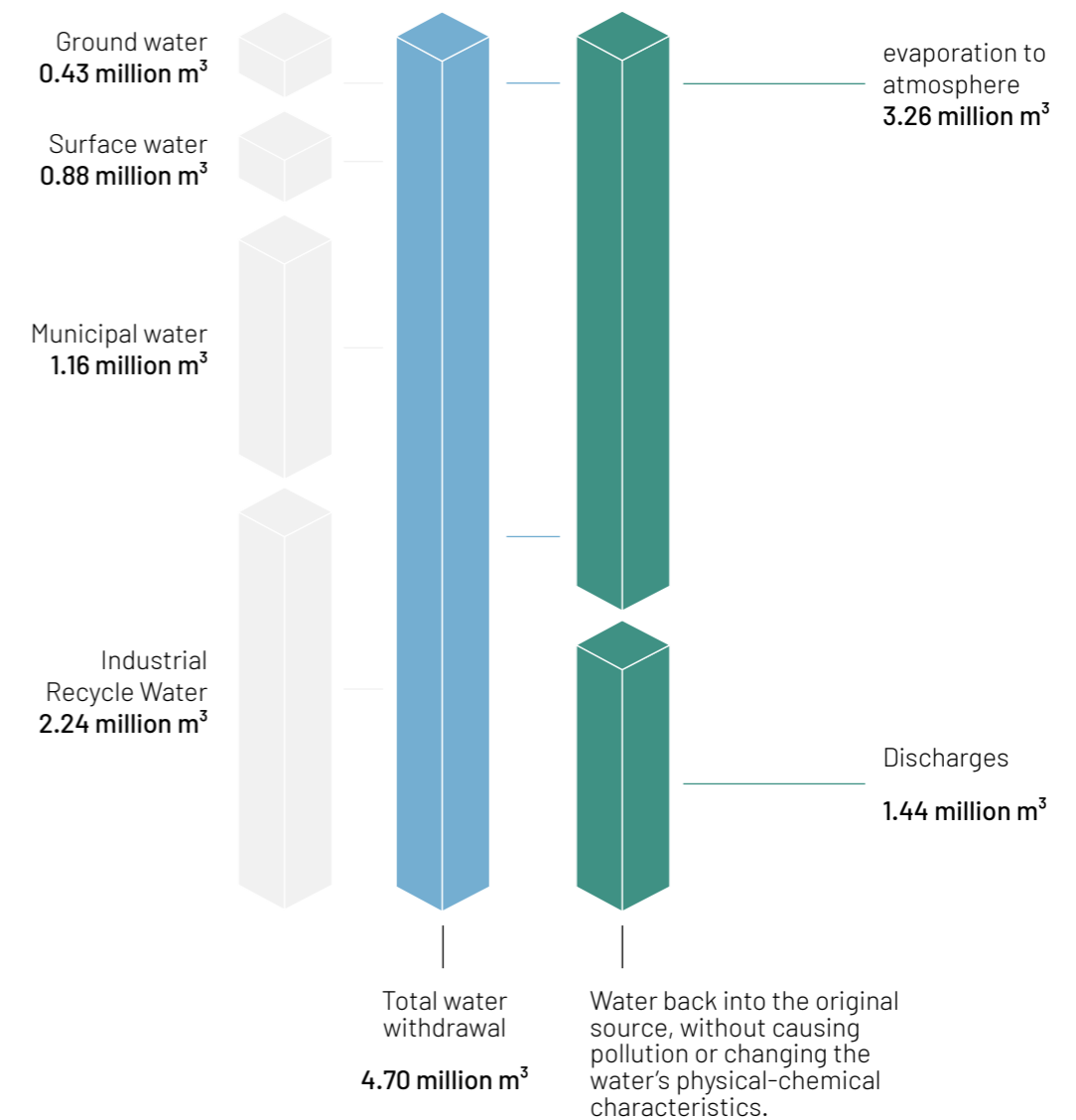
The most intense users of cooling water are the Air Separation Units. In these units there are several types of cooling systems, and about 84% have semi-open water recirculating systems, which require water withdrawal to replenish loss from evaporation and the discharges to the sewer required to maintain the maximum salt concentration in the system to perform the cooling.

The discharge of these semi-open water circuits is piped back into a controlled sewer that at a later stage will perform treatment to allow for the water to be recycled.

A small percentage (18%) of the air separation units have a once-through system where the water is pumped into our facility, cools the process, and returns back to the source without alteration to the chemistry of the water.

Air Separation Unit semi-open circuit water utilization is explained in the next page diagram.

Water usage within the Group's processes



Circuit Type	m ³
Once - through	21,024,896
Semi - open	4,704,112

Circuit Type	Water consumption
Semi-open	%
ASU	87%
HYCO	1%
CO ₂	12%

Make-up water Semi-Open circuit	m ³	%
Municipal Water	1,158,845	25%
Industrial Recycle Water	2,239,144	48%
Surface Water	877,248	19%
Ground Water	428,875	9%
Make - up Total	4,704,112	100%
Discharges	1,440,814	31%
Evaporation	3,263,298	69%

Cycles	3.3
Water m³/Mwh	1.89

In 2019 **Nippon Gases Europe's** water withdrawal was 4.7 million m³ from various sources. 27% came from freshwater sources such as rivers, lakes or ground wells, 25% from municipal supply and the remaining 48% from industrial recycle water.

* Historical data is not available due to change in scope conditions.

Discharges into air and water

Discharges into air and water in the industrial gases business are limited, by nature. Around 87% of the **Nippon Gases** water consumption goes to the air separation units separate the components of atmospheric air (oxygen, nitrogen, argon). These plants do not use any combustion processes and consume almost exclusively electrical energy.

- Reused water consumptions.

Most of the water entering the cooling circuit of our production facilities enters a semi-open circuit, were it is recirculated and cooled to provide refrigeration for the equipment. Most of the water (69%) is evaporated to the atmosphere and the remainder (31%) is discharged, maintaining levels of chemistry concentration as per the process limits.

The discharge from these semi-open water circuits is piped back into a controlled sewer that will, at a later stage, perform treatment to allow the water to be recycled.

- **Efficiency in the use of water**

The most common parameter of efficiency of a semi-open cooling water circuit is the number of concentration cycles the make-up (incoming) water is recycled.

The Nippon Gases data in 2019 is:

- Total withdrawal water: 4,704 km³ (100%).
- Total discharges: 1,440 km³ (32%).

Number of concentration cycles: 4,704/1,440 = 3.3 cycles.

- **Water management within the value chain.**

Water is a limited environmental resource, critical to the health and sustainability of our planet. **Nippon Gases** facilities cannot operate without adequate water supplies, and this reality drives us to be good stewards.

Nippon Gases optimizes water consumption by close follow-up of the cooling water circuit parameters, and adjusting water treatment accordingly in order to minimize the discarding of water to the sewer, therefore optimizing water usage.

A higher concentration cycle indicates a more optimal water usage of the water.

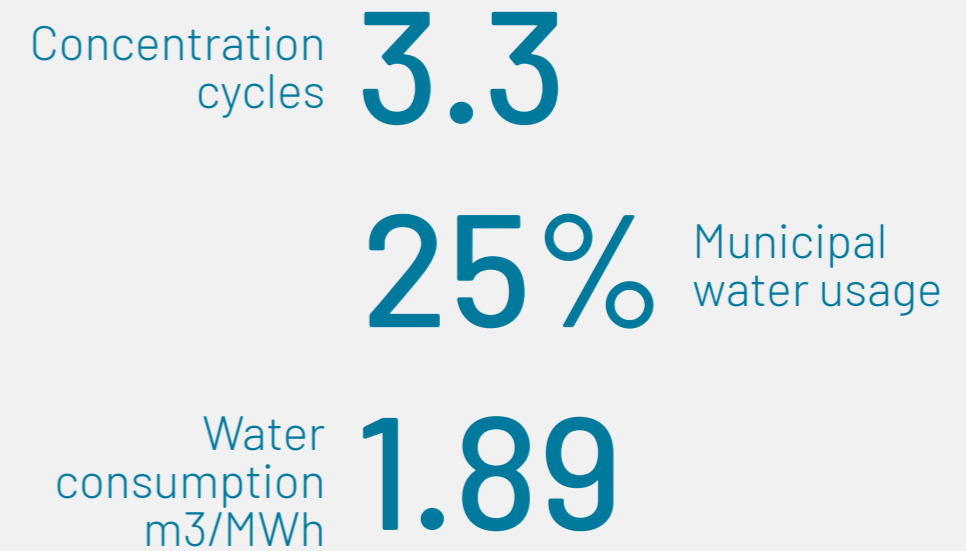
Another area of action is the reusing of water that is not valid for human use.

The most common alternative is industrial recycled water, whose contaminant levels makes it unsuitable for drinking but mean it can be used for industrial cooling services.

The main purpose is to minimize the usage of such a valuable resource as municipal water.



The water KPI's for 2019 are the following:



There are no figures available for the previous years due to change of the reporting scope.

- **Environmental related SDG targets (period 2020-2023):**

100% Water management system for main consumer facilities⁹

(9) Facilities with consumption >30,000 m³ water/yr except once through system.

Related to:



Environmentally responsible production and consumption

5.5.2 Raw material usage

Most of the raw materials **Nippon Gases** used in 2019 to produce nitrogen, oxygen, argon and carbon dioxide were renewables, notably air and water.

Nippon Gases divides the waste stream into three partial streams:

1. Waste that is generated by our suppliers during the production of our main input materials.

2. Waste that is generated in the manufacture of our products at our plants.

3. Packaging waste from the delivery of our products to our customers.

1. The main input materials used at our production facilities are electricity, ambient air or process gases like CO₂.

The environmental aspect of the use of electrical energy is described in chapter 5.5.1.

The environmental aspect of the use of electrical energy is described in chapter 5.3.

Neither the use of air nor by-product CO₂ generated additional waste at our suppliers.



- The waste generated at our plants is mainly non-hazardous waste like metal, paper, wood and domestic waste.

Non-Hazardous Waste 2019 (in tons)	
Waste total	2,231
Waste on landfill	48
% on Landfill	2.0%

Hazardous waste is comprised by some process materials, such as oils and residues from the scrubber in SPG (Specialty Gases Plant) filling plants.

Hazardous Waste 2019 (in tons)	
Waste total	424
Waste on landfill	5.3
% on Landfill	1.2%

A very small percentage of the waste generated by at **Nippon Gases** ends up in landfill. The vast majority is recycled (98%).

* Historical data is not available due to change in scope conditions.

- Nippon Gases** produces very little packaged waste. The main delivery modes of our products are:

- Delivery by pipeline.
- Delivery as bulk liquid.
- Delivery as package.

Both pipeline deliveries and deliveries of liquid products to tanks installed by customers do not generate any waste.

Nippon Gases use gas cylinders made from steel or aluminum for the distribution of packaged gases. **Nippon Gases** operates a “closed-loop” business model for reusable and refillable gas cylinders. Every refillable gas cylinder is designed and intended to contain gas throughout its lifetime, and to be repeatedly refilled. When the cylinder is empty, it is brought back from the customer to **Nippon Gases** for refilling and continued use in a closed-loop system.

The refillable gas cylinder is an industrial package that is kept in continued use and has an economic life span of more than 25 years. Each time cylinders are returned for refilling there are standard procedures to check if they are suitable for continued use. On average, each cylinder is filled at **Nippon Gases** several times a year.

The cylinder only enters the waste stream if it fails its periodic inspection. The gas cylinder is fully recyclable at the end of its lifetime.

With this sustainable business model concept, Nippon Gases makes a major contribution to avoiding waste.

5.6 Climate change

5.6.1 GHG emissions

We are committed to sustainability in our activities

Nippon Gases, part of **Taiyo Nippon Sanso Corporation**, is strongly engaged with sustainability and the application of the **KAITEKI** philosophy approach to our day-to-day activities.

KAITEKI means “the sustainable well-being of people, society and our planet Earth”. Founded on this philosophy, **Nippon Gases** considers that global warming (a consequence of increased GHG) is having a strong impact, not only in terms of the environmental impact, but also through direct consequences on the health and economy of our community.

For years we have been implementing initiatives focused on the three main areas that have a direct impact on **GHG emissions**: energy consumption at our production plants, emissions from the transportation fleet, and **GHG emissions** related to the commercialization of our products and solutions. Of course, the first step was to identify the **GHG footprint** at each step of our business cycle and put in place a methodology that can measure the different GHG impacts.

As an intensive energy user at our production plants, efficiency has a direct impact on **GHGs**. Our efforts are based on productivity programs that contribute to reducing waste, improving plant performance, optimizing energy consumption and minimizing product losses during the different production steps and unscheduled plant shutdowns. We have a robust program promoting productivity initiatives. Furthermore, this program is part of our business plan and has a bolted-on quarterly review and follow-up procedure.

A good example of how our technology improvements together with the circular economy concept contribute to **GHG** reduction is the drop of 78.840 tons/year of CO₂ emitted and CH₄ reduction at one of our CO production plants. This plant has changed its production parameters by shifting the process balance at the input by reducing CH₄ in favor of adding recovered CO₂ from a flue gas, and increasing the energy input for the reaction by redirecting the H₂ to heat the process.

As mentioned before, product transportation is a big contributor to **GHG emissions**. To mitigate this, we have put in place specific programs that help to optimize transportation by adapting our transport to customer patterns and avoiding unnecessary kms driven, reducing fuel consumption per unit of delivered product.

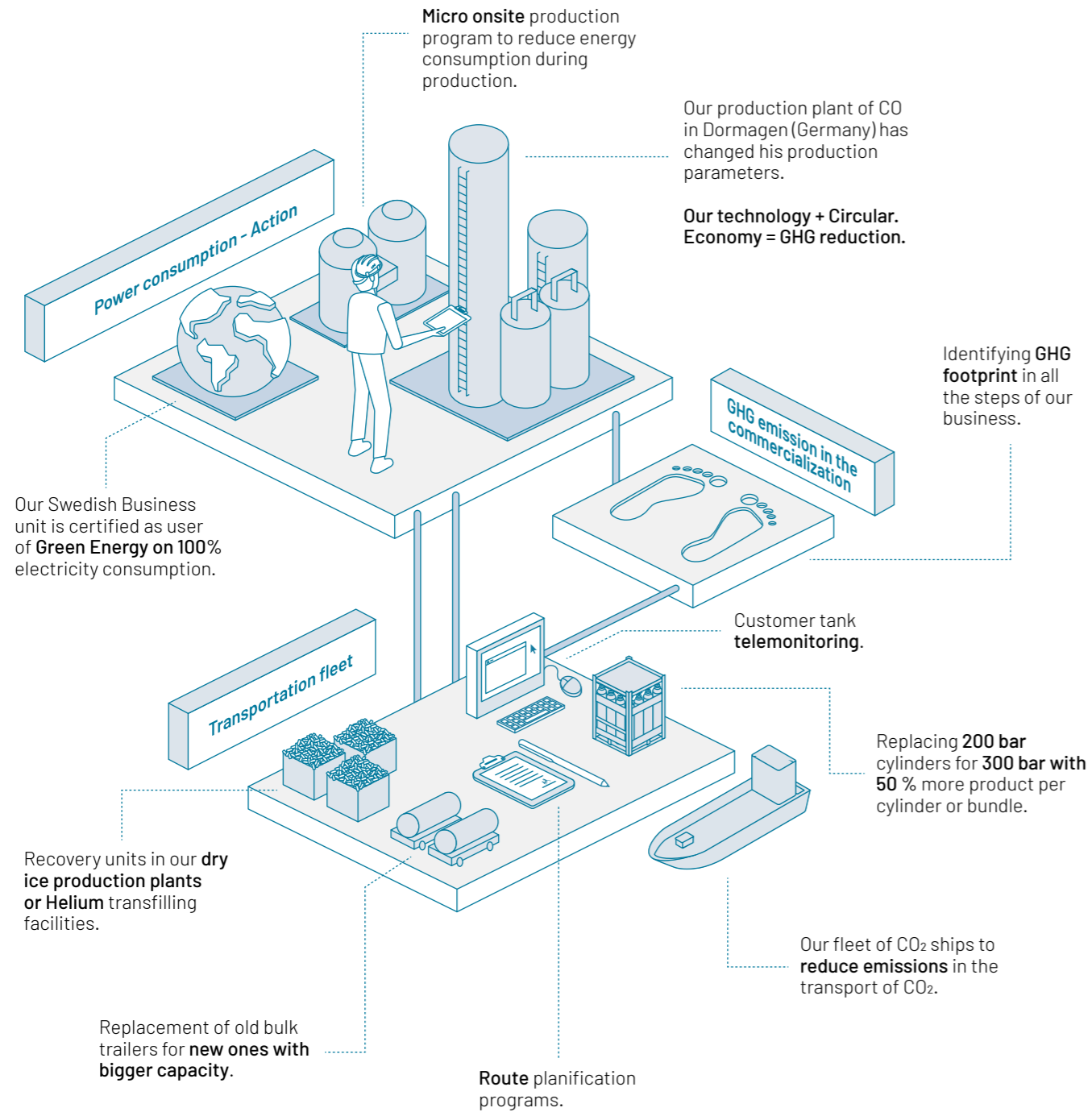
Helping customers to reduce GHG emissions through our solutions and technology

Nippon Gases' commitment to **GHG emissions** reduction does not stop at the gate of our plants. The development of technology related to gas applications for our customers is helping the industry to be more efficient and environmentally friendly.

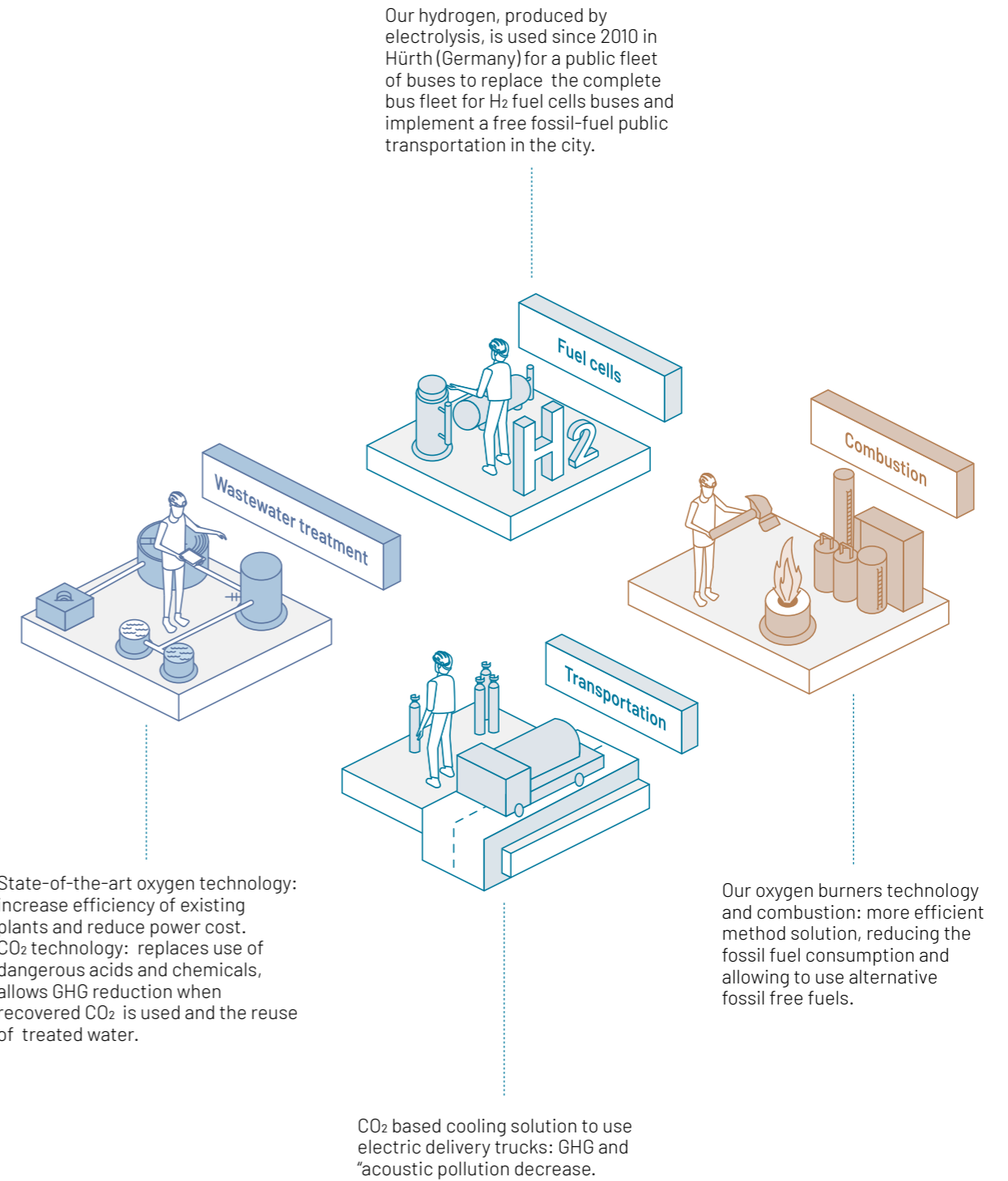
The transportation and delivery of fresh and frozen products, wastewater treatment, combustion processes in steel mills, aluminum, glass, cement, syngas production in chemical and petrochemical processes, calibration mixtures that control emissions levels, new lines of refrigerant gases – these are all areas where our efforts are bringing direct benefits both to industry and the environment. In combustion, our technology provides our customers with a more efficient solution, reducing fossil-fuel consumption and enabling the use of alternative fossil-free fuels. In this way, carbon emissions are reduced, helping our customers to meet their environmental requirements while keeping their production costs competitive.

In 2019 our expertise and technology contributed to reducing close to 33,000 ton/ year of **GHG emissions**.

Our compromise



Helping our customers

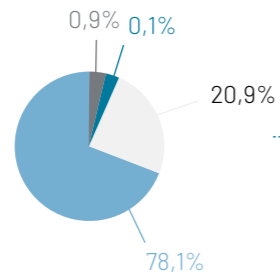


Environmental Inputs and Outputs of Nippon Gases Operating Activities

Raw material

Atmospheric air is the raw material used to produce industrial gases.

- Nitrogen
- Other
- Argon
- Oxygen



Gas production facility

Operating activities

ASU Outputs

Europe Emissions - CO₂eq Tons

ASU	849,000
Scope 1(NG)	1,644
Scope 2(Electrical+Steam)	847,000
Water Discharged	1.1 millions m³

ASU Inputs

Electricity	2.7 TWh
Steam	17,000 Tons
Natural gas	631 Tons
Water	4.1 million m ³

Transportation	
Diesel	25,500 KL

Transportation	
CO ₂ eq	67,000 Ton

Gas filling station

Customers

Scope 1 and Scope 2 CO₂ emissions for **Nippon Gases**.

The CO₂eq emission factor per equivalent Tons has improved vs our benchmark in 2017:

0.5%

	2017	2018	2019
Europe Emissions - CO₂eq Tons (Scope 1+2)	1,075,337	1,065,933	1,023,866
ASU			83%
HYCO			5%
CO ₂			5%
Distribution			7%
Scope 1 (NG + Distribution)			12%
Scope 2 (Electrical + Steam)			88%
Tons CO ₂ eq / Unit Ton eqv	100.0%	98.6%	99.5%

Scope 3 emissions. **Nippon Gases** has not yet aligned with **TNSC** in the procedure for calculating the Scope 3 inventory. However, based on the intensive usage of our manufacturing, and the limited usage of raw products, we estimate the impact of Scope 3 to be immaterial.



6. Community commitment

Nippon Gases employees are fully committed to Community Engagement.

Every year we see the number of projects and volunteers growing. As an organization, we want and need to support this more and more.



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6.3	Community Engagement projects	182

6.1 Impact on communities

At **Nippon Gases** we are committed to supporting a wide range of community initiatives. We offer our employees the opportunity to get involved and make a difference in local communities. We are proud to say that every year we see a high number of volunteers who demonstrate their commitment to local communities by contributing with their personal time and skills to support all kinds of initiatives.

Various projects are held during the year, allowing employees to help directly or to raise funds for nonprofit organizations from different sectors such as education, diversity, community support, health & wellness and the environment.

2019 data:

- 64 projects.
- +500 participants.
- 81,539€ donated.

A list of Community Engagement (CE) projects is attached to this document.

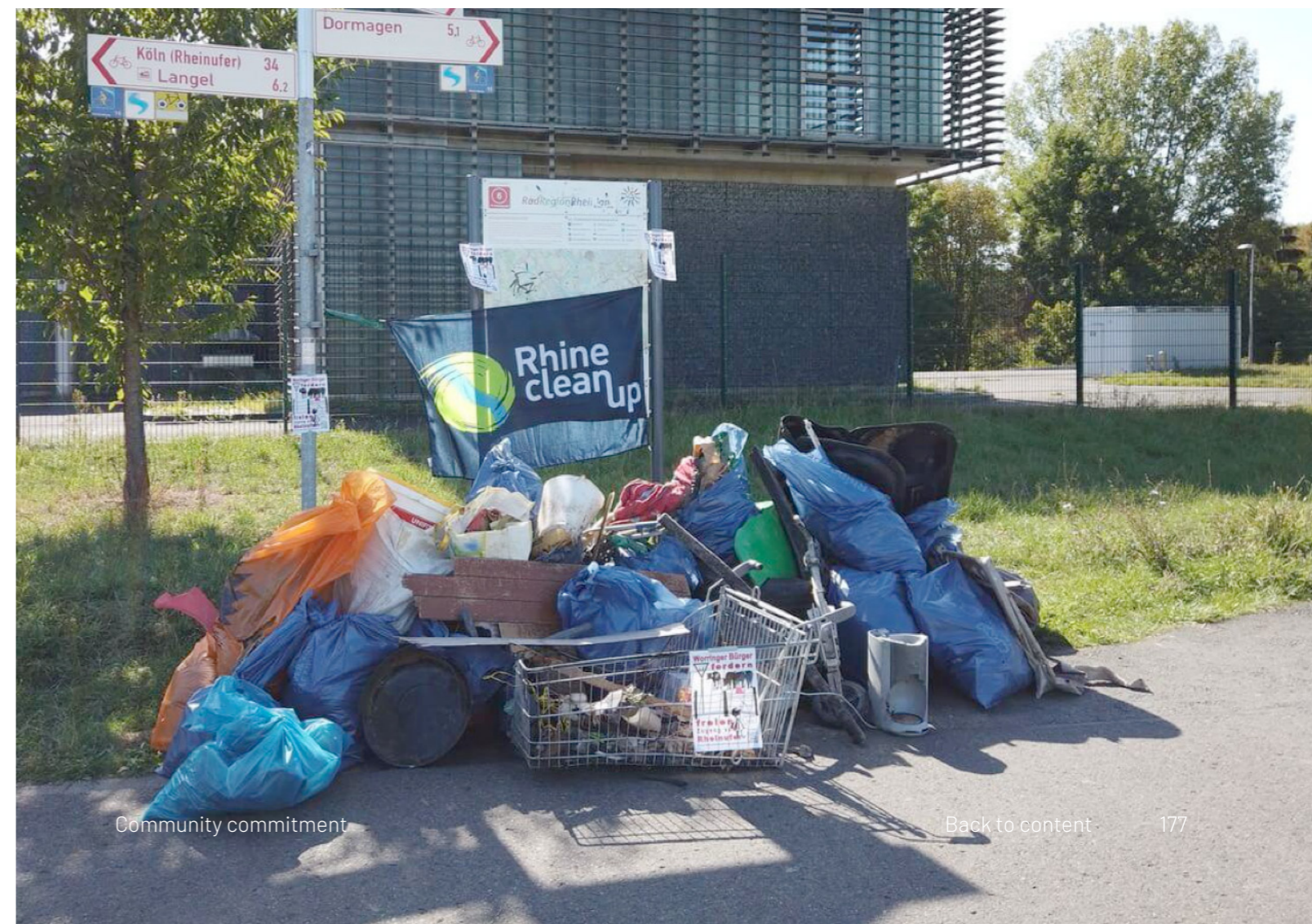
Nippon Gases Germany

Relieving the Rhine River of pollution.

More than 20,000 people in four countries collected more than 171,000 kg of garbage along the banks of the Rhine. The German Finance Team took part in the Rhine Clean-Up Day.

Wearing bibs and gloves and well equipped with trash grabbers and other tools, participants gathered a range of items ranging from surprisingly large objects including truck wheels and bicycles to assorted heaps of small objects including plastics and cigarette butts.

“We cannot save the world by doing this, but we are not helpless, and we can start making a difference right by our own home”, said one of our volunteers.



“Die Kids, die wir betreuen, sind nicht weniger begabt als die aus besseren Wohnquartieren. Aber ihr Startblock ins Leben steht 30 Meter weiter hinten. Die müssen erstmal aus der Kurve.”

Wir machen
BOLLEKIDS.de
weiter

* The children we take care of here are not less talented than children living in better living areas. But at the start of their life they are 30 meters behind. We have first to close the gap.

School Sponsors

In Berlin the beginning of the new school year was imminent and the kids from Haus Bolle in Berlin needed start-up help. Once more this year, **Nippon Gases Germany**, has been involved as a school starter sponsor, enabling many children's wishes and needs to be fulfilled.

Employees' willingness to donate and support this initiative was incredible.



Straßenkinder e.V.

Nippon Gases Spain

Supporting people with disabilities with Adecco Foundation.

Plan Familia is an orientation and intervention program for people with disabilities, developed by the Adecco Foundation. Their main objective is to support the social integration of disabled people by enhancing their competences and skills, promoting their personal autonomy and employability so that they can perform an occupation or work activity.

Nippon Gases Spain takes part in this project by supporting Adecco Foundation with donations for the corresponding therapies, activities, training and commitment to promote the employability of people with disabilities.

COVID-19

An initiative to collect and deliver blankets to Hospitals and Nursing Homes during the **COVID-19** crisis. Oximesa demonstrated its commitment to **COVID-19** patients through its volunteers, who delivered 5,000 units of blankets.





Nippon Gases Italy

Santa Claus gathering.

The annual charity initiative, organized by Forma (Fondazione Regina Margherita) non-profit organization, was a success, despite the weather. Thousands of loving Santas gathered on a Sunday morning, December 1, to greet and cheer the children with illnesses.

Hundreds of balloons inflated with helium were delivered to participants who donated to the non-profit organization, which this year will allocate the amount raised during the event to finance the restructuring of the nephrology, gastroenterology and transplant departments, thus contributing to better care for the children.

Some Rivoira volunteers brought the balloons inside the hospital and distributed them to the children, who with sparkling eyes and their hearts filled with joy, watched the gathering from the windows of their rooms.



6.2 Membership list of associations

We are convinced that our business benefits from the active participation in organizations that represent our industry. During FY2019 we were active in many associations and organizations, including:

Europe	EIGA: European Industrial Gases Association
Spain	FEIQUE: The Spanish Federation of the Chemical Industry AFGIM: Spanish Industrial Gases Association AEGE: Spanish Energy-Intensive Industry Group AFGIM: Association of Spanish Medical Gas Manufacturers CEJO: Association of Japanese companies in Spain AmCham Spain: American Chamber of Commerce in Spain
Italy	FEDERCHIMICA: Italian Association of Chemical Industry AGT: Italian Association of Industrial and Medical Gas Manufacturers UNIONE INDUSTRIALE: Association of Italian Manufacturing and Service Companies IJBG: Italian . Japan Business Group AmCham Italy: American Chamber of Commerce in Italy
Germany	IGV: Industrial Gas Association e.v. VCI: Association of Chemical Industry DVS: German Welding Association VIK: Association of Industrial Energy Consumers HyCologne: Association in Rheinland to promote the use of hydrogen JHK: The Japanese Chamber of Industry and Commerce in Düsseldorf
Belgium	Essenscia: Fedetation of the chemical and life sciences industries Waterstofnet VZW: Hydrogen Association of Belgium BJA: Belgium-Japan Association & Chamber of Commerce AmCham Belgium: American Chamber of Commerce in Belgium
Netherlands	VFIG: Association of Manufacturers of Industrial Gases of Netherlands DUJAT: Dutch - Japanese Trade Federation Netherlands
France	AFGC: Association Française de Gaz Comprimés France
UK	BCGA: British Compressed Gases Organization
Denmark	PCG: Association of Comprised Gases Producers
Sweden	SIGA: Swedish Industrial Gas Association
Norway	NIGF: Norwegian Industrial Gas Association



6.3 Community Engagement projects

Country	Organization & Project Description	Category (Education, Diversity, Community Support (includes Disaster Relief), Health & Wellness, Environment)
Spain	Fundación Adecco: Supports social integration of disabled people.	Community Support (includes Disaster Relief)
Spain	GOIEKI: Promoting employment.	Community Support (includes Disaster Relief)
Spain	AECC: Promote breast cancer research campaign.	Health & Wellness
Spain	ASOCIACION AYUDALE A CAMINAR: Support to disabled persons.	Community Support (includes Disaster Relief)
Spain	BOMBEROS UNIDOS SIN FRONTERAS: Support to the firebrigade.	Community Support (includes Disaster Relief)
Spain	SOCIARTE: Support to the integration of disabled persons.	Community Support (includes Disaster Relief)
Spain	ASOCIACION DE VECINOS SAN JUAN: Support to the development of the neighborhood.	Community Support (includes Disaster Relief)
Spain	Fundacion Juegaterapia: Promote health among small ones in a natural environment.	Health & Wellness
Spain	Banco de España: Collecting of food packages.	Community Support (includes Disaster Relief)

Spain	Development and Assistance Foundation: Support to elderly people living in a residence.	Community Support (includes Disaster Relief)
Spain	EcoMar: Support in cleaning the areas affected by the DANA disaster in the Levante area.	Community Support (includes Disaster Relief)
Spain	Laguna Vianorte Foundation: dedicated to the care and attention of patients suffering from advanced diseases, the elderly and their families.	Health & Wellness
Spain	George The King charity Gala: improve the living quality of early born babies.	Community Support (includes Disaster Relief)
Spain	Clinica Universitaria de Navarra: Promote research in childhood cancer and to help families with cancer children.	Health & Wellness
Spain	COVID-19 initiative: New open source turbine respirators to combat the effects of COVID-19.	Health & Wellness
Spain	Junior Achievement: Support young people in understanding that the education they get today will help them to get a bright future.	Education
Spain	College and Association of Chemists of Madrid: Promote the study of STEM careers.	Education
Spain	Science week: Promote and bring science in all aspects closer to the schoolchildren.	Education
Spain	AVOI - Children's Oncology Volunteers Association: Support to children that suffered cancers.	Health & Wellness
Spain	A.L.E.S. Association for the fight against blood diseases: Collaboration during the 17th Solidarity march.	Health & Wellness
Spain	Fundación Oncogilla Girona / Agrupación Excursionista Palafrugell / Club Atlético Palafrugell: Solidarity team to raise funds to improve the quality life of cancer patients.	Health & Wellness
Spain	Association we fight for life: Support Solidarity march.	Health & Wellness
Spain	COVID-19 initiative: blankets delivery in Hospitals and Nursing Homes, during the COVID-19 crisis.	Health & Wellness



Portugal	Respira: Promote respiratory health awareness.	Health & Wellness
Portugal	Portuguese Pneumology Society: Raise awareness of the danger of smoking.	Health & Wellness
Portugal	Respira: Raise awareness about Chronic Obstructive Pulmonary Disease (COPD).	Health & Wellness
Portugal	Coimbra University Hospital Centre (CHUC): promoting physical activity and a healthy lifestyle.	Health & Wellness
Portugal	Home-Rehabilitation Program: Exchange experiences and opinions among people with respiratory problems.	Health & Wellness
Portugal	Children Protection Association: Food collection.	Community Support (includes Disaster Relief)
Italy	Religious Community of Monte Acuto: Support to 150 Years celebration.	Community Support (includes Disaster Relief)
Italy	Polisportiva Primavera: Support march to reinforce disability rights.	Diversity
Italy	Gruppo Astrofili Monti Lepini: awareness of the importance of the scientific research for the cultural, social and economic development of society.	Education
Italy	LILT: On the occasion of the Pink Night, support activities to fund cancer research.	Health & Wellness
Italy	Un Ospedale per Amico: Support to a party to collect funds for a Pediatric Hospital.	Health & Wellness
Italy	Unitalsi Lourdes: Special event for disabled people during Lourdes pilgrimage.	Health & Wellness
Italy	European Researchers' night: raise the awareness of the importance of the scientific research for the cultural, social and economic development of society.	Education

Italy	Santa Claus Parade: Rivoira supported Onlus Foundation "Forma" of the Regina Margherita Hospital during the Santa Claus parade.	Health & Wellness
Italy	Telethon Event: Support rare diseases research.	Community Support (includes Disaster Relief)
Italy	Christmas card contribution to Regina Margherita Onlus: Donation for a student award in Tanzania.	Health & Wellness
Germany	Deutsche Welthungerhilfe: Support to fight world hunger.	Community Support (includes Disaster Relief)
Germany	Rhine Clean Up Day: Clean the Rhein river banks.	Community Support (includes Disaster Relief)
Germany	Haus Bolle: School Start Project.	Education
Belgium	RACE FOR THE CURE: Think Pink vzw, support to the cancer research.	Health & Wellness
Belgium	OUT OF THE BOX: Barbeque event organized for a home with disabled people (down syndrome).	Community Support (includes Disaster Relief)
Belgium	10 MILES: Running marathon organized by the city of Antwerp > donations go to various social projects.	Community Support (includes Disaster Relief)
Belgium	MUSIC FOR LIFE: Escalante, support to coordinate co-housing project for 10 mentally disabled young adults.	Community Support (includes Disaster Relief)
Belgium	MUSIC FOR LIFE: Boven de Wolken, photography project by volunteers to support parents with the loss of a dead born baby.	Community Support (includes Disaster Relief)
Offshore	Friends of Anchor: Local charity that relies on fundraising and donations who provide treatment, care & support to patients with cancer.	Health & Wellness
Offshore	P3 Kinellar Stars: Support to youth sport teams.	Community Support (includes Disaster Relief)
Offshore	Colony Park FC: Support to youth sport teams.	Community Support (includes Disaster Relief)

Offshore	Westdyke Community Club: Support to youth sport teams.	Community Support (includes Disaster Relief)
Offshore	Macmillan Cancer Support: Support to organization that provides treatment, care & support to patients with cancer.	Health & Wellness
Offshore	First Strichen Guides: Support to youth organization.	Community Support (includes Disaster Relief)
Offshore	MND Scotland: Motor Neurone Disease - donation to assist with the research to find a cure in Scotland.	Health & Wellness
Offshore	Portlethen Guides: Support to youth organization.	Community Support (includes Disaster Relief)
Offshore	Granite City Trampoline: Support to youth sport organization.	Community Support (includes Disaster Relief)
Offshore	Thistle Youth FC: Support to youth sport organization.	Community Support (includes Disaster Relief)
Offshore	Friends of the Neonatal: Support to Aberdeen Maternity Hospital Neonatal Unit for premature & sick babies.	Health & Wellness
Offshore	Cornerstone Community Shop: Support to food collection.	Health & Wellness
Offshore	Polska Szkola: Donation to help buy toys for young children.	Community Support (includes Disaster Relief)
Offshore	Abdn Cheer & Dance Co: Support to youth organization.	Community Support (includes Disaster Relief)
UKIE	St Andrews Hospice – Children’s hospice: Children Charity (Christmas).	Community Support (includes Disaster Relief)
UKIE	St Andrews Hospice – Children’s hospice: Children Charity (Eastern).	Community Support (includes Disaster Relief)
UKIE	Christmas Jumper Day: Christmas Raffles organized to support he Christmas Jumper Day.	Community Support (includes Disaster Relief)



7. Appendixes



Chapter contents

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7.1 Glossary

CCU	Carbon Capture and Utilization
ESG	Environmental, Social, and Governance
GHG	Greenhouse Gases
MAP	Modified Atmosphere Packaging
MCC	Mitsubishi Chemical Corporation
MCHC	Mitsubishi Chemical Holdings Corporation
N ₂ O	Nitrous Oxide
PDP	Personal Development Plan
PPA	Power Purchase Agreement
PPE	Personal Protective Equipment
RI - rate	Recordable Injury rate
SDG	Sustainable Development Goals from United Nations
TNSC	Taiyo Nippon Sanso Corporation

7.2 About this report

The non-financial statement was prepared pursuant to the requirements of Royal Decree-Law 18/2017, of 24 November, amending the Spanish Commercial Code, the consolidated text of the Spanish Companies Act approved by Royal Legislative Decree 1/2010, of 2 July, and Spanish Audit Law 22/2015, of 20 July, on disclosures of non-financial and diversity information. It also considered the European Commission guidelines on non-financial reporting (2017/C 215/01) arising from Directive 2014/95/UE. Preparation also considered the content of the Global Reporting Initiative's Sustainability Reporting Guidelines (selected GRI Standards) and the principles in the Integrated Reporting Framework, published by the International Integrated Reporting Council, IIRC.

The scope of this report includes the information on FY2019 (from April 1st 2019 to March 31st 2020) of **Nippon Gases**. The following criteria have been applied to the information reported herein:

- The financial information is presented in accordance with the consolidation principles applied in the annual accounts.
- Non-financial information relates to operations over which **Nippon Gases** maintains control (companies consolidated in the Consolidated Financial Statements in accordance with the full integration method).



7.3 Legal entities list

This report details and expands on the non-financial statement. Through the non-financial statement, **Nippon Gases** reports on relevant environmental, social and employee-related matters, and human rights matters for the company in carrying out its business.

During the preparation of this report and its contents selection, the results of the materiality analysis carried out have been considered, with the following result:

Highly relevant aspects	Relevant aspects	Non-relevant aspects
- Employment	- Human Rights	- Circular economy and prevention and waste management
- Health and safety	- Consumers	- Sustainable use of resources
- Training	- Subcontracting and suppliers	- Actions to combat food waste
- Equality	- Commitments of the company with sustainable development	- Protection of biodiversity
- Work organization	- Tax information	- Climate change
- Social relationships	- Environmental management	- Pollution
- Accessibility		
- Fight against corruption and bribery and money laundering		

Trade Name	Activity	Holding		Registered Office
		Direct %	Indirect %	
Nippon Gases España S.L.U.	Production, marketing and sales of industrial gases	100%	-	Orense 11- 28020 Madrid, Spain
Nippon Gases Portugal Gases Lda.	Production, marketing and sales of industrial gases	100%	-	E.N. 13 Km 6,4 4470-Maia, Portugal
Oximesa S.L.U.	Production and sale of medical gases and services	100%	-	Orense 11 - 28020 Madrid, Spain
Nippon Gases Finance Ltd.	Finance Company	100%	-	Suite 27, 21 Lower Baggot Street Dublin D02 X658 Ireland
Rivoira Gas S.R.L.	Production, marketing and sales of industrial gases	-	100%	Via Benigno Crespi, 19-20159 Milan, Italy
Rivoira Operations S.R.L.	Production, marketing and sales of industrial gases	-	100%	Via Benigno Crespi, 19-20159 Milan, Italy
Rivoira Pharma S.R.L.	Production and sale of medical gases	-	100%	Via Benigno Crespi, 19-20159 Milan, Italy
Rivoira Refrigerant Gases S.R.L.	Marketing and sales of refrigerant gases	-	64%	Via Benigno Crespi, 19-20159 Milan, Italy
Gem Gas S.R.L.	Marketing and sales of industrial gases	-	100%	Via Benigno Crespi, 19-20159 Milan, Italy
Nuova Pescarito S.R.L.	Distribution of Industrial gases	-	100%	Via Benigno Crespi, 19-20159 Milan, Italy
Rivoira Sud S.r.l	Production, marketing and sales of industrial gases	-	59.5%	Via Benigno Crespi, 19-20159 Milan, Italy
Domolife S.r.l.	Production and sale of medical gases and services	-	51%	Via Aterno 56, 65128 Pescara, Italy

Dryce S.r.l.	Production and distribution of dry ice and CO ₂	-	51%	Via Aosta, 5 Cernusco sul Naviglio (MI), Italy
Praxair MI Services S.R.L. (in liquidation)	Dormant company	-	51%	Strada Provinciale Piano Tavola - Bivio Aspro - 95032 Belpasso (CT), Italy
Nippon Gases Deutschland Holding GmbH	Holding company	100%	-	Hans-Böckler Strasse, 1-40476 Düsseldorf, Germany
Nippon Gases Deutschland GmbH	Production, marketing and sales of industrial gases	-	100%	Hans-Böckler Strasse, 1-40476 Düsseldorf, Germany
Sauerstoff- und Stickstoffrohrleitungsgesellschaft mit beschränkter Haftung	Distribution of industrial gases	-	50%	Hans-Böckler Strasse, 1-40476 Düsseldorf, Germany
Nippon Gases Sp.Zo.o	Marketing and sales of industrial gases	-	100%	Al Korfantego 40-004 Katowice, Poland
Nippon Gases Belgium N.V.	Production, marketing and sales of industrial gases	0.01%	99.99%	Lammerdries 29 2250 Olen - 2900 Schoten, Belgium
Antwerpse Chemische Bedrijven (LCB) N.V.	Production, marketing and sales of industrial gases	-	100%	Metropoolstraat 16, 2900 Schoten, Belgium
Nippon Gases Netherlands B.V.	Production, marketing and sales of industrial gases	-	100%	Beugsloepweg 3, 3133 KV Vlarding, The Netherlands
Nippon Gases CO ₂ B.V.	Production, marketing and sales of industrial gases	-	100%	Beugsloepweg 3, 3133 KV Vlarding, The Netherlands
Nitraco N.V.	Distribution of industrial gases	-	50%	Metropoolstraat 16, 2900 Schoten, Belgium
Nippon Gases Scandinavia Holding AS	Holding company	-	100%	Postboks 23, Haugenstua 0915, Oslo, Norway

Nippon Gases Danmark AS	Production, marketing and sales of industrial gases	-	100%	Rode Banke, 120, 7000 Frederica, Denmark
Nippon Gases Norge AS	Production, marketing and sales of industrial gases	-	100%	Postboks 23, Haugenstua 0915, Oslo, Norway
Nippon Gases Sverige AB	Production, marketing and sales of industrial gases	-	100%	Box 51, 73122 Köping, Sweden
Nippon Gases Europe Ship AS	Distribution of industrial gases	-	100%	Postboks 23, Haugenstua 0915, Oslo, Norway
Nippon Gases UK Ltd.	Production, marketing and sales of industrial gases	-	100%	Gresley Way, Immingham Docks, DN40 2NT, United Kingdom
Nippon Gases Ireland Ltd.	Production, marketing and sales of industrial gases	-	100%	Harcourt Building, Dublin 2, Ireland
Nippon Gases France SAS	Production, marketing and sales of industrial gases	-	100%	Rue de l'industrie 60 Savigny, France
Nippon Gases Offshore Investments Ltd.	Holding company	-	100%	Howe Moss Avenue Kirkhill Industrial Estate Dryce, Aberdeen, United Kingdom
Nippon Gases Offshore Ltd.	Production, marketing and sales of industrial gases	-	100%	Howe Moss Avenue Kirkhill Industrial Estate Dryce, Aberdeen, United Kingdom
Nippon Gases Offshore Tank Ltd.	Production, marketing and sales of industrial gases	-	100%	Howe Moss Avenue Kirkhill Industrial Estate Dryce, Aberdeen, United Kingdom
Nippon Gases Asia Pacific PTE Ltd.	Production, marketing and sales of industrial gases	-	100%	21 Tanjong Kling road, Singapore

7.4 Table of contents required under Law 11/2018

Index of contents required by 11/2018 Law, of December 28, which modifies the Commercial Code, the revised text of the Capital Companies Law approved by 1/2010 Royal Legislative Decree, of 2 of July, and 22/2015 Law, of July 20, on Audit of Accounts, regarding non-financial information and diversity.

General information

Sub-category	Reporting framework	Reference	Comments / Reason for omission
Business Model	Brief description of the group's business model:	GRI 102-2 Activities, brands, products, and services.	pp. 3-5; 14-63
	- Business environment	GRI 102-4 Location of operations.	
	- Organization and structure	GRI 102-6 Markets served.	
	- Market presence	GRI 102-7 Scale of the organization.	
	- Objectives and strategies	GRI 102-15 Key impacts, risks, and opportunities.	
- Main factors and trends that affect the company's future evolution			
Main risks and impacts identified	Risk management.	102-15 Key impacts, risks, and opportunities.	pp. 58; 64-65; 82
	Risk and impact analysis related to key issues.		pp. 66-69; 75; 115; 128; 147

Environment

Sub-category	Reporting framework	Reference	Comments / Reason for omission
Environmental management	Current and foreseeable effects of the company's activities.	Internal reporting framework: qualitative description of the main current and foreseeable effects of the company's activities.	pp. 130-133
	Environmental assessment and certification procedures.	Internal reporting framework: qualitative description of assessments and certifications.	pp. 130-132
	Resources dedicated to the prevention of environmental risks.	Internal reporting framework: quantitative and qualitative description of resources dedicated to the prevention of environmental risks.	pg. 128
	Implementation of the precautionary principle.	GRI 102-11 Precautionary Principle or approach.	pp. 126-127
	Amount of provisions and guarantees for environmental risks.	Internal reporting framework: qualitative description of the amount of provisions and guarantees for environmental risks.	-
Pollution	Measures to prevent, reduce or repair emissions that seriously affect the environment, including any form air, noise and light pollution.	GRI 305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions. Internal reporting framework: qualitative and quantitative description of the measures taken.	pp. 149-155
Circular economy and waste prevention and management	Measures related to prevention, recycling, reuse and other form of waste recovery and disposal.	GRI 306-2 Waste by type and disposal method.	pp.162-165
	Actions to avoid food waste.	N.A.	-



Social and employee-related matters

Sub-category	Reporting framework	Reference	Comments / Reason for omission	
Sustainable use of resources	Water consumption and water supply in accordance with local constrains.	GRI 303-1 Water withdrawal by source.	pp. 156-161	
	Raw materials consumption and measures taken to improve the efficiency of its use.	GRI 301-1 Materials used by weight or volume.	pp. 162-163	
	Direct and indirect energy consumption.	GRI 302-1 Energy consumption within the organization.	pp. 136; 141; 146	
	Measures taken to improve energy efficiency.	Internal reporting framework: qualitative description of the measures taken.	pp. 134-148	
	Use of renewable energy.	GRI 302-1 Energy consumption within the organization.	pp. 146-147	
Climate change	Relevant aspects regarding greenhouse gas emissions as a result of the company's activity, including goods and services produced by the company.	GRI 305-1 Direct (Scope 1) GHG emissions. GRI 305-2 Energy indirect (Scope 2) GHG emissions.	pp. 166-172	
	Measures taken to adapt to climate change.	Internal reporting framework: qualitative description of the measures taken to adapt to the consequences of climate change.	pp. 166-172	
	Voluntary reduction targets.	Internal reporting framework: quantitative description of voluntary reduction targets.	pp. 148; 166-172	
Biodiversity	Measures to preserve or restore biodiversity.	N.A.	-	The company does not have facilities located in areas of special biodiversity protection or protected, therefore, this indicator is considered as not relevant
	Impacts caused by activities or operations in protected areas.	N.A.	-	

Sub-category	Reporting framework	Reference	Comments / Reason for omission	
Employment	Total number of employees and distribution by country, gender, age and professional category.	GRI 102-8 Information on employees and other workers. GRI 405-1 Diversity of governance bodies and employees.	pp. 14; 95-97	The company reports the total number and distribution of employees by gender, age and professional category; the breakdown of the number of employees by country is not included.
	Total number and distribution of employment contract modalities.	GRI 102-8 Information on employees and other workers. GRI 405-1 Diversity of governance bodies and employees.	pp. 95-97	
	Annual average of indefinite, temporary and part-time contracts by gender, age and professional category.	GRI 102-8 Information on employees and other workers. GRI 405-1 Diversity of governance bodies and employees.	pp. 95-99	The information provided refers to the number of contracts at the end of the fiscal year due to the difficulty to obtain average annual values. Given the company's low turnover rate (4,88%), it is considered a good estimation of the average number of contracts for the year ended March 31, 2020.
	Number of dismissals by gender, age and professional category.	Internal reporting framework: quantitative description of the number of dismissals and their breakdowns.	pp. 98-99	
	Gender pay gap.	Internal reporting framework: (average women remuneration - average men remuneration) / average men remuneration.	pg. 107	
	Average remuneration by gender, age and professional category.	Internal reporting framework: qualitative description of the average remuneration by gender, age and professional category.	-	The company does not report the average remuneration by gender, age and professional category.
	Average remuneration of the Board of Directors by gender.	Internal reporting framework: qualitative description of the average remuneration of the Board of Directors by gender.	-	The sole Administrator and the members of senior management who may hold positions of administrators or board member in the parent company have not received any specific remuneration for this concept.



Sub-category	Reporting framework	Reference	Comments / Reason for omission
Employment	Average remuneration of directors by gender.	Internal reporting framework: qualitative description of the average remuneration of directors by gender.	- The company does not report the average remuneration of directors by gender.
	Implementation of labor disconnection policies.	Internal reporting framework: qualitative description of the implementation of labour disconnection policies.	- The company has no labour disconnection policy.
	Number of employees with disabilities.	GRI 405-1 Diversity of governance bodies and employees.	pg. 95
Work organization	Organization of working time.	Internal reporting framework: qualitative description of the organization of working time.	pp. 108-109
	Number of absenteeism hours.	Internal reporting framework: quantitative description of the number of total hours of absenteeism.	pp. 120-121
	Measures to promote work-life balance and co-parenting responsibilities.	Internal reporting framework: qualitative description of the measures.	pp. 108-109
Health and safety	Occupational health and safety conditions.	Internal reporting framework: qualitative description of occupational health and safety conditions.	pp. 112-122
	Number of work accidents and occupational diseases by gender, frequency and severity rate by gender.	GRI 403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities.	pp. 118-122

Sub-category	Reporting framework	Reference	Comments / Reason for omission
Labor relations	Social dialogue organization, including procedures to inform and consult with employees and to negotiate with them.	Internal reporting framework: qualitative description of the organization of social dialogue.	pp. 100-102
	Percentage of employees covered by collective agreements, by country.	GRI 102-41 Collective bargaining agreements.	pg. 102
	Balance of collective agreements, especially in the field of health and safety.	Internal reporting framework: qualitative description of the balance of collective agreements.	pg. 102
Training	Training policies implemented.	GRI 404-2 Programs for upgrading employee skills and transition assistance programs.	pp. 103-105
	Number of hours of training by professional category.	Internal reporting framework: quantitative description of the total hours of training by professional categories.	pg. 105
Universal accessibility of people with disabilities.		Internal reporting framework: qualitative description of the universal accessibility of people with disabilities.	pg. 111
Equality	Measures taken to promote equal treatment and equal opportunities for women and men.	Internal reporting framework: qualitative description of the measures taken to promote equal treatment and equal opportunities for women and men.	pp.110-111
	Equality plans measures adopted to promote employment, protocols against sexual and gender-based harassment.	Internal reporting framework: qualitative description of the integrated measures.	pp. 110-111
	Integration and universal accessibility for people with disabilities.	Internal reporting framework: qualitative description of the integrated measures.	pp. 67; 179
	Policy against all types of discrimination and, where appropriate, management of diversity.	Internal reporting framework: qualitative description of diversity management.	pp. 110-111

Human Rights

Sub-category	Reporting framework	Reference	Comments / Reason for omission
Application of due diligence procedures in the field of human rights.	GRI 102-16 Values, principles, standards, and norms of behavior. GRI 102-17 Mechanisms for advice and concerns about ethics.	pp. 66-67; 76-77	
Prevention of the risks of violation of human rights and, where appropriate, measures to mitigate, manage and repair possible abuses committed.	GRI 102-16 Values, principles, standards, and norms of behavior. GRI 102-17 Mechanisms for advice and concerns about ethics.	pp. 66-67; 76-77	
Human rights violations complaints.	GRI 102-17 Mechanisms for advice and concerns about ethics. GRI 406-1 Incidents of discrimination and corrective actions taken.	pg. 76	
Promotion and compliance with ILO's provisions related to freedom of association and collective bargaining; the elimination of work discrimination, forced or compulsory labor and the effective abolition of child labor.	GRI 102-16 Values, principles, standards, and norms of behavior. GRI 102-17 Mechanisms for advice and concerns about ethics.	pg. 77; 102	

Corruption and bribery

Sub-category	Reporting framework	Reference	Comments / Reason for omission
Measures taken to prevent corruption and bribery.	GRI 102-16 Values, principles, standards, and norms of behavior. GRI 102-17 Mechanisms for advice and concerns about ethics.	pp. 72-74	

Sub-category	Reporting framework	Reference	Comments / Reason for omission
Measures to combat money laundering	GRI 102-16 Values, principles, standards, and norms of behavior. GRI 102-17 Mechanisms for advice and concerns about ethics.	pg. 75	
Contributions to non-for-profit organizations	Internal reporting framework: quantitative description of contributions to foundations and non-profit entities.	pg. 176	

Society

Sub-category	Reporting framework	Reference	Comments / Reason for omission
Commitment with sustainable development	Impact of the company's activity on employment and local development.	Internal reporting framework: qualitative description of the impact.	pp. 38-39; 176-180
	Impact of the company's activity on local populations and territories.	Internal reporting framework: qualitative description of the impact.	pp. 38-39; 176-180
	Company's relations with local communities' agents and dialogue channels.	Internal reporting framework: qualitative description of the relationships maintained.	pp. 38-39; 176-180
	Partnerships and sponsorship actions.	GRI 102-13 Membership of associations.	pp. 178-186
Sustainable supply chain	Inclusion of social, gender equality and environmental matters in the company's purchasing policy.	Internal reporting framework: qualitative description of the management carried out.	pp. 84-89
	Consideration in the suppliers and subcontractors' relations of their social and environmental responsibility.	Internal reporting framework: qualitative description of the management carried out.	pp. 38-39; 84-89

Sub-category	Reporting framework	Reference	Comments / Reason for omission
Sustainable supply chain	Monitoring systems and audits and results.	Internal reporting framework: qualitative and quantitative description of monitoring and audit systems, and the results.	pp. 86-88
Consumer relationship management	Measures to protect consumers' health and safety.	Internal reporting framework: qualitative description of the measures to protect consumers' health and safety.	pp. 78-79; 113
	Complaint systems.	Internal reporting framework: qualitative description of claim systems.	pp. 68; 80-82
	Complaints received and their resolution.	Internal reporting framework: quantitative description of complaints received and their resolution.	pg. 81
Tax information	Profits obtained by country.	Internal reporting framework: quantitative description of the profits obtained before taxes .	pp. 14; 49
	Taxes paid on profits.	Internal reporting framework: quantitative description of taxes on profits paid.	pg. 49
	Public subsidies received.	GRI 201-4 Financial assistance received from government	-



Independent Limited Assurance Report of the Sustainability Report
for the year ended March 31, 2020

NIPPON GASES EURO-HOLDING S.L.U. AND SUBSIDIARIES



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INDEPENDENT LIMITED ASSURANCE REPORT OF THE SUSTAINABILITY REPORT

Translation of a report originally issued in Spanish. In the event of discrepancy, the Spanish-language version prevails

To the Shareholders of NIPPON GASES EURO-HOLDING S.L.U.

Pursuant to article 49 of the Code of Commerce we have performed a verification, with a limited assurance scope, of the accompanying Sustainability Report for the year ended March 31, 2020, of NIPPON GASES EURO-HOLDING S.L.U. and Subsidiaries (hereinafter, the Group), which is part of the accompanying Consolidated Directors' Report of the Group.

The content of the Sustainability Report includes additional information to that required by prevailing mercantile regulation in relation to non-financial information that has not been subject to our verification. In this regard, our review has been exclusively limited to the verification of the information shown in the chapter 7.4 "Table of contents required under Law 11/2018" of the accompanying Sustainability Report.

Responsibility of the Board of Directors

The preparation of the Sustainability Report included in the Consolidated Directors' Report and its content is the responsibility of the Board of Directors of NIPPON GASES EURO-HOLDING S.L.U. The Sustainability Report was prepared in accordance with the content required by prevailing company law and in conformity with the criteria outlined in the *Global Reporting Initiative Sustainability Reporting Standards* (GRI standards) selected, as well as other criteria described in accordance with that indicated for each subject in the chapter 7.4 "Table of contents required under Law 11/2018" of the Sustainability Report.

The Board of Directors are also responsible for the design, implementation and maintenance of such internal control as they determine is necessary to enable the preparation of a Sustainability Report that is free from material misstatement, whether due to fraud or error.

They are further responsible for defining, implementing, adapting and maintaining the management systems from which the information necessary for the preparation of the Sustainability Report is obtained.

Our independence and quality control

We have complied with the independence and other Code of Ethics requirements for accounting professionals issued by the International Ethics Standards Board for Accountants (IESBA), which is based on the fundamental principles of integrity, objectivity, professional competence, diligence, confidentiality and professionalism.

Our Firm complies with the International Standard on Quality Control No. 1 and thus maintains a global quality control system that includes documented policies and procedures related to compliance with ethical requirements, professional standards, as well as applicable legal provisions and regulations.



The engagement team consisted of experts in the review of Non-Financial Information and, specifically, in information about economic, social and environmental performance.

Our responsibility

Our responsibility is to express our conclusions in an independent limited assurance report. Our review has been performed in accordance with the requirements established in prevailing International Standard on Assurance Engagements 3000 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" (ISAE 3000 Revised) issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC) and the guidelines for verifying Non-Financial Statement, issued by the Spanish Official Register of Auditors of Accounts (ICJCE).

The procedures carried out in a limited assurance engagement vary in nature and timing and are smaller in scope than reasonable assurance engagements, and therefore, the level of assurance provided is likewise lower.

Our work consisted in requesting information from Management and the various Group units participating in the preparation of the Sustainability Report, reviewing the process for gathering and validating the information included in the Sustainability Report, and applying certain analytical procedures and sampling review tests as described below:

- ▶ Meeting with Group personnel to know the business model, policies and management approaches applied, the main risks related to these matters and obtain the necessary information for our external review.
- ▶ Analyzing the scope, relevance and integrity of the content included in the Sustainability Report based on the materiality analysis made by the Group and described in chapter 7.2 "About this report", considering the content required by prevailing mercantile regulations.
- ▶ Analyzing the processes for gathering and validating the data included in the Sustainability Report for the year ended March 31, 2020.
- ▶ Reviewing the information on the risks, policies and management approaches applied in relation to the material aspects included in the Sustainability Report.
- ▶ Checking, through tests, based on a selection of a sample, the information related to the content of the Sustainability Report for the year ended March 31, 2020 and its correct compilation from the data provided.
- ▶ Obtaining a representation letter from the Board of Directors and Management.

Basis for qualified conclusion

The Sustainability Report does not include the number of employees by country, nor the average remuneration of directors by gender nor the average remuneration of employees disaggregated by gender, age and professional category, as required by the Law 11/2018, of 28 December, on the subject of non-financial information and diversity.

Qualified conclusion

Based on the limited assurance procedures conducted and the evidence obtained, except for the impact of the matters described in "Basis for qualified conclusion", no additional matter has come to our attention that would cause us to believe that the Group's Sustainability Report for the year ended March 31, 2020 has not been prepared, in all material respects, in accordance with the contents required by prevailing company law and the criteria of the selected GRI standards, as well as other criteria, described as explained for each subject matter in the chapter 7.4 "Table of contents required under Law 11/2018" of the Sustainability Report.

Use and distribution

This report was prepared in response to the requirement established by prevailing company law in Spain and may not be appropriate for other uses and jurisdictions.

ERNST & YOUNG, S.L.

(signed in the original version)

Alberto Castilla Vida

July 7, 2020

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