

SUSTAINABILITY  
**REPORT**  
**2017**



[www.ntn-snr.com](http://www.ntn-snr.com)



With You

« IT'S NOT A QUESTION OF PREDICTING THE  
FUTURE BUT OF MAKING IT POSSIBLE »

*Antoine de Saint-Exupéry*



## SUMMARY

• Strategy and organization	3
• Social Policy	27
• Partnerships and sponsorship	44
• Business ethics and collaborative purchasing	48
• Environmental issues	56
• Sustainable innovations	89
• Indicators	94



*« WE SHALL CONTRIBUTE TO INTERNATIONAL  
SOCIETY THROUGH CREATING NEW TECHNOLOGIES  
AND DEVELOPING NEW PRODUCTS »*

# STRATEGY & **ORGANISATION**

**NTN**® **SNR**®

[www.ntn-snr.com](http://www.ntn-snr.com)



With You

# Strategy and organization

The NTN-SNR group is well known as a key player in the automotive, industrial and aeronautic sectors. This position, of which we are proud, testifies to our ability to supply high-quality, innovative products and services that deliver excellent performance.

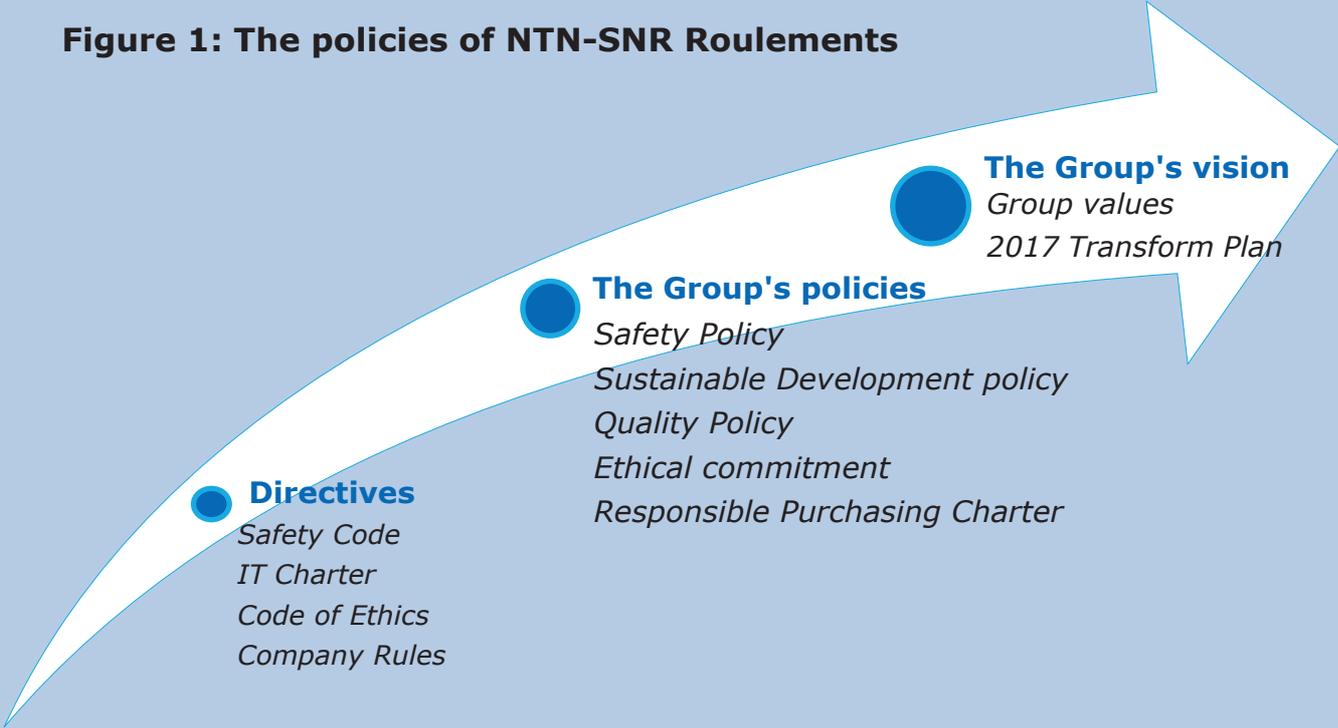
## NTN's philosophy

**“We will contribute to society on a global scale by creating new technologies and developing new products.”**

Thanks to the group's values, we have been able to identify our strengths and challenges and implement a strategy that can fulfil the expectations of our stakeholders. As part of the NTN Corporation, NTN-SNR Roulements respects the principles of the Corporate Social Responsibility Report drafted by NTN.

To implement NTN's philosophy and each of the policies pursued by the company, we have identified our most important social responsibility-related actions.

**Figure 1: The policies of NTN-SNR Roulements**



## Make the world Nameraka...



In 2018, NTN-SNR Roulements joined the select club of the 1500 hundred-year-old companies in France, with a twin anniversary: that of NTN Corporation and that of NTN-SNR Roulements. The history of any big company features women and men who through their energy, expertise and passion give life to the company and help it endure. This centenary is an opportunity to recall the values on which it was built. It is also a symbol, as it lays the foundations of a company ready to take up the challenges of tomorrow. Investments, innovations and social and environmental commitments will enable it to expand in Europe, Africa, Brazil and the Middle East.

^

NTN-SNR puts its environmental and societal commitment at the heart of its business strategy. Its ambition: be an exemplary industrialist.

"Produce technologies that will improve the world for current and future generations by preserving our planet and providing innovative technological solutions. Make the world Nameraka (harmonious)". These words of Hiroshi Ohkubo, chairman of NTN Corporation, reflect the Group's willingness to take up these challenges from day to day.

It is thus quite natural that the three-year strategic plan places special emphasis on Corporate Social Responsibility: the CSR strategy must nurture the Group's global strategy and serve the Company's managerial innovation and economic performance.

The vision and the challenges ahead are a formidable human adventure combining solidarity and inventiveness. Through 8 major formative projects, NTN-SNR is doing its utmost to achieve its ambitions:



1. Recasting the managerial role
2. Boosting organisational performance
3. The new organisation of the CSR (Corporate Social Responsibility) unit
4. Reorganisation of and new tools for R&D
5. Digitalisation projects at all levels of the company
6. Optimisation of the production sites
7. Africa: a fast-expanding market
8. Construction of new administrative and R&D buildings on the Annecy site



In the coming months, we will all have to identify what CSR at NTN means for us and for our stakeholders. Our shareholder, our employees, customers, suppliers and the communities in which we are developing are all contributors to our challenges of tomorrow. CSR is a mainspring of our performance in our ecosystem, we need to identify who we are in this context and the strategic challenges we will have to tackle in the future.

Our CSR policy will meet these challenges.

**Alain Chauvin** Chief Executive Officer

**Elizabeth Battarel** Human Resources Director

## Our commitment

In a world of growing demands, increasing risks and enhanced expectations on the part of our partners, it is essential for our continued success that we maintain an exemplary, responsible, confidence-inspiring professional approach.

NTN-SNR's identity is forged around strong, concrete and shares values: **performance, proximity, team spirit, respect and professionalism**, these are the values that have sustained us for 100 years. Both individually and collectively, the commitments we undertake have real meaning: the commitment to listen to and do our best for the people we work with, live with and act for.



**With You**

## With You, a collaborative and responsible spirit

NTN-SNR's human and technological heritage contributes to its corporate culture, is characterized by proximity and commitment. The European teams develop specific solutions to anticipate and make a success of their customers' forward-looking plans on strategic markets. They partner their challenges in a spirit of dialogue and mutual progress.

This sense of partnership also guides the company's social and environmental approach. Our transparent relations with customers, suppliers and partners are underpinned by a code of ethics based on respect and responsibility. All our production sites are naturally ISO 14001 and ISO 50001-certified for France. Beyond that, our research work creates eco-bearings that cut carbon emissions, energy consumption and production raw materials. Our engineers also take up the technological challenges of wind and solar renewable energies.

---

***NTN-SNR's humanistic and responsible  
values***

---

Social responsibility finds expression at several levels, in particular:

- The development of “win/win” relations with you, our customers, suppliers and partners. Healthy, transparent relations based on communication, the sharing of experience, respect and professionalism.
- The further development of the skills of each of our employees so that we can be at the forefront of our sector.
- All NTN-SNR's employees' due observance of the Code of Ethics, which guides us on a daily basis so that we act in a responsible and humane manner. NTN-SNR is committed to the well-being of its workforce and ensures that working conditions are not detrimental to health and that all necessary measures are taken to guarantee the safety and protection of personnel.

These fundamental principles reflect the way we wish to conduct our relations as part of our group, our markets, and our environment.

NTN-SNR is committed to respecting applicable national and international legislation in the fair and honest conduct of its business.

## The challenges of social responsibility

Conscious of current social challenges and demands, and considering the company's social responsibilities as a means of reasserting its identity and strengthening its cooperative commitments, NTN-SNR Roulements has done its utmost to provide a sincere and clear vision of its activities and commitments in terms of corporate social responsibility, a concept that forms an integral part of the company's strategic plan. It is crucially important to measure the impact of our actions. This is why it is vital to improve the indicators and reporting relating to these various issues:



- Improving the company's performance and the sustainable development strategy and facilitating the dialogue with stakeholders.
- Waste reclamation, recycling and re-use.
- Reducing environmental impacts by implementing strategic action plans such as ecodesign and energy savings.
- Encouraging suppliers, customers and colleagues to adopt ethical, responsible principles.

NTN-SNR's social responsibility strategy started in 2013 with the creation of a CSR Committee and the issue of the first CSR Report which was published together with the company's management report in June 2014. This report is therefore the fifth NTN-SNR Corporate Social Responsibility report.

### Prime movers



The comprehensive nature and relevance of the approach is assured by a groupwork-oriented methodology. A CSR Committee mobilizes the NTN-SNR Group's activities in the field of social responsibility and ensures that they are encouraged and strengthened. It draws up systematic action plans and CSR policies and considers CSR-related questions in all sectors.

The CSR Committee comprises 9 persons from the relevant sectors: purchasing, environment, business ethics, social affairs (training, safety, human relations), societal affairs and communication.

A Management Committee determines Group policy in matters of corporate social responsibility and promotes, disseminates and applies it within the Group. It also deals with questions referred to it by the CSR Committee.



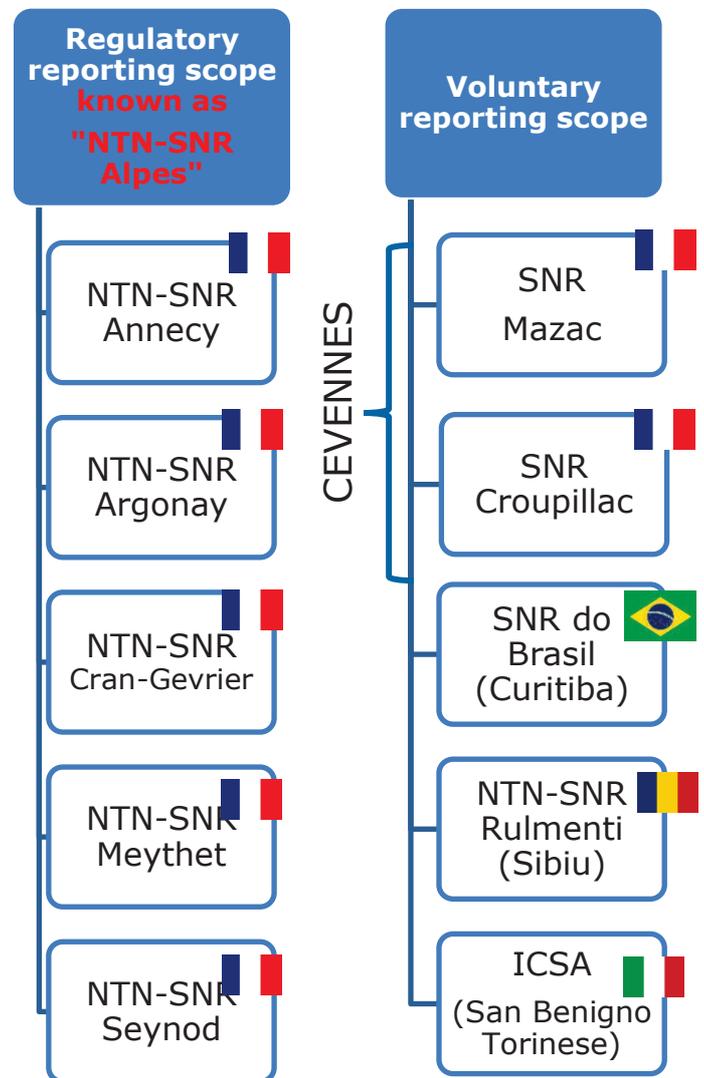
## Reporting scope

This report provides consolidated information on NTN-SNR ROULEMENTS and all its subsidiaries to help monitor developments within the Group and combine the resources and stability of its head office with the flexibility and local vision of its subsidiaries (subject to justified exceptions). This year we have not observed any changes compared with the prior period.

The sales offices in Lyon and Vanves are included in the social data but not in the other parts (environment in particular), as their activity has insignificant impact compared with our manufacturing activities. On the other hand, the production sites in Germany and Morocco share no or only very little information with our head office. They are therefore not included in the voluntary reporting scope for 2017.

There are no plans to include them in the reporting scope in the short term, although this has not been definitively ruled out.

## NTN-SNR Group



**This report covers 90 % of the employees of the NTN-SNR Group and its subsidiaries.**

**100 % of the statutory reporting scope is covered.**

Each sector has chosen a position in the consolidation scheme in the light of the services it offers, as indicated in the diagram below. Each sector collects the data applicable to its scope via the central function data contributors in the case of NTN-SNR France and directly on site in the case of the overseas sites

Data from all the sites is aggregated directly with Tennaxia Reporting software application.

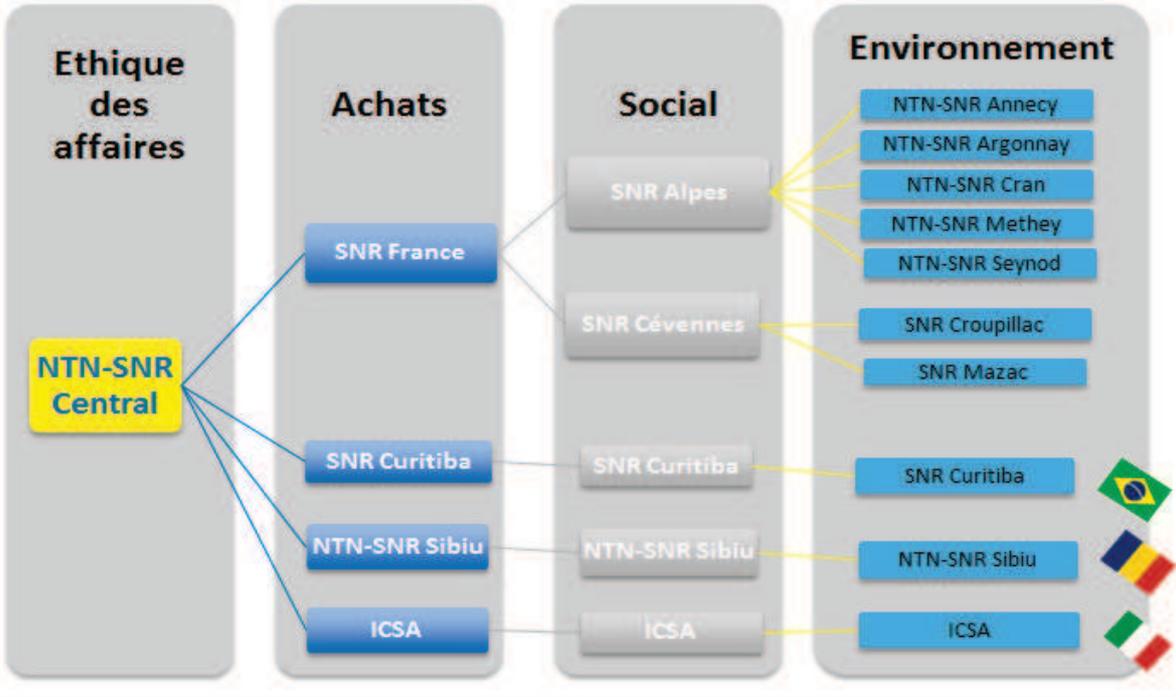
**Reporting period:**

This report presents the data observed during the fiscal year ended 31 March 2018, that is to say the period 01/04/2017 to 31/03/2018 (fiscal year 2017). However, the social data for the Alpes and Cévennes reporting scope sites is an exception; as it is still based on the calendar year, so that it can be compared with reports already published on the basis of the same data (for example, social report, training plan), and which must, as provided for by law, coincide with the elapsed calendar year (01/01/2017 to 31/12/2017). Please note however that there were no significant events in the social domain during the period from 01/01/2018 to 31/03/2018.

The indicators used to comply with regulations have been taken from the **Global Reporting Initiative (GRI)**. The correspondence between these indicators and those used in the GRI is indicated in the appended cross-reference table. This appendix complements and provides further details concerning the data taken from the statutory text, which is not presented in this report.

**Data capture:**

In order to check the accuracy of the data taken from CSR reporting, “source” files were created to record the source or references of the collected data. In cases where some data derived from French regulations is not applicable to all foreign sites, data corresponding to the relevant jurisdiction is provided if equivalent regulations exist.



**Above figure: Internal organization for data collection**

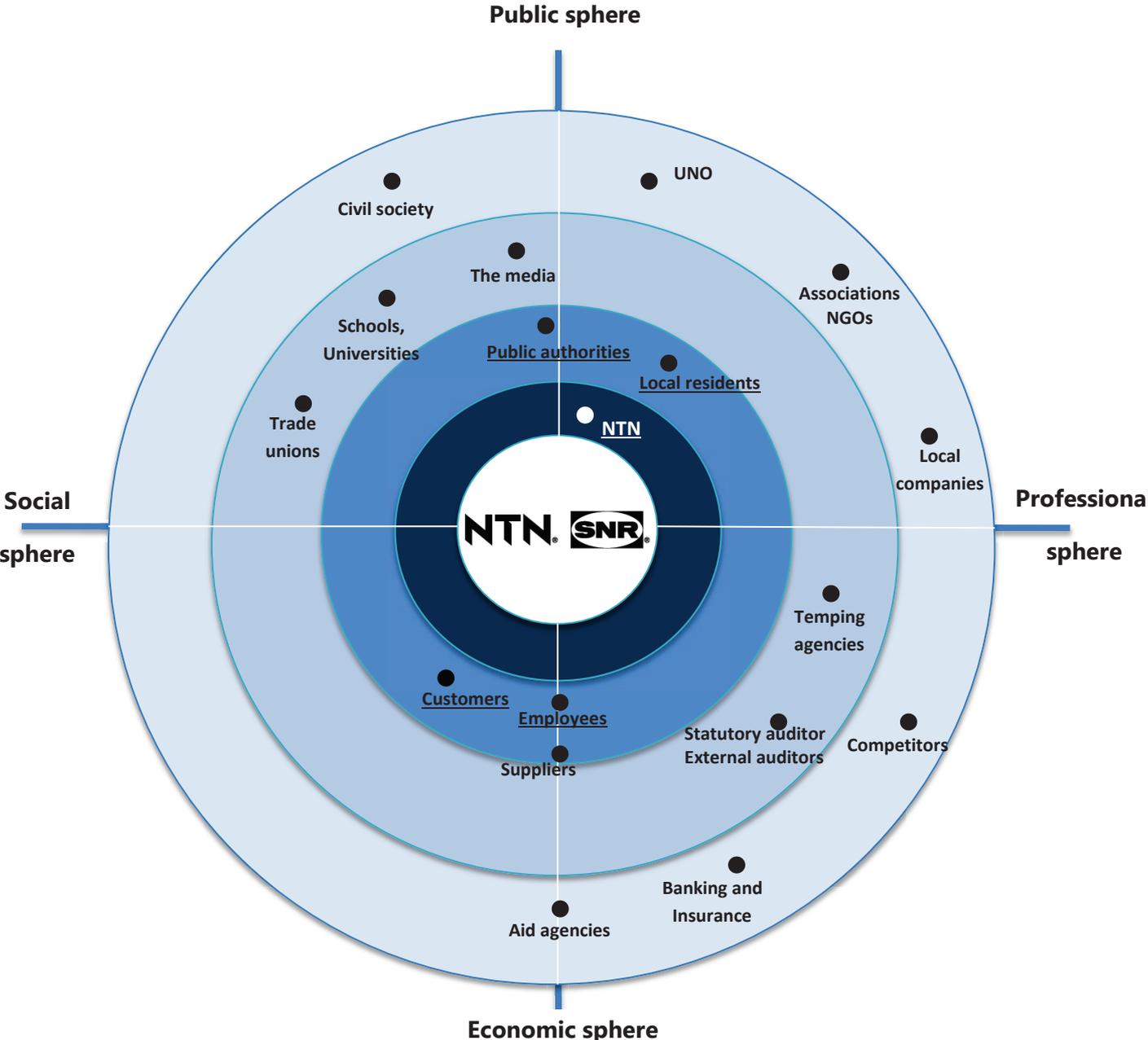
# Our stakeholders

NTN-SNR has identified its stakeholders with a view to forming lasting and trustworthy relationships. We undertake to consider all identified stakeholders and understand their expectations.

Our 6 key stakeholders are our parent company, our customers, our employees, local residents, public authorities and suppliers.

We maintain dialogue with these strategic partners via the Climate Club, the DREAL, the Prefecture, via NTN directives, and we are starting to think in depth about a more appropriate communication mode with our employees.

The demands of the local residents are taken into consideration as rigorously as possible via the Environmental management system.



# Global Compact



NTN Corp signed the Global Compact in March 2015. This United Nations initiative aims to encourage companies to adopt a socially responsible attitude.

So it is essential for NTN-SNR to embrace this initiative, in order to adopt a common vision with our shareholder on these issues of paramount importance. In concrete terms, endorsement of this charter implies compliance with 10 principles divided into 4 categories.

## Human rights

- 1) **NTN-SNR** undertakes to promote and comply with international law on human rights in its sphere of influence;
- 2) **NTN-SNR** ensures that its own entities are not party to human rights violations;

## Employment law

- 3) **NTN-SNR** undertakes to respect freedom of association and recognize the right to collective bargaining;
- 4) **NTN-SNR** undertakes not to have recourse to any form of forced or compulsory labour;
- 5) **NTN-SNR** undertakes not to have recourse to child labour;
- 6) **NTN-SNR** undertakes to eradicate discrimination in matters of employment and occupations;

## Environment

- 7) **NTN-SNR** undertakes to adopt a precautionary approach to environmental problems;
- 8) **NTN-SNR** undertakes to take initiatives promoting greater environmental responsibility;
- 9) **NTN-SNR** undertakes to favour and propagate environmentally-friendly technologies;

## The fight against corruption

- 10) **NTN-SNR** undertakes to fight all forms of corruption, including extortion and bribery.

11)





## Our CSR performance

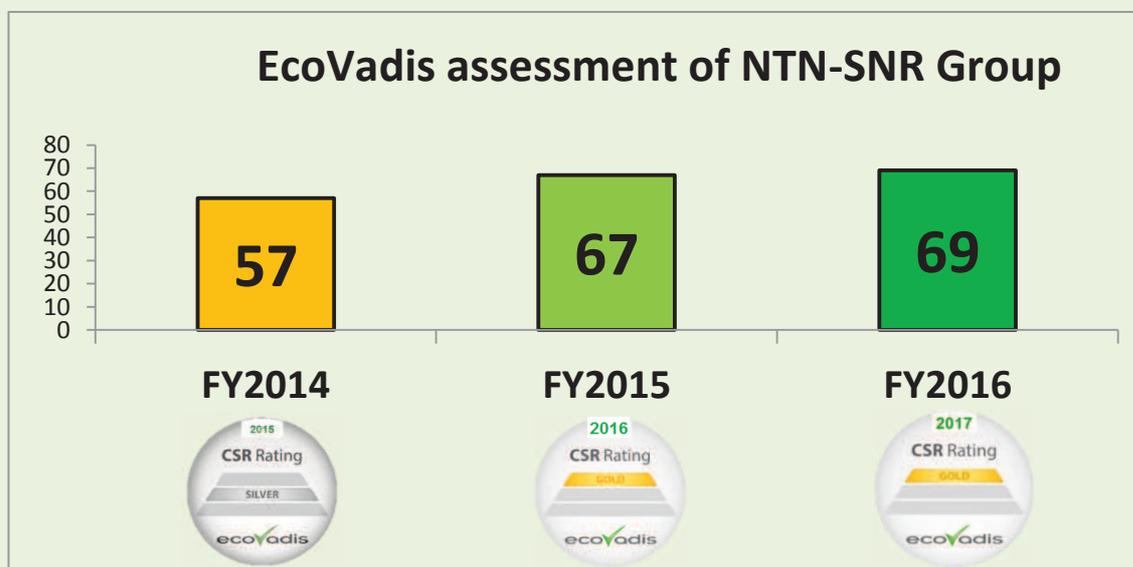
In order to assess our CSR performance as objectively as possible, we work closely with the online discussion and assessment platform EcoVadis. This online platform is an interface between customers and companies for sharing and circulating information on social responsibility.

The ECOVADIS assessment enables us to identify areas in which we can further improve our performance, capitalize on our approach and place ourselves in relation to other companies in our sector.

**Our goal:** go even further in matters of CSR to make NTN-SNR a resolutely forward-looking sustainable company.

For instance, we complete an annual questionnaire to assess our CSR performance. For our last assessment in December 2017 (based on the 2016 CSR report), we scored **69/100**, putting us in the **top 1 %** of companies assessed in our industry segment. With its Gold commitment level, NTN SNR is now listed as an "advanced" CSR provider.

### Improved CSR performance:



#### What our rating means in the EcoVadis framework:

**69/100**

**TOP 1%** of  
assessed companies

Structured CSR approach

Quantified commitment and tangible action in all areas

Detailed information on implementation

CSR reporting on actions/performance indicators

# Structuring progress around NEO



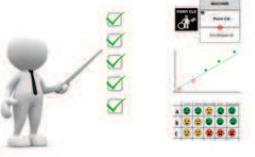
## In the words of Denis Grasset - Operational Excellence:



"NEO is above all an approach that aims to improve the overall performance of the company by making sense of each other's actions on a daily basis. NEO focuses on peoples' states of mind and behaviours to bring more rhythm, more reactivity and more desire to everyone's commitments across the full range of NTN-SNR's operations."

In parallel with the roll-out of "factories of the future", NTN-SNR has sought to implement a process of ongoing progress for all of its factories.

NEO is organised around 6 guiding principles:

 <p><i>Ceux qui savent sont ceux qui font</i></p>	 <p><i>Pas de progrès possible sans mesure</i></p>	 <p><i>Le progrès à petits pas</i></p>
<p><b>People who know are people who do.</b> 600 people were trained 1000 people are involved</p>	<p><b>No progress without measurement.</b> « Field » measures in half of the production sectors</p>	<p><b>The progress step by step.</b> 75 spheres launched 40 spheres discounted</p>
 <p><i>Ecrire le standard</i></p>	 <p><i>Développer le management visuel</i></p>	 <p><i>Rien n'est impossible</i></p>
<p><b>Write the standard.</b> Driving standards were written in one in three area</p>	<p><b>Develop visual management.</b> 150 means with shown key points.</p>	<p><b>Nothing is impossible.</b></p>

Since June 2015 and following various training courses in partnership with ECAM Lyon (a French engineering school), NTN-SNR has deployed its operational excellence initiative, setting up more than 100 efficiency-oriented projects. The first stage of this initiative involved more than 400 operators being coached on a training platform at the Seynod site. As of today, Denis Grasset is looking for ways to communicate these non-production working methods. Indeed, the company wants to be more involved and more reactive: to implement actions that deal with identified problems.

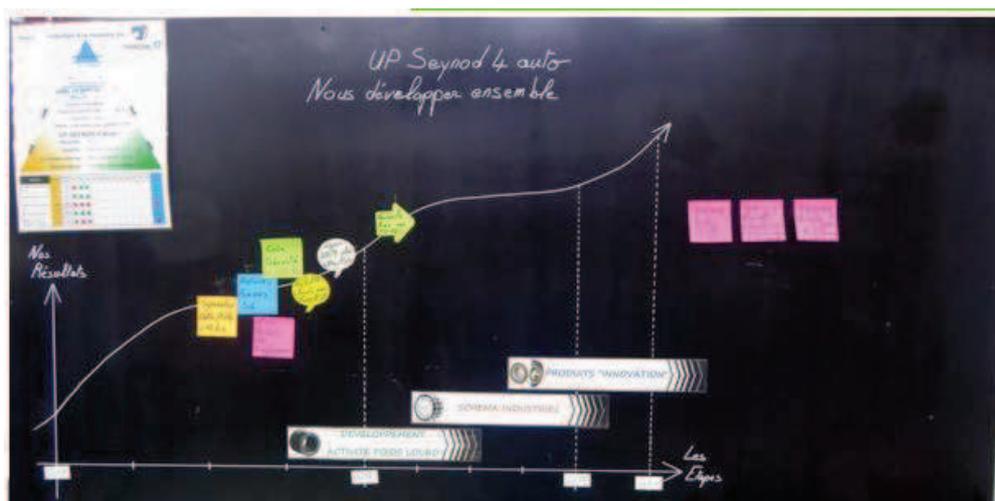
A first step is to work on the "irritants" - the everyday problems encountered by employees that prevent them from working effectively. And it is only after working on these "irritants" that solutions will be brought in to increase workplace performance.

While NTN-SNR does not prioritize standards or tools, it will provide guidelines. Each department will choose the means/tools best suited to its working methods in order to improve and progress.

This approach is consistent with corporate strategy, as it is strongly supported by Management. COMEX members will also be trained in this methodology on 14 June by ECAM Lyon.

Roadmap management will enable employees to have a common overall vision of the desired objectives. These will be broken down into several steps/targeted actions, each with a means of measuring progress, a deadline, and an identified driver. These actions will be prioritized based on resources.

*Roadmap examples:*





## ACTION SUPPORTING THE 2017 TRANSFORM PLAN:

# The factory of the future

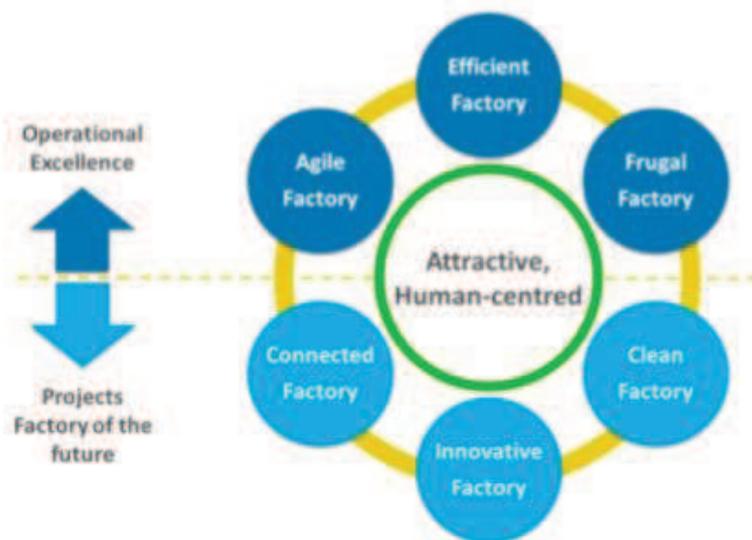


Our willingness to develop the ideal factory, now part of the “Showcases of Future Industry”, stems from a reflection we initiated in 2012 that enables the company to make progress and contribute to its sustainability;



## The factory of the future

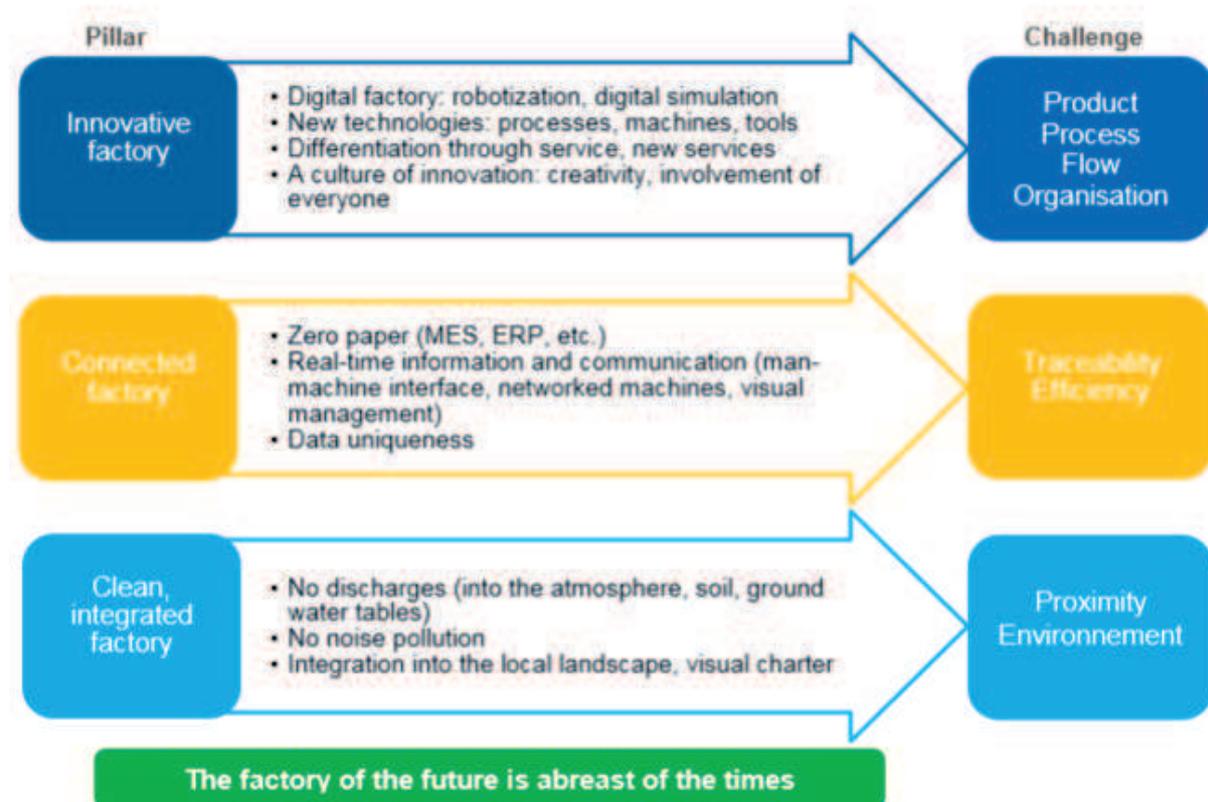
NTN-SNR has constructed new buildings on its sites of Alès and Argonay as part of the development of its Automotive and aeronautics offering. These factories are gradually being fitted out in an innovative manner within the framework of the “Factory of the Future” project



### ***How have these factories of the future been conceived?***

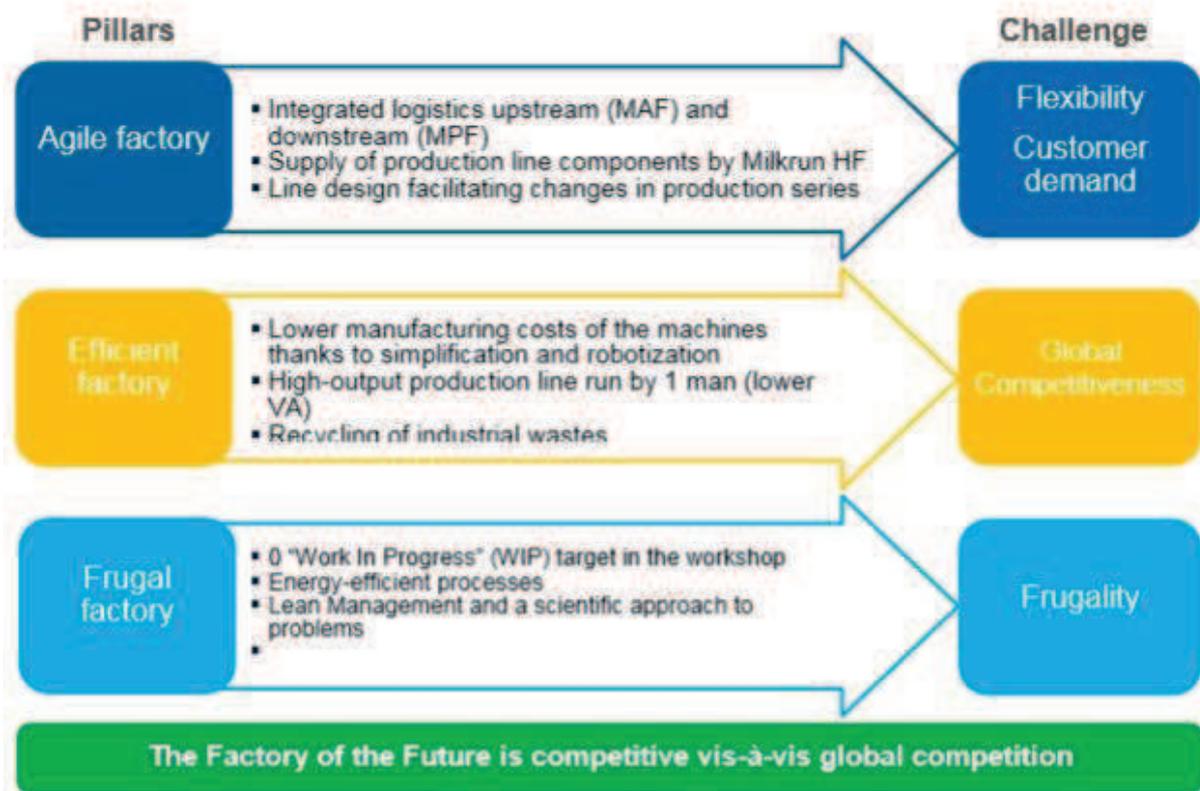
We started by defining our vision of the “Factory of the Future”: this is a key stage, because all projects need a guiding principle. We retained: “Believe in ideas to construct major projects”. Because we want to set very ambitious goals aimed at achieving a “breakthrough” by being very innovative in our ideas.

Our prime objective is that of the Human-centred Factory, which is meant to be attractive and instructive for our employees.



### ***In concrete terms, what solutions have been selected?***

Let's take the example of the “Innovative Factory”: we applied our solutions in our products (3<sup>rd</sup> generation bearings), in our processes (robotization of the machines, face spline, post-processing) and working conditions (physical and cognitive ergonomics, continual improvement in production, etc.).



The factory of the future is structured around six pillars that enable us to address environmental issues, efficiency, organization, competitiveness, frugality and naturally the customer. The innovative factory finds expression in the use of new technologies, digital simulation and a culture of innovation. The connected factory helps us strive for "zero paper" while offering the company real-time data communication. The clean, integrated factory for its part aims to eliminate discharges and environmental pollution.

The Agile Factory aims to improve logistical aspects, the Efficient Factory strives to lower manufacturing costs and improve output, and lastly the Frugal Factory aims to improve energy efficiency.

## The Industry of the Future concerns all internal and external stakeholders:

- **Employees:** welcoming, rewarding, instructive
- **Customers:** efficient
- **Suppliers:** sustainable, responsible
- **The shareholder:** profitable
- **Local stakeholders** (economic and state): creating jobs, with a powerful image
- **Local residents:** integrated into its environment, clean
- 



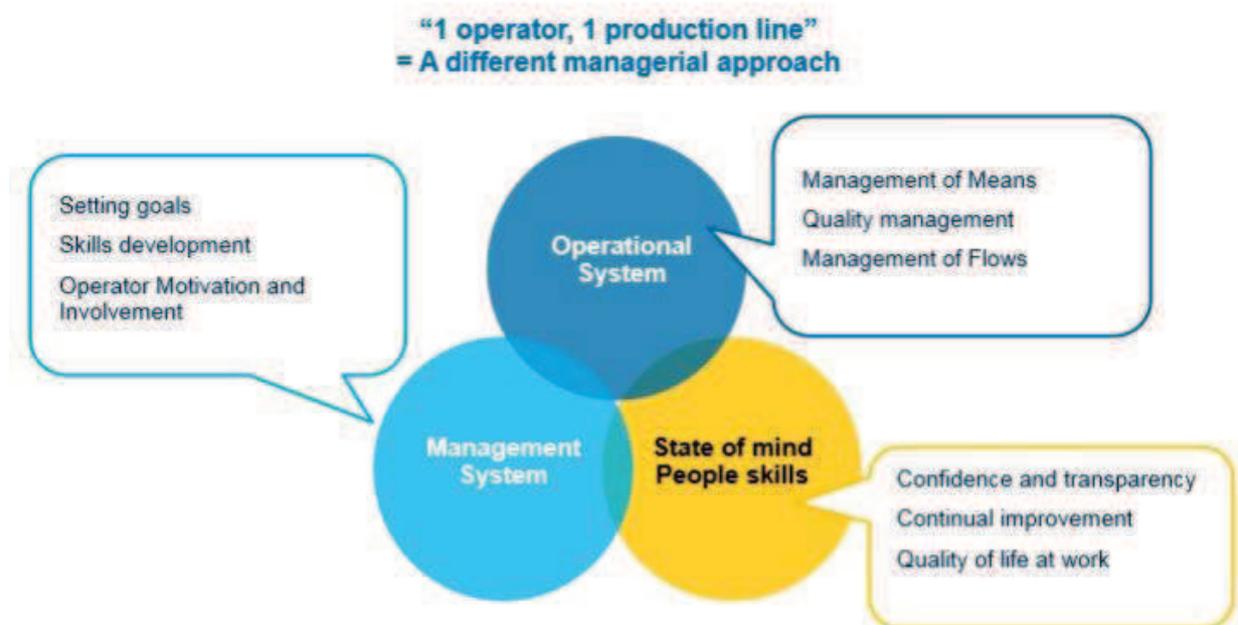
The industry of the future can only succeed with the help of:

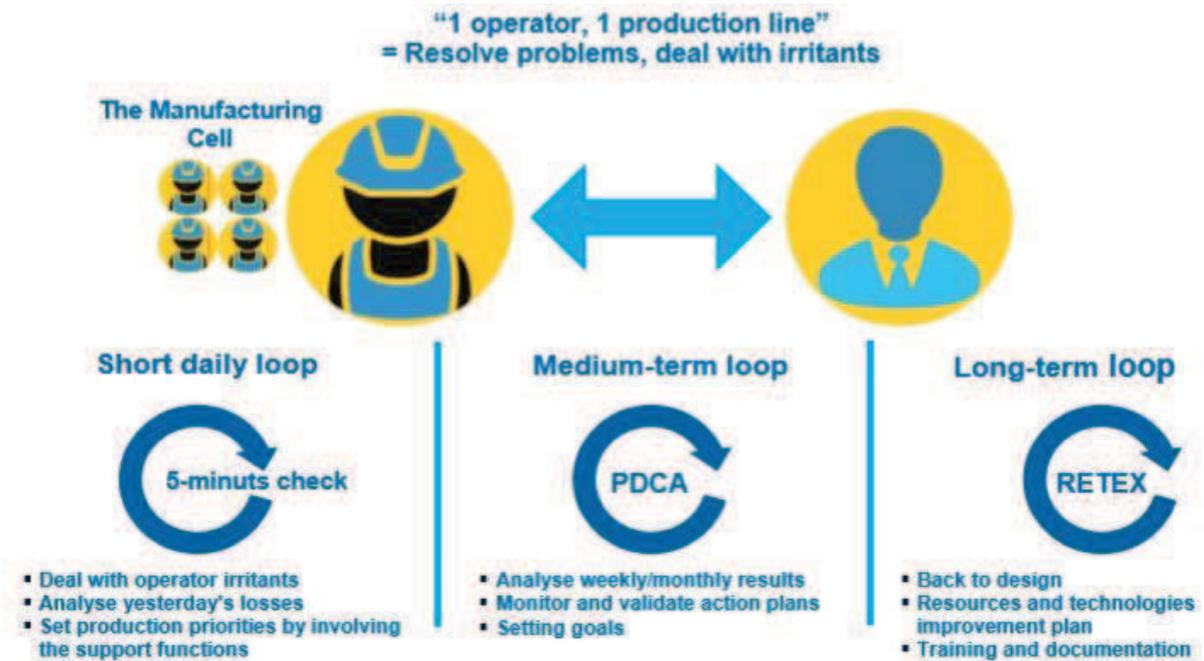
- The industrialist himself
- All the personnel endorsing the project
- The confidence of its customers and suppliers
- All local stakeholders  
(Town/city, Department, Region, Government departments, Europe)

## Man's place in the factory

“The Industry of the Future presupposes factories for people, built and shaped by people”

The factory of the future is meant to be human-centred. Ergonomics is a key challenge: everything has been designed to prevent operators from having to handle parts. Training is also central to this project, encouraging self-reliance and twofold competence (production and metrology for instance). Lastly, procedures will be standardized and tools easily accessible, to increase swiftness of action and reduce arduousness.





The "factory of the future" approach to man's place in the factory is based on "1 operator, 1 production line". To that end 3 loops are used: a short daily loop for a regular check of production; a medium-term loop to analyse results and set goals, and a long-term loop with a more global outlook on training and design, among other things.

### Safety:

- Delivery of components and removal of finished products by "mini-train"  
No forklift trucks in the workshops → Increased pedestrian safety

### Acceptance criteria:

The Showcase Factory is located **within the country**

It has a **predominantly domestic supply**

The Showcase Factory presents a concept that is easy to communicate (e.g.: Cobots in X Industry

providing welding assistance);

The Showcase Factory contributes to the manufacturer's **strategic objective**;

The outlook for operational and/or business gains is good;

Innovation lies in the **integration of a group of technological and near-mature digital solutions**

This is a **novel approach within the sector**, at least in France;

The implemented technological solutions are **portable/adaptable** either within the sector or across other sectors;

The Showcase Factory forms part of a **sustainable development** approach:  
It supports or integrates the recognition of environmental impacts;  
It supports or integrates the recognition of social impacts (employment, changes in professions and organizations, training and security);  
It anticipates the impacts on the ecosystem (territory, suppliers, customers).

The manufacturer encourages the **long-term grouping of suppliers** to create a comprehensive range of products, especially for exports.

## Argonay – The factory of the future

*Along with innovation and performance, environmental and corporate social commitment are the heart of NTN-SNR Roulements' corporate strategy. The company's goal is to be an exemplary player within the industry. The Argonay factory illustrates these three dimensions perfectly, with a new 3,800-m<sup>2</sup> production facility adding to the existing 9,800 m<sup>2</sup>, which is dedicated to aeronautics.*

## Performance process and machines

### Cutting-edge machinery and processes

- New thermochemical nitriding treatment as well as carburizing and vacuum heat treatment, leading to a reduction in processing times via the integration of multiple operations
- Industrialization of new grinding processes to meet customer requirements
- Complex, best-in-class milling machinery
- New three-dimensional measurement process, with improved repeatability and reproducibility

### A connected, paperless factory

NTN-SNR has implemented an MES (Manufacturing Executive System) that is directly connected to its ERP (Enterprise Resources Planning).

This system allows the operator to have all the production data (technical data about the factory, plans, operations to be carried out, etc.) available on his/her screen. It can hence monitor the production indicators and manage production in real time. The system also enables the transmission of traceability data, supported by similarly connected measuring devices.

The factory is paperless, with 100% traceability.

### An efficient, flexible factory

Production time is quartered (from 60 to 15 days). This is in response to an increase in output and to deadlines set by customers, allowing for a service rate of 95% to be achieved.



### **A high-quality organization that guarantees compliance, reliability and traceability.**

With more than two to three audits per month, the factory is certified on multiple levels:

- ISO 9001 and EN/AS 9100 (aeronautics quality certification)
- PART 21 - G production approval (commercial civil aviation)
- NADCAP (Special Process Certification: Nondestructive Testing and Thermal Treatment)
- PART 145, FAR 145 and CCAR 145 Repair Approvals from European, US and Chinese authorities (for commercial civil aviation bearing repairs)

### **The people-centred design of the "factory of the future"**

- A new architectural charter for factories aimed at creating more pleasant living and working spaces
- Ergonomic studies performed at each station or production site to reduce physical stress
- A new definition of operational standards to reduce employee's cognitive load
- Numerous training programs provided directly by suppliers of machine tools and devices

## **An eco-designed factory**

### **Protect the natural environment**

- Settling and holding ponds to store rainwater before it is discharged into the natural environment
- Anti-pollution devices in the rainwater collection network
- Protect comfort levels of others in the vicinity
- Silencers installed at each air treatment outlet

### **Improve the indoor environment**

- Reversible air conditioning flowing near to the floor
- A treated ceiling for improved acoustic comfort

### **ISO 50001 certification for the building's energy performance**



*« WE READILY COMMIT TO PROTECTING  
THE MEN AND WOMEN WHO MAKE OUR  
COMPANY WHAT IT IS TODAY »*

SOCIALLY  
**POLICY**

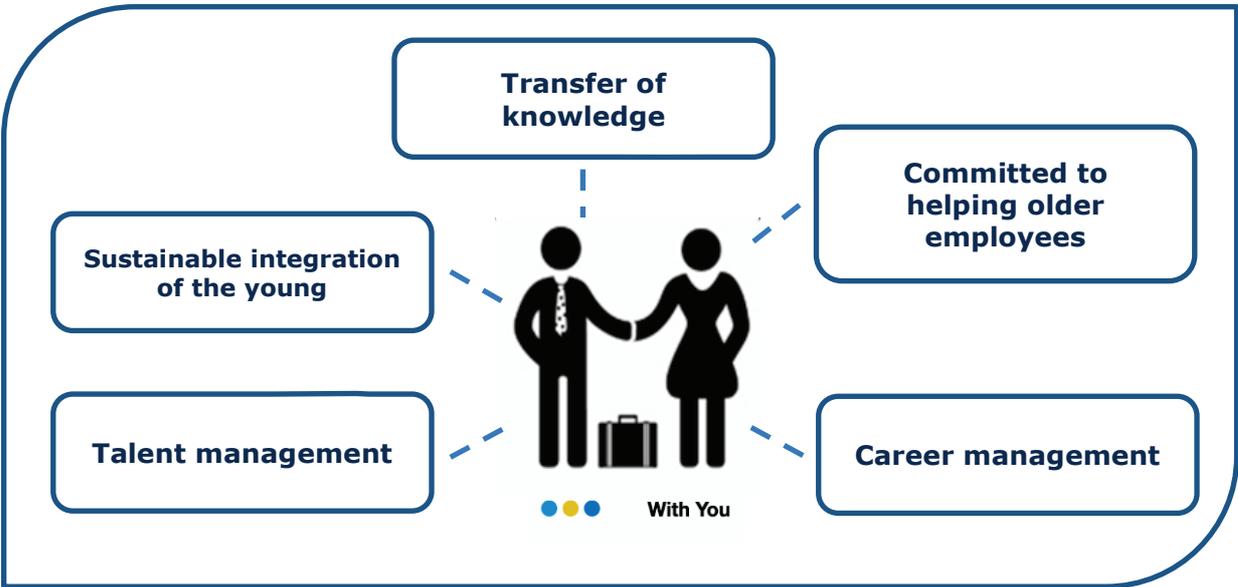


[www.ntn-snr.com](http://www.ntn-snr.com)  
● ● ●  
With You

# SOCIAL POLICY

## A people-centred company

NTN-SNR seeks to apply a people-centred approach to management. The company ensures the principles of equal employment and non-discrimination from the time of recruitment and throughout the career of its employees. The Group wishes to promote intergenerational bonds by organising conditions enabling transfers of knowledge between older staff and young newly-hired staff. NTN-SNR is also committed to designing an ergonomic work environment to ensure the health and safety of employees.



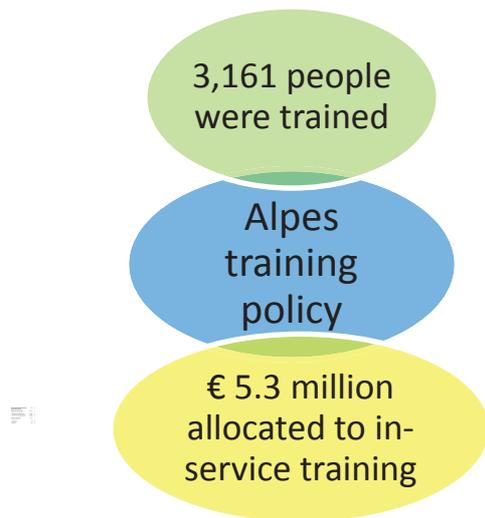
## NTN-SNR: Largest private employer in the two Savoy departments

The NTN-SNR group's foothold in the 2 Savoy departments has once again been demonstrated through its ambition to consolidate the Annecy site as head office, and by investing more and more in research and development. NTN-SNR Roulements plays a key part in stimulating several labour market areas in France and abroad, by creating several thousand direct and indirect jobs in all occupational categories. In 2017, NTN-SNR Alpes had more than 2,800 employees.

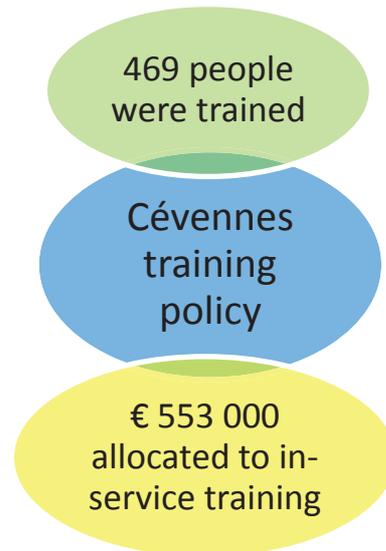
In France, NTN-SNR has worked closely for many years with companies in the sheltered employment sector in both the Annecy region and in Alès.

# TRAINING

## Training at the NTN-SNR ALPES sites



## Training at the SNR CEVENNES sites



NTN-SNR has more particularly placed emphasis on training in labour relations. Previously reserved for managers, it is now extended to all employees. Managers and HSWCC members attend a 2-day training session and the rest of the personnel a 2-hour session.

In 2017 NTN-SNR Alpes saw record figures:

**59,111 hours of training completed**

(All areas combined except for Individual Training Plans)

More than 150 employees underwent the Quality of Work Relations program. The other most frequently covered training themes were:

- Training for new recruits
- Technical training and advanced occupational training
- Safety
- Quality

For many years, NTN-SNR has been developing an internal training policy. The key elements of these programs was the same as in the previous years, with training courses designed to assist newly recruited personnel and training plans relating to the acquisition of new skills.

The company also gives staff working in the production facilities but without any higher qualifications in mechanical disciplines the opportunity to study for a CQPM (Certificat de Qualification Paritaire de la Métallurgie / Equivalent Metalworking Qualification Certificate) and also offers engineering training for employees, technicians and supervisors. This year 21 operators obtained a CQPM.

As continuing professional training is one of the key success factors for internal mobility, NTN-SNR endeavours to develop the skills of its employees and helps them acquire new skills through very big investments in this respect. NTN-SNR's ambition is also to enable each employee to maintain their employability.

Since NTN-SNR has deployed a skills approach that consists in:

- Identifying jobs and making known the occupations in the 11 skills areas
- Describing the key skills
- Creating the related HR management tools (skills interviews, standard training plans, recruitment profiles and a chart of career paths).

Since 2015 NTN-SNR has accelerated the skills approach to include **all subsidiaries in the NTN-SNR group's reporting scope** in it (at the end of the business plan), create symbiosis with the Training and Employment policies, make the **action plans** genuine **drivers of performance, develop skills** and incorporate **future-oriented** thinking on skills areas and occupations.

The project now aims to **develop skills** and **anticipate developments** in the core activities.

## ***ON-SITE TRAINING TO BRING MEANING TO WORK!***



From 19 to 23 June 2017, a week was dedicated to training production workers. The group trains its employees to meet customer expectations via the Together for Customers initiative. This highly entertaining training program allowed employees to gain a better understanding of customer expectations. It also gave meaning to their work, as their professional roles are closely linked to the equipment of many major brands.

## EMPLOYMENT: THE WORKFORCE

In terms of recruitment, 2017 was marked by appointments in all occupational categories (655 permanent employment contracts). At Group level, 61 % of recruitments were for manual positions and 25 % were for technicals and supervisory positions.

These recruitments were made to assist in the development projects and significant activities undertaken by NTN-SNR ROULEMENTS in a context of very low turnover.

### Respect for human rights and diversity

NTN-SNR is committed to creating a working environment free from discrimination in which all human rights are respected. The agreements reached within the group, such as the agreement on equal employment between women and men or the generational contract, help create a working environment that respects differences between employees, regardless of gender, age, origin, status, etc.

NTN-SNR has created a framework allowing everyone to reconcile the demands of professional life with family responsibilities, including partnerships with nurseries to provide childcare opportunities for employees.

NTN-SNR is also committed to improving working conditions by facilitating part-time work for older staff, through ergonomics measures and support for older staff approaching retirement age with special working hours and arrangements facilitating a serene transition from working life to retirement.

### Work placements and work-study programme: two pillars of the recruitment policy



NTN-SNR shows its commitment to young people by offering a comprehensive programme of work placements and work-study apprenticeship contracts. In 2017, the group offered more than 200 courses (140 in Alps and 46 in Cevennes). The Group is committed to pursuing a proactive policy, organised by our Human Resources department, that meets our legal obligations and enables

trainees and apprentices combining work with periods of study to learn their future occupation and acquire professional experience in a rewarding and diversified working environment. An extremely wide range of traineeships is available. This reflects the variety of profiles we are looking for in the light of the diversity of occupations practised within the Group. In recent years, the company has increased number of work/study apprenticeship contracts it offers (up from 15 to over 40 young people per year). At the same time, the group wants to create and maintain strong relations with teaching establishments (engineering colleges, technical and professional academies, university technical faculties).

**“The students we take in today may one day be job applicants, customers or suppliers”**

### Career path management

Internal mobility is a key area of the NTN-SNR group's social policy. The agreement on career path management, signed on 15 December 2016 within NTN-SNR ROULEMENTS, aims to further develop internal career advancement opportunities for each employee with the , regardless of age, gender and level of qualification. To this end, the role of HR management committees has been strengthened in order to streamline mobility processes. Forecasting has been made a central component of HR processes, including the Employment and Expertise Forecast Management program. In particular, these measures address the sustainable integration of young people under 30 and employees aged 55 and over. Access to information has also been improved so that all employees know about promotion and career opportunities within the Group.



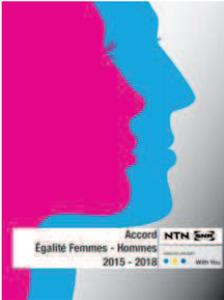
### Preserve the intergenerational bond

NTN-SNR has also reaffirmed its commitment to maintaining intergenerational bonds by again signing an agreement on the generational contract in December 2016. Irrespective of their age, only the skills of employees determine their access to employment and career advancement within the Group.

Thus many objectives have been set in the generational contract, including a commitment to continue hiring the over-fifties and young people on permanent employment contracts. NTN-SNR has committed to hiring an average of 40 % of under-30s and 5 % of people aged 50 or over.

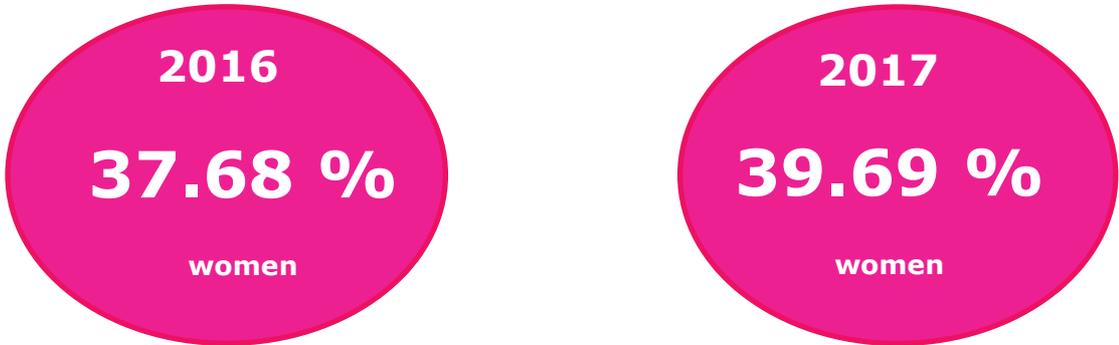
### Gender equality

The gender equality agreement, signed by all the trade unions (CFDT, CFE-CGC, CGT, FO and SUD) on 19/11/2015 for a period of 3 years (at NTN-SNR France) formally sets out promotion objectives and NTN-SNR's willingness to promote gender equality in the company in all areas of working life (hiring, training, wages, etc.).



**Changes in female workforce**

Women represent an increasing proportion of new NTN-SNR employees. From 2014 to 2017, the female workforce increased as follows:

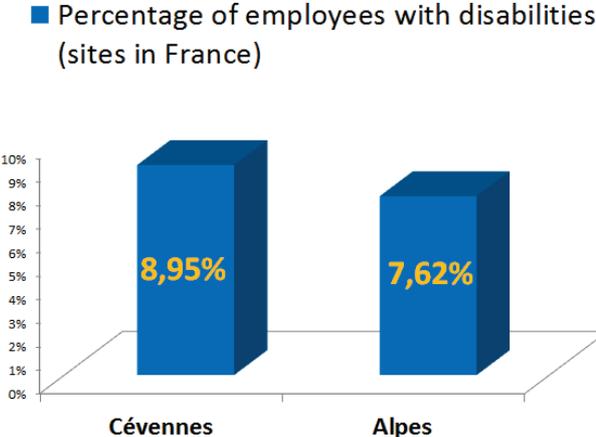


**Foreign workers**

We also take on repatriated staff, in particular from Japan. Foreign workers make up 3.9 % of the workforce. French lessons are paid for by the company.

**Facilitating the recruitment of persons with disabilities**

NTN SNR has taken pains to hire people with disabilities for several years. These efforts go further than simply meeting statutory requirements, even though the obligation concerning employment of workers with disabilities (Act of 10 July 1987) is a necessary baseline that has always been heeded.



The figures in the 2017 social report demonstrate the Group's intention to facilitate the direct and indirect recruitment of persons with disabilities. Disabled workers in France represent more than 7 % of the reference workforce, so more than the legal minimum of 6 %.

Foreign sites are introducing awareness-raising measures to encourage the provision of jobs for disabled workers and suitably adapted workstations are available to all personnel.

## **NTN-SNR INCENTIVISES ITS HUMAN RESOURCES THROUGH DIALOGUE WITH ITS SOCIAL PARTNERS**

NTN-SNR is highly committed to the quality of the dialogue with its social partners because to improve individual and collective performance, it is necessary for all personnel to feel involved and to subscribe to the company's objectives.

To that end, NTN-SNR draws on:

- The skills and initiative of its employees;
- Individual mobilisation on a daily basis;
- The resourcefulness of everyone and cohesion in action.

Communications with employees take various forms, being conducted at either an institutional level, in the case of the social partners, or individually through more focused communications activities relating to professional knowledge, an understanding of how the company operates or our commitments in terms of sustainable development.

The bodies that represent the personnel at the Alpes site are the Works Council (WC), the shop stewards and the Health, Safety and Working Conditions Committee (HSWCC). Local and central union representatives and representatives of the Board of Directors also work at the Alpes site. A representative of the trade union branch also works at one of the Alpes sites.

Agreements can also motivate employees thanks to their positive impact on working conditions, as well as improving the company's economic performance.

Three agreements were signed in 2017:

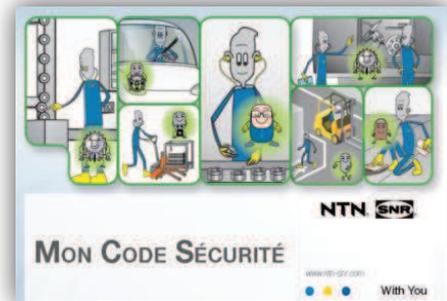
- an agreement relating to profit-sharing.
- A pay agreement.
- An agreement relating to PERCO (a collective pension fund)

## HEALTH AND SAFETY AT WORK: A SHARED COMMITMENT

Safety is one of the Group's key values and a priority of company policy. In this respect and mindful of these obligations, the directors and senior management of NTN-SNR Roulements take all the necessary measures to ensure the health and safety of their employees and, more generally anyone working in the company.

### ***A Code of Safety to control risks***

Familiarisation activities, training events, respect for the rules, collective and individual protection mechanisms and equipment, as well as feedback regarding any malfunctions, make it possible to control risks and work in safety. A **Code of Safety**, which constitutes a vital tool for accident prevention within the company, has been drawn up to help control risks and prevent any mistakes which could jeopardise the well-being of anyone performing activities within the company and cause accidents.



### ***Safety policy and management system***

The approach to preventing workplace accidents and occupational illnesses with the NTN-SNR Group is based on a Safety Management System (SMS) together with the company's **Safety Policy**.



## SAFETY POLICY

**NTN-SNR GROUP undertakes to:**  
Make the Safety of people and property a strong value of the GROUP and a priority of the company's policy



**The following principles are applied:**

- Comply with regulations and good practices on all NTN-SNR GROUP sites.
- Integrate Safety, Ergonomics and Working Conditions into the design of our equipment, work stations and related instructions.
- Develop preventive actions ensuring Safety in all operational processes.
- At both an organizational and a technical level, take any measures that avert fire risks.
- Adopt exemplary conduct and abide by commitments in order that we all pursue the ambition of "Zero Accidents, Zero Occupational Illnesses".
- Communicate regularly about our objectives and actions.
- Share Safety policy with all the personnel and all our partners.

22 February 2016

A. CHAUVIN  
Chairman and CEO

D400005

At NTN-SNR, the Safety Management System is structured around 5 pillars:

- The Safety Manual
- The Audit Guide
- The Labelling Process
- The Audit Matrix
- The "Who does What"

NTN-SNR is committed to making the issue of safety and working conditions one of its key values and a priority in its company policy, in order to sustain its track record.

The work undertaken in order improve safety must:

- be performed using the Plan, Do, Check, Act schema;
- ensure constant improvement (for instance, meet Group targets with regard to safety indicators, constant compliance with the Safety Manual, etc.);
- Be consistent with "basic" safety principles.
- While ensuring due compliance with regulations.

**Some safety statistics** (for France, Brazil, Romania and Italy):

**81** projects completed in 2017

**€1,175,000** budget for the safety of people, property and fire prevention

## Labelled Safety Management Systems

All the Group's sites are engaged in a "Health, Safety & Working Conditions Management System" quality certification process renewed every 3 years, awarded subject to an audit conducted by an external organisation on the basis of NTN-SNR's SMS framework. Both the Cran and Sibiu sites had their SMS label renewed in March 2017.

## Improving employee health

The improvement of working conditions is therefore one of the key elements in NTN-SNR's human resources management policy. It is therefore within this framework and in accordance with the national interprofessional agreement of 4 May 2010, which was signed by all the trade union organisations, that NTN-SNR acts for the prevention of psychosocial risks.

## Workplace accidents

2017 saw a **decrease in workplace accidents** leading to work stoppage compared to 2016. This came about thanks to the ergonomics actions implemented both in the design of the machines and to remedy workstation flaws. The company has reduced its number of workplace accidents from 52 in 2016 to 48 in 2017.

## A bicycle revision for more safety on the journeys !

In July 2017, NTN-SNR offered employees of the Alpes sites a review of their bike. During lunch breaks, employees had the opportunity to have their bicycle checked by a specialist. The NTN-SNR security service and the Roule & Co. association had also remind the rules of good behavior to avoid road accidents. Indeed, 43% of commuting accidents included bicycles. This event happened 3 times in July 2017, the sessions lasted 3 hours. 60 employees participated to the workshop.

## MANAGEMENT OF THE COMPANY'S ERGONOMICS APPROACH.

For the NTN-SNR Group, ergonomics means adapting work, tools and the environment to people, not the other way around. NTN-SNR first made available the resources necessary to roll out this approach in 1999. Now a fully-fledged business process, ergonomics aims to protect the health of staff in all areas of the company, while improving efficiency at work.

The ergonomics process implemented by NTN-SNR is structured along two main lines that meet the needs of the company. First, this involves corrective ergonomics (proposing improvements to existing resources/organisational structures based on the analysis of operator activity). We also talk about Ergonomics Design; i.e., ergonomics that relates to the Provision of New Ways process. Ergonomics and operator activity are factored in at the design stage for important and significant company projects.

### Tools used to assist in ergonomic development:

- **The Tools:**

- ➔ Method: specifications/standards, workspace rating tools, assessment of the conformity of new resources, etc.
- ➔ Training: training modules (managers and technical/methods teams)
- ➔ Communication: dashboard, indicators, etc.

- **Financial resources:**

- ➔ An annual budgetary framework amount for corrective ergonomics as a function of the priorities at each site.

### Some ergonomics statistics *(For France, Brazil, Romania and Italy):*

**69** ergonomics projects, **75 %** of which completed in 2017

**€303,000** budgeted for ergonomics in 2017

Or **€890,000** budgeted over 3 years

### Jobs in ergonomics:

The Central Ergonomist heads the process for the whole group by framing policy and related directives, which are implemented in the field by intermediaries on a daily basis.

**187** hours' training in ergonomics provided in 2017

The ergonomists observe, describe and assess employees' activities. This inventory identifies the risks and/or discomfort and a related action plan to improve working conditions by reducing everyday difficulties at work.

Nearly 80 % of posts have now undergone an ergonomic assessment at NTN-SNR; as a result, solutions have been implemented in particular to:

- relieve the operators' physical loads in order to improve their working conditions while maximising performance.
- Facilitate reflection about work instructions, i.e. assess all the physical and/or mental constraints on operators in order to put in place a suitable organisation.

The challenges in 2017/2018 will among others be to assist Sibiu and ICSA in adapting their work stations to better optimise machinery and organizations and thereby develop personnel loyalty.

### ***Focus on ergonomics projects carried out in the Group in 2017:***

In FY 2017 this concerned many projects. This is particularly the case for GEN 3 lines at Alès.

#### **The Take Off project in Argonay**

The plan for this site that specialises in manufacturing small series of large bearings is to establish a flexible, efficient and adaptable factory. A people-centred workplace that is respectful of the environment and efficient in conserving energy and raw materials, this interconnected factory is intended to be the factory of the future (see the Strategy & Organisation section).

#### **The SRB bearings range at ICSA**

SRB bearings have the special feature of reducing friction and wear thanks to a pressed steel cage. A high-strength, machined-brass cage also provides extreme, long-lasting strength for even the toughest applications. A feature of these bearings is that they provide extremely precise guidance for rolling bodies.



## MOTIVATING EMPLOYEES

Improved working conditions are meant to heighten employee motivation. The agreements reached in 2016 have a positive impact on working conditions in a variety of ways:

- The agreement on supplementary health insurance and its successive amendments offer employees a very good value scheme for obtaining refunds of the medical expenses. As the company and the works council cover a very significant proportion of the cost of the supplementary health insurance scheme, employees thus enjoy better protection at a lower cost. This agreement therefore has a positive impact on employee health and their perception of the company.
- The mandatory annual negotiation agreement is an important part of dialogue between management and labour. The ultimate aim of this agreement signed in 2016 is to boost employees' buying power and reward their efforts. It is therefore an incentive for employees.
- The agreement on the leave bank lets employees set aside time for their personal affairs, anticipate retirement, fund a part-time job or purchase years of pension contributions while taking company constraints into account. It therefore improves employees' working conditions.

## WORKS COUNCIL

The activities of the Works Committee (WC) at NTN-SNR reflect its commitment to social action and solidarity. This body operates thanks to a Management subsidy of 1.28 % of the wages bill. The challenge its elected representatives face is to adapt proposed actions to employees' changing consumption patterns and lifestyles. At the Alpes sites, for example, the Works Council offers help for children: back-to-school expenses, Christmas presents, and holidays. Employees may also be offered financial assistance to contribute to the cost of childcare or home helps.

The NTN-SNR establishment committee has two main objectives:

- Monitoring the company's economic results
- Working to promote social, cultural and sporting initiatives.

Monthly meetings are held with management. These may be supplemented by other meetings, as dictated by the Company's social and economic events. Regarding the works themselves, there will be mandatory committees (housing, economic, employment-training) and optional committees (group purchases, leisure & culture, social services). Olivier Passerini, secretary of the NTN-SNR Alpes Works Council, mentions three main committees:

### **Social committee**

- About 1 million euros of budget dedicated to social works
- A social worker to help families in need (e.g., a sick family member)
- Introduction of holiday vouchers

### **Entertainment and Culture Committee**

- Outings budget, e.g.: Walibi Group trips budget: Guatemala & Canada in 2017 + financial assistance for individual trips every 3 years.
- Access to tickets for many local events (+ pool)

### **Sports committee**

- ASO (Association Sportive Ouvrière) = Worker's Sports Association (which celebrated its 70th anniversary in 2018!)
- Twenty sports are offered: team sports + gymnastics, Zumba, skiing, etc.

## THE WORLD CAFÉ IN BRAZIL: BRAINSTORMING TO IMPROVE !



1 July 2017 in Brazil was dedicated to the culture of innovation. Group brainstorming exercises were carried out to develop team spirit. The event also helped to uncover talent and identify areas of organisational development. To meet CSR challenges and comply with the TRANSFORM2017 plan, an employee participation day was planned to better understand staff expectations. To start, a working group was set up in Brazil, with the aim of developing the culture of innovation at the Curitiba site. Innovation is not restricted to the creation of new accessories or services; it also incorporates new processes, solutions and efficiency gains by integrating economic performance and safety.

Launched in 2015, the innovation trade group was set up to study the concepts and tools required to develop this culture in-house. Managers were made aware of this in early 2017, and an event dedicated to the culture of innovation - the World Café - was staged on 1 July. Around a hundred employees attended the event (Production, Maintenance, Methods and Quality), which also involved an external consultant. To kick off, each team presented their respective suggestions for improving their own business sector. During the event, facilitators also highlighted that everyone, without exception, had the opportunity to propose ideas and innovate. Groups were set up, and several suggestions were debated to define a process whereby all employees could provide a steady flow of ideas and come up with effective solutions. At the end of the event, actions promoting ergonomics, safety, or improvements to processes were selected to be taken up. Notably, this included the installation of equipment to limit oil consumption at certain stages of the manufacturing process, as well as measures to improve, for instance, the management of supplies.

"The event was really constructive. The employees displayed real openness, and were able to start dialogues and learn together in a collaborative way. We used drawings/diagrams to summarise ideas and better target the next steps. We will be using this as a basis to create an innovation program. We wanted to kick off this project with the operational teams, as this is a major source of ideas and we need to take their capabilities into consideration," explains Human Resources and Information Technology manager Sandra Gapski.

Although originally planned for the end of the fiscal year, the process has already been launched following the success of the action plan. The initiative seems to be an example worth following...

## **SOCIAL POLICY GOALS FOR 2018**

NTN-SNR caters for the well-being of its employees. Measures have been planned across all French sites for the 2018 financial year. The company intends to organise its 2018 social policy around two major elements:

- The establishment of a **concierge service** for all French sites. The idea is that any employee going to his/her place of work is exempt from any administrative procedures with which he/she may be faced. Every employee can also use this service to do their shopping.
- **Donation of leave.** This increasingly widespread practice will allow an employee to donate his/her day(s) off to a fellow employee in need.



**VOLUNTEER**

« *ANYTHING IS POSSIBLE !  
NTN-SNR'S HUMAN AND TECHNOLOGICAL  
HERITAGE CONTRIBUTES TO ITS COMPANY  
CULTURE, CHARACTERISED BY ENDURANCE,  
EFFORT AND CONQUEST SPIRIT* »

**PARTNERSHIPS &  
SPONSORSHIP**

**NTN** 

[www.ntn-snr.com](http://www.ntn-snr.com)



With You

ONS

## PARTNERSHIPS AND CORPORATE SPONSORSHIP

... committed sites!

October 2017 saw the birth of a praiseworthy partnership with the Alès plant. URAPEI 30, an association for disabled children, and SNR Cévennes joined forces to pursue a brioche sale project. SNR Cévennes offered this commendable association the possibility of selling brioches at the guard house (to all the teams). A monetary donation of the same amount as the sales was also made to the association.



### Participation in the blood donation programme



Every year NTN-SNR organizes blood donation campaigns on its sites, sponsored by the Red Cross and other organizations. Blood donations are always organized in sessions 1 week apart so that workers on alternate shifts can be included in sessions. This year donations were made over 4 sessions at the Annecy site and a total of 141 donations were collected in tax year 2017.

In 2017  
**141**  
donations

### Visits to educational establishments and partnerships

2017 was a year marked by links with schools.

**64 young people** had the opportunity to discover NTN-SNR. They included 12 students from the Lycée Louis Lachenal in Argonay preparing for a BTS (vocational training certificate) in Product Development Process Design. 27 students from the Usses de Frangy secondary school also attended an "In-company Class" day. Lastly, students from the technological university institute of Annecy also visited NTN-SNR, including students preparing for a DUT (two-year technical college diploma) in Mechanical Engineering and Industrial Automation, and a DUT in Electrical Engineering and Industrial Computing. The 'Teachers in companies' operation organized by the Auvergne-Rhône-Alpes regional council also took place on 17 November 2017.



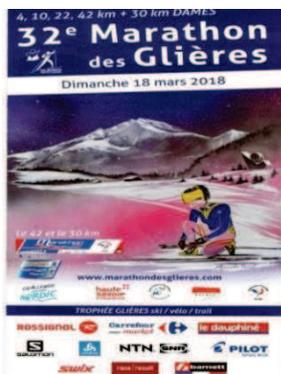
## A worthy project focusing on future generations!

Through a corporate sponsorship project, the employees of NTN-SNR Rulmenti (Sibiu) got involved with a local orphanage: they refurbished a house to offer the children a welcoming and more modern living environment. Beyond the material aspects, they shared many memorable moments with the children, such as a fair or a tour of the plant. The project's members also taught the children how to make a bearing.



This project was supervised by more than **20 NTN-SNR employees** and involved **140 hours of work**.

## Sport, a driver of CSR policy



Every year NTN-SNR supports the Glières Marathon, a very popular cross-country skiing race in the Haute-Savoie department. More than 500 participants from Europe and even North America took part in this event. The company also offered goodies to 200 young participants in the March 2018 edition.

## Corporate Games, driving team spirit

NTN-SNR has taken part in the Annecy Corporate Games since 2013. This event is the leading multi-sports inter-company challenge in France and in the world. It has been held since 1988 in more than 60 towns and cities worldwide.

In 2017, **301 NTN-SNR employees** took part in this event. A stand presenting the company with corporate items and promotional documents was set up for the duration of the event.

The 2017 edition attracted 4,600 participants representing more than 130 companies and 10 nationalities. It is also worth noting that this event involved roughly a hundred hours of work and was allocated a budget of €34,000.

Conviviality and networking on the programme of this 100 % sporting weekend: the opening evening, sporting events, the athletes parade, the opening ceremony, the Games Party and naturally the medal and trophy ceremony for the most athletic companies in France.

Great progress!

**76 % more** NTN-SNR  
participants than in 2015



*« OUR VALUES ARE PRESENT IN OUR EVERYDAY OPERATIONS, OUR EFFECTIVENESS AND OUR IDENTITY, WITH REGARDS TO OUR CUSTOMERS, SUPPLIERS AND TEAMS THROUGHOUT THE WORLD »*



BUSINESS ETHICS &  
**COLLABORATIVE  
PURCHASINGS**



[www.ntn-snr.com](http://www.ntn-snr.com)



With You

# Business ethics

**The dissemination of the Code of Ethics forms part of our general desire for continuous improvement.**

## **What is NTN-SNR's Code of Ethics?**

In a world of growing demands, increasing risks and greater expectations on the part of our key partners, our reputation and their confidence can only be maintained through exemplary, professional and responsible conduct.

Consistent with our values, the Code of Ethics was created in 2010. It describes our fundamental ethical principles and the way we wish to conduct our relations as part of our Group, our markets and our environment. It fits in with our overall approach to continual improvement.

The themes addressed by our Code of Ethics include protection of life, protection of group assets, environmental protection, legal and regulatory compliance, relations with partners, and prevention of fraud and corruption.

NTN-SNR is strongly committed to ethical issues. Beyond training in the code of ethics, there is a policy that drives the company. An "antitrust compliance" program is in place. A comprehensive procedure has been drafted, and regular checks are in place.



## ETHICAL COMMITMENT

**NTN-SNR GROUP undertakes to:**  
Conducting its business in an honest and fair manner and in compliance with applicable national and international laws and regulations.



**The following principles are applied:**

- Non-discrimination of employees in any form whatsoever.
- Due observance of the rules of free competition.
- Refusal of corruption in any form: passive, active, conflicts of interest, etc.
- Fairness and integrity with customers, partners and the shareholder.
- Protection of the company's image and expertise.
- Protection against fraud and cybercrime.
- Accurate financial reporting both internally and externally.
- Political and religious neutrality of the company.

22 February 2016

A. CHAUVIN  
Chairman and CEO

## Protection of life

Beyond physical protection (security policy), the protection of life also concerns:

- the prevention of discrimination in any form whatsoever, starting with recruitment and continuing on through the entire professional career,
- protection of employees' personal data,
- due observance of national and international regulations: freedom to join a trade union, prohibition of forced, compulsory or child labour or conduct that contravenes human dignity, respect for indigenous peoples.

**98 %** of our **managers** have been trained in the **Code of Ethics**

## Prevention of external fraud and cybercriminality

The “fraud” market is booming. More and more actors are involved and they are becoming ever more professional and innovative. This is unfortunately a deep-seated trend. And we must respond to it. We have observed a greatly exacerbated risk in this area since 2010. A risk prevention procedure has been drawn up and a dedicated training module has been created. A warning system has been implemented that quickly circulates instructions on how to respond to these new threats. Awareness-raising e-mails are regularly sent to all staff with a record of identified fraud attempts and reminding them of the instructions to be followed in order to ensure vigilance.

## Responsible purchases

Production purchases are mostly made by the central departments (based at NTN-SNR Annecy) for Europe. The factories themselves manage purchases of operational requirements and certain production items that are specifically delegated to them.

NTN-SNR Roulements wants to incorporate collaborative, responsible purchasing principles in its relations with suppliers. To that end, the company drew up a charter for collaborative, responsible purchasing in 2014 in order to restate its

commitments in terms of human relations, environmental protection and ethics, and to set out the requirements it places on its suppliers.

In order to affirm its undertakings, NTN-SNR Roulements has, since 2010, been a signatory to the "10 commitments for responsible purchasing" issued by the French credit ombudsman and the CDAF (association of French purchasers). The principles of this charter are: fair financial dealings with suppliers, collaboration, reducing the risk of mutual dependence, the involvement of the company in this issue, awareness of total cost of ownership, consideration of environmental issues, the company's local responsibilities and managing the overall supplier relationship.

### **Level of dependence of local suppliers on the company**

In order to limit the risk of dependence on the part of our suppliers, we take account of the proportion of their activity that we account for when awarding contracts. We apply a threshold value for this dependence level which must not be exceeded. By taking account of this threshold value, it is possible to limit the take-up of new contracts by the suppliers in question when alternatives are available to us.

### **Sustainable development criteria**

When analysing requests for proposals, we also consider the total cost of the solutions proposed by our suppliers, as well as other CSR criteria depending on the purchasing site. For example, the prohibition of child labour, ISO 14001 certification and occupational health and safety (OHSAS 18001) are taken into account in Italy.

### **Internal training on the Responsible Purchasing Charter**

**94 %** of buyers trained in the principles of  
Responsible Purchasing

## **The commitments enshrined in NTN-SNR's Responsible Purchasing Charter**



### NTN-SNR's commitments **to its suppliers:**

- To collaborate on a secure and reliable basis
- To develop a win-win relationship
- To apply a clear, open purchasing policy

### NTN-SNR's expectations **of its suppliers:**

- To respect the core human rights principles
- To take account of environmental challenges
- To pursue honesty in business dealings

***A balanced, long-term relationship in a context of mutual trust and confidence.***

**76 %** of turnover covered by the Responsible Purchasing Charter

### **NTN-SNR acknowledged for the quality of its collaborative relations**

*"NTN-SNR undertakes to maintain sustained and balanced relations with its suppliers, an assurance of sustainable performance"*

We take part in Thésame's PEAK programme (Purchasing European Alliance for Knowledge) as part of our approach to improving relations with our suppliers. This is a think tank developed by research laboratories, professional schools and companies.

It aims to develop and showcase collaborative relations between customers and suppliers.

## CHANGING OUTLOOKS ON RELATIONS BETWEEN CUSTOMERS AND SUPPLIERS

“The quality of relations between customers and suppliers, a factor of performance”



### Personal viewpoint of Frédéric Lavabre, Purchasing Director, NTN-SNR Europe

“ A strong interpersonal relationship between a customer and a supplier is an important factor in our search **for better performance** of our company. An effective relationship is one that transcends mere supply and demand with regard to goods or services. True performance is achieved through **much more**

**in-depth work** aimed at creating sustainable value, which implies **working together throughout the life cycle of our products:**

- **Working together** on developing products to optimise design or the adopted processes from the outset
- **Working together** to find out and understand the innovations that suppliers can bring us and guarantee long-term and profitable drivers of growth
- **Working together** to resolve the inevitable difficulties encountered in mass production that require dialogue and understanding to be able to react at the best time

### “The quality of the relationship, the bedrock of confidence”

This in-depth, collaborative work can only take place if the customer and supplier have a quality relationship that goes beyond merely reassuring stakeholders and fuels their motivation to work together, through:

- A relationship over the long term
- The importance attached to a balanced relationship
- A greater sense of responsibility
- Professionalism and exemplary conduct.

...everything that inspires Confidence and makes a partner relationship possible.

Therefore this work on improving relations between the customer and suppliers is a necessity, a goal that we needed to learn how to measure. For me, the PCI indicator can become a core indicator in these approaches, with a view to

improving the sustainable economic performance of our activities”

## A tool, actions....



The PEAK Collaborative Index (PCI) is a French annual index measuring the collaborative climate between customers and suppliers, a key indicator of the French automotive sector (PFA).

This barometer, the fruit of an assessment of 18 relational skills aggregated into 1 index, measures the national trend on collaboration between the two parties with a reliable and representative indicator.

### The PEAK Collaborative Index © is: **QUALITY OF THE RELATIONSHIP.**

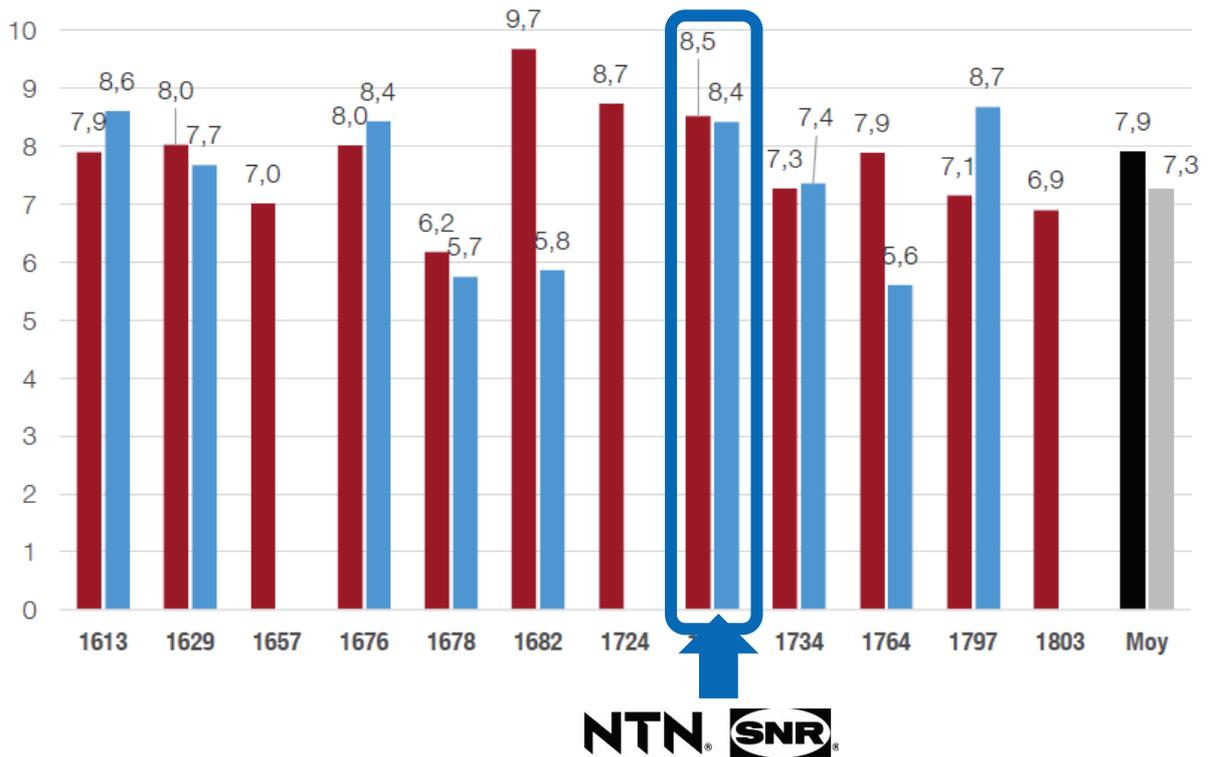
18 relational skills:

- |                        |                        |
|------------------------|------------------------|
| - Positive recognition | - Reliability          |
| - Politeness           | - Objectivity          |
| - Restraint            | - Intellectual honesty |
| - Availability         | - Consistency          |
| - Relationship balance | - Solidarity           |
| - Integrity            | - Skills development   |
| - Fair competition     | - Transparency         |
| - Justification        | - Contacts made        |
| - Objectivity          | - Proactivity          |
| - Shared progress      |                        |
- + **1 aggregated PCI index**

### Opportunities:

- Place our customer-supplier relations in a representative range of companies
- Go further in our improvement processes with our suppliers
- Capitalise on the survey's findings to improve the skills of those involved in the relationship (*e.g., buyers*).
- Help assess the impact of our CSR policy

### NTN-SNR 2017 PCI indicator result:



**NTN-SNR as perceived by the Suppliers**  
**8.4/10**

**NTN-SNR as perceived by Customers**  
**8.5/10**

### Rewards for the best suppliers

NTN-SNR rewards its best suppliers with PRO Trophies at an annual ceremony.



“The Supplier Awards are an opportunity to celebrate NTN-SNR EUROPE's best suppliers and reassert our convictions with regard to collaborative and sustainable relations”.



*« CAPITALISING ON TECHNOLOGICAL BREAKTHROUGHS  
AND THE SHARING OF A COMMON VISION, WE REMAIN  
FOCUSED EVERYDAY ON ENVIRONMENTAL AND  
ENERGY TRANSITION, AND WE DEVELOP PRODUCTS  
AND SOLUTIONS THAT RESPECT THE ENVIRONMENT »*

# ENVIRONMENTAL ISSUES

**NTN**® **SNR**®

[www.ntn-snr.com](http://www.ntn-snr.com)



With You

# ENVIRONMENTAL CHALLENGES

NTN-SNR aims to develop and promote products and services that help reduce its environmental impacts.

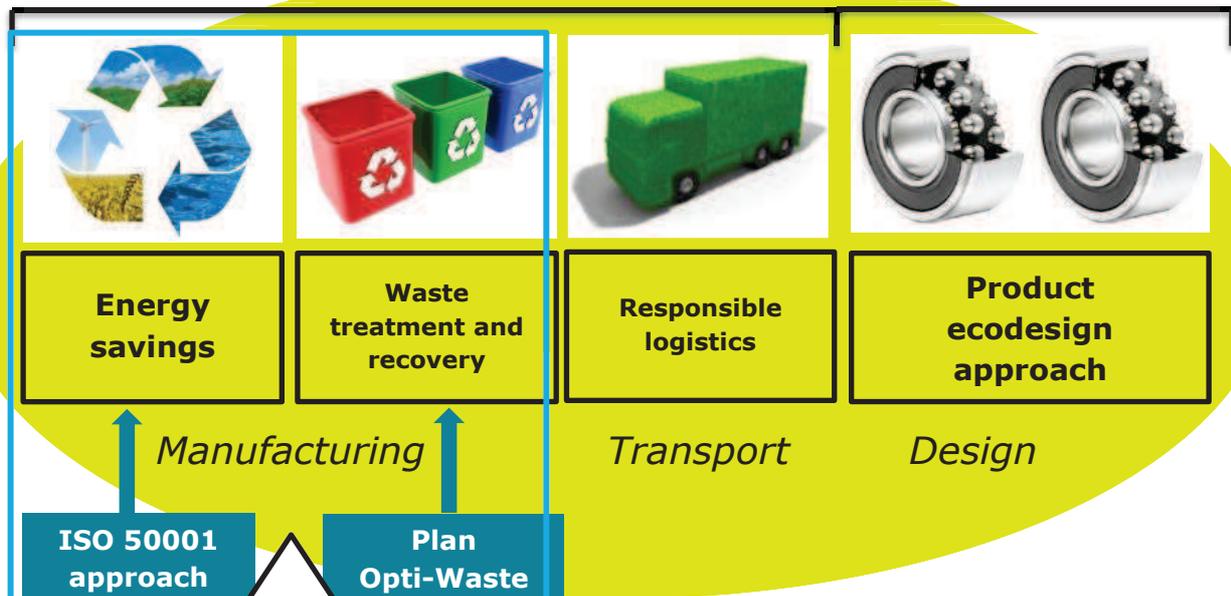
**Reduction of our environmental footprint**

**Preservation of resources**

**Sustainable Development**

**Green Factories**

**Consumers**



The **2017 Transform plan** supports environmental initiatives that will help cut the Group's greenhouse gas emissions.

These initiatives include:

- Energy savings
- Waste reclamation, recycling and re-use
- Carbon dioxide and VOC (volatile organic compound) emissions



**NTN 100**

# A SUSTAINABLE DEVELOPMENT PROCESS FOR A FORWARD-LOOKING GROUP...

In 2015 NTN-SNR ROULEMENTS has pursued a policy of sustainable development, following on from the environmental policy in place previously. This sustainable development policy has supplemented its environmental commitments with commitments to energy-savings and design for environment (DfE) and incorporated the will to maintain a relationship of trust with its stakeholders.

The 4 main themes central to our policy:

## Reducing our carbon footprint and continually managing the risks and impacts of our activities on the environment.

- Factor in environmental protection aspects when installing facilities and infrastructures.
- Reduce our impact on the natural environment, in particular by reducing our consumption of natural resources, and processing or recycling our discharges and waste.
- Go further in preventing the risk of accidents impacting on the natural environment and people.

## Continually improving the group's energy efficiency to mitigate global warming and preserve resources.

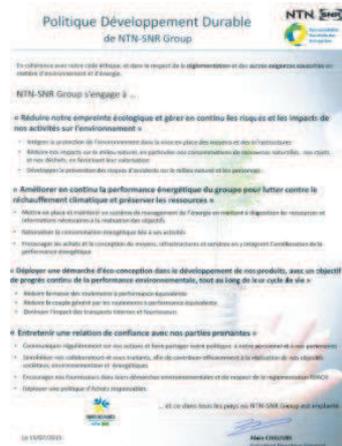
- Introduce and maintain an energy management system by providing the resources and information needed to achieve objectives.
- Rationalise the energy consumption of our activities.
- Encourage improved energy performance in the purchasing and design of resources, infrastructures and services.

## Deploying ecodesign principles in our product development processes, with the aim of continually improving our environmental performance, throughout the product life cycle.

- Reduce the weight of our bearings.
- Reduce the torque generated by bearings for equivalent levels of performance.
- Lessen the impact of our transport and that of suppliers.

## Maintaining a relationship of trust with our stakeholders.

- Communicate regularly about our actions and share our policy with our personnel and partners.
- Raise awareness among employees and subcontractors so that they can contribute effectively to achieving our social, environmental and energy objectives.
- Encourage our suppliers in their approaches to environmental protection and to compliance with the REACH regulation.
- Deploy a policy of responsible purchasing.



## Management System

On the basis of our sustainable development policy, we have constructed an environmental management system (EMS) and an energy management system (EnMS). The EMS and EnMS are components of the overall management system and include the organisational structure, planning activities, responsibilities, practices, procedures, processes and resources mobilised to draft, deploy, implement, review and maintain the sustainable development policy.

### ISO 14001 certification

Environmental protection measures are guided by the ISO 14001 certification of our 9 production sites in France, Brazil, Romania and Italy. This standard is based on the principle of continual improvement of environmental performance and controls the impacts of the company's activity throughout the life cycle of our products. The year 2017 was marked by the renewal of the certificate version 2015. This change is part of the harmonization of ISO standards and insists on the notion of taking into account the needs of stakeholders and the notion of leadership in the application of this new reference system.

The scope of the certification encompasses the production and design of bearings.

### ISO 50001 certification

We have been ISO 50001-certified since January 2016 for energy management, which completes our environmental certification in order to incorporate a genuine sustainable development dimension. This standard is based on the principle of continuous improvement of energy efficiency and controls the impacts of the company's activity.

Through our ISO 50001 certification we undertake not just to improve the energy efficiency of our activities but also to incorporate energy efficiency criteria into purchases and the design of new facilities and infrastructures.

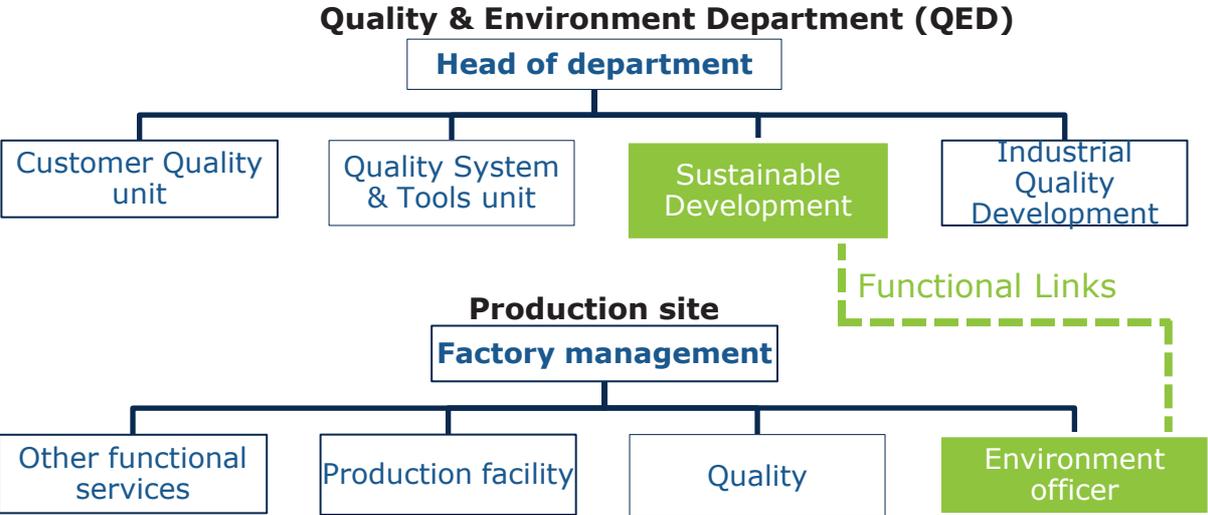
NTN-SNR ROULEMENTS: 9 certified production sites					
Country	Factory	ISO 14001		ISO 50001	
		Date of renewal of the certification	Certificate	Date of certification	Certificate
	NTN-SNR Annecy NTN-SNR Meythet NTN-SNR Seynod NTN-SNR Argonay NTN-SNR Cran-Gevrier SNR Cévennes (M + C)	01/2018	UTAC: SME/0448-8	01/2016	UTAC: SMé/0448
	SNR Rolamentos do Brazil	01/2018	UTAC: SME/0448-8		
	NTN-SNR Rulmenti				
	ICSA	05/2014	TÜV: 50 100 12275		



## Organisation and structure of the Sustainable Development service

The Group's Sustainable Development Service forms part of the Quality & Environment Department. The Environment Manager on each site works closely with the Sustainable Development Service, which aims to analyse, provide tools and unite the entire Group around its Sustainable Development policy. The Sustainable Development service liaises closely with other support services, in particular purchasing, the "Building, Facilities and Energy" department, the project teams, the laboratory or the safety service.

The Sustainable Development Service introduces and oversees the energy management system on the sites and in central departments, in conjunction with the Group's Energy Expert and the site Maintenance services.



## Target investments in Environmental aspects

Every year NTN-SNR invests in environmental protection and energy savings.

**€670 000**

(Amount invested for the environment in tax year 2017 for our 9 production sites)

Amounts (k€)	ALPES		CEVENNES		SITES ABROAD	
	FY2016	FY2017	FY2016	FY2017	FY2016	FY2017
Provisions for pollution risks	57	<b>122</b>	5	<b>67</b>	-	-
Compliance expenditure	28	<b>102</b>	100	<b>0</b>	0	<b>0</b>
Investments in energy savings	133	<b>31</b>	0	<b>0</b>	0	<b>16</b>
Other environmental investments	230	<b>494</b>	22	<b>43</b>	33	<b>31</b>
<b>TOTAL ENVIRONMENTAL INVESTMENTS</b>	<b>391</b>	<b>627</b>	<b>122</b>	<b>43</b>	<b>33</b>	<b>47</b>

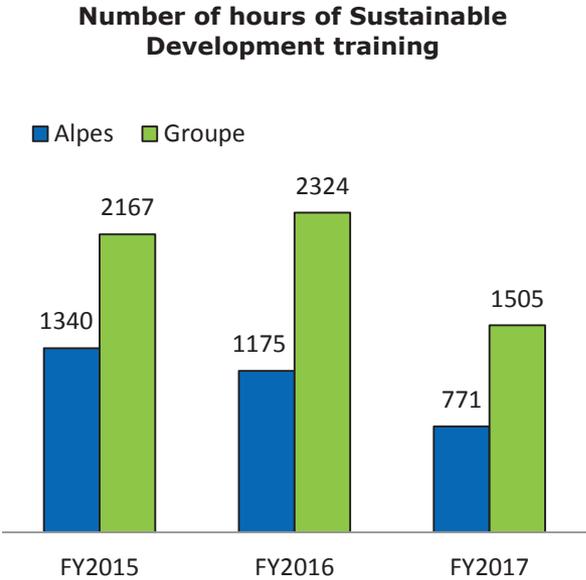
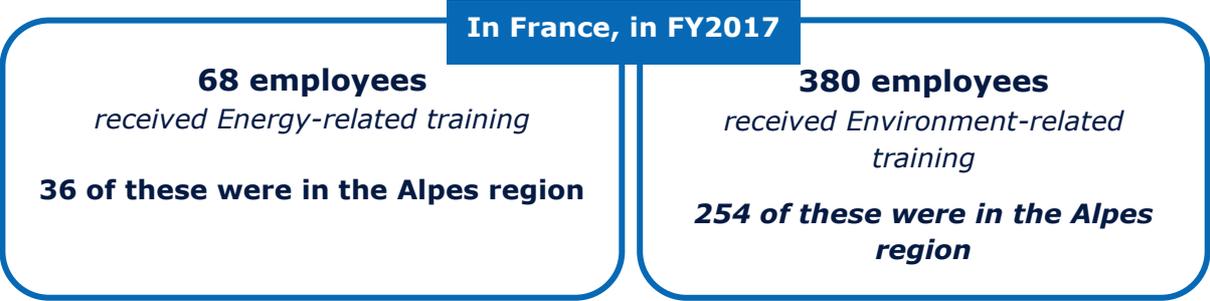
None of these sites is subject to any financial guarantees.

# EMPLOYEE AWARENESS-RAISING ABOUT SUSTAINABLE DEVELOPMENT

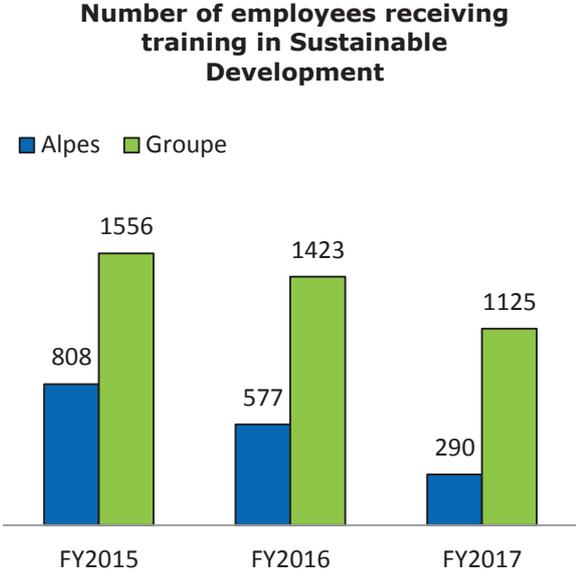
## Training and awareness-raising about sustainable development

Training geared to each individual's job is provided in order to maintain the level of environmental education at all levels in the employee hierarchy at all sites.

There are **9 training modules on the Environment** and **4 on Energy**, covering the following topics: *Environment and Energy in the workshops, Environment/Energy for supervisory staff and technicians, Knowledge of the ISO14001/ISO50001 standards, Regulations governing facilities classified for the protection of the environment, the ADR directive + Security, Posts having an Environmental/Energy impact, Factoring the Environment into projects, Chemicals, a Sustainable Development component of "core activity" training courses (adjusters, etc.).*



**- 35 %** hours of training across the Group compared with FY2016



**- 21 %** employees trained across the Group compared with FY2016

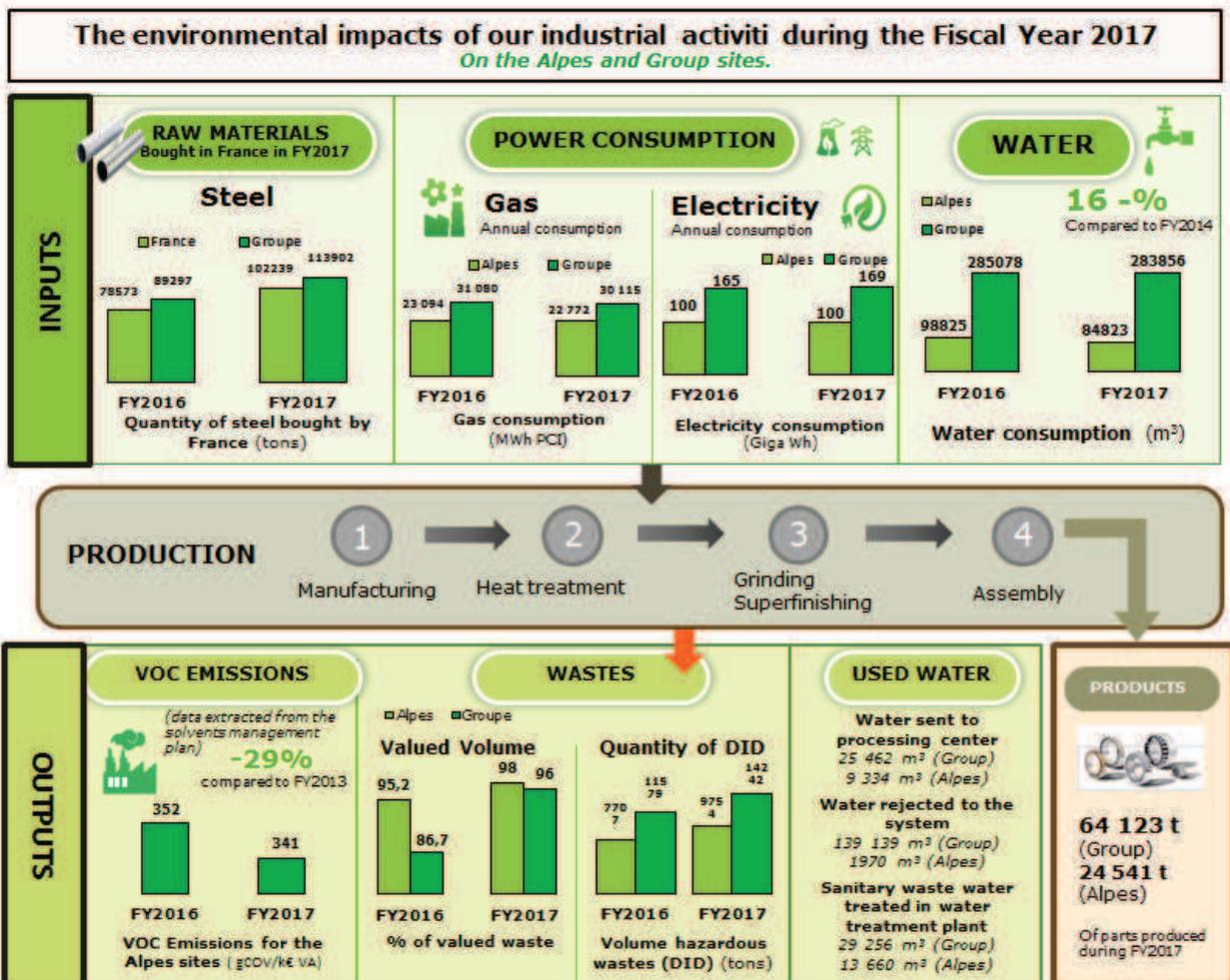
## Reducing the environmental impact of all production processes

NTN-SNR makes every effort to reduce the environmental impact of all processes throughout the life cycle of our products.

Identifying all the environmental impacts generated by our business operations, either in terms of inputs (raw materials, resources used, etc.) or outputs (products, carbon emissions, waste, wastewater, etc.) allows us to ascertain which are the most significant, and then to implement corrective and preventive measures accordingly. Our goal is to reduce all environmental nuisances at the sites. Any environmental nuisance, whether due to odours, sound or light, is treated as a nonconformity. Its causes are analysed, and an associated action plan is initiated in order to eliminate it. Instructions and awareness-raising measures have been introduced to minimise this type of nuisance.

### **GOOD PRACTICES to restrict noise pollution:**

- ❑ Creation of distinct timeslots for emptying skips and carrying out work.
- ❑ Instructions for closing windows to avoid disturbing those living or working nearby.
- ❑ Implementation of corrective actions for occasional nuisances caused by malfunctioning equipment.



## ENVIRONMENTAL TARGETS AND RESULTS

Every year NTN-SNR sets and seeks to meet the Group's sustainable development targets.

The following were identified as the main areas of improvement for the year ended 31 March 2018: reducing the impact of global warming and scaling up the "3 Rs" (reduce, reuse, recycle).

Results of measures taken in FY2017 (from 1 April 2017 to 31 March 2018):

OBJECTIVE	TARGET for FY2017	RESULTS for FY2017	
Improve the waste recovery rate for the sites in France	95 %		<b>98 %</b>
Reduce our environmental impact by cutting our carbon dioxide and VOC emissions	<i>Implement a master plan</i>		<b>This action will be prioritised in 2018, notably with the completion of the Greenhouse Gas Emissions Balance.</b>
Maintain ISO 50001 certification for our production sites in France  Improve the energy performance of the sites in France compared to FY2014	<i>100 % of sites in France certified</i>  <i>Improvement in energy performance (France): a 3 % improvement on 2014</i>		<b>Maintain France certification</b>  <b>Energy efficiency a 2.5 % improvement on 2014 (France)</b>

Besides these targets, relating to Sustainable Development Policy, each site also sets environmental targets concerning their activity (water consumption, production of waste, environmental event such as complaints, incidents and accidents, energy consumption, etc.)

These indicators are monitored using monthly dashboards and controlled at the level of each production site.

## Three-year plan for FY2018 - 2020 STRATEGIC AREAS FOR SUSTAINABLE

We have undertaken **three commitments** to address the Sustainable Development challenges facing the Group:

- 1. Direct the Group's CSR approach towards performance**
- 2. Reduce our atmospheric emissions**
- 3. Reduce our carbon footprint**
  - Implement a management system for greenhouse gas emissions (monitoring of the carbon dioxide emissions indicator at various levels (Group, France, Sites, Activity, etc.)).
  - Implement a mobility plan.
  - ISO 50001 certification of the Romanian and Brazilian sites.

### **Aims for FY2018:**

1. Maintain our **waste recovery rate at more than 95 %** for sites in France at the end of FY2018 and reduce the carbon impact of waste treatment processes.
2. **Improve the energy efficiency** of our production sites by **3 % compared with FY2014** by maintaining ISO 50001 certification across all our sites in France to contend with energy scarcity and constantly increasing energy prices, while helping cut greenhouse gas emissions.



**CSR ACTION SUPPORTING THE 2017 TRANSFORM PLAN**  
**"OPTI-WASTE INITIATIVE"**



In line with its sustainable development priorities, NTN-SNR has embarked on a process of optimising its production waste treatment lines. This initiative aims to minimise the environmental impacts of its waste. This is also about reorganising our approach to awarding contracts and developing improvement processes for our lines in the Alps sites.

To reduce the impact of waste both upstream and downstream of our activities, NTN-SNR operates a prevention policy in order to reduce its production of waste. The aims of prevention are to avoid the production of waste, reduce the harmfulness of waste that is produced, and improve the ease of waste processing.

In line with our Sustainable Development Policy, we have launched a 3-year plan aimed at analysing waste to know it better then reclassifying it according to its recovery potential (such as its calorific value). We have consulted a wide range of service providers since 2014 and observed the proposed waste reclamation solutions, the economic criterion no longer being the only one governing our choice. So rather than awarding contracts to the "lowest bidders" we now award contracts to the "best bidders".

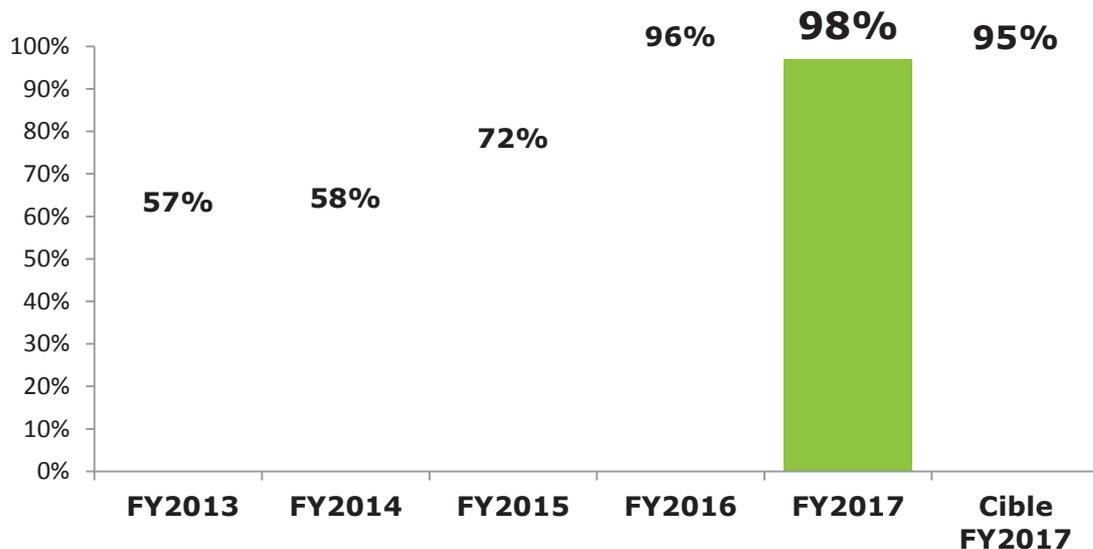
**Conclusive results for an ambitious approach :**

Target for FY2018  
 Maintain  
**>95 %**



**Waste reclamation, recycling and re-use rate**

*Sites in France*



In FY2017, 98 % of waste was recovered at sites in France and 96 % across the entire Group. These results are in line with expectations set out the previous year.

**€1.76 million**  
of gains generated by waste recovery across all our sites

**+ 16 %**  
of gains generation by waste recovery for the sites in France between 2016-2017

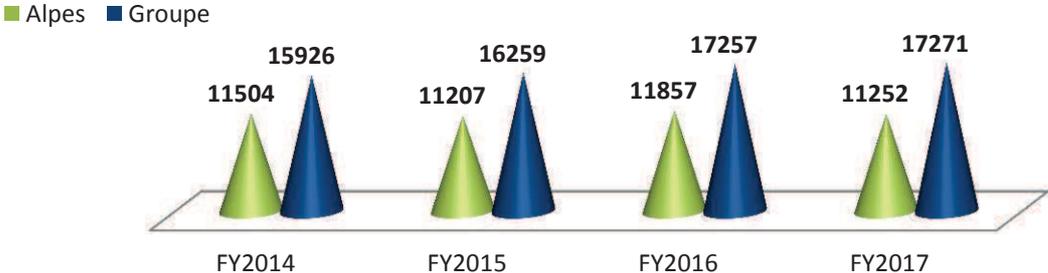
**30,254 tonnes** of waste recovered in 2017 (NTN-SNR Group)  
of which **20,597 tonnes** for sites in the Alpes region

This approach can be considered a success, as results far exceed the established targets. Nowadays, landfill is only used as a backup. Alternatives are constantly being sought to optimise the activities of the services involved and encourage recovery and recycling.

We now adopt a process that includes suppliers in a comprehensive purchasing strategy. The policy consists in choosing a recycling chain that favours the method of treatment at an equivalent or even lower cost. This gives our suppliers an incentive to develop and propose new ways of managing waste. The criteria are based on the costs of treatment and transport, the line code and the carbon footprint. Finally, from a perspective of continuous improvement, a review of landfill has been conducted to assess by year the points that still need to be dealt with.

This is the fruit of a constructive collaboration between suppliers and NTN-SNR's Purchasing, Operations and Environment services.

**Quantity of waste classified as non-hazardous (common industrial waste)**  
in tonnes



As far as non-hazardous waste is concerned, the on-site organisation permits sorting at source in identified areas. Each site raises staff awareness in order to better control waste management.

## FOCUS ON THE SITES: Recover, reuse, recycle ...

### REUSE

- ❑ Annecy

**Reuse of whole oil waste**

- ❑ Seynod

**Reuse of empty drums** at the Annecy site to package grinding swarf briquettes.

- ❑ Alès, Annecy, Sibiu

**Reuse of dishcloths** Reduction in the amount of soiled waste.

### RECOVERY

- ❑ Curitiba

**Sending contaminated waste and grinding slurry to cement plants.** Recovery of previously buried waste

- ❑ Alès, Seynod

**Optimised installations for making briquettes from grinding swarf.**

Recovery in steel mills of 15 % of grindings produced.

**Optimisation and reuse of packaging** for use in our products

The established rules for all new types of packaging are:

- sustainable packaging should be used in Europe
- PVC should be avoided
- use of materials should be reduced to the bare essentials

**Sorting and collecting paper**

In parallel to its paper and cardboard recovery chain in use on its sites, NTN-SNR France has signed a contract with ECOFOLIO to participate in the **green management of paper** placed on the market.



NTN-SNR is a member of several **eco-organisations**, such as SCRELEC and ECOSYSTEME, for the products it markets.

## NTN-SNR certified ISO 50001 for its French sites



To be more in line with Sustainable Development principles, NTN-SNR rolled out the ISO 50001 approach to energy performance across all sites in France in 2016. The certification acknowledges the work done for several years on reducing NTN-SNR's energy consumption and greenhouse gas emissions. For the next three years, the goal is to extend this certification to foreign sites.

The ISO 50001 certification is the direct result of the introduction of an energy management system. Within the framework of a structured approach, this has enabled implementation of numerous improvement initiatives, leading to better control of energy consumption on NTN-SNR's French sites. This certification is the 1<sup>st</sup> stage of a key area of the Directive on energy savings included in the Transform 2017 plan.

Beyond certification, **the asserted aim is to improve the overall energy efficiency of its sites by 3 % by the end of FY2018** and include NTN-SNR's three foreign sites in the ISO 50001 certification.

### Concrete action in favour of energy transition

NTN-SNR ROULEMENTS's approach to energy saving is based on the following key principles, within the framework of a continual improvement process:

- *Cut waste;*
- *Optimise existing structures and improve its metering system;*
- *Change technologies where required.*

**66 %** of the identified initiatives were carried out across the entire Group  
*Cumulative results for FY2017*

These initiatives were concentrated on lighting, factory heating, recovery of calories from compressors in order to heat domestic water, installing variable compressors, and the optimised management of compressed air (widely used in manufacturing processes) via the implementation of sequencers.

**Focus on certain energy saving initiatives taken in 2017**

**The "GOR" (green, orange, red) process: Speeding up energy savings!**

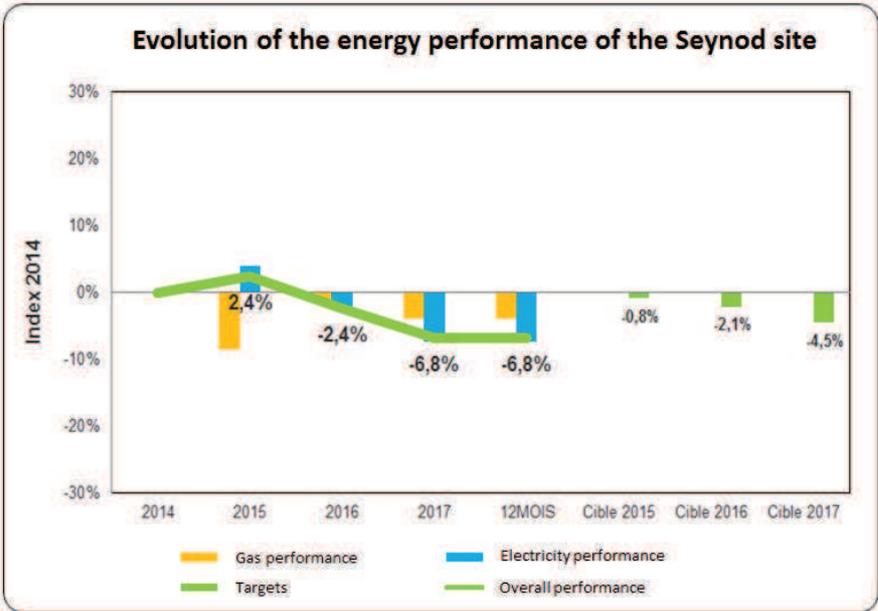
***NTN-SNR's Seynod site has introduced an experimental system designed to reduce energy consumption in production.***

At the beginning of 2016, in line with our ISO 50001 process, the Seynod factory initiated an energy waste reduction plan at its production facilities. A pilot facility was earmarked to test the method, dubbed GOR: The method consists in specifying how to stop machines according to various criteria:

- **G**reen: power down using the master switch
- **O**range: the controls remain powered up
- **R**ed: the machine continues running

This initiative aims to adjust energy consumption according to need. The results are measured every day according to the electrical energy used and production data. This easily quantifies gains according to activity. The most significant gains have been made on the tempering furnaces, the hydraulic units, the coolant circuits, spindle rotation and the conveyors.

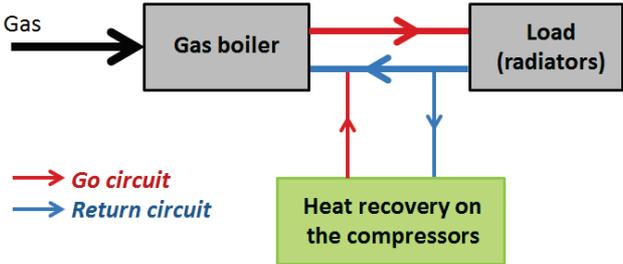
The roll-out of the VOR method in two factories in 2017 proved the effectiveness of the system, with an improvement in energy performance of **6.8 %** compared with 2014.



NTN-SNR's goal is to deploy the process across all sites during the next three years. SNR Cevennes is committed to adopting this method.

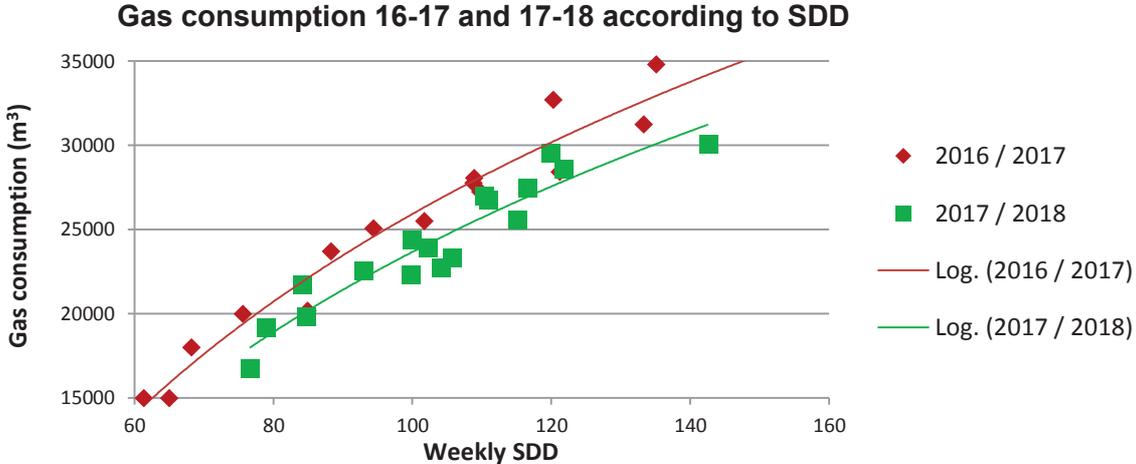
**Heat optimisation**

To save gas, the Seynod site has set up a system for recovering calories from its compressors. These calories are recovered via oil/water heat exchangers installed in five compressors.



The operating principle is as follows: Part of the water heating return circuit is diverted to these exchangers. Once heated, the water then re-joins the entrance to the boilers. The increase in temperature of the return circuit reduces gas consumption. The proximity of the boilers and compressors on the Seynod site allowed for installation costs to be kept down.

This project, which was set up in 2017 and expected to be amortised in under three years, showed encouraging first-year results, with a clear reduction in gas consumption. The installation is optimisable such that it can operate without boilers in the off-season. Thanks to this installation, almost **3,000 m<sup>3</sup> of gas were saved** each week over the 2017/2018 winter period compared to same period in 2016/2017.



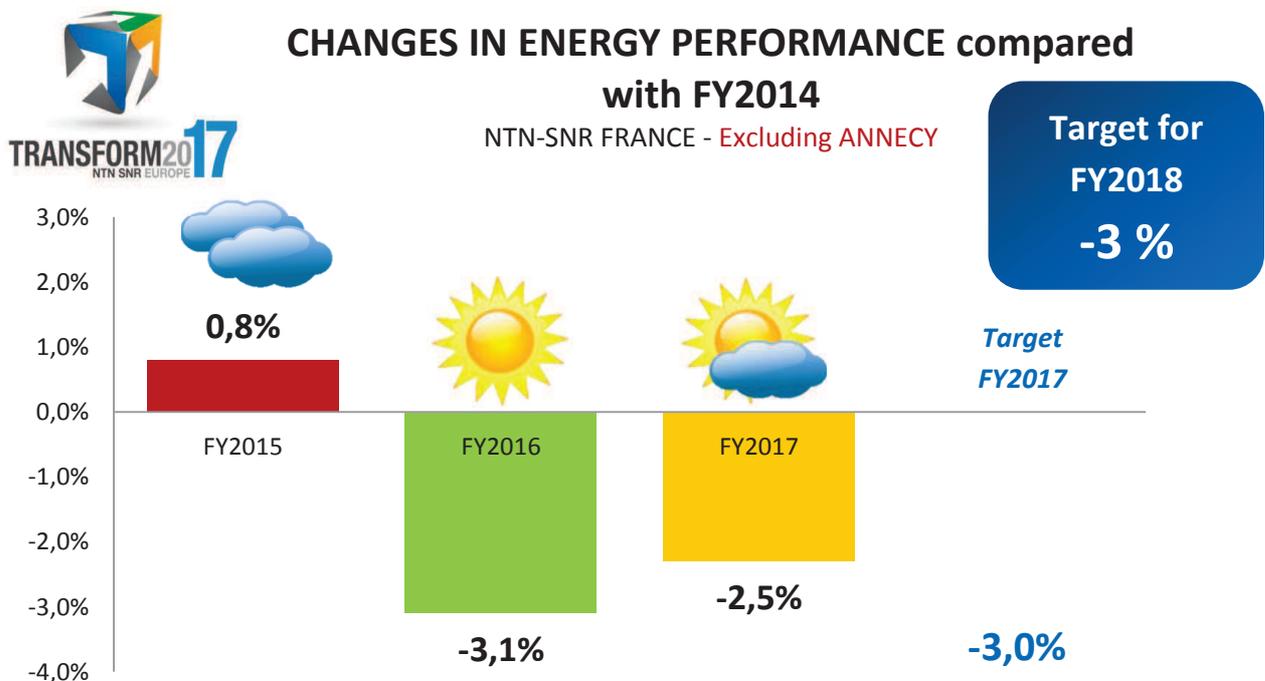
Such systems are also in place on the Argonay, Sibiu, and Croupillac sites.

## Energy information system

After 4 years of research, NTN-SNR can congratulate itself on having developed an energy information system. Thanks to a unique interdepartmental fund and a collaboration with the company Automatique Et Industrie, NTN-SNR can now monitor the full range of its energy activity. Action-oriented software is currently under development within the company.

## An energy management system for significant results

The **overall energy performance** (gas + electricity) of sites in France has improved by **2.5 %** since 2014.



### CHANGES IN ENERGY PERFORMANCE COMPARED WITH FY2014 = BASELINE

*NB: The Annecy site is not included in these figures because of the de-industrialisation of the site, which distorts the results of improvement actions in the rest of the sites in France.*

In 2017, the Meythet site saw a drop in the number of hours worked, which affected the indicator linked to hours ranges.

These efforts should be sustained, especially in regard to management. Employees must partake in a process of continuous improvement, with action plans monitoring actions to measure their effectiveness.

These achievements are part of an integrated process in NTN-SNR's business plan, which aims to reduce and control its energy consumption and greenhouse gas emissions

The energy management system will continue to be deployed in clearly identified key areas like heating, lighting and compressed air, on both its French and its foreign sites.

## Three-year plan for FY2018 - 2020 ENERGY STRATEGY

- **GOR approach:** roll-out of the S3 pilot scheme
- **Energy review** of all sites
- **Energy information system EIS**
  - Multi-site roll-out (2018 Seynod pilot scheme)
- **Real-time control** of energy consumption
  - Hyper-vision
- **Development of project partnership**, waste heat recovery, lighting, photovoltaics, etc.
- **Development of self-consumption**
  - Optimisation of the TURP agreement.
- **Renewal of ISO 50001 certification** with the aim of extending certification to the three foreign sites (Italy, Romania, Brazil)



# CONTROL AND REDUCE OUR POLLUTING EMISSIONS: ACTIONS PROMOTING SUSTAINABLE DEVELOPMENT!



**NTN-SNR is committed on a daily basis to making its contribution to the ecological and energy transition. In particular, actions are taken to reduce its footprint on the planet and develop products for environmentally-friendly applications. Measures are continually taken to prevent, reduce and improve discharges into the air, water and soil.**

## Improving the prevention of discharges

### Ensuring good air quality

The control of discharges into the air is ensured through operating instructions and preventive maintenance plans at the various facilities (extraction, general ventilation, production equipment, etc.). Statutory inspections and tests are performed at regular intervals.

In the case of new equipment that is liable to generate discharges into the atmosphere, the project team, which includes a contact person familiar with the issue of environmental impacts, completes a questionnaire that takes account of all the requirements and good practice relating to the control of discharges into the atmosphere.

VOC emissions are one of the main concerns of the Sustainable Development service. Numerous measures are taken to control and minimise VOC discharges, including:

- Replacement of a NITAL facility with a NITEAU facility: Water-based etching, reducing the use of VOC-emitting solvents. The first facility was installed at the Croupillac site, and another is currently being implemented at the Argonay site.
- At Seynod, the main VOC-emitting site in the Alpes region, special measures have been taken to reduce the consumption of solvents and limit VOC emissions (cooling solvent to prevent evaporation, fitting covers on the solvent tanks, reducing draining operations to the bare minimum, etc.).

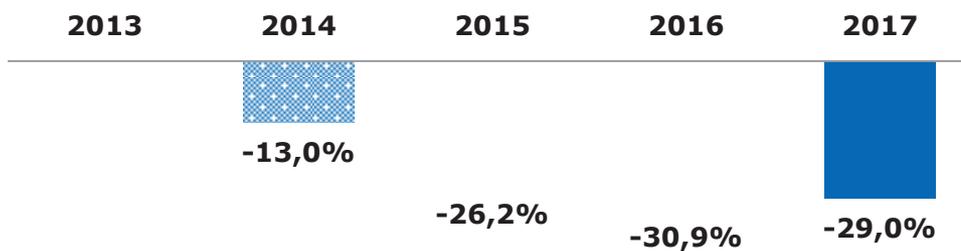
In September 2017, four washing machines were removed (*one in GEN2 and three in GEN3*) and replaced by centrifuges allowing for dry bearings. This has significantly reduced solvent consumption.



- At the Annecy site, the last washing machines using VOC-emitting solvent have been replaced with detergent washing machines, which are much more environmentally friendly.

These actions have reduced VOC emissions by **29 %** since 2013 at the Alpes sites.

### Change in VOC emissions compared to 2013 Alpes sites



There has been a slight increase (2.7 %) in VOC emissions compared to 2016. This increase is mainly due to difficulties in tuning the washing machines. Efforts are continuing to resolve this issue, which remain a main concern of the Sustainable Development service.

### Ensuring good soil quality

Any equipment liable to generate soil pollution is installed in a way that prevents leakage or is connected to a drip collection system that makes it possible to protect the soil against any risk of pollution. The environmental action plans provide for the possibility of establishing equipment compliance in order to optimise the control of soil pollution risks

A plan has been defined to modernise service networks and buried tanks. In particular, studies and an action plan are ongoing to backfit all the buried tanks posing a risk of pollution. In 2015, buried tanks on the Annecy site were

backfitted to eliminate any risk of pollution. In 2016, buried tanks at the SNR Mazac site were brought into compliance.

And after a study conducted on Meythet, one tank was brought into compliance in 2017. The second tank is scheduled for 2018.

Half-yearly piezometric inspections are performed in order to check the quality of the groundwater and soil over time. The tightness of the solvent storerooms is regularly reviewed, and underground systems are prohibited wherever possible in the new workshops, in order to avoid the risk of soil pollution (*example: at SNR Croupillac, there are no buried harmful substance systems*).

## Ensuring good quality of discharged water

**Rainwater** usually passes through a scrubber/oil separator before being discharged into the natural environment and undergoes self-inspection.

Process **water** is not released into the natural environment but is for the most part treated in a suitable waste treatment centre.

Any water released is subject to intense regular inspections in order to ensure compliance with requirements.

On some sites, such as NTN-SNR Seynod and Argonay, some of the process water is treated in an optimised internal purification station before being released into the communal purification station.

### New industrial water treatment facility in Seynod

Replacement of the old industrial water treatment method at Seynod with physico-chemical batch treatment in a 12-m<sup>3</sup> reactor. Start-up is planned for early FY2018.

Installation cost: **€429,000**

### An evaporative condenser at Alès:

In 2014, the Mazac site (Alès) invested in an evaporative condenser, which was brought into operation in 2015. This installation has brought into compliance the process water discharged at the urban station (which represents an average of 2,000 to 2,500 m<sup>3</sup> a year).

The evaporative condenser at the Mazac site not only treats the rinsing water previously treated in an approved centre but above all it has brought the discharges at the council station into compliance.

**Changes in discharges in FY2016 compared with FY2014 at the SNR Mazac site:**



<b>Results of environmental discharge prevention, reduction and improvement measures taken in FY2017 at all NTN-SNR group sites</b>					
<b>70 %</b> Of production sites have performed soil or groundwater analyses	<b>15</b> Soil or groundwater analyses have been performed	<b>90 %</b> Of production sites measure their noise emissions	<b>100 %</b> Of direct discharges into the natural environment are analysed	<b>90 %*</b> Of production sites have measured their boiler emissions	<b>100 %*</b> Of boiler inspections showed compliance with regulations

(\* ) The Curitiba site does not have a boiler. Of the 8 production sites that measure boiler emissions, only the SNR Mazac, ICSA and Sibiu sites carried out inspections during FY2017. The other sites will have to inspect boiler emissions in FY2018. According to the monitoring plan, inspections are carried out every two years.

In the event of any nonconformity, the causes are analysed then corrective and improvement measures are identified and incorporated into an improvement plan. These measures are consolidated at group level by the Sustainable Development department, which manages the associated economic aspects, and are managed and implemented by the sites themselves. A communications plan that is adapted to the various situations that arise is coordinated within the company by the Environment Service.

## Reducing our consumption of raw materials

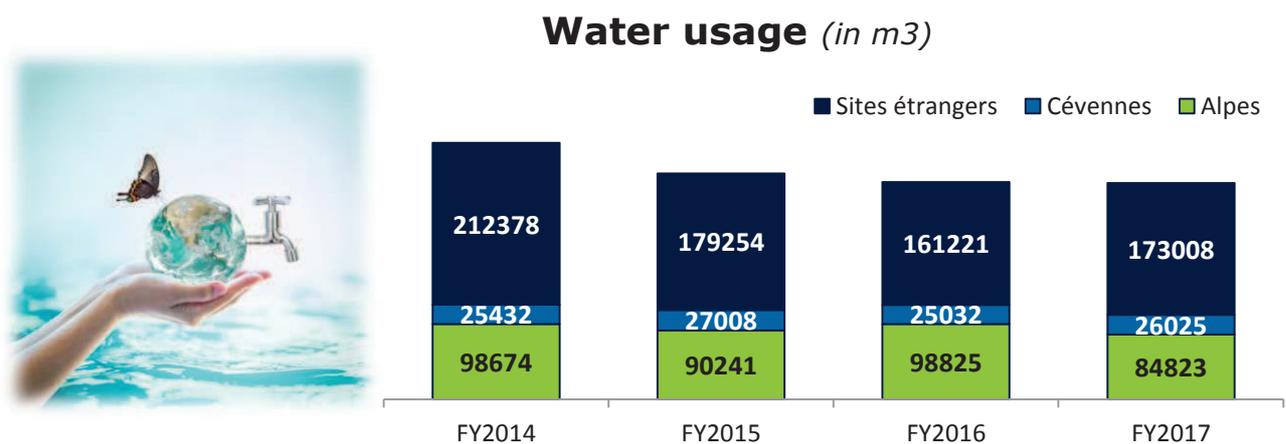
### Ensuring optimised water consumption

Water consumption is regularly monitored at all sites and optimised wherever possible. Water cycle charts are updated every year at each of the sites.

The consumption of water used for lubrication in the manufacturing processes is optimised through the use of central distribution systems. The cutting fluids, which consist mainly of water, are re-used thanks to the presence of central closed-circuit recovery, filtration and redistribution systems.

A water reserve has been designed at ICSA in order to re-use the water that is employed for the grinding operation cooling process as well as for washing the rings and bearings during heat treatment.

*Water supply as a function of local constraints is an issue that is deliberately omitted from NTN-SNR's considerations since none of our sites are affected by water shortages.*



**283,856 m<sup>3</sup>** of water consumed in 2017

or - **0.43 %** compared with 2016

**52,628 m<sup>3</sup>** of water saved since 2014

### Raw materials consumption

Bearings are primarily made of steel, 90 % of which is recycled material. Ecodesign reduces the quantity of steel used in the production of bearings.

The raw materials and chemicals used in our products undergo an internal approval process to ensure that our bearings present no risk to users.

## Protecting biodiversity

Given the low impact of our activity and the locations of our French sites on biodiversity, protection of biodiversity is a theme that has been intentionally excluded from the reporting scope in France.

## Optimising the use of paper and fighting against illegal logging

To help promote responsible forest management in Brazil, the Curitiba site only uses recycled paper or white FSC-labelled paper sourced from sustainably managed forests for its reports or official documents.



To reduce the consumption of raw materials, since 2010 the French sites have chosen a more ecological A4 paper weight of 75 g/m<sup>2</sup> (instead of 80 g/m<sup>2</sup>) while still meeting the requirements of the various departments.

## The fight against food waste



In the company restaurants of the Annecy and Seynod sites, NTN-SNR is involved in the fight against food waste. For the record, the national target for 2025 is to reduce food waste by 50 %.

Our partner Elios is permanently committed to preserving resources, even beyond simple food waste. In this context, numerous commitments have been put in place, such as selective sorting, the sorting of biodegradable waste via the Gruffy biogas plant, the preservation of natural resources, and the implementation of a materials ignition plan and stickers for water and electricity savings, and purchases of environmentally responsible materials and products (*biodegradable towels with natural ink, bisphenol A-free receipts, socially responsible clothing, seasonal food products, proximity*). The company would like to promote organically-farmed products, and consideration should be given to this matter.

The Environmental diagnosis of the Annecy site's corporate restaurant carried out in June 2017 revealed **good management of the water resource**. This performance is mainly due to:

- Regular maintenance of the washing machine,
- The washing machine being in use only during service times,
- Awareness raising within the team about water saving.

Water consumption **8.3 L / meal**

This is **30.83 %** less than the average restaurant's water consumption

(12 L / meal)

## ECODESIGN AND PRODUCTS' GREENHOUSE GAS EMISSIONS BALANCE

### NTN-SNR's Ecodesign process: Develop technology that is good for the environment!



**"NTN-SNR started really using the term "ecodesign" (aka DfE, design for environment) in 2007", says Christof Schmidt, head of Industry and Aeronautics R&D.**

*"Our company quickly assesses what is already the result of ecodesign in its output and defines an indicator that measures shortcomings in this respect and what improvements are required. We have been able to clarify the process, the aim always being the same, namely satisfy the customer's technical specifications. Ecodesign becomes a value of our company. NTN-SNR adopts an ecodesign approach internally to federate teams around a shared ethic, and externally by taking into account the environmental impact of its products. What was previously regarded as a constraint is now a winner. We now observe greater awareness amongst our employees, a general realisation that involves everyone in the company's project, including team management. Indicators are in place to measure daily improvements and appreciate the teams by communicating about the actions undertaken, to motivate them."*

A carbon balance carried out in 2010 revealed that "85 % of the carbon dioxide emitted by a bearing comes from its use". Manufacturing, transporting and processing it at end of life only represents 15 %.

Ecodesign is currently a standard approach within NTN-SNR for improving technical and environmental performance (torque and weight). This EcoDesign approach is included in the Sustainable Development Policy, and will be stimulated among other things by incorporating the life cycle perspective into our ISO 14001 Version 2015-certified Environmental management system.

## The commitments enshrined in NTN-SNR's Ecodesign Charter

- To reduce the weight and torque of bearings while providing equivalent performance
- To reduce the energy needed for bearing manufacture
- To continue to improve our environmental management system in accordance with ISO 14001 and to encourage our suppliers to share this approach
- To reduce the risks associated with the use of chemical products in accordance with the REACH regulation and to encourage our suppliers to share this approach
- Lessen the impact of our transport and that of suppliers.



### Reducing emissions, a shared goal

Ecodesign has always been a central concern for NTN-SNR: the choice of materials and their impact on the environment, life cycle analysis of components, optimisation of the minimum required weights.

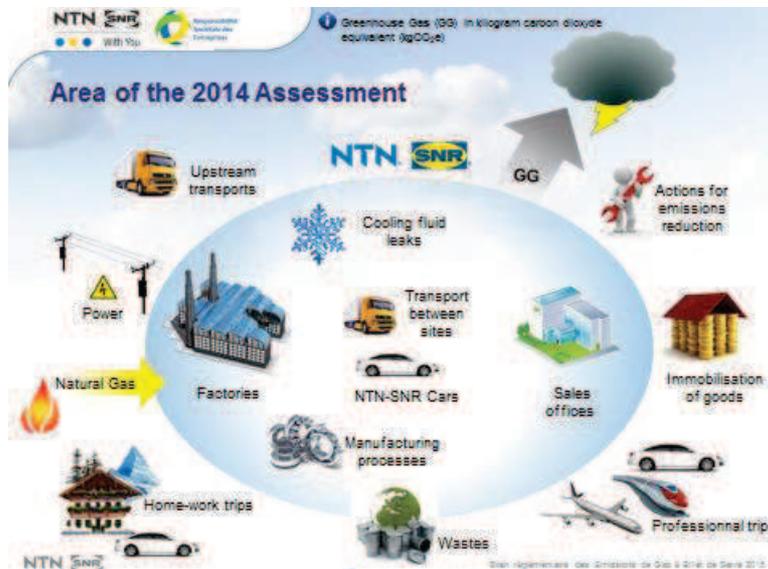
Bearings designed by NTN-SNR are recyclable, as they are made almost entirely of steel.

The company has created software (Dylico2) that simulates the bearing's impact on a vehicle's carbon dioxide emissions. This tool allows manufacturers to meet Euro standards.

By reducing the ecological impact of their vehicles, manufacturers enhance their brand image. In this respect, NTN-SNR has contributed to the Renault Eolab prototype, with **a 30 to 40 % improvement in torque and a 25 % weight saving.**

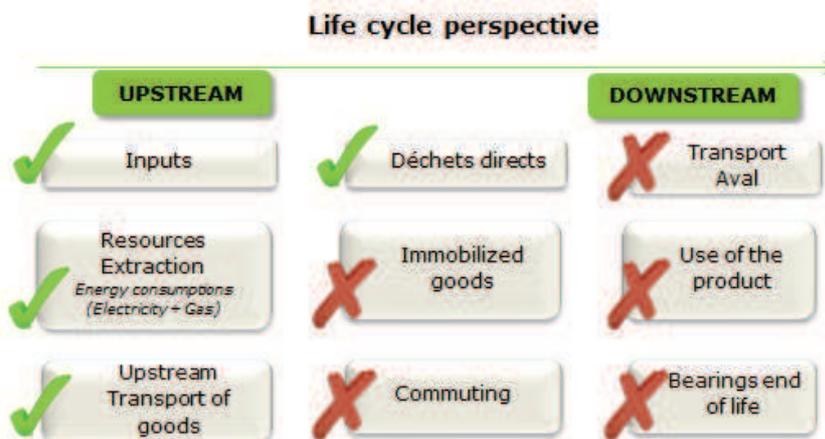
## Our carbon dioxide emissions: Greenhouse gas balance

The greenhouse gas balance of the Alpes sites was updated at the end of 2015. It will be updated again in 2019.



On the basis of this balance and the carbon balance done in 2010, sources of carbon emissions considered significant have been brought to light (sources representing 80 % of the 2015 greenhouse gas balance have been singled out).

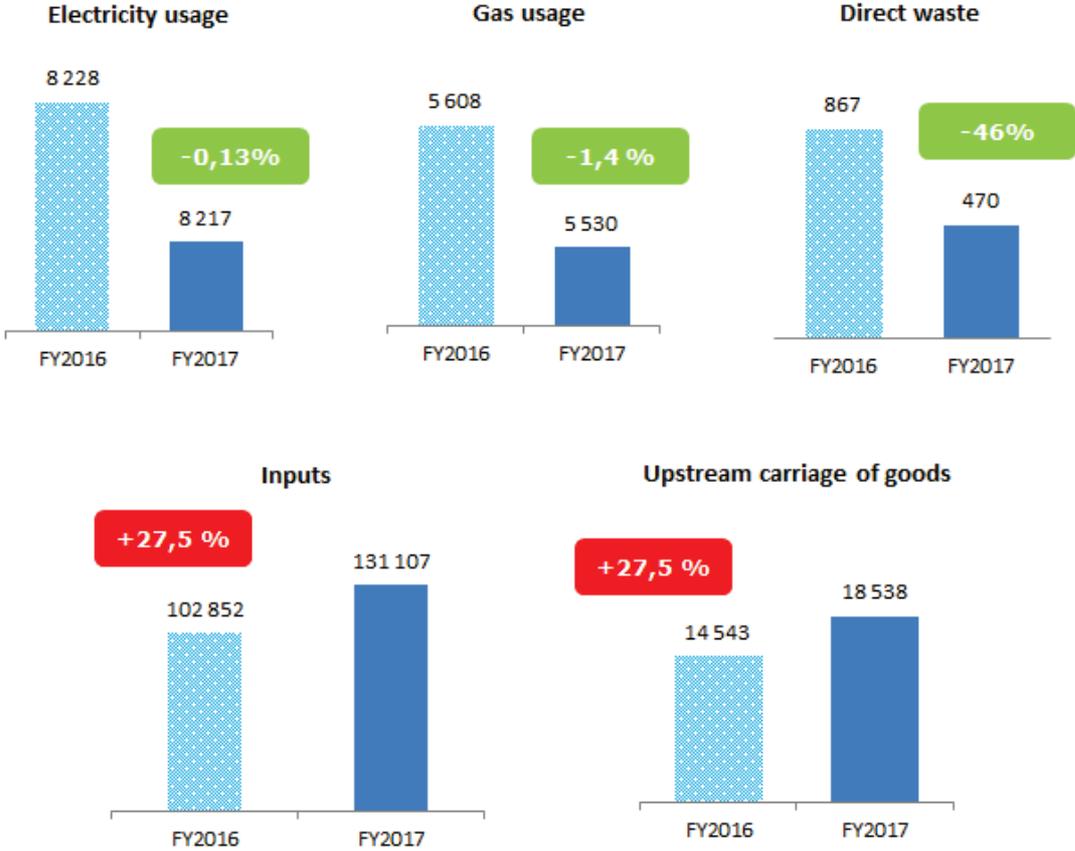
The result of this analysis is presented below:



- ✓ Sources of emissions deemed significant and measured by a performance indicator as in this report.
- ✗ Sources of emissions deemed insignificant. For downstream transport and the use of the product, these sources of emissions are not monitored by an indicator due to the difficulty of obtaining quantifiable information.

For each of the sources deemed significant, carbon dioxide emissions were calculated using the Bilan\_Carbone\_V7.4 spreadsheet, in tax year 2017.

## Results of carbon dioxide emissions (tCO2) in FY2017 for the Alpes region:



Uncertainty in the calculation of carbon dioxide emissions for energy consumption, waste and inputs is low. For the upstream carriage of goods, however, the margin of uncertainty is high, as tonne-kilometre values for the three modes of transport (maritime, road and rail) were based on estimated data. The increase in the quantity of steel purchased (+27,5%) between FY2016 and FY2017 had a direct impact on the transport activity. The rate of increase for for each mode of transport (Maritime, road and rail) was therefore estimated to be identical to that of inputs (ie +27,5%).

Actions are taken every year to reduce these emissions. Regarding inputs, around **90 %** of the purchased steel is already recycled material. However, we have observed an increase of carbon dioxide emissions from inputs due to a sharp increase in the purchase of forged blanks (46,447 tonnes of blanks in 2016 compared to 69,329 tonnes in 2017).

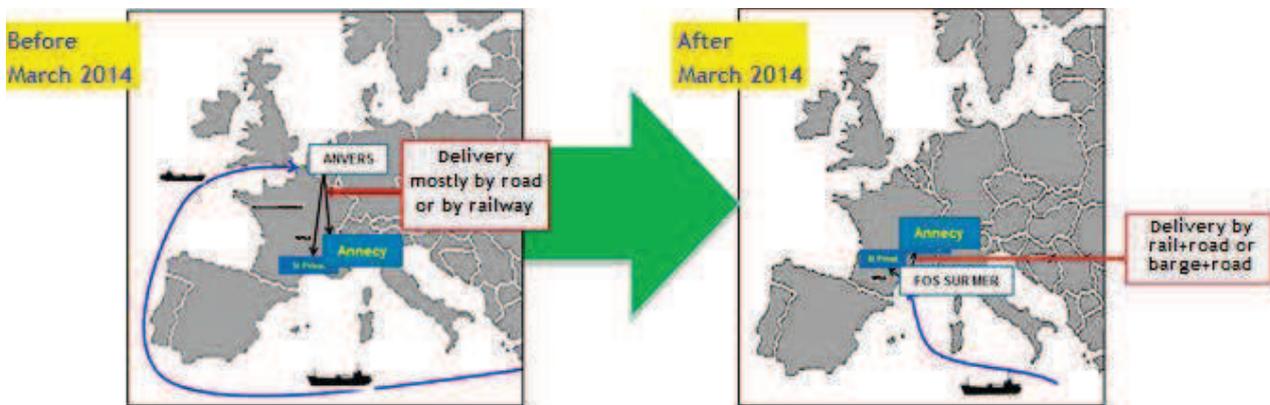
A management process for controlling greenhouse gas emissions will be implemented during FY2018. This process will make it possible to track the progress of the carbon dioxide indicator and set out an action plan.

## TRANSPORT: A STEP TOWARDS THE ECOLOGICAL TRANSITION

### Optimised inbound transport: reorganisation of transport routes favouring maritime and rail transport

Since 2014, NTN-SNR Roulements has been optimising the way its products are transported in order to reduce its impact on the natural environment and its transport costs:

- by favouring maritime and rail routes
- by reducing journey length.



Previously, maritime transport containers shipped from the Mediterranean arrived at the ports of Le Havre and Antwerp and were then transported to the Alpes and Cévennes sites by road or rail.

Now, all containers are unloaded at the port of Fos sur Mer. On the one hand, this makes it possible to encourage local employment (French port) and, on the other, to reduce the total distance travelled.

All deliveries from Fos sur Mer to Cévennes are made by road, and those to Anney by rail, inland waterways and road. Transit via barge and rail allows for a reduction in road transport - the most carbon dioxide-emitting method.

The observed gains are both **economic** and **environmental**.

### Optimising product transport

The Cran site uses a company from the sheltered employment sector to assemble and pack spare parts for automotive repairs. Products are transported between the Cran site and ADTP site by lorry.

As of 2014, ADTP has been investing in a new establishment (Fier site) in immediate proximity to the distribution hub at NTN-SNR's Cran site. The

management of flows and stocks at the Fier site is now fully integrated in NTN-SNR's computerised production system. Manufacturing lead times and the related carbon footprint have been reduced by bringing the two entities closer together. No products are now transported by lorries, which have been replaced with a small electric train.

### The NTN-SNR MilkRun

NTN SNR has been studying ways of optimising its suppliers' deliveries, the aim being to rationalise transportation and better control the quality of the tractor unit and trailer.



NTN-SNR then started its Milk Run project in January 2016. The principle is to have milk runs with lorries taking a set route with multiple stops.

The first stage consisted in working on all the Italian suppliers, who would mainly use a parcel service, more often than not travelling through the Mont Blanc tunnel.

A contract has been negotiated with our haulage firm for the purchase of four Euro 6-compliant trucks that will pick up loads from all our Italian suppliers and deliver truckloads to the Annecy and Alès sites, mainly via the Fréjus tunnel.

During the course of 2016, we set up the Milk Run for Slovak, German and Dutch suppliers. This now represents 9 lorries per week for Italy, 11 for Slovakia and 2 for the Netherlands, with a load factor in excess of **80 %**.

**The scheme's main benefit with respect to our carbon dioxide emissions stems from the use of Euro 6-compliant trucks for these journeys, and the optimisation of their loading rates.**

## Transport between sites: towards a greener mode of transport!

The plan to convert our diesel-powered lorries to NGV (Natural Gas for Vehicles)



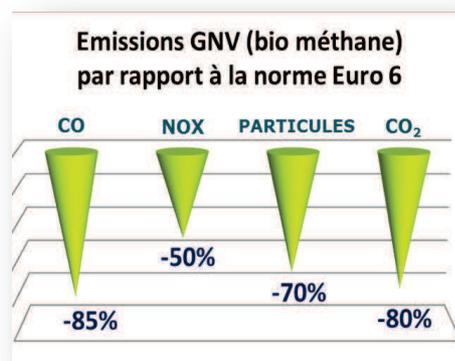
To reduce its environmental impact, NTN-SNR joined forces with the local carrier-led EQUILIBRE project in December 2014.

This project aims to implement NGV in road transport.

In 2015, a test was carried out in real-world conditions over a 10-day period with an IVECO 330 CV CNG road tractor. Initial conclusions were by and large positive.

A project to install a CNG (Compressed Natural Gas) distribution station at NTN-SNR's Argonay site is currently under discussion.

### Impact of the initiative:



**80 %**  
reduction in carbon dioxide emissions

Reduction of around  
**726 tCO<sub>2</sub>e/year**  
(Based on 2016 figures)

1 L of Diesel fuel  
=  
5 L of CNG

## Reducing greenhouse gases generated by employee commuting

On average, employees driving to and from work on their own each cover 11,000 km a year, the equivalent of a round-the-world trip every 4 years! To reduce this figure, as well as associated pollutant emissions, the Auvergne Rhône Alpes region is supporting NTN-SNR in developing the MOV'ICI application.



**NTN-SNR has 8 subscribers**  
**225 members in the NTN-SNR community**

Car-sharing allows people who live close to one another to share their regular journeys between their homes and the place of work. In so doing, the company optimises the travel arrangements of its employees, who feel less tired, save money and have a chance to communicate with one another and be green citizens.

### Encouraging public transport and car sharing in the subsidiaries:

#### CEVENNES

Since 2015, there has also been a car sharing site for the Cévennes: [covoiturage.gard.fr](http://covoiturage.gard.fr)  
An information campaign has been implemented to raise employee awareness about carpooling.



#### ICSA

To encourage employees to use public transport, certain public transport routes in San Benigno Canavese (in the Turin region of Italy) have been extended as far as the entrance to the ICSA factory.

#### SIBIU

To limit emissions due to employee transport, the SNR Sibiu site has introduced a shuttle service, public transport facilities and car-sharing schemes for employees living in nearby villages.

## Climate Club: a dialogue with local firms and the Annecy Urban District Council



***NTN-SNR chairs the Annecy Council's Climate Club, an initiative that defines itself as an advisory body on global warming, energy savings, the development of renewable energies, etc.***

The Annecy Council's Enterprise Climate Club has nearly 60 members, who include volunteers and institutional, socioeconomic and community partners. The Enterprise Climate Club was formed in 2015 specifically to enable local firms to meet in the presence of sustainable development stakeholders in the Annecy Council.

In concrete terms, the topic of mobility has been discussed and possible solutions considered to make Annecy a greener urban area in terms of transport and climate protection. These initiatives aim to improve the quality of life of the urban district's residents and to enable local companies to become real partners with regard to climate issues.

NTN-SNR's Sustainable Development department represents the company at these meetings and presents the actions taken by NTN-SNR in sustainable development matters. In particular, our CSR approach has been presented in its entirety by way of example, as has our ISO 50001 approach.

Our involvement in the Club Climate demonstrates our commitment to live up to our stakeholders' expectations in environmental matters and to pursue a sustainable development policy consistent with the needs and expectations of Annecy Council.

NTN-SNR, in collaboration with Grand Annecy, is drawing up mobility plans, including diagnoses and action plans aimed at improving travel arrangements (carpooling, public transport, 'soft' modes of transport, etc.).

## Renewable Energies



**28 %** of the Group's electricity  
**100 %** of electricity at the Curitiba site  
**18 %** of electricity at the French sites  
**... is generated by renewable energies**

### Solar panels installed in Alès



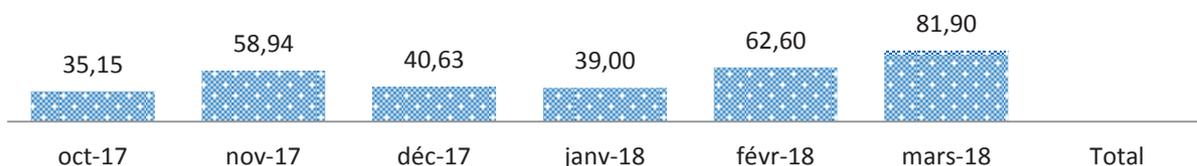
As is the case for our parent company, NTN Corporation in Japan, the car parks at the Alès site have been equipped with solar shades to produce electricity. Employees at the Alès site can now park their vehicles under 5,000 m<sup>2</sup> of solar shades. Two

charging stations have been installed for electric vehicles.

Since October 2017, electricity production has been monitored on a monthly basis.

### Electricity produced by the Mazac solar shades *in MWh*

**318,21 MWh**



This project, consistent with our ISO 14001 and ISO 50001 certifications, reflects NTN-SNR's commitment to searching for green and sustainable solutions that reduce its environmental footprint.

« OUR INNOVATIONS ARE AIMED  
AT PRODUCING BEARINGS THAT WILL  
STAND THE TEST OF TIME »



SUSTAINABLE  
**INNOVATIONS**

**NTN**® **SNR**®

[www.ntn-snr.com](http://www.ntn-snr.com)



With You



## “ MAKING THE BEARING SOCIALY RESPONSIBLE ”

NTN-SNR commits for sustainable innovation. This strategy, focused on R&D, is one of the company’s driving forces of development. Today, we’re preparing for what will do the best on our markets in the next 20 years.

When we imagine our future products, intangible objectives remain: quality, performance, and the bearing’s intelligence (with mechatronics). However – and it must be emphasised – we are also looking at how to adjust to changes in society: new means of transportation, “green” energies, reduction of the carbon footprint of industrial activities, more energy-efficient vehicles, etc.

The innovations presented here fall within the scope of this vision: blade root bearings adapted to future fuel-efficient aircraft engines, inverted tapered roller bearings in automobiles to improve energy efficiency, electric wheel motors for clean and efficient vehicles, etc.

By exercising our multidisciplinary expertise over the years, in fields such as tribology (the study of contacts), lubricants, calculations, and mechatronics, we have developed bearings that practically eliminate friction in mechanical assemblies. Designed to reduce energy consumption at the heart of contemporary rotating solutions, they stand out as essential components in applications responding to current environmental challenges – wind turbines, electric vehicles, etc. Thanks to these innovations, we are able to apply the notion of social responsibility to bearings.



**Reduction in environmental impacts:**  
low torque components, new materials, electric vehicles...



**Increased reliability:**  
innovative lubrication and sealing solutions...



**Performance and life optimisation.**



**Intelligent products, mechatronics:**  
speed, angle and temperature sensors, on-board diagnostics...

## NTN-SNR adapts its research and technologies to predominant global trends

Thanks to its extensive innovation capacities, NTN-SNR is a leader acknowledged by its partners. NTN-SNR ranks 38<sup>th</sup> in the Top 50 of French companies filing patents. The company ensures that its R&D priorities address the requirements of tomorrow. At NTN-SNR, innovation manifests itself in projects conducted in partnership with clients, technical centres and universities with a view to meeting the requirements of tomorrow; among other things this incorporates Industry 4.0 (paperless, stabilized temperature, low-energy lights, etc.).

The European Commission has adopted a new regulation that will impose new emission thresholds on car manufacturers. It has set this threshold at 95 grams of CO<sub>2</sub> emitted per kilometre by the beginning of 2021, against 130 grams in 2015. In this respect, NTN-SNR takes pains to support its partners in the development of new even more environmentally friendly solutions. Similarly in aeronautics, new generations of engines consume much less aviation fuel. More and more city centres are being made traffic-free.

Addressing these trends requires innovation, which leads to various areas of focus:

- Reducing torque and friction;
- Reducing weights and optimizing shapes;
- Developing new forms of mobility relating to the explosion of urban development: electric bicycles, car sharing and other "soft modes";
- The choice of materials and their strength: ceramics, plastics, composites, [...]: less material and more strength;
- The place of bearings in internal combustion engines;
- Keeping pace with electrification (electric motors and related sensors, electrical equipment and actuators).

To best meet these requirements, 2017 was marked by three main lines of product research:

- Bearings for internal combustion engines (camshaft, crankshaft, balancing shafts),
- Bearings, sensors and actuators for electric and hybrid vehicles,
- Bearings in ceramic for aeronautics.

## Developing an automotive crankshaft bearing to reduce carbon emissions

NTN-SNR has developed a prototype crankshaft bearing to replace the hydrodynamic bearing. The aim is to help car manufacturers achieve compliance with the new 2021 European regulations concerning carbon emission thresholds. The tests are encouraging for application in mass production.



**Marc Paquien** - Innovation project leader - tells us more:



*"Less friction also means lower carbon emissions. And sharp reductions in carbon emissions are imposed on the motor industry by the European Commission from 2021. In reality this is a real opportunity for developing new projects with high added value on bearings. Several clients are interested, naturally for ethical reasons but also because the financial stakes are high for manufacturers. The use of a crankshaft bearing poses real technical challenges, but these efforts are greatly rewarded with a potential reduction in carbon emissions in the region of 1 g/km!"*

## Camshaft bearings, new driver of growth for NTN-SNR

NTN-SNR is also pursuing its development projects for camshaft bearings with leading manufacturers. The group is positioning itself on the technology of camshaft bearings, which offer significant reductions in consumption and carbon emissions.

These bearings are already in development with manufacturers.

NTN-SNR bearings offer real advantages, such as surface treatments for operation in harsh lubrication conditions, or geometric adjustments to facilitate mounting.

The development of these disruptive solutions raises new issues. The engine's environment must be factored in from the earliest design stages. NTN-SNR is thus banking on the development of skills, test equipment and calculation tools.



## Bearings for the aeronautics industry

Thanks to all these strong projects, NTN-SNR has also been selected for the second Clean Sky project: Clean Sky 2.

Clean Sky is the biggest European research programme developing an innovative and cutting-edge technology aimed at reducing aircraft carbon, gas and noise emissions. Funded by the European Union's Horizon 2020 programme, Clean Sky plays its part in strengthening European aeronautical collaboration, global leadership and competitiveness.



**NTN-SNR integrates a wide-ranging environmental into all its innovation projects, both in the specifications of its innovative products and in the accompanying methods and organizations.**

« OUR CSR PERFORMANCE THROUGH  
MORE THAN 330 INDICATORS »

INDICATORS



[www.ntn-snr.com](http://www.ntn-snr.com)



With You

« IT'S NOT A QUESTION OF PREDICTING THE  
FUTURE BUT OF MAKING IT POSSIBLE »

*Antoine de Saint-Exupéry*



## DISTRIBUTION OF INDICATORS

### SOCIAL

#### PAGE 1

- Workforce \_\_\_\_\_ Table 1
- Hiring / termination / Remuneration \_\_\_\_\_ Table 2

#### PAGE 2

- Work organisation / Social relations \_\_\_\_\_ Table 3

#### PAGE 3

- Health & Security \_\_\_\_\_ Table 4
- Training / Equal treatment / anti-discrimination \_\_\_\_\_ Table 5

### SUSTAINABLE PURCHASING

#### PAGE 4

- Various information \_\_\_\_\_ Table 6

### ENVIRONMENT

#### PAGE 5

- Pollution and waste management \_\_\_\_\_ Table 7

#### PAGE 6

- Sustainable use of resources \_\_\_\_\_ Table 8
- Global warning \_\_\_\_\_ Table 9

**SOCIAL : Table 1 - Workforce**

<b>Social</b>	<b>SNR Cévennes</b>	<b>NTN-SNR Alpes</b>	<b>ICSA (Italy)</b>	<b>SNR Curitiba (Brazil)</b>	<b>NTN-SNR Sibiu (Romania)</b>	<b>NTN-SNR Group</b>	<b>Article 225 Equivalence</b>	<b>GRI G4 Equivalence</b>
<b>Workforce breakdown by age</b>								
<i>Number of executives under 25</i>	0	9	0	0	4	13	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of executives aged 25 to 29</i>	1	48	0	0	39	88	I.a) 1.4	G4-10 / LA1 / LA12
<i>Number of executives aged 30 to 49</i>	6	268	3	7	124	408	I.a) 1.5	G4-10 / LA1 / LA12
<i>Number of executives aged 50 to 59</i>	5	95	5	1	21	127	I.a) 1.6	G4-10 / LA1 / LA12
<i>Number of executives over 60</i>	1	14	2	0	6	23	I.a) 1.3	G4-10 / LA1 / LA12
<i>Number of emp/tech/sup under 25</i>	11	99	1	4	39	154	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of emp/tech/sup aged 25 to 29</i>	6	101	1	9	38	155	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of emp/tech/sup aged 30 to 49</i>	44	372	24	79	113	632	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of emp/tech/sup aged 50 to 59</i>	24	132	12	6	32	206	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of emp/tech/sup over 60</i>	2	16	3	0	10	31	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of manual workers under 25</i>	14	74	0	2	108	198	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of manual workers aged 25 to 29</i>	16	117	2	14	68	217	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of manual workers aged 30 to 49</i>	183	862	93	50	351	1539	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of manual workers aged 50 to 59</i>	117	599	53	1	147	906	I.a) 1.2	G4-10 / LA1 / LA12
<i>Number of manual workers over 60</i>	9	35	0	0	24	68	I.a) 1.2	G4-10 / LA1 / LA12
<b>Total female employees</b>	<b>53</b>	<b>831</b>	<b>48</b>	<b>47</b>	<b>375</b>	<b>1354</b>	I.a) 1.2	G4-10 / LA1 / LA12
<b>Total male employees</b>	<b>386</b>	<b>2010</b>	<b>140</b>	<b>126</b>	<b>749</b>	<b>3411</b>	I.a) 1.2	G4-10 / LA1 / LA12
<b>Total employees</b>	<b>439</b>	<b>2841</b>	<b>188</b>	<b>173</b>	<b>1124</b>	<b>4765</b>		

**SOCIAL : Table 2 - Hiring/Layoffs/Wages**

<b>Social</b>	<b>Unit</b>	<b>NTN-SNR Alpes</b>	<b>NTN-SNR Group</b>	<b>Article 225 Equivalence</b>	<b>GRI G4 Equivalence</b>
<b>Recruitment</b>					
<i>Women hired on permanent contracts</i>		86	117	I.a) 2.1	EC6
<i>Men hired on permanent contracts</i>		197	548	I.a) 2.1	EC6
<i>Executives hired on permanent/fixed term contracts</i>		51	99	I.a) 2.1	EC6
<i>Employees, technician and supervisors hired on permanent/fixed term contracts</i>		124	190	I.a) 2.1	EC6
<i>Manual workers hired on permanent/fixed term contracts</i>		164	460	I.a) 2.1	EC6
<b>Layoffs</b>					
<i>Total departures</i>		305	766		
<i>Including layoffs</i>		26	120	I.a) 2.2	LA1
<i>Including resignations</i>		146	448	I.a) 2.2	LA1
<i>Including retirements</i>		67	98		
<i>Including mutually agreed termination of contract</i>		6	8		
<i>Turnover rate (ratio of resignations to total workforce)</i>	%	5,14	9,40	I.a) 2.2	LA1
<b>Wages</b>					
<b>Total annual wage bill</b>	EUR	92 646 758	113 841 897		
<i>Average profit-sharing amount per employee beneficiary</i>	EUR	1 150	3 191	I.a) 3.1	G4-51

**SOCIAL : Table 3** – Work organization/Industrial relations

<b>Social</b>	Unit	NTN-SNR Alpes	NTN-SNR Group	Article 225 Equivalence	GRI G4 Equivalence
<b>Work organization</b>					LA7
<b>Organization of working hours</b>					
<i>Average weekly working hours, Administrative Employees</i>	h	36,18	38,9	I. b) 1	
<i>Average weekly working hours, Workers on 2*8 shifts</i>	h	36,02	37,71	I. b) 1	
<i>Number of employees with flexitime arrangements</i>		1 200	1 201	I. b) 1	
<i>Number of employees working in weekend shifts</i>		142	142	I. b) 1	
<i>Number of employees working in fixed shifts</i>		342	408	I. b) 1	
<i>Number of employees working in alternating shifts</i>		1 026	1 136	I. b) 1	
<i>Number of employees working daytime hours</i>		1 331	1 642	I. b) 1	
<i>Number of employees working 3*8</i>		0	958	I. b) 1	
<i>Number of employees working 2*8</i>		1 026	1 193	I. b) 1	
<i>Number of employees working on weekends</i>		142	213	I. b) 1	
<i>Number of employees working at NIGHT</i>		342	409	I. b) 1	
<b>Absenteeism</b>					
<i>Number of theoretical days worked</i>	d	731 471	1 157 918		
<i>Number of days' absence due to travelling to and from work</i>	d	3145	3 232,5	I. b) 2	
<i>Absentee rate due to travelling to and from work</i>	%	0,43	0,28	I. b) 2	
<i>Number of days' sick leave</i>	d	32 258	49 692,32	I.b)2 et I.d)4	LA6
<i>Absentee rate for sick leave</i>	%	4,41	4,29	I.b)2 et I.d)4	LA6
<i>Number of days' absence of executives</i>	d	3773	4 966		
<i>Absentee rate - Executives</i>	%	3,60	3,4	I. b) 2	
<i>Number of days' absence of employees, technicians and supervisors</i>	d	7442	11 240,53		
<i>Absentee rate of employees, technicians and supervisors</i>	%	4,2	4,26	I. b) 2	
<i>Number of days' absence of manual workers</i>	d	38 340	58 016,27		
<i>Absentee rate of manual workers</i>	%	8,53	8,99	I. b) 2	
<b>Industrial relations</b>					
<b>Organization of dialogue between management and labour</b>					
<i>Average renewal frequency of work's council members</i>	year	4	3,33	I. c) 1	LA4
<i>Contribution to WC 1.25 %</i>	EUR	1 146 845	1 321 680	I. c) 1	LA4
<i>Contribution to WC 0.20 %</i>	EUR	188 079	213 064	I. c) 1	LA4
<i>Average renewal frequency of shop stewards</i>	year	4	3,67	I. c) 1	LA4
<i>Number of hours reserved for union/delegate duties</i>	h	6270	7 362	I. c) 1	LA4
<i>Average renewal frequency of HSWCC members</i>	year	2	2,4	I. c) 1	LA4
<i>Total number of hours of delegation</i>	h	15 383	18 814	I. c) 1	LA4

**SOCIAL : Table 4 – Health and safety**

<b>Social</b>	Unit	NTN-SNR Alpes	NTN-SNR Group	Article 225 Equivalence	GRI G4 Equivalence
<b>Health and Safety</b>					
<b>Frequency and severity of workplace accidents</b>					
Total number of workplace accidents declared with sick leave including number of accidents due to the existence of serious hazards		43	51	I. d) 3	LA6 / LA7
including number of accidents due to falls from heights		1	1	I. d) 3	LA6 / LA7
including number of accidents caused by machines		1	2	I. d) 3	LA6 / LA7
including number of traffic, handling, storage accidents		2	4	I. d) 3	LA6 / LA7
including number of accidents caused by objects, weights or particles accidentally in motion		25	26	I. d) 3	LA6 / LA7
including number of accidents caused by objects, weights or particles accidentally in motion		2	6	I. d) 3	LA6 / LA7
including other cases		12	12		
Total number of accidents to and from work with sick leave		13	18	I. d) 3	LA6 / LA7
Number of hours of exposure to risk	h	4 518 211	5 143 211	I. d) 3	LA6 / LA7
Number of days lost	d	3006	2 588	I. d) 3	LA6 / LA7
Frequency (F) = Num. lost-time accidents X 10 <sup>6</sup> / Num. hours	%	9,5	ND	I. d) 3	LA6 / LA7
Severity (S) = Num. of days lost X 10 <sup>3</sup> / Num. hours	%	0,67	ND	I. d) 3	LA6 / LA7
<b>Occupational illnesses</b>					
Number of recognized occupational illnesses		7	9	I. d) 4	LA6
Number of employees suffering from an occupational disease recognized as such during the year		6	8	I. d) 4	LA6

**SOCIAL : Table 5 – Training/Equal treatment/Fight against discrimination**

<b>Social</b>	Unit	NTN-SNR Alpes	NTN-SNR Group	Article 225 Equivalence	GRI G4 Equivalence
<b>Training and skills development</b>					
<b>Training policy implemented</b>					
Number of job offers published internally		N.D.	79		
Number of employees that benefited from the internal mobility program		155	217		
Number of Male trainees		2 228	3 136	I. e) 1	LA10 / LA11
Number of Female trainees		933	1 792	I. e) 1	LA10 / LA11
Number of Executive trainees		411	628		
Number of Emp/Tech/Sup trainees		783	1 286		
Number of Manual worker trainees		1 967	3 192	I. e) 1	LA10 / LA11
Proportion of the wage bill devoted to ongoing training	%	5, 8	5, 62	I. e) 1	LA10 / LA11
Amount dedicated to ongoing training	EUR	5 370 205	6 3937 16	I. e) 1	LA10 / LA11
<b>Total number of hours of training</b>					
Number of hours of executive training	h	15 495	25 635	I. e) 2	LA9 / HR2
Number of hours of empl./tech./sup. training	h	27 945	30 758	I. e) 2	LA9 / HR2
Number of hours of manual worker training	h	57 042	126 103	I. e) 2	LA9 / HR2
Total training hours	h	100 482	182 496	I. e) 2	LA9 / HR2
<b>Equality of treatment</b>					
<b>Measures taken to encourage recruitment and integration of disabled people</b>					
Number of value units recovered via service providers from the sheltered employment sector		84.5	96.85	I. f) 2.2	LA12
<b>Fight against discrimination policy</b>					
Average number of temporary workers		196	410		
<b>Young people</b>					
Total number of work-study contracts		36	45	I. f) 2.1	
<b>Over-fifties</b>					
Number of recruitments of over-50s		ND	81	I. f) 2.1	

**PURCHASING : Table 6 – Miscellaneous**

<b>Responsible purchases</b>	<b>Unit</b>	<b>Group Values</b>	<b>NTN-SNR Alpes Values</b>	<b>Article 225 Equivalence</b>	<b>GRI G4 Equivalence</b>
<i>What quantity of steel is used?</i>	Tons	111 821	100 158 <sup>(*)</sup>	II. c) 2.1	EN1 / EN2
<i>What are the countries of origin of the steel?</i>	/	France, Suède, Chine, Allemagne, Japon, Brésil, Inde, Bulgarie, Corée	France, Suède, Chine, Allemagne	III. c) 2	HR5 / EN33
<i>How many bearing components are used?</i>	Unit	2 714 896 799	2 541 476 712	II. c) 2.1	EN1 / EN2
<i>What quantity of packaging is used?</i>	Unit	39 436 802	38 327 195	II. c) 2.1	EN1 / EN2

<sup>(\*)</sup> The value for material purchases for blacksmiths is calculated in calendar year 2017 (= 69 329 tons out of 100 158 tons).

## ENVIRONMENT : Table 7 – Pollution and waste management

Environment	Unit	NTN-SNR Alpes	NTN-SNR Group	Article 225 Equivalence	GRI G4 Equivalence
<b>Pollution and waste management</b>					
<b>Air</b>					
What percentage of inspected boilers do not comply with regulations?	%	No inspection (Inspection every two years) Figures unavailable for Cran	No inspection on Alpes & Croupillac 0% at Mazac 0% at Sibiu (Romania) 0% at ICESA (Italie)	II. b) 1.1	
<b>Water</b>					
What is the quantity of process water sent to the treatment station?	m <sup>3</sup>	9 334,02	25 462,07	II. b) 1.2	EN22 / EN24
What is the quantity of process water discharged into the sewers?	m <sup>3</sup>	Argonay : 1970 Seynod : 0 because of an accident on the water treatment plant	139 138,6	II. b) 1.2	EN22 / EN24
What is the percentage of inspected process water that does not comply with regulations?	%	0% at Argonay Figures unavailable elsewhere	0% at Argonay 17% at Mazac 0% at ICESA (Italy) Figures unavailable elsewhere	II. b) 1.2	
What is the quantity of waste water from sanitary facilities treated in the purification station?	m <sup>3</sup>	13 660	29 256	II. b) 1.2	EN22
<b>Waste prevention, recycling and disposal measures</b>					
What is the quantity of hazardous industrial waste (HIW)?	t	9 754	14 242	II. b) 2	EN23 / EN24
Quantity of hazardous waste as a function of added value	kg/EUR	0,066	0,061	II. b) 2	EN23
Quantity of non-hazardous waste as a function of added value	kg/EUR	0,077	0,074	II. b) 2	EN23
What is total quantity of waste generated by your activity?	t	21 006	31 513	II. b) 2	EN23
<b>Waste reclamation, recycling and re-use</b>					
What volume is reclaimed/recycled/reused?	t	20 597	30 254	II. b) 2	EN23
What is the value of expenditure allocated to the treatment of waste?	EUR	1 795 933	2 412 218	II. b) 2	
What is the value of gains from waste reclamation, recycling and re-use?	EUR	1 585 955	1 764 571	II. b) 2	
<b>Noise pollution</b>					
Do you measure your noise emissions?		Yes : 80% No : 20%	Yes : 90% No : 10%	II. b) 3	EN24
How many complaints have been received due to noise nuisance?		0	0	II. b) 3	EN24
<b>Odour nuisance</b>					
Do you measure your odorous emissions?		NO	Yes : 10% No : 90%	II. b) 3	EN24
What is the level of complaints received due to odour-related nuisances?		Annecey : 2 complaints Seynod : 1 complaints (hydrocarbon odors)	Mazac : 10 complaints Alpes : 3	II. b) 3	EN24
<b>Light pollution</b>					
How many complaints have been received due to light-related nuisances?		0	0	II. b) 3	EN24

NA : Not Applicable

## ENVIRONMENT : Table 8 – Sustainable use of resources

Environment	Unit	NTN-SNR Alpes	NTN-SNR Group	Article 225 Equivalence	GRI G4 Equivalence
<b>Sustainable resource use</b>					
<b>Water consumption</b>					
What is the aggregate value of water consumption?	m <sup>3</sup>	84 823	283 856	II. c) 1.1	EN8
Water consumption as a function of added value	m <sup>3</sup> /KEUR	0,578	1,20	II. c) 1.1	EN8
What is the consumption of mains water?	m <sup>3</sup>	84 823	130 647	II. c) 1.1	EN8
What is the consumption of surface water?	m <sup>3</sup>	0	0	II. c) 1.1	EN8
What is the consumption of underground water?	m <sup>3</sup>	0	144 981	II. c) 1.1	EN8
<b>Chemical products</b>					
What is the quantity of chemicals used in the manufacturing process?	t	ND	ND	II. c) 2.1	EN1 / EN2
Chemicals used in-process as a function of added value*	g/EUR	ND	ND	II. c) 2.1	EN1 / EN2
What quantity of material (bearings) is placed on the market?	t	24 541	64 123	II. c) 2.1	EN1 / EN2
<b>Energy consumption</b>					
<b>Electricity</b>					
What is the consumption of electricity?	MWh	100 212	169 314	II. c) 3.1	EN3
<b>Gas</b>					
What is the gas consumption?	MWh_PCI	22 772	30 115	II. c) 3.1	EN3
Gas consumption as a function of added value (WhPCI/Euros)	MWh PCI/Euros	155,17	127,71	II. c) 3.1	EN3

NA : Not Available

## ENVIRONMENT : Table 9 – Climate change

Environment	Unit	NTN-SNR Alpes	NTN-SNR Group	Article 225 Equivalence	GRI G4 Equivalence
<b>Climate change</b>					
<b>Greenhouse gas emissions</b>					
Quantity of emissions generated by energy	tCO2e	13 747	NC	II. d) 1	EN15 / EN16
Quantity of emissions generated by air-conditioning systems	tCO2e	NC	NC	II. d) 1	EN15
Quantity of emissions generated by inbound freight	tCO2e	18 538 (estimated value)	NC	II. d) 1	EN17
Quantity of emissions generated by outbound freight	tCO2e	NC	NC	II. d) 1	EN17
Quantity of emissions generated by internal freight	tCO2e	NC	NC	II. d) 1	EN17
Quantity of emissions generated by inputs (steel, components, chemicals)	tCO2e	131 107	NC	II. d) 1	EN17
Quantity of emissions generated by waste	tCO2e	470	NC	II. d) 1	EN17
Quantity of emissions generated by purchases of steam or cold	tCO2e	NC	NC	II. d) 1	EN17
Quantity of emissions generated by business travel	tCO2e	NC	NC	II. d) 1	EN15 / EN17
Quantity of emissions generated by travel to and from work	tCO2e	NC	NC	II. d) 1	EN17
Quantity of emissions generated by product packaging	tCO2e	NC	NC	II. d) 1	EN17
Quantity of emissions associated with product end-of-life	tCO2e	NC	NC	II. d) 1	EN17
<b>Total CO<sub>2</sub> emissions</b>	<b>tCO2e</b>	<b>163 862</b>	NC	<b>II. d) 1</b>	<b>EN17</b>
<b>Total CO<sub>2</sub> emissions/Added Value</b>	<b>tCO2e/k€</b>	<b>1,12</b>	NC	<b>II. d) 1</b>	<b>EN17</b>
On what date did you produce this/these assessment(s)?		05/2018	NC	II. d) 1	EN15/EN17
What is the quantity of avoided CO <sub>2</sub> emissions?	tCO2e	10 694	NC	II. d) 2	EN15/EN17
<b>VOC releases</b>					
Quantity of VOC released (civil year 2016)	VOC Tons	50,53 (43.53 for Seynod plant)	111,42 Figures unavailable for ICESA	II. b) 1	EN21
Quantity of VOC / added value	g/€VA	0,34	0,5	II. b) 1	EN21
<b>Added Value</b>					
What is the Added Value ? (€)	K€	146 757	234 668	-	-

NC : Non calculated

*This is a free translation into English of the original report issued in the French language and it is provided solely for the convenience of English speaking users. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.*

## **NTN-SNR Roulements**

Year ended the 03/31/2018

**Independent verifier's report on consolidated social, environmental and societal information presented in the management report**

ERNST & YOUNG et Associés

# NTN-SNR Roulements

Year ended the 03/31/2018

## Independent verifier's report on consolidated social, environmental and societal information presented in the management report

*This is a free translation into English of the original report issued in the French language and it is provided solely for the convenience of English speaking users. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.*

To the shareholders,

In our quality as an independent verifier accredited by the COFRAC<sup>1</sup>, under the number n° 3-1050, and as a member of the network of one of the statutory auditors of the company NTN-SNR Roulements, we present our report on the social, environmental and societal information established for the year ended on the 03/31/2018, presented in the management report, hereafter referred to as the "CSR Information," pursuant to the provisions of the article L.225-102-1 of the French Commercial code (*Code de commerce*).

### Responsibility of the company

It is the responsibility of the Board of Directors to establish a management report including CSR Information referred to in the article R. 225-105 of the French Commercial code (*Code de commerce*), in accordance with the protocols used by the company (hereafter referred to as the "Criteria").

### Independence and quality control

Our independence is defined by regulatory requirements, the Code of Ethics of our profession as well as the provisions in the article L. 822-11 of the French Commercial code (*Code de commerce*). In addition, we have implemented a quality control system, including documented policies and procedures to ensure compliance with ethical standards, professional standards and applicable laws and regulations.

### Responsibility of the independent verifier

It is our role, based on our work:

---

<sup>1</sup> Scope available at [www.cofrac.fr](http://www.cofrac.fr)

- to attest whether the required CSR Information is present in the management report or, in the case of its omission, that an appropriate explanation has been provided, in accordance with the third paragraph of R. 225-105 of the French Commercial code (*Code de commerce*) (Attestation of presence of CSR Information);
- to express a limited assurance conclusion, that the CSR Information, overall, is fairly presented, in all material aspects, in accordance with the Criteria;

Our verification work mobilized the skills of four people between May 2018 and July 2018 for approximately four weeks.

We conducted the work described below in accordance with the professional standards applicable in France and the Order of 13 May 2013 determining the conditions under which an independent third-party verifier conducts its mission, and in relation to the opinion of fairness and the reasonable assurance report, in accordance with the international standard ISAE 3000<sup>2</sup>.

## **1. Attestation of presence of CSR Information**

### **Nature and scope of the work**

We obtained an understanding of the company's CSR issues, based on interviews with the management of relevant departments, a presentation of the company's strategy on sustainable development based on the social and environmental consequences linked to the activities of the company and its societal commitments, as well as, where appropriate, resulting actions or programmes.

We have compared the information presented in the management report with the list as provided for in the Article R. 225-105-1 of the French Commercial code (*Code de commerce*).

In the absence of certain information, we have verified that the explanations were provided in accordance with the provisions in Article R. 225-105-1, paragraph 3, of the French Commercial code (*Code de commerce*).

We verified that the information covers the consolidated perimeter, namely the entity and its subsidiaries, as aligned with the meaning of the Article L. 233-1 and the entities which it controls, as aligned with the meaning of the Article L. 233-3 of the French Commercial Code (*Code de Commerce*).

Based on this work, we confirm the presence in the management report of the required CSR information.

## **2. Limited assurance on CSR Information**

### **Nature and scope of the work**

We undertook interviews with the persons responsible for the preparation of the CSR Information in the different departments, in charge of the data collection process and, if applicable, the people responsible for internal control processes and risk management, in order to:

---

<sup>2</sup> ISAE 3000 - Assurance engagements other than audits or reviews of historical information

- Assess the suitability of the Criteria for reporting, in relation to their relevance, completeness, reliability, neutrality, and understandability, taking into consideration, if relevant, industry standards;
- Verify the implementation of the process for the collection, compilation, processing and control for completeness and consistency of the CSR Information and identify the procedures for internal control and risk management related to the preparation of the CSR Information.

We determined the nature and extent of our tests and inspections based on the nature and importance of the CSR Information, in relation to the characteristics of the Company, its social and environmental issues, its strategy in relation to sustainable development and industry best practices.

For the CSR information which we considered the most material<sup>i</sup>:

- At the level of the consolidated entity, we consulted documentary sources and conducted interviews to corroborate the qualitative information (organisation, policies, actions, etc.), we implemented analytical procedures on the quantitative information and verified, on a test basis, the calculations and the compilation of the information, and also verified their coherence and consistency with the other information presented in the management report;
- At the level of the representative selection of entities that we selected<sup>ii</sup>, based on their activity, their contribution to the consolidated indicators, their location and a risk analysis, we undertook interviews to verify the correct application of the procedures and undertook detailed tests on the basis of samples, consisting in verifying the calculations made and linking them with supporting documentation. The sample selected therefore represents on average 33% of the total headcount and 31% of the electricity consumption.

For the other CSR information, we assessed their consistency in relation to our knowledge of the company.

Finally, we assessed the relevance of the explanations provided, if appropriate, in the partial or total absence of certain information.

We consider that the sample methods and sizes of the samples that we considered by exercising our professional judgment allow us to express a limited assurance conclusion; an assurance of a higher level would have required more extensive verification work. Due to the necessary use of sampling techniques and other limitations inherent in the functioning of any information and internal control system, the risk of non-detection of a significant anomaly in the CSR Information cannot be entirely eliminated.

## Conclusion

Based on our work, we have not identified any significant misstatement that causes us to believe that the CSR Information, taken together, has not been fairly presented, in compliance with the Criteria.

Paris-La Défense, August 28th 2018

Independent Verifier  
ERNST & YOUNG et Associés

Christophe Schmeitzky  
Sustainable Development Partner

Jean-François Bélorgey  
Partner

---

<sup>i</sup> **Social information:** employment (total headcount, hiring and terminations), absenteeism, health and safety at the work place, work accidents, notably their frequency and their severity, training policies, number of hours of training.

**Environmental and societal information :** general environmental policy (organisation, training and information delivered to the employees, approaches to evaluation and certification), preventative measures recycling and waste management, energy consumption, measures undertaken to improve energy efficiency and to promote the use of renewable energy, raw material consumption and measures undertaken to enhance resource efficiency, climate change (GHG emissions), importance of subcontracting and the consideration of environmental and social issues in purchasing policies and relations with suppliers and subcontractors.

<sup>ii</sup>Annecy (France)