

# SUSTAINABILITY REPORT

2018

# 

The concept of equilibrium is the key to reading the RadiciGroup 2018 Sustainability Report.

The word *equilibrium* has its root in the Latin *aequus* meaning equal or fair, and libra, scales.

Not too surprisingly, the etymology of this word fully reflects the sustainability principles adopted by RadiciGroup in its pursuit of what is fair, balancing environmental, social and economic aspects with the desire to seek continual improvement, in a consistent and committed way.

quilibrium

Such an equilibrium is dynamic, made up of challenges, new ideas and solutions and, at times, trial and error, in a quest for answers to continually changing scenarios. Maintaining this equilibrium is an inevitable challenging goal tied to the evolving concept of sustainability, changing market situations and the perennial renewal of people and companies.

The images accompanying the various sections of this Report were chosen with the specific purpose of illustrating the fascinating concept of equilibrium underlying the Group's principles, brought to life by actions, results and indicators.

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DISCLOSURE 102-16

To be one of the leading chemical groups in the polyamide, synthetic fibres and high performance polymers production chain.

# Our Mission

To promote the development of our businesses while pursuing our Group values and culture.

To pursue our vision by valorizing and optimizing our resources, establishing alliances and searching for new markets, including niche markets.

To embed sustainability into new product and application development.

## Our Values

Putting people at the centre of everything we do and respecting their right to physical and cultural integrity.

Efficiency and effectiveness of our management systems to improve our business.

Fairness and transparency of our management systems in compliance with all applicable laws and regulations.

Attention to the needs and expectations of our stakeholders in order to create a feeling of belonging and satisfaction.

Reliability of our management systems and operating procedures to ensure the safety of our employees, our communities and the environment.

Our responsibility as a company for our workers, production sites and communities.

The RadiciGroup Vision, Mission and Values were set down in the 1990s and have guided the Group in making its choices.

A Group Vision, Mission and Values statement is posted at every Group site and on the RadiciGroup website in all the main languages, so that it can be read and shared by the workers and all the stakeholders.

# United Nations Sustainable Development Goals

3 GOOD HEALTH AND WELL-BEING





































a commitment to global development, environmental protection, and peace and prosperity in the world.

The meeting participants adopted the 2030 Agenda for Sustainable Development, including 17 new Sustainable Development Goals (SDGs) and related subgoals. The 17 Goals aim to build a more equal society by

In 2015, more than 150 world leaders

met at the United Nations to formulate

and related subgoals. The 17 Goals aim to build a more equal society by ending poverty and inequality, promoting human dignity, and ensuring decent growth and a peaceful existence for all human beings. In essence, a call for global action while protecting Planet Earth and its resources.

The 2030 Agenda for Sustainable

The 2030 Agenda for Sustainable Development explicitly calls for the contribution of governments, businesses and civil organizations. RadiciGroup, which has promoted active sustainability policies for over 15 years, voluntarily joined the initiative and adopted the SDGs as guidance for its actions. The Group contributes to the achievement of the Sustainable Development Goals through the daily work of its over 3,000 workers and the collaboration of its stakeholders, as narrated in this Sustainability Report.

# Group quality, environment, energy, health and safety policy

In June 2019, a new version of the Group Quality, Environment, Energy, Health and Safety Policy was signed by the President and Vice President of RadiciGroup.

The new Policy is an update of the 2017 version and contains a reinforced commitment to environmental and occupational safety issues.

Other key aspects stressed in the document are the ever-greater involvement of the stakeholders, the importance of training as an element of growth and the engagement of all the people working for the Group.

Looking at added value from a broad perspective, ensuring continuity and being inclusive of all stakeholders. This is how RadiciGroup brings to life its corporate values - putting people at the centre of everything it does, reliability, fairness and transparency in its day-in and day-out operations. By following these guidelines, the Group ensures the quality of its products, promotes occupational health and safety, and carries on business with respect and care for the environment. A long-term commitment to the pursuit of truly sustainable social, economic and environmental development driven by innovation and research is the foundation for the engineering and advancement of the Group's technology, processes and products.

Within the above framework,
RadiciGroup pursues the objective of
increasing cooperation and synergy
among the functions of the Group
Business Areas to build a path towards
the optimization and excellence of
each process through the continual
improvement of activities, transparency
in operations and communications, and
quality and performance of products and
services – all in close collaboration with
stakeholders.

Diligent compliance with the laws and regulations on the environment, occupational health and safety, and

prevention of harmful incidents potentially affecting products and production processes is the fundamental basis of every Group business activity. To this end, RadiciGroup companies have adopted Quality, Environmental, Energy, Health and Safety Management Systems, duly certified by recognized certification bodies and based on a set of well-defined procedures, understood at all organization levels.

In order to ensure the **quality** of its products and services, the Group has numerous tools at its disposal that enable its companies to develop robust and reliable processes, meet the most exacting requirements and foster continual improvement. As regards the **environment and energy,** RadiciGroup is engaged in optimizing performance and working towards targets that can be seen and measured, by investing financial, human and technological resources to monitor and reduce environmental impact.

At the same time, the Group is engaged in promoting commitment to the environment among its customers, suppliers and workers, in particular through activities aimed at getting all stakeholders involved. The Group's environmental agenda covers its entire production value chain, including the calculation of the environmental footprints of the main products and

services and feasibility assessments of using ecodesign and circular economy principles, wherever possible.

RadiciGroup management is aware of the fact that worker health and safety is always a top priority and of central importance. Thus management ensures the application of the safety standards set out in the applicable laws and regulations, regularly verifies compliance with said standards and assesses their effectiveness, with the aim of improving accident prevention and reducing accident risk.

Group management also promotes transparent and collaborative relationships with local authorities and communities, furthers the implementation of worker consulting mechanisms and encourages worker participation in corporate processes.

Moreover, the Group invests sizeable resources in training workers to increase knowledge and raise awareness of how important the contribution of each single worker is in achieving the overall result.





etter from the Pres

DISCLOSURE 102-14

Environmental, social and economic sustainability is continuously rising on our Group's relevance scale and is becoming a global factor capable of serving as a guiding tool for our industrial growth model, on equal footing with the other strategic elements of competitiveness. I see evidence of this every day, talking to my collaborators, reading newspapers and exchanging ideas with other entrepreneurs, who, like me and my family, gather market expectations, day in and day out.

In light of the above, I can proudly say that, once again, the Group environmental data collected for the 2018 Sustainability Report show further improvement, even though we have already reached levels beyond which making any substantial progress becomes very hard. This improvement, however, demonstrates that our companies, in all circumstances, still pursue the optimization of every single production process, particularly in regard to the use of resources raw materials, energy, and water and invest constantly in reducing emissions, production waste and the use of fossil derived materials. We produce more and we are profitable, while using fewer resources.

And that is not all. Indeed, since we intend to further our strategy of promoting "competitive sustainability" capable of generating growing and "virtuous" demand for low environmental impact products along the entire value chain, we have conducted a relentless campaign with our suppliers and customers, as well as scientific organizations, in favour of innovative choices. Innovation has meant, for instance, biopolymers, pilot projects involving monomaterials with easy end-of-life recyclability, and metal replacement solutions for traditional applications with equal performance yet lower environmental impact. As regards these endeavours, there has been a strong commitment to measuring the environmental

impact of these products, starting from the preindustrial phase, using internationally recognized scientific and professional measuring systems.

RadiciGroup intends to be a leading player of change and act at all levels operational, commercial, institutional to develop new models with a rigorous approach and ambitions goals, the first of which is circularity embedded in the very formulation of the materials. What we produce is too valuable in terms of material, technical and economic resources to be thrown away after one life cycle. Everything must have a second (and possibly a third) life.

Another important concept, which my family and I share, is that our Group must interact increasingly more actively with local communities and institutions. We must grow harmoniously in the social context and the world, by pursuing, with perseverance and determination, an equilibrium capable of adjusting to changing circumstances. This is why we often opened our doors to local communities and schools in 2018 in order to tell them about RadiciGroup and exchange ideas on their vision of business. Such an initiative creates a useful and challenging dialogue that enriches people both inside and outside the industrial world.

We also invested heavily in workers by hiring new people and designing well-structured and robust training programmes to help develop their professional and personal skills. Health and safety were topics of special relevance in the curricula of our training courses. Part of this Sustainability Report is dedicated to reporting on how the Group literally "cultivates and grows" safety in all the countries where we operate.

A point I like to repeat every year is that all the people in the Group are charged with the task to cultivate sustainability, which would not exist without their valuable contribution. Sustainability governance is not merely a strategic matter entrusted to the senior decision-makers of the Group. Sustainability is a system to be operated with care, together with timely reporting of what is not working right in the workplace. It is talking with co-workers to try out alternative solutions and the courage to make new choices. It is the mental attitude of each one of us towards curiosity, growth and evolution.

I would like to conclude with a remark on the concept of dynamic equilibrium that was chosen as the graphic leitmotif for our Sustainability Report. The images that represent equilibrium in the various scientific disciplines do not convey a sense of staticity or immobility — indeed, quite the opposite. They are intended to stimulate our thoughts on how to have confidence in what we do, so that we are not overwhelmed by sudden change, yet, at same time, remain reactive and ready to reap the benefits that these changes bring about. Albert Einstein once said the straight and simple truth about equilibrium: "Life is like riding a bicycle. To keep your balance, you must keep moving."

More finish lines are ahead of us. Let us start on our journey!

**Angelo Radici,**President of RadiciGroup

MAINTAINING THIS EQUILIBRIUM IS AN INEVITABLE
CHALLENGING GOAL TIED TO THE EVOLVING CONCEPT
OF SUSTAINABILITY, CHANGING MARKET SITUATIONS
AND THE PERENNIAL RENEWAL OF PEOPLE
AND COMPANIES.



This document is the Sustainability Report of Radici Partecipazioni SpA and its associated companies, herein jointly referred to as "RadiciGroup" or "the Group".

This Report has been prepared in accordance with the GRI Standards: Core Option.

The following 22 production sites and the parent company provided data for this Report:

CORDONSED SA (Argentina)

LOGIT Sro (Czech Republic)

NOYFIL SA (Switzerland)

NOYFIL SpA (2 sites, Italy)

RADICI CHEMIEFASER GmbH (Germany)

RADICI CHIMICA DEUTSCHLAND GmbH (Germany)

RADICI CHIMICA SpA (Italy)

RADICI FIL SpA (Italy)

RADICI NOVACIPS SpA (2 sites, Italy)

RADICI PARTECIPAZIONI SpA (Italy)

RADICI PLASTICS GmbH (Germany)

RADICI PLASTICS BV (The Netherlands)

RADICI PLASTICS Ltda (Brazil)

RADICI PLASTICS MEXICO S. de R.L. de C.V.

(Mexico)

RADICI PLASTICS SOUZHOU Co. Ltd. (China)

RADICI PLASTICS USA Inc. (USA)

RADICI YARN SpA (2 sites, Italy)

RADICIFIBRAS Ltda (Brazil)

SC YARNEA Srl (Romania)

TESSITURE PIETRO RADICI SpA (Italy)

The holding company Radici Partecipazioni SpA has provided data only for its employees since its environmental impact is extremely limited.

The companies listed above generate almost the entire sales revenue of RadiciGroup. The entities excluded are the sales companies and the companies not comprised in the business boundaries of chemicals, engineering polymers and synthetic fibres. The material topics identified and related indicators apply to all the companies listed above.

# Reporting principles

The reporting principles adopted to define the content and quality of this Report are stated below. They are the premises substantiating the intentions of the Group to prepare a document that is representative of the Group sustainability strategy, the goals achieved and the goals still to be achieved. The principles are important instruments because they enable the Group to share its results and expectations with its stakeholders in a transparent and balanced way allowing for debate.

#### Stakeholder inclusiveness

In 2018 RadiciGroup revised the mapping of its stakeholders, as shown on page 126, and surveyed their legitimate expectations, as reported in the table "MAPPING OF STAKEHOLDERS, THEIR LEGITIMATE EXPECTATIONS AND RISKS" on page 128.

Some stakeholder groups — particularly employees, members of local communities and suppliers — were actively engaged in the materiality analysis according to the procedures described in the section "Materiality Analysis". Their contribution was valuable in that it created a more complete and shared vision of the sustainability topics, which is essential to the Group.

Furthermore, in numerous instances described in the section, "Stakeholders", these groups engaged directly with the Group in initiatives fostering dialogue and collaboration on sustainability topics and their promotion.

Lastly, year after year, both the full and summary versions of the Sustainability Report are circulated to the stakeholders through internal briefings and training sessions, as well as traditional and social media. Together, these initiatives cover a wide communicative spectrum, thus ensuring that the Report, and all the ideas and information contained in it, can potentially reach all the stakeholders.

#### **Sustainability Context**

Each material topic is included in the wider context of the RadiciGroup sustainability strategy aimed at actively working towards sustainable development for its production businesses, and thus contributing to the more general United Nations Sustainable Development Goals mentioned above in the introductory pages to this Report. An analysis of the context in which RadiciGroup operates has been added to this edition of the Report, which helps to capture the characteristics and the strategies of the various Group Business Areas.

#### **Materiality**

The Corporate Mission, Vision and Values, along with an analysis of the context and the legitimate expectations of stakeholders, have guided the Group in identifying the material topics. The thorough process used to identify the material topics followed a specific established corporate procedure and is described under "MATERIALITY"

MATRIX". This process allowed clearly bringing to light the topics on which RadiciGroup has focused its efforts and resources in the context of sustainability.

## Completeness, accuracy and equilibrium

This Sustainability Report focuses on material topics that apply to the totality of the companies providing data for the year 2018 and the two preceding years. Together, these companies account for practically all of RadiciGroup's sales revenue and employees, which gives the Report full representativeness.

As in every year, numerical data were collected in disaggregated form. Each production site provided its results, which were then aggregated at the central level. Data over the last three years are shown in the Report. Wherever reference is made to data over a six-year period, the relevant data can be found in previous editions of the Sustainability Report posted on the RadiciGroup website in the Sustainability section. Numerical data are presented and commented on in a transparent and balanced manner. Computation methods and measurement units are shown. where appropriate, and any estimates and assumptions made are also indicated. The uncertainty margin was estimated to be less than 5%.

A similar method was implemented for collecting information for non-numerical indicators. Questionnaires in the English and Italian languages were sent to the production sites and the results were restated in summary form so as to highlight what was common to the various sites group-wide.

#### **Comparability**

This Report has been prepared in accordance with the GRI Standards: Core Option. The previous Reports were prepared in accordance with the GRI 4 Core Option (2016) and GRI Standards Core Option (2017).

The different standards used plus the updating of a number of indicators introduced by the reporting model make a direct comparison of this Report with older versions impossible. This notwithstanding, cases of missing data or serious deviations have been duly highlighted and explained. Similarly, any corrections of older data have also been pointed out.

#### **Clarity**

Special effort has been made to organize the information for every version of the Report with the objective of ensuring the clarity and accessibility of the document. This version of the Report includes a number of summary tables enabling the reader to immediately grasp the relevant aspects of the matters covered in the main sections.

The full text of the Report will be released in Italian and English, while abridged or reduced versions, called "Key Elements" will also be made available. The reduced versions are intended for wider circulation to stakeholders and will allow them to become familiar with the most relevant results of the Group on economic, environmental and social topics in simplified form.

# OISCLOSURE 102-50, 102-51, 102-52

#### Reliability

The strategic and operational processes that bring the Sustainability Report to life are illustrated and documented in the text, with special reference to the corporate sustainable development strategy procedure that describes the processes for defining the RadiciGroup context, mapping stakeholders and their expectations, and identifying material topics.

The Sustainability Report has been externally assured by the independent certification body CERTIQUALITY and has been prepared in accordance with the GRI Standards: Core Option. The certification body has verified the accuracy and reliability of both the primary and aggregated data, the consistency and truthfulness of the claims made and the overall conformity of the document to the model indicated. The economic and financial figures for DISCLOSURE 201-1 underwent a voluntary audit by Deloitte & Touche as part of the annual audit of the Radici Partecipazioni SpA consolidated financial statements.

#### **Timeliness**

This Sustainability Report covers data and events for the calendar year 2018 and is being released about one year after the release of the previous version, published in September 2018. Any data that do not refer to the reporting year are duly pointed out. Said data have been included to make the Report more up to date. RadiciGroup publishes its Sustainability Report on an annual basis.

#### **Precautionary Principle**

RadiciGroup is fully aware of the potential risks of its business activities to the environment and people. All Group company management systems, with the collaboration of the relevant functions, carry out extensive and meticulous work in risk analysis. RadiciGroup consistently conducts extensive monitoring, prevention and mitigation actions and has made the precautionary principle an objective and measurable concept by completing certification to ISO 14001 and OHSAS 18001 (now replaced by ISO 45001) at all its main sites.

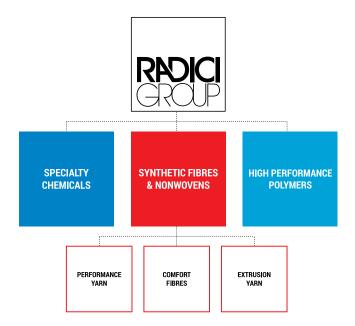
# RadiciGroup

#### **Group structure**

With about 3,100 employees, 2018 sales revenue of EUR 1,211 million and a network of more than 30 production and sales sites in Europe, North and South America and Asia, RadiciGroup is a world-leading producer of a wide range of chemical intermediates, polyamide polymers, engineering polymers, synthetic fibres and nonwovens.

A thorough understanding of the entire production process – from polymerization upstream of spinning to compounding downstream – and expertise in state-of-the-art production technologies enable RadiciGroup to deliver high-value added solutions.

The whole Group strategy is, in fact, based on innovation, quality, customer satisfaction and economic, environmental and social sustainability.



# A global presence

#### FUROPA

#### **Czech Republic**

Podborany

#### France

O Saint Priest

#### **Germany**

- Hamburg
- Lüneburg
- Selbitz
- Tröglitz

#### Hungary

Szentgotthard

#### Italy

- Andalo Valtellino
- Ardesio
- Casnigo
- Chignolo d'Isola
- Gandino
- Novara
- Villa d'Ogna

#### The Netherlands

Born

#### Romania

Savinesti

#### Spain

○ Barcelona

#### **Switzerland**

Stabio

#### **United Kingdom**

○ Wakefield

PRODUCTION SITE
 COMMERCIAL SITE

#### ASIA China

- Shanghai
- Suzhou

#### India

O New Delhi

#### **AMERICAS**

#### Argentina

- Buenos Aires
- Rio Grande

#### Brazil

- Araçariguama
- São José dos Campos

#### Mexico

Ocotlán

#### USA

Wadsworth

The macro Business Areas of RadiciGroup are:

#### SPECIALTY CHEMICALS

The Specialty Chemicals Business Area is engaged in the production of chemical intermediates and PA 6, 6.6 and 6.10 polymers and specialty polymers, all of which serve as raw materials for the manufacture of many products in the plastics and synthetic fibre industries. In fact, Specialty Chemicals supplies the needed raw materials for further processing to the other Group business areas.

#### HIGH PERFORMANCE POLYMERS

High Performance Polymers specializes in the manufacture of engineering polymers – plastic materials that can feature different physical and mechanical characteristics depending on the type of application for which they have been designed. Engineering polymers are raw materials for several industries, including automotive, electrical/electronics, plumbing and heating, and household appliances.

#### SYNTHETIC FIBRES AND NONWOVENS

Synthetic Fibres and Nonwovens is responsible for the manufacture of numerous kinds of products, from polyester to nylon yarn, synthetic grass yarn and nonwovens. These materials are used in a variety of industries, including automotive, apparel and furnishings.

For more information www.radicigroup.com/en/documentation/corporate/to-be-glocal

#### **The RadiciGroup Key Numbers**

SALES CONSOLIDATED AT RADICIGROUP LEVEL (Millions of Euros)

471
SPECIALTY CHEMICALS

444

SYNTHETIC FIBERS AND NONWOVENS

406

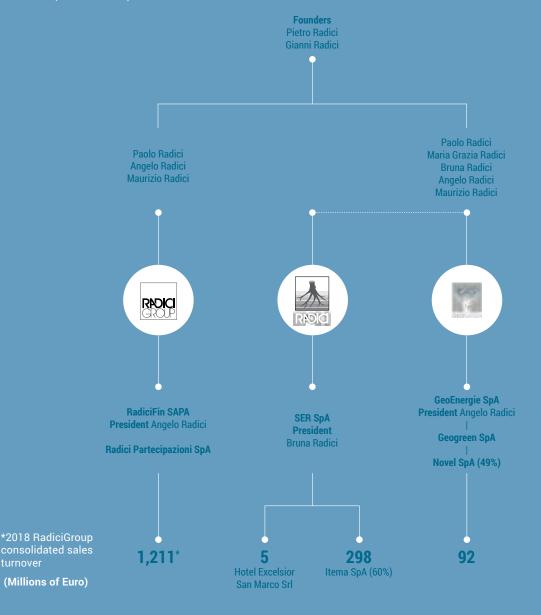
HIGH PERFORMANCE POLYMERS

10 OTHER BUSINESSES

2018 RADICIGROUP SALES TURNOVER 1,211 MILLIONS OF EUROS

#### Radici world

RadiciGroup is a structured multi-faceted industrial group, with its own core businesses, but it is also part of a wider industrial organization comprising diverse businesses, such as textile machinery (ITEMA), energy (GEOGREEN) and hotels (SAN MARCO).



#### Governance

The governance structure of the RadiciGroup organization is based on direct management control by the Radici family. The latter owns the entire share capital of the Group and sets Group strategy in accordance with the Board of Directors. Angelo, Maurizio and Paolo Radici, in their capacities as President, Vice President and Board member, respectively, have everyday operational control of Group business operations.

### Parent Company and the Board of Directors

Radici Partecipazioni SpA is the parent company that groups and controls the industrial businesses in the areas of synthetic fibres, chemicals and high performance polymers and is under the direct control of parent company Radicifin S.A.p.A.

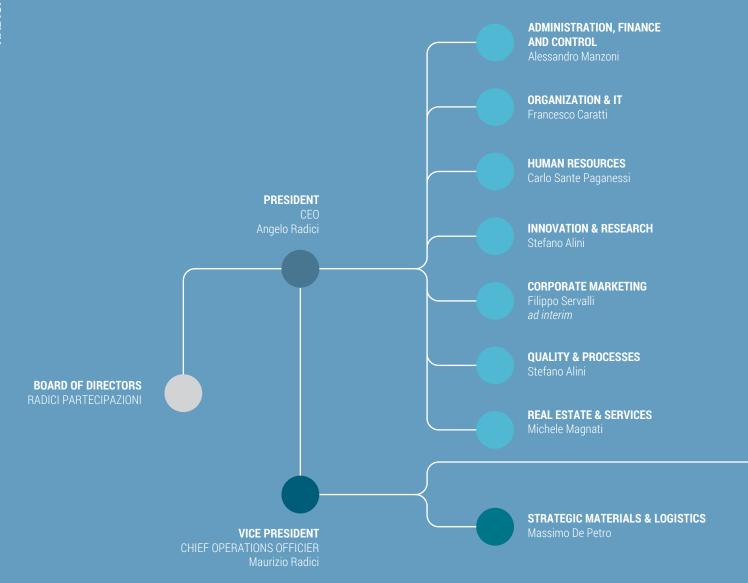
Radici Partecipazioni SpA manages and coordinates the activities of all its subsidiaries along the guidelines set forth by the Board of Directors. It also provides centralized services through corporate functions. For administration and control, the parent company has a Board of Directors, with strategic and administrative duties, and a Board of Statutory Auditors. The latter comprises 3 members, holding office for a period of 3 years, who perform a control function over administration. The Board of Directors holds office for 1 year and comprises 7 members, among which the majority shareholders and members with competencies related to economic. financial, administrative and legal matters.

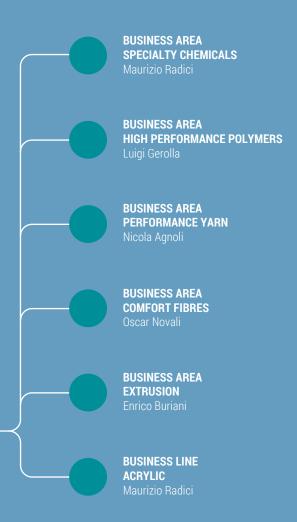
#### **Business Area Manager**

Group production and sales activities are entrusted to the operational units, which carry out the Group business plan at the Board of Directors' behest. The business areas are defined according to the type of production or process technology and are each headed by a manager appointed by the Radici Partecipazioni Board of Directors. Sometimes, Business Area Managers also hold the position of managing directors at their respective companies, vested with the power of ordinary administration.

With an eye on the future and with the aim of increasing cooperation and capturing synergies among the business areas functions, in 2018 the organization of the corporate functions was restructured so as to bring out the excellence of each of the corporate functions and reinforce the international dimension of the Group.

#### The Group's structure







#### Radici Partecipazioni BOD

Angelo Radici Maurizio Radici Paolo Radici Luigi Gerolla Alessandro Manzoni Edoardo Lanzavecchia Pecuvio Rondini



#### Ethics Committee President:

Alessandro Manzoni

#### Members:

Carlo Sante Paganessi Francesco Pezzotta Aldo Piceni Filippo Servalli



#### Founders

Pietro Radici Gianni Radici



#### Shareholders

Radicifin S.a.p.A. di: Paolo Partecipazioni S.r.l. Unip. Angelo Radici Partecipazioni S.r.l. Unip. Maurizio Radici Partecipazioni S.r.l. Unip.



#### **Board of statutory auditors**

President:

#### Members:

Marco Baschenis Matteo Perazzi



#### Radici Partecipazioni S.p.A. *President:*

ngelo Radici

#### Vice President:

Maurizio Radici

# DISCLOSURE 102-2, 102-6

### Radicigroup products and markets served

RadiciGroup has registered its corporate trademark and thirty product trademarks for products intended for use in the following main sectors:

#### PRODUCTS FOR APPAREL

Raw and dyed yarn for outerwear, intimatewear, hosiery and swimwear.

Nonwovens for single-use protective clothing and medical and sanitary applications.

Engineering polymers for clothing accessories and trim.

#### PRODUCTS FOR FURNISHINGS AND CONSTRUCTION

Raw and dyed yarn for curtains, upholstery, rugs and fitted carpet.

Engineering polymers for furniture and components, and home interior accessories.

Artificial grass yarn for indoor and outdoor decorative turf for both residential and contract sectors.

Nonwovens for construction, roof insulation, steam barriers, water proofing, filtration, furnishings, tablecloths and single-use items.

#### PRODUCTS FOR AUTOMOTIVE

Engineering polymers for under-bonnet and car interior applications.

Raw and dyed yarn for car interiors, seats and carpeting.

Yarn for airbag fabric and tyre reinforcement.

Nonwovens for car interiors, soundproofing, car protection and airbag housings.

#### PRODUCTS FOR THE INDUSTRIAL SECTOR

Adipic acid and other chemical intermediates for polyamide polymers, polyurethanes, plastifiers, adhesives, solvents and other chemicals.

Engineering polymers for use in the electrical/electronics sector and many other technical and industrial applications.

Yarn for technical and special uses. Nonwovens for filtration and specialized industrial applications.

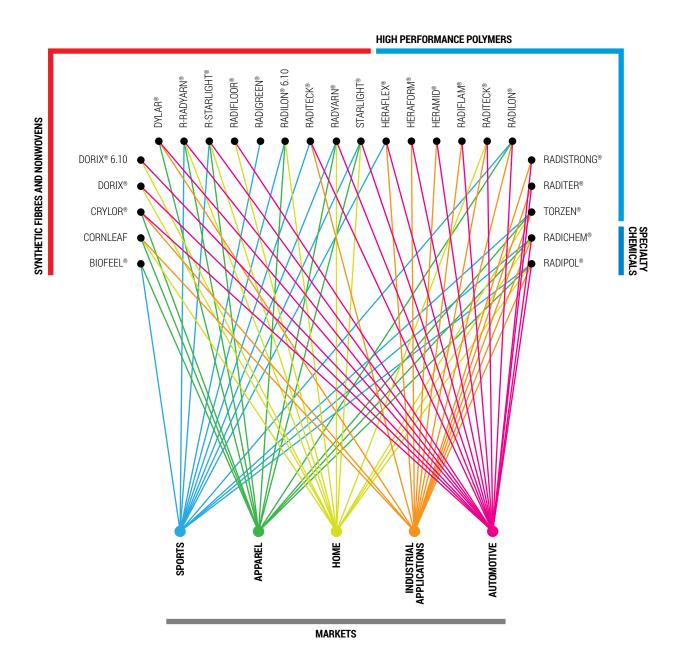
#### PRODUCTS FOR THE SPORTS SECTOR

Raw and dyed yarn for sportswear, sports accessories and equipment.

Artificial grass yarn for sports turf.

Engineering polymers for sports equipment and accessories and components for sports facilities.

For more information www.radicigroup.com/en



## RadiciGroup products and sustainability

The realization of lower environmental impact products is the result of a well-established management approach whereby RadiciGroup sustainability choices are rooted in the day-to-day activities of its businesses and the needs of its markets. This is because such products can be used for a broad variety of applications and distributed worldwide.

The effort to design and create these products is supported by a system that controls and monitors the impact of the products under development with a scientific, rigorous and replicable approach, as explained in the section of this Sustainability Report on measurement.

Below are the guidelines the Group has long followed in the research and development of its product portfolio:



Realize products made from biopolymers obtained from renewable raw materials not competing with food resources.



Realize products using energy from renewable sources, mainly hydroelectric power.



Realize coloured products using solution dyeing, by which the pigments are added directly during extrusion, with huge water and energy savings.



Realize products made from recycled raw materials, i.e., according to the circular economy approach, materials that undergo mechanical recycling and are then processed into high-performance polymers to give them a second life.



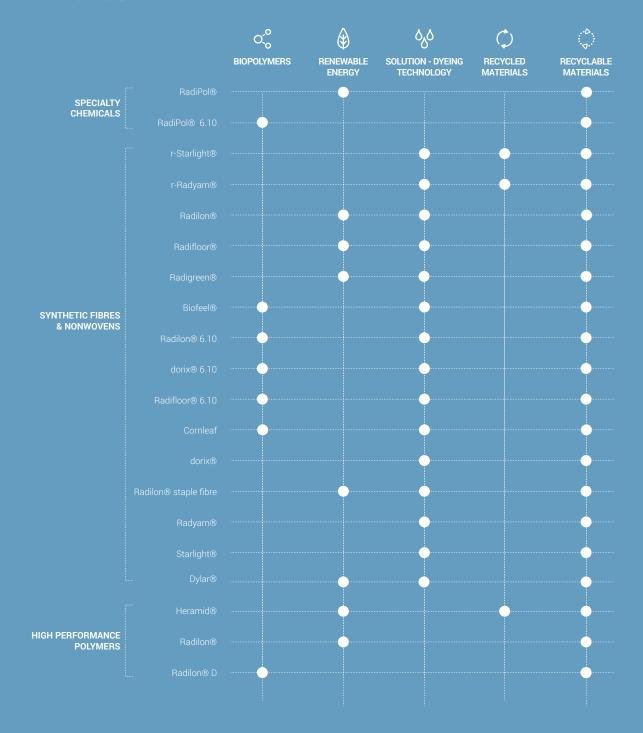
Realize recyclable products, i.e., in the circular economy scenario, products that become raw materials once again after a suitable recycling process.

The chart below provides an overview of the main RadiciGroup products with reduced impact from the point of view of their sustainability characteristics.

A key aspect, which needs to be stressed, is that all these products are recyclable. The concept of recyclability is fundamental to the circular economy approach, which for a number of years now has been an EU-wide strategy and is the answer to SDG 9: Industry, Innovation and Infrastructure, which calls for building an innovative and sustainable production system.

For more information <a href="https://www.radicigroup.com/en/sustainability/overview/sustainable-products">www.radicigroup.com/en/sustainability/overview/sustainable-products</a>





## Circular economy: ecodesign for recyclability and recycling

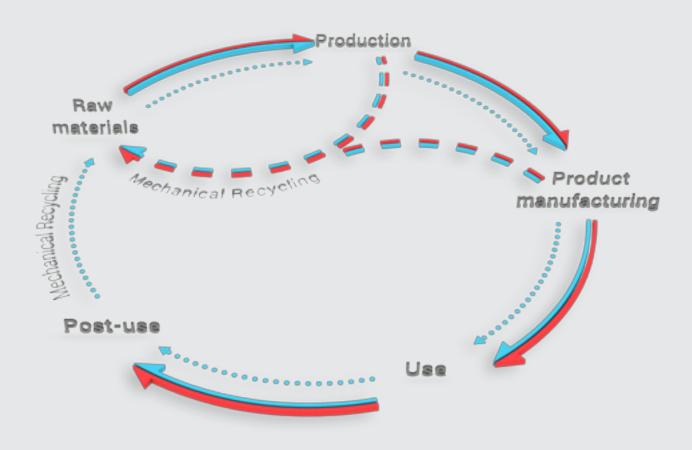
RadiciGroup adheres to the circular economy concept, where products, materials and resources are kept in use for as long as possible, waste production is minimized and products, upon reaching the end of their life, are re-used to create new value.

Following this approach, pre-consumer waste from the various business areas is recycled by mechanical processes in the High Performance Polymers Area and then processed into high-performance polymers, as also illustrated in the section on waste in this Report. Presently, the flow of manufacturing scrap is carefully sorted by type depending on the intended application. This is the start of a quality recovery process involving all the Group sites. Attentive management of manufacturing scrap is actually essential for the best reuse after recovery. The recovery process takes into careful consideration all aspects of the product, the process, and the work involved: Quality, Environmental and Health and Safety System Management certifications cover all the phases of the scrap recycling process, i.e., collection, recovery and manufacture of engineering polymers.

But that is not all. RadiciGroup is also engaged in experimenting with ecodesign. Products can be made easier to recycle starting from stage one, product formulation, where the Group boasts strong know-how. A few of its ecodesign products developed in 2018 – primarily realized with monomateriality in mind – are presented in the case history boxes below. Today, it is often impossible to adequately recycle every day objects, for instance, mainly because they are made of a variety of different parts that are hard to break down. The result is that recycling can only be generic and thus cannot take full advantage of the potential reuse of the various components.

RadiciGroup, with the collaboration of its production chain, has developed products made of a single material or with added materials compatible with the primary material. Hence, at the end of their first life, these products are immediately ready - without the need for further processing – for recycling by mechanical processing that can transform them into raw materials to be used for the production of other plastic objects, which are also recyclable. It was a tough challenge because only one material had to reproduce the functional and technical performance and appearance usually achieved by using a variety of different elements.

#### RadiciGroup circular economy flow



Post-industrial recycling

High Performance Polymers

Synthetic Fibres & Nonwovens

····· Post-industrial and post-consumer recycling

#### RadiciGroup delivers a 100% nylon 100% recyclable garment to its Ski Club athletes and coaches: the circular economy runs in the family

In May 2018, the coaches of the RadiciGroup Ski Club were presented with a new 100% nylon gilet, made by RadiciGroup in cooperation with the companies in its 100% European production chain. This monomaterial garment was developed within an ecodesign framework and is the result of careful co-design work carried out with suppliers and customers.

The gilet is truly monomaterial, virtually the only high-performance monomaterial garment on the market, and can be easily recycled by mechanical processing at the end of its life, thus becoming a secondary raw plastic material to be used again for technical and industrial applications. It is made with Raditek® Fine yarn, a patented high-tenacity polyamide varn specially engineered for high technology applications, such as sails and parachutes. The varn endows the fabric with high tear and abrasion resistance, while keeping it lightweight. The yarn was also formulated to be resistant to UV radiation and maintains its performance characteristics unchanged over time. Moreover, the fabric was enhanced with a PFC-free anti-drop treatment. The gilet features fibreball insulation with siliconized RADILON® staple fibre, another RadiciGroup product. This filling is an excellent alternative to goose down, provides effective warmth, and is lightweight and hypoallergenic. As for the accessories, the zipper was made of polyamide, while the ropes were made of nylon with a minimal percentage of elastomer, so as not to jeopardize recyclability.

# Tessiture Pietro Radici, Versalis and Safitex: a partnership to recycle artificial grass

Versalis (Eni), RadiciGroup and Safitex have joined forces to make synthetic turf for sports fields recyclable, in line with the principles of the circular economy. The project, presented in November 2018 at Ecomondo, an Italian trade fair dedicated to environmental sustainability, was a collaboration among Versalis, the supplier of the raw material (polyethylene), RadiciGroup, through its subsidiary Tessiture Pietro Radici, a manufacturer of fibres for sports applications, and Safitex, a manufacturer of synthetic turf.

This all-Italian project has improved the circularity of the synthetic turf, by reducing its end-of-life impact. Indeed, currently synthetic turf is still disposed of through landfill or incineration. As a result of the cooperation of the above three companies, the artificial grass can now be recycled at the end of its life, like other plastics. The turf will now be collected, shredded and processed for other applications in the sports sector, as well as furnishings.

To assess the project's environmental performance, each of the three companies carried out a Life Cycle Assessment for their own product. The results of the studies carried out on the materials and turf have been verified by an independent certification body, Certiquality, which issued a Product Environmental Footprint (PEF) certificate for each product attesting to compliance with the PEF method, valid in all European countries for the calculation of the environmental performance of products during their entire life cycle.

## Measuring the environmental impact to quantify sustainability

A transparent, replicable and scientific quantification of environmental impact is absolutely essential for projects like the ones described above and, more generally, for all Group production decisions.

The measuring systems used by RadiciGroup are based on the principles of Life Cycle Assessment (LCA), a universally recognized, scientifically valid methodology, which has the objective of establishing a complete overview of a product's interaction with the environment throughout its life cycle. RadiciGroup has performed an LCA for each of its main polyamide and polyester based products since 2010.

LCA data are used by the Group to simulate the potential environmental impact of a new product in the pre-industrial phase, to create an Environmental Product Declaration (EPD) and to calculate the Product Environmental Footprint (PEF).

An EPD is a verified and certified document based on the ISO 14025 standard, which tracks and communicates the environmental performance of a product. As of today, EPDs have been developed and published by the RadiciGroup High Performance Polymers and Synthetic Fibres and Nonwovens Business Areas. All the EPDs are published online on dedicated sites operated by EPD programme operators. For this service, the Group has chosen the International EPD® System, one of the world's most reputable EPD programme operators.

The Product Environmental Footprint (PEF) is a methodology promoted by the European Union that establishes the rules for calculating, assessing and communicating the environmental performance of goods and services to stakeholders. PEFs have been issued by the RadiciGroup Specialty Chemicals and Synthetic Fibres and Nonwovens Business Areas.

All the above methodologies for measuring environmental performance have a number of advantages. First of all, they put corporate strategic choices on solid ground and provide a way to answer market requests on sustainability issues. Moreover, they allow pinpointing the phases, both inside and outside the boundaries of corporate activities, where the major impacts are concentrated and establishing the areas where investment can bring the best results in terms of the ratio between technical and environmental performance.

# Product communication at the service of the value chain (and sustainability)

RadiciGroup not only puts significant effort into the realization of low impact products but also works hard day in and day out so that its customers (and, indirectly, all its stakeholders) can count on technical information about these products that complies with current laws and regulations, corresponds to market expectations and ensures the safety of all members of the production chain.

RadiciGroup's chemicals, polymers and yarns are not meant for direct sale to end consumers but are supplied to customers for further processing. Nevertheless, all Group products must meet the general safety and labelling regulations of the European Union and the laws of the countries where they are produced or sold. In many cases, the products can also be subjected, on a voluntary basis, to additional specifications or provisions, at times more restrictive than the mandatory provisions in force.

Regarding the RadiciGroup Synthetic Fibres and Nonwovens Business Area. all products comply with the obligations set by the REACH regulation. More in detail, yarns with a PA6/PA6.6 polymer matrix for textile applications are certified to Annex 6. Class I. of Oeko-tex® Standard 100, while fibres with a PET polymer matrix are certified to Annex 4, Class I. of Oeko-tex® Standard 100. The Oeko-tex® Standard is one of the most widespread and reputable, independent and consistent international testing and certification systems for raw materials. semi-finished and finished goods in the textile industry. Oeko-tex® also certifies products for special applications, such as the standard products developed by the major international players in the textile/apparel sector, Lastly. RadiciGroup products are conformant to the ZDHC-Roadmap to Zero programme. Zero Discharge of Hazardous Chemicals (ZDHC) is an international programme aimed at eliminating hazardous chemicals from the global textile supply chain.

In 2018, the Group started adding Global Recycled Standard (GRS) certification to Oeko-tex® certification for some of the yarns in the polyester business line. GRS is a certification for products with recycled content and includes all the features of the ZDHC programme, in

addition to requiring, for each item sold, a reclaimed material declaration specifying the actual content of recycled material.

Regarding the Group's Specialty Chemicals Business Area, all the chemicals produced at the Novara (Italy) and Zeitz (Germany) plants comply with the requirements of the REACH regulation. This European Union regulation was adopted to improve the protection of human health and the environment from the risks of chemical substances. The registration dossiers for the two plants are constantly updated to reflect the findings of current toxicological and ecotoxicological studies, as reported by the European Chemical Agency (ECHA). The safety sheets sent to users downstream contain the instructions for correct and safe use.

A safety sheet in accordance with REACH provisions is also issued for all products manufactured by the RadiciGroup High Performance Polymers Business Area. Additionally, for all High Performance Polymer products, a REACH Declaration is issued stating the absence of Substances of Very High Concern (SVHV) and a specific REACH Compliance Statement (1907/2006) attesting to the fact that all the substances contained in the product have been registered or are exempt from registration. A statement is also provided pursuant to EU Directive 2011/65/EU (RoHS) on the restriction of the use of certain hazardous substances in electrical and electronic equipment. Products for the automotive sector come with IATF 16949 certificates. Products intended to be brought into contact with food are accompanied by declarations of conformity, as required by the international regulations (10/2011 EU/

SCLOSURE 417-2, 417-3

FDA) on materials coming into contact with food.

In matters of product environmental communication, the Group's job is facilitated most of all by the ISO standards governing environmental labelling. In particular, for the High Performance Polymers and Synthetic Fibres and Nonwovens Business Areas, the LCA-based Environmental Product Declarations (EPDs) and related publishing obligations, aid the Group in maintaining a high level of transparency.

Due to the effort spent on environmental labelling and communication within the reporting period, no Group company has reported incidents of non-compliance concerning product and service information and labelling or incidents of non-compliance concerning marketing communications. Furthermore, an ongoing and growing relationship of trust and mutual respect with the media is proof that RadiciGroup corporate and product communication is truthful and reliable.

# Innovation and research for the future of RadiciGroup and its stakeholders

During the second half of 2018, RadiciGroup worked at creating a new corporate function called "Innovation & Research" intended to serve as the central think tank for all design and development activities for the advancement of technologies, processes and products for the entire Group. The mission of the new function will be to "identify and develop" new opportunities for "radical innovation", consistent with the RadiciGroup vision. The activities of the Innovation & Research function will complement the R&D work carried on in the Group Business Areas.

The activities of the new function will revolve around sustainability, aided by the following guiding principles that will help to make decisions and choices for future initiatives:

- Focus efforts on products that customers and, more generally speaking, stakeholders actually need, looking at things with a wider perspective instead of just pure market considerations.
- Search for innovative processes able to provide 360-degree sustainability solutions, which would take into account environmental, social and economic aspects.
- Pursue operational efficiency and return on investment from products, without neglecting the search for partners and innovators outside the Group.
- Prove the value of Group processes and products through objective measurements of performance and impacts, striving with renewed commitment for a more rigorous, transparent and scientific approach as a response to the widespread perception of "greenwashing".

During the reporting year, the Group was involved in numerous R&D projects dealing with as many different subjects and paying special attention to recycling, recyclability, and bio sources. Specifically, research work was conducted on:

- Polyamides from renewable source materials and derivatives in the fibres and polymers sector.
- Monomers for polyamides from renewable source materials.
- Long-chain polyamides for the compounds sector.

- Materials for applications in the field of water distribution systems (domestic and industrial users), with a product offering based on PA6.6 (conventional polymers), PA6.12 (long chain polyamides) and PPA.
- Yarn made from renewable source materials for circular knitting for the manufacture of socks and hosiery.
- · Semi-aromatic copolyamides and polyamides.
- · Materials for metal replacement in the automotive sector.
- Use of mechanically regranulated post-industrial polymer waste for the production of textile yarn and staple.
- Flame-retardant recycled PET yarn and low-temperature melting yarn to be used in combination with other materials.
- In the artificial grass sector, development of yarns with special shapes and/or composition for performance characteristics that last over time (resilience, abrasion resistance and softness) and for special applications (curled and textured yarns).

#### No Oil Nylon: Customer engagement becomes a new (sustainable) product

Collaboration with customers played a key role in some R&D initiatives regarding low impact products.

One such project started in 2016 and called "No Oil Nylon" was finally accomplished in 2018 due to the collaboration with key Customers and the cross-Group contribution of the Specialty Chemicals (polymer formulation) and Comfort Fibres (yarn production) Business Areas. The goal of the project was to realize a polymer obtained entirely from vegetable source materials not competing with human food resources.

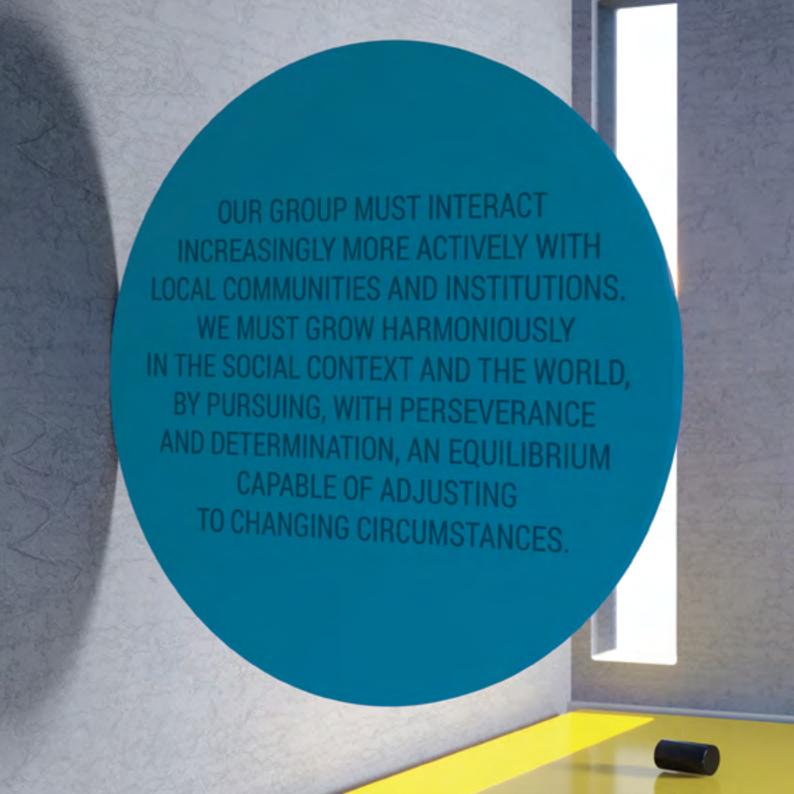
"No Oil Nylon" won the competition "Smart Fashion & Design" for funds from the European Regional Development Fund (ERDF), which focuses its investments on projects with real and proven effects in the fashion and/or design value chain with special attention to eco-industrial themes.

The "No Oil Nylon" project was recognized for the adoption of innovative solutions in processes and products, as well as in the organization model calling for the participation of renowned partner businesses in the value chain.

"No Oil Nylon" saw Radici Yarn, a Group textile yarn specialist, working together with two strategic customers from the hosiery sector.

The design of the 100% bio yarn opened the way to further studies and trials and then the launch of new lines of products manufactured with the yarn.

The contribution of the partners, who shared their long experience and history in their respective fields, was invaluable for the success of the project. Once again, RadiciGroup's vertically integrated production – from polymer to yarn – and the indispensable value added from downstream industries – the hosiery manufacturing sector, in this specific case – contributed to fulfilling the objective of successfully completing a challenging sustainable innovation project.





# Stakeholders

DISCLOSURE 102-40

RadiciGroup believes that dialogue with its stakeholders and their engagement are indispensable for building a shared context of sustainability and creating shared value through constructive discussions. Maintaining a high level of information, communication and engagement, both within the Group and with its external audience, is a serious and ongoing commitment.

In this Sustainability Report the following groups of stakeholders were taken into consideration:

ENVIRONMENT
TRADE ASSOCIATIONS
GROUP COMPANIES
SHAREHOLDERS
BOARD OF DIRECTORS AND MANAGEMENT
CUSTOMERS
COMMUNITIES
LOCAL COMMUNITIES
LOCAL COMMUNITIES
COMPETITORS
SUPPLIERS
BANKS AND INSURANCE COMPANIES
WORKERS
MEDIA
ACADEMIC AND RESEARCH INSTITUTIONS
CONTROL AND MONITORING BODIES

TRADE UNION ORGANIZATIONS

ISCLOSURE 102-43

The stakeholder groups were identified and the list was updated in 2018 by the Group Sustainability team in the context of both the individual sites and the Group in general, as described in the Report section "Building the Report".

The following sections will cover more in detail the relationship with the stakeholders who are traditionally close to Group operations, primarily by examining their engagement in the issue of sustainability and describing their active role, jointly with RadiciGroup, in furthering the philosophy of sustainability.

As a general consideration, it is important to emphasize that the Group adopts, a common fundamental ethical approach in its relationships with its stakeholders but diversifies its strategies and mode of relating to them depending on the cultural and geographical contexts in which it operates.

#### **Shareholders**

**DISCLOSURE 102-18, 102-43** 

As already mentioned, RadiciGroup is fully owned and operated by the Radici family. Thus, Angelo, Paolo and Maurizio Radici are engaged in sustainability topics on a daily basis as an intrinsic part of their role as Group directors. Additionally, their engagement in sustainability continues the Group's tradition of sustainability, which began from its very founding, before the term even existed.

In particular, the President of RadiciGroup, in consultation with the Board of Directors, defines the guidelines for the sustainability process, approves the annual revision of the general context and the key elements of the Sustainability Report, and communicates the latter through the "Letter from the President". The Vice President works in close contact with the business areas and coordinates the implementation of the sustainability strategies and improvement plans in the companies.

Furthermore, in April 2019, Angelo and Maurizio Radici jointly signed the newest version of the Group Quality, Environment, Energy, Health and Safety Policy, reproduced on page 6 of this Report. The document is an important public statement in which they reiterate, among other things, their personal commitment and the commitment of the Group to the environment and safety, and to the research and development of low impact processes and products, as well as their commitment to an open and constant dialogue with the Stakeholders.

#### **Board of Directors and Management**

The Board of Directors and Managers actively participate in the management of the Group on a day-to-day basis, as described in the section of this Report on governance. All RadiciGroup top corporate functions work together to embed sustainability into Group strategy and operations.

Let us start with the Ethics Committee (Supervisory Body), which is entrusted with the promotion of the Code of Ethics and the surveillance of compliance with its provisions. The Ethics Committee also supports the Sustainability policies and initiatives of the Group, in particular the Sustainability Report.

The Board of Directors has the responsibility to establish the strategy to address sustainability on the basis of the abovementioned materiality analysis, the relevant topics identified therein, and the analysis of risks and opportunities drawn up from the RadiciGroup general context analysis. Within this context, the Chief Financial Officer authorizes the financial resources needed to achieve the sustainability objectives, while the Business Area Managers are delegated the tasks of adapting the corporate strategies to their sites and preparing

the related executive plans by working in close collaboration with the relevant Function Managers.

#### **Group Companies**

Each of the business areas is engaged on several fronts in sustainability matters. First of all, from a governance perspective, each of the business areas has one or more representatives in the GRI Coordination Group. The latter is given the task of determining and annually updating the RadiciGroup general context and drawing up the materiality analysis.

The analysis is essential to identify the relevant sustainability topics to bring to the attention of the Board of Directors. Once the list of topics has received the Board of Directors' approval, the Coordination Group, working in synergy with the operating teams of the individual companies, gathers the data and ensures the homogeneity of the data and indicators for the Sustainability Report, prepares the Report and takes care of the external and internal circulation of the Report.

The GRI Coordination Group is also entrusted with the task of mapping stakeholder expectations and promoting adequate initiatives for dialogue with the various stakeholders and encouraging their engagement.

The sustainability teams at the individual sites, beside collecting data for the Report, also provide input and suggestions to the Coordination Group and, in cooperation with the latter, devise action and improvement plans tailored to their companies' needs.

This invaluable exchange of ideas allows corporate strategy to trickle down to the production sites in a suitable manner and to become enriched by ideas from the various production contexts.

At the end of the day, it is the Group companies that shape the results, the products and the trends illustrated in this Report. Their contribution is essential and irreplaceable and makes up the heart of this Sustainability Report.

## Integrated management systems as strategy and sustainability guidelines for the companies

In 2018 the Group completed the management system certification programme for its companies, while making the transition at all sites to the 2015 version of ISO 9001, covering quality management systems, and ISO 14001, covering environmental management systems.

The adoption of management systems – especially integrated management systems - in Group companies brings the organization a series of benefits through enhanced sharing of objectives, coordinated management, resource optimization, improved synergies and integration of competences.

The Group's drive to be at the cutting-edge of certification is a requirement dictated by the strategic role certifications play in the area of competiveness – more efficient and better organized systems are intrinsically more competitive – and on the sustainability front. From the viewpoint of sustainability, in fact, management

systems and related certifications are reliable guidelines for organizing, managing, and monitoring the various projects and improvement plans. The risk-based approach to management systems means that the global vision of the organization must undergo constant development and updating.

In light of the above considerations, the management systems team has actively collaborated with the Sustainability Group in defining the context of the organization and in conducting the materiality analysis, as reported herein in the section "Building the Report".

### **RadiciGroup Certifications**

RADICIGROUP SITE	ISO 9001:2015	IATF 16949:2016	ISO 14001:2015	OHSAS 18001:2007	ISO 45001:2018	ISO 50001:2011
CORPORATE						
RADICI PARTECIPAZIONI SpA	<b>✓</b>					
SYNTHETIC FIBRES & NONWOVENS						
RADICI FIL SpA	<b>✓</b>		*	<b>✓</b>		<b>✓</b>
LOGIT Sro	<b>✓</b>		<b>✓</b>	<b>✓</b>		<b>✓</b>
RADICI YARN SpA – Villa d'Ogna	*		<b>/</b>			
RADICI YARN SpA – Ardesio	*		<b>/</b>			
SC YARNEA SrI	*		*	<b>✓</b>		
RADICI CHEMIEFASER GmbH						<b>/</b>
RADICIFIBRAS Ltda	•					
NOYFIL SpA- Chignolo d'Isola	*			<b>✓</b>		
NOYFIL SpA- Andalo Valtellino	*			<b>✓</b>		
NOYFIL SA	<b>✓</b>		<b>✓</b>			
CORDONSED S.A.						
TESSITURE PIETRO RADICI SpA	*		*	<b>✓</b>		
PERFORMANCE PLASTICS						
RADICI NOVACIPS SpA – Villa d'Ogna	*	*	<b>✓</b>	<b>✓</b>		
RADICI NOVACIPS SpA- Chignolo d'Isola	*		<b>✓</b>	<b>✓</b>		
RADICI PLASTICS GmbH	*	*	*			<b>/</b>
RADICI PLASTICS Ltda	*	*	*			
RADICI PLASTICS Co. Ltd.	*	*				
RADICI PLASTICS USA Inc.	*	*				
RADICI PLASTICS MEXICO S. de R.L.	*					
RADICI PLASTICS B.V.	*	*	*			
SPECIALTY CHEMICALS						
RADICI CHIMICA NOVARA SpA	<b>/</b>		<b>✓</b>	<b>✓</b>		<b>✓</b>
RADICI CHIMICA DEUTSCHLAND GmbH	*		*	<b>/</b>		<b>✓</b>
Updated as of July 2019	<ul><li>Existing</li><li>New cert</li></ul>	★ Transition to ification	new version in 20	118 🌞 Transition	to new version in	2019

#### Other certifications:

- Type III environmental labelling Environmental Product Declaration (EPD): Radici Novacips SpA and Radici Fil SpA
- · Oeko-Tex Standard 100: Radici Fil SpA, Radici Yarn SpA, Noyfil SpA and Noyfil SA.
- · Product Environmental Footprint (PEF) Statement of Compliance: Tessiture Pietro Radici SpA
- · Global Recycled Standard (GRS): Noyfil SA.

For more information www.radicigroup.com/en PAGE CERTIFICATIONS

# Global Recycled Standard (GRS) certification for RadiciGroup recycled polyester: yet another acknowledgement of RadiciGroup's transparent and measurable product sustainability

In October 2018, RadiciGroup r-Radyarn® and r-Starlight® post-consumer recycled polyester yarns – UNI 11505 certified since 2014 – were also certified to the Global Recycled Standard (GRS), promoted by Textile Exchange, an international non-profit organization working for the promotion and responsible development of sustainability in the textile industry.

The GRS certificates obtained by Noyfil, a company belonging to the RadiciGroup Comfort Fibres Business Area, cover two families of products with two different minimal content percentages of recycled materials: 95% r-PET, raw or yarn-dyed, and 85% r-PET, solution—dyed.

The decision to certify the two product families to GRS was an important one, as it responded to market demand and moved towards complete traceability of raw materials. GRS certification also

served to reiterate the importance of transparent and measurable recycling, in line with the principles of the circular economy. Compliance with GRS requirements allows Novfil to issue a transaction certificate for every delivery of r-Starlight® or r-Radyarn® products. This third-party-verified accompanying document states the content and origin of the recycled materials contained in the product. Thus the two product lines are certified to comply with both the product requirements (UNI 11505) and the system requirements, which range from workers' rights to environmental management policies, including water supply, emissions, and waste production and management.

MANAGEMENT APPROACH 103-1

The currently valid certifications held by the companies are a key factor not only for the above-mentioned reasons but also for achieving the United Nations Sustainable Development Goals (SDGs) in a global sustainability context. The table below cross-references the certifications current held by Group companies and the Sustainable Development Goals that the certifications contribute to. See page 5 of this Report for a more detailed overview.

TABLE 2

CERTIFICATION		SUSTAINABLE DEVELOPMENT GOALS
ISO 14001	Environmental Management	Goal 6, Goal 9, Goal 13, Goal 15
ISO 50001	Energy Management	Goal 7, Goal 11, Goal 13
ISO 45001 / OHSAS 18001	Occupational Health and Safety	Goal 8, Goal 11, Goal 16
ISO 9001	Quality Management Systems	Goal 9
ISO 14044	Environmental management – Life cycle assessment	Goal 9, Goal 12, Goal 13
ISO 14024	Environmental Labels and Declarations	Goal 9, Goal 12, Goal 13

The ISO 26000 standard on the social responsibility of organizations underpins the entire Group sustainability process, and the philosophy promoted by the standard is the same as the one inspiring the UN Sustainable Development Goals.

For more information www.iso.org/sdgs.html

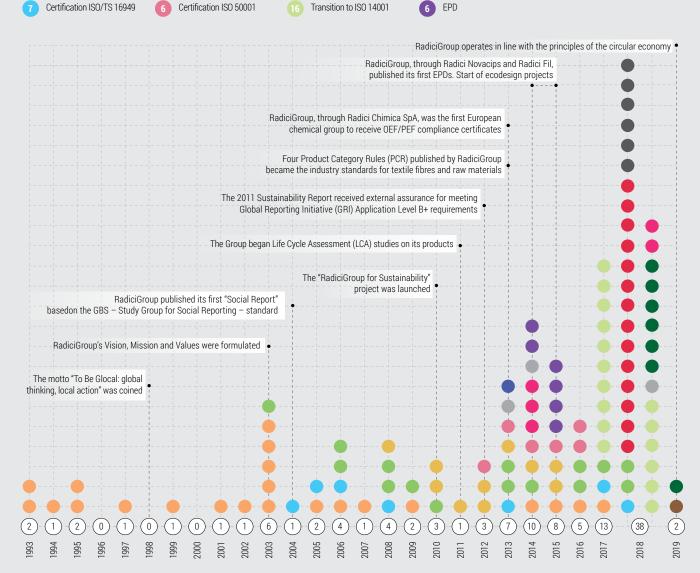
## RadiciGroup road to sustainability

The numbers refer to production site certifications.

- 1 Certification ISO 45001
- 15 Certification ISO 14001
- Transition to ISO 9001
- 3 OEF/PEF
- 1 ISO/IEC 17025

- 22 Certification ISO 9001
- 10 Certification OHSAS 18001
- 6 Transition to ISO/TS 16949
- 5 Product 11505 / GRS

7 OCS Certificate



#### **RadiciGroup workers**

RadiciGroup's workers are entrusted with the task of bringing the concept of sustainability to life everyday in performing their jobs. Several relevant training courses on sustainability are conducted especially for staff members, and communication channels on the same topic are kept available and regularly updated for the purpose of keeping them informed and engaged and listening to their voices.

Without the essential contribution from Group workers, this Report could not have been written. For this reason, they were among the stakeholders chosen to provide their assessment on material topics, as reported in the final part of this Sustainability Report. This choice was made recognizing that, without the employees' viewpoint, the assessment would have been incomplete, lacking the multi-faceted perspective essential for a real and believable sustainability strategy.

The following table gives a snapshot of the Group workforce composition.

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#### RADICIGROUP WORKERS

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			IVIEN			WUNEN		ALL		
		2016	2017	2018	2016	2017	2018	2016	2017	2018
n	Total Workforce*	2,250	2,345	2,367	817	842	834	3,067	3,187	3,201
n	Total Employees*	2,165	2,227	2,240	799	826	824	2,964	3,053	3,064
n	Total Employee Workers*	85	118	127	18	16	10	103	134	137
%	Temporary Workers	3.8%	5.0%	5.4%	2.2%	1.9%	1.2%	3.4%	4.2%	4.3%

MONTH

A I I

During the reporting year, the total RadiciGroup workforce increased (+11 workers), as did the number of male employees hired (+13 men). *TABLE 3* Except for Asia, the 30-to-50 age group remained the largest segment of the workforce, but the workers over 50 were on the increase. *TABLE 4* 

<sup>\*</sup> TO 31/12/2018

TABLE 4

		MEN				WOMEN		ALL		
		2016	2017	2018	2016	2017	2018	2016	2017	2018
n	EMPLOYEES <30 YEARS OLD	219	272	265	111	165	113	330	437	378
n	EMPLOYEES 30<>50 YEARS OLD	1,185	1,130	1,115	511	454	496	1,696	1,584	1,611
n	EMPLOYEES >50 YEARS OLD	761	825	860	177	207	215	938	1,032	1,075

DISCLOSURE 102-7

RadiciGroup realizes that the aging of its workforce is going to be a challenge in the mid to long term. Many of the policies described in this Report were decided on to foster the employee career path, balancing productivity and work dignity. This aspect deserves particular consideration because the predominant worker category at RadiciGroup, by virtue of the nature of the business, is blue-collar workers, people working in the production plants, who accounted for more than 70% of total employees in 2018. *TABLES 9 AND 10* 

Continual training of workers through a dialogue between different generations, special attention to health and safety, the introduction of state-of-the-art technologies reducing physical effort and the promotion of programmes and initiatives to foster personal wellbeing. These are some of the activities undertaken to improve conditions for Group employees in all stages of their professional career.

The Group employee breakdown by geographical region reflects the relentless internationalization process started in the 1980s. At RadiciGroup, cultural diversity is considered a value, an element that enriches corporate values. As of today, half of the people working for the Group reside outside Italy, predominantly in other European countries, but the number of workers is also increasing in Asia, North America and South America. *TABLES 5,6,7,8* 

#### **WORKFORCE BY REGION\***

TABLE 5

			MEN			WOMEN		ı	ALL	
		2016	2017	2018	2016	2017	2018	2016	2017	2018
n	ITALY	1,297	1,342	1,373	301	312	318	1.598	1,654	1,691
n	REST OF EUROPE	597	633	622	429	443	423	1,026	1,076	1,045
n	ASIA	60	67	69	18	21	24	78	88	93
n	NORTH AND SOUTH AMERICA	296	303	303	69	66	69	365	369	372

<sup>\*</sup>THE WORKFORCE INCLUDES: TEMPORARY WORKERS AND EMPLOYEES

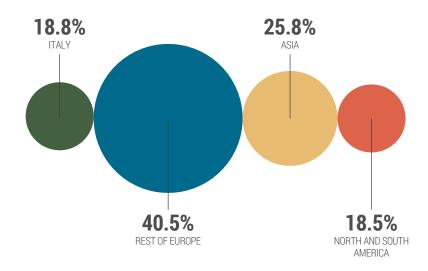
TABLE 6

#### **FEMALE WORKFORCE BY REGION\***

			2016	2017	2018
1	%	EUROPE (ITALY + REST OF EUROPE)	27.8	27.7	27.1
2	%	ITALY	18.8	18.9	18.8
	%	REST OF EUROPE	41.8	41.2	40.5
	%	ASIA	23.1	23.9	25.8
	%	NORTH AND SOUTH AMERICA	18.9	17.9	18.5

<sup>\*</sup>THE WORKFORCE INCLUDES: TEMPORARY WORKERS AND EMPLOYEES

#### Percentage of female workforce by region - 2018



#### **EMPLOYEES BY REGION**

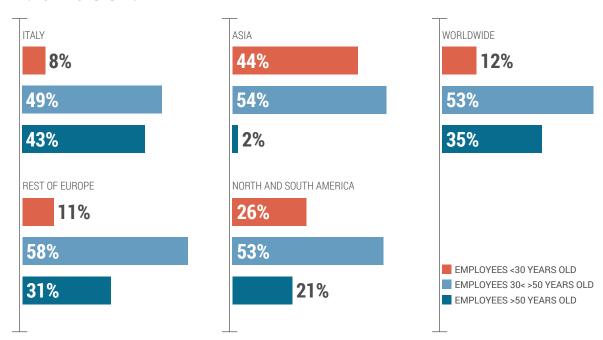
			MEN			WOMEN		ALL		
		2016	2017	2018	2016	2017	2018	2016	2017	2018
n	ITALY	1,246	1,250	1,277	294	298	311	1,540	1,548	1,588
n	REST OF EUROPE	591	624	614	419	443	423	1,010	1,067	1,037
n	ASIA	52	65	69	18	21	24	70	86	93
n	NORTH AND SOUTH AMERICA	276	288	280	68	64	66	344	352	346

TABLE 8

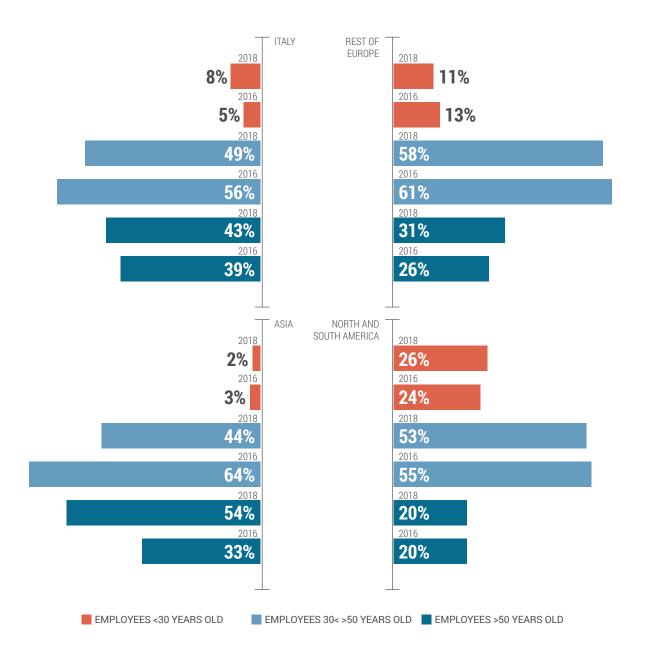
#### **EMPLOYEES BY GENDER, AGE GROUP AND REGION**

				MEN			WOMEN			ALL		TOTALE AREA
			2016	2017	2018	2016	2017	2018	2016	2017	2018	GEOGRAFICA 2018
n		EMPLOYEES <30 YEARS OLD	51	58	107	21	24	25	72	82	132	
n	ITALY	EMPLOYEES 30<>50 YEARS OLD	685	632	595	185	174	179	870	806	774	1,588
n	า	EMPLOYEES >50 YEARS OLD	510	560	575	88	100	107	598	660	682	
n	등 문	EMPLOYEES <30 YEARS OLD	72	122	60	58	109	55	130	231	115	
n	REST ( EUROF	EMPLOYEES 30<>50 YEARS OLD	330	296	327	282	238	275	612	534	602	1,307
<u>n</u>	<u> </u>	EMPLOYEES >50 YEARS OLD	189	206	227	79	96	93	268	302	320	
n		EMPLOYEES <30 YEARS OLD	31	20	26	14	14	15	45	34	41	
n	ASIA	EMPLOYEES 30<>50 YEARS OLD	20	44	42	3	7	8	23	51	50	93
n		EMPLOYEES >50 YEARS OLD	1	1	1	1	0	1	2	1	2	
n	H H K K	EMPLOYEES <30 YEARS OLD	65	72	72	18	18	18	83	90	90	
n	NORTH AND SOUTH AMERICA	EMPLOYEES 30<>50 YEARS OLD	150	158	151	41	35	34	191	193	185	346
<u>n</u>	AMA	EMPLOYEES >50 YEARS OLD	61	58	57	9	11	14	70	69	71	
n		TOTAL EMPLOYEES	2,165	2,227	2,240	799	826	824	2,964	3,053	3,064	

#### **Employees by age group - 2018**



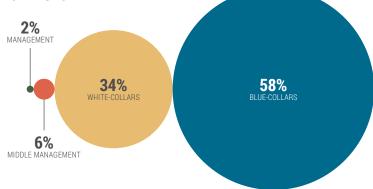
#### Employees by age group and region - 2018 vs 2016



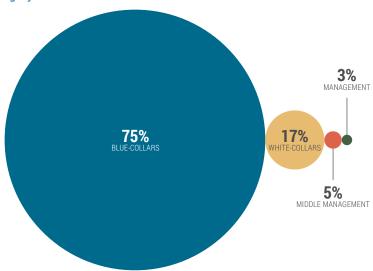
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	WO	MEN	MEN		
	n	%	n	%	
MANAGEMENT	17	2.1%	66	2.9%	
MIDDLE MANAGEMENT	52	6.3%	122	5.4%	
WHITE-COLLAR WORKERS	275	33.4%	377	16.8%	
BLUE-COLLAR WORKERS	480	58.3%	1,675	74.8%	
TOTAL EMPLOYEES	824	100.0%	2,240	100.0%	





#### Male employees by category - 2018



#### **EMPLOYEES BY GENDER, AGE GROUP AND CATEGORY**

			MEN WOMEN			ALL			TOTAL		
		2016	2017	2018	2016	2017	2018	2016	2017	2018	CATEGORY
n	MANAGEMENT < 30 YEARS OLD	0	0	0	0	0	0	0	0	0	
n	MANAGEMENT 30 <> 50 YEARS OLD	33	29	29	13	11	12	46	40	41	83
n	MANAGEMENT > 50 YEARS OLD	40	33	37	4	5	5	44	38	42	
n	MIDDLE MANAGEMENT < 30 YEARS OLD	0	1	4	1	2	3	1	3	7	
n	MIDDLE MANAGEMENT 30 <> 50 YEARS OLD	85	75	74	30	29	36	115	104	110	174
n	MIDDLE MANAGEMENT > 50 YEARS OLD	39	48	44	10	11	13	49	59	57	
n	WHITE-COLLAR WORKERS < 30 YEARS OLD	32	26	36	40	43	49	72	69	85	
n	WHITE-COLLAR WORKERS 30 <> 50 YEARS OLD	198	201	175	172	167	162	370	368	337	652
n	WHITE-COLLAR WORKERS > 50 YEARS OLD	128	153	166	41	56	64	169	209	230	
n	BLUE-COLLAR WORKERS < 30 YEARS OLD	187	245	225	70	120	61	257	365	286	
n	BLUE-COLLAR WORKERS 30 <> 50 YEARS OLD	869	825	837	296	247	286	1,165	1,072	1,123	2,155
n	BLUE-COLLAR WORKERS > 50 YEARS OLD	554	591	613	122	135	133	676	726	746	
n	TOTAL EMPLOYEES	2,165	2,227	2,240	799	826	824	2,964	3,053	3,064	3,064

#### Age at Work: a challenge, many opportunities

In 2018, RadiciGroup ran a workshop entitled "Age at Work, 8 lifestyles in the workplace". The goal of the initiative was to have people sharing the experience and knowledge acquired to gain a better understanding of the issue of age in the workplace. RadiciGroup has traditionally considered its workers staying with the company until retirement as an asset. However, the company must deal with the strategic (and physiological) necessity of engaging young people as collaborators, who, by virtue of their age, education and training, are better prepared to take on the present and future technological challenges.

The labour intensive nature of production at RadiciGroup poses numerous challenges, from

the need for formal and informal mechanisms to transfer knowledge between generations to the need for dealing with change in relation to the age and personal and professional history of each worker. But the workshop also brought up numerous opportunities, particularly through the analysis of the corporate organization from a different perspective – not a one-size-fits-all approach but an approach to the management of individual people in the various stages of their working life taking into account the mindset, attitude and motivational levers of each individual.

#### Customer

RadiciGroup has built a global customer base, which is served by an international production organization with plants located in the major world markets and a global sales network. The RadiciGroup customer base is extremely diversified and complex in correlation with the Group's diversified production and market outlets. RadiciGroup operates in the businessto-business sector and, therefore, its customers are processing companies of all sizes. In the fibres industry, there is a prevalence of mid-sized and mid-to-smallsized companies, while in the polymers and chemicals sectors there are mostly midand large-sized companies.

Thanks to its upstream vertical integration, economic and financial soundness, global organization, careful market analysis and risk management, RadiciGroup is able to respond effectively to the legitimate expectations of its customers, above all by ensuring the continuity of supply, consistent product quality and after-sales service. More and more frequently the Group business areas offer customers active collaboration, technical knowhow and consulting services for the development of new products. The technical assistance provided often concerns the sustainability aspects of customer projects.

The Group's sales and technical assistance teams have very close relations with customers. In addition to making daily contacts, Group staff have the opportunity to meet with customers at trade shows. In 2018, the Group business areas participated in a total of about ten trade fairs all over the world, plus numerous sector meetings and conferences. All the above events have contributed to building strong relationships of trust, based on the principles set out in the RadiciGroup Code

of Ethics and included in the RadiciGroup Customer Code of Conduct. Here are a few excerpts:

"RadiciGroup's relationship with its customers, major stakeholders, is based on the principles of legality, transparency, fairness, trust and cooperation."

"RadiciGroup builds its customer relationships aiming at fully satisfying their needs, with the goal of creating a solid relationship inspired by the general values of fairness, honesty, efficiency and professionalism."

#### RadiciGroup Customer Code of Conduct

Besides the sales and customer assistance teams, the abovementioned Innovation & Research function also works closely with customers, identifying their needs and helping them apply the principles of sustainability to their products in accordance with the provisions of their operating guidelines. The section of this Report dedicated to low impact products reports a case history in which customer engagement became co-design and materialized into a finished product.

For more information on the Customer Code of Conduct <a href="https://www.radicigroup.com/en/sustainability/ethical-quidelines/client-conduct-code">www.radicigroup.com/en/sustainability/ethical-quidelines/client-conduct-code</a>

## Customer satisfaction as an engagement tool

"For the purposes of continuous improvement, RadiciGroup undertakes to conduct regular Customer Satisfaction surveys and to undertake improvement actions based on the findings obtained in the surveys."

#### RadiciGroup Customer Code of Conduct

The Customer Satisfaction Survey (CSS) conducted on a biannual basis is one of the main tools of customer relationship management. In the survey, customers mark the level of satisfaction with the Group but also have the opportunity to express their view on a number of key market issues.

For 14 years, RadiciGroup has involved customers in this study, carefully monitoring the resulting level of satisfaction, and has relentlessly worked both to improve the methodology of the survey and raise the quality of the interaction with the recipients. The Customer Satisfaction Survey has always been a fundamental tool for self-assessment and comparison with the competition, as well as an incessant stimulus for improvement, which is also noted in the Group Quality, Environment, Energy, Health and Safety Policy.

The 2018 Customer Satisfaction Survey introduced numerous formal changes designed to speed up the compiling process and improve ease of use. Although comparability with previous editions was retained, the number of questions was noticeably reduced by

## Decathlon visits RadiciGroup, 360° sustainability

The sustainability team from sporting goods retailer Decathlon Group made a stop at the RadiciGroup headquarters and visited plants specialized in the production of engineering polymers and synthetic fibres.

An exchange of experiences on the topic of sustainability sums up the day spent by about sixty Decathlon workers from all over the world who visited the RadiciGroup headquarters and two Group manufacturing companies. After a classroom session, the Decathlon people were taken to the production sites in Villa d'Ogna where they were able to see the nylon 6 polymerization process, yarn processing and the production of engineering polymers.

The Decathlon sustainability team was in Italy in July 2018 for a "sustainability week" focused on the circular economy, ecodesign, low environmental impact products and renewable energy.

In this context, the visit to RadiciGroup was the ideal opportunity to discuss numerous technical issues with a producer that is attentive to product sustainability.

eliminating redundancies. The recipients of the survey were all customers worldwide who were active in 2017. The survey was translated into eight languages, and a modular design approach to survey data collection was implemented.

Regarding content, the CSS was preceded for the first time by an analysis of the Group market context, which was conducted to better focus on recipients and questions. Some of the questions were reformulated based on the results of the 2016 survey and the market situation analysis. As always, the survey measured the level of importance assigned to a given topic and the level of satisfaction with both the Group and its competitors. The score was expressed on a scale from 1 (lowest satisfaction) to 6 (highest satisfaction).

The survey was sent out to 2,910 customers (recipients) and there were 642 responders, a response rate of 22%. This percentage was on the decline, compared to the response rates

Customer
Satisfaction 2018

OVERALL
WEIGHTED AVERAGE

DEVELOPMENT NEW PRODUCTS/
NEW PROCESSING TECHNOLOGIES

SALES STAFF'S REACTIVE, PROFESSIONAL
AND CLOSE TO CUSTOMER NEEDS

MIMPORTANCE

SATISFACTION RADICIGROUP

SATISFACTION COMPETITORS

of the previous edition but still ensured the representativeness of the responders and the validity of the results. Nevertheless, the falling response rate creates a challenge for the Group and an opportunity to rethink the mode of interaction with customers, who are still very sensitive to the topic proposed but have a waning desire to carry out the actual filling in of the questionnaire.

In general, the results of the 2018 edition of the Customer Satisfaction Survey show that the level of satisfaction with RadiciGroup stayed above the competition in several areas: development of new products and new technologies, quality, relationships with sales staff and, above all, the overall evaluation (score of 4.9 versus 4.8 for competitors).

Less flattering was the score for delivery time, which was penalized during 2018 in certain businesses, especially in some market areas due to force majeure events affecting the upstream links of the Group supply chain, while at the same time other businesses felt the effect of a sudden jump in product demand. As a result, risk assessment and management procedures were activated by the logistics functions of the interested business areas.

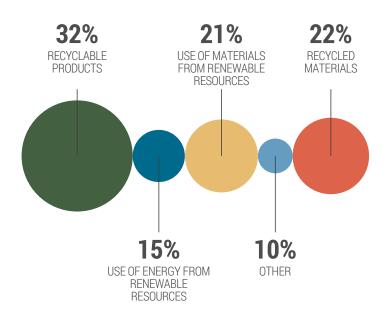
Closeness to customers' needs was, once again in 2018, the ace up RadiciGroup's sleeve for most of the responders, who, as usual, considered the vertically integrated production chain and the adoption of ISO management systems to be strategic factors in favour of the Group.

In line with the growing importance of sustainability for the market, the survey showed that the importance of sustainable business management had progressively gained ground, with 70% of the responders assessing the topic as very important (score of 5) or extremely important (score of 6). In the 2016 edition, the corresponding percentage was 65%. Particularly relevant to customers were recyclable products, which received a top score for importance from 32% of the interviewees, followed

by products obtained from recyclate (22%) and the use of materials from renewable sources (21%). These results largely confirm some of the sustainable development guidelines RadiciGroup has invested in for quite some time, which are described at the beginning of this Report. Recyclability across all RadiciGroup product ranges, in particular, was recognized as the key to future development. Customer perception of the importance of the energy from renewable sources declined (15%), although this topic remains high on the RadiciGroup sustainability agenda. In fact, clean energy is included in the United Nations Sustainable Development Goals (SDGs), namely SDG 7: Affordable and Clean Energy.

The last question on communication was intended to assess the customers' level of satisfaction with their interaction with Group staff. The answers to this question are essential to understand whether the information and engagement activities conducted by the Group were effective on the whole. In the 2018 edition of the Customer Satisfaction Survey, 76.6% of the interviewees rated this aspect as satisfactory or extremely satisfactory.

#### **Customer satisfaction-sostenibilità per il Cliente**



#### **Suppliers**

The Supplier Code of Conduct clearly states the guiding principle for the selection of suppliers and how the Group will interact with these important stakeholders. The RadiciGroup supply chain is extremely complex, because it must deal with the needs of a very diversified Group and its over twenty production sites in the chemicals, high performance polymers and synthetic fibres sectors, with an extensive product portfolio. RadiciGroup suppliers are based in Europe, Asia and North and South America, where the production plants are also located.

"RadiciGroup will promote transparency and fairness in its processes for the selection of suppliers. Suppliers will be evaluated based on the quality and prices of their products and services and they all will be treated fairly and equally."

RadiciGroup Supplier Code of Conduct

#### "STRATEGIC MATERIALS & LOGISTICS" FUNCTION

As previously mentioned, the Group production processes are extremely diversified and complex, starting with the raw materials. In 2018 a new function, called "Strategic Materials and Logistics", was created specifically to handle the management of raw materials. The new function is entrusted with the centralized coordination of the various procurement and management phases with the objective of ensuring continuity, efficiency and the best conditions for the supply of caprolactam, phenol, cyclohexanol-cyclohexanone mix, ammonia, adiponitrile, and the chemical intermediates needed for the production of polyethylene and polyester polymers, materials "(...) which, in terms of costs and volumes, represent the predominant share of the variable cost of the products," as stated in the corporate procedure PR 04 "Procurement of

strategic raw materials".

For the procurement of strategic raw materials, RadiciGroup has about 70 suppliers located all over the world on framework agreements. These raw materials suppliers account for about 70% of the Group procurement costs and are essential for all RadiciGroup production processes.

Packaging and Transportation is another activity unit of the Strategic Materials and Logistics function. Transportation is the second most important item purchased by the Group and is a strategic factor for the success of the Group production and sales strategy. Continuing along the lines of the ethical and organizational principles laid out by the former Purchasing and Logistics function, the newly created Strategic Materials and Logistics function has set the goal of not only optimizing logistic flows, thus contributing to improving product lead time, but also finding lower environmental impact solutions.

In this context, intermodal goods transport, one of the Group's preferred means of goods transfer, is becoming more and more relevant. Also gaining popularity are co-investments made by the Group and its suppliers to replace road transport with rail transport over sizeable distances.

#### "REAL ESTATE & SERVICES" FUNCTION

Following the reorganization of the corporate functions already mentioned in this Report, the year 2018 closed with the formalization of the Real Estate and Services function. The tasks assigned to this function include coordinating at the corporate level and supporting individual business areas on matters concerning service procurement, such as telecommunications and information technology, domestic and international shipping, car fleet management, and handling of trade fair events and trip arrangements. This new structure was designed with the specific goal of creating value by exploring new possible synergies between the various RadiciGroup departments and, at the same time,

working to optimize the existing processes.

Moreover, the function was assigned the task of managing the Group's real estate as a unified portfolio, paying special attention to environmental requalification. The suppliers related to this function are predominantly mid-sized domestic companies. For services used in the daily operations of the companies, the suppliers may sometimes be local family-operated businesses. This deliberate choice has been made to keep value added within the local community by fostering the development of associated local businesses as much as possible.

The tables below show a breakdown of Group suppliers by sales and region.

#### **RADICIGROUP SUPPLIERS BY 2018 SALES**

STRATEGIC RAW MATERIALS	From EUR 630 to EUR 690 million
PACKAGING AND TRANSPORT	About EUR 55 million
MAINTENANCE AND UTILITIES	About EUR 113 million
OTHER GOODS AND SERVICES	About EUR 45 million

#### **RADICIGROUP SUPPLIERS BY REGION AND 2018 SALES**

EUROPE	About 85% of sales*
ASIA	About 10% of sales
NORTH AND SOUTH AMERICA	About 5% of sales

\*OF WHICH, ABOUT TWENTY KEY SUPPLIERS WITH SALES OVER EUR 10 MILLION.

ISCLOSURE 102-10, 102-15

For its entire supply chain, RadiciGroup carries on continuous monitoring of the market and organizational structure of suppliers, coupled with constant risk surveillance. The aim of the latter is to safeguard business continuity, protect the Group from sudden changes in the prices of raw materials and prevent potential disruption of service to customers. Risk surveillance turned out to be particularly valuable in 2018, a year in which there was a shortage in the supply of strategic raw materials by a major polyamide 6.6 supplier. That event forced one of the companies of the Specialty Chemicals Business Area, as well as competitor companies, to declare force majeure for a number of months. During that disruption, RadiciGroup and the supplier worked hard and relentlessly to honour their contractual obligations and ensure the delivery of the products to customers, to the extent possible.

**TABLE 12** 

#### SUSTAINABILITY IN THE SUPPLY CHAIN

During the two-year period 2016-2017, a significant awareness raising campaign was conducted among suppliers on the topic of workers' rights, as amply reported in the 2017 edition of the Sustainability Report.

To review just the main points, in 2017 a copy of the RadiciGroup Supplier Code of Conduct was sent to about 350 suppliers around the world. The Code was accompanied by a letter explaining the purpose of the Code and stating that it was to be read as a guide to collaborating on building an ever more sustainable supply chain. As part of this collaboration, the suppliers were provided with an email address to freely report any deviations by RadiciGroup employees from the values set out in the Code.

Furthermore, about 60 supplier codes were collected from suppliers who sent them in on their own initiative. An analysis of the codes found a broad and comforting convergence with the Group's ideas on the topics of human rights, and labour and environmental management.

In 2018, an important further step forward was made towards supplier engagement: the suppliers were asked, for the first time, to contribute to the materiality analysis on which this Sustainability Report is based. A limited group of suppliers were selected according to their representativeness, country, type of product supplied and level of sustainability awareness. The selected suppliers received the materiality questionnaire described in the section "Building the Report".

The supplier results, combined with those from the employees and representatives of local communities, were merged with the RadiciGroup assessment to build a shared multi-stakeholder materiality matrix, which, for the first time, reflected the valuable viewpoint of the suppliers

For more information on the Supplier Code of Conduct

www.radicigroup.com/en/sustainability/ethical-guidelines/conduct-code

#### **Banks and Insurance companies**

Transparency and trust are the key words for the Group's relationship with financial institutions. RadiciGroup has always chosen partner banks that have recognized ethical values and a strong tradition of close relationships with their local communities, and share the underlying principles of the Group's industrial business. The Group and the banks, each fulfilling their respective roles, have established and nurtured relationships of mutual esteem through dialogue, meetings and regular exchanges of information.

RadiciGroup has been able to maintain a high level of creditworthiness, due to both the good performance of its businesses and its balanced financial policies. On their part, the banks provide essential support to the Group's medium-to-long-term investment policy with the goals of safeguarding employment and fostering the development of the local communities, in particular.

Furthermore, the banks finance environmental and R&D investments and show great interest in innovation by Group companies and the Group's sustainability project and related reporting.

#### **Local communities**

#### **ENGAGEMENT WITH LOCAL COMMUNITIES**

DISCLOSURE 102-40, 413-1

Besides implementing employment policies aimed at safeguarding work as an absolute value and other activities such as donations and sponsorships, RadiciGroup is actively engaged and participates in the development of the local communities. These social initiatives are the milestones marking the Group's long history and are examples of how the ethical principles of the founders, Gianni and Luciana Radici, have become concrete practices. They also represent a tangible

response to the reasonable expectations of the local community and an integral part of the Group's redistribution of its value added.

As the needs of the local communities have changed over time, so has the Group's concept of philanthropic marketing, which has evolved into today's stakeholder-oriented social marketing. Since 2017, RadiciGroup and its companies have not only provided economic support but also engaged with local organizations in joint projects for the development of business opportunities. This new vision entails diversifying social activities according to the location where the Group companies operate and constantly looking after the needs of the local communities, as well as looking out for any opportunities that may arise locally, including radically new projects. A number of new criteria for the evaluation of sponsorship applications were added at the beginning of 2019, precisely for the purpose of exploring the opportunity of collaborating with applicants on business projects.

A case in point of this new approach to sponsorship is the Group's support of the Atalanta BC. The close relationship with this successful Bergamo football team, on the one hand, created several opportunities in 2018 for engaging employees in social events — the exclusive sale of team jerseys to Group employees, tickets to championship matches and meetings with the players — and, on the other, offered a unique chance to bring the name of RadiciGroup to non-traditional venues and to explore business opportunities from a different perspective.

Finally, the numerous charitable donations (in the strictest sense) made in 2018 to cultural institutions and health, prevention, and humanitarian organizations were maintained by virtue of their non-profit nature and the important ethical value of their work.

Atalanta jerseys auctioned for charity: the proceeds from the uniforms worn by the players during the Atalanta BC-Borussia Dortmund Europa League match will benefit the Bergamo Oncological Association

The Atalanta BC-Borussia Dortmund match went from a sports event to a solidarity contest. Atalanta Bergamasca Calcio club and RadiciGroup, in collaboration with Bergamo V television station and its TV sports show "TuttoAtalanta", agreed to auction the 25 jerseys worn by the Atalanta players during the Europa League match played on 22 February 2018 at "Mapei Stadium" in Reggio Emilia.

The ball used for the match, with the signatures of the trainer Gasperini and all the players of both teams, was also auctioned. The proceeds were donated to the Associazione Oncologica Bergamasca (AOB), a volunteer organization engaged for over 20 years in improving the life of people ill with cancer. The AOB, a long time friend of RadiciGroup, is known for the excellence of its services provided to cancer patients and has won recognitions and awards from local and regional authorities and institutions.

#### **CONTRIBUTIONS AND DONATIONS IN 2018**

RadiciGroup tracked the applications for contributions entered online during 2018 using the online management system set up in 2016. In 2018, the number of online applications meeting all the initial acceptance requirements reached 100. Of those, 65 were accepted based on specific criteria, including geographical region and social and cultural values, published on the sponsorship application page.

For more information www.radicigroup.com/en/radici-connect/sponsorship/intro

CONTRIBUTIONS AND DONATIONS 2018	2016	2017	2018
HEALTH AND PREVENTION, HUMANITARIAN ORGANIZATIONS	141,638	149,428	89,081
COMMUNITIES, CULTURE AND TRAINING	96,378	76,987	133,657
SPORTS*	338,000	411,105	390,786
TOTAL	576,016	637,520	613,524

<sup>\*</sup>TOTAL CONTRIBUTIONS IN THE SPORTS LINE ITEM DO NOT INCLUDE THE SPONSORSHIP OF ATALANTA BC.

JISCLOSURE 415-1

In 2018, RadiciGroup did not make any direct or indirect contributions in favour of political parties, in compliance with the provisions of the internal Code of Ethics, signed by the President of RadiciGroup and updated in 2013, which reads as follows concerning the point in question:

"The Company will not make direct or indirect contributions, or allocate funds or financial resources in favour of public bodies (such as political parties or committees), except those which are allowed and provided for by the law and regulations in force, and have received the prior approval of the Company's Board of Directors"

## Local communities (and their inhabitants) as privileged stakeholders

One of the key legitimate expectations of the inhabitants of the communities where RadiciGroup operates is to receive clear and timely information on what is happening in the Group.

Considering the organizational complexity of the business and the number of different countries where the Group operates, different tools and approaches are used to keep the dialogue between companies and local communities open and lively.

Some of these tools may be informal, like "word of mouth" from company employees. Others, such as social media engagement or open

doors events held for the members of the local communities, require more organization and have, at the same time, both a local and a global reach.

## SOCIAL MEDIA AS A TOOL FOR REACHING AND LISTENING TO LOCAL COMMUNITIES

RadiciGroup has long accepted social media as a tool to give immediacy to engagement with local communities. In particular, the Group uses Facebook Italia to give information on a daily basis concerning cultural, sports or social events organized by the Group or local associations, adding dedicated hashtags to identify the posts.

In this context, the Facebook post count and RadiciGroup followers count are on the increase, which proves that the selected tool is indeed effective. Through the 466 posts in 2018 (versus 490 in 2017) the 1,254 followers of the RadiciGroup Facebook page enjoyed the opportunity to obtain information (and show their appreciation by clicking "Like") concerning, for example, the outcomes of sports teams sponsored by the Group, primarily, Recastello RadiciGroup, Radici Nuoto and Sci Club RadiciGroup, while at the same time promoting the visibility of these sports clubs. They also learned about public events promoted by RadiciGroup or local cultural institutions. Starting in 2018, the Facebook page extended its coverage to include the province of Novara, thus moving to a higher level of engagement, particularly in view of the strong relationship Radici Chimica has established with its community.

For a few years now, RadiciGroup has regularly verified the effectiveness of Facebook Italia as an engagement tool, by analysing the post count trend and performing a segmentation of the followers by geographic location. The results of this analysis for the year 2018 showed that the area of Bergamo (and province) and the area of Novara (and province), which are the main target areas of Group engagement activities, are also the areas with a greater number of followers. Thus, the results of

the Facebook page are in line with the Group's engagement target.

A more detailed analysis showed that the largest percentage of people interested in the posts in 2018 fell into the age group from 25 to 44 years old, an active population group consistent with the content posted by RadiciGroup. The increase in RadiciGroup page "LIKES" from 1,069 in 2017 to 1,250 in 2018 further strengthened the good performance of the page, giving the Group comfort that this form of engagement has been a suitable choice.

#### INITIATIVES TO OPEN DOORS AND BROADEN HORIZONS.

RadiciGroup strongly desires to see its vision, mission and values moving beyond the corporate boundaries into those communities from which Group sites draw resources and know-how and to which they give back value added in the form of employment and economic resources.

Along with the virtual relationship built through social media, the Group pursues the objective of establishing a more real transparent relationship of mutual enrichment. To that end, in 2018 RadiciGroup undertook several initiatives that gave the inhabitants of local communities the opportunity to experience life in the companies directly and discover their strategies and activities in person. Such initiatives have a two-fold purpose. On the one hand, they aim to teach people through the discovery of production processes — typically practically unknown to most of them — and, on the other, they open up the inner workings of a factory through direct contact with the people that make these production processes come alive.

The lab workshops set up in cooperation with BergamoScienza, an international science festival, gave people coming from all over the region of Lombardy, an opportunity to visit the Radici Novacips plants and discover the secrets of nylon chips, which many everyday objects are made of.

#### Intervistabili 2,0: boys and girls from Social Co-op SottoSopra discover the RadiciGroup production world

In February 2018, a group of boys and girls from the Social Education Centre located near to the Radici Novacips production site in Villa d'Ogna, province of Bergamo, Italy, spent a special morning on a journey to discover the world of industry.

The initiative was part of RadiciGroup's engagement with local communities, in particular, expressing appreciation for diverse abilities as resources. The young people are the hosts and presenters of the television programme "Intervistabili" [Interviewables] — a television format created by the SottoSopra Social Co-op in collaboration with local television station Antenna2. They were taken on a tour of the Radici Novacips plant to see first-hand what was being produced inside and how all the activities were planned and carried out.

Overall, the visit was a positive experience of diversity and inclusion for everyone, including the Radici Novacips workers, who, during interviews with the very special young journalists, explained the characteristics of the main products and work organization in the company.

## "BRIDGE" PROJECTS IN COOPERATION WITH LOCAL SCHOOLS

The work that RadiciGroup has done with schools for many years deserves a chapter of its own. In the same spirit of openness and transparency characterizing open doors events, in 2018 numerous diversified projects were organized and carried out in cooperation with schools.

Preserving the know-how needed for industrial application sectors, contributing to the professional training content of educational curricula, looking ahead to the future of local communities as a key element of business continuity and having the willingness to create a permanent bridge between schools and businesses: those were the main reasons RadiciGroup decided to renew its close collaboration with local schools, which are the institutions responsible for educating and training the potential future human resources of the Group.

In the reporting year, 21 students had the opportunity to benefit from Group company work experience placements/ internships dealing with technical aspects of production processes or management topics. Entire classes from 10 different schools visited the main Group companies in Italy. Company tutors went to lower and upper secondary schools to give presentations on RadiciGroup activities and talk with the students about their future career expectations.

The Group also actively participates in career day events at universities and career orientation meetings, where professional "supply and demand" meet and corporate representatives have the chance to present their forecast on

which skills will be in high demand in the work world.

Some of the more important projects involving students cover sustainability topics. Among the most noteworthy projects are:

- "Natta for the Environment: Eccellenti rilevanze", a project that received a special award from Confindustria [Italian Manufacturers Association] of Bergamo. The syllabus is being taught over three years (2017-2019), during which RadiciGroup corporate tutors help the students of Istituto Natta in Bergamo a technical upper secondary school that has educated generations of future Group employees learn about the environmental certification process according to the ISO 14001:2015 standard.
- Liceo Scientifico Federici in Trescore (Province of Bergamo) / RadiciGroup school-work alternation project named "A corporate model for recycling and environmental sustainability", to be delivered over the three-year period 2018-2020. A third-year class of the Federici upper secondary school has been "adopted" by Group companies for a programme covering the topics of recycling, sustainability and sustainability reporting, in particular. Engagement and participation of a few lower secondary school classes at the RadiciGroup stand at Plast, the most important Italian exhibition for the plastics and rubber industry. During their visit at the stand, the students gained familiarity with the trade fair world. They also had the opportunity to listen in person to experts of the High Performance Polymers Business Area tell the story of the Group's engineering polymers, how they are part of our daily life, and how their performance characteristics make them suitable not only for high performance applications but also for recycling many times over.

Overall, about 1,200 students and about 40 Group corporate representatives participated in the Education programme over the four-year period 2015-2018.

#### RadiciGroup awarded the "Quality Alternation Stamp" by Confindustria Bergamo in recognition of its numerous school collaboration projects

In 2018, RadiciGroup was, once again, one of the businesses that could boast of a BAQ – Bollino per l'Alternanza di Qualità [Quality Alternation Stamp], an important recognition awarded by Confindustria, the Italian Manufacturers Association. The Quality Stamp for the school year 2017-2018 was given to companies that promoted high-quality, highly educational school-work alternation projects for high school students. The two topics chosen for the more challenging projects undertaken by RadiciGroup were the ISO 14001 certification process and a critical analysis of the data reported in the Sustainability Report. Besides support for the school-work alternation programme, the Quality Stamp was awarded to recognize RadiciGroup's special commitment to the continuity of other activities, for instance, open day events for students only, lectures both at RadiciGroup sites and in classrooms, participation in career day events held at universities and career orientation meetings. The Group companies involved in the various projects were RadiciFil, Radici Yarn, Radici Novacips, Tessiture Pietro Radici and Radici Partecipazioni, the Group parent company.

## Academic and research institutions

RadiciGroup supports ongoing collaborations with the academic world on several fronts: firstly, through the Education programme described above, by facilitating internships, thesis work for university degrees, and research projects predominantly involving students in technical and scientific disciplines.

The Group calls on universities and their experts to collaborate on many of its research projects. Finally, the Group has additional contacts with academia thanks to the consulting services often provided to trade associations by university faculty and staff.

#### **Trade union organizations**

RadiciGroup defends the freedom of its employees to unionize and recognizes the great importance of collaborating with trade union organizations and their representatives.

The Group has traditionally cultivated a collaborative relationship with trade unions, always with respect for their respective roles, which takes the form of periodic exchanges of ideas on corporate strategies and objectives. During the last several years, the topics of discussion have often included the aspects of sustainability related to occupational health and safety.

Just to name a few representative examples, the Group, in cooperation with the trade unions, has set up special educational projects, such as "RadiciGroup for Safety", already described in the prior year Sustainability Report.

Furthermore, continual collaboration with the union organizations has made it possible to renew the profit sharing scheme, year after year, and, at some production sites, to agree on a performance bonus, that is, additional annual compensation calculated collectively as a lump sum and split by the employees. The lump sum is determined based on company performance indicators, as well as environmental and safety indicators that are essential elements of the Group sustainability philosophy.

#### Media

Communication transparency, a key concept emphasized in the Group Quality, Environment, Energy, Health and Safety Policy, describes and guides RadiciGroup's relationships with media communication, information and dissemination organizations at the national and international levels. As a matter of fact, social and traditional media are one of the Group's preferred tools to effectively reach all potential stakeholders on an ongoing basis. Due to their special role as "intermediaries", the media contribute to generating value added in terms of information, awareness and engagement, inside and outside the Group.

#### **PRESS**

RadiciGroup cultivates fully collaborative relationships with newspapers and specialized periodicals, the goal being to proactively inform its stakeholders about Group activities. In 2018, the corporate

press office regularly updated the media on a timely basis through its growing number of contacts.

During the year, the press office issued over 40 press releases on various topics concerning the three Group business areas or the Group as a whole, 15 advertorials and 2 issues of "Voices", the corporate magazine dealing with RadiciGroup best practices in various areas. The two 2018 issues of the magazine dedicated their pages to topics related to the apparel and automotive industries.

All the above RadiciGroup activities are aimed at reaching its stakeholders. For instance, by maintaining a constant presence in trade publications, RadiciGroup strives to inform and engage its customers and all the players in its value chain. Local newspapers and magazines are used with the specific objective of reaching Group employees and the inhabitants of local communities for the purpose of stakeholder engagement.

To better assess the effectiveness of the Group's media communication, in 2018 the RadiciGroup corporate press office activated a press review service in collaboration with an external supplier who handles press release monitoring in all the countries where the Group operates. The press survey showed that there is strong interest in RadiciGroup by both the general media and trade publications.

Thus, the tool provided further confirmation of RadiciGroup's role as a leading player in the world of chemicals, polymers and synthetic fibres, and more. RadiciGroup also received a

great number of citations on different platforms related to sustainability covering aspects on the environment, safety, engagement with local communities, and support of cultural and sports activities.

#### SOCIAL MEDIA

Due to the unstoppable expansion of online communications, engagement through social media offers the Group a variety of ways to speak directly to its stakeholders, who were previously difficult, if not impossible, to reach in every part of the world. Furthermore, social communication allows the Group to establish an ongoing dialogue with stakeholders and encourage them to take a more active role.

Transparency, accuracy and quality of information are part of the ethical commitment made by the Group in response to the spread of superficial information and the indiscriminate use of digital content going on every day. RadiciGroup is very careful to avoid greenwashing in its posts on sustainability, a topic subject to serious inaccuracies.

RadiciGroup has its own profiles and dedicated pages on various social networking websites: LinkedIn, dedicated to the business world; Twitter, also hosting the RadiciGroup "green" page named "RG for Sustainability"; and Facebook, where RadiciGroup has a world page and two local pages. The Group has also its profiles on Instagram and YouTube.

Every year, the effectiveness of social networking is assessed by monitoring

the interaction between RadiciGroup and users on the various social networking sites.

The 2018 analysis of social interaction has once again demonstrated further improvement in the quality of user engagement, i.e., the quality of the interaction between RadiciGroup and its users, which means a growing interest and participation in dialogue, measured by criteria like "comments" "likes" and "shares". Particularly noteworthy is the special role that Facebook Italia plays in RadiciGroup's relationship with local communities concerning social sustainability issues, described in detail in the "Local Communities" section of this Report.

#### **Trade associations and competitors**

RadiciGroup attaches an ever-greater importance to being present in pre-competitive initiatives, where it is possible to develop research projects and take on important present and future challenges related to products and systems. By sharing competencies and potential risks, it becomes easier to develop and experiment with new solutions to meet the new needs of the market.

Furthermore, as a member of a trade association, it is easier to have one's voice heard at the institutional level and to give authoritative support to government organs in their decision-making and legislative processes, as well as to work together to construct consumer culture and awareness.

Recycling, recyclability and microplastics are just a few of the key topics the Group dealt with during 2018 through its activities in trade associations, side by side with competitors in an open and direct dialogue with full respect for the rights of the players involved and the rules of fair commercial practice.

Below is a list of associations and the office held by RadiciGroup in 2018:

- · RESPONSIBLE CARE ITALIA: Vice President.
- · ASSOFIBRE: President.
- Associazione Tessile e Salute and TEXCLUBTEC: RadiciGroup is a member of the Board of Directors of each association.
- ESTO: RadiciGroup is a member of the Board of Directors and a member of the artificial grass yarn team. It also is the founder and President of the Environmental Group.
- CIRFS: RadiciGroup has long had members on the Board of Directors, the ECOLIS/ENERGY environmental committee, the Committee for Research and Development, and the Technical Committee. Furthermore, RadiciGroup holds the presidency of the Statistics Committee and Economics Committee.

On the RadiciGroup corporate website, in 2018 two new pages were created, "EU Programmes" and "Partnership", to make it easier for stakeholders to learn more about the role of the Group in some of the projects promoted and carried out in collaboration with trade associations and to stay up to date on the progress of these initiatives. The "EU Programmes" page reports on programmes under the auspices of the European Union, while the "Partnership" page reports on collaborative projects originating in different contexts. The common theme of all the projects is environmental sustainability.

The Group has also promoted and collaborated on the development of guidelines on proper environmental communication. It is worth mentioning the Esto Environmental Group, as a member of which RadiciGroup has promoted better information on environmental labelling and voluntary rules for greenwashing-free communication.

#### To learn more:

www.radicigroup.com/en/documentation/regulations/programs www.radicigroup.com/en/products/focus/partnership

RADICIGROUP COMPANY ENROLLED IN 2018	MAIN RADICIGROUP MEMBERSHIPS IN TRADE OR OTHER ASSOCIATIONS IN 2018
	FEDERCHIMICA
	AIN – INDUSTRIAL ASSOCIATION OF NOVARA
RADICI CHIMICA SpA	CEFIC - EUROPEAN CHEMICAL INDUSTRY
	IBIS - CONSORTIUM FOR SUSTAINABLE CHEMISTRY
	SPRING
RADICI CHIMICA GMBH	NORDOSTCHEMIE
	IHK (INDUSTRIE- UND HANDELSKAMMER)
RADICI NOVACIPS GMBH	CHEMIE WIRTSCHAFTSFOERD GMBH
	CONFINDUSTRIA
RADICI NOVACIPS SpA	FEDERCHIMICA
·	PLASTICS EUROPE AISBL (BE)
	PLASTICS EUROPE ITALY THROUGH PLASTICS EUROPE BRUSSELS
	PROPLAST
RADICI NOVACIPS SpA	UNIPLAST- UNI-ITALIAN NATIONAL PLASTICS STANDARDS BODY
	TMP
	CEI - ITALIAN ELECTROTECHNICAL COMMITTEE
RADICI PLASTICS SUZHOU	ITALIAN CHAMBER OF COMMERCE IN CHINA
	PLASTICS INDUSTRY ASSOCIATION (FORMERLY SPI)
RADICI PLASTICS USA	OMA - OHIO MANUFACTURERS' ASSOCIATION
	WADSWORTH CHAMBER OF COMMERCE
TESSITURE PIETRO RADICI SpA	CONFINDUSTRIA
	EDANA
	ESTO AISBL
RADICI YARN SpA	CONFINDUSTRIA
YARNEA SRL	NEAMT CHAMBER OF COMMERCE AND INDUSTRY
	FEDERATIA PATRONALA A INDUSTRIEI DE TEXTILE
RADICI CHEMIEFASER GMBH	VTB: VERBAND DER BAYERISCHEN TEXTIL UND BEKLEIDUNGESINDUSTRIE
	IHK: INDUSTRIE- UND HANDELSKAMMERN
	ABRAFAS – ASSOCIAÇÃO BRASILEIRA DE PRODUTORES DE FIBRAS ARTIFICIAIS E SINTÉTICAS
RADICIFIBRAS INDUSTRIA E COMERCIO LTDA	SINDTEXTIL – SINDITÊXTIL SINDICATO INDÚSTRIA FIAÇÃO TECELAGEM ESTADO SÃO PAULO
	CIESP – CENTRO DAS INDÚSTRIAS DO ESTADO DE SÃO PAULO
RADICI FIL SpA	CONFINDUSTRIA
	FEDERCHIMICA CON ASSOFIBRE
LOGIT SRO	ITALIAN-CZECH CHAMBER OF COMMERCE AND INDUSTRY
RADICI PARTECIPAZIONI SpA	AICQ
	CIRFS
	CONFINDUSTRIA
	EPCA
	TESSILE E SALUTE
	TEX CLUB TECH
	ELLEN MACARTHUR FOUNDATION

#### RadiciGroup joins the Ellen MacArthur Foundation's "Make Fashion Circular" initiative

Clothes are a daily necessity and for many represent an important expression of individuality. However, the way they are made and utilized today is highly wasteful. From designed or planned obsolescence a tactic for making clothes fall "out of fashion" quickly, so they are disposed of while still practically new to the lack of large scale recycling systems for used textiles: all these factors contribute to a huge waste of value.

The "Make Fashion Circular" project invites industry leaders and other stakeholders to join forces to create a circular textile system. The objective is to make garments renewable and safe to wear, increase the length of time clothing is used, and promote clothing

reuse and recycling in ways that preserve its value. RadiciGroup has been an official member of the Ellen MacArthur Foundation's "Make Fashion Circular" project team since 2018. The prestigious international Ellen MacArthur Foundation was launched in 2010 to accelerate the transition to a circular economy in every area.

RadiciGroup's activities in the "Make Fashion Circular" association focus on the issues of recyclability, recycling and ecodesign – challenges that RadiciGroup has long been engaged in on the front line, while never losing sight of the more general challenge of a new broader sustainable business model.

#### **Control and monitoring bodies**

"All corporate activities shall be carried out with the utmost diligence, honesty, collaboration, fairness, loyalty, moral integrity and professional rigour, in compliance with the law, corporate procedures and regulations, and the Code of Ethics."

"All relationships [with public authorities] shall be characterized by the utmost transparency, clarity and correctness, so as not to lead to interpretations that may be partial, distorted, ambiguous or misleading on the part of the private and public institutions with which the Company has relationships for various purposes."

#### RadiciGroup Code of Ethics

In consideration of the high number of companies included in the boundaries of the Sustainability Report and the different geographical contexts, it is impossible to give an overview of the relationships between the Group and the various control and monitoring bodies. An interesting glimpse of the ceaseless exchange of ideas can be seen from the pages of this Report dedicated to the topic of health and safety. RadiciGroup conducts every aspect of its business activities in accordance

with the Code of Ethics, and maintains transparent and collaborative relationships with control and monitoring bodies.

All activities involving these stakeholders – whether bodies for surveillance over compliance with norms of a binding nature or bodies for monitoring compliance with voluntary rules – are undertaken in the spirit of collaboration and are key to corporate life.

#### **Communities**

By "Community", RadiciGroup means a group of people held together by the common interest for environmental and social issues related, in this case, to the world of industry. The pool of people comprises local communities, but goes beyond them, overcoming the boundaries of the physical world and moving into a virtual world as a result of the possibilities of aggregation afforded by the digital world and social media networking, in particular. Although RadiciGroup is a business-tobusiness company, it cares about the requests from the communities concerning Group's products and processes of today and tomorrow.

Worth mentioning here is the issue of microplastics in the environment, a topic of large-scale public

DISCLOSURE 102-40

debate. As described elsewhere in this Report. RadiciGroup, a manufacturer of polymers and synthetic fibres, has long been involved in studying this phenomenon. The Group has also sponsored multi-stakeholder roundtables on how to find solutions capable of mitigating the problem starting from its production processes. RadiciGroup is also active on the front of recycling yet another hot topic of discussion in the public arena through participation in conferences and debates having the purpose of studying and proposing advanced technical solutions. Additionally, the Group is proactively engaged in communication and awareness raising activities through traditional and social media, in addition to its Education programme with the goal of making the student members of the communities more aware and informed on the various subjects by providing them with the technical industrial side of the issues. All these tools provide valuable opportunities for the exchange of ideas, face-to-face debates and mutual enrichment. Lastly, RadiciGroup has cooperated for several years with Global Young Voices (GYV), an international association of young millennials active in the pursuit of sustainability whose purpose is to raise awareness on environmental and social topics in global communities. Collaborating with GYV allows RadiciGroup to effectively reach young boys and girls in every country of the world so as to inform them on important topics regarding sustainability and encourage them to get involved personally.

#### **Environment**

The environment is the "silent" stakeholder par excellence. There is no unambiguous definition of it, but this Report would not have been written and all the work that went into it would not have been done, if not for an ethical commitment to give voice to the environment. RadiciGroup shareholders, top management, companies and all workers, together with its social stakeholders, act as spokespersons for the environment and its unvoiced present and future requests by safeguarding it through the projects, indicators, case histories and results reported in this Sustainability Report.

#### Global Yong Voices and RadiciGroup for Sustainable Development Goals (SDGs)

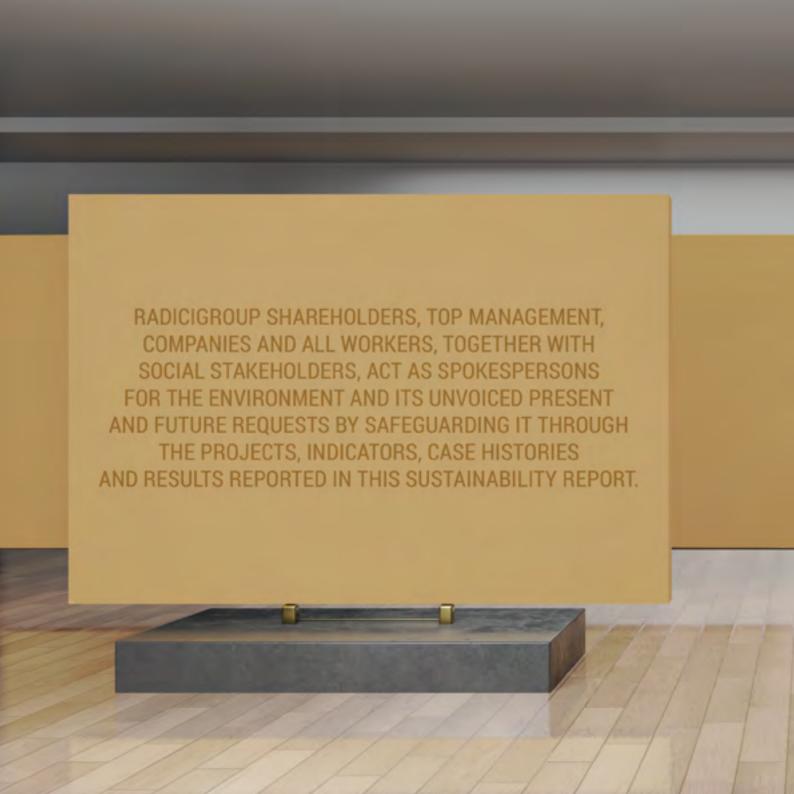
DISCLOSURE 102-44

In 2018, Global Yong Voices (GYV) and RadiciGroup renewed their partnership with a new project to raise awareness among young people (up to the age of 30) about the 17 United Nations sustainable development goals (SDGs). The engagement initiative was perfectly in line with SDG 17: Partnership for the Goals, which calls on companies, countries, international organizations and individuals to join forces and cooperate, instead of competing, to promote the United Nations Sustainable Development Agenda.

Global Young Voices launched a competition among foundations, non-profit organizations and start-ups run by young people who aim to reach one or more of the 17 UN SDGs through their work. Out of the many submissions received from all over the world, 21 finalists were selected as the most meritorious ones for originality and feasibility.

The winning submission, a project with the aim to improve food security and resilience to climate change in communities around Liberia, was awarded a financial contribution by RadiciGroup.







# RadiciGroup economic performance

The consolidated financial statements for the year ended 31 December 2018 report a value of output of EUR 1,186,275 thousand (EUR 1,110,580 thousand in 2017), a gross operating margin of EUR 185,178 thousand (EUR 161,553 thousand in 2017), and operating income of EUR 141,535 thousand (EUR 119,709 thousand in 2017). The result of the year, after depreciation, amortization and writedowns, was EUR 97,509 thousand (EUR 81,837 thousand in 2017).

The Group continues its strategy of focusing on its core businesses that are considered strategic and synergistic over the medium term, such as chemicals for nylon production, engineering polymers and synthetic fibres. The goal of the Group's strategy is to improve its competitive position and achieve an overall balance among the geographical markets where it operates, in order to reduce dependency on single markets and boost cash flow to reduce debt and finance new initiatives in its strategic businesses.

Economic sustainability and social-environmental sustainability are inextricably linked at RadiciGroup, which has long had strategies and investments in place to safeguard not only profitability but also sustainability and the development of human capital. Of equal importance for the Group are its efforts in product and process innovation aimed at enhancing its portfolio of low impact products, while, at the same time, exploiting new opportunities in markets increasingly more attentive to the way companies manage sustainability internally.

Finally, let us not forget the relevant investment RadiciGroup makes every year in the people working for the Group, including fair compensation and adequate education and training, along with protection of occupational health and safety and the development of the skills, knowledge and potential of individual workers, as show in the following schedules.

### Creation and distribution of value added

The above value-added schedules follow the method provided by GBS – Study Group for Social Reporting www.gruppobilanciosociale.org

The data are from the Radici Partecipazioni SpA consolidated financial statements. As noted in the consolidated financial statements, the economic flows related to transactions between companies included in the scope of consolidation have been eliminated. Included in the consolidated financial statements, which the Group voluntarily has audited by Deloitte & Touche, are parent company Radici Partecipazioni SpA and the Italian and foreign companies in which it directly or indirectly holds a majority of the share capital, pursuant to Article 2359 of the Italian Civil Code.

31/12/2017

31/12/2018

31/12/2016

4,431,631

245,731,982

38,805,292

206,926,689

3,755,696

300,651,781

41,791,493

258,860,287

4,016,826

323,773,174

43,553,464

280,219,710

### **GENERATION OF VALUE ADDED**

+/- Additional and extraordinary items

Depreciation and amortization

PRODUCTION VALUE 946,065,498 1,164,318,842 1,222,273,814 1 Sales and service revenue 945.147.279 1.146.294.145 1,212,528,918 2 Change in work in progress, semi-finished goods and finished goods inventories 690,516 17,814,922 9,020,136 3 Change in contract work in progress 4 Increase in internally generated non-current assets 227,703 209,775 724,760 5 Other revenue and income INTERMEDIATE PRODUCTION COSTS 704.765.147 867,422,758 902,517,466 6 Raw materials, supplies, consumables and goods for resale 531,064,736 691,480,119 730,444,796 7 Services 171.424.093 175.835.802 176.591.194 8 Leases and rentals 3.986.722 5.401.205 5,491,761 9 Change in raw materials, supplies and goods for resale inventories (4,316,132)(7,591,811)(12,347,183)10 Provisions for liabilities and charges 163,374 361.174 405,357 11 Other provisions 845,395 76,341 108,000 12 Miscellaneous operating costs 1.596.959 1.859.929 1.823.541 **GROSS VALUE ADDED FROM OPERATIONS (A-B)** 241,300,351 296,896,084 319,756,348

**GROSS TOTAL VALUE ADDED** 

**NET TOTAL VALUE ADDED** 

ITEM

### **DISTRIBUTION OF VALUE ADDED**

ITEM			31/12/2016	31/12/2017	31/12/2018
A)	PERSONNEL WAGES AND BENEFITS		133,767,454	139,538,473	139,889,046
	Contract workers		6,332,576	6,622,828	6,709,120
	Employees		127,434,878	132,915,644	133,179,926
	a) Direct compensation		101,559,121	106,367,081	106,741,571
	b) Indirect compensation		25,875,757	26,548,563	26,438,355
B)	PAYMENTS TO GOVERNMENT		19,185,700	34,177,994	38,415,294
	a) Current taxes		19,982,948	30,229,218	37,501,150
	Direct taxes		16,337,995	26,369,692	34,128,382
	Indirect taxes		3,644,953	3,859,526	3,372,768
	b) Deferred taxes		(230,889)	4,437,491	1,266,829
	c) Revenue grants		(566,360)	(488,715)	(352,685)
<b>C</b> )	PAYMENTS TO LOAN PROVIDERS		3,366,290	2,694,396	3,792,973
	Short-term loan interest		3,366,290	2,694,396	3,792,973
	LONG-TERM LOAN INTEREST				
D)	PAYMENTS TO SHAREHOLDERS		9,000,000	12,991,285	25,500,000
	Dividends (income distributed to shareholders)		9,000,000	12,991,285	25,500,000
E)	RETAINED VALUE ADDED		41,044,229	68,845,420	72,008,872
+/-	- Changes in reserves		41,044,229	68,845,420	72,008,872
F)	CONTRIBUTIONS AND DONATIONS		563,016	612,720	613,525
		NET TOTAL VALUE ADDED	206,926,689	258,860,287	280,219,710
ITEM			31/12/2016	31/12/2017	31/12/2018
%	PERSONNEL WAGES AND BENEFITS / VALUE ADDED		64.64%	53.90%	49.92%
%	PAYMENTS TO GOVERNMENT/ VALUE ADDED		9.27%	13.20%	13.71%
%	PAYMENTS TO LOAN PROVIDERS / VALUE ADDED		1.63%	1.04%	1.35%
%	PAYMENTS TO SHAREHOLDERS / VALUE ADDED		4.35%	5.02%	9.10%
%	RETAINED VALUE ADDED / VALUE ADDED		19.84%	26.60%	25.70%
%	CONTRIBUTIONS AND DONATIONS / VALUE ADDED		0.27%	0.24%	0.22%

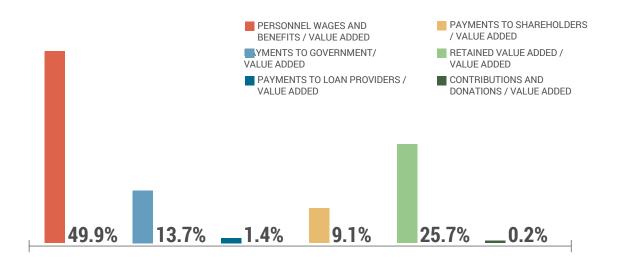
### **GENERATION OF VALUE ADDED BY REGION**

ITEN	1	ITALY	REST OF EUROPE	ASIA	NORTH AND SOUTH AMERICA	WORLDWIDE
A)	PRODUCTION VALUE	703,448,514	307,549,850	56,750,688	154,524,761	1,222,273,814
1	Sales and service revenue	697,566,784	307,541,514	55,827,159	151,593,461	1,212,528,918
2	Change in work in progress, semi-finished goods and finished goods inventories	5,201,989	(36,682)	923,528	2,931,301	9,020,136
3	Change in contract work in progress	-	-	-	-	-
4	Increase in internally generated non- current assets	679,742	45,018	-	-	724,760
5	Other revenue and income					
B)	INTERMEDIATE PRODUCTION COSTS	537,480,873	210,122,931	42,163,265	112,750,397	902,517,466
6	Raw materials, supplies, consumables and goods for resale	419,203,306	165,468,668	42,434,304	103,338,517	730,444,796
7	Services	114,013,359	44,138,458	3,701,677	14,737,700	176,591,194
8	Leases and rentals	3,271,623	969,695	612,429	638,014	5,491,761
9	Change in raw materials, supplies and goods for resale inventories	(278,301)	(1,180,497)	(4,624,445)	(6,263,941)	(12,347,183)
10	Provisions for liabilities and charges	50,000	355,357	-	-	405,357
11	Other provisions	108,000	-	-	-	108,000
12	Miscellaneous operating costs	1,112,885	371,250	39,299	300,107	1,823,541
	GROSS VALUE ADDED FROM OPERATIONS (A-B)	165,967,642	97,426,919	14,587,423	41,774,364	319,756,348
+/-	Additional and extraordinary items	37,277,150	(17,369,323)	(4,974,549)	(10,916,452)	4,016,826
	GROSS TOTAL VALUE ADDED	203,244,791	80,057,596	9,612,874	30,857,912	323,773,174
-	Depreciation and amortization	23,165,412	16,606,899	661,932	3,119,221	43,553,464
	NET TOTAL VALUE ADDED	180,079,379	63,450,697	8,950,942	27,738,691	280,219,710

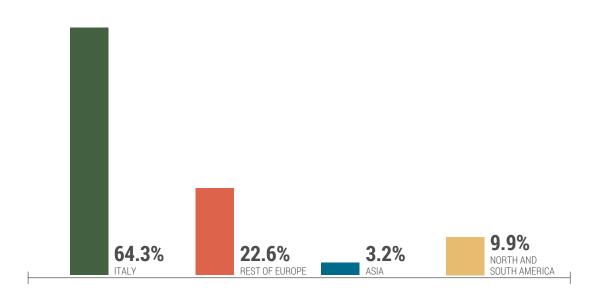
### DISTRIBUTION OF VALUE ADDED BY REGION

ITE	M	ITALY F	REST OF EUROPE	ASIA S	NORTH AND OUTH AMERICA	WORLDWIDE
A)	PERSONNEL WAGES AND BENEFITS	87,527,760	36,850,148	2,636,222	12,874,916	139,889,046
	Contract workers	4,675,281	704,831	95,732	1,233,276	6,709,120
	Employees	82,852,479	36,145,317	2,540,490	11,641,640	133,179,926
	a) Direct compensation	64,659,346	30,377,730	1,681,731	10,022,764	106,741,571
	b) Indirect compensation	18,193,133	5,767,587	858,759	1,618,876	26,438,355
B)	PAYMENTS TO GOVERNMENT	27,199,158	5,141,758	1,839,334	4,235,044	38,415,294
	a) Current taxes	28,098,607	5,352,861	1,835,310	2,214,371	37,501,150
	Direct taxes	26,201,390	4,937,803	1,705,573	1,283,616	34,128,382
	Indirect taxes	1,897,217	415,059	129,737	930,755	3,372,768
	b) Deferred taxes	(746,038)	(11,830)	4,024	2,020,673	1,266,829
	c) Revenue grants	(153,411)	(199,274)	-	-	(352,685)
C)	PAYMENTS TO LOAN PROVIDERS	2,275,216	207,703	42	1,310,012	3,792,973
	Short-term loan interest	2,275,216	207,703	42	1,310,012	3,792,973
	Long-term loan interest					
D)	PAYMENTS TO SHAREHOLDERS	25,500,000	-	-	-	25,500,000
	Dividends (income distributed to shareholders)	25,500,000	-	-	-	25,500,000
E)	RETAINED VALUE ADDED	37,030,524	21,208,162	4,454,950	9,315,236	72,008,872
+/-	+/- Changes in reserves	37,030,524	21,208,162	4,454,950	9,315,236	72,008,872
F)	CONTRIBUTIONS AND DONATIONS	546,722	42,926	20,395	3,482	613,525
	NET TOTAL VALUE ADDED	180,079,379	63,450,697	8,950,942	27,738,691	280,219,710
					NODTH AND	
ITE	M	ITALY F	REST OF EUROPE	ASIA S	NORTH AND OUTH AMERICA	WORLDWIDE
%	PERSONNEL WAGES AND BENEFITS / VALUE ADDED	48.61%	58.08%	29.45%	46.42%	49.92%
%	PAYMENTS TO GOVERNMENT/ VALUE ADDED	15.10%	8.10%	20.55%	15.27%	13.71%
%	PAYMENTS TO LOAN PROVIDERS / VALUE ADDED	1.26%	0.33%	0.00%	4.72%	1.35%
%	PAYMENTS TO SHAREHOLDERS / VALUE ADDED	14.16%	0.00%	0.00%	0.00%	9.10%
%	RETAINED VALUE ADDED / VALUE ADDED	20.56%	33.42%	49.77%	33.58%	25.70%
%	% CONTRIBUTIONS AND DONATIONS / VALUE ADDED	0.30%	0.07%	0.23%	0.01%	0.22%

### Distribution of Value Added - 2018



### Distribution of Value Added by Region - 2018



Noteworthy are some elements that support the Group's economic sustainability vision in practical terms:

- About half of the value added goes to employee compensation, in keeping with the principle of equal pay for equal work for all collaborators.
- EUR 4.352 million: regional business tax (IRAP) for financial year 2018.
- About 14% is for payments to the government in the form of taxes. In this regard, the following table reports the amount of income taxes paid to each country.

### TOTAL INCOME TAXES 2018 BY COUNTRY (IN €)

ARGENTINA	13,788
GERMANY	4,494,365
ROMANIA	323,329
CZECH REPUBLIC	31,010
HUNGARY	21,663
SWITZERLAND	4,329
ITALY	26,201,390
CHINA	1,203,355
MEXICO	10,315
LUXEMBOURG	-
BRAZIL	1,076,264
SPAIN	-
INDIA	502,218
UNITED KINGDOM	31,088
THE NETHERLANDS	32,019
USA	183,248
TOTAL	34,128,382

As for capital investments, maintaining the high level of technological excellence to stay competitive and protect the environment at all Group sites was important in 2018 and will be in the medium term.

Below are given some data on investments.

- EUR 198 million: investments to support the competitiveness of Group companies in the five-year period 2014 2018. Of this amount, EUR 44 million was specifically invested in 2018. This figure also includes environmental investments of EUR 4.5 million reported immediately below.
- EUR 4.5 million: environmental investments made in 2018 for the introduction of best available techniques, improvement of energy efficiency, emissions abatement, research and development of low impact processes and products, and improvement of health and safety conditions at various sites.
- EUR 3.1 million: costs of environmental protection management (for instance, certification, waste disposal and water treatment costs) at Italian companies.

The strength of the RadiciGroup balance sheet is proven by its net financial debt and net shareholders' equity given below.

### **BREAKDOWN OF NET INVESTED CAPITAL**

TABLE 20

NET FINANCIAL DEBT	EUR/1000	112,178
NET SHAREHOLDERS' EQUITY	EUR/1000	479,446
NET INVESTED CAPITAL	EUR/1000	591,624

Along with the positive performance of the Group, it is essential to stress that, as stated in prior Sustainability Reports, profitability and financial soundness were pursued with respect for the environment and its resources.

The following ratios, which compare the amount of energy or water used or the amount of emissions or waste generated to total net value added, show the favourable performance of the Group: value added rose, use of resources fell.

TABLE 23

TABLE 24

### GRI 302-3 ENERGY INTENSITY - TOTAL PRIMARY ENERGY (DIRECT + INDIRECT) TO TOTAL NET VALUE ADDED

		2016	2017	2018
GJ	Total primary energy (GRI302-1)	6,178,598	6,611,640	6,272,943
€	Total net value added	206,279,587	258,860,287	280,219,710
GJ/€	Total primary energy (direct+indirect) to total net value added	0.030	0.026	0.022

### GRI 305-4 GHG EMISSION INTENSITY - TOTAL EMISSIONS TO THE ATMOSPHERE TO TOTAL NET VALUE ADDED

		2016	2017	2018
tCO <sub>2</sub> eq.	Total emissions to the atmosphere (GRI305-1 and 305-2)	490,434	522,305	464,449
€	Total net value added	206,279,587	258,860,287	280,219,710
kgCO <sub>2</sub> eq./ ŧ	Total emissions to the atmosphere (direct+indirect) to total net value added	2.38	2.02	1.66

As usual, the following ratios for water resources and waste destined for disposal without recovery were calculated.

WATER	RESOURCES TO TOTAL NET VALUE ADDED	2016	2017	2018
MI/€	Water resources (GRI 303-3) to totale net value added	0.00043	0.00043 0.00035	
WASTE	DESTINED FOR DISPOSAL WITHOUT RECOVERY TO TOTAL NET VALUE ADDED	2016	2017	2018
kg/€	Waste destined for disposal without recovery (GRI 306-2) to total net value added	0.020	0.021	0.014

**Business performance** 

SPECIALTY CHEMICALS BUSINESS AREA

(Excerpted from the "Directors' Report" in the Consolidated Financial Statements for the year ended 31 December 2018)

Against the backdrop of rising world production capacity, the Specialty Chemicals Business Area has maintained its competitive position among the world's adipic acid producers. The business area is one of the few European manufacturers with vertically integrated polymer 6.6 production. During the year, the Specialty Chemicals BA was able to strengthen its market share of polymer 6.6 by making the most of the strong tension between supply and demand, which progressively developed starting in the first quarter of 2018.

That occurred in an international context, in which the positive trend inherited from 2017 experienced a slowdown in all manufacturing sectors, including chemicals. In the European markets, which are the ones of greatest interest for the Specialty Chemicals BA, the slowdown started in the second half of 2018.

In that situation, however, the main markets for the products of the Specialty Chemicals BA behaved in different ways. The adipic acid market suffered a period of stagnation. The market for polyamide 6.6 was marked by an imbalance between inadequate supply and constantly high demand, with production affected by contingent events occurring during the first half year, in particular, a series of force majeure claims by some of the major world producers and a prolonged strike during the first half that hit the French railways. These events clearly reduced the supply and availability of product in the market, and created problems in the procurement of some raw materials. The main effect of the mismatch of supply and demand for polyamide 6.6 was a progressive rise in average sales prices, which resulted in an increase in cost margins and the achievement of good economic results, decidedly higher than expected.

The persisting imbalance between supply and demand, particularly in the polymers market, made it necessary to apply quotas on the sales of polyamide 6.6 produced at the Radici Chimica SpA plant during the whole year, while, for adipic acid, production was adapted as required, by leveraging the flexibility and adaptability of Radici Chimica Deutschland.

The results of the BA showed a positive trend and an improvement over the results of 2017. Sales in the two main product areas (polymers and adipic acid) increased by 7.3% compared to 2017. The increase in average sales prices translated into a sizeable contribution, in absolute value, to gross operating margin.

It should be noted that, in spite of the expected contained economic outlook, BA sales revenue and net income in the first quarter of 2019 were overall positive and higher than expectations. The changing market conditions and above all the difficulties

encountered in procuring some of the main raw materials could affect the production of the BA during the course of 2019.

The Specialty Chemicals Business Area has continued its strategy to maintain the loyalty of its main customers, trying to recover sales volume. Within this strategy, an investment in a new production line was brought to completion. The new smaller-scale specialty polymer production line allows for widening product assortment and increasing overall production capacity, primarily to the benefit of polyamide 6.6.

### HIGH PERFORMANCE POLYMERS BUSINESS AREA

During financial year 2018, the High Performance Polymers Business Area was forced to deal with changing conditions in the raw materials market. Raw materials prices rose in all segments of the business area, although at different rates depending on the country, inevitably resulting in shrinking margins.

However, a forward-looking sales strategy, together with containment of fixed costs allowed the business area to achieve a gross operating margin that exceeded both the prior financial year and budget expectations. All the segments of the business area recorded improved sales volumes and plants operated at production capacity utilization rates near saturation. During the second half of the year, in order to meet the growing demand, two new production lines were installed at the site in Villa d'Ogna, Italy, and one new line in the plant in Brazil. Finally, the installation of a new compounding line began at the site in China, which is set to go into production during 2019.

During the past three years, the efforts of the High Performance Polymers Business Area have been rewarded by the fulfilment of its strategic goals: good quality, improved company integration, and competitive advantages such as customer service through sales and logistics customer care and technical assistance, in order to support customers in the ongoing relationship and in designing the best products to meet application needs.

Innovation efforts have focused mostly on the Radilon® product line for the automotive sector. PA6, PA6.6, and PA6.10 engineering polymers characterized by innovative features, low environmental impact, superior performance and high quality. During the first few months of 2019, great effort has been invested in innovation. The development of new materials starting from polymers other than PA6 and PA6.6 and featuring superior technical characteristics has been the guiding light of the work by Research and Development. These efforts are expected to bear important fruit, also in terms of sales, during 2019. The outlook for the 2019 financial year remains very uncertain, and the raw materials tension does not seem to be diminishing, while at the same time some of the most important markets, like Germany, are recording decreasing performance and falling consumption of engineering compounds.

In spite of all these negative signals, the global presence of the BA gives reason to expect that these losses can be offset, if not totally at least partially, thus allowing it to achieve strong results consistent with prior financial years.

### SYNTHETIC FIBRES & NONWOVENS BUSINESS AREA

### SYNTHETIC FIBRES & NONWOVENS BA ORGANIZATION

Comfort Fibres	POLYAMIDE BL
	POLYAMIDE BRAZIL BL
	POLYESTER BL
	ACRYLIC BL
Performance Yarn	FLOOR COVERING & INDUSTRIAL BL
Extrusion Yarn	SPUNBOND (Dylar®) BL
	SPECIALTY (Radigreen®) BL

### **COMFORT FIBRES POLYAMIDE BL**

Financial year 2018 registered two-speed performance. The first half-year showed quite a satisfactory level of demand in all the geographical regions and market sectors where the BA operates, whereas the second half-year was marked by a more or less severe slowdown. That had an impact on the overall results, which were lower than expected and lower than the prior financial year.

Despite strong tension on prices and on the supply of some of the main

raw materials, such as polyamide 6.6, demand remained good, particularly for some of the products/market sectors.

The rise in the price of a barrel of oil, together with a series of force majeure events leading to breaks in production activities, resulted in low availability of the raw materials and pushed prices to very high levels. Hence, the organization made every effort to pass through cost increases as fast as possible, in order to safeguard margins.

During the second half of 2018, demand noticeably weakened for almost all products and in almost all markets, which forced changes in the production schedule. A contraction in sales during that period caused a decrease in margins, leading to overall results lower than in the prior financial year.

The outlook of 2019 remains uncertain and rather difficult to forecast. It thus becomes necessary to operate in the market even more prudently and wisely, but also more incisively and proactively, while, at the same time, improving production efficiency and adapting production capacity to the reduced demand in a consistent manner.

### **COMFORT FIBRES POLYAMIDE BRAZIL BL**

The Brazilian market gave off strong signals of weakness during the course of the first half of 2018. Demand slowed down significantly, affected by the increasing weakness of the national currency against the US dollar and the euro and by the aggressive sales policy of Asian traders and manufacturers. At the end of May, there was a lengthy halt in the domestic transport system, which paralyzed the country for over 10 days, resulting in a long production shutdown, a loss in sales revenue and reduced production efficiency, making the general situation even more taxing.

In part due to the political changes in Brazil, the second half of the year saw a slight recovery, which generated some optimism and confidence. However, customs duties, which were high compared to sales prices and imposed on both raw materials

and semi-finished products, made it difficult to generate significant margins. The instability in Brazil, despite the formation of a new government, produced both a drop in demand and great difficulty in effectively passing through cost increases, tied to the rise in raw materials prices and, most of all, to the weakening of the Brazilian currency against the euro and the US dollar.

In conclusion, in spite of an unfavourable scenario, the final result for the year turned out consistent with the budget forecast. Concerning the outlook for 2019, in the difficult backdrop outlined above, the objective set for the year is to achieve a result in line with 2019 budget expectations.

### **COMFORT FIBRES POLYESTER BL**

After a rather slow start to the financial year in some market sectors, demand reached traditional levels, with a few negative exceptions. In particular, the sales of basic products in certain countries that are traditionally important suffered more than forecast because of the monetary and financial difficulties of the customers of those countries.

During the first half of the year, the trend in key raw materials costs experienced a moderate but constant increase, which could not always be passed on to sales prices. Conversely, during the second half-year the prices fell back. The pressure generated by imports of Asian products, at incredibly low prices, was constant and unrelenting, generating a risk of sales volume erosion. During the second half of the financial year, there was a generalized drop in demand, leading to overall lower margins compared to the results of the prior financial year. In the polyester sector, demand was particularly lively on products made with 100% recycled raw materials, in part, as a result of the strong push by some fashion and sportswear brand names.

The outlook of the first half of 2019 remains uncertain and rather difficult to forecast. Demand remains at modest levels, while stocks at

customers seem to be high, a situation that could possibly lead to a contraction in sales. Furthermore, due to the downward price effect of some of the main raw materials and the deep crisis in the Turkish market, an important target market for the BA, the scenario does not look promising, but the objective set for the year still is to achieve an overall positive result.

### PERFORMANCE YARN BA

The first half-year of 2018, marked by a positive trend in world economic growth, was followed by a generalized slowdown in activity starting in the summer of the same year. Particularly severe was the slowdown in European automotive production during the third quarter. This contraction reflected, in part, the difficulties the European auto industry was encountering in meeting the new CO2 emissions criteria of the Worldwide Harmonized Light Vehicle Test Procedure (WLTP) and confirmed a more generalized ongoing contraction in demand, not only in Europe but in China as well, where the incentive programme ended.

With regard to sales in 2018, the business area's leadership position in the automotive industry – specifically, coloured polyamide 6 yarn for auto carpeting in the premium segment – was confirmed once again. Despite the fall in demand during the last part of the year, sales were overall in line with the volume of 2017. Concerning sales of high-tenacity polyamide 6.6 yarn for airbags and tyre cord, the polymer supply shortfalls significantly affected the capability of the BA to meet customer demand. Lastly, in 2018 polymer demand remained at good levels until the summer and, all in all, sales turned out higher than the prior financial year thanks to the upturn in film extrusion copolymer sales.

The expectations for 2019 call for a generalized slowdown in the global economy and, in particular, the European economy, which must deal with a macroeconomic picture clouded with political uncertainties created by Brexit, the election for the European Parliament, and the possible

consequences of a US-China trade war. As a result, in the first few months of the year, there was a reduction in raw materials prices and, consequently, a realignment of sales prices in the BA's target market.

### **ACRYLIC BL**

Argentina is experiencing a deep crisis in its national financial-monetary system. A dramatic peso devaluation, the inflation rate and cost of money at very high levels, and structural reforms of the labour market, pension system and judicial system which have not taken off: all these factors are keeping the country on the threshold of default. The accumulated inflation of over 100% in the last 3 years required an adjustment and restatement of the financial statements of the company to reflect values in a hy-per-in-fla-tion-ary economy. Overall, the contraction in the textiles market was about 41%.

Cordonsed was hit hard by the consequences of the deep economic recession. One of the major customers went bankrupt triggering negative consequences for the company's sales revenue. Sales of top and staple fell by about 48% and yarn sales, by about 23%. Despite all that, greater margins on yarn and careful cost containment made it possible to achieve a positive result.

The first quarter of 2019 was in line with the budget. In view of the fact that in the last quarter of 2018 all customers made the decision to reduce their stocks, in the first quarter of 2019 they were forced to purchase goods in order to start the 2019 production season. The objective for the year 2019 is to limit risks and credit exposure to weaker customers, while waiting to see how the difficult political and economic situation in which the company operates is going to evolve.

### **EXTRUSION YARN (NONWOVENS) BA**

The Extrusion Yarn (Nonwovens) Business Area is involved in the manufacture and sale of two different lines of products: Dylar Spunbond

polypropylene nonwoven fabric and Radigreen artificial grass yarn, mostly made of polyethylene and polypropylene.

The BA is comprised of only Tessiture Pietro Radici SpA, the ancestral company of RadiciGroup. Overall, in the 2018 financial year, the company recorded higher gross sales revenue compared to the prior financial year and the budgeted figure. The result in terms of margins, however, was lower in both absolute and percentage terms, due to the greater relative impact of the cost of raw materials.

With regard to the two business areas, gross sales revenue for Dylar Spunbond increased compared to the financial statement results of the prior financial year, thanks to the additional volumes produced by the newly started production line, and was in line with the budget figures. Conversely, for Radigreen, the sales revenue decreased compared to the prior financial year, but was higher than the budget estimate.

### **DYLAR SPUNBOND**

The 2018 financial year was marked by the start-up of a new production line in the context of a larger sales volume than reported in 2017 and a higher average raw material price (polypropylene) compared to the average price of the prior year. Dylar product sales prices stayed at the same level as 2017 and thus did not fully absorb the increase in the cost of raw materials. It should be noted that, while the increase in the cost of raw materials was recovered on average for sales of basic products, it was decided to adopt an aggressive pricing policy for materials produced on the new production line, with the objective of ensuring an adequate production volume and thus maintaining production continuity.

In 2019, the lost margins are expected to be recovered by progressively improving the industrial yield of the new production line and by introducing new higher-value added products manufactured on the new line. To that end, the search for new

applications and new customers continues, also in markets that the company has not actively pursued in the past.

### RADIGREEN BL

The 2018 financial year was marked by a fall in total sales volumes, an average purchase price of polyethylene at the same level as 2017 and the purchase price of polypropylene on the increase. In this context, sales prices for all Radigreen product families were kept practically unchanged with a consequent margin loss compared to 2017, due to the rising prices of polypropylene.

In summary, in the Radigreen business line, the market problems encountered during the last 5 years still persisted in 2018, only partially compensated for by the strategy of cutting less profitable products and holding a solid position in the US market, where market prices allow products to command higher margins compared to the same products sold in Europe.

# RadiciGroup social performance

### RadiciGroup and its Workers

The employer-employee relationship one of the main areas where RadiciGroup realizes its social sustainability principles has as its objective the creation of the best conditions for the optimal development of its workers' talent, strong points and wellbeing.

As a sound basis for achieving the above social objective and in keeping with its ethical principles and founding values, RadiciGroup is committed to respecting workers' rights in all countries of the world. The same commitment is reiterated in its Customer and Supplier Codes of Conduct. These codes are public documents and explicitly state that RadiciGroup will not condone child labour, forced labour or slavery. The Codes also reaffirm the importance of the promotion of union rights and the use of fair bargaining practices and attentive surveillance against discrimination.

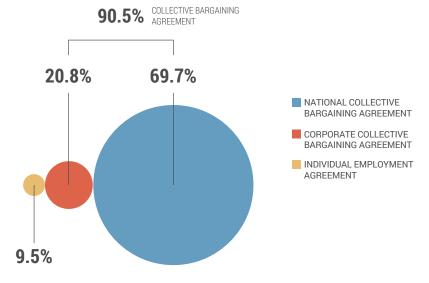
Bargaining is, in fact, a fundamental form of worker protection. At RadiciGroup, in 2018 the incidence of collective (national and corporate) bargaining was again very high, reaching 90.5% (+1.9% compared to 2016). *TABLE 26* 

Furthermore, in 2018, permanent employment contracts rose to 93%, an increase of almost 2% over 2017, albeit still 1 percentage point below 2016. *TABLE 27*Both of these aspects point to the fact that RadiciGroup is committed to ensure its collaborators have the conditions required for stable and long lasting employment with full protection of their rights.

### TYPE OF BARGAINING AGREEMENT - EMPLOYEES COVERED BY BARGAINING AGREEMENTS

		2016	2017	2018
n	National collective bargaining agreement	2,121	2,146	2,137
n	Corporate collective bargaining agreement	504	521	637
n	Individual employment agreement	339	386	290
n	Total employees	2,964	3,053	3,064
%	Individual employment agreement	11.4%	12.6%	9.5%
%	Collective bargaining agreement	88.6%	87.4%	90.5%

### **Employees by type of bargaining agreement -2018**



The prevalence of temporary (fixed-term) employment can be explained in the context of the Chinese labour market. The use of temporary employment contracts is a very common practice in China and, only after two renewals, will the employer propose a permanent employment contract, which the worker is free to accept or refuse. RadiciGroup values cultivating the loyalty of its collaborators everywhere in the world. In the Chinese labour market, turnover is typically high, as many workers choose to extend the temporary employment contracts. Thus, in order to attract and retain the best talents, the Group invests in reconciliation of family and working life and in education and training aimed at improving its employees' professional skills, which are valuable for their job with the company, but also, as the case may be, for their employment with other companies.

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		2016	2017	2018	2016	2017	2018	2016	2017	2018
n	Permanent contract employees	2,064	2,065	2,092	728	719	762	2,792	2,784	2,854
n	Temporary contract employees	101	162	148	71	107	62	172	269	210
%	Permanent employees to total employees	95.3%	92.7%	93.4%	91.1%	87.0%	92.5%	94.2%	91.2%	93.1%
n	Full-time total	2,126	2,198	2,214	699	720	709	2,825	2,918	2,923
n	Part-time total	39	29	26	100	106	115	139	135	141
%	Full-time permanent to total employees	98.2%	98.7%	98.8%	87.5%	87.2%	86.0%	95.3%	95.6%	95.4%
	of which:									
n	Full-time (permanent employees)	2,025	2,036	2,066	628	613	647	2,653	2,649	2,713
n	Part-time (permanent employees)	39	29	26	100	106	115	139	135	141
%	Full-time permanent to total permanent employees	98.1%	98.6%	98.8%	86.3%	85.3%	84.9%	95.0%	95.2%	95.1%

### PERMANENT EMPLOYEES BY REGION

RADICIGROUP WORKFORCE BY EMPLOYMENT AND CONTRACT TYPE

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		2016	2017	2018	2016	2017	2018	2016	2017	2018
n	Italy	1,239	1,230	1,231	285	289	299	1,524	1,519	1,530
n	Rest of Europe	551	553	573	375	367	396	926	920	969
n	Asia	5	7	9	1	2	2	6	9	11
n	North and South America	269	275	279	67	61	65	336	336	344

WOMEN

ALL

MEN

### PART-TIME EMPLOYEES BY REGION

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		2016
n	Italy	16
n	Rest of Europe	23
n	Asia	0
n	North and South America	0

TABLE 30

TABLE 31

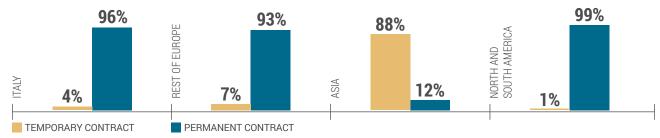
TABLE 32

### **EMPLOYEES BY TYPE OF EMPLOYMENT AND REGION - 2018**

	EMPLOYEES	PERMANENT CONTRACT	TEMPORARY CONTRACT	% PERMANENT CONTRACT
Italy	1,588	1,530	58	96%
Rest of Europe	1,037	969	68	93%
Asia	93	11	82	12%
North and South America	346	344	2	99%

# 93% OF EMPLOYEES HAS A PERMANENT CONTRACT

### Percentage Permanent Contract and Temporary Contract by Region - 2018



### **EMPLOYEES BY TYPE OF EMPLOYMENT AND REGION**

	EMPLOYEES	PART-TIME	FULL-TIME	%PART-TIME
Italy	1,588	105	1,483	6.6%
Rest of Europe	1,037	34	1,003	3.3%
Asia	93	0	93	0.0%
North and South America	346	2	344	0.6%

4.6% OF EMPLOYEES HAS A PART-TIME JOB

2017

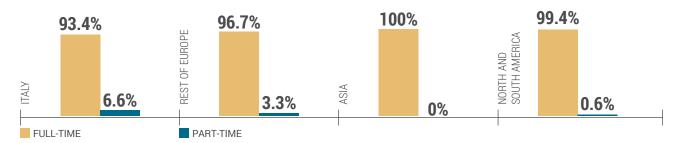
2018

2016

### PART-TIME FEMALE EMPLOYEES TO TOTAL PART-TIME EMPLOYEES

n	71.9%	78.5%	81.6%

### Percentage Part-Time and Full-Time by Region - 2018



Concerning compensation, the minimum wage levels established by national agreements. corporate agreements and labour market conditions apply by default to all Group workers. RadiciGroup realizes that a rewarding compensation strategy is one of its main assets. In fact, the 2018 economic data on the distribution of value added show that the largest portion, about 50%, went to employee wages and salaries, which confirms that RadiciGroup believes compensation is one of the keys to attracting and retaining excellent employees. The compensation schemes adopted by Group companies take into account the responsibility level and individual contribution to achieving organizational goals. Male and female employees have equal pay rates for equal job duties, in accordance with the Group ethical principles and the national and corporate collective agreements, which provide for a pay scale with no difference between genders. Furthermore, the incentive plan for management is based on the Management by Objectives (MBO) approach and performance is evaluated in relation to Group objectives, company objectives and individual objectives.

In 2018, other employee benefits, where provided (company car, restaurant vouchers, canteen service at discounted prices and special discounts agreed on with stores, sport centres, or travel agencies), were all made available and/or assigned to employees based on the company agreement and the job position of the individual employee, irrespective of the type of employment or employment contract (full-time or part-time, temporary or permanent employment).

### **HEALTH AND SAFETY**

RadiciGroup demonstrated its strong commitment to occupational health and safety. In 2018, the work done included widespread data gathering, awareness raising and education campaigns, and implementation and/or updating of occupational health and safety management systems. The substantial section of this Report dedicated to

health and safety issues shows that, in 2019, the Group continued to remain very vigilant on the topic in question.

In order to compile a more complete overview in line with the GRI Standards, at the beginning of 2019, the GRI team developed a questionnaire based on the new disclosure 403 (Occupational Health and Safety) and submitted it to the sites included in the reporting boundaries. The objective was to contextualize the numerical data that are ordinarily collected for the Report. A large amount of information was collected, which is presented below in aggregated form.

All Group companies have implemented a health and safety management system. The main normative reference in implementing the occupational health and safety management system at the Italian sites was Legislative Decree [D.Igs] 81/2008, which gives incentives for the implementation of an organization and management model.

DISCLOSURE 403-1

The management systems in place at many of the Group plants are based on ISO 45001 (replacing OHSAS 18001), a voluntary standard dealing with occupational health and safety. (See the list of certifications on page 24 of this Report.)

A key role is assigned to the staff responsible for the management system, mostly employees at the various sites, who have different roles depending on the legislative and regulatory framework in the various countries. At Italian sites, the manager of the prevention and protection service (RPPS), and the employer, have the specific duty to organize and manage the risk prevention and protection system, in accordance with Legislative Decree [D.Lgs] 81/2008. The duties of these professionals, who are also responsible for keeping their skills up to date, include the identification and assessment of risk factors, the development of preventive and protective measures, and worker training and information. In the performance of their duties, the

RPPSs may be assisted by the managers of the Health & Safety Management Systems (SSL) and the employer.

Health and safety are the responsibility not only of specific company professionals but also of all the workers, who are called on to develop and improve the management systems. At all Group sites mechanisms are in place to engage people on this topic, mostly for compliance with legal requirements. Training has a primary role: about half of the total hours of staff training are dedicated to health and safety topics. In addition to training courses, the most common means of engagement are operating instructions, circulars and instructional materials.

Furthermore, at all RadiciGroup production sites in Italy, a Worker Safety Representative (RLS) is either appointed or elected. The function of this professional is to collect and report complaints, problems, and requests for information and clarification filed by workers, in order to generate a spirit of active participation in the practice of workplace health and safety principles. The role of the Worker Safety Representative is to get workers engaged in the decision-making process in the development phase of protective and preventive measures by having them express their ideas, opinions and worries.

Finally, at the Italian Group plants, in compliance with Legislative Decree [D.Lgs] 81/2008, a meeting is held, at least once a year, with the participation of the employer, the individuals responsible for the prevention and protection services (RPPS), the worker safety representatives and the medical doctor responsible for the medical checks of workers. In many of the Group sites, other meetings are also held on a regular basis. In some of the Italian Group sites, the Health, Safety and Environment Committee, if present, may also hold meetings.

At all RadiciGroup sites, risk assessment is the basis of all prevention activities. The individuals responsible for occupational health and safety

generally draw up risk assessment for every task in normal, abnormal and emergency conditions, based on which risks are identified, assessed, monitored and mitigated.

In most cases, health and safety management is based upon recognized standards and guidelines for risk management, which are applied to all company workers. What is common to all Group sites is the pursuit of continual improvement in performance. To this end, all Group sites have in place monitoring, risk assessment, performance evaluation systems and/or full-fledged improvement plans.

It is important to stress that all workers at all Group companies can report hazardous situations using the various tools made available: dedicated reporting forms, communication to direct supervisors, communication to the worker safety representative, or dedicated meetings. The system in place confirms the central role assigned to every individual worker and his/her responsibility to make a contribution to the safety of the company. The following schedules present the 2018 situation concerning health and safety indicators. The data show that, following an improvement in 2017 due. in part, to the RadiciGroup for Safety project, the situation slipped back to the level of 2016 in total number of injuries with a slightly worse injury lost day rate (severity rate).

### **INJURY SITUATION**

		2016	2017	2018
n	Total Employess*	3,202	3,321	3,335
hours	Total hours worked	5,334,975	5,489,755	5,530,787
n	Number of Fatalities	0	0	0
n	Total injureis	87	69	87
n/200.000h	Injuries Rate	3.26	2.51	3.15
days	Days of prognosis	2,253	1,685	2,441
d/200.000h	Injuries Lost Day Rate	84.46	61.39	88.27

<sup>\*</sup>THE WORKFORCE INCLUDES: CONTRACT WORKERS. TEMPORARY WORKERS AND EMPLOYEES

If, on the one hand, the number of injuries in 2018 and the breakdown into high-consequence and non-high-consequence injuries remained unchanged from 2016 (total injuries 87, high-consequence 12 and non-high-consequence 75) and the injury rate declined from 3.26 to 3.15, on the other hand, the injury lost day rate (severity rate) rose from 84.46 to 88.27, an increase due to high-consequence injuries. The recurrent types of injuries are fractures, bruises, abrasions and cuts. In the non-high-consequence injury category, the most common injuries are bruises, abrasions and cuts, followed by burns. Employees, specifically males, are the workers most subject to injuries.

Once again, the trend warns that companies should never let their guard down when it comes to safety, by undertaking continual awareness-raising activities aimed at keeping the workers focused on "incorrect behaviour" that may, if left uncorrected, lower the company's general safety level.

The schedules below show different breakdowns of the injury situation for men and women and type of employment contract (employees, temporary workers and self-employed contract workers on a coordinated and continuous collaboration contract). *TABLES 34 - 36* 

IN HIDV	CHILIATION .	. Iniai v	VORKFORCE

		2016	2017	2018
n	Total Workers*	3,202	3,321	3,335
hours	Total hours worked	5,334,975	5,489,755	5,530,787
n	Number of Fatalities	0	0	0
n	Number of High-Consequence Injureis	12	9	12
n/200.000h	High-Consequence Injuries Rate	0.45	0.33	0.43
days	Days of prognosis - High-Consequence Injuries	926	666	1,297
d/200.000h	High-Consequence Injuries Lost Day Rate	34.7	24.3	46.9
n	Number of Injureis	75	60	75
d/200.000h	Injuries Rate	2.8	2.2	2.7
days	Days of prognosis	1,327	1,019	1,144
d/200.000h	Injuries Lost Day Rate	49.7	37.1	41.4

<sup>\*</sup>I LAVORATORI COMPRENDONO I LAVORATORI AUTONOMI, GLI INTERINALI E I DIPENDENTI

### **INJURY SITUATION - TOTAL EMPLOYEES**

TABLE 35

### ALL

		2016	2017	2018	
n	Total Workers	2,964	3,053	3,064	
hours	Total hours worked	4,908,203	5,010,381	5,044,517	
n	Number of Fatalities	0	0	0	
n	Number of High-Consequence Injureis	11	8	12	
n/200.000h	High-Consequence Injuries Rate	0.45	0.32	0.48	
days	Days of prognosis - High-Consequence Injuries	842	521	1,297	
d/200.000h	High-Consequence Injuries Lost Day Rate	34.3	20.8	51.4	
n	Number of Injureis	73	56	68	
d/200.000h	Injuries Rate	2.97	2.24	2.70	
days	Days of prognosis	1,295	990	1,078	
d/200.000h	Injuries Lost Day Rate	52.8	39.5	42.7	

	MEN			WOMEN			
2016	2017	2018	2016	2017	2018		
2,378	2,472	2,494	824	849	841		
3,995,792	4,154,146	4,181,446	1,339,184	1,335,609	1,349,341		
0	0	0	0	0	0		
9	8	10	3	1	2		
0.45	0.39	0.48	0.45	0.15	0.30		
738	603	1,125	188	63	172		
36.9	29.0	53.8	28.1	9.4	25.5		
61	55	70	14	5	5		
3.05	2.65	3.35	2.1	0.7	0.7		
1,141	953	1,045	186	66	99		
57.1	45.9	50.0	27.8	9.9	14.7		

	MEN				WOMEN			
2016	2017	2018	2016	2017	2018			
2,165	2,227	2,240	799	826	824			
3,626,974	3,719,776	3,734,456	1,281,230	1,290,606	1,310,061			
0	0	0	0	0	0			
8	7	10	3	1	2			
0.44	0.38	0.54	0.47	0.15	0.31			
654	458	1,125	188	63	172			
36.1	24.6	60.2	29.3	9.8	26.3			
61	52	63	12	4	5			
3.36	2.80	3.37	1.87	0.62	0.76			
1,141	935	979	154	55	99			
62.9	50.3	52.4	24.0	8.5	15.1			

TABLE 36

### INJURY SITUATION TOTAL EXTERNAL WORKERS (TEMPORARY + CONTRACTORS)

ALL

		2016	2017	2018	
n	Total external Workers (temporary + contractors)	238	268	271	
hours	Total hours worked	426,772	479,373	486,270	
n	Number of Fatalities	0	0	0	
n	Number of High-Consequence Injureis	1	1	0	
n/200.000h	High-Consequence Injuries Rate	0.47	0.42	0	
days	Days of prognosis - High-Consequence Injuries	84	145	0	
d/200.000h	High-Consequence Injuries Lost Day Rate	39.4	60.5	0	
n	Number of Injureis	2	4	7	
d/200.000h	Injuries Rate	0.94	1.67	2.88	
days	Days of prognosis	32	29	66	
d/200.000h	Injuries Lost Day Rate	15.0	12.1	27.1	

Note\* Below are the rules followed for data processing related to these disclosures:

- a. The disclosures cover all the workers of the organization divided into employees, temporary workers and self-employed contract workers on a coordinated and continuous collaboration contract with a Group site.
- b. Hours worked is the number of hours of actual presence (the sum of regular plus overtime hours).
- c. An injury is an incident that resulted in at least one lost workday, not counting the day of the incident itself.
- d. Commuting incidents are not taken into account.
- e. The days of absence after an injury are the number of full calendar days of absence starting from the day the injury occurred up to the day of return to work, and not the number of workdays. The day the injury occurred is not included.
- f. The indicator takes into account any relapse from previous injuries.
- g. Injuries are classified into fatal, high-consequence and non-high-consequence. High-consequence injuries are the incidents that cause injuries with a prognosis of > 40 days (in Italy, they may give rise to criminal court proceedings) or other injuries from which the worker cannot recover. Non-high-consequence injuries are incidents with a prognosis of <40 days and do not give rise to criminal court proceedings.
- h. Injuries have been classified according to the following list:
  - · Contusion, abrasion, would, cut
  - Distortion, displacement or sprain
  - Fracture
  - Amputation
  - · Burns, chemical or physical
  - Intoxication
  - Anoxia / asphyxiation (drowning, strangulation)
  - Electrocution

	MEN	WOMEN			
2016	2017	2018	2016	2017	2018
213	245	254	25	23	17
368,818	434,370	446,990	57,954	45,004	39,280
0	0	0	0	0	0
1	1	0	0	0	0
0.54	0.46	0	0	0	0
84	145	0	0	0	0
45.6	66.8	0	0	0	0
0	3	7	2	1	0
0	1.38	3.13	6.90	4.44	0
0	18	66	32	11	0
0	8.3	29.5	110.4	48.9	0

.....

As regards the topic of health, all companies have implemented occupational health services at different levels, in compliance with legal requirements. The responsibility for this service is assigned, in most cases, to the individuals responsible for safety matters or the employer.

MONTEN

Occupational health services are provided by competent individuals with recognized qualifications and accreditations. In Italy, these services are provided by a competent medical doctor, in other countries by medical personnel with similar functions and responsibilities. In Italy, the main tasks of the doctor are to inspect workplaces, establish a health monitoring plan, make periodical medical checks, report cases of work-related illnesses and share the results of his/her work with the company. Regarding work-related illnesses, in 2018 four cases of diagnosed work-related illnesses were reported, all having to do with hypoacusis, or partial loss of hearing.

Many Group companies also offer workers voluntary health promotion services and programmes. A few Italian companies have in place a Workplace Health Promotion (WHP) programme, described in this Report in the section on reconciling private and working life, where the topics covered are selected with worker input. TABLES 37 - 38

DISCLOSURE GRI 403-10 TABLE 37

### WORK-RELATED ILL HEALTH DIAGNOSED WORK-RELATED ILLNESSES - EMPLOYEES

				ALL			MEN			WOMEN		
			2016	2017	2018	2016	2017	2018	2016	2017	2018	
12	n	Total Employees	2,964	3,053	3,064	2,165	2,227	2,240	799	826	824	
2	hours	Total hours worked	4,908,203	5,010,381	5,044,517	3,626,974	3,719,776	3,734,456	1,281,230	1,290,606	1,310,061	
	n	Number of Fatalities	0	0	0	0	0	0	0	0	0	
	n	Diagnosed Work-related Illnesses	3	6	4	3	5	4	0	1	0	
	n/200.000l	Work-related Illness Rate	0.12	0.24	0.16	0.17	0.27	0.21	0	0.15	0	

### **DIAGNOSED WORK-RELATED ILLNESSES - EXTERNAL WORKERS**

			ALL			MEN			WOMEN	
		2016	2017	2018	2016	2017	2018	2016	2017	2018
n	Total Employees	238	268	271	213	245	254	25	23	17
hours	Total hours worked	426,772	479,373	486,279	368,818	434,370	446,990	57,954	45,004	39,280
n	Number of Fatalities	0	0	0	0	0	0	0	0	0
n	Diagnosed Work-related Illnesses	0	0	0	0	0	0	0	0	0
n/200.000	Oh Work-related Illness Rate	0	0	0	0	0	0	0	0	0

# Safety first: the President of RadiciGroup urges the creation of a corporate safety culture

In June 2018, Radici Chimica SpA in Novara hosted a gathering of top managers of some of the best-known company members of the Club della Prevenzione nelle Grandi Organizzazioni (CPGO) [Club for Prevention in Large Organizations] set up within the Associazione professionale Italiana Ambiente e Sicurezza (AIAS) [Italian Association for Environment and Safety]. The meeting resulted in a fruitful exchange of experiences on the topic of safety between major Italian and international industrial companies. The event also gave the participants the opportunity to tour the plant and see first-hand how the health and safety management system works at Radici Chimica, an ISO-certified company with a

health and safety management system implemented in accordance with Italian Legislative Decree [D.Lgs.] 105/2015. The day's work session was opened by Angelo Radici, president of RadiciGroup, who began by saying: "We have always focused our attention on products, processes and people: for us safety comes first, in order to work better in total safety - for us, the environment, and the communities around us - and ensure prosperity for our business. That is why we set up a structured safety management programme, "RadiciGroup for Safety", with the goal of developing a true corporate culture of occupational injury prevention."

### TRAINING AND FDUCATION

ISCLOSURE 404-1

During the reporting year, the Group added a new, more general plan to its investment in safety training. The supplementary objective was the continual updating of its workers' skills and the full use of their abilities, skills and training.

More specifically, the Group set up new special courses under the "RadiciGroup for Sustainability" initiative, designed with different depths of training to meet the needs of the interested participants. With these courses, RadiciGroup not only intended to provide information and knowledge but also to take full advantage of the employees'

commitment to sustainability and stress the importance of the Sustainability Report as a tool for communication and awareness-raising.

Firstly, a new module was implemented for newly hired employees to give basic information about the Group, as well as to teach the fundamentals of sustainability principles. Secondly, the training module used in previous years prevalently for sales personnel was completely redesigned for a wider audience, addressing issues more indepth and with greater focus on case histories, environmental data, and upto-date information on processes and reduced impact products. About 170 employees attended the training courses

in the period spanning 2018 and the first few months of 2019. The attendees, as representatives for all the Group workers, were invited to give their assessment for the materiality matrix lying at the core of this Report.

Both voluntary and compulsory training courses on health and safety played a special and essential role. These courses alone accounted for 50% of the total number of hours dedicated to training and education. *TABLE 39* 

The reporting year data for total hours of training and hours of training per capita confirmed the rising trend of prior Reports. In fact, the total hours of training went from 53,228 hours in 2016 to 64,608 hours in 2018 (from 18 to 21 hours per person). The growth occurred both for male and female employees. The percentage increase in hours per capita was quite significant, +16.7% compared to 2016 for women, and + 17.6% for men. TABLE 41 The regional breakdown of the data shows a strong commitment to education and training in Asia (+81% in hours per capita in three years) and Europe excluding Italy (+60% in hours per capita in three years). At the Italian sites, where a hefty training programme had been implemented during the previous years, the hours of training per capita decreased (-10% in the three-year period), as they did in America (-23% in the three-year period). TABLE 42

2016

### **EMPLOYEE TRAINING**

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		2016	2017	2018
hours	Total hours of training	53,228	63,719	64,608
n	Total employees	2,964	3,053	3,064
h/employees	Hours of training per capita	18.0	20.9	21.1
	Total hours of training SSL	26,644	34,561	32,032
	% Total hours of training	50%	54%	50%

### TRAINING BY CATEGORY

FARIF 40

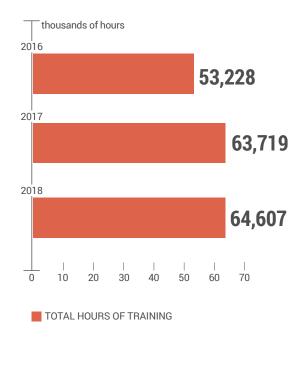
		2016	2017	2018
hours	Management	2,855	1,858	2,941
hours	Middle management	4,523	4,529	6,659
hours	White-collars workers	9,013	13,877	13,607
hours	Blue-collars workers	36,837	43,455	41,401
h/employees	Management	32	24	35
h/employees	Middle management	29	29	41
h/employees	White-collars workers	15	21	21
h/employees	Blue-collars workers	18	20	20

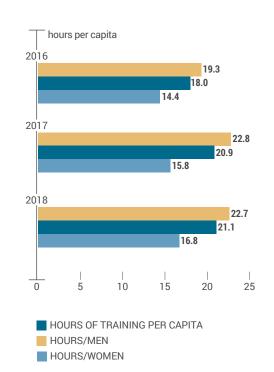
### **HOURS OF TRAINING BY GENDER**

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		2016	2017	2018
hours	Hours of training – women	11,499	13,011	13,813
n	Employees – women	799	826	824
h/employees	hours/women	14.4	15.8	16.8
hours	Hours of training – men	41,729	50,708	50,794
n	Employees – men	2,165	2,227	2,240
h/employees	hours/men	19.3	22.8	22.7

### **Hours of training by gender**



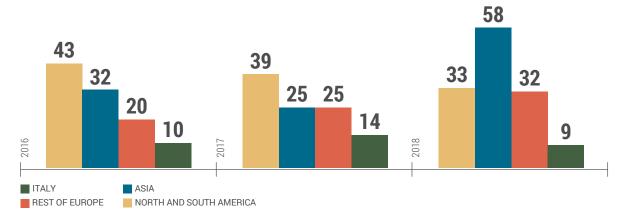


### **HOURS OF TRAINING PER CAPITA BY REGION**

TABLE 42

		2016	2017	2018
h/employees	Italy	10	14	9
h/employees	Rest of Europe	20	25	32
h/employees	Asia	32	25	58
h/employees	North and South America	43	39	33

### Hours of training per capita by region



### RECONCILING PRIVATE AND WORKING LIFE

Still another important social sustainability front in 2018 was employee wellbeing. The actions taken targeted initiatives for reconciling private and working life, that is, achieving so-called "work-life balance". RadiciGroup promotes a healthy balance between work and private life, first and foremost through implementing the measures and instruments required by law, mainly reduction of working hours (part-time), parental leave and family leave for urgent reasons, such as assistance and care of family members, wherever required by the national legislation of the countries where the Group companies are located.

RadiciGroup also promotes special initiatives for its employees aimed at improving their physical and psychological wellbeing. Since 2015, RadiciGroup has activated a project called Workplace Health Promotion (WHP), conceived by ATS Bergamo and the Region of Lombardy to encourage workers to adopt healthy lifestyles and positive mental attitudes. The project is gradually being extended to the various companies.

In 2018, RadiciGroup also organized corporate sports tournaments, ski events and group walks where employees could socialize, together with the now traditional weekly offering of fresh fruit to employees of the sites participating in the initiative and a menu selection favouring fresh food and vegetables at company canteens.

## Good corporate practices and training: sustainability is a daily commitment at Radici Plastics Souzhou

From 2018 to 2019, the employees of Radici Plastics Souzhou, the Chinese subsidiary of the RadiciGroup High Performance Polymers Business Area, carried out many sustainability initiatives.

The unceasing Group commitment and the workers' rising awareness, combined with the market stimuli and the Chinese political context, were all factors that gave a decisive impulse to the internal sustainability awareness-raising project.

There were two main strands of action: training and good daily practices. Training was concerned with explaining the RadiciGroup philosophy and the contents of the Sustainability Report. Two sessions were held, during which office personnel and workers first watched a video and listened to a talk on the topic given by a professor and then were guided through a debate on the topic of environmental pollution and its effects on human beings. The second topic the employees were introduced to was reporting and the Sustainability Report.

Furthermore, company's workers together came up with a manifesto of good daily practices concerning actions of individual employees that could help the environment. For example, it was recommended that they limit the use of paper and recycle it, try to be more careful about turning off lights in the office, not waste water, and use public transportation or "green" means of transport, such as bicycles, to commute to work.

Moreover, the company purchased sustainable lunch containers for the canteen, replaced the traditional disposable single-use chopsticks with reusable ones, and purchased reusable shopping bags for all workers.

Lastly, an eco-sustainable weekend on the hills around Souzhou has been planned for the summer of 2019. The employees will have the chance not only to socialize and share convivial moments, but also work together cleaning up litter and debris as they walk along the paths.

THE REALIZATION OF LOWER ENVIRONMENTAL IMPACT PRODUCTS IS THE RESULT OF A WELL-ESTABLISHED MANAGEMENT APPROACH WHEREBY RADICIGROUP SUSTAINABILITY CHOICES ARE ROOTED IN THE DAY-TO-DAY ACTIVITIES OF ITS BUSINESSES AND THE NEEDS OF ITS MARKETS.





# RadiciGroup environmental performance

RadiciGroup is fully aware that indiscriminate exploitation of resources will inevitably lead to the degradation of social and environmental conditions to the detriment of all stakeholders. It is also conscious of the inevitable environmental impacts of its industrial activities and, for this reason, works incessantly to monitor its operations carefully and mitigate such impact as much as possible. The robust section below dedicated to environmental indicators and the trends arising from them is proof of the seriousness of the RadiciGroup approach. Moreover, the pre-eminent position obtained by environmental issues in the materiality matrix testifies to the widespread attention and importance attributed by all Group stakeholders.

At RadiciGroup, respect for the environment is realized through the scrupulous observance of the law, demonstrated by the fact that, in the reporting year, no monetary or other sanctions were imposed on the Group for failure to comply with environmental laws and regulations. Added to this are solid policies for containing emissions, increasing the use of renewable resources and rationalizing the consumption of raw materials, energy and water without changing product performance. In line with these policies, the Group invests in reject reduction by improving quality and using smart recycling aimed at preserving, as much as possible, the value of materials and their performance during the recovery process and transformation into secondary raw materials.

### RAW MATERIALS

As illustrated in the beginning part of this Report, RadiciGroup is a producer of polymers, chemical intermediates and fibres obtained, in very large part, from fossil sources. Aware of this, RadiciGroup strives for increasingly efficient use of these same raw materials through management systems that can improve the efficiency of company processes and, in parallel, through the introduction of the best technologies available on the market, as described in the section of this Report on economic indicators.

Furthermore, as repeatedly mentioned in this Report, the Group promotes recycling and is actively developing polymers obtained from renewable source materials to add to its stable and solid range of products. This topic is covered in the section on product innovation. In the future, renewable sources are bound to become an increasingly more important part of corporate strategy and thus RadiciGroup has been actively investing in this area through innovation and measurable impact reduction.

Financial year 2018 confirmed the performance of 2017 with regard to the quantity of materials used, both in absolute and percentage terms; materials based on non-renewable source materials made up 97% of the total, as in previous years. RadiciGroup's businesses depend mostly on fossil-based inputs needed for the production of nylon and polyester. However, the high performance shown by the management system Key Performance Indicators (KPI) for production yields, particularly Overall Equipment Effectiveness (OEE) and the good level of recycling production rejects destined for mechanical recovery - processes described below in the Report - highlight the Group's great attention to raw materials and consumption rationalization.

TABLE 43

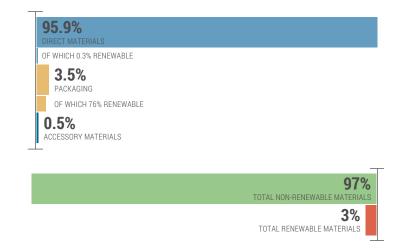
**GRI301-1 MATERIALS USED BY WEIGHT AND BY TYPE** 

		2016	2017	2018
	MATERIALS USED BY TYPE			
t	Direct materials	434,023	475,961	475,195
t	Accessory materials	2,184	2,547	2,699
t	Packaging	17,466	18,482	17,479
t	Total	453,674	496,991	495,373
	NON-RENEWABLE MATERIALS			
t	Non-renewable direct materials	433,615	474,604	473,618
t	Non-renewable accessory materials	2,184	2,547	2,699
t	Non-renewable packaging	4,056	4,419	4,261
t	Total non-renewable materials	439,855	481,570	480,578
	% Renewable packaging compared to total packaging	77%	76%	76%
	RENEWABLE MATERIALS			
t	Renewable direct materials	408	1,357	1,577
t	Renewable accessory materials	0	0	0
t	Renewable packaging	13,411	14,063	13,218
t	Total renewable materials	13,819	15,420	14,795

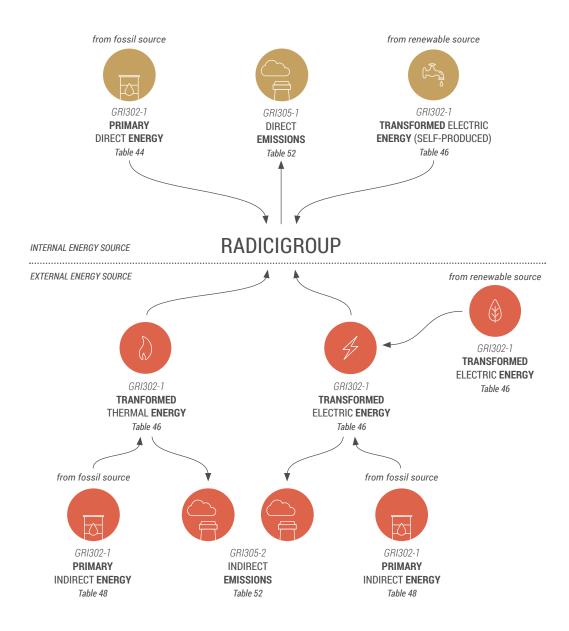
### Used materials 2016-2018

# DIRECT MATERIALS ACCESSORY MATERIALS PACKAGING 2016 454 2017 497 2018 495 400 420 440 460 480 490

### **Used materials 2018**



### **ENERGY**



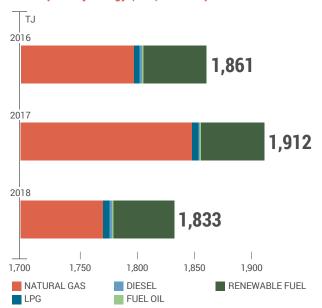
### **GRI302-1 ENERGY CONSUMPTION WITHIN RADICIGROUP**

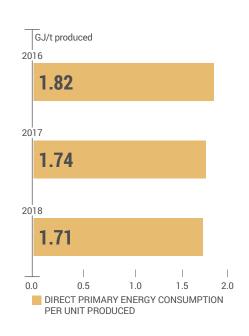
	SUMED (DIRECT PRIMARY ENERGY CONSUMPTION)	2016	2017	2018
GJ	from NATURAL GAS - non renewable*	1.798.343	1.848.817	1.771.423
GJ	from NATURAL GAS - non renewable	1.494	1.534	1.307
GJ	from LPG - non renewable	5.363	5.853	6.276
GJ	from FUEL OIL - non renewable	822	1.104	891
GJ	Subtotal non-renewable fuel consumption	1.806.023	1.857.308	1.779.897
GJ	from BIOGAS	55.472	55.038	53.215
GJ	Subtotal renewable fuel consumption	55.472	55.038	53.215
GJ	Total fuel consumed	1.861.495	1.912.346	1.833.112

\*TO CONVERT NATURAL GAS FROM Nm³ TO GJ, A FACTOR OF 39.01 (SOURCE MOD. GRI 3.1) WAS USED FOR ALL COM PANIES, OBSERVING THE PRECAUTIONARY PRINCIPLE.

GRI302-1 DIRECT PRIMARY ENERGY CONSUMPTION PER UNIT PRODUCED		2016	2017	2018
GJ/t	Non-renewable	1.82	1.74	1.71
GJ/t	Total (renewable + non-renewable)	1.88	1.79	1.76

### **Direct primary energy (fuel) consumption**





MANAGEMENT APPROACH 103-;

Energy has always been one of the strong points of RadiciGroup, which has worked incessantly to reduce consumption and raise plant efficiency, also by having Energy Managers at the most energy-intensive plants. These professionals' main tasks include the analysis, monitoring and optimization of energy consumption.

Some Group sites hold energy management ISO 50001 certification, a key element for structuring and implementing performance improvement actions. With its policies, particularly those related to green energy, RadiciGroup aims to make a

contribution to Sustainable Development Goal SDG 7: Affordable and Clean Energy.

Turning to the analysis of the data regarding consumption of direct primary energy, the data show a clear improvement both in terms of absolute value and per unit produced. In absolute quantities, energy consumption fell by 4.1% compared to the prior year, with savings of 79,017 GJ (minus 29% over 6 years). Energy, from fossil sources only, used per unit produced made a 6.3% improvement over the three-year period. TABLES 44, 45

### GRI 302-1 ELECTRICAL ENERGY MIX - 2018

of which sites wholly or largely supplied with energy from renewable sources:

### powered with green energy at 100%

Radici Novacips - (Villa d'Ogna) Italy Radici Novacips - (Chignolo d'Isola) Italy Radici Plastics - Brazil Radici Plastics - Germany Radici Yarn - (Ardesio) Italy Radici Partecipazioni - Italy

### powered with green energy at over 80% $\,$

Radici Fibras - Brazil

### plant powered with green energy at 100%

Radici Yarn Polymerization - Italy Radici Fil Polymerization - Italy

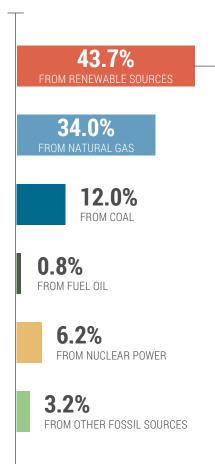




TABLE 46

#### INTERMEDIATE ENERGY CONSUMPTION BY PRIMARY ENERGY SOURCE (ELECTRICAL, STEAM, HEATING, COOLING)

		2016	2017	2018
GJ	Total INTERMEDIATE energy	3,726,772	3,708,391	3,634,185
	of which			
	ELECTRICITY CONSUMPTION			
GJ	SUBTOTAL ELECTRICITY CONSUMPTION	1,756,188	1,778,482	1,770,366
GJ	Electricity consumption from renewable sources	905,296	715,908	774,255
GJ	of which self-produced (hydroelectric power)	56,538	51,358	54,000
%	Electricity from renewable sources to total electricity	51.5%	40.3%	43.7%
	ELECTRICITY FROM RENEWABLE SOURCES IS SELF-PRODUCED BY A RADICIGROUP SITE,	WHILE THE REMAINDER	IS PURCHASED FRO	OM GEOGREEN
GJ	Electricity consumption from non-renewable sources	850,892	1,062,574	996,111
GJ	from Natural Gas	420,352	633,698	602,035
GJ	from Coal	271,938	262,005	212,215
GJ	from Fuel Oil	17,821	17,971	15,023
GJ	from Nuclear Power	106,673	106,321	110,287
GJ	from other fossil sources	34,108	42,580	56,551
	STEAM CONSUMPTION			
GJ	SUBTOTAL STEAM CONSUMPTION	1,970,584	1,929,909	1,863,819
GJ	from Natural Gas	1,970,584	1,929,909	1,863,819
	FROM RADICI CHIMICA, WHICH PURCHASES STEAM FROM NOVEL			
	HEATING CONSUMPTION			
GJ	SUBTOTAL HEATING CONSUMPTION	0	0	0
GJ	from non-renewable sources	0	0	0
	COOLING CONSUMPTION			
GJ	SUB TOTALE CONSUMO RAFFREDDAMENTO	0	0	0
GJ	from non-renewable sources	0	0	0
INTER	MEDIATE ENERGY (ELECTRICITY) CONSUMPTION PER UNIT PRODUCED			
		2016	2017	2018
GJ/t	Electricity	1.77	1.67	1.70

Focusing now on electricity, the 2018 mix shows a considerable increase in the portion coming from renewable sources, which rose to 43.7% (from 40.3% in 2017), settling around the levels recorded between 2011 and 2014, without, however, reaching the peak performance of 2016 (51.5%). As always, some of the Group sites were powered entirely, or for the most part, with energy from renewable sources. *TABLES 46, 47* 

It should be noted that the production of green energy, mainly hydroelectric power produced in partnership with supplier Geogreen, is heavily influenced by climatic variations. The varying amount of rainfall from year to year means more or less water in the rivers and, consequently, a varying quantity of green energy that can be produced and made available. The climatic changes that have occurred in recent years in Italy, with alternating long periods of very little rainfall and periods of incessant rainfall, do not in any way favour the regular operation of hydroelectric plants. Again in 2018, in second place after renewable sources as a source of energy for the Group was natural gas, the fossil fuel with the lowest environmental impact among nonrenewable sources.

#### TOTAL DIRECT + INDIRECT PRIMARY ENERGY CONSUMPTION FROM NON-RENEWABLE SOURCES

			2016	2017	2018
E 48	GJ	From fossil sources (non-renewable)	6,178,598	6,611,640	6,272,943
TABLE					
	INDIR	RECT PRIMARY ENERGY FROM FOSSIL SOURCE			
			2016	2017	2018
LE 49	GJ	Total	4,372,575	4,754,332	4,493,046
TABLE					
	DIRE	CT + INDIRECT PRIMARY ENERGY CONSUMPTION FROM NON-RENEWAB	LE (FOSSIL) SOURCES		
			2016	2017	2018
ABLE 50	GJ	Total non-renewable fuel consumption (Table 44)	1,806,023	1,857,308	1,779,897
TABL	GJ	Total non-renewable indirect primary energy - Electricity	1,703,863	2,118,438	1,947,985
	GJ	Total non-renewable indirect primary energy - Steam	2,668,712	2,635,895	2,545,061
	GJ	Total non-renewable indirect primary energy - Heating	0	0	0
	GJ	Total non-renewable indirect primary energy - Cooling	0	0	0

TABLE 51

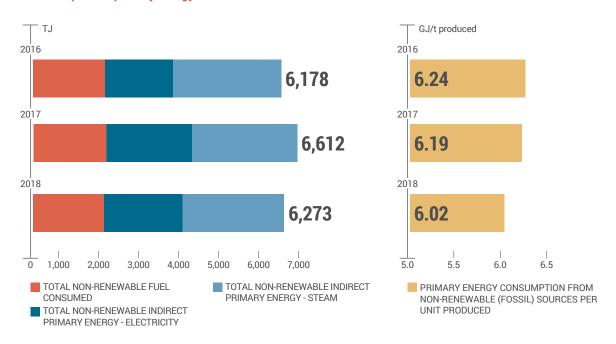
TOTAL PRIMARY ENERGY CONSUMPTION FROM NON-RENEWABLE (FOSSIL) SOURCES PER UNIT PRODUCED

		2016	2017	2018
GJ/t	Total primary energy (direct + indirect) from fossil source (Table 48)	6.24	6.19	6.02
GJ/t	Total indirect primary energy (Table 49)	4.41	4.45	4.31
GJ/t	Indirect primary energy - Electricity	1.72	1.98	1.87
GJ/t	Indirect primary energy - Steam	2.69	2.47	2.44
GJ/t	Indirect primary energy - Heating	0.00	0.00	0.00
GJ/t	Indirect primary energy - Cooling	0.00	0.00	0.00

An examination of energy consumption from non-renewable primary sources as a whole (direct energy and indirect energy) reveals a continuous gradual improvement, with a reduction in consumption per unit produced of 3.5% compared to the previous three-year period.

TABLES 48 - 51

#### Global impact on primary energy



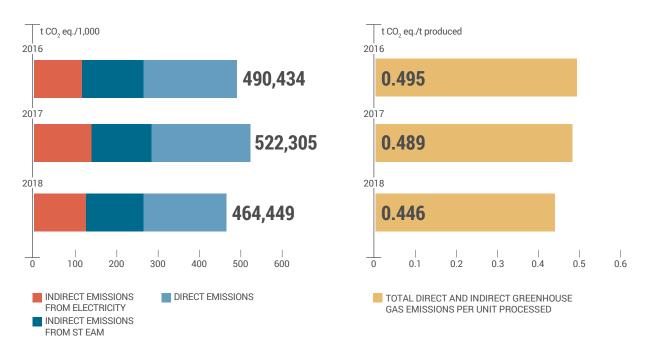
#### **EMISSIONS**

MANAGEMENT APPROACH 103-

As regards emissions, after years of strong reductions thanks to the investments made by the Group, notably in the Specialty Chemicals area with a drastic fall in N2O (nitrous oxide) emissions, the margins for improvement are shrinking, since processes are close to full optimization.

However, in 2018, an improvement in results was recorded once more, reflecting the ongoing emission monitoring and reduction work being carried out at the production sites. Specifically, direct and indirect greenhouse gas emissions dropped from 522,305 tCO2eq in 2017 to 464,449 tCO2eq in 2018, a percentage decrease of 11%. Over the 2016-2018 three-year period, the percentage decrease was 5.3%. The energy mix has certainly worked in favour of the indirect emissions situation, since, as mentioned above, there was an increase in the proportion of electricity from renewable sources. Emissions (direct and indirect) per unit produced also improved, going from 0.489 tCO2eq/t to 0.446 tCO2eq/t (the ratio had already been literally halved compared 2010). Performance with regard to the quality of emissions was also good.

#### Total direct and indirect emission of greenhouse gas



#### GRI305-1, GRI305-2 TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS

		2016	2017	2018
t CO <sub>2</sub> eq.	Total	490,434	522,305	464,449
t CO <sub>2</sub> eq.	DIRECT EMISSIONS (GRI 305-1)*	225,089	237,477	198,555
t CO <sub>2</sub> eq.	INDIRECT EMISSIONS (GRI 305-2)	265,345	284,828	265,895
t CO <sub>2</sub> eq.	Indirect emissions from Electricity	116,645	137,956	124,084
t CO <sub>2</sub> eq.	Indirect emissions from Steam	148,701	146,872	141,811
t CO <sub>2</sub> eq.	Indirect emissions from Heating	-	-	-
t CO <sub>2</sub> eq.	Indirect emissions from Cooling	-	-	-

<sup>\*</sup>THE VALUES SHOWN INCLUDE CO., FROM COMBUSTION AND N2O FROM THE PRODUCTION OF ADIPIC ACID AND NITRIC ACID.

#### GRI305-4 TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS PER UNIT PROCESSED

	2016	2017	2018
tCO <sub>2</sub> /t	0.495	0.489	0.446

For the purposes of the Report, it is interesting to examine the benchmark that compares the energy mix selected by the Group for its activities against the standard energy mixes available at the national level. The specific choices made in favour of green electricity or low-impact fuels have in fact allowed RadiciGroup sites to emit 29% less greenhouse gas than they would have with the national energy mix available to them. That percentage value was obtained by calculating the emissions from both the actual energy mix of the Group and from the national energy mixes of each of the countries where the production plants falling within the reporting boundaries are located (data source www.iea.org - reference year 2016). This important result highlights the voluntary contribution of Group companies to the achievement of SDG 13: Climate Action. Greenhouse gas emissions are driving climate change, and SDG 13 urges all industrial players to reduce their GHG gases as much as possible. TABLE 54



#### NATIONAL STANDARD BENCHMARK MIX AND RADICIGROUP MIX (ELECTRICITY)

		2016	2017	2018
t CO <sub>2</sub> eq.	INDIRECT EMISSIONS FROM ELECTRICTY – STANDARD NATIONAL MIXES	170,831	175,026	175,085
t CO <sub>2</sub> eq.	INDIRECT EMISSIONS FROM ELECTRICITY - RADICIGROUP SELECTED MIX	116,645	137,956	124,084
t CO <sub>2</sub> eq.	DIFFERENCE	54,186	37,071	51,001
%	DIFFERENCE	31.7%	21.2%	29.1%

#### **GRI305-7 QUALITY OF EMISSIONS**

TABLE 55

TABLE 54

		2016	2017	2018
t	NOx	125	141	127
t	SOx	2	0	0
t	VOC	12	8	8
t	HAP	-	0.01	0.01
t	PM	11	8	8
t	Other air emissions	17	16	14
t	Total	167	173	157

#### **WATER**

Water is the essential liquid used for cooling production plants at RadiciGroup sites, but water has also become an increasingly precious asset from an environmental and economic point of view. All the ancestral Group companies are located in northern Italy, an area with good water availability, specifically surface and underground waters, which have always been considered a strategic factor for local development. Nevertheless, the same region is also ranked as "medium to high water stressed" by the World Resources Institute. The ranking also applies to most of the Group sites around the world, all located in medium-to-high water stressed regions, as illustrated by the graph in the figure, which relates the amount of water consumed by the Group in 2018 with the level of water stress in river basins where the sites operate. Indeed, RadiciGroup draws its water mainly from rivers or canals, as shown by the indicator 303-3.

RadiciGroup is aware of the scenario in which its water consumption takes place and is extremely careful to limit it as much as possible. The Group uses little or no water in its products and does not create long-term water reserves for its production activities that could deprive local communities of their water supply. The same water is used several times within the plants for cooling purposes, then treated in accordance with the legislation in force in the various countries in which the Group operates and, finally, is returned intact to the environment, mainly into surface watercourses, as shown by indicator 303-4.

Actual water consumption in 2018, that is, the difference between the water withdrawn and water discharged was 4,859 ML (megalitres) equal to 5.6% of water withdrawn, due, for the most part, to evaporation. *TABLES 59, 60* 

RadiciGroup water consumption by regional water stress level 51,6% LOW STRESS (<10%) 47,9%

DATA SOURCE: ACQUASTAT

WATER CONSUMPTION COMPARED TO WATER WITHDRAWN EQUALS 5.6%

#### **GRI303-3 WATER WITHDRAWAL**

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		2016	2017	2018
MI	Total	88,222	91,564	86,464
MI	Surface water	35,698	36,507	35,481
MI	Other water	0	0	0
MI	Freshwater	35,698	36,507	35,481
m³	from rivers/canals	35,251,946	36,041,554	35,013,017
m³	from spring	445,842	465,195	468,049
MI	Groundwater	11,213	10,206	9,477
MI	Other water	0	0	0
MI	Freshwater	11,213	10,206	9,477
m³	from wells	11,213,152	10,206,239	9,476,849
MI	Third-party water	41,311	44,851	41,506
MI	Other water	0	0	0
MI	Freshwater	41,311	44,851	41,506
m³	from acqueducts	131,499	171,948	155,355
<u>m³</u>	from private utilities	41,179,819	44,678,576	41,350,964

The results of the Group's careful policy on water resources are also reflected in the indicators below, which point to a decrease in the quantities of water used in absolute value. Water consumption declined from 91,563,512 ML (megalitres) in 2017 to 86,464,234 ML in 2018 (-5.6%). The downward trend is also confirmed by water consumption per unit produced, which went from 0.0858 ML/t in 2017 to 0.083 ML/t in 2018 (-3.2% compared to the prior year, - 6.8% in three years and - 8.9% in 6 years). For the purpose of the indicator (GRI-303), it should be emphasized that RadiciGroup does not use sea water and does not produce water as a byproduct of its processes. For the purposes of the Report, in accordance with the precautionary principle, all the water used by the Group is considered freshwater. *TABLES 56, 57* 

#### **USE OF WATER RESOURCES PER UNIT PRODUCED**

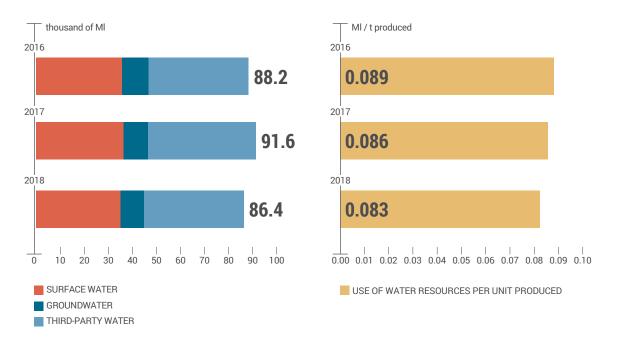
	2016	2017	2018
MI/t	0.089	0.086	0.083

While water consumption decreased, water recycling increased resulting in water savings of 68% (i.e., a saving ratio of 1.7 times less than the theoretical requirement). The Group recycling percentage would jump to 131% (2.3 times less than the theoretical requirement), if the German company Radici Chimica Deutschland GmbH were excluded from the overall reporting boundaries. In reality, the German site recycles water outside its own site. Thus the recycling is "external" and, as such, is entered as 0% in the indicator (saving ratio of 1). The company draws water from a water loop managed by the industrial park where the company is located, which also performs water

recycling. Now, if Radici Chimica Deutschland is considered alone, the water saving is 5,950%, which means water withdrawal from the environment is 60 times less than the theoretical requirement and attributable almost entirely to the water added to replenish the water lost, in large part due to evaporation and in small part to cooling tower blowdown.

TABLE 58

#### Water withdrawal by source



#### WATER RECYCLED AND REUSED

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		2016	2017	2018
	WATER SAVINGS			
m³	Water withdrawn	88,222,258	91,563,512	86,464,234
m³	Water recycled	58,870,072	59,815,885	59,257,811
%	Water saved	67%	65%	69%
n	Saved value	1.67	1.65	1.69
	WATER SAVINGS EXCLUDING RADICI CHIMICA DEUTSCHLAND			
m³	Water withdrawn	47,037,364	46,880,024	45,108,470
m³	Water recycled	58,870,072	59,815,885	59,257,811
%	Water saved	125%	128%	131%
n	Saved value	2.25	2.28	2.31
	RADICI CHIMICA DEUTSCHLAND + INDUSTRIAL PARK SAVED WATER			
m³	Water withdrawn from towers	-	-	690,518
m³	Water pumped from external loop to RCD	-	-	41,083,364
%	Water saved	-	-	5950%
n	Saved value	-	-	60.5

#### **GRI 303-4 WATER DISCHARGE BY DESTINATION**

DISCLOSURE 303-4 TABLE 59

		2016	2017	2018
MI	TOTAL	87,759	86,603	81,605
MI	THIRD-PARTIES	40,903	44,383	41,071
MI	OTHER DESTINATIONS	46,856	42,219	40,535
MI	SURFACE WATER	46,554	41,859	40,275
MI	SEWERS	302	360	260
	of which			
Ml	WATER DISCHARGED DIRECTLY	45,609	41,129	39,288
MI	WATER TREATED BY INTERNAL PURIFICATION PLANT	1,247	1,090	1,247

#### WATER DISCHARGE PER UNIT PRODUCED

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<u>M/t</u> 0.047	0.040	0.039

2016

#### **WATER DISCHARGE BY QUALITY**

TABLE 61

		2010	2017	2010
Кд	COD	1,548,314	1,577,728	1,427,080
Кд	Nitrogen	1,076,151	1,206,893	1,205,101
Кд	Suspended solids	13,180	19,138	43,417
Кд	Metals*	7,158	8,348	9,399

<sup>\*</sup>METALS INCLUDE: ALUMINIUM, CHROME, IRON, NICKEL, COPPER, VANADIUM, ZINC.

Although the consumption figures are in line with the Group's commitment, not so satisfactory are the data concerning the quality of the discharged water, which worsened compared to 2017. *TABLE 61* 

#### Water management applications: safe and better quality water

Today, the growth of the world's population, the expansion of intensive agriculture and climate change, coupled with the "chronic" waste of water in cities, are the main factors jeopardizing the availability and quality of water.

Alongside the significant amount of work done to monitor and rationalize water consumption, in recent years the High Performance Polymers Business Area has developed a range of innovative compounds for water management applications: various polyamides intended to partially or totally replace metal parts in plumbing and heating fixtures, such as water and heat metres, boiler components and taps. All these compounds meet the guidelines of the main European countries on materials for direct contact with drinking water and offer advantages in terms of sustainability by providing greater resistance to corrosion and scale, thereby extending the useful life of the fixtures and

helping to reduce the waste of water. Finally, being totally lead free in line with the most stringent European regulations, these materials provide end consumers with safer and better quality drinking water with no contaminants, unpleasant odours or tastes.

With this new product line – the result of careful R&D work – RadiciGroup offers its contribution to achieving United Nations Sustainable Development Goal SDG 6: Clean Water and Sanitation, in its target markets.



#### WASTE

MANAGEMENT PROACH 103-1 All RadiciGroup companies operate so as to contain waste and waste generation with careful process management policies. All Group sites have always had in place waste identification, and sorting and storage methods, in compliance with current legislation and voluntary standards. In addition, some companies promote information campaigns for their customers, for example on the compatibility of materials, to encourage product recycling at the end of their lifecycle. All this gives a boost to the circular models of business that the Group is progressively making its own, also in light of the invitation to work for responsible production patterns set out in SDG 12: Responsible Production and Consumption. Given the above scenario, in 2016 the Radici Novacips plant decided to obtain authorization for the treatment of plastic waste.

The authorization allows the Group to develop high performance products from either subproducts or waste, totally in line with the spirit of the EU circular economy package. The realization of the application potential of RadiciGroup's recycled engineering polymers is made possible by the "high-quality" recovery and recycling process, in which all sites participate by carefully sorting and managing production rejects (polymers and fibres), so that they can be reprocessed into the best compound possible, depending on their initial characteristics. The flow of these materials to be recycled is carefully sorted upstream by type and characteristics, in keeping with the application they are destined for during recovery reprocessing.



DISCLOSURE 306-2 TABLE 62

TABLE 63

TABLE 64

The above premise is necessary to interpret the data in disclosure 306-2 concerning the progressively increasing amount of non-hazardous waste sent to recovery, today a precious resource for the High Performance Polymers Business Area. The data are not negative – quite the opposite – as they point to the fact that the recycling recovery process illustrated above is working at full capacity.

Therefore, not only is the Group's waste containment policy effective, as proven by the ratio, total weight of waste per unit produced, which showed a falling trend compared to 2017, but it also attests to the full recovery of the waste and its recycling back into the Group production chain for the production of a range of high performance engineering polymers (Heramid®). TABLES 62, 63, 64

#### GRI306-2 WASTE BY TYPE AND DISPOSAL METHOD

		2016	2017	2018
t	TOTAL	14,500	17,988	19,365
t	TOTAL HAZARDOUS WASTE	2,153	3,121	2,490
t	HAZARDOUS WASTE DESTINED FOR RECOVERY	378	331	540
t	HAZARDOUS WASTE DESTINED FOR DISPOSAL	1,775	2,790	1,950
t	TOTAL NON-HAZARDOUS WASTE	12,347	14,867	16,875
t	NON-HAZARDOUS WASTE DESTINED FOR RECOVERY	10,088	12,150	14,817
t	NON-HAZARDOUS WASTE DESTINED FOR DISPOSAL	2,259	2,717	2,058
	of which:			
t	OCCASIONAL WASTE (MAINTENANCE, BUILDING RENOVATIONS, ETC.)	1,986	2,094	2,104
t	NON-HAZARDOUS PROCESS WASTE (FORMERLY BY-PRODUCTS) DESTINED FOR INTERNAL RECOVERY	3,345	5,477	7,459
t	PROCESS WASTE DESTINED FOR EXTERNAL TREATMENT	9,169	10,417	9,802

#### TOTAL WEIGHT OF PROCESS WASTE PER UNIT PRODUCED

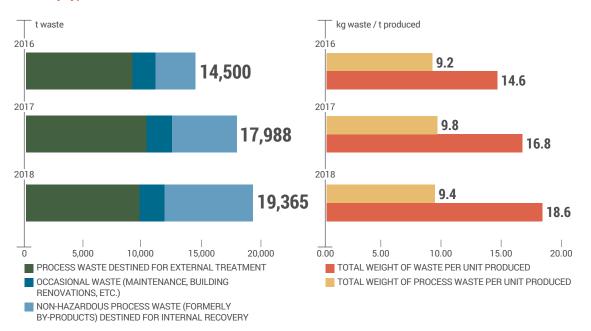
	2016	2017	2018
Kg/t	9.25	9.76	9.41

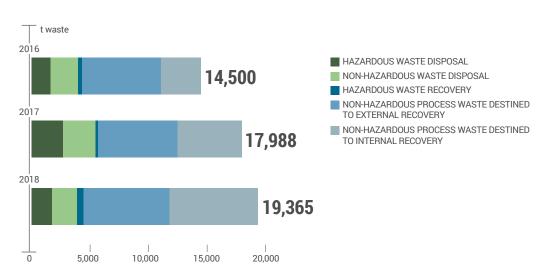
#### **TOTAL WEIGHT OF WASTE PER UNIT PROCESSED**

	2016	2017	2018
Kg/t	14.63	16.85	18.59

Based on the documentation held by the Sustainability Group, provided by the companies in charge of waste management and treatment, it is not possible to give more detailed information as required by the GRI model.

#### Waste by type and destination

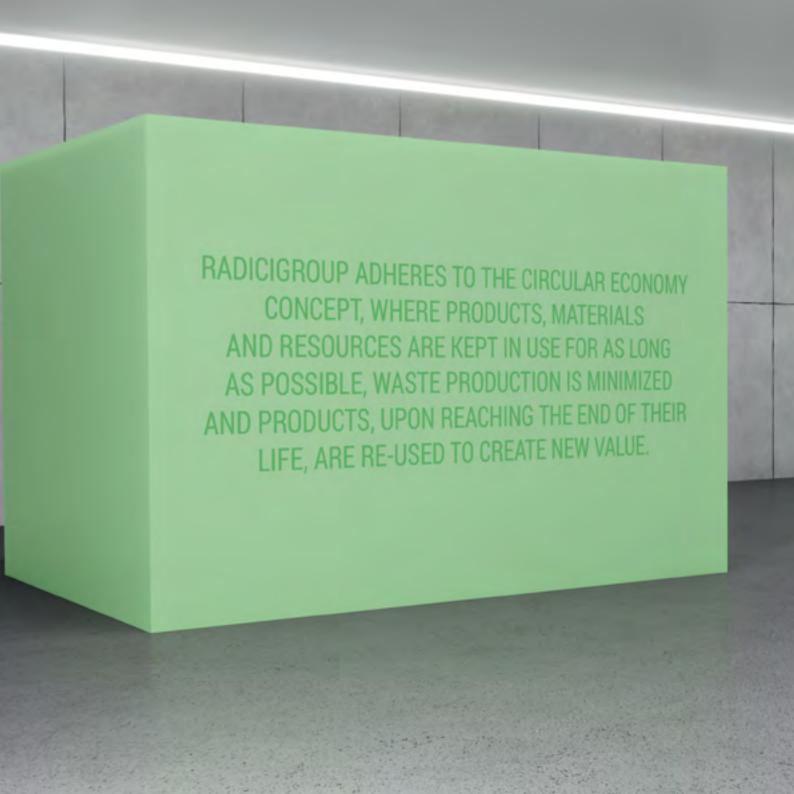




#### **Operation Clean Sweep: Zero plastic pellet and dust loss**

In 2018 all the production plants of the RadiciGroup High Performance Polymers Business Area signed a formal pledge to become an Operation Clean Sweep® (OCS) Partner. The OCS is an international programme supported by industry associations all over the world and designed to prevent plastic pellet and powder loss into the environment. The special focus is on materials handling and transport operations, from the arrival of raw materials to the departure of semi-finished products to be delivered to customers.

Operation Clean Sweep (OCS) is an industrial programme that involves the whole value chain, including transport and logistics. RadiciGroup High Performance Polymers decided to join the initiative on a voluntary basis to make a contribution, incorporating it as part of the Group's Sustainability Policy.





## **Building the report**

#### RadiciGroup Sustainability Strategy

The RadiciGroup strategy in relation to sustainability is defined based on the principles formulated in the Group Vision, Mission and Values, the Policies and the Business Plan and is implemented through a multi-function approach with the engagement of Group top management, the GRI Coordination Group, RadiciGroup sites and the stakeholders.

In particular, the strategy is structured around:

- Analysis of the organization's context, to make decisions based on an overall and well-thought-out view of the scenario in which RadiciGroup operates.
- Stakeholder mapping, and understanding of the reasonable expectations and interests of the stakeholders, together with risks, expectations and opportunities arising from the relationship with the stakeholders.
- Approach to stakeholder engagement, based on the expectations expressed by stakeholders and Group strategies.
- Materiality analysis, a fundamental tool to objectivize the process followed to identify the most relevant topics, including the process of stakeholder engagement in the assessment of materiality itself, and to incorporate the vision of management related to each potentially material topic.

#### **Context analysis**

In 2018, extensive context analysis work, jointly managed by the heads of the Quality, Health, Safety and Environmental (QHSE) management systems and the sustainability team, asked the main RadiciGroup companies to take a closer look at all the factors, both external and internal, that could influence their strategy and operations or could be influenced by the companies themselves.

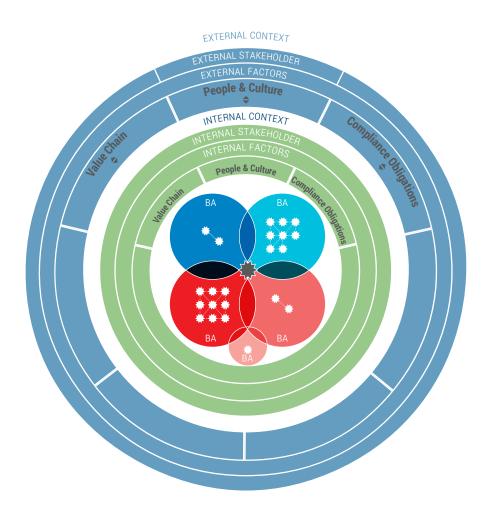
The collaboration between the management systems and the sustainability teams enabled the participants to unify and improve the existing analysis models, benefit from the mutual experience and exchange of information between the teams, rationalize the work already done, highlight the group-wide nature of the sustainability topic and bring it, once more, to the attention of top management.

The context analysis highlighted the characterizing factors for each site, business area and the Group as a whole that can be concisely represented by the figure shown here.

#### RadiciGroup context

#### STRATEGIC CONTEXT & RISKS/OPPORTUNITIES

Context analysis is carried out taking into consideration the main areas that can affect the company performance, namely: the **value chain** (market / customers/ supply chain/ economic factors/ etc.); **people and culture** (human resources and civil society); and **compliance obligations**. For each area, the analysis identifies current and forecast performance and related risks and impacts. The analysis produces a list of the actions that have been identified and a brief description of each (supported by business plans, projects, investments, etc.).



#### STAKEHOLDER: Environment

Trade associations
Customers
Communities
Local communities
Competitors
Suppliers
Banks and insurance companies
Media
Academic and research institutions
Control and monitoring bodies
Trade union organizations
Group companies
Shareholders
Board of Directors and management
Workers



## DISCLOSURE 102-15

#### Risk analysis

A fundamental element for the interpretation of this analysis was the risk-based thinking approach that revealed the strategic importance of each factor relating to the company, its stakeholders and their reasonable expectations, as illustrated in the table dedicated to stakeholder expectations and risks and opportunities.

Along with this analysis, in 2018 some specific risk analyses were also conducted dealing with the Group's market scenario and the economic and financial context in which it operates. The results of the targeted analyses are summarized below.

#### MARKET RISK

The Group is exposed to risks resulting from competition and fluctuations in volumes and prices. Against such eventualities, in 2018 it continued to monitor the market so as to promptly catch any signal the market might have sent out both in terms of potentially risky situations and opportunities.

#### FINANCIAL RISK

RadiciGroup is exposed to certain financial risks associated with its operations. These risks are kept under constant review by the centralized function of Finance, Credit Management and Procurement, an approach aimed at anticipating potential negative scenarios and taking appropriate action to mitigate them. In particular, in 2018 the Group had the need to monitor the following potential risks:

- Credit risk
- Liquidity risk
- · Interest rate risk
- · Exchange rate risk

Such analysis supplements the process of identifying material topics. The analysis revealed that the organization is not exposed to particularly risky situations, either internal or external, and the topics illustrated above may be ranked as relevant

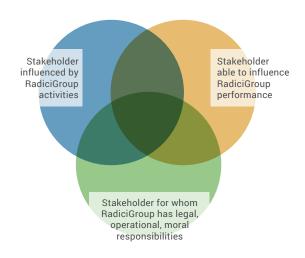
but not strategic, albeit worthy of continual close monitoring.

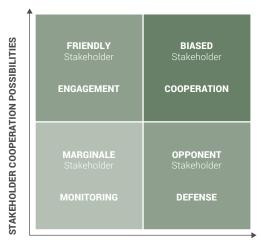
### Stakeholder Mapping and approach to stakeholder engagement

Together with the context analysis and an assessment of the risks, during the reporting year RadiciGroup also undertook a revision of stakeholder mapping, carried out by the GRI Coordination Group, which gave a closer look at the context and brought to light aspects (and stakeholders) previously not taken into consideration. New categories were added, while old ones were modified to more closely reflect the reality of the Group.

In addition, a weighted map of the stakeholders was built based on their level of interaction with RadiciGroup and the kind of relationship the Group wishes to have with them.

#### Stakeholder assessment grid





STAKEHOLDER POSSIBLE THREATS

This is the stakeholder list resulting from the work described above:

- Environment
- Trade associations
- · Group companies
- Shareholders
- · Board of Directors and management
- Customers
- Communities
- · Local communities
- Competitors
- Suppliers
- · Banks and insurance companies
- Workers
- Media
- · Academic and research institutions
- · Control and monitoring bodies
- Trade union organizations

For each of these categories of stakeholders, the expectations, risks and opportunities related to their engagement have been taken into consideration, as already reported in numerous previous Sustainability Reports. This is a table that summarizes the relevant points regarding RadiciGroup's relationship with stakeholders.

#### MAPPING OF STAKEHOLDERS, THEIR LEGITIMATE EXPECTATIONS AND RISKS

STAKEHOLDERS	STAKEHOLDERS' LEGITIMATE EXPECTATIONS	RADICIGROUP RESPONSE
WORKERS	<ul> <li>Ethical employment relationship</li> <li>Stable employment relationship</li> <li>Health and safety</li> <li>Fair compensation</li> <li>Career path</li> <li>Training and education</li> </ul>	Compliance with legal obligations RadiciGroup Code of Ethics Policies and procedures of voluntary management systems (QSE) Training and education programmes and assessment of competencies and performance Succession plans Assessment plans
CUSTOMERS	<ul> <li>Products and/or services meet expectations</li> <li>Fair and transparent relations</li> <li>Collaboration and relationship continuity</li> <li>Joint R&amp;D projects</li> <li>Consulting on end customer needs, global problem solving and compliance obligations</li> </ul>	<ul> <li>Clarity of specifications</li> <li>Quality consistency and quality improvement policies</li> <li>Implementation of Code of Ethics principles</li> <li>Teams dedicated to joint projects</li> <li>Dedicated and professionally competent staff</li> </ul>
SUPPLIERS	<ul> <li>Fair value (price)</li> <li>Stable relationship</li> <li>Fair and transparent relations</li> <li>RadiciGroup solvency</li> <li>Joint development projects/activities</li> </ul>	<ul> <li>Supplier Code of Conduct</li> <li>Procurement procedures</li> <li>General procurement terms and conditions</li> <li>Compliance with purchase specifications</li> </ul>
GROUP COMPANIES	<ul> <li>Products and/or services meet expectations</li> <li>Fair and transparent relations</li> <li>Collaboration and strengthening of value chain</li> </ul>	<ul> <li>Guidelines and procedures</li> <li>Assistance and consulting</li> <li>Network building</li> <li>Synergies</li> <li>Knowledge sharing</li> </ul>

RADICIGROUP RISKS	RISK MITIGATION	RADICIGROUP OPPORTUNITIES	ENGAGEMENT METHODS
<ul> <li>Demotivation (RR + OR + FR)</li> <li>Disengagement (OR)</li> <li>Absenteeism (OR)</li> <li>Corruption (RR + FR + PR)</li> <li>Fraud (RR + FR + PR)</li> <li>Reputational risk (RR)</li> </ul>	Code of Ethics RadiciGroup Human Resources policies Adoption of voluntary management systems (QSE) MBO and benefits Career management Engagement Training and education activities	Retention     Motivation     Efficiency	Training, development and assessment programmes Internal communications Engagement Special targeted events "Sto bene [I feel good]" (WHP)
Complaints (OR) Insolvency (FR) Customer losses (OR + FR) Ineffective customer approach strategy (OR) Reputational risk (RR) R&D work delayed or inadequate (OR) Supply chain risk due to disappearance of market and/or product substitution (OR)	Management and technical assistance     Complaint management     Credit management     Controlling activities     Strategic and operational marketing activities     R&D activities     CRM activities     Cultivation of customer loyalty     Search for new customers     Customer satisfaction activities     Monitoring of supply chain     Monitoring of production and replacement processes	Market leadership     Reputation     Retention     Business continuity and profitability     Conquest of new markets	Networking and business meetings     Knowledge sharing     Partnerships and joint projects     Communication     Targeted special events and trade fairs
Non-conforming products / services (OR) Business continuity not guaranteed (PR) Corruption (RR + FR + PR) Fraud (RR + FR + PR) Abuse of RadiciGroup intellectual property (PR) Failure to comply with legal requirements (RR + PR) Failure to comply with the Supplier Code of Conduct (RR + PR) Reputational risk (RR)	Business risk analysis     Controlling activities     Supplier Code of Conduct     Procurement procedures and purchase specifications     Risk surveillance activities	Reputation     Business continuity     Synergies     Development	Networking and business meetings     Knowledge sharing     Partnerships     Acceptance of the Code of Conduct     Communication
Misalignment of parent company and subsidiary policies (OR)     Reputational risk (RR)	<ul> <li>Integrated management systems</li> <li>Group-wide projects and work groups</li> <li>Coordinating activities</li> </ul>	Synergies     Optimization     Business opportunities	Networking and business meetings     Group-wide teams     Knowledge sharing     Communication

STAKEHOLDERS	STAKEHOLDERS' LEGITIMATE EXPECTATIONS	RADICIGROUP RESPONSE
SHAREHOLDERS	<ul> <li>Return on invested capital</li> <li>Business profitability</li> <li>Increase in intangible value</li> </ul>	<ul> <li>Strategic plans and related budgets</li> <li>Management systems</li> <li>Acquisitions</li> <li>Reorganizations</li> </ul>
BOARD OF DIRECTORS & MANAGEMENT	<ul> <li>Business profitability</li> <li>Increase in intangible value</li> <li>Fair and transparent relations</li> <li>Collaboration and strengthening of value chain</li> </ul>	<ul> <li>Strategic plans and related budgets</li> <li>Management systems</li> <li>Acquisitions</li> <li>Reorganizations</li> <li>Guidelines and procedures</li> <li>Network building</li> <li>Synergies</li> <li>Knowledge sharing</li> </ul>
BANKS & INSURANCE COMPANIES	<ul> <li>Profits</li> <li>Stable relationship</li> <li>Fair and transparent relations</li> <li>RadiciGroup solvency</li> </ul>	<ul> <li>Short- and medium-term economic plans and policies</li> <li>Clear economic/financial reporting compliant with laws and regulations</li> <li>Third-party audited financial statements</li> <li>Policies for reducing financial indebtedness</li> </ul>
ENVIRONMENT	Continuity     Protection     Respect     Equilibrium	Sustainable development
TRADE UNION ORGANIZATIONS	<ul> <li>Freedom of association</li> <li>Dialogue</li> <li>Trust</li> <li>Collaboration</li> <li>Communication</li> </ul>	<ul> <li>Compliance with legal obligations</li> <li>RadiciGroup Code of Ethics</li> <li>Presence of trade unions</li> <li>Regular meetings with trade union organizations</li> </ul>
LOCAL COMMUNITIES & LOCAL INSTITUTIONS (SCHOOLS, ETC.)	<ul> <li>Environmental protection and safety</li> <li>Local community-friendly employment policies (local resources, people with disabilities, youth, etc.)</li> <li>Economic and social support</li> <li>Transparency and communication</li> <li>Leadership in training local resources</li> </ul>	<ul> <li>Responsible medium- to long-term environmental policies</li> <li>Employment policies favouring local human resources</li> <li>Sustainability Report and constant communication</li> <li>Social and philanthropic marketing</li> </ul>

RADICIGROUP RISKS	RISK MITIGATION	RADICIGROUP OPPORTUNITIES	ENGAGEMENT METHODS
Market risk (SR)     Financial risk (FR)     Reputational risk (RR)	<ul><li>Risk prevention and response</li><li>Controlling activities</li><li>Marketing and communication policies</li></ul>	Business continuity and profitability	<ul> <li>Daily strategic and operational engagement</li> <li>Reporting activities and programme meetings</li> <li>Communication</li> </ul>
<ul> <li>Market risk (SR)</li> <li>Financial risk (FR)</li> <li>Reputational risk (RR)</li> <li>Misalignment of parent company and subsidiary policies (OR)</li> </ul>	Controlling activities     Marketing and communication policies     Integrated management systems     Group-wide projects and work groups     Coordinating activities	<ul> <li>Business continuity and profitability</li> <li>Synergies</li> <li>Optimization</li> <li>Business opportunities</li> </ul>	<ul> <li>Daily strategic and operational engagement</li> <li>Reporting activities and programme meetings</li> <li>Knowledge sharing</li> <li>Group-wide teams</li> </ul>
Increase in interest rates (FR)     Lack of financing (FR)     Bank bankruptcy (FR)	Direct ongoing collaboration with banks     Policies and plans aimed at strengthening RadiciGroup financial soundness and reputation     Controlling activities     Search for financing at best interest rates     Careful monitoring of banks	Reputation     Trust     Business continuity	Networking and business meetings     Sharing information     Partnerships     Communication
<ul> <li>Lack of raw materials (OR)</li> <li>Catastrophic events (PR)</li> <li>Accidental events (OR)</li> </ul>	<ul> <li>Compliance with legal obligations</li> <li>Prevention activities</li> <li>Voluntary plans and actions for environmental protection</li> </ul>	Business continuity     New markets	• Policies as per Sustainability Report
Strikes (OR)     Reputational risk (RR)     Legal proceedings (OR + FR + RR)	<ul><li>Concerted arrangements</li><li>Joint projects</li><li>Legal action</li></ul>	Reputation     Corporate climate	Concerted arrangements     Development of joint projects
Environmental risks (PR)     Health and safety (PR)     Less employment in community (PR)     Risk of social context degradation (PR)     Reputational risk (RR)	Compliance with legal obligations     RadiciGroup Sustainability policies and integrated management systems     Implementation of RadiciGroup employment policies     Cultivation of relationships with local communities (e.g., open factories)	Reputation     Mutual support     Local professional pool	Communication     Targeted special events     Activities as per     Sustainability Report     RadiciGroup Education     programme

STAKEHOLDERS	STAKEHOLDERS' LEGITIMATE EXPECTATIONS	RADICIGROUP RESPONSE
CONTROL AND MONITORING BODIES	Compliance with legal and regulatory obligations	Compliance with legal and regulatory obligations
COMPETITORS	<ul> <li>Fair and transparent relations</li> <li>Fair competition</li> <li>Joint action for the protection of common interests</li> </ul>	<ul> <li>Application of the Code of Ethics</li> <li>Implementation of RadiciGroup Vision, Mission and Values</li> <li>Active participation in production chain/sector programs and projects</li> </ul>
MEDIA	Clarity Transparency Ongoing relationship Mutual trust	RadiciGroup marketing policies     Consistent communication policies
ACADEMIC & RESEARCH INSTITUTIONS	<ul><li> Knowledge sharing</li><li> Employment opportunities</li><li> Support</li></ul>	<ul><li>Internships</li><li>Education days</li><li>Sponsorships</li></ul>
TRADE ASSOCIATIONS	<ul> <li>Collaboration</li> <li>Trust</li> <li>Innovation proposals</li> </ul>	<ul> <li>Dialogue and participation</li> <li>Transparency and communication</li> <li>Training and information</li> <li>Sharing of knowledge and experiences</li> </ul>
COMMUNITIES	A better world     Meeting their needs	Sustainable development

#### \* LEGEND

RR - REPUTATIONAL RISK

OR - OPERATIONAL RISK

PR - PURE RISK

SR - STRATEGIC RISK

FR - FINANCIAL RISK

RADICIGROUP RISKS	RISK MITIGATION	RADICIGROUP OPPORTUNITIES	ENGAGEMENT METHODS
<ul> <li>Sanctions (OR)</li> <li>Sequester and closing of plants (OR+RR)</li> <li>Conviction and sentencing (OR)</li> <li>Reputational risk (RR)</li> </ul>	<ul> <li>Adoption of certified management systems</li> <li>Prevention activities</li> <li>Training and education</li> <li>Organizational model 231</li> </ul>	Business continuity     Continual improvement of management systems     Saving     Reputational solidity     Innovation	Communication     Sharing and cooperation     Transparent information
Loss of market share (OR+FR)     Ineffective joint marketing-R&D strategy and management systems (OR)     Reputational risk (RR)     Ineffective communication strategy (OR)	Strategic and operational marketing activities     Membership in industry and sector associations     Monitoring of internal activities     CRM activities	Collaboration through trade associations to safeguard the market     Industry-wide innovation     Reputation	Networking and business meetings     Social events     Communication
Reputational risk due to lack of information or spread of misleading information (RR)	Ongoing media communication activities of corporate and BA functions	• Reputation	Press Office activities     Active social media presence     Engagement in initiatives
Misalignment of skills offered vs. skills required by RadiciGroup (OR)     Reputational risk (RR)	<ul> <li>Strong relationships with schools and universities</li> <li>Joint projects and training programmes</li> </ul>	Reputation     Pool of competencies and professional profiles	<ul> <li>Targeted special events</li> <li>Career days</li> <li>Collaboration (training and profile selection)</li> <li>Communication</li> </ul>
Risk of conceding to unshared decisions (OR) Weakened network and loss of lobbying capacity (RR) Reputational risk (e.g., activist organization) (RR)	Active presence of     RadiciGroup representatives in associations as influencers.     Transparent communication about sustainability results: GRI, PCRs, EPDs, LCAs, etc.	Reputation     PR and influencer activities	Participation in activities and decision-making processes     Communication
Market risk (SR)     Reputational risk (RR)	Attention     Knowledge	Innovation     New markets	Communication     Dialogue     Networking and business meetings     Policies as per Sustainability Report

#### **Materiality analysis**

To further strengthen its sustainability strategy, during 2018 and 2019, RadiciGroup also conducted a substantial review of the materiality analysis system, basing it on the context analysis and the stakeholder mapping described above and on the materiality analysis for the years 2015, 2016 and 2017.

The stronger methodology led to more clarity in objectives, an improved crosscutting approach and more concrete engagement of some categories of stakeholders, namely: local communities, suppliers, and employees. Those stakeholders were selected based on their physical or strategic proximity to RadiciGroup and their increasing level of interaction with the Group.

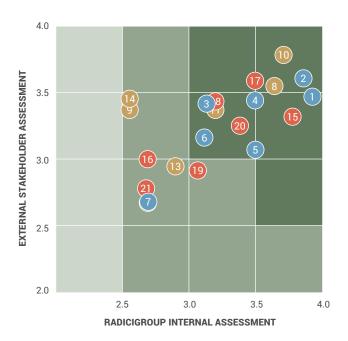
Through a questionnaire, the members of the Sustainability Team were asked to express their assessment of the general importance of each topic, the potential impacts of the topic on the Group (economic, reputation or any other kind of impact) and how the topic was being managed by the Group. This assessment was the internal materiality analysis, validated by the Group top management.

A similar assessment request was extended to some key RadiciGroup suppliers, to a representation of the inhabitants of the Province of Bergamo, diversified by place of residence, age group, employment and educational level, and to the approximately 170 employees who had attended a training course on the Sustainability Report held in 2018.

Suppliers, employees and local residents were also asked to express their opinion on the general importance of each topic and the potential impacts that each topic could have on the Group. Finally, they were asked what level of engagement they would like on each topic. This last step was, among other things, a valuable source of information on engagement. This assessment constituted the external materiality analysis.

	In the table below are listed the topics on which the stakeholders expressed their opinion:					
		1 Energy				
	MENT	2 Emissions				
	EVELOF	3				
	NTAL D	4 Water				
	ENVIRONMENTAL DEVELOPMENT	5 Waste				
	ENVIR	6 Raw materials				
		7 Product sustainable innovation and measurement of product environmental impacts				
		8 Employment				
	E	9 Equal opportunity and non-discrimination				
	SOCIAL DEVELOPMENT	10 Occupational health and safety				
	DEVEL	11 Employee training and education				
	SOCIAL	12 Supplier social assessment				
		13 Interaction with local communities				
		14 Consumer health and safety				
COMONIC O MANACENTA DEVELOPMENT	AENT	15 Economic performance				
	VELOPI	16 Labelling and marketing communications				
	ENT DE	17 Customer satisfaction				
	NAGEM	18 Compliance				
	S & MAI	19 Value chain traceability				
	DNOMIC	20 Certifications and integrated management systems				
	Ä	21 Listening to the communities				

The topics brought to light by the internal and external materiality analyses are shown in the following MATERIALITY MATRIX.



#### **MATERIALITY CRITERIA**

#### A = Relevant and strategic (i.e., material) topics

Areas of interest and operation critical for both RadiciGroup and the stakeholders that need to be taken into consideration by management as strategic.

#### B = Relevant but non-strategic topics

Areas relevant to corporate performance and stakeholders but not central to business strategy (some topics may be considered material in view of future strategies, especially those on which stakeholder attention is growing).

#### C = Non-relevant topics

Low-priority areas for RadiciGroup and its stakeholders but which must be monitored in any case.

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RADICIGROUP

The 2018 approach to materiality analysis made it possible to carry out a multi-stakeholder analysis, which was essential for the Group to create an effective strategy of effective and shared sustainability. Looking to the future, the methodology is expected to be improved further and the materiality analysis extended (already likely in 2019, to the customer category). Furthermore, a way will need to be found to hear the environment as a stakeholder through the voices of some of its representatives.

The topics considered material were subject to reporting and included in in this Sustainability Report, objectivized through the indicators and illustrated by case histories. The table below allows the reader to identify the material topics in the various chapters.

#### TABLE OF THE MATERIAL TOPICS INCLUDED IN THE REPORT

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MENTA	4 Waste	Page 117
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ECON	20 Certifications and integrated management systems	Page 100





# Assurance statement

THIS SUSTAINABILITY REPORT IS VALIDATED BY THE THIRD-PARTY CERTIFICATION COMPANY CERTIQUALITY TO BE IN ACCORDANCE WITH THE REPORTING MODEL "GLOBAL REPORTING INITIATIVE" – GRI STANDARDS: CORE OPTION.



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#### AUDIT OF THE 2018 RADICIGROUP SUSTAINABILITY REPORT

Audit Scope

Certiquality S.r.I. has been selected by Radici Partecipazioni S.p.A. to review the RadiciGroup Sustainability Report for the year 2017, in order to assess compliance with the guidelines of the Global Reporting Initiative (GRI) Standards in accordance with the Core option which incorporates the minimal standard disclosure and the valuation of at least one performance indicator for each identified material aspect. This letter describes the activities which were conducted and reports on the audit findings and on any recommendations for improvement.

The audit was carried out with reference to the "GRI Standards", as published by the GRI in 2016, with a particular focus on:

- checking which principles were used in defining Report Content (including stakeholder inclusiveness, sustainability context, materiality and completeness);
- proper Report Boundary Setting:
- checking which principles were used in ensuring the quality of the report (bulance, comparability, accuracy, timeliness, clarity and reliability of the system for managing data and information);
- compliance of the Report Content in accordance with the guidelines of the GRI Standards (Core option).

The audit was conducted using audit procedures which were adopted by Certiquality in compliance with the UNI (N) ISO 19011-2018 standard.

#### Audit Methods

Audit activities were carried out by following the modes operand below:

- analysis of the document entitled "Bilancio di Sossenibilità RadiciGroup 2018", with special reference to the principles and contents described in the GRI guideline (Report Boundary Setting, Standard Disclosures and Performance Indicators);
- interviews with the staff directly or indirectly involved in the preparation of the document and in the
  procedures for data and information management (from data collection to subsequent processing);
- review of documents and records available at the headquarters of Radici Partocipazioni S.p.A. in Gandino and in a representative sample of production plants included in the Report Boundary.
   Noyfil Chignolo d'Isola, Noyfil Andalo Valtellino (cfo Chignolo), Tessiture Pietro Radici Gandino, Radicifil Casnigo; Radici Plastics Suzhou (China); Radici Plastics GmbH (Germany); Radicifibras (Brasil), by conference call organised at Radici Plastecipazioni in Gandino.
- Applicable procedures for data collection, recording and processing as well as technical and regulatory aspects of company activities were analysed.

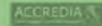
Economic and financial data were sourced from the consolidated balance sheet of Radici Partecipazioni S.p.A., which had been the object of a prior voluntary accounting undit (please refer to the Deloitte & Touche report dated 29th May 2019) and therefore were not further assessed.

Assessment of the management of the data and information contained in the report was conducted by sampling, taking care to ensure adequate coverage of all aspects touched upon in such document.















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To be discovered

#### Audit Findings and Recommendations

The 2018 RadiciGroup Sustainability Report is the second edition to have been drafted according to the GRI Standards.

The report provides a comprehensive overview of the overall connections of the group companies to the context in which they operate. Numerical Performance Indicators are represented over a three-year period from 2016 to 2018, with some references to a longer period being included in order to provide an assessment of performance trends since the start of the GRI project. Information is presented in a clear and balanced manner and the language used, supplemented where necessary by explanatory notes, makes the report intelligible to an audience which may not be technically-minded.

The Report Boundary does not contain any significant exclusion. The exclusion of environmental aspects concerning the group's head office and the exclusion of all aspects concerning its business units, which are mentioned in the report, are not significant when taking the group into consideration and is therefore justified.

Both the standard disclosure and the representation of the indicators show a good degree of compliance with the requirements of the GRI guidelines, partly improved compared to last year, although some margin for improvement remains. Among the most significant improvements compared to last year, we note the structure of the process of defining material aspects, through the preparation of specific questionnaires presented to representatives of the main stakeholders (GRI group and holding manager; workers; suppliers; local communities). With regard to the list of aspects on which a stakeholder assessment was requested, it could be useful to highlight the recycling of materials, which is repeatedly referred to in the text as a strategic factor and it not among the topics submitted to stakeholder evaluation. Another positive aspect is the tirrely adoption of some of the new indicators relating to water aspects (GRI-303) and occupational health and safety (GRI-403), with the reporting of new data and information that complete an already broad and comprehensive picture.

The data collection and data processing system is sufficiently well-structured and documented at the central level and has been improved at the local level, even if from the checks carried out on the sample sites some margin for improvement is confirmed, especially with respect to foreign sites.

The checks performed do confirm the existence of some margin of improvement for specific aspects of limited importance, such as the criteria for quantifying training hours or lost days due to accidents, with a view to standardising the criteria for data collection between the various companies and plants of the group and bringing them further in alignment with the GRI standards. More generally, it is recommended to pursue further the constant improvement of the data management system, especially as regards the information transmitted to foreign sites regarding the criteria for data collection and the checks to be carried out on the collected data.

#### Audit Conclusions

The review of the 2018 "Bilancia off Scoteribilità RadiolGroup" has not given rise to any significant issues, neither as regards compliance with the principles of the guidelines of the GRI Standards, nor as regards its content in terms of reported information or Performance Indicators, while still leaving some room for improvement. The audit activities conducted have not resulted in any findings to suggest that the Report does not meet the Core option requirement level.

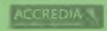
11th July 2019

Coniquality S.F.I.
THE GENERAL MANAGER
ROSPING FRANCES











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