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## **HOW TO READ THIS REPORT**

This Sustainability Report was made according to the Global Reporting Initiative reporting model - Version 4 "in accordance - core" (*STANDARD DISCLOSURES G4-32*) and according to the guidelines set by the Radici Partecipazioni Procedure PR08 - MANAGEMENT APPROACH FOR SUSTAINABLE DEVELOPMENT.

In it one can identify some thematic routes that can be considered together or separately. They meet the need of different users of the report to catch with greater immediacy some aspects rather than others.

This is what you can find:



• THE TECHNICAL ROUTE: goes over the origins of this Report step by step, from the relevance analysis to the creation of the materiality matrix.

Why take this route? Because it tells which companies were involved and what principles were followed for the selection of topics and for the presentation and description of the various aspects. It relates the "technical" characteristics of this document.



 THE STAKEHOLDERS' ROUTE: describes how the different categories of Stakeholders were identified, what were the assessments of their legitimate expectations, how they were informed and involved by RadiciGroup.

Why take this route? To learn about the work that RadiciGroup does together with its Customers, Suppliers, Employees, to Local Communities.



• THE INDICATORS ROUTE: spells the facts on RadiciGroup's trends in relation to social, environmental and economic issue

Why take this route? To learn about the Group's performance in terms of impact, investment, research and development.

Each of these routes is graphically marked for easy identification. In this Report you can also find:

#### **EXCELLENCE BOXES**

The Excellence Boxes: they describe results, activities and stimulating initiatives of the individual Companies.

## **KNOW THYSELF**

RadiciGroup draws inspiration from Socrates' famous exhortation for its commitment to a careful analysis of its environment of operation. We are doing this in order to identify strengths and weaknesses, along with the risks and opportunities associated with our operations and in particular the relationship with our stakeholders, the cornerstone for creating of tangible and intangible value for the Group.

The result of explorative work carried out in 2015 and part of 2016, as reported here, shows a constantly evolving RadiciGroup image, according to its multiple frames of reference.

THE SPIRIT OF GIANNI RADICI:
WE DO NOT REMEMBER HIM,
HE REMEMBERS US - WITH FIGURES
IN HAND - WHO WE ARE, WHO WE WERE
AND WHO WE INTEND TO BE.

The above are the opening words of the collection of reflections "99r + 1" ... 99 roots + 1 soul - that RadiciGroup dedicated to its founder. [TN: Radici is Italian for 'roots']

The first 33 reflections are related to the history of Gianni Radici's area of origin. This is followed by 33 reflections on the world of industry that Gianni, his family and his collaborators were able to create. Finally, the present and future outlook of industry are the issues of the last 33 communicative roots of the book.

On the occasion of the tenth anniversary of Gianni Radici's passing, RadiciGroup included texts and images taken from "99R + 1" to accompany its Sustainability Report.



# STANDARIO DISCLOSURES

STANDARD DISCLOSURES G4-2 and 56

VISION, MISSION, VALUES
LETTER FROM THE PRESIDENT
RADICIGROUP: ABOUT US
MACROECONOMIC CONTEXT AND STRATEGIES
ECONOMIC INDICATORS
SHAREHOLDERS & STAKEHOLDERS
RADICIGROUP FOR SUSTAINABILITY

## **OUR VISION**

• To be one of the leading chemical groups in the polyamide, synthetic fibres and engineering plastics production chain.

## **OUR MISSION**

- To promote the development of our businesses while pursuing our Group values and culture.
- To pursue our vision by valorising and optimizing our resources, establishing strategic alliances and searching for new markets, including niche markets.
- To embed sustainability into new product and applicationdevelopment.

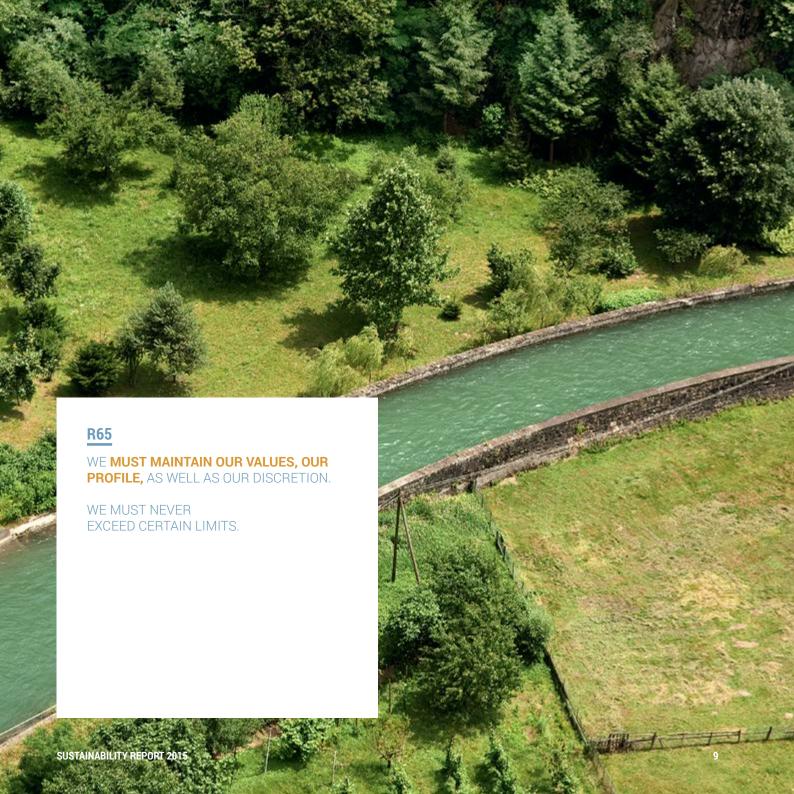
## **OUR VALUES**

- Putting people at the centre of everything we do, 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 to comply 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 and operating systems to ensure the safety of our employees, our community and the environment.
- Our responsibility as a company for our workers, productionsites and communities.

## **OUR CODE OF ETHICS**

"The success of a company is always based on values such as transparency, credibility and loyalty; these principles are the fundamental and inalienable heritage of a company, its reputation.

(...) The principles that should inspire the activities of RadiciGroup are those of a strict observance of the law, fair competition and respect of the legitimate interests of Customers, Suppliers, Employees, Shareholders, the Institutions and the Collective. Due to the complexity of the situations in which RadiciGroup has to operate, every corporate behaviour must be immediately attributable to these principles."



## THE GUIDELINES OF OUR SUSTAINABILITY PROJECT

#### STANDARD DISCLOSURES G4-2

A comprehensive approach to sustainability, making it a strategic model and transforming sustainability measurement systems into management tools integrated in the daily business activities.

#### To learn more:

Letter from the President - page 12

Product Indicators - The Measurement of Impacts - (Specifically PR1) - page 102

"Our future engagements" - at the bottom of each chapter on the GRI indicators

Investments in environmental and social sustainability. A mid-term evaluation of business activities and a long-term evaluation of social investment.

#### To learn more:

Economic Indicators (EC) - page 64 Social indicators (SO) - page 80

Work for stakeholders to know and get involved in the building of a common and shared sustainability framework.

◆ To learn more: Mapping of Stakeholders and their expectations, projects involving Stakeholders - page 33

The timely and rigorous measurement of environmental, economic and social indicators.

#### To learn more:

Indicators according to the Global Reporting Initiative model - page 63

Product Strategies that focus on biopolymers, recycling and the study of products obtained from traditional sources but with limited impact.

#### To learn more:

Our Research and Development Projects – page 102

Our Products with limited environmental impact – page 110

A way to produce, distribute and retrieve based on a circular economy model. A system designed with a regenerative perspective, where products are already eco-designed, where wastes and residues are converted into resources.

#### To learn more:

Our Products with limited environmental impact – page 110

The graphic tables related to recycling (polyamide and polyester). – pages 106-107

Indicators related to the environment (EN) - Raw Materials and Waste - page 86

#### The continuous improvement of our performance

• To learn more: : "Our future engagements" - at the bottom of each chapter on the GRI indicators,

#### An increasingly broad and comprehensive process of communication of the sustainability project

To learn more: Communication tools aimed at informing and involving Stakeholders – page 37





## LETTER FROM THE PRESIDENT

STANDARD DISCLOSURES G4-1

In 2015, RadiciGroup's business development was accompanied by positive financial results due to continued focus on operational and financial efficiency and our Group's watchful management policy.

The performance of our Business Areas was good overall, although there were some challenges in some markets in difficulty that tested our ability to react and adapt.

In this context, RadiciGroup's commitment to sustainability became even stronger, a true strategic asset and competitive factor.

From an environmental perspective, like every year, we worked for the accurate and certified measuring of our impacts through the PEF (Product Environmental Footprint) and EPD (Environmental Product Declaration) projects. This was done in order to undertake plans of mitigation or even prevention of said impacts. In the course of 2015, we were in the frontline on a number of projects to study products designed to be easily recycled or have very low environmental impacts right from the raw materials.

In this regard, the European Commission's Directive on Circular Economy did not find us unprepared. The willingness to invest in medium term product R&D - in particular as regards recycling processes and organic polymers in an eco design context - is the sign of the important change of mentality that has been taking place in our Group for some years and the progressive rooting of the strategic and economic value of sustainability.

The awards and voluntary certifications obtained by our Companies are also evidence of a measurable and concrete engagement that lasts over time and lays the foundation for a sustainable future.

And again, focus on the awareness of public opinion regarding voluntary lists of prohibited substances and seeking a dialogue with those who made these requests were the expression of an attitude open to constructive dialogue and innovation.

Aware that the basis for a solid and sustainable future are being built in the present, in 2015 we increased our commitment to training. The hours of training in our Group grew in absolute terms and per capita. This was an important sign of awareness that a trained and motivated team of people is essential in view of the challenges related to environmental issues, and not only. Safety, for example, is and will be an important challenge for all our Companies.

Looking together to the future of our Group, I am pleased to report that in 2015 we had some new hires with permanent contracts, demonstrating the will to establish a long-term contractual relationship with our people.

As for governance, we laid the foundations for some important projects to take shape in 2016 and to guide our activities in the years to come. In particular, the Radici Partecipazioni Board of Directors approved the introduction of new codes of conduct related to Customers and Suppliers and the beginning of a process for the renewal of the Employee Code of Ethics. These guidelines are meant to be a living part of operations in each company, helping the Group to evolve towards an ever closer working relationship with our stakeholders.

As for them, in 2015 we initiated numerous activities for knowledge and dialogue, as shown by the as many projects discussed in this Report.

Furthermore, between 2015 and 2016, the holding company Radici Partecipazioni was ISO 9001:2015 certified, first among the companies of the Group. The procedures of the holding company, in which ample space is devoted to issues of sustainability, are now destined to become

#### **R77**

RADICIGROUP'S OBJECTIVE FOR 2020 IS TO BE A LEADER IN THE RESEARCH, DEVELOPMENT AND PRODUCTION OF NEW-CONCEPT, HIGH-VALUE ADDED SUSTAINABLE MATERIALS, SUCH AS BIOPOLYMERS MADE FROM RENEWABLE RESOURCES, A NEW SYNTHESIS OF NATURE AND SCIENCE

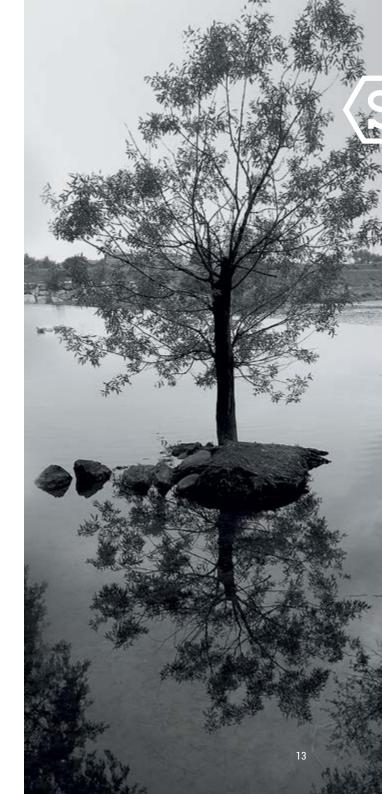
guidelines for all RadiciGroup Companies.

Finally, the adoption of the GRI-G4 reporting standards and the revision of the 2014 materiality matrix presented an opportunity to address issues not previously considered. An important stimulus to look at ourselves in the mirror and identify areas of improvement on which to invest with conviction and commitment, while always aware of our many strengths.

Given the many positive results presented in this Report and the challenges that still lie ahead, with this phrase by great champion Michael Jordan, "Talent makes you win a game. Intelligence and teamwork make you win tournaments", I want to thank my "team", the Radici-Group people. To their intelligence, tenacity and passion we owe the Group's success.

I would also like to thank the Customers, Suppliers, Local Communities and all of our Stakeholders with whom we share the path towards sustainability.

Angelo Radici
President of RadiciGroup



#### QUALITY, HEALTH & SAFETY AND ENVIRONMENTAL CORPORATE POLICY

STANDARD DISCLOSURES G4-2 and 56

Reliability, fairness, transparency. Putting people at the centre of everything RadiciGroup does. These are some of the distinctive features of RadiciGroup. The Group's business operations have always been based on values and behaviours aimed at safeguarding and promoting the health of employees and working places, safety at work, respect for the environment, and a real, sustainable development.

Through the continual improvement of its activities, of communication transparency, of the quality and performance of its products and services, RadiciGroup's main mission is the satisfaction of its stakeholders: customers, shareholders, employees and the local communities where it operates.

Such a policy, however, cannot be implemented without diligently observing environmental and worker health and safety regulations, as well as regulations aimed at the prevention of incidents that could harm products and/or production processes. To this end, RadiciGroup has adopted Quality, Health and Safety, Energy and Environmental Management Systems at its companies. These systems are certified by accredited certifying bodies and are based on well-defi ned procedures, which are understood by evervone at all levels of the organization. Furthermore, the adopted management systems are subject to continual improvement in line with technical advancements, the latest scientifi c knowledge and market demand.

To ensure the quality of the products and services supplied, the Group has adopted tools, such as Six Sigma methodology, to implement robust and reliable processes, capable of reducing or preventing non-conformities and meeting the most stringent requirements.

As regards the environment, RadiciGroup has long striven for continuous improvement in performance and has achieved visible and measurable results, by investing funds and human and technological resources for monitoring and reducing its environmental footprint and encouraging the environmental commitment of its customers and suppliers. To this aim, the entire supply chain has been taken into consideration and the environmental footprint of the main products and services has been measured according the EU Product Environmental Footprint (PEF) auidelines. Whenever possible, principles inspired by eco-design and circular economy have been

applied.

RadiciGroup management is aware that its workers' health and safety is a priority and of central importance – market success and productivity notwithstanding. Group management ensures compliance with safety standards provided for by the applicable laws and regulations and has long pursued an agenda of enhancing prevention and control in order to reduce accident risks. Furthermore, management promotes transparency and collaboration in relations with local authorities and communities.

As part of its commitment to sustainable development. RadiciGroup will be reporting on Corporate Social Responsibility (CSR) according to the guidelines set forth by the Global Reporting Initiative (GRI), the leading internationally recognized framework for reporting economic, environmental and social sustainability.

Moreover, to raise the sense of awareness and responsibility of its employees as for the abovementioned principles, to encourage people to act according to such principles. RadiciGroup continuously invests in specific training programs..

This Group Policy is supplemented by the policies of the individual Group companies, as well as by the guidelines set forth in the annual Sustainability Reports.

March 2016

Il Presidente up Zaric Il Vicepresidente Maurizio Radici



#### **R92**

A REAL ECOLOGICAL APPROACH ALWAYS BECOMES A SOCIAL APPROACH TOO.

THE CRIES OF THE EARTH NEED TO BE HEARD AS MUCH AS THE CRIES OF THE POOR.

A NEW MAN IS ESSENTIAL FOR A NEW RELATIONSHIP WITH NATURE.

A NEW ECOLOGY REQUIRES A NEW ANTHROPOLOGY.

SUSTAINABILITY REPORT 2015



## RADICIGROUP - ABOUT US

STANDARD DISCLOSURES G4-4

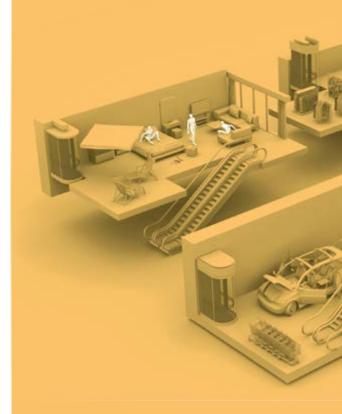
RADICIGROUP, an Italian manufacturer with over 70 years of history, is a leading worldwide producer of a wide range of chemical intermediates, polyamide polymers, engineering plastics, synthetic fibres and nonwovens. The Group capitalizes on its excellence and know-how in chemicals to develop and realize products for numerous applications in a variety of industrial sectors, including automotive, apparel, furnishings, sport, electrical/electronics, household appliances, consumer goods and construction.

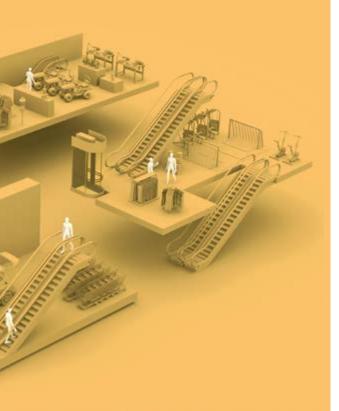
Through the years, RadiciGroup has transformed its organization into an industrial multinational with production and sales sites around the globe: Europe (Italy, Czech Republic, France, Germany, Hungary, Romania, Switzerland and the United Kingdom), North America (the United States and Mexico), South America (Argentina and Brazil) and Asia (China and India).

RadiciGroup's major strength and distinctive feature is its vertically integrated polyamide production. The Group has the ability to produce polyamide (commonly known as nylon) and process it into a broad portfolio of polymers, engineering plastics, synthetic fibres and nonwovens. But vertically integrated polyamide production is not the whole story. Today, RadiciGroup is also a European leader in the manufacture and processing of polyester yarn. In this business, RadiciGroup's control of the production chain starts with yarn spinning and includes all the various downstream processes.

Each of the RadiciGroup Business Areas – Specialty Chemicals, Performance Plastics

and Synthetic Fibres & Nonwovens (Performance Yarn, Comfort Fibres and Extrusion Yarn) is committed to deliver its customers performance, innovation and sustainability through all its products and services. RadiciGroup's approach to sustainability can be summed up in three words: consistent concrete action.





#### OUR SECTORS

STANDARD DISCLOSURES G4-8

#### PRODUCTS FOR THE HOME SECTOR

Yarns for curtains, upholstery, carpets and wall-to-wall carpets.

Engineering plastics for household appliances and the electrical/electronic sector. Nonwovens for roofing, filtration, furnishings and disposable table tops.

#### PRODUCTS FOR APPAREL

Yarns for clothing, lingerie, beachwear and sportswear. Nonwovens for protective disposable clothing.

#### PRODUCTS FOR THE AUTOMOTIVE SECTOR

Engineering plastics for car interiors and engine components.

Yarns for car interiors and airbags. Nonwovens for headliners, seatings and airbag covers.

#### PRODUCTS FOR THE INDUSTRIAL SECTOR

Yarns and engineering plastics for special applications in the industrial sector.

#### PRODUCTS FOR THE SPORTS SECTOR

Yarns for sportswear.

Yarns for sports fields, recreational and domestic indoor and outdoor applications.

#### R34

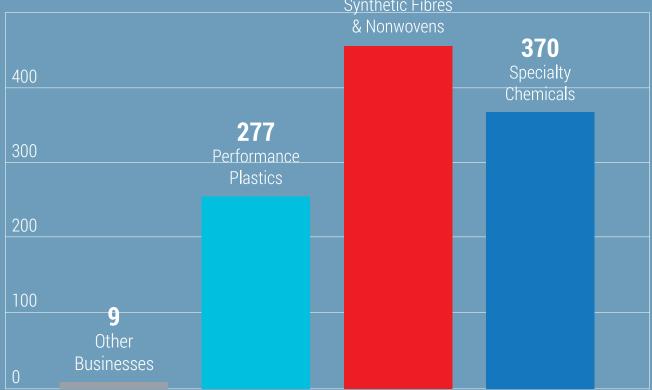
## MY FATHER PIETRO RADICI WAS A SIMPLE, STRONG AND GENEROUS MAN.

FROM THE FIRST WAREHOUSE IN MONZA TO THE ONE IN MILAN AND THE FACTORY IN LEFFE, THROUGH THE YEARS OF THE ECONOMIC BOOM RIGHT UP TO THE SATISFACTION OF HIM BEING AWARDED WITH THE TITLE OF MERIT CAVALIERE DEL LAVORO ('KNIGHT OF LABOUR').

SUSTAINABILITY REPORT 2015

# OUR KEY FIGURES STANDARD DISCLOSURES G4-9





RADICIGROUP PERSONNEL **2,967 EMPLOYEES** 

2015 SALES - CONSOLIDATED

FOR EACH BUSINESS AREA

(Millions of Euro)

#### A GLOBAL PRESENCE

STANDARD DISCLOSURES G4-6



Over time, RadiciGroup was able to turn its structure into a global industrial group, creating a network of production units and business offices located between Europe (Italy, Czech Republic, France, Germany, Hungary, Romania, Switzerland and United Kingdom), North and South America (United States, Mexico, Argentina and Brazil) and Asia (China, India).

#### **ASIA**

#### China

- Shanghai
- Suzhou

#### India

New Delhi

#### **AMERICAS**

#### **Argentina**

- Buenos Aires
- Rio Grande

#### Brazil

- Araçariguama
- São José dos Campos

#### Mexico

Ocotlán

#### **USA**

Wadsworth

#### **EUROPE**

#### France

Saint Priest

#### Italy

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

#### Germany

- Hamburg
- Lüneburg
- Overath
- Reutlingen
- Selbitz
- Tröglitz
- Viernheim

#### **United Kingdom**

London

#### Czech Republic

Podborany

#### Romania

Savinesti

#### **Spain**

Barcelona

#### Switzerland

Stabio

#### Hungary

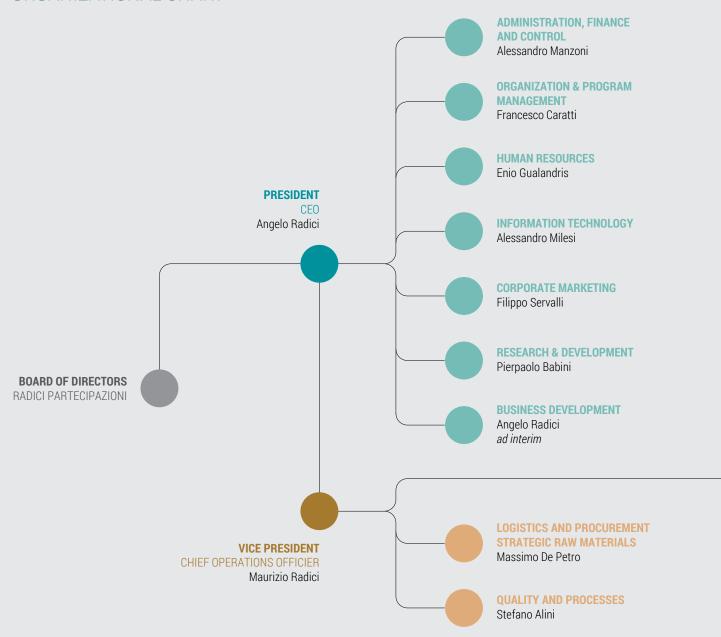
Szentgotthard

- Commercial offices
- Manufacturing sites

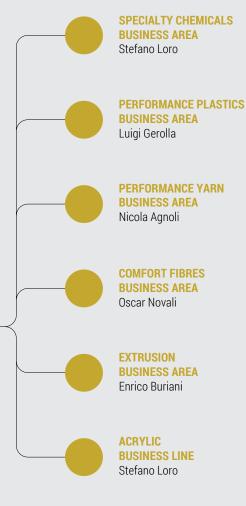
SUSTAINABILITY REPORT 2015



#### ORGANIZATIONAL CHART







#### CORPORATE

- Research and Development
- · Strategic Resource Identification and Allocation
- Group Services and Platforms
- · Marketing and Communication

#### OPERATIONS

- . New Market and Product Development . Business Planning
- ORGANIZATIONAL SYSTEMS DEVELOPMENT
- ORGANIZATIONAL SYSTEM
- BUSINESS AREA



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



#### **Ethics Committee**

#### President:

Alessandro Manzoni

#### Members:

Enio Gualandris Francesco Pezzotta Aldo Piceni Filippo Servalli



#### **Founders**

Pietro Radici Gianni Radici



#### **Shareholders**

Paolo Partecipazioni Srl Angelo Radici Partecipazioni Srl Maurizio Radici Partecipazioni Srl



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

President: Aldo Piceni

#### Members:

Marco Baschenis Matteo Perazzi



#### Radici Partecipazioni S.p.A.

President: Angelo Radici

Vice President: Maurizio Radici

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#### THE SHAREHOLDERS

STANDARD DISCLOSURES G4-7 STANDARD DISCLOSURES G4-34

RadiciGroup is a family-run business. The Radici family owns the entire Group shares, and it directs the strategic choices in cooperation with the Board of Directors. Angelo, Maurizio and Paolo Radici, in their capacities as President, Vice President and Advisor supervise business performance daily and operationally.

Specifically, the President handles the Corporate functions of Human Resources, Administration, Finance and Control, Information Systems, Marketing, Research and Development and Business Development; the Vice President handles the Corporate functions of Logistics and Purchasing and Strategic Raw Materials, Quality and Processes together with the various business areas.

The Shareholders are daily involved in the Group's management. In 2015, in particular, the signing by the President or Vice President of all the procedures of the holding company denotes full participation in all activities.

THE BOARD OF DIRECTORS
STANDARD DISCLOSURES 64-7

The Radici Partecipazioni S.p.A. holding company combines the activities of RadiciGroup in the field of synthetic fibers and nonwoven fabrics, chemicals and plastics and is controlled directly and indirectly by the Group Holding, Radicifin S.A.p.A.

The main governance bodies of Radici Partecipazioni are the Board of Directors, with administrative functions, and the Board of Statutory Auditors. The latter is composed of three members, appointed for three years with administration control functions. The Board of Directors stays in office for one year and consists of 7 members; it is vested with all the powers of the Group's operations and represents it against third parties. Its members are the majority shareholders along with advisors, chosen on the basis of proven ability and experience, from different professional fields internal or external to the Group. Currently the members of the Board share their specific expertise in economic and financial, administrative and legal matters.

The Group's Business Areas are each coordinated by a manager with a high managerial and technical profile, designated by the Board of Directors of Radici Partecipazioni, who is responsible for the development, management and marketing of the Area. With decision-making and operational autonomy, Business Area Managers sometimes play the role of managing directors of their respective companies, with the usual limits.

The role of the Business Area Manager is essential to convey the needs of the sites and areas to the Board of Directors. The latter avails itself of the Business Area Manager in implementing the Group's Business Plan.

#### THE ETHICS COMMITTEE

Guarantor and responsible for the dissemination and application of the Code of Ethics as well as promoter of Radici-Group's sustainability policies, the Ethics Committee is composed of:

- one Director representing the Board of Directors of the holding company who chairs the Committee;
- the President of the board of auditors of the holding company;
- the heads of the corporate functions Human Resources, Legal-Credit, Marketing and Sustainability.

The Ethics Committee is assisted by the GRI Coordination Group for specific projects related to the dissemination of the Code of Ethics and the definition of the topics of the Materiality Matrix in specific Stakeholder Engagement projects discussed below in this Report.

## GOVERNANCE IN TERMS OF SUSTAINABILITY

STANDARD DISCLOSURES G4-35

Starting in 2015, the procedure PR 08 - MANAGEMENT APPROACH FOR SUSTAINABLE DEVELOPMENT, signed by the Vice President of RadiciGroup, clearly defines the role that each of the people working for the Group is called upon to perform daily in terms of sustainability.

#### In particular,

#### The Chief Executive Officer

Defines the guidelines of the RadiciGroup Sustainability Project from GRI Coordination Group input and of all stakeholders, approves the Sustainability Report and points out its main elements in the "Letter from the President".

#### **The Chief Operative Officer**

Coordinates the Business Area Manager in the implementation of sustainability policies and improvement plans in line with the overall policy of the Group and Business Area specific policies.

#### The Business Area Manager

Defines, on the basis of the general policy of the Group and the Business Plan, the Business Area plans and sustainability policies for their sites and supports them through appropriate investments.

#### The Heads of functions

Support the GRI groups in collecting information and interact with them in order to create improvement activities and plans. They ensure reliability, traceability and the correctness of the data provided by their processes.

#### **The GRI Coordination Group**

In addition to collaborating with the Ethics Committee, it coordinates the GRI Groups of the associate companies to provide uniform data collection rules as regards the Sustainability Report, which it creates and disseminates. It collects inputs for the improvement plans, which it analyzes and assesses based on RadiciGroup policies.

In order to include an increasingly broader and across-

the-board vision of RadiciGroup's reality in this Report, in 2015 the GRI Coordination Group expanded with the inclusion of one or more people from each Business Area of the Group.

#### The site/Business Area GRI Group

Collects data for reporting in accordance with the criteria of consistency, accuracy and uniformity required by RadiciGroup's "consolidation" needs and policies. It studies improvement projects in close collaboration with the GRI Coordination Group, and, together with the Managers of Functions, it implements the sustainable improvement actions set out in business and RadiciGroup plans.

#### THE QUALITY SAFETY AND ENVIRON-MENT MANAGEMENT SYSTEM

The Quality Safety and Environment management system is one of the pillars of the Group's sustainability governance. The Function Corporate Quality & Processes is responsible for it. This function, directly coordinated by the Vice President of RadiciGroup, expressed in March 2016 several focal points of the Group's commitment to sustainability through the QUALITY SAFETY AND ENVIRONMENT POLICY reproduced in full in this Report.

## THE CERTIFICATION OF THE HOLD-ING COMPANY

As an integral part of the implementation of the different aspects contained in the policy, and in particular as an expression of our commitment to

"diligent observance of regulations in matters of environmental protection, health and safety of workers and the prevention of harmful events at the expense of products and production processes. For this purpose RadiciGroup adopts for its companies Management Systems for Quality, Environment and Energy and

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Health and Safety properly certified by accredited Bodies and based on well-defined procedures understood at all organizational levels. Added to this is an action of continuous improvement of these Systems in accordance with technical progress, scientific knowledge and market demands".

the process that began in 2015 and that led to the ISO 9001:2015 certification of the holding company Radici Partecipazioni S.p.A came to an end in May 2016.

It is the first RadiciGroup company to be certified according to the new edition of the standard, incorporating the latest requirements on the definition of the environment of operation and risk analysis.

Developing Procedures and Management Instructions for the main activities carried out by the Corporate Functions is important self-analysis work that each function operated with a view to improving efficiency and streamlining the workflow. Signed by the President or Vice President of RadiciGroup, the procedures and management system they create are the reference point for the Holding Company and all Associate Companies.

Also, both in form and in substance, they are an expression of increasing integration between the legal systems and the reporting model chosen. Many mapping and analysis tools came in fact from the Procedures and can be found as an integral part of this Sustainability Report.

## THE GROUP'S CERTIFICATIONS PROCESS

Next to the holding company process proceeds the certification process of the different sites. In particular, in 2015, the new certifications denoted special attention to environmental and energy issues.

#### In 2015:

- 100% of the sites considered for the Report had at least one management system certified or undergoing certification.
- 85% of those sites operated in accordance with ISO 9001:2008.

- 47.6% of the Group workforce operated in accordance with ISO 14001.
- Logit and Radici Fil were awarded the Certiquality Certificate of Excellence for the presence of effective integrated management systems, after similar awards given in 2014 to Radici Chimica, Radici Novacips and Tessiture Pietro Radici.

#### To learn more about RadiciGroup:

#### SUSTAINABILITY REPORT

www.radicigroup.com/en/corporate/radicigroup/brochure

#### RADICIGROUP WEBSITE AND NEWS

www.radicigroup.com/en

#### TO BE GLOCAL. WHITE PAPER

www.radicigroup.com/en/corporate/radicigroup/brochure

#### QUALITY ENVIRNONMENT AND SAFETY POLICY

www.radicigroup.com/en/corporate/radicigroup/quality-policy

#### LINKEDIN PROFILE

www.linkedin.com/company/radici-group

#### **TWITTER PROFILES**

twitter.com/RadiciGroup twitter.com/RGSustainable twitter.com/RGCulture

#### **FACEBOOK WORLD PROFILE**

www.facebook.com/radicigroup.world

#### ITALY FACEBOOK PROFILE

www.facebook.com/radicigroup.italia

#### CZECH REPUBLIC FACEBOOK PROFILE

www.facebook.com/radicigroup.ceskarepublika

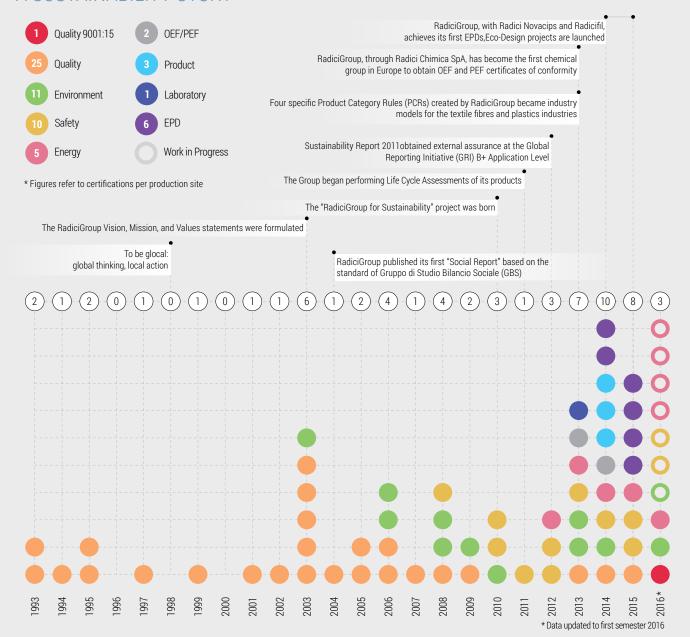
#### SLIDESHARE PAGE

www.slideshare.net/radicigroup

#### YOUTUBE CHANNEL

www.youtube.com/user/RadiciGroup

#### A SUSTAINABILITY STORY\*



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## **CERTIFICATIONS 2015**

RADICIGROUP SITE	industry code	ISO 9001:2015	ISO 9001:2008	ISO/TS 16949:2009	ISO 14001:2004	OHSAS 18001:2007	ISO 50001:2011
CORPORATE							
RADICI PARTECIPAZIONI S.p.A.	EA 35	₩					
SYNTHETIC FIBRES & NONWOVENS							
RADICI FIL S.p.A.	EA 04		<b>✓</b>		<b>/</b>	<b>/</b>	*
LOGIT Sro	EA 04		<b>✓</b>		<b>/</b>	*	<b>✓</b>
RADICI YARN S.p.A. – Villa d'Ogna	EA 04		<b>/</b>		<b>/</b>	₩	<b>⇔</b>
RADICI YARN S.p.A. – Ardesio	EA 04		<b>✓</b>		₽	⇔	<b>⇔</b>
SC YARNEA Srl	EA 04		<b>✓</b>		<b>✓</b>	<b>✓</b>	<b>⇔</b>
RADICI CHEMIEFASER GmbH	EA 04						*
NOYFIL S.p.A. – Chignolo d'Isola	EA 04		<b>/</b>			<b>✓</b>	
NOYFIL S.p.A. – Andalo Valtellino	EA 04		<b>✓</b>			*	
NOYFIL SA	EA 04		<b>/</b>		⇔		
RADICIFIBRAS Ltda	EA 04		<b>✓</b>				
CORDONSED S.A.	EA 04						
TESSITURE PIETRO RADICI S.p.A.	EA 04		<b>✓</b>		<b>✓</b>	<b>✓</b>	
PERFORMANCE PLASTICS							
RADICI NOVACIPS S.p.A. – Villa d'Ogna	EA 14		<b>/</b>	<b>/</b>	<b>✓</b>	<b>/</b>	
RADICI NOVACIPS S.p.A. – Chignolo d'Isola	EA 14		<b>/</b>		<b>✓</b>	<b>✓</b>	
RADICI PLASTICS GmbH	EA 14		<b>/</b>	<b>/</b>	<b>/</b>		<b>✓</b>
RADICI PLASTICS Ltda	EA 14		<b>/</b>	<b>/</b>			
RADICI PLASTICS Co. Ltd.	EA 14		<b>/</b>	<b>/</b>			
RADICI PLASTICS USA Inc.	EA 14		<b>✓</b>	<b>✓</b>			
RADICI PLASTICS MEXICO S. de R.L.	EA 14		*				
SPECIALTY CHEMICALS							
RADICI CHIMICA NOVARA S.p.A.	EA 12		<b>/</b>		<b>/</b>	<b>/</b>	*
RADICI CHIMICA DEUTSCHLAND GmbH	EA 12		<b>/</b>				<b>✓</b>

CERTIFICATION BODY 9001	CERTIFICATION BODY 16949	CERTIFICATION BODY 14001	CERTIFICATION BODY 18001	CERTIFICATION BODY 50001
Certiquality				
Certiquality		Certiquality	Certiquality	Certiquality
Certiquality		Certiquality	Certiquality	Certiquality
Certiquality		Certiquality	WIP	WIP
Certiquality		WIP	WIP	WIP
SRAC Romania		SRAC Romania	SRAC Romania	WIP
				DEKRA
Certiquality			Certiquality	
Certiquality			Certiquality	
Certiquality				
Fundaçao Vanzolini				
Certiquality		Certiquality	Certiquality	
Certiquality	Certiquality	Certiquality	Certiquality	
Certiquality		Certiquality	Certiquality	
TUV	TUV	TUV		TUV
Bureau Veritas	Bureau Veritas			
TUV	TUV			
SQA	SQA			
ABS Quality				
Certiquality		Certiquality	Certiquality	
DQS		DQS	DQS	DQS
✓ Certified	<b>⇔</b> Work in progress	★ Newly certified in 2015	<b>✓</b> Change	in certification body

Radici Chimica S.p.A	RADICIGROUP SITE
OEF / PEF	CERTIFICATION
Certiquality	CERTIFICATION BODY
2013	YEAR
Radici Plastics USA Inc.	RADICIGROUP SITE
ISO/IEC 17025:05	CERTIFICATION
AZLA	CERTIFICATION BODY
2013	YEAR
Radici Chimica S.p.A	RADICIGROUP SITE
AEON – ASTM D6866*	CERTIFICATION
ASTM	CERTIFICATION BODY
2014	YEAR
Radici Novacips S.p.A	RADICIGROUP SITE
OEF / PEF	CERTIFICATION
Certiquality	CERTIFICATION BODY
2014	YEAR
Radici Novacips S.p.A	RADICIGROUP SITE
EPD	CERTIFICATION
Certiquality	CERTIFICATION BODY
2014	YEAR
Radici Novacips S.p.A	RADICIGROUP SITE
EPD S-P-00554	CERTIFICATION
Environdec	CERTIFICATION BODY
2014	YEAR
Noyfil SA	RADICIGROUP SITE
UNI 11505 – R Starlight	CERTIFICATION
Certiquality	CERTIFICATION BODY
2014	YEAR
Noyfil S.p.A.	RADICIGROUP SITE
UNI 11505 – R Radyarn	CERTIFICATION
Certiquality	CERTIFICATION BODY
2014	YEAR
Radicifil S.p.A.	RADICIGROUP SITE
EPD	CERTIFICATION
Certiquality	CERTIFICATION BODY
2015	YEAR
Radici Novacips S.p.A	RADICIGROUP SITE
EPD S-P-00707	CERTIFICATION
Environdec	CERTIFICATION BODY
2015	YEAR
Radici Novacips S.p.A	RADICIGROUP SITE
EPD S-P-00708	CERTIFICATION
Environdec	CERTIFICATION BODY
2015	YEAR

\*for Radipol DC (PA 6.10) and Radipol DX (PA 10.10)

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## THE 2015 SUSTAINABILITY REPORT

#### STANDARD DISCLOSURES G4-3 and 7

• IT IS A REPORT BY RADICI PARTECIPAZIONI S.P.A. AND ITS ASSOCIATE COMPANIES

#### STANDARD DISCLOSURES G4-28, 29 and 30

- IT IS PUBLISHED ANNUALLY (last edition: July 2015)
- 21 DIFFERENT COMPANIES PROVIDED DATA FOR THIS REPORT.
- THERE ARE 27 NUMERICAL AND NON-NUMERICAL INDICATORS
- MORE THAN 70 PEOPLE COLLABORATED ON ITS CREATION
- IT REGARDS THE FOLLOWING STAKEHOLDERS:
  - SHAREHOLDERS
  - EMPLOYEES
  - CUSTOMERS
  - COMPETITORS
  - PROVIDERS
  - BANKING INSTITUTIONS
  - TRADE UNION REPRESENTATIVES
  - LOCAL COMMUNITIES
  - TRADE ASSOCIATIONS
  - THE MEDIA
  - SCHOOLS AND THE ACADEMIC WORLD
- AND IN PARTICULAR THE APPROXIMATELY 3,000 RADICIGROUP EMPLOYEES
- VALIDATED BY THIRD PARTY BY THE CERTIFICATION COMPANY CERTIQUALITY CONFORMING TO THE RE-PORTING MODEL "GLOBAL REPORTING INITIATIVE" – VERSION 4 "IN ACCORDANCE - CORE"" STANDARD DISCLOSURES G4-32

## PRINCIPLES USED TO DEFINE THE CONTENTS OF THE REPORT AND THEIR ENUNCIATION

STANDARD DISCLOSURES G4-18

Each year the Sustainability Report is characterized by accurate content identification work, which meets, in form and content, the following criteria:

#### Materiality

The determination of the relevant "or material" topics for the RadiciGroup Sustainability Report took place through the Materiality Matrix.

Other tools for determining the material aspects were added to the matrix:

- The analysis of the operating environment and the legitimate expectations of Stakeholders.
- The improvement plan of the previous Sustainability Report (edition 2014 of the Sustainability Report).
- The performance indicators (KPI) relating to the Radici-Group Management Systems.
- The instructions of the Board, the Ethics Committee and the GRI Coordination Group who, based on the Group's history, values and policies, identified more relevant topics on which to converge efforts and projects.

#### **Sustainability context**

Each topic was framed within the broadest sustainability context in which RadiciGroup operates. The Disclosure on Management Approach (DMA), in particular, examined in depth for each macro-theme (environment, labour, social or economic conditions, products and processes) sustainability objectives and strategies set forth by the Group.

#### **Inclusiveness**

The principle of inclusiveness was embodied in this Report, and before that in the efficiency of RadiciGroup, through the involvement of an increasing number of Stakeholders with ad hoc engagement projects, as recounted in the pages to come. In addition, all indicators presented were considered applicable to all companies

#### reported.

#### Accuracy, clarity

In accordance with the GRI reporting model, all numerical indicators are presented here with a trend of at least three years. This is to facilitate the reader in assessing the real trends expressed by the indicators. The presentation of data relating to several years also allows to understand the variation in the Group's performance over time.

The introduction of routes, patterns, graphic parts and boxes of excellence to facilitate reading and comprehension reflects the desire to make this document accessible to an ever increasing number of people.

#### **Balance and prudence**

The results obtained by RadiciGroup were presented in an objective manner, taking care not to present a misleading or only positive vision of each aspect. Where there was a doubt on how to display the data, the version least favourable to RadiciGroup was always chosen.

#### **Completeness**

#### STANDARD DISCLOSURES G4-17

The Sustainability Report 2015 of the holding company Radici Partecipazioni S.p.A., also commonly herein referred to as RadiciGroup, includes the following companies:

- CORDONSED SA (Argentina)
- LOGIT Sro (Czech Rep.)
- NOYFIL SA (Switzerland)
- NOYFIL S.p.A. (2 branches, Italy)
- RADICI CHEMIEFASER GmbH (Germany)
- RADICI CHIMICA DEUTSCHLAND GmbH (Germany)
- RADICI CHIMICA S.p.A. (Italy)
- RADICI FIL S.p.A. (Italy)
- RADICI NOVACIPS S.p.A. (2 branches, Italy)
- RADICI PARTECIPAZIONI S.p.A. (Italy)
- RADICI PLASTICS GmbH (Germany)
- RADICI PLASTICS Ltda (Brazil)
- RADICI PLASTICS SOUZHOU Co. Ltd. (China)
- RADICI PLASTICS USA Inc. (USA)
- RADICI YARN S.p.A. (2 branches, Italy)
- RADICIFIBRAS Ltda (Brazil)

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- SC YARNEA Srl (Romania)
- TESSITURE PIETRO RADICI S.p.A. (Italy)

There is no joint venture in the Group to date. The RADI-CI PARTECIPAZIONI S.p.A. (Italy) Holding Company contributed data for economic and social indicators, but not environmental, as it is a non-manufacturing company whose impact is extremely limited. Data concerning commercial companies are not included in the Report either.

The company Radici Plastics Mexico was acquired during 2015 and it was not possible to include it. however, it will be fully considered starting from the 2016 edition.

The companies in the list above represent basically Radici Partecipazioni S.p.A.'s entire turnover.

Regarding the use of electricity by the Italian sites, those indicators are mainly processed on the basis of data from GEOGREEN, RadiciGroup's provider - partner for energy, particularly from renewable sources. The Geogreen group belongs to the Radici family while not being a subsidiary of the holding company Radici Partecipazioni (www.geogreen.it).

#### Comparability and timeliness STANDARD DISCLOSURES G4-22 and 23 STANDARD DISCLOSURES G4-28

For over a decade, RadiciGroup's Sustainability Report has been published regularly every calendar year to ensure timely and useful information for our stakeholders. The Report contains data and information referring to the year ended on 31 December 2015, except for certain information about 2016, properly marked in the text.

The comparability of the Sustainability Report 2015, compared to the editions that preceded it, is not full. During the transition to the GRI-G4 model, changes were performed (and explained in the accompanying texts) to some of the indicators compared to the previous editions.

The data were collected by the individual companies using the GRI Groups Site Managers, processed by the GRI Coordination Group and presented in aggregate form in

the Report.

#### THE MATERIALITY MATRIX

STANDARD DISCLOSURES G4-19, 20 and 21

In 2014, RadiciGroup developed an initial materiality matrix. It was based on an assessment of the significant issues identified by the GRI Coordination Group, selected considering the history of RadiciGroup, its Vision, Mission, Values and the types of production companies.

This first matrix formed the basis for the previous edition of the Report. At the base of the matrix is the evaluation of the aspects identified, grouped into three main categories (Environmental, Social, Economic), and the assignment of a value to the impact they exert on the Stakeholders through a score from 1 (hardly important) to 4 (extremely important).

In order to update the Matrix and make it more appropriate and closer to the RadiciGroup reality, the GRI Coordination Group submitted it in 2015 to the Shareholders of Radici Partecipazioni, the Ethics Committee of RadiciGroup and the Group's Human Resources function.

Thanks to the average of the results obtained after several assessments, the matrix was remodulated and the following issues emerged as significant with highest priority (16 votes) *Table 1*, finally ratified by the Board of Directors of Radici Partecipazioni, and set to become part of the Group's strategy.

The GRI Coordination Group was mandated by the Board to enable the necessary forms of involvement or "engagement" of the different stakeholders identified in the Matrix and to activate all the necessary arrangements to update the matrix, based on the interests of the stakeholders.

For each topic in 2015, at Group level and in the individual Companies, projects were undertaken aimed at strengthening and supporting the activities already present as will be shown in this Report.

The Ethics Committee was mandated to ensure that these projects are actually achieved.

ASPECT	INTERESTED INTERNAL STAKEHOLDERS	INTERESTED EXTERNAL STAKEHOLDERS
Generated and distributed economic value	Shareholders, Employees	Banking Institutions, Trade Unions, Local Communities, Competitors, Suppliers, Customers The Media, Schools
Internal employment policies	Shareholders, Employees	Trade Unions, Local Communities, The Media Trade Associations, Schools
Atmospheric emissions	Shareholders, Employees	Local Communities, The Media, Trade Associations
Electricity consumption	Shareholders, Employees	Local Communities, Suppliers, Trade Associations
Complaints	Shareholders, Employees	Customers, Banking Institutions, Competitors

Other tools for determining the material aspects, mentioned above, caused the following topics to emerge as relevant *Table 2*.

The self-assessment of the process followed to determine the issues showed a still limited involvement of the stakeholders, but much higher than the previous edition. Their engagement was the subject of some spe-

cific improvement projects intended to continue in time.

Finally, in 2015, RadiciGroup took steps to get know more thoroughly and consult its stakeholders through a number of actions designed to produce a "positive contamination" between its requests and the expectations of the stakeholders.

Table 2

ASPECT	INTERESTED INTERNAL STAKEHOLDERS	INTERESTED EXTERNAL STAKEHOLDERS
Workplace Health and Safety	RadiciGroup workforce (Contract workers, temporary workers and employees) Shareholder	Trade Unions, Local Communities
Sustainability of the Supply Chain	RadiciGroup workforce (Contract workers, temporary workers and employees)	Suppliers, Customers
Limited impact processes and products	RadiciGroup workforce (Contract workers, temporary workers and employees) Shareholder	Suppliers, Customers, Local Communities

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In particular, in 2015, the following work was done: **STANDARD DISCLOSURES 64-25** 

- A mapping of RadiciGroup's business environment in relation to the Stakeholders and their legitimate requests.
- A study of the opportunities and risks linked to the relations that RadiciGroup keeps with the stakeholders.
- · An analysis of currently available engagement tools.

Competitors, Unions and Banks were added to the categories of stakeholders presented in the 2014 Report, selected according to the Group's history and type of business.

A self analysis of the Stakeholders considered until 2014 led the GRI Coordination Group to add these missing categories from the perspective of increasingly more complete reporting and a growing commitment to the inclusiveness of all Stakeholders.

This mapping is part of a project shared between the Sustainability function and the Corporate Quality & Processes function and constitutes a useful knowledge base for both the Sustainability Report and the new Radici Partecipazioni procedures.

Work was also done on the following:

- A specific mapping of the communication tools available today used for stakeholder engagement, including the two new categories above (see p.34). This mapping is also part of the joint sustainability and certification projects mentioned above.
- Some targeted communication actions, part of a wider plan of engagement, whose results (see p. 39) were evaluated
- The adoption of the Customer and Supplier Codes of Ethics, whose foundations were laid in 2015, intended to generate joint projects for the creation of a sustainable supply chain.

All these activities, also described below, have for objective increased stakeholder engagement, so that they are consistently better informed and involved in RadiciGroup activities

#### **OUR STAKEHOLDERS**

STANDARD DISCLOSURES G4-24

- SHAREHOLDERS
- EMPLOYEES
- CUSTOMERS
- COMPETITORS
- SUPPLIERS
- BANKS
- TRADE UNION REPRESENTATIVES
- LOCAL COMMUNITIES
- TRADE ASSOCIATIONS
- THE MEDIA
- SCHOOLS AND THE ACADEMIC WORLD

### MAPPING OF RADICIGROUP'S ENVI-RONMENT OF OPERATION IN RELA-TION TO THE STAKEHOLDERS

STANDARD DISCLOSURES G4-2, 14, 26 e 27

A careful analysis of our environment of operation in order to identify strengths, areas of improvement, risks and opportunities related to operations and in particular our relationship with Stakeholders, who are key to the creation of tangible and intangible value. The mapping below *Tables 3a-3b* derived from such intent; it shows the result of an analysis conducted in 2015, which led to the emergence of some interesting projects for dialogue with and engagement of the stakeholders.

The risks related to not meeting or not meeting in full the legitimate expectations of the Stakeholders are given in order of probability of occurrence according to an internal assessment made by the Corporate Quality & Processes function in collaboration with the Corporate Marketing function. The risks are classified as follows. Table 4

Underlying all RadiciGroup's answers to these expectations and the risk mitigation policies, there is constant performance assessment and the principle of continuous improvement set out in ISO 9001, explained in the Radici Partecipazioni procedure PR09 and implemented daily in the Group's businesses.

Table 3a - MAPPING OF RADICIGROUP'S ENVIRONMENT OF OPERATION IN RELATION TO THE STAKEHOLDERS

STAKEHOLDER	LEGIT EXPECTATIONS OF STAKEHOLDERS	RESPONSE BY RADICIGROUP	RISKS FOR RADICIGROUP*
SHAREHOLDERS	Return on invested capital Profitability of the business Intangible value increment	Strategic Plans and related Budgets Management Systems Acquisitions Reorganizations	Market risks RS Financial Imbalances RF Reputational risk RR
EMPLOYEES	Ethics of employment Stability of employment Health and safety Fair remuneration Career path Training	Compliance with obligations RadiciGroup Code of Ethics RadiciGroup policies and procedures on different themes (PR03)	Demotivation RR + RO + RF Disengagement RO Absenteeism RO Corruption RR + RF + RP Fraud RR + RF + RP
CUSTOMERS	Products and/or services in line with expectations Fairness and transparency of relations Collaboration and support Joint R&D	Clear definition of specifications Consistency and quality improvement policies Implementation of propriety principles from the Code of Ethics Teams dedicated to joint projects Dedicated resources	Complaints RO Insolvency RF Loss of Customer RO + RF Ineffective joint MKT-R&D strategy RO
COMPETITORS	Fairness and transparency of relations Fair competition Joint development of application fields	Implementation of propriety principles of the Code of Ethics Implementation of RadiciGroup's Vision, Mission and Values Research and development for more competitive products and business	Loss of market share RO + RF Ineffective joint strategy of MKT-R&D and management systems RO
SUPPLIERS	Profit Stability of the relationship Fairness and transparency of relations RadiciGroup's solvency	Suppliers Code of Ethics Provisioning procedures (PR04 and PR05) Guidelines on payments	Non-compliant products and services RO No guarantee of Business Continuity RP Corruption RR + RF + RP Fraud RR + RF + RP Abuse of RadiciGroup intellectual property RP Ethical aspects: respect for human rights, workers' rights and the environment RR + RP

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Table 3a

STAKEHOLDER	MITIGATION OF RISK	OPPORTUNITIES FOR RADICIGROUP	WAYS TO ENGAGE
SHAREHOLDERS	Risk Prevention and Response actions (FC01) Controlling activities (FC01) Watchful MKT & Communication Policy	Business continuity and profitability	Daily strategic and operational involve- ment Communication
EMPLOYEES	Code of Ethics RadiciGroup policies on Human Resources (PR03) MBO and Benefits Career Management Engagement Training activities	Loyalisation Motivation Efficiency	Internal communication Engagement Ad hoc events MBO and Benefits WHP
CUSTOMERS	Complaint handling Management of all Customer credits Controlling activities Strategic & operational marketing activities (PR10) R&D activities (PR07) CRM activities Customer loyalisation Seeking new Customers Customer Satisfaction Activities	Market Leadership Reputation Loyalisation Business continuity and profitability Conquering new markets	Network and business meetings Knowledge sharing Partnerships Communication Ad hoc events and fairs
COMPETITORS	Strategic and operational Marketing activities R&D Activities CRM Activities Customer loyalisation Looking for new Customers Customer Satisfaction Activities	Collaboration through trade associations to safeguard the market Industry innovations Reputation	Network and business meetings Social meetings Communication
SUPPLIERS	Business Continuity activities Controlling activities Suppliers Code of Ethics Provisioning procedures (PR04 and PR05) Supervisory activities	Reputation Business continuity Synergy Development	Network and business meetings Knowledge sharing Partnerships Signing the Code of Ethics Communication

STAKEHOLDER	LEGIT EXPECTATIONS OF STAKEHOLDERS	RESPONSE BY RADICIGROUP	RISKS FOR RADICIGROUP*
BANKS	Profit Stability of the relationship Fairness and transparency of relations RadiciGroup's solvency	Watchful short- and medium-term policies and economic-financial plans Economic-financial reporting clear and compliant with the law Third party budget certification Debt reduction policies	Increased levels of interest rates RF Failed funding RF Financial Institution bankruptcy RF
UNION REPS	Freedom of association Dialogue Trust Collaboration	Meeting obligations RadiciGroup Code of Ethics Presence of Union Organisations	Strikes RO Reputational risk RR Legal action RO + RF + RR
LOCAL COMMUNITIES	Environmental protection and safety Employment policies attentive to local resources Economic and social Support Transparency and communication	Medium- and long-term environmental and responsible policies Employment policies attentive to local resources (PR03) Sustainability and constant communication (PR08) Social and Philanthropic Marketing	Environmental risks RP Health and Safety RisksRP Reduced local employment RP Social context degradation risk RP Reputational risk RR
TRADE ASSOCIATIONS	Collaboration Trust Input of innovation	Dialogue and participation Transparency and communication Training and information Sharing knowledge and experience	Risk of suffering decisions not shared RO Depletion of the network and loss of lobby- ing ability RR Reputational risk (e.g. organisations of activists) RR
THE MEDIA	Clarity Transparency Constant relations Mutual trust	RadiciGroup MKT and communication policies (PR10)	Reputational risk for missed information or dissemination of misleading information RR
SCHOOLS AND THE ACADEMIC WORLD	Knowledge sharing Employment opportunities Support	Internships Training days Sponsorships	Misalignment of skills offered vs. skills required by RadiciGroup RO

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STAKEHOLDER	MITIGATION OF RISK	OPPORTUNITIES FOR RADICIGROUP	WAYS TO ENGAGE
BANKS	Direct and continuous collaboration with banking institutions Policies and plans to strengthen the balance sheet and reputation of RadiciGroup (FC01) Controlling activities (FC01) Seeking funds activities with the best rates (FC01) Careful supervision of banking institutions	Reputation Trust Business continuity	Network and business meetings Information sharing Partnerships Communication
UNION REPS	Public consultation Joint projects Legal action	Reputation Corporate climate	Meetings and dialogue Consultation Shared projects Communication
LOCAL COMMUNITIES	Meeting obligations RadiciGroup Sustainability and integrated management systems Implementation of RadiciGroup employ- ment policies Cultivating relationships with local com- munities (e.g. Open factories)	Reputation Mutual support Local professionals	Communication Ad hoc events Planned activities from Sustainability Report
TRADE ASSOCIATIONS	Active presence of RadiciGroup representative in the associations in the role of influencer Transparent communication of Sustainability results: GRI, PCR, EPD, LCA, etc.	Reputation Lobbying	Participation in activities and decision- making processes Communication
THE MEDIA	Constant activity of the corporate func- tions and BU dedicated to communication with the media	Reputation	Press office activities Active presence in social media Involvement in initiatives
SCHOOLS AND THE ACADEMIC WORLD	Strong relations with schools and universities Joint R&D projects (PR07) Recruitment and training of interns and new graduates	Reputation Available skills and professionals	Ad hoc activities Career day Collaboration (training and selection of profiles) Communication

Table 4

DESCRIPTION	CATEGORY OF Risk	CATEGORY CODE	EXAMPLES
Risks related only to events likely to INCREMENT or REDUCE the company's value (causing a PROFIT or LOSS). It can be POSITIVE or NEGATIVE.	STRATEGIC Risk	RS	Sales budget, raw material purchasing, etc.
Risks related only to events likely to REDUCE the company's value (causing a LOSS).	OPERATING Risk	RO	Process, technology, complexity of rules and regulations, human resources, IT systems and infrastructure, quality assurance and control systems, contractual liability (product specifications, penalties, etc.).
Risks related only to events likely to REDUCE the company's value (causing a LOSS).	FINANCIAL Risk	RF	Credit, financial exposure, payments, solvency, etc.
Risks related only to events likely to REDUCE the company's value (causing a LOSS).	REPUTATIONAL Risk	RR	Ability to stay on the market, trust, reliability, respect and ability to ensure product standards, communication processes, MKT and CSR.
Risks related only to events likely to REDUCE the company's value (causing a LOSS).	PURE Risk	RP	Owned assets, accidents at work, continuity of production activities, natural events, socio-political events, wrongdoing, environmental pollution, etc.

#### MAPPING OF COMMUNICATION TOOLS AIMED AT STAKEHOLDER INFORMA-TION AND ENGAGEMENT

STANDARD DISCLOSURES G4-26 and 27

Each day, the approximately 3,000 people of Radici-Group communicate constantly among themselves and with an equally high if not even higher number of external stakeholders.

Maintaining the proper level of information, communication and involvement in the Group and toward the outside is an ongoing commitment that requires deep knowledge of communication tools and their continuous updating, to adapt to constantly changing needs and sensibilities.

This is a mapping of the main communication and information tools or channels in use today within the Group,

associated with the different categories of Stakeholders. *Tables 5a-5b* 

#### RADICIGROUP TELLS ITS STORY THROUGH SOCIAL MEDIA

In 2015, the LinkedIn channel was the primary route of Radici-Group's social communications, also thanks to the activation of a specific Showcase Page for the theme of sustainability.

Here are some data on communications via LinkedIn:

- 25 RadiciGroup News picked up again through as many posts
- 28 posts about Group fairs and events
- 10 posts about presentations, using Slideshare, made during meetings or events attended by people of the Group.

The Twitter channel, with its 465 tweets in 2015 and more than 1,500 followers (through the RadiciGroup, RG for Sustainability and RG for Culture account) was a faithful witness of the Group's activities.



Table 5a - MAPPING OF COMMUNICATION TOOLS AIMED AT STAKEHOLDER INFORMATION AND ENGAGEMENT

STAKEHOLDER	WEBSITE	RADICIGROUP INSIDE INTRANET	SOCIAL MEDIA	PRESS OFFICE TOOLS
SHAREHOLDERS	Institutional information and RadiciGroup News	All the info found in the sections of the portal	Linkedin Twitter Slideshare YouTube	Press releases News Interviews Press review
EMPLOYEES	Institutional information and RadiciGroup News	Intranet Section About us (RadiciGroup news), Library/ Manual, Help Desk, Conventions Area Themed areas dedicated to the various functions Work area Collaboration (projects + workspaces)	Linkedin Twitter Slideshare Youtube Business territory Facebook	Press releases Newsletters House Organ Press review
CUSTOMERS	Code of Ethics Institutional and product information RadiciGroup News		Linkedin Facebook World Slideshare Youtube	Press releases Newsletters House Organ (Voices) DEM campaigns
COMPETITORS	Code of Ethics Institutional and product information RadiciGroup News		Linkedin Facebook World Slideshare Youtube	Press releases
SUPPLIERS	Code of Ethics Institutional and product information RadiciGroup News	Portal sections shared with Suppliers in specific projects	Linkedin Facebook World	Newsletter

Table 5a				
STAKEHOLDER	CORPORATE DOCUMENTATION	EVENTS & FAIRS	SURVEYS	BUSINESS MEETING
SHAREHOLDERS	Consolidated financial statements Sustainability Report Institutional brochures:  • To Be Glocal  • White Paper	Company events and trade fairs		Strategic plans & budgets Management Reviews BA meetings. Customer Satis- faction surveys Sustainability project meetings Ethics Committe meetings
EMPLOYEES	Institutional brochures:  • To Be Glocal  • White Paper  • Sustainability Report Meetings to present institutional documentation	Company events for the community (open factories, scholarships and cultural events)	Survey of training needs, surveys of the WHP project (for participating companies)	Report Meetings to present institutional documentation Inter-function meetings Union meetings RadiciGroup Academy training meetings
CUSTOMERS	Institutional brochures:     To Be Glocal     White Paper     Sustainability Report Product brochures and technical sheets	Company events and trade fairs Customer visits to RadiciGroup production sites	Biannual customer satisfaction survey	Periodic meetings with Radici- Group sales force
COMPETITORS	Institutional brochures:  • To Be Glocal  • White Paper  • Sustainability Report	Trade fairs ad associations events	Biannual customer satisfaction survey	Trade associations events
SUPPLIERS	Institutional brochures:  • To Be Glocal  • White Paper  • Sustainability Report	Company events and trade fairs RadiciGroup staff visits to Suppliers production sites	Survey on the themes of social and environmental sustainability	Periodic meetings with Radici- Group Purchasing & Logistics function





STAKEHOLDER	WEBSITE	RADICIGROUP INSIDE Intranet	SOCIAL MEDIA	PRESS OFFICE TOOLS
BANKS	Institutional information and RadiciGroup News		Linkedin	News
UNION REPS	Institutional information and RadiciGroup News		Linkedin	News
LOCAL COMMUNITIES	Institutional information Information reported on the Sponsorship Job Opportunities Sections of the website RadiciGroup News		Twitter Business territory Facebook	News Promotion via the press Radio and tv
TRADE ASSOCIATIONS	Institutional information and RadiciGroup News		Linkedin Facebook Twitter	News
THE MEDIA	Institutional information and RadiciGroup News		Twitter Slideshare Youtube	Press releases, House Organ (Voices), in-depth contents (corporate profiles, pictures, info on products, PR activities)
SCHOOLS AND ACADEMIC WORLD	Institutional information Information reported on the Sponsorship Job Opportunities Sections of the website RadiciGroup News		Linkedin Business territory Facebook Slideshare	

Table 5b

STAKEHOLDER	CORPORATE DOCUMENTATION	EVENTS & FAIRS	SURVEYS	BUSINESS MEETING
BANKS	Consolidated financial statements Institutional brochures:  • To Be Glocal  • White Paper  • Sustainability Report			Periodic meetings with Radici- Group Administration and Finance functions
UNION REPS	Institutional brochures:  • To Be Glocal  • White Paper  • Sustainability Report	Company events		Periodic institutional meetings (es. second level bargaining, funded training, business investment)
LOCAL COMMUNITIES	Institutional brochures:	Company events for the community (open factories and cultural events)		
TRADE ASSOCIATIONS	Institutional brochures:	Company events		Participation of RadiciGroup representatives in technical and scientific committees Institutional relations meet- ings
THE MEDIA	Institutional brochures:  • To Be Glocal  • White Paper  • Sustainability Report RadiciGroup Publications on various supports	Company events and trade fairs, press conferences pre- senting products or initiatives		PR meetings, meetings on occasion of corporate events, press conferences
SCHOOLS AND ACADEMIC WORLD	Institutional brochures:  • To Be Glocal  • White Paper  • Sustainability Report RadiciGroup Publications on various supports	Targeted company events (career day, school work alternation projects)		RadiciGroup Academy meet- ings, meetings to plan joint activities (internships, school- work alternation, dissertation)



#### STAKEHOLDER ENGAGEMENT

STANDARD DISCLOSURES G4-26 and 27

Not only analysis, however. 2015 and the year 2016 were marked by the launch of numerous Stakeholder involvement projects that realized the general engagement activities described in the matrix relative to the Group's business operations.

#### ALL STAKEHOLDERS

#### The Promotion of the Sustainability Report and of the Items from the Report

The Sustainability Report 2014, in full or reduced (Items from the Report) form, was presented through communication tools and channels specific for each category of Stakeholders, namely:

- Report presentation through direct meetings with all Radici Partecipazioni Employees and with the Marketing Staff Commercial, Human Resources and Union Representatives of Italian companies (about 160 people).
- Sending the report in paper or electronic format to numerous representatives of the institutions, associations the Group belongs to and Banks:
- Promotion and dissemination through traditional media and the website by means of RadiciGroup's press releases and newsletter, which reaches over 3000 users in Italy and abroad, Customers, Suppliers and Competitors of the Group.
- Promotion of the Report through social channels LinkedIn and Twitter, with particular focus on the promotion of the Items from the Report, the stripped down version presented by individual thematic tables.

To facilitate the use of themes, and as a sign of acknowledgment of the various cultures present within the Group, this smaller version was presented for the first time in RadiciGroup's 6 main languages (Italian, English, German, Portuguese, Chinese, Czech).

#### To learn more:

TO THE ITEMS

www.radicigroup.com/en/documentation/corporate/report

From the point of view of results, the direct stakeholders gave some tips and suggestions on the content and format of the Report, which were incorporated as far as possible in the current edition.

At the reputation and image level, the press review bore witness to RadiciGroup's strong focus on its sustainability commitment.

As for involvement through social media, the many interactions through "likes" "shares" and "comments" that were made to posts having to do with the Report, still viewable on RadiciGroup's social profiles, indicate a good level of attention for and interest in this document.

#### **The Facebook World Project**

At the end of 2015 the Facebook profile (RadiciGroup World) was launched in English, featuring business news, events and initiatives of the Group.

The profile, primarily intended to chronicle what is happening in the Group's companies in terms of business activities, is an important tool of engagement for all Stakeholders, considering the number of Facebook users in the world, more than 1.6 billion in 2016, and the familiarity with this tool now common in every place and in every age group.

#### To learn more:

FACEBOOK WORLD PROFILE www.facebook.com/radicigroup.world

#### LOCAL COMMUNITIES, EMPLOYEES

#### The business territory Facebook Project

The first two, country specific Facebook profiles (to date RadiciGroup Italy and RadiciGroup Czech Republic) were launched in 2015 and implemented in the local language,

featuring news related to local events and for the promotion of local social, cultural or sports activities.

For the significance of these profiles as elements of exchange and dialogue with the Stakeholders, the same considerations expressed for the Facebook World profile apply.

#### To learn more:

FACEBOOK ITALY PROFILE www.facebook.com/radicigroup.italia

FACEBOOK CZECH REPUBLIC PROFILE www.facebook.com/radicigroup.ceskarepublika

#### SCHOOLS AND THE ACADEMIC WORLD

#### The "Education 2015" Project

The Education Project has been contributing for some time to greater mutual knowledge between RadiciGroup and the world of schools. The demand for professional skills is constantly evolving, just as the educational programmes of schools are renewed.

Through many of its initiatives, Education 2015 focused on the experiences that connect learning to doing and provided knowledge to the institutes of the main local communities to have better prepared students who will one day also be potential resources for RadiciGroup companies.

The project objectives were manifold. First, engage the students, with their wealth of knowledge and innovative interaction tools, in business activities, by creating an actual know-how exchange point. Second, provide students with opportunities for direct knowledge of the companies and the technological processes that take place there on a daily basis. Finally, help them in preparation for a future working life, to understand the dynamics of a company's organization and culture.

#### The activities and results of the project were interesting:

**2 Career Days:** Opportunities for meetings between RadiciGroup and students of the Bergamo faculties of Business Sciences, Economics and Quantitative Methods, Law, Languages, Foreign Literature and Communication, Human and Social Sciences, Humanities and Engineering.

**2 Days organized** by RadiciGroup during the International Festival of Science "BergamoScienza", opportunities for students to visit Group companies and labs and work side by side with engineers to discover the world of polyamide.

**6 Internships Projects** hosted respectively by Geogreen, Radici Fil, Radici Novacips and Radici Yarn, that involved students of upper secondary schools, each with a company assigned tutor.

**6 Training interventions** performed by Radici-Group staff who travelled to high schools and universities to support students in their studies orientation or searching for a profession.

**9 Visits to the facilities** of the Italian companies of the Group by students and teachers of secondary schools and universities.

**27 Scholarships** to children of employees of Group companies.

**1820 Students** visited Milan Expo in 2015 with the support of RadiciGroup, as part of the project "Expo: Adopt a school".



#### CLASSY POLYAMIDE: A SUCCESSFUL EXPERIMENT

Between 2015 and early 2016, a special project involved RadiciGroup and the Institute Giulio Natta of Bergamo, with the support of Confindustria Bergamo.

It was a school-work alternation research programme, a real "twinning" between companies Radici Novacips and Radici Yarn and students, accompanied by some teachers.

After four months of work at the sites and in their respective classes, the students - 8 from Chemistry and Materials, 4 from Environmental Biotechnology and 4 from the High School of Applied Sciences - presented the activities carried out under this experimental project aimed at analyzing and comparing the traditional polyamides, PA6 and PA6.6, with new polyamides from organic sources used for applications in the textile industry and for the production of technical items. This together with a project for the environmental assessment of the water purification system.

The students participated very actively in the initiative, managing their work with a great deal of autonomy, adopting a logical approach to problem solving, exposing analytically the results of each project.

All this contributed to the positive evaluation of both the companies involved and the Natta Institute.

Finally, at the event "A Plus" promoted by Confindustria Bergamo, as part of the Industriamoci competition, the project was also granted a special "TOP PLAYER" award for the commitment and quality of the design developed between ITIS Natta and RadiciGroup, for the integration of students with different majors (Environmental Sciences, Chemistry and High School of Applied Sciences) and for the inclusion of teachers in the training course.

"Classy Polyamide" is therefore the first step of a project that RadiciGroup will follow with more new school-work alternation experiences.

## TRADE ASSOCIATIONS AND COMPETITORS

STANDARD DISCLOSURES G4-16

Participation in Trade Associations has always been considered very important by RadiciGroup for the sharing of ideas, information, strategies and as a form of engagement of the sector operators.

It is also the main opportunity for dialogue and positive exchange of views with Competitors, outside the competitive arena and in compliance with current regulations.

In the neutral context of association life started the collaboration to jointly tackle the issues of the sector and the market and promote its development within institutional contexts. In most cases influence and protection policies of the industries involved are in fact processed within the policies of the Associations themselves, with the opportunity to also develop joint strategies with synergic sectors.

In the year being reported RadiciGroup was an active member of Several associations. *Table 6* 

In particular, RadiciGroup employees played active roles in the following associations:

ASSOFIBRE CIRFS ITALIA – The Italian industry association of manufacturers of artificial and synthetic fibers. The Presidency is held by RadiciGroup Vice President Maurizio Radici.

ASSOCIAZIONE TESSILE E SALUTE (Textile association and health) — Founded in 2001, the Association is ON the side of consumers, producers and organizations who care about the safety of textile and footwear products and the protection of the Made in Italy. It works in tandem with the Ministry of Health to prevent and combat the spread on the market of products harmful to the health of users. RadiciGroup has participated in the Board of Directors since 2015.







LIST OF THE MAIN ASSOCIATIONS RADICIGROUP IS A MEMBER OF	RADICIGROUP COMPANIES REGISTERED IN 2015
AIAS-SICUREZZA	RADICI NOVACIPS S.p.A.
AICQ	RADICI PARTECIPAZIONI S.p.A.
ASSOCIAZIONE TESSILE E SALUTE	RADICI PARTECIPAZIONI S.p.A.
ASSOCIAZIONE INDUSTRIALI NOVARA	RADICICHIMICA S.p.A.
ASSOFIBRE	RADICI FIL S.p.A.
CEFIC - EUROPEAN CHEMICAL INDUSTRY	RADICICHIMICA S.p.A.
CIRFS	RADICI PARTECIPAZIONI S.p.A.
CONSORZIO IBIS	RADICICHIMICA S.p.A.
CONFINDUSTRIA BERGAMO	RADICI PARTECIPAZIONI S.p.A.
EDANA	TESSITURE PIETRO RADICI S.p.A.
EPCA	RADICI PARTECIPAZIONI S.p.A.
ESTO	TESSITURE PIETRO RADICI S.p.A.
FEDERCHIMICA	RADICICHIMICA S.p.A.
FORAZ	RADICICHIMICA S.p.A.
IHK	RADICICHIMICA DEUTSCHLAND GmbH
M-VENA GmbH	RADICICHIMICA DEUTSCHLAND GmbH
NORDOSTCHEMIE	RADICICHIMICA DEUTSCHLAND GmbH
NYLON 6 PROMOTION GROUP	RADICI PARTECIPAZIONI S.p.A.
PLASTICS EUROPE	RADICI NOVACIPS S.p.A.
SPI	RADICI PLASTICS USA
SPRING	RADICICHIMICA S.p.A.
STC	TESSITURE PIETRO RADICI S.p.A.
TEX CLUB TEC	RADICI PARTECIPAZIONI S.p.A.
UNIPLAST-ENTE ITALIANO DI UNIFICAZIONE DELLE MATERIE PLASTICHE	RADICI NOVACIPS S.p.A.
UNI	RADICI PARTECIPAZIONI S.p.A.

CIRFS – European Man-Made Fibres Association, the European Association representing the producers of manmade fibers. RadiciGroup has its own representatives on the Board of Directors, in the ECOLIS/ENERGY Committee, which deals with environmental and energy issues, as well as in the Research and Development Committee and the Technical Committee. RadiciGroup also chairs the Statistical Committee and the Economic Committee. The task of the latter, in particular, is an across-the-board work of protecting the interests of the sector and safe-quarding against the competition.

**ESTO** – European Synthetic Turf Organisation, the international association established to inform on and promote the use of artificial grass. In addition to performing informational and promotional activities, Esto is a nonprofit organization of collective participation which represents the entire production chain of synthetic turf and is a reference point for researchers, clubs, leagues, government bodies of the sports industry, local and national government offices and councils.

RadiciGroup is a member of the Management Board and of the artificial grass yarn Working Group.

**CEFIC** – European Chemical Industry Council, the association that groups together the European chemical companies. Strongly committed on sustainability issues, in particular through the Responsible Care project, CEFIC closely monitors EU policies, facilitating dialogue between the various actors of the chemical industry chain.

PLASTICS EUROPE – The Association that holds relations with the leading plastics manufacturers and brings together the manufacturers of 90% of polymers in Europe. RadiciGroup is an active member of the working group "Life Cycle Thinking and Sustainability" dedicated to thinking in terms of the product's life cycle and the coefficiency of processes and products. A specific mission of the group is to make available to stakeholders reliable, credible and scientifically proven information on sustainability issues. The Group also participates in the activities of the Economic Committee.

Finally, in 2015 the relationships with organizations that became spokesmen, especially in the textile sector, of requests regarding voluntary lists of chemical prescriptions had special importance. In this regard, see the text in the part reserved for product indicators (PR).

RADICIGROUP ACCEPTS APPEAL OF GREEN ECONOMY BUSINESSES AND ORGANIZATIONS FOR AN EFFECTIVE INTERNATIONAL AGREEMENT ON CLIMATE.
STANDARD DISCLOSURES 64-15

In the month of November 2015 RadiciGroup made an important formally commitment, divided into 7 points, developed through an extensive consultation process within the framework of the States General of the Green Economy.

Here are the chapters of the commitment, ranging from environmental management to the conception of a new economic and productive model:

- PROMOTE AN EFFECTIVE INTERNATIONAL AGREE-MENT AND IMPLEMENT RELEVANT DOMESTIC MEA-SURES OF MITIGATION AND ADAPTATION.
- 2. ADOPT LEGALLY BINDING TARGETS, IN LINE WITH THE 2°C\*, OBJECTIVE, BASED ON EQUITABLE CRITERIA.
- 3. LAUNCH AN ECOLOGICAL TAX REFORM, INTRODUCING A CARBON TAX AND ELIMINATING SUBSIDIES HARMFUL FOR THE ENVIRONMENT.
- 4. EXPLOIT THE ENORMOUS POTENTIAL OF ENERGY EF-FICIENCY IN ALL SECTORS: CONSTRUCTION, TRANS-PORT, AGRICULTURE, INDUSTRY AND SERVICES.
- 5. ACCELERATE THE EXIT FROM FOSSIL SOURCES AND THE GROWTH OF RENEWABLE ENERGY.
- PROMOTE MORE SUSTAINABLE SOIL MANAGEMENT MODELS, TAKING AN ACTIVE ROLE OF AGRICULTURE FOR MITIGATION OF AND ADAPTATION TO CLIMATE CHANGE.
- 7. ECO-INNOVATION AND CIRCULAR ECONOMY, KEY FACTORS OF THE TRANSITION.

The Appeal and the list of signatory companies were delivered to the Italian Minister of Environment, in view of COP 21 in Paris, as a sign at the same time formal and tangible of the commitment of Italian companies in favour of the climate.

\* The 2°C objective refers to the commitment of maintaining the average temperature increase to 2°C above pre-industrial levels



## SUPPLIERS AND CUSTOMERS: PROJECTS TO CREATE A SUSTAINABLE SUPPLY CHAIN TOGETHER

Working for an all around concept of sustainability has long been a strategic goal of RadiciGroup. Along with building a sustainable supply chain, before and after the Group. To achieve this goal there are two key concepts: knowledge and collaboration.

Knowledge of one's own reality, Suppliers and the world of Customers, as well as constant dialogue and cooperation with both these categories of stakeholders.

A special work of knowing and engaging these Stakeholders was done in the 2015-2016 biennium.

Through the implementation of corporate procedures, supervision on the new supplier selection criteria, which take into account sustainability aspects, and the signing of the Codes of Conduct of Suppliers and Customers, the path of a sustainable supply chain is emerging with increasing clarity for RadiciGroup.

#### RADICIGROUP'S SUPPLY CHAIN

STANDARD DISCLOSURES G4-12 and 13

The diagrams below, related in particular to our nylon core business, help visualize the complex typeS of productions of the RadiciGroup Companies. The diagrams of all the Group's products are available in the TO BE GLOCAL brochure published on the RadiciGroup website.

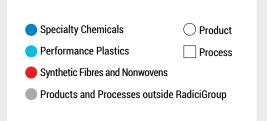
The color scheme helps you understand what is produced or processed by different macro Business Areas of the Group and what is bought outside.

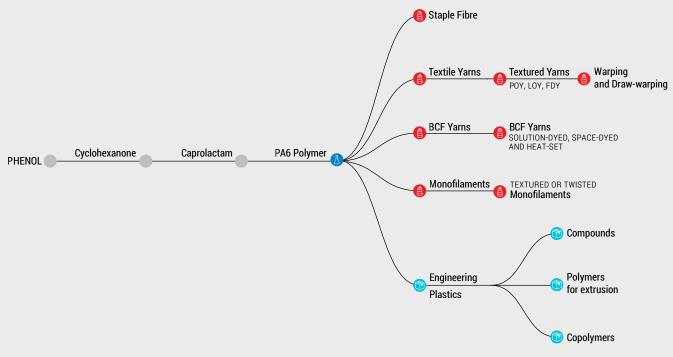
### **SYNERGY & INTEGRATION**

#### PA6

Production chain integration from polymer to semi-finished products. Specific know-how in the Business Areas Performance Plastics and Synthetic Fibres.

Value added: downstream technologies and applications.

















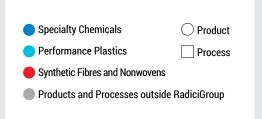


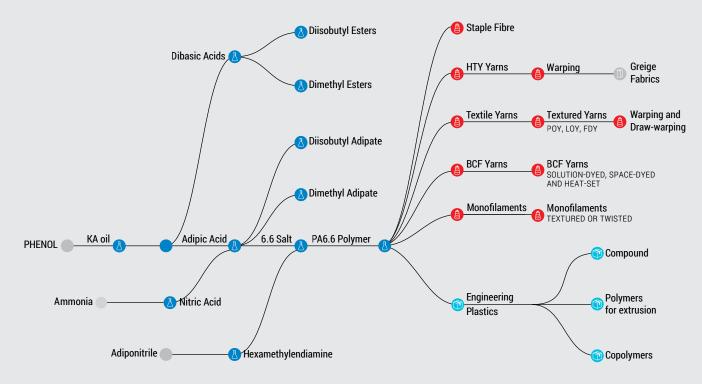


## SYNERGY & INTEGRATION

PA6.6

Production chain integration from monomer to semi-finished products. Specific know-how in the Business Areas Specialty Chemicals (intermediates), Performance Plastics and Synthetic Fibres. Value added: downstream technologies and applications.







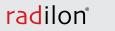
















To describe the supply chain of RadiciGroup, it is appropriate to distinguish between the Suppliers of Strategic Raw Materials and all other Suppliers of products and services essential to the life of the Group's companies.

In parallel with the preparatory work for ISO 9001:2015 certification, RadiciGroup adopted two different corporate procedures, common to all sites, to regulate their supply chain activities.

The Strategic Raw Materials are "raw materials whose costs and volumes affect predominantly the variable costs of the final product", as defined by the procedure "PR 04 - PROCUREMENT OF STRATEGIC RAW MATERIALS". This procedure defines the purchase management processes of such materials for the associate companies subsidiaries of RadiciGroup.

It also has the following purposes:

- "To ensure the best source of supply in terms of quality, volume and price with a view to optimizing financial and warehouse goals.
- To constantly guarantee relations between the SRM (Strategic Raw Materials) Department of Radici Partecipazioni S.p.A. and the RadiciGroup sites.
- To define the criteria for selecting and evaluating Suppliers.
- To evaluate and Select Suppliers based on their ability to deliver a product that conforms to the organization's requirements."

(text taken from "PR 04 - PROCUREMENT OF STRATEGIC RAW MATERIALS")

Procedure "PR 05 - LOGISTICS AND PROCUREMENT", linked to the supply of everything that does not fall within the definition of Strategic Raw Materials, has the following purposes:

- "To ensure centralized purchases from a perspective of standardization and optimization as required by the Management of RadiciGroup.
- To constantly guarantee relations between the L&P (Logistics & Procurement) department of Radici Partecipazioni S.p.A. and the RadiciGroup sites that do the buying.

- To evaluate and Select Suppliers based on their ability to deliver a product that conforms to the organization's requirements.
- To define the criteria to make sure that purchased goods (products and/or services) comply with the requirements agreed with the L&P department."

Both procedures are made available to the sites through a dedicated section on the RadiciGroup Intranet, accessible to all users within the Group.

## SUPPLIERS OF STRATEGIC RAW MATERIALS

In 2015 about 70 suppliers of strategic raw materials accounted for approximately 65% of RadiciGroup's expenditure for Suppliers costs. For this reason they are the most important part of the supply chain on which the Sustainability Report focuses its attention in this edition.

Located primarily in the European area, the Suppliers of Strategic Raw Materials are predominantly multinational groups at the forefront from a technological point of view, dealing in the chemical sector. These Suppliers are linked to the production of polyamide, polyamide intermediates, polyester, polypropylene and polyethylene, the raw materials used for all key RadiciGroup productions.

The Purchasing & Logistics Function (which includes the Strategic Raw Materials and Logistics & Procurement functions) concludes framework contracts with these Suppliers, valid for all RadiciGroup European companies and monitors compliance with them.

STANDARD DISCLOSURES G4-13

As part of the relationship with these suppliers, a single important change in corporate structure occurred in 2015. The global supplier of caprolactam formerly known as DSM CAPROLACTAM became FIBRANT. This involved a change in the shareholding composition of the multinational, without however any effect on its relationship with RadiciGroup.





## THE OTHER SUPPLIERS OF PRODUCTS AND SERVICES

Alongside the manufacturers of Strategic Raw Materials, a large number of other suppliers collaborate with Radici-Group Companies mainly for:

- · Auxiliary raw materials and catalysts
- Packaging and Transport
- Other types of supply (maintenance, utilities)
- · Services not covered in any of the above categories

Given the complexity of the production and operational processes of the 21 companies surveyed for the purpose of this Sustainability Report, it is difficult to put a precise number on the suppliers belonging to these categories.

Mostly manufacturers, but also intermediaries or suppliers of services, are handled directly by the purchasing departments of the individual sites, with the exception of packaging and rail transport Suppliers, for whom European level framework agreements stipulated by the Logistics & Procurement Corporate Function are in place.

#### BREAKDOWN OF RADICIGROUP SUPPLIER TYPES BASED ON TURNOVER

RAW MATERIALS between 500 and 550

million euro

PACKAGING+TRANSPORT about 55 million euro

OTHER

MAINTENANCE+UTILITIES about 125 million euro about

60 million euro

#### GEOGRAPHICAL BREAKDOWN OF RADICIGROUP SUPPLIER TYPES BASED ON TURNOVER

EUROPE about 85% of turnover (in Euro)\*

ASIA about 10% of turnover

AMERICAS about 5% of turnover

\*With turnover exceeding 10 million Euros, about 20 key Suppliers.

## THE ROLE OF THE PURCHASING & LOGISTICS FUNCTION

A key role in the management of Suppliers is therefore covered by the Purchasing&Logistics function, and indirectly by all procurement functions of the individual sites, which also have the task of monitoring, in addition to the compliance with what is provided with the required specifications, that the specifications issued by the supplier meet the following:

- The requirements specified by RadiciGroup including those regarding delivery and after delivery activities (e.g. supply specifications).
- The requirements not formally established by Radici-Group but necessary for the use specified or expected.
- The statutory and regulatory requirements (rules and regulations) applicable to the product.
- Any other additional RadiciGroup requirement (compliance with the Supplier code of conduct, sustainability requirements, etc.).

#### THE SUPPLIER CODE OF CONDUCT

The project, commissioned by the RadiciGroup Ethics Committee at the request of the GRI Coordination Group, was realized in collaboration with the Purchasing&Logistics function.

It provides for the gradual signing by the Suppliers of a Code of Conduct presenting the commitment RadiciGroup intends to make, together with the suppliers, for the building of a sustainable supply chain from an economic, social and environmental point of view.

The Supplier Code of Conduct, designed in 2015, is intended to apply in 2016 following a specific resolution of the Radici Partecipazioni Board of Directors.

Its main topics include transparency and legality in the conduct of business, a detailed section specific to work

and the rejection of any form of abuse (child labour, forced labour, enslavement, discrimination). Other topics include safety in products and processes and specific commitment to researching products with an increasingly limited environmental and social impact. Such topics, already contained in summary form in the Code of Ethics of RadiciGroup 2011, here acquire breadth and depth.

RADICIGROUP'S CUSTOMERS

Listening to and getting to know our customers is fundamental for conducting business in a good and profitable way.

RadiciGroup's Customers, business to business companies, are a global network of producers that reprocess the Group's products for applications in the clothing, furniture, construction, automotive, sports and some industrial sectors (for a detailed description of product applications, see the diagrams on p. 17 and our website at www.radicigroup.com).

## THE CRM PROJECT AND KNOWING YOUR CUSTOMERS

For a long time now, RadiciGroup believes it is essential to develop a system that will generate know-how so that the knowledge about customers is accurate, timely, updated and redistributed within the Group. To this end, the Customer Relationship Management (CRM) project began in 2006, which puts customers and not the product, at the centre of the business.

The "Customer's life cycle" is particularly important in this vision. It represents ideally the process of the Customer approaching the company seen from the Customer's point of view. This cycle repeats itself with every purchase and is an opportunity for RadiciGroup to go from knowing to engaging the Customer in building a shared idea of busi-

ness, through the strengthening of mutual trust.

To date, the CRM project involves the following companies to various degrees: Tessiture Pietro Radici, Radici Chimica, Radici Chimica Deutschland, Radici Novacips, Radici Plastics Iberica, Radici Plastics Gmbh, Radici Plastics UK, Radici Plastics France, Radici Plastics India, Radici Plastics Suzhou, Radici Plastics Ltda, Radici Plastics Usa, Radici Plastics Mexico, Radicifil and Noyfil.

Approximately 62% of customers present in the system is active, 20% are potential customers and 18% are inactive. CRM therefore constitutes an important tool to get to know the world of Customers and provides high potential for engagement as it ranges through all the Group's key areas, with the following breakdown:

#### STANDARD DISCLOSURES G4-8

Clothing Furniture	31% 17%
Automotive	22%
Electrical&Electronic	6%
Other sectors	24%

## LISTENING TO CUSTOMERS SATISFACTION SURVEY

**INDICATOR G4-PR5** 

Along with the daily dialogue with the sales force, the CRM system and engagement projects through social media, which will be discussed, every two years there is also a customer satisfaction survey that "checks the pulse" of our customers.

This is done to understand their assessment of their relationship with RadiciGroup and its Competitors on issues related to price, quality of products and services and sales staff and technical assistance relations.

In addition, some questions try to understand the vision of our Customers about wide-ranging issues, such as sustainability, which became part of the editions 2012



and 2014 and will be further explored in the 2016 edition of the survey.

The Customer Satisfaction survey is a tool for establishing a dialogue with and engaging customers, who can express a direct and qualified opinion not only on predetermined topics, but also on free topics.

The survey results are processed by the Corporate Quality & Processes function and presented, in aggregate form and broken down by business Area, to all sales and technical assistance personnel of the Group.

The 2014 edition of the survey included 1,823 active Customers all over the world. Feedback levels were satisfactory: 36.5% provided a valid response. This percentage corroborates the survey itself and also confirms that the Customer Satisfaction listening and dialogue mode is deemed important by Customers.

From the Customer Satisfaction 2014 survey emerged as strengths the constancy of quality and customer closeness of the sales staff, together with the rapidity of response of the technical assistance staff. Meeting delivery times and maintaining a constant price policy emerged as points that need attention and improvement plans, put in place by the Companies.

Regarding sustainability, the issue that most captured the attention of Customers and that turned out to be a synonym for sustainability for them, was the use of energy from renewable sources and the use of recycled and recyclable raw materials.

The Customer Satisfaction 2016 edition shows a further approach to Customers through a new graphic interface, streamlined content and a wide range of open-ended questions, thus marking even more the transition from Customer Satisfaction to Customer Experience, an experience truly tailor made for each individual Customer.

RADICIGROUP'S CUSTOMERS IN THE CHEMICAL AND FIBRES | SECTORS: A PILOT ENGAGEMENT PROJECT

A pilot project for the engagement of Customers in collaboration with the University of Bergamo was realized in 2015 making use of the LinkedIn/LinkedIn Sales Navigator Tool.

The project involved the analysis of the presence in and use of LinkedIn by Customers also present in the Customer Satisfaction 2014 database.

From the list of actual attendance about 30 contacts were selected (not direct RadiciGroup contacts) which were sent messages about sustainability issues, specifically regarding air emissions (chemical industry Customers) and the release of microplastics in the marine environment (fibers industry Customers).

The experiment produced positive results both as for the quality and abundance of the data identified and as regards the research of Customers or of the potential contacts identified. The engagement obtained was of good quality, but not big enough.

Additional projects are planned for the year 2016, based on the experience gained, in order to raise awareness of sustainability issues among our Customers using other experimental channels.

#### COMPLAINT MANAGEMENT

As for the subject of complaints, a major issue according to the materiality matrix and an extremely important element in Customer relations, a change of mentality has long been in place in the Group. More and more today Companies have a more positive interpretation of complaints than the traditional negative view, considering them also opportunities for improvement, to follow the evolution of the market and the increasingly stringent customer demands both technical and for service. Over the years the quality and performance levels required of products have gone up, which forced the Group to perform a systemic review of product specifications com-

bined with the assessment of the "Process capability" using the Six Sigma\* approach..

Complaint management is considered "material" as it allows the active monitoring of customer satisfaction and new market needs

\* Six Sigma is a problem solving methodology that aims at improving customer satisfaction through a higher process capacity to meet product specifications.

At RadiciGroup's, complaints are monitored in each manufacturing site and subsequently consolidated by Business Area.

In particular, the following are analyzed:

- · number of service complaints;
- · index of service complaints on shipped products;
- number of product complaints;
- index of product complaints on shipped products;
- percentage of complaints/turnover;
- percentage of returns/sold.

As a result of the constant work of monitoring and improving the quality, you may notice that the incidence of External Failure Costs (EFC - complaints) has dropped over the years. In other words, considering Quality Costs (costs for: external failures, internal failures, controls, prevention) as 100%, the percentage of external failure costs has been constantly decreasing. *Table* 7

#### CUSTOMER CODE OF CONDUCT

Sustainability is a goal that RadiciGroup wants to achieve of course together with its Customers, sharing processes of common commitment and continuous improvement.

For this reason, similarly to what happened to the Supplier Code of Conduct, a Customer Code of Conduct was established in 2015. Formalized via a specific resolution by the Board of Directors of Radici Partecipazioni, it constitutes a bilateral moral commitment to building a supply chain attentive not only to the quality of products or services, but also to the environmental and social and working conditions in which the products or services are manufactured and marketed.

Starting in 2016, RadiciGroup will invite its customers to share and implement these principles.

The main topics of the Code involve the issue of effective complaint management as emerged from the materiality matrix and the promotion of commercial relations in the name of fairness and focus on issues related to working conditions, quality, safety and the environment. Particular emphasis is given to transparency and business integrity, the guarantee of fair working conditions, the monitoring of safe work processes and workplace conditions and the commitment to the preservation of natural resources.

Table 7

	2013	2014	2015	Q1.2016
Costs of External Failures	9.0%	7.4%	6.6%	6.2%



#### MACRO ECONOMIC CONTEXT AND STRATEGIES

Text taken from the Directors' Report on the management of the Consolidated Financial Statements as of 31 December 2015

The Consolidated Financial Statements as of 31 December 2015 showed a produced value of 936,082 thousand Euros, a gross operating profit of 102,610 thousand Euros and an operating income of 62,530 thousand Euros.

STANDARD DISCLOSURES G4-7

Radici Partecipazioni S.p.A. is the holding company that combines the industrial activities of RadiciGroup in the field of synthetic fibres, chemicals and plastics and is a direct and indirect subsidiary of the Group Holding Company, Radicifin S.A.p.A.

The following are the macro business areas the company deals in:

- SPECIALTY CHEMICALS AREA
- PERFORMANCE PLASTICS AREA
- SYNTHETIC FIBRES & NONWOVENS AREA

#### FUTURE STRATEGIES FOR THE BUSI-NESS AREAS

- Focus on core businesses considered strategic, synergic and assuredly interesting in the medium term, such as the chemistry of nylon, engineering plastics and synthetic fibres.
- Improvement of the competitive position on the market reaching a substantial balance among the geographical areas in which the Group operates, in order to be less dependent on the performance of individual markets and to strengthen the cash flow intended to reduce indebtedness as well as to fund new initiatives in the strategic businesses.

## THE ACTION PLAN TO IMPLEMENT SUCH STRATEGIES

- Redefinition of productive capacities and realignment of capacities to changing market conditions;
- Revision of industrial processes, as pertains both the internal efficiency of each operating company and the industrial efficiency of production cycles involving a number of group companies;
- Control of the net financial position, with a focus on working capital;
- Sale of properties not used for the purpose of the production process of goods or services.

#### SPECIALTY CHEMICALS AREA

In 2015, the chemical industry's global performance was characterized by moderate growth in terms of sales volumes (+ 3.1%), but penalized by the fall in sales prices caused by the depressive impact of oil prices.

In this context, the Specialty Chemicals Area did not modify its competitive position among world producers of Adipic Acid thanks to the two production facilities of Novara and Zeitz, notwithstanding the increase in world-wide production capacity; it is also one of the few European manufacturers with integrated polymer 6.6 process. The introduction into the product range of long-chain polymers PA 6.10 and PA 6.12 found space in the markets of compounds, injection moulding of industrial products and again the textile industry.

The breakdown by geographical macro-area confirmed last year also the prevalent percentage of the economies of emerging countries, primarily China. However, the continuous increase in Chinese production capacity, which is above the growth of domestic demand, entails for European and American manufacturers, and so consequently also for the Specialty Chemicals Area, greater difficulty in entering Asian markets.

In 2015, especially in the first half of the year, the weakening of the euro was a positive factor for RadiciGroup, which seized the opportunity in terms of both volumes and profit margins. The sales trend in 2015 of the main products was positive in terms of volume, both the new polymer sales mix and the adipic acid maintaining altitude; the largest decrease concerned average prices, by reason of tension caused by excess supply and of the trend in the prices of major raw materials derived from oil, especially in the second half of the year.

By contrast, there was a very good result in terms of volumes and profit margins for polymers, also as a result of the significant growth in volumes of products with higher added value.

In a highly competitive market in terms of sales pric-

es, the Specialty Chemicals Area was thus able to retain substantially its market positions, relying on Customer delivery service and technical support as major strengths.

The prospects for international macroeconomic development for the year 2016 are moderate, in particular showing an increase of 2.5% for the chemical industry. In this scenario RadiciGroup's strategy is to emphasise the activity of improving production efficiency and the optimization of the use of the capabilities, accompanying these activities with a process of cost containment and product quality improvement. Next to this we want to emphasise the diversification efforts of the product portfolio in the area of polymers looking for further developments of high-value added polymers.

#### PERFORMANCE PLASTICS AREA

2015 was a time of great success for the Plastics Area. Turnover was up compared to the previous year (+ 9%), with an increase in profit margins. The business area was able to increase its turnover in almost all areas where its companies operate.

All sites optimized their production capacity in line with market requirements; the German site is planning to install a new line of compounds to keep up with the growth of European volumes.

In the first half of 2015, Roots Novacips S.p.A. acquired from shareholder Modi Intercontinental Pvt. Ltd. 40% of the shares it holds in Radici Plastics India Pvt. Ltd. bringing ownership to 100%. With ownership of all the shares, it is believed that local production can begin earlier and that more resources can be invested in the Indian market. Radici Plastics Mexico S. de R. L. de C.V. became part of the Plastics Area in August; with this latest company the Plastics Area will be able to serve the Mexican customers who until now were reached by Radici Plastics USA, thus optimizing transportation and import time and costs.



The good quality levels and integration achieved by the companies together with the competitive advantages created over the years like the service provided to customers in terms of commercial and logistical assistance as well as technical support to design the product most suitable to the application are the elements of a strategy that in the last three years has rewarded the efforts of this business Area.

The innovation has been focused primarily on the range of Radilon® brand products for the automotive industry: engineering plastics based on PA6, PA6.6 and PA6.10 that stand out for innovation, reduced environmental impact, quality and high performance.

During 2015 the Performance Plastics Area was able to best manage the uncertainty of the markets in which it operates. The tension over consumption was handled with the flexibility that for several years now characterizes the division and with an internationalization strategy that helped stem the less brilliant performances at a global level.

The signals currently coming from the various markets in which the Area operates are difficult to interpret, but the strategy of internationalising the productive activity to follow global customers and at the same time develop local ones has proved successful in these years of uncertainty. It was this strategy that led to the building of a solid and global organisation, capable of providing high quality standards on very distant markets, quickly and compressing supply chain costs. In the first part of 2016 there have been considerable efforts in the area of innovation, in particular as regards the development of new materials including on polymeric bases different from PA6 and PA6.6 and with high value technical features.

## SYNTHETIC FIBRES & NONWOVENS AREA

Seven Business Lines belong to this business Area. Table 8

#### **COMFORT FIBRES**

#### **Polyamide Business Line**

During 2015, the Business Area earned revenues mainly in Italy (45%) followed by the EU/EFTA area (37.5%).

All this as a result of constant sales repositioning work and product diversification, in order to develop products of higher value, lees likely to be attacked by the competition.

This made it possible in 2015 to reach a satisfactory level of gross revenues, although down compared to that recorded in 2014, and a good use of production facilities combined with an increase in average margins.

During the reporting period the costs of the main raw and auxiliary production materials showed a fluctuating trend, with a central part of the year in which there was a rise back up compared to the initial period, but later it went back down again, reaching the annual minimum in the last quarter.

A good sales mix and the application of effective trade policies and actions implemented in order to limit or reduce production costs allowed a significant increase of the average margins and improvement in the current results of the Business Area. The operating profit achieved was superior to both what was predicted in the budget and what was recorded in the previous year.

In the wake of what happened in the last quarter of 2015, in early 2016 there was a slowdown in demand in some sectors in which the business area operates. The situation remains uncertain, as is a possible reading of the evolution of the scenario.

The actions undertaken in this context, both in production and commercial terms, are intended to limit the

Table 0	POLYAMIDE BUSINESS LINE
COMFORT FIBRES	POLYAMIDE BRAZIL BUSINESS LINE
	POLYESTER BUSINESS LINE
PERFORMANCE YARN FLOOR COVERING&INDUSTRIAL BUSINESS LINE	
EVIDIISION VADN	SPUNBOND BUSINESS LINE
EXTRUSION YARN	SPECIALTY BUSINESS LINE
	ACRYLIC BUSINESS LINE

growth in inventories and ensure sales revenues close what is specified in the budget.

#### **Polyamide Brazil Business Line**

As it is known, in 2015 the Brazilian economy experienced a sharp downturn. In 2015 the Business Area saw its revenues shrink by 16.6% and implemented a restructuring process to make the production structure more efficient.

The 2016 indicators do not show encouraging signs. The annual inflation is predicted at 7.06%, the unemployment rate could reach 14% and industrial production for the first quarter shows an 11.4% decrease compared to the same period of the previous year.

The Business Area will continue along this way implementing the restructuring process, which will be matched to a watchful management of variable costs, a more efficient management of electricity and gas needs and improved production yields and average quality. In parallel, an extraordinary investment plan was undertaken that will lead to an increase in productivity and an improvement in production efficiency.

#### **Polyester Business Line**

With the persistence of a weak economic climate, the de-

mand in the whole of 2015 displayed a decrease over the previous year in the furniture and technical textiles industries, while there was an expansion in the automotive and weaving industries.

The difficulties are increasing the products definable as "commodities", which continued to show significant annual decline rates. The collapse in demand in Turkey linked to the economic and political difficulties that the country is experiencing - contributed substantially to the intensification of the contraction of the sales of products that fall into this category.

In the course of 2015 we increased efforts to maintain an adequate level of revenues and such as to ensure reasonable utilization of manufacturing capacity, favouring as far as possible the sale of products with a higher margin. The decision of the Central Bank of Switzerland to abolish the minimum exchange rate of 1.20 Swiss francs to one euro starting from 15 January 2015 had a significant impact on the performance of the Stabio business unit.

A series of extraordinary measures were put in place to deal with this, with the aim to reduce the main costs in Swiss currency, in particular by renegotiating the energy supply contracts and the second level employment contracts in order to maintain the competitiveness of the



production costs. On the front of the main raw materials, like other petrochemical derivatives, those used by the Business Area also suffered a significant reduction of costs in the first half and then stabilized in the middle of the year and decreased again in the final guarter.

The trade policies applied made it possible not having to transfer these reductions on the sales prices of the products with immediate effect, benefiting from it in terms of margins.

The comprehensive income of the Business Area in 2015 turned out to be considerably lower than the previous year, but still showed a positive performance in light of the decline in revenues.

Action from aggressive non-European operators in terms of business proposals, flanked by faltering consumption, continued to influence the trend of demand even in the early months of 2016.

Therefore, in 2016, the Business Area will field a series of actions aimed at strengthening the market position, maintaining good levels of profitability and strict management of production costs.

#### PERFORMANCE YARN

#### **Floor Covering & Industrial Business Line**

Thanks to the favourable situation of the European market, the Business Area managed to consolidate its leading position in the polyamide 6 yarns sector, mass dyed and used for car flooring.

High tenacity polyamide 6.6 yarns used in the automotive industry to produce tires and airbag fabrics also recorded an increase in sales, about 6% over the previous year.

Sales of polymers instead suffered from excess supply, with falling prices on the European polyamide 6 market, an indirect result of the strong structural over-capacity of caprolactam in Europe. Such over-capacity prompted integrated manufacturers to convert large unsold amounts

of caprolactam in polyamide 6 polymer, conditioning the prices, as we said.

The turnover of the Business Area during 2015 recorded a decrease of 2.5% over the previous year due to the reduction in purchase prices of raw materials and as a result of the sales prices, effectively cancelling the increase in volumes, which was 3%.

For 2016 the outlook for growth, albeit moderate, of the principal markets in which the Business Area operates, makes it possible to assume the maintenance of a good level of plant utilization. Regarding polymers, considering the structural situation of the market of traditional PA6 polymers, an additional boost will be given to the production of new co-polymers for extrusion sectors.

#### **EXTRUSION YARN**

As a whole, the Business Area recorded a gross turnover higher than what was achieved in the previous year (+9.6%) and higher than the budget assumption. The result in terms of gross operating margin came to 11.9% of the product value, much higher, in absolute values, than the margin achieved in the previous year and the one predicted in the budget.

#### **Spundbound Business Line**

The year 2015 was characterized by slightly higher sales volumes than those recorded in 2014 with quite variable raw material (polypropylene) average prices, especially in the first half, but with an average value less than in 2014 at the end of the year.

Sales prices mirrored the raw material trend although, due to the different mix of products, a higher margin was generated than in the previous year.

In this context, almost all of the Customers maintained, or even increased, the volumes ordered compared to the previous year. The research of new markets continued through systematic marketing surveys, followed by visits with and samples from Customers belonging to industrial sectors other than building insulation, a more than con-

solidated sector for Tessiture Pietro Radici.

#### **Specialty Business Line**

The profit recorded by the Specialty Business Line with "Radigreen®" brand products in 2014 was an encouragement to continue also for the year 2015 with the business strategy characterized by a careful selection of products to be promoted, so as to improve the profitability of the business area.

In this context, the solidarity agreement that provides for a maximum reduction of working hours, average over the period, slightly less than 60% of the total number of hours, was prudently renewed for a further twelve months

From a commercial point of view, 2015 was marked by an increase in sales volumes (+30%) compared to the previous year, essentially due to the entry of a major American customer and increased demand from some older European customers. Sales prices increased in all product families.

The price trend of the raw material (polyethylene) was affected at times by limited product availability on the market and then by some manufacturers' tendencies for strong speculation. At year end, the average price of polyethylene was in any case slightly higher than the one recorded in 2014.

#### **Acrylic Business Line**

The year 2015 was characterized by difficulties in logistics for the supply of raw materials mainly due to bureaucratic import matters. This situation did not allow Radici-Group to fully exploit the production potential and thus satisfy all product requests made by a still weak market.

The situation in the Argentine acrylic fibre market thus reflects the uncertainty that characterizes the general economic situation. In December 2015 there was a sharp devaluation of the Argentine peso that would lead to a progressive competitive advantage in domestic production over imports of finished product.

The new political scenario could lead to a gradual rebal-

ancing of the economy, encouraging credit and development. Acrylic fibre sales declined slightly, offset however by the sale of yarn, a product increasingly more important in the business area's business model.





# INDICATORS ACCORDING TO THE GLOBAL REPORTING INITIATIVE MODEL



## **ECONOMIC INDICATORS (EC)**

**INDICATOR G4-EC1** 

(DMA) The tables given below show how RadiciGroup year after year materializes the concept of sustainability in the economic-financial field, a topic whose importance is also underlined by the materiality matrix of 2015. *Tables 9-10* 

The Group's economic sustainability policy results in the following:

- Strategies and investments where the most profitable possible use of one's resources is right up there with the protection and promotion of the Group's human canital.
- Attention to the preservation of profitability working at the same time on the mitigation of environmental impacts.
- Investment in R&D and innovation, of products in particular, to achieve a broad portfolio of products with limited impact, able to preserve the environment and to create, at the same time, new market opportunities for RadiciGroup companies.
- Investment to measure the impacts and make the plants even more efficient for savings and efficiency are the primary source of sustainability.
- Investment on the people of the Group, in terms of proper remuneration and adequate education and training.
- Support for Local Communities through sponsorships of social and cultural activities in areas where Radici-Group Companies are found.

The statements follow the GBS - CSR Report Study Group model (www.gruppobilanciosociale.org).

The data refer to the consolidated financial statements of Radici Partecipazioni S.p.A. As it is known, in the consolidated financial statements the economic flows stemming from transactions between companies included in the consolidation are eliminated.

The financial statements are audited voluntarily by Deloitte&Touche and include, besides the parent company, the Italian and foreign companies in which Radici Partecipazioni holds, directly or indirectly, a majority of the share capital and controls management pursuant to Art. 2359 of the Italian Civil Code.

70.96%

percentage of employee compensation on the value added in 2015.

#### Table 9

ITEMS	31.12.15	31.12.14	31.12.13
A) PRODUCTION VALUES	993,769,060	1,026,788,990	1,052,493,758
Revenue from sales and services	1,011,118,534	1,021,683,243	1,042,894,774
2. Changes in inventories of work in progress,			
semi-processed and finished products	(17,534,599)	4,917,409	9,414,333
3. Custom change in work in progress	-	-	-
4. Increase in capital assets for internal work	185,125	188,339	184,652
5. Other operating income			
B) INTERIM COSTS OF MANAGEMENT	763,942,939	835,206,659	871,656,161
6. Costs for the purchase of raw and subsidiary			
materials, consumables and goods	576,061,208	645,415,439	671,887,411
7. Costs for services	179,927,810	179,104,337	198,793,212
8. Costs for use of third party assets	5,117,266	5,525,369	5,326,634
9. Change in inventories of raw subsidiary			4
materials, consumables and goods	769,270	3,007,777	(6,287,138)
10. Provisions for risks	300,567	193,740	596,671
11. Other provisions	299,199	770,670	12,678
12. Other operating expenses	1,467,618	1,189,327	1,326,693
GROSS ADDED VALUE (A-B)	229,826,121	191,582,331	180,837,597
+/- Accessory and extraordinary components	(6,306,693)	2,691,404	7,391,404
TOTAL GROSS VALUE ADDED	223,519,428	194,273,735	188,229,001
- Depreciation	40,034,852	39,536,412	39,898,717
TOTAL NET VALUE ADDED	183,484,576	154,737,323	148,330,284

#### Table 10

ITEMS	31.12.15	31.12.14	31.12.13
A) REMUNERATION OF STAFF	130,196,142	123,704,018	125,609,007
Non-employees	7,397,897	7,084,606	7,105,875
Employees	122,798,245	116,619,412	118,503,133
a) direct remuneration	97,595,292	92,535,618	94,145,149
b) indirect remuneration	25,202,953	24,083,794	24,357,984
B) REMUNERATION OF PUBLIC ADMINISTRATION	16,404,674	8,483,021	8,684,808
a) Current taxes	20,781,715	9,884,968	9,086,287
Direct taxes	17,127,826	6,478,651	5,502,499
Indirect taxes	3,653,889	3,406,317	3,583,788
b) Deferred taxes	-3,973,424	-495,439	-192,309
c) Grants for operating expenses	-403,618	-906,508	-209,169
C) REMUNERATION OF CREDIT CAPITAL	6,081,958	9,433,626	12,281,414
Charges for short-term capital assets	6,081,958	9,433,626	12,281,414
Deferred charges for long-term capital assets			
D) REMUNERATION OF RISK CAPITAL	4,020,000	4,020,000	0
Dividends (income distributed to shareholders)	4,020,000	4,020,000	0
E) REMUNERATION OF THE COMPANY	26,252,265	8,659,933	1,373,988
+/- changes in reserves	26,252,265	8,659,933	1,373,988
F) EXTERNAL DONATIONS	529,538	436,725	381,067
TOTAL NET VALUE ADDED	183,484,576	154,737,323	148,330,284



# SPECIFIC ENVIRONMENTAL IMPACT INDEXES COMPARED TO THE VALUE ADDED GENERATED BY THE GROUP.

Income generation inevitably involves the use of resources. RadiciGroup's goal is to ensure over time the level of profitability of its business, however, gradually decreasing the impact on the environment, according to a circular economy perspective.

As evidence of this commitment, the *G4-EN5 INDICATOR* reported here shows the decrease of the total primary energy quantity (*G4-EN3 INDICATOR*) coming from fossil fuels, compared to the total net value added generated by the Group, which is instead increasing. *Table 11* 

The same reasoning also applies to the other indices shown below, relating to water resources, waste subject to disposal and not intended for recovery and emissions. *Table 12* 

These objectives were achieved thanks to a clear desire to invest, in particular.

#### 134 MILLION

Cost of investments in support of the competitiveness of the Group's Companies in 2011-2015. Of these, 30 million specifically invested in 2015.

#### **MORE THAN € 2.5 MILLION**

Cost of environmental investments made in 2015 and allocated to the introduction of Best Available Techniques, improving energy efficiency, reducing emissions and research and development activities aimed at the introduction of limited impact processes and products.

About all these activities and the many results obtained, see the texts and the indicators contained in the chapters of the Report concerning the environmental (EN) and product (PR) indicators.

#### **INDICATOR G4-EN5**

Table 11 TOTAL PRIMARY ENERGY (DIRECT+INDIRECT) COMPARED TO THE TOTAL NET VALUE ADDED

		2013	2014	2015
GJ	Total primary energy EN3	7,176,375	6,587,001	6,359,153
€	TOTAL NET VALUE ADDED	148,330,284	154,737,323	183,484,576
GJ/€		0.048	0.043	0.035

#### Table 12

		2013	2014	2015
m³/€	Water resurces (G4-EN8 indicator) compared to the value added	0.58	0.59	0.48
t/k€	Waste subject to disposal without recovery (G4-EN23 indicator) compared to the value added	0.031	0.025	0.021
tCO₂eq/k€	Total emissions into the atmosphere (G4-EN15 and G4-EN16 indicators) compared to the value added	4.6	3.3	2.9

#### **DIRECT - INDIRECT TAXES BY COUNTRY (euro)**

ARGENTINA 818,746 BRAZIL 489,411

CHINA 1,293,697

GERMANY 1,296,038

INDIA 106,964

UK 25,803

ITALY 15,761,095

LUXEMBOURG -

HOLLAND -

CZECH REPUBLIC 68,728

ROMANIA 379,832

SPAIN 3,249

SWITZERLAND 114,637

HUNGARY 32,497

USA 391,018

TOTAL 20,781,715





# INDICATORS OF LABOUR PRACTICES AND DECENT WORK CONDITIONS (LA)

## A PHOTOGRAPH OF RADICIGROUP'S EMPLOYEES

STANDARD DISCLOSURES G4-10 and 11

Equally distributed between Italy and the rest of the world, RadiciGroup's workforce was made up in 2015 of 3016 people, employees and temporary workers together. 2198 men and 818 women now form RadiciGroup's human capital.

Here is a detail photo of them. Table 13-14

These tables show that RadiciGroup's workforce in the year of reporting was reduced by a total of 31 people, 30 employees and one temporary worker compared to 2014 (40 fewer men, 9 more women). The figure confirms the trend seen for some time in the Group of a reduced male labour force matched by an increase in the female.

In particular, a reduction of 43 units (34 men and 9 women) is due to the corporate restructuring of RadiciFibras in Brazil, while other sites hired staff, including for example the 15 men who became part of the Radici Plastics Suzhou staff

#### **Types of Contracts**

In 2015, 94.5% of the Group's employees were hired with a permanent contract. In this context, the women trend stabilized at around 90.9%. As for the permanent male staff, the situation was almost stationary, with a shift from 94.4% in 2013 to 95.8% in 2015.

More than 95% of the Group's Employees worked full time in the year of reporting. For female staff in particular, full time amounted to 86%; the women who benefited from part-time in 2015 were 15 more than the previous year.

Table 15

As for the male staff, full-time went up to 99% since the men who worked part-time decreased by 32 units.

Collective bargaining remained the widely prevalent type of contract, equal to 79.3%, and growing continuously. *Table 17* 

Table 13 G4-10-11 WORKFORCE BY GEOGRAPHICAL AREA\*

			2013	2014	2015
n	Total workforce	Total	3,210	3,047	3,016
n		Men	2,404	2,238	2,198
n		Women	806	809	818
n	Italy	Total	1,601	1,599	1,587
n		Men	1,301	1,296	1,287
n		Women	300	303	300
n	Rest of Europe	Total	1,003	1,007	1,029
n		Men	610	597	596
n		Women	393	410	433
n	Asia	Total	36	42	57
n		Men	27	29	44
n		Women	9	13	13
n	America	Total	570	399	343
n		Men	466	316	271
n		Women	104	83	72

<sup>\*</sup>workforce = employees + temps

Table 14 PERCENTAGE OF THE FEMALE WORKFORCE BY GEOGRAPHICAL AREA (2015)\*

		2013	2014	2015
%	Europe (Italy + rest of Europe)	26.6%	27.4%	28.0%
%	Italy	18.7%	18.9%	18.9%
%	Rest of Europe	39.2%	40.7%	42.1%
%	Asia	25.0%	31.0%	22.8%
%	America	18.2%	20.8%	21.0%

<sup>\*</sup>workforce = employees + temps

Table 15 RADICIGROUP'S WORKFORCE AND EMPLOYESS BROKEN DOWN BY GENDER AND EMPLOYMENT AND CONTRACT TYPE\*

Table 15	RADICIGROUP S WURKFURGE AND EMPLOYESS BRO	KEN DOWN BY			
			2013	2014	2015
n	Total workforce	Total	3,210	3,047	3,016
n		Men	2,404	2,238	2,198
n		Women	806	809	818
n	Total employees	Total	3,166	2,997	2,967
n		Men	2,362	2,192	2,156
n		Women	804	805	811
n	permanent employees	Total	2,895	2,859	2,803
n		Men	2,230	2,121	2,066
n		Women	665	738	737
n	PART-TIME permanent	Total	140	140	123
n		Men	56	54	22
n		Women	84	86	101
n	FULL-TIME permanent	Total	2,755	2,719	2,680
n		Men	2,174	2,067	2,044
n		Women	581	652	636
%	full-time permanent of total permanent employees	Total	95.2%	95.1%	95.6%
%		Men	97.5%	97.5%	98.9%
%		Women	87.4%	88.3%	86.3%
n	temporary employees	Total	271	138	164
n		Men	132	71	90
n		Women	139	67	74
%	permanent employees of total employees	Total	91.4%	95.4%	94.5%
%		Men	94.4%	96.8%	95.8%
%		Women	82.7%	91.7%	90.9%
n	PART-TIME (total)	Total	140	140	123
n		Men	56	54	22
n		Women	84	86	101
n	<ul><li>FULL-TIME (total)</li></ul>	Total	3,026	2,857	2,844
n		Men	2,306	2,138	2,134
n		Women	720	719	710
%	<ul><li>full-time employees of total employees</li></ul>	Total	95.6%	95.3%	95.9%
%		Men	97.6%	97.5%	99.0%
%		Women	89.6%	89.3%	87.5%

\*workforce = employees + temps

#### **INDICATOR G4-LA12**

The following table displays a breakdown of Employees by gender and age range that shows how the intermediate range is widely prevalent in the Group. The division between women and men in the Group does not show significant changes. *Table 16* 

The breakdown of employees by category found in the previous editions of the report is being reviewed to make it more consistent with the reality of RadiciGroup. Therefore, we chose not to put it in the Sustainability Report 2015, but it will be re-introduced in the edition 2016 along with its specifications.

Table 16 EMPLOYEE BREAKDOWN BY AGE GROUP AND GENDER

			2013	2014	2015
n	Total Employees	Total	3,166	2,997	2,967
n		Men	2,362	2,192	2,156
n		Women	804	805	811
n	Employees < 30 years old	Total	436	332	304
n		Men	294	194	200
n		Women	142	138	104
n	Employees 30 < > 50 years old	Total	1,980	1,813	1,800
n		Men	1,455	1,311	1,258
n		Women	525	502	542
n	Employees > 50 years old	Total	750	852	863
n		Men	613	687	698
n		Women	137	165	165

Table 17 TYPE OF CONTRACTING - PERCENTAGE OF EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS

		2013	2014	2015
n	Total Employees	3,166	2,997	2,967
n	National collective bargaining	2,217	2,203	2,229
n	Company collective bargaining	162	160	124
n	Individual bargaining	787	634	614
%	Individual bargaining percentage	24.9%	21.2%	20.7%
%	Collective bargaining percentage	75.1%	78.8%	79.3%

#### STANDARD DISCLOSURES G4-56

(DMA) RadiciGroup's policy towards its human resources is made explicit in the Group's values:

- The centrality of the person, respect for their physical and cultural integrity.
- The efficiency and effectiveness of management systems to improve our business.
- The fairness and transparency of the management systems in compliance with current standards.
- Attention to the needs and expectations of our stakeholders to enhance the feeling of belonging and satisfaction.
- The reliability of management systems and procedures for the safety of our employees, the community and the environment.
- The responsibility of the company for its workers, sites and factories.

The importance of each person, the responsibility for creating appropriate and safe working environments, attention to the local communities, to which belong many of the Group's workers; these are important key issues that quide the actions of RadiciGroup.

In particular, putting people first, an element of the internal management policy highlighted by the materiality matrix, entails travelling two main roads:

- creating intangible value through training and motivation initiatives that foster a relationship of mutual trust between RadiciGroup and its Employees;
- creating tangible value through adequate remuneration to which is added a collective and individual incentive system.

#### CREATING INTANGIBLE VALUE

#### **TRAINING**

As anticipated, the Group attaches great importance to education and training. It is a key element for the creation of intangible value, i.e. the individual and collective growth that aims to help each person to give the best of their ability in their role and, at the same time, to enhance and preserve the know-how in the Companies.

The RadiciGroup Shareholders attach considerable importance to training. Constantly informed on the progress of courses from the Corporate Human Resources function, in 2015 they urged continuous investment on the subject, including appointments in collaboration with local educational institutions in the projects (see in this regard the Stakeholder Engagement section of the document on school relations).

In addition to the compulsory training as provided by law, pertaining to workplace Health and Safety, in 2015 RadiciGroup thus faced with voluntary training several other issues considered of paramount importance, in particular quality, behaviour, management methodologies and individual work logic.

The Group had launched the RadiciGroup Academy initiative already in 2011. Over the years, the Academy welcomed newly hired young graduates, supervisors and managers of the RadiciGroup companies. In 2014 and 2015, in particular, there were about 100 Italian students, along with, for the first time, US, Brazilian and German colleagues.

RadiciGroup Academy courses have had, for example, these objectives:

- Generating knowledge and awareness in terms of organisation and relationships between functions, with the goal of stimulating internal customer culture, the decision-making ability of each person with the knowledge of the impacts of such decisions on the organisation.
- Helping people to build clarity in their institutional, organisational, functional and relational roles and responsibilities.
- Stimulating and reactivating, in the Manager, the theme of change and development of new operational and relational methods.
- Recognizing, strengthening and facilitating the expression of each for the common objective: diversity as wealth and not as an obstacle.

In addition to what was done at the Academy level, the Group held numerous other courses. The Human Resources function collected the educational needs of the

Sites, developed a Group level training plan and structured a system for assessing the efficacy of the training plans as prepared.

In particular, during 2015, Fondirigenti, a fund created to promote the growth of the managerial culture, to which RadiciGroup's Italian Companies belong, made available - through a tendering mechanism - some sums to fund Manager training programmes on issues such as:

- Organisational innovation
- · Growth of managerial skills
- Internationalisation
- Strategic alliances
- Credit
- Strategic finance

Three Group companies (Radici Novacips, Noyfil and Radici Chimica) then presented the Training Plans and subsequently obtained € 43,000 in funding.

For all three companies the courses were focused on the theme of "Change Management & Integration" with the aim of:

- Becoming aware of the nature of change and its constituent phases by identifying three key issues:
- 1. Organisational: analysing context and organisational culture.
- 2. Managerial: changing leadership, communication, governance of processes.
- 3. Individual: handling barriers to change, involvement and promotion of innovative behavioural patterns.
- Handling the introduction of organisational innovations whether of a process or technological.
- Addressing the moment of change as an opportunity

for integration.

- Building knowledge and awareness in terms of organisation and relationships between functions, with the goal of stimulating internal customer culture, the decision-making ability of each person with the knowledge of the impacts of such decisions on the organisation.
- Supporting the people involved in building clarity in their institutional, organisational, functional and relational roles and responsibilities.
- Providing operational tools for the management and development of its employees.
- The total number of people involved, including Executives and auditors, was more than 40.

Below (*Table 18*) we report some numerical indicators concerning the Group' workers' training.

In absolute terms, the hours of training show a largely positive trend with a 15.8% increase in three years. Even the hours/person index grew, from 13.5 hours/person in 2013 to 16.6 hours/person in 2015 (+ 23.5%).

Because, as explained for the G4-LA12 indicator, the classification of employees by category is being revised, it is not possible to apply this layering to the training in this Report.

The breakdown by gender given below is however still valid. *Table 19*.

As for the distribution of training hours by gender, the data shows interesting values. The training index for hours per capita shows a significant increase for women; the index went from 7.6 hours/woman in 2013 to 14.5 hours/woman in 2015, a 91% increase.

## **INDICATOR G4-LA 9**

Table 18 TRAINING FOR FMPI OYFFS

		2013	2014	2015
n	Total employees	3,166	2,997	2,967
hours	Total training hours	42,641	47,663	(+15.8%)* 49,365
hours	Hours per capita	13.5	15.9	(+23.5%)* 16.6

\*compared to 2013

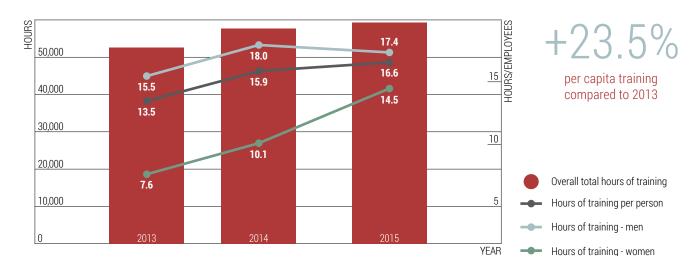
## **INDICATOR G4-LA 9**

Table 19 TRAINING BY GENDER

		2013	2014	2015
hours	Training hours for women	6,103	8,130	11,756
n	Women employees	804	805	811
hours	Training hours per capita for women	7.6	10.1	(+91.0%)* <b>14.5</b>
hours	Training hours for men	36,538	39,533	37,610
n	Men employees	2362	2,192	2,156
hours	Training hours per capita for men	15.5	18.0	(+ 12.8%)* <b>17.4</b>

<sup>\*</sup>compared to 2013

## TRAINING BY GENDER INDICATOR G4-LA 9



The increase was due in particular to a robust training programme at Radici Chimica Deutschland, a site where the hours were increased tenfold. Also with regard to the training of male staff, the index shows an increase, albeit more modest, of 12.8%, from 15.5 to 17.4 hours/man.

#### PROJECT WHP: HEALTH AND WELLNESS IN THE WORKPLACE

In some Group Companies, to a training project on business organisation issues was added a project aimed at all Employees, called Workplace Health Promotion.

In 2015, the WHP project involved Radici Partecipazioni, Tessiture Pietro Radici and Geoenergie; only one case of excellence, but it will be extended gradually.

This project, a clear sign of RadiciGroup's will to invest on people's health and welfare, is sponsored by the ATS of Bergamo, Bergamo Confindustria and the Lombardy Region and has a three-year plan of action. Its purposes are the gradual improvement of the organisation and the working environment and the promotion of healthy lifestyle choices whose beneficial effects can also involve the families of the Employees. Added to this is an encouragement to cultivate personal growth and, as a result of healthier lifestyles, also increased job productivity.

To effectively engage its employees, RadiciGroup entrusted them with the choice of a topic to be addressed among the first areas of intervention. Along with the initiatives linked to sport and healthy eating, selected by the Group, Employees identified as an issue to address the Personal and Social Well-being that results in the need to reconcile one's private and work lives.

In 2015, company walks, football tournaments, collective ice skating and skiing lessons allowed people to try their hand at "best practices" or aggregative sports activities. This was accompanied by a communication campaign with emails and posters promoting healthy nutrition rules. Every Monday, a fresh fruit basket in each of the branches participating in the project was the WHP snack offered to all. In addition, thanks to an agreement with certain Group suppliers companies, snack and drink vending machines and caterings at events offered "lighter" food choices, preferring, for example, fruits, vegetables and fresh foods.

The issue of reconciliation, more delicate and requiring more complex management, will be addressed in the course of 2016, inspired by the suggestions and demands highlighted by our Employees through an ongoing survey in the branches.

In addition to the two issues of 2015, a motivational path linked to the fight against smoking is coming in 2016.

## SAFETY TRAINING

"Evaluating risks, preventing them, taking steps to minimize them. For some time now, these activities have been carried out with commitment in all RadiciGroup Companies. However, what has been done so far is not enough. It is necessary to cross over not only in theory, but in fact, from risk management to the active promotion of safety in each of our Companies.

This commitment cannot be delegated but is entrusted to each of us personally.

For this reason, together with the Human Resources function of RadiciGroup, we decided to launch "RadiciGroup for Safety", a special campaign that aims to work at the roots of safety. A commitment to training and raising awareness on the contribution that each of us can and must give to this issue"

The situation regarding accidents and absence from work was characterized by a deterioration in 2015 that mainly affected the male staff.

The frequency rate (TI) of accidents returned to the levels of 2013, but with a severity index (IG) worsened from 80 to 122 days/200,000 hours.

The TA index measuring absenteeism consequently increased by 11.7% over the previous year, while still remaining lower than in 2013. The percentage of absence from the workplace, which absences due to an accident contribute to in addition to those due to sickness and unregulated permits, was set on 4.4%.

In the reporting period, 5 cases of occupational diseases were also reported in Italy. *Tables 20-21* 

## **INDICATOR G4-LA 6**

Table 20 WORKPLACE HEALTH AND SAFETY\*

				2013	2014	2015
	n	Total workforce *	Tot	3,218	3,061	3,016
	n		Men	2,412	2,251	2,198
	n		Women	806	810	818
	n	Total employees	Tot	3,166	2,997	2,967
	n		Men	2,362	2,192	2,156
	n		Women	804	805	811
	hours	Total hours worked	Tot	5,486,505	5,063,455	5,018,225
	hours		Men	4,166,134	3,881,705	3,755,672
2	hours		Women	1,320,371	1,181,750	1,262,553
ACCIDENTS	n	Total days lost	Tot	2,191	2,505	3,065
	n		Men	2,028	1,863	2,689
SS	n		Women	163	642	376
Ā	n	Total number of accidents	Tot	92	76	85
	n		Men	86	65	73
	n		Women	6	11	12
	n	Total number of occupational diseases	Tot	2	0	5
	n		Men	1	0	5
ш	n		Women	1	0	0
ABSENCE	n	Average days of absence	Tot	11	8	10
SEI	n		Men	11	9	10
A B	n		Women	11	6	10
	n	Average working days	Tot	218	213	222
	n		Men	219	221	225
	n		Women	215	191	214
	n/200.000h	IR (injury rate)	Tot	3.4	3.0	3.4
	n/200.000h		Men	4.1	3.3	3.9
	n/200.000h		Women	0.9	1.9	1.9
	n/200.000h	ODR (occupational disease rate)	Tot	0.07	0.00	0.20
	n/200.000h		Men	0.05	0.00	0.27
(0	n/200.000h		Women	0.15	0.00	0.00
INDEXES	d/200.000h	LDR (lost day rate)	Tot	79.9	98.9	122.2
Ω	d/200.000h		Men	97.4	96.0	143.2
볼	d/200.000h		Women	24.7	108.7	59.6
	d/200.000h	AR (absentee rate)	Tot	9,985	7,954	8,880
	d/200.000h		Men	10,039	8,440	8,588
	d/200.000h		Women	9,821	6,396	9,703
	%	Absence	Tot	5.0	4.0	4.4
	%		Men	5.0	4.2	4.3
	%		Women	4.9	3.2	4.9

<sup>\*</sup>for the calculation of the G4-LA6, the workforce includes contract workers, temporary workers and employees



### **INDICATOR G4-LA 6**

Table 21 DISTRIBUTION OF ACCIDENTS BY GEOGRAPHICAL AREA

Tubic 21	DISTRIBUTION OF ACCIDENTS BY GEOGRAFI MICAL AREA				
			ITALY		
		2013	2014	2015	
	n Total workforce	1,609	1,612	1,587	
ho	rs Total hours worked	2,473,215	2,423,810	2,473,062	
	n Total days lost	883	976	1,338	
	n Total number of accidents	42	35	51	
	n Total number of occupational diseases	2	0	5	
	n AVERAGE staff Absence days	8	8	8	
	n AVERAGE working days	196	198	204	
n/200.0	Oh IR = Injury rate	3.4	2.9	4.1	
n/200.0	Oh ODR = occupational disease rate	0.16	0	0.4	
d/200.0	0h LDR = lost day rate	71.4	80.5	108.2	
d/200.0	Oh AR = absentee rate	7,712	8,075	7,846	
	% Absence	3.9%	4.0%	3.9%	

# CREATING TANGIBLE VALUE - THE AWARD AND INCENTIVE SYSTEM

Competitive remuneration continues to be an essential factor in attracting external candidates and Employee loyalty. The compensation strategy is therefore essential, also for RadiciGroup, especially if related to the intangible factors of which we spoke earlier, to strengthen the climate of trust and corporate welfare.

The Group's companies' pay system is determined by the different levels of responsibility and the individual contribution to the collective result. National collective agreements or business contracts, and if those are not available, the conditions of the labour market, determine the minimum remuneration levels for all workers.

Two important incentive tools were given special attention

in 2015: the renewal, for Italian companies, of the Prize for Participation in the Corporate Performance and the definition, for the managerial figures of all Group Companies, of a general policy of Management by Objective (MBO).

The result of constructive consultations with Labour Union Representatives, the Renewal of the Prize for Participation in the Corporate Performance had to do with some of the Italian companies covered by the Report.

It is a variable annual prize of a collective nature with individual distribution, determined on the basis of profitability and quality indicators as well as environmental and safety indicators. As compared to the previous agreement, this renewal increased the value of the potential prize that is awarded upon the achievement of all the objectives.

This is a sign of RadiciGroup's will to reward managerial figures all over the world in a fair-minded way, the criteria for the MBO and its incentives were established

REST OF EUROPE		AMERICA		ASIA				
2013	2014	2015	2013	2014	2015	2013	2014	2015
1,003	1,008	1,029	570	399	343	36	42	57
1,675,336	1,668,443	1,639,844	1,263,885	879,145	775,387	74,069	92,057	129,932
688	631	518	425	863	987	195	35	222
22	25	20	28	15	12	0	1	2
0	0	0	0	0	0	0	0	0
17	8	14	10	11	6	7	6	6
219	209	223	209	281	289	257	227	296
2.6	3.0	2.4	4.4	3.4	3.1	0	2.2	3.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.1	75.6	63.2	67.3	196.3	254.6	526.5	76.0	341.7
15,875	7,771	12,693	9,306	8,175	4,309	5,332	5,349	3,758
7.9%	3.9%	6.3%	4.7%	4.1%	2.2%	2.7%	2.7%	1.9%

and formalised through the Management Instruction IG 03:04.

This procedure provides for an assessment based on a variable mix, depending on the framework range, of Group objectives, business goals and individual goals.

## **INDICATOR G4-LA2**

In addition to the remuneration systems we just mentioned, there were also other benefits in 2015 (company cars, restaurant tickets, canteen at special rates, discounts on the purchase of goods and services) that were assigned or made available to employees, regardless of contract type (full time or part time, permanent or temporary), on the basis of company agreements and the role of the individual.

Our future engagements on the topic:

- A renewed commitment to issues already addressed in 2015 in order to complete the training programmes already undertaken.
- A major plan to raise safety awareness at all Group Companies.
- Further work on the standardization of incentive policies for all Group companies.

# **SOCIAL INDICATORS (SO)**

As confirmed by our Values

(DMA) "The centrality of the person, respect for their physical and cultural integrity."

"The responsibility of the company for its workers, sites and factories."

RadiciGroup has traditionally been aware of its local social responsibility and is attentive to people who contribute on a daily basis to the growth of its companies with their work and ideas

The Group is aware of fact that all stakeholders are part of the company understood as "expanded", which is not limited to the scope of financial economic consolidation, or the physical boundaries of the factories, but transcends these areas to get in touch, thanks to the various stakeholders, with the world that surrounds it.

As evidence of this, even the Materiality Matrix has been showing, for two years now, the importance of the economic value generated and distributed as a significant part of the Group's activities.

Alongside the local engagement projects, through the previously discussed social media, many different areas were affected by the Group's social marketing and philanthropic activities in 2015. These activities were aimed at supporting in first the Community, but also the Schools or Associations with a cultural or social objective.

(DMA) In particular, RadiciGroup's social and philanthropic activities focused on a few key issues formalized by the management instruction "IG 10 11 SOCIAL & PHILAN-

THROPIC MARKETING" part of the Radici Partecipazioni procedure "PR 10, Marketing & Communication", which began in 2015 and was made official in January 2016.

This management instruction, signed and approved by the President of RadiciGroup, defines the Group's basic principles of action in terms of attention to:

- Culture and Education, Environment with the natural and historical sites.
- Sport, especially if amateur sports aimed at social inclusiveness projects.
- Health and prevention, with special consideration to disease prevention and care of particularly serious diseases.
- Young and old.

(DMA) In accordance with its internal Code of Ethics, signed by the President of Radici Partecipazioni and updated in 2013, and with this specific provision in particular.

"RadiciGroup cannot make direct or indirect contributions in whatever form, nor allocate funds and funding to support public entities (e.g. political parties, committees), except as permitted and provided for by the laws and regulations and preliminarily approved by the Board of Directors of Radici Partecipazioni S.p.A."

The Group has maintained a neutral position towards political parties, not providing any form of direct or indirect financial contribution.

(INDICATOR G4-S06)

The presence of Group consolidated financial statements, certified by a third party, and the presence of

cross-checks between the different business functions also guarantee from risks related to corruption, an issue addressed also in the RadiciGroup Code of Ethics with some specific provisions:

(DMA) "In promotional or commercial relationships and relations, illegal practices and behaviours are prohibited, as well as collusion, illegal payments, bribes and favouritism, direct solicitations or through third parties for personal benefits for oneself or others, contrary to the laws, regulations and standards subject to this Code of Ethics."

"In relations with Customers and Suppliers or third parties, money offers or gifts aiming to obtain real or apparent advantages of various kinds (e.g. economic, favours, recommendations) are not allowed."

In this regard, in the year of reporting, there was no significant penalty payable by the Group, whether monetary (above 500 €) or non-monetary, for non-compliance with laws and regulations related to this issue.

(INDICATOR G4-S08)

# SPONSORSHIPS AND DONATIONS 2015

The contributions and donations granted in 2015 were divided as follows. *Table 22* 

In 2015, RadiciGroup focused a constantly increasing economic support in particular on cultural initiatives and especially on the Fondazione Teatro Donizetti.

The latter, connected to the historical Bergamo theatre, aims to promote and increase its activities and assumes as a priority the task of bringing the theatre to its full functionality through extensive restoration work.

## REQUESTS FOR SPONSORSHIPS AND DONATIONS

Since the beginning of 2016, sponsorship requests are all conveyed through a new and special section, accessible from the home page of the RadiciGroup website at:

www.radicigroup.com/en/radici-connect/sponsorship/intro

Table 22

	2013	2014	2015
Health Care and Prevention, Humanitarian Associations	39,007	103,011	51,168
Local interests, Culture and Training	111,457	79,529	195,670
Sports	263,775	265,101	292,140
Total*	414,239	447,641	538,978
Total for RadiciGroup	381,067	436,725	529,538

<sup>\*</sup>The total refers to RadiciGroup'sd activities with Geogreen, a manufacturing company that belongs to the Radici family but is not a subsidiary of the holding company Radici Partecipazioni S.p.A. Donations and contributions are in fact handled in common.

Available in Italian and English, the sponsorship request page allows you to work with greater transparency with respect to the receipt and management of calls for contributions.

Again with a view to transparency, the page also clearly sets out the principles based on which an initiative is chosen for support:

## (DMA)

- LOCAL REACH OF THE PROMOTING ASSOCIATION AND BOND WITH COMMUNITIES RELEVANT TO THE INDIVIDUAL COMPANIES AND THE GROUP.
- NO PROFIT CHARACTER OF REQUESTING ENTITY OR EVENT.
- COMMITMENT TO THE PROMOTION OF PEOPLE AND SUPPORT IN SITUATIONS OF HARDSHIP.
- HIGH CULTURAL OR AGGREGATIVE VALUE OF THE INITIATIVE.

Each request is answered through management by the site, thus avoiding any dispersions in the communication process. All requests converge in a database that stores the details of the projects for which support is requested so the Group can act quickly where there is evidence of a particular state of need.

As the sponsorship request form is a available also in English, all Group Stakeholders have the opportunity to have access to RadiciGroup's support, thereby contributing to the policy of extension of social and philanthropic activities from Italy to the world.

Our future engagements on the topic:

- Working further with Local Communities to establish an ongoing dialogue and ever increasing engagement
- Making ever more transparent the sponsorship and donation management system through annual and public reporting of the activity in the next Editions of the Report
- Expanding the scope of support activities to non-Italian Group companies

### RADICI CHIMICA FOR NOVARAJAZZ

"Our Passion for Jazz". With this slogan, reported on the official programme of NovaraJazz, RadiciGroup emphasised its traditional support for the event in 2015.

Now in its twelfth edition, NovaraJazz is a music festival that RadiciGroup, with Radici Chimica S.p.A., has been supporting for a number of years. The high profile music artists who come to the city to experiment with jazz and fusion between the arts mean that the whole town is involved in a full calendar of events.

Between concerts, premieres, collaborations and side events, NovaraJazz in fact hosted a total of over 100 events in 2015.

## ■ PHOTO IMAGES AND INTERNATIONAL JAZZ TO REMEMBER GIANNI RADICI

Successful entrepreneur. Father. Husband. Philanthropist. Great sportsman. Gianni Radici was all this. On the tenth anniversary of his passing (25 April 1924/5 October 2005) RadiciGroup commemorated its founder with a photographic exhibition and a concert together with the Group's Employees and the local Community who knew him.

In spring 2015, a photographic and multimedia installation recounted moments of Gianni Radici's business and family life. These portraits brought back friendship, passion for sports and deep "roots" in the area of origin.

But not only. RadiciGroup commemorated its founder also as part of the thirteenth edition of the Bergamo Science festival and with the artistic contribution of the famous American trumpeter Dave Douglas. An exceptional musical event, attended by about 200 Employees of RadiciGroup's Italian companies, which was also an opportunity to renew economic aid to BergamoScienza, a very important international cultural event.

## **R76**

# EVERY COMPANY, OR GROUP, IS BORN AND GROWS AROUND A COMMUNITY;

EACH COMMUNITY IS DEEPLY-ROOTED TO A
PIECE OF LAND THAT GIVES US ENERGY, WATER
AND THE AIR WE BREATHE.
TODAY, ETHICS AND ENVIRONMENTAL
AWARENESS ARE KEY FACTORS TO BUSINESS.
THIS MEANS TURNING OUR COMMITMENT TO
BE A SUSTAINABLE COMPANY INTO A DRIVER OF
COMPETITIVENESS.

BELIEVING DEEPLY IN THIS ECOLOGICAL PATH AND TRANSMITTING THAT BELIEF WITH CONVICTION TO OUR CUSTOMERS, SUPPLIERS AND WORKERS IS OUR MISSION, BOTH NOW AND IN THE FUTURE.





# **HUMAN RIGHTS (HR)**

Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world; (...)

Whereas it is essential that human rights should be protected by rules of law, if you want to avoid that man is compelled to have recourse, as a last resort, to rebellion against tyranny and oppression; (...)

Whereas a common understanding of these rights and freedoms is of the greatest importance for the full realization of this pledge;

### THE GENERAL ASSEMBLY

Proclaims this Universal Declaration of Human Rights as a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society, keeping this Declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms and by progressive measures, national and international, to secure their universal and effective recognition and observance, both among the peoples of Member States themselves and among the peoples of territories under their jurisdiction.

## Text taken from the Universal Declaration of Human Rights.

(DMA) RadiciGroup has always pursued as a fundamental value, at the basis of all its activities, full respect of the human rights of all its Employees and Stakeholders.

The importance attached to the respect of these rights is structured in particular by one of the Group's values: "The centrality of the person, respect for their physical and cultural integrity"

Compliance with the legislation in force in any part of the world, regular and mostly collective agreements for all workers (79% of all contracts made with our Employees as evidenced by the *Table 17*), are proof RadiciGroup does not oppose, but rather favours, forms of collective bargaining that best protect workers.

(INDICATOR G4-HR3)

In the year 2015, no incident of discrimination or reports, infringements or sanctions pertaining to a breach of Human Rights were recorded in RadiciGroup Companies.

(DMA) However, in order to work on building a supply chain ever more attentive to the conditions of the workers, the RadiciGroup Ethics Committee and the GRI Coordination Group addressed the issue and again reiterated its importance, respectively, in the Supplier Code of Conduct and the Customer Code of Conduct, previously discussed.

Both of these documents contain commitments that the Group makes, and ask our customers and suppliers to make, with regard to the respect of fundamental human rights:

- Suppliers pledge not to use bonded or forced labour.
- Suppliers should not resort to any kind of child labour in their supply chain or in their business activities, in accordance with the fundamental rules of the ILO (International Labour Organization) and the United Nations Global Compact principles.

Text taken from the Supplier Code of Conduct

- Similarly to RadiciGroup, Customers are required to manage employee contracts in a legal and proper manner in compliance with applicable labour laws.
- Customers also undertake to ensure that at the workplace of their Employees no kind of inhumane treatment is implemented and that the Employees are not subjected to threats, harassment, sexual abuse, torture or corporal punishment, coercion or mental or physical abuse.

Text taken from the Customer Code of Conduct

## Our future engagements on the topic:

- Spreading awareness on human rights to our customers and suppliers through the gradual spread of their respective Codes of Conduct.
- Start spreading the same awareness within the Group, in particular through training for those who are meant to disseminate and explain these Codes of Conduct to Customers and Suppliers.

## **R96**

YOU WILL SEE POLITICAL GREATNESS IN DIFFICULT TIMES, WHEN ACTION FOLLOWS THE FUNDAMENTAL PRINCIPLES TO PURSUE THE LONG-TERM COMMON GOOD.



SUSTAINABILITY REPORT 2015



# **ENVIRONMENTAL PERFORMANCE INDICATORS** (EN)

(DMA) "On the theme of the Environment, RadiciGroup has long pursued the continual improvement of its performance with visible and measurable results, investing and employing human and technological resources to control and reduce its environmental impacts and promoting environmental commitment also among its customers and suppliers. All this considering the entire production chain, by measuring the environmental footprint of the main products and services in accordance with the European guidelines of the Product Environmental Footprint (PEF) and considering, where possible, the application of principles inspired by eco-design and circular economy."

The Group's QUALITY ENVIRONMENT AND SAFETY POLICY shows clearly and unequivocally the group's guidelines on the environment: a rigorous measurement of the impacts (see in this regard the text in the part dealing with product indicators) and a constant investment in economic, educational and technological terms precisely to reduce these impacts.

The scenario within which the Group's manufacturing sites operate, mainly those in Europe, is characterized by regulations that guide companies on rigorous sustainability processes.

In particular, the Environmental Authorizations that the sites in Italy and Germany are subjected to establish rules with respect to emissions in air and water, waste and energy use.

In addition to this, the ISO 14001 and ISO 50001 certifications add voluntary management requirements to keep environmental impacts under control and operate according to the principle of continuous improvement.

## IDENTIFICATION AND EVALUATION OF ENVIRONMENTAL IMPACTS FOR THE GROUP'S COMPANIES

During the identification and evaluation of the environmental impacts of the companies, prescribed by ISO 14001 and ISO 50001 standards, the following were identified as particularly significant elements: air emissions, water discharges, waste, use of water, energy, other natural resources and fuels. All these elements were then evaluated for

- environmental impact;
- compliance with the legal requirements or voluntary commitments to environmental policy;
- technical adequacy using as a benchmark the best technologies available on the market;
- impact on the stakeholders, in particular Employees of the sites, local communities and Shareholders.

Following the 2015 analysis, several major projects were conducted in the Group especially regarding energy and emissions, factors cited as relevant in the materiality matrix.

## **FNFRGY**

In 2014, Legislative Decree 102/2014 entered into force for Italian companies, implementing a European directive on energy efficiency. Companies that fall under the defi-

nition of "large company" or "high energy consumption or energy-intensive", i.e. all the Italian companies of the Group, were asked to submit an energy analysis document, with the exception of sites with ISO 50001 certified energy management system, already including an energy audit carried out in accordance with the dictates of Annex 2 of Legislative Decree No. 102.

During 2015 some consultants therefore proceeded to energy audit the Group's companies, including, although they could have been excluded, Noyfil, Chignolo branch and Radici Yarn, Ardesio branch. The energy audit for these two, however, was postponed to 2016.

In this way, in the 2015-2016 biennium, RadiciGroup achieved a full assessment of consumption, identifying potential improvement measures.

This analysis is likely to be repeated every four years, and every year the sites are required to communicate the energy savings achieved in the previous year as a result of energy efficiency measures. In this context, an important support to the efficiency improvement process are Energy

Managers, technicians responsible for the conservation and rational use of energy, whose aim involves a careful analysis of the organization's energy consumption, identifying potential savings opportunities.

The indicators reported below all show substantial improvement trends, confirming the effectiveness of the energy policies undertaken by the Group. The direct primary energy consumption trend (*Table 23*) showed a stabilization of the absolute value relative to 2015 as well as a 23.7% reduction in consumption when considering the 2013-2015 triennium. This trend was also reflected in the index per tonne of product, also decreasing.

A detailed analysis of the type of fuel the Group companies use showed an increase in supply of natural gas plants at the expense of the more polluting oil-fired plants. The use of diesel for back-up systems (gensets) showed an increase.

## **INDICATOR G4-EN3**

Table 23 DIRECT PRIMARY ENERGY CONSUMPTION

		2013	2014	2015
GJ	TOTALE	2,585,711	1,971,976	1,972,603
GJ	from NATURAL GAS*	2,580,541	1,967,077	1,967,104
GJ	from DIESEL	1,102	1,101	1,769
GJ	from LPG	3,063	3,128	2,952
GJ	from BURNING OIL	1,005	670	778

-23.7%

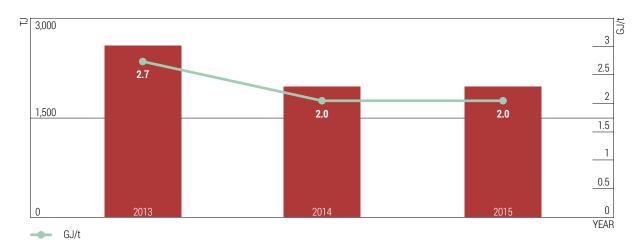
consumption of primary direct energy 2013-2015

### Index PRIMARY DIRECT ENERGY CONSUMPTION INDEX IN RELATION TO THE OUANTITIES PRODUCED

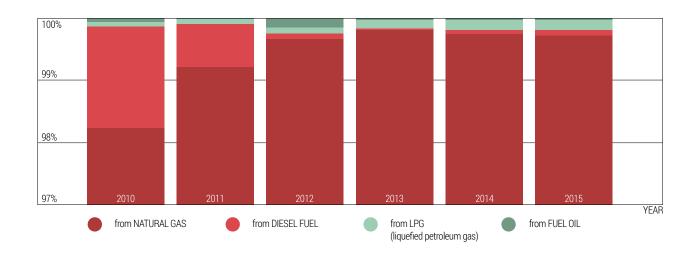
	2013	2014	2015
GJ/t	2.7	2.0	2.0

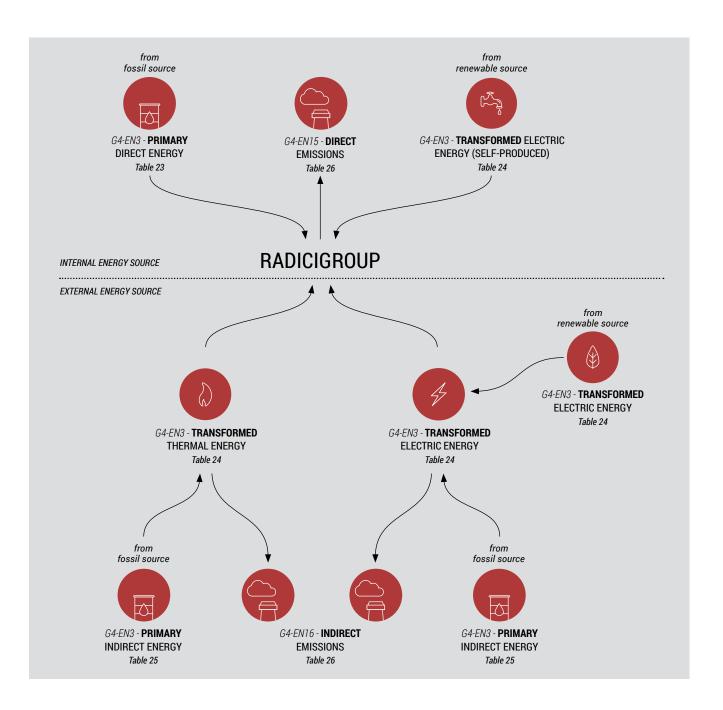
<sup>\*</sup> regarding NATURAL GAS, to go from Nm3 to GJ we used the conversion factor 39.01 for all companies in observance of the precautionary principle.

## **DIRECT PRIMARY ENERGY CONSUMPTION**



The graph represents the change through the years of the direct energy mix and shows how, since the start of reporting according to the GRI model, the consumption fuel oil and diesel has reduced for the benefit of lower environmental impact fuels.





## **INDICATOR G4-EN3**

Table 24 Transformed Energy Consumption Broken Down by Primary Energy Source (Electrical and Thermal)

	THE TOTAL PROPERTY OF THE PROP		<u> </u>	· · · · · · · · · · · · · · · · · · ·
		2013	2014	2015
GJ	TOTAL TRANSFORMED ENERGY	3,808,477	3,848,824	3,738,731
GJ	ELECTRICAL ENERGY SUB TOTAL	1,882,802	1,793,416	1,745,769
GJ	From renewable source	833,840	813,088	846,822
%	energy from renewable source out of tot electric energy	44.3%	45.3%	48.5%
GJ	of which self-produced (hydroelectric)	(58,345)	(79,043)	(56,338)
GJ	From NON renewable sources:	1,048,962	980,328	898,947
GJ	-● from Natural Gas	574,205	522,170	479,068
GJ	—● from Natural Gas	313,143	301,996	238,338
GJ	─● from Burning Oil	9,333	14,929	15,503
GJ	—● from Nuclear	117,037	106,084	129,919
GJ	from other fossil sources	35,244	35,149	36,119
GJ	THERMAL ENERGY SUB TOTAL	1,925,675	2,055,408	1,992,962
GJ	from Natural Gas	1,925,675	2,055,408	1,992,962

## INDEX INTERMEDIATE ENERGY CONSUMPTION INDEX IN RELATION TO THE QUANTITIES PRODUCED

	2013	2014	2015
GJ/t	2.0	1.9	1.8

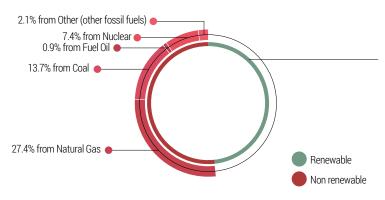
The energy mix of the RadiciGroup companies kept improving. With regard to electricity, one may notice a steady increase in energy from renewable sources from 44.3% in 2013 to 48.5% of the energy mix in 2015, with 7 100% renewable energy powered sites. *Table 24* 

Although self-produced energy increased by 78%, in the years 2011-2015, even though the figure for 2015 alone

showed a decline due to a particularly dry summer season, in the three years the percentage remained unchanged.

The electricity index used per tonne produced is also constantly improving, rising from 2 GJ/t to 1.8 GJ/t in the 2013-2015 triennium.

## ELECTRICAL ENERGY MIX 2015



# **48.5%**OF ELECTRICAL ENERGY MIX FROM RENEWABLE SOURCES

of which companies with 100% renewable energy:

Radici Novacips - Villa d'Ogna, Italy Radici Novacips - Chignolo, Italy

Radici Plastics - Brazil

Radici Plastics - Germany

Radici Yarn - Ardesio, Italy

Radici Fibras - Brazil

Radici Partecipazioni - Italy

## **INDICATOR G4-EN3**

Table 25 DIRECT + INDIRECT PRIMARY ENERGY FROM FOSSIL SOURCE

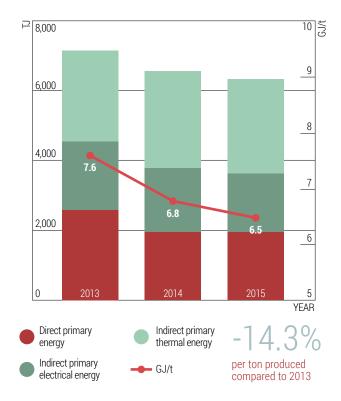
		2013	2014	2015
GJ	TOTAL DIRECT PRIMARY ENERGY + INDIRECTA FROM FOSSIL SOURCE	7,176,375	6,587,001	6,359,153
GJ	TOTAL DIRECT PRIMARY ENERGY*	2,585,711	1,971,976	1,972,603
GJ	TOTAL INDIRECT PRIMARY ENERGY	4,590,664	4,615,025	4,386,550
GJ	To produce INTERMEDIATE ELECTRICAL energy from fossil sources - INDIRECT PRIMARY Electrical ENERGY	1,976,812	1,833,705	1,679,071
GJ	To produce INTERMEDIATE THERMAL energy from fossil sources - INDIRECT PRIMARY Thermal ENERGY	2,613,852	2,781,320	2,707,479

<sup>\*</sup>Added minor retroactive corrections (< 0.3%).

## Index TOTAL PRIMARY ENERGY CONSUMPTION INDEX IN RELATION TO THE QUANTITIES PRODUCED

		2013	2014	2015
GJ/t	TOTAL PRIMARY ENERGY	7.6	6.8	6.5
GJ/t	DIRECT PRIMARY Energy	2.7	2.0	2.0
GJ/t	Total INDIRECT primary energy	4.9	4.8	4.5
GJ/t	INDIRECT PRIMARY Electrical Energy	2.1	1.9	1.7
GJ/t	INDIRECT PRIMARY Thermal Energy	2.8	2.9	2.8

## IMPATTO GLOBALE DEL GRUPPO SULL'ENERGIA PRIMARIA



In parallel to the improvement of the energy mix, the use of primary energy derived from fossil sources (not renewable), showed a significant reduction. *Table 25* 

The need for this energy to produce a tonne of product was reduced from 7.6 GJ/t in 2013 to 6.5 J t in 2015, thus a 14.3% decrease.

This result is also attributable to the continued investment for the introduction of BAT (Best Available Techniques) at Group plants. Energy saving measures had particular importance in 2015, such as for example the improvements to the cooling water distribution system at Radici Chimica, which allowed savings of approximately 1,800,000 kWh.

### NOYFIL SA OFFICIALLY SIGNS COMMITMENT TO CLIMATE

Starting from 1 January 2015, the Noyfil SA company, located in Switzerland and dealing in the production of polyester yarn, has been formally committed to climate protection.

The declaration, signed at the Swiss Agency of Energy for the Economy (AEnEC) provides that the company will work with full conviction for lasting climate protection. Through this voluntary participation, recognized by the Swiss Confederation and the cantons that belong to it, Noyfil is committed in particular to reducing its  $\mathrm{CO}_2$  emissions and to optimizing the energy efficiency of its installations.

The programme signed between NOYFIL and AEnEC considers energy efficiency investments programmed for up to 2018.

These investments will finance 16 different interventions with an estimated energy efficiency improvement of 4.5% starting from 2017.

In addition a 0.7% reduction in CO2 emissions was also estimated starting from 2016, compared to the quantities measured by the Life Cycle Assessment studies of 2012. In absolute terms, Noyfil's commitment to the climate will result in a reduction in emissions of approximately 40,000 kg of CO./year.

This will be proven results, because the AEnEC system provides for annual performance monitoring of the company, critical for reporting on and improving the process of implementing the measures.

## EMISSIONS INTO THE ATMOSPHERE

Set as a priority for RadiciGroup by the materiality matrix, this issue has long been on the Group's agenda. The effort to control and reduce emissions, especially at Radici Chimica, has produced remarkable results over the past five years.

There are two key elements to the Group project:

- monitoring the impacts of all stages of the production cycle, to which the Life Cycle Assessments conducted in the Group for the purpose of producing the Environmental Product Declaration (EPD) and the Product Environmental Footprint (PEF) contributed substantially (see in this regard the relevant texts in the product indicators - PR part);
- investment in abatement technologies, and low-impact process solutions (see in this regard the figure reported in the Economic Indicators - EC);
- the results presented below show a positive scenario as regards direct and indirect emissions considered both in an absolute sense and in reference to the quantities produced.

The results of this indicator are not comparable with the results presented in previous editions of the Report.

Certain quantities of direct emissions mistakenly not counted in the past were included, although the overall trend evidenced by the indicator remained unchanged. An analysis of the three-year trend (2013-2015) showed reduced emission values, with a 21.6% decrease of total emissions compared to 2013, and more specifically a 32.1% decrease of direct emissions and 7.4% of indirect emissions. *Table 26* 

Considering a longer time perspective, the reduction of total emissions of greenhouse gases compared to 2011 was equal to 47.4% in the past five years.

### INDICATOR G4-EN15 + G4-EN 16

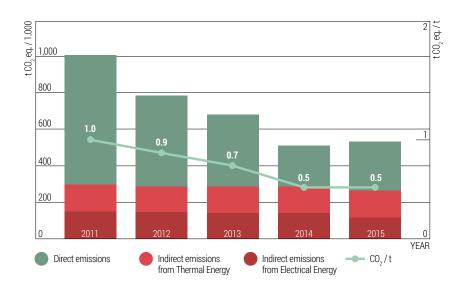
Table 26 TOTAL DIRECT AND INDIRECT EMISSIONS OF GREENHOUSE GAS

		2011	2012	2013	2014	2015
t CO <sub>2</sub> eq.	TOTAL	1,010,036	791,257	677,381	507,743	531,006
t CO <sub>2</sub> eq.	DIRECT EMISSIONS (G4-EN15)	711,432	501,336	390,696	218,729	265,443
t CO <sub>2</sub> eq.	INDIRECT EMISSIONS (G4-EN16)	298,604	289,921	286,685	289,014	265,563
CO <sub>2</sub> eq.	indirect emissions from Electricity	145,322	147,262	141,041	134,039	114,702
t CO <sub>2</sub> eq.	indirect emissions from Thermal Energy	153,282	142,659	145,644	154,975	150,861

## INDEX OF TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS IN RELATION TO THE QUANTITIES PRODUCED

	2011	2012	2013	2014	2015
tCO <sub>2</sub> eq./t.	1.0	0.9	0.7	0.5	0.5

## TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS



-21.6%

TOTAL EMISSIONS Vs 2013

Table 26

-60.5%

POLLUTANTS Vs 2013 Table 27

As regards **indirect emissions** from electricity, these showed satisfactory decreases (-21% in five years) as an immediate reflection of RadiciGroup's policy to increase the use of renewable energy sources, while thermal energy emissions were slightly increased. The balance was still largely positive with a reduction by 11% of indirect emissions compared to 2011.

As for **direct emissions**, the intense work carried out at Group plants, and in particular at Radici Chimica, led to an overall reduction for RadiciGroup equal to 62.7% in five years.

A marked improvement in the trend of these emissions occurred from 2011 to 2014, with slightly less flattering values in 2015. In addition to the physiological decrease of possible margins for improvement, the Radici Chimica plant experienced some technical problems related to the replacement of an abatement catalyst and to a system protection valve failure. This made the emission reduction system temporarily less effective.

While considering this factor, the Specialty Chemicals Business Area alone (Italy and Germany) decreased its own direct emissions by 65.9% over 5 years (2011-2015).

The indices also show that in 5 years the amount of CO2 equivalent per tonne produced went down exactly by half, from 1  $tCO_2eq/t$  to 0.5  $tCO_2eq/t$ .

Pollutants also more than halved (-60.5% in 2013 to 2015 and -65.6% in the period 2011-2015). This improvement was particularly noticeable in the last three years.

Finally it should be noted that sites with higher emissions further improved their measurement system by introducing a continuous monitoring system for NOx emissions, which allowed more accurate measurements and instant answers on emission control thanks to the automation of the plants. *Table 27* 

## **INDICATOR G4-EN21**

Table 27 QUALITY OF EMISSIONS

	QUALITY OF EMISSIONS	2011	2012	2013	2014	2015
t	TOTALE	527	502	459	240	181
t	NOx	317	306	312	207	152
t	SOx	1.73	0.03	0	0	0
t	POP	0.03	0.02	0	0	0
t	VOC	14	18	11	12	9
t	НАР	174	161	109	0	0
t	STACK AND FUGGITIVE	0	0	0	0	0
t	PM	7	6	9	5	8
t	Other air emissions	14	11	18	16	12

## THE WATER RESOURCES

The quality and quantity of water used in all Radici-Group companies is constantly subjected to monitoring and control, from which important data and information can be obtained for the protection of water resources. The indicators below show a situation that, though there is room for improvement, is basically stable.

## **INDICATOR G4-EN8**

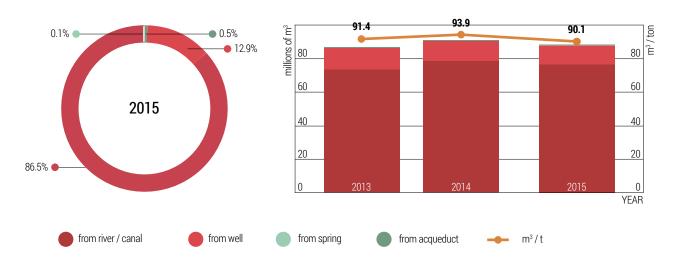
Table 28 WATER RESOURCES BY SOURCE

		2013	2014	2015
<b>m</b> <sup>3</sup>	TOTAL	86,446,525	90,738,824	88,076,062
<b>m</b> <sup>3</sup>	from acqueduct	124,258	116,177	120,813
<b>m</b> <sup>3</sup>	from spring	354,433	339,886	402,969
m³	from well	12,499,407	11,982,837	11,380,769
m³	from river / canal	73,468,427	78,299,924	76,171,511

## Index USE OF WATER RESOURCES INDEX IN REALTION TO THE QUANTITIES PRODUCED

	2013	2014	2015
m³/t	91.5	94.0	90.1

## WATER RESOURCES BY SOURCE



## **INDICATOR G4-EN22**

Table 29 WATER DISCHARGE BY TYPE\*

		2013	2014	2015
<b>m</b> ³	TOTAL	47,517,723	48,175,520	48,086,341
<b>m</b> <sup>3</sup>	in surface waterway	47,155,802	47,900,397	47,852,384
m³	in sewers	361,921	275,123	233,957
OF WHICH		2013	2014	2015
<b>m</b> ³	TOTAL	47,517,723	48,175,520	48,086,341
<b>m</b> <sup>3</sup>	water discharged directly	45,849,407	46,720,980	46,736,209
m³	water treated with internal purifier	1,668,316	1,454,540	1,350,132

<sup>\*</sup> The results of this indicator are not fully comparable with the results presented in previous editions of the Report, for which estimates related to water discharge into the sewers system had been used that, upon a subsequent measurement, proved inadequate. Therefore, we proceeded with a retroactive revision of the indicator.

## INDEX OF WATER DISCHARGE IN RELATION TO THE QUANTITIES PRODUCED

	2013	2014	2015
m³/t	50.3	49.9	49.2

### **INDICATOR G4-EN22**

Table 30 OUALITY OF DISCHARGED WATER

		2013	2014	2015
kg	COD	1,533,321	1,185,152	694,055
kg	Total Nitrogen	995,990	1,096,000	780,132
kg	Suspended Solids	23,823	17,169	23,474
kg	Metals (aluminium, chrome, iron, nickel, copper, vanadium, zinc)	7,931	9,648	3,486

The trend on the amount of water used by RadiciGroup companies was stationary with respect to the previous years. The water consumption per tonne produced index was good, dropping to 90.11 m3/t.

It is worth mentioning that in the Group the use of water resources, coming mostly from rivers or canals, is mainly intended to cool the plants and not for the actual production processes. Consumption is therefore largely fixed, regardless of production performance. At the Group's sites, all process water is treated in accordance with the regulations of the countries where the companies operate. The cooling water is monitored continuously, for it to be discharged in accordance with the law.

In this context, the COD, nitrogen and metals trend was very positive in 2015, though there is no figure on the water treated internally at the Radici Fil plant site for reasons having to do with the installations that did not allow the measurement of the quantities. *Table 30* 

## **INDICATOR G4-EN10**

Table 31 WATER SAVINGS

		2013	2014	2015
<i>m</i> <sup>3</sup>	water taken	86,446,525	90,738,824	88,076,062
<i>m</i> <sup>3</sup>	water recovered	74,004,952	56,826,947	56,062,226
%	water saved	86%	63%	64%

As regards the recovery of water resources, some sites reused the same water several times before discharging it.

Radici Fil, for example, has long been a virtuous company in this sense, and reuses its water 11 times. Radici Chimica Deutschland's recycling the water outside of the plant impacts instead negatively on the savings ratio calculation, which does not allow it to be accounted for in the Report. Considering the fact that Radici Chimica

Deutschland draws its water from a ring canal that undergoes only limited volume changes related to climatic conditions (evaporation-rainfall), water recycling can be considered constant and cannot be included in the count of water reuse by other Group Companies.

The latter take, use several times and put back the water in the environment whereas Radici Chimica took it only once and uses always the same water.



Therefore, in 2015, the value of indicator G44-EN10 was 64% *Table 31* if including Radici Chimica Deutschland, 116% if excluding it. *Table 32*.

## **INDICATOR G4-EN10**

Table 32 WATER SAVINGS (without Radici Chimica Deutschland)

		2013	2014	2015
<b>m</b> <sup>3</sup>	water taken	48,132,201	48,787,877	48,389,149
m³	water recovered	74,004,952	56,826,947	56,062,226
%	water saved	154%	116%	116%

# MATERIALS USED AND WASTE: THE TWO EXTREMES OF PRODUCTION PROCESSES

A careful use of raw materials, increasingly oriented toward renewable resources. Waste management aimed at reducing the quantities produced and the transformation of waste into resources, within a circular economy perspective.

These were the guidelines of RadiciGroup's activities in 2015, at the two extremes of its production chain, reflected in the performance measured by the indicators given below.

## **INDICATOR G4-EN1**

Table 33 MATERIAL USED

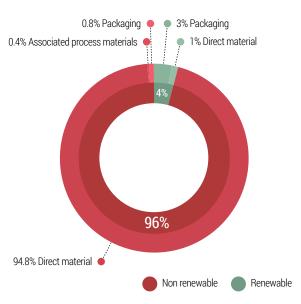
		2013	2014	2015
t	TOTAL	451,605	452,845	473,537
t	direct materials	428,602	432,162	454,183
t	accessory materials	3,324	1,652	1,828
t	packaging	19,679	19,031	17,526
t	NON RENEWABLE MATERIALS	435,841	437,759	454,727
t	non renewable direct materials	428,087	431,573	449,096
t	non renewable accessory materials	3,324	1,652	1,828
t	non renewable packaging	4,430	4,534	3,803
t	RENEWABLE MATERIALS	15,764	15,086	18,810
t	renewable direct materials	515	589	5.087
t	renewable accessory materials	0	0	0
t	renewable packaging	15,249	14,497	13,723

The three-year trend showed a constant slight increase in the use of raw materials mainly due to an increase of production, the processed amount in fact increased by 3.3%. As for direct materials, there was a slight increase in 2015 of the renewables used (from 3% in 2014 to 4% in 2015). *Table 33* 

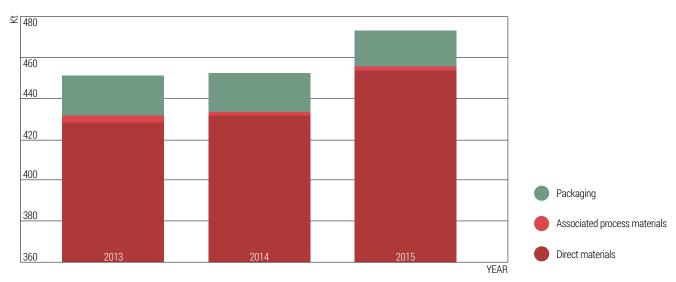
This is explained as a result of the strategic decision to use sebacic acid, of vegetable origin, for the production of bio-polyamide polymer 6.10. As for direct renewable materials, starting from a very small base given the nature of the Group's core business, the increase was 900%.

In addition to this positive scenario, the fact that the accessory raw materials used were reduced by the introduction of BAT. For example, the Radici Plastics Ltda site in Brazil reduced its nitrogen consumption thanks to the installation of a new dryer.





## **TOTAL MATERIALS USED**



# WASTE

The increase in the amount of waste that was produced in 2015 is identifiable as an increase of non-hazardous waste by 21%, in particular due to processing waste.

The current regulation, evolving in 2015, provides interpretive possibilities such as to enable the Group to classify as byproducts significant amounts of their polymerization waste, since, subject to absolutely marginal processing, it is totally and directly reused within the Group for the production of secondary raw materials.

However, with the perspective of increasing the traceability of processes and information transparency towards its customers/stakeholders, all of RadiciGroup's Italian nylon chain has begun to manage and classify as non-hazardous waste amounts of polymeric material regarded as byproducts in the past, for management purposes and in previous editions of the Report. A further increase of non-hazardous waste is due to material disposed of as a result of demolition and subsequent reconstruction work, especially at Radici Chimica.

With regard to hazardous waste, it should be emphasized that the growing attention by European institutions and the consequent refinement of the regulations, to which the Group complies rigorously, means that from year to year the classification may vary.

As a general trend, from the perspective of protecting health and the environment, the chances of recovery or treatment are improving and increasing.

As for RadiciGroup, these combined effects, combined with the continuous improvement of process technology, were reflected in the reduction of 22% of the hazardous waste in the three years, accompanied by a 49% increase in recovered hazardous waste.

Finally, we would like to mention that there was no

## **INDICATOR G4-EN23**

Table 34 TOTAL WEIGHT OF WASTE BY TYPE AND DESTINATION

		2013	2014	2015
t	TOTAL	12,758	12,096	14,119
t	HAZARDOUS	2,928	2,531	(-22%)* 2,272
t	hazardous recovery	176	264	(+49%)* 262
t	hazardous disposal	2,752	2,267	2,010
t	NON HAZARDOUS	9,830	9,565	( <b>+21</b> %)* 11,847
t	non hazardous recovery	8,026	7,888	10,047
t	non hazardous disposal	1,804	1,677	1,800

<sup>\*</sup>compared to 2013

## Index TOTAL WEIGHT OF WASTE IN RELATION TO THE QUANTITIES PRODUCED

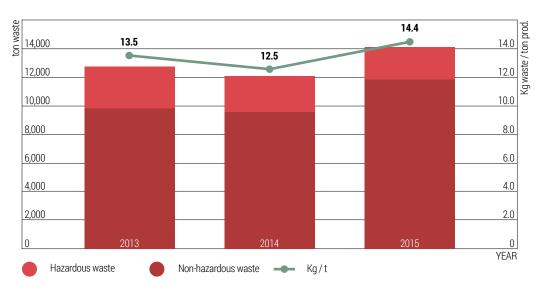
	2013	2014	2015
kg/t	13.5	12.5	14.4

significant penalty charged to the Group in the year of reporting, whether monetary (above 500 €) or non-monetary, for non-compliance with environmental laws and regulations. (INDICATOR G4-EN29).

## Our future engagements on the topic:

- Working more and more from the perspective of circular economy by extending eco-design and recycling projects.
- Studying further solutions for lightening the impacts of the production sites, in particular as regards energy, water, emissions.
- Continuing the work of measuring and managing environmental impacts through recognized systems and certificates.

## TOTAL WEIGHT OF WASTE BY TYPE AND DESTINATION



SUSTAINABILITY REPORT 2015

# PRODUCT INDICATORS (PR)

(DMA) "Through the continuous improvement of our activities, communicative transparency and products and services in terms of quality and performance, RadiciGroup sets as its main objective the satisfaction of its stakeholders: Customers, Shareholders, Employees and Local Communities where it operates"

This principle, derived from the Group's QUALITY ENVI-RONMENT AND SAFETY POLICY, formed in 2015 the main focus of the Group's product strategies.

This principle was materialized through different planning and management tools, including

- The commitment, enshrined in section 7.2.1 of ISO 9001:2008, adopted by all RadiciGroup companies, to ensure:
- a. The requirements specified by the customer, including the requirements for delivery and after sale assistance. The requirements not established by the customer but necessary for the specified or provided use, if known.
- b. The statutory and regulatory requirements applicable to the product.
- c. Any additional requirements considered necessary by the organisation.
- The internal Guidelines, common to all companies, and established in 2011 to define at a global level the specifications to share with the customer and in particular.
  - Legal and contractual aspects of the specifications and reference documents that go with the supplies.
  - The evaluation of processes and the definition of specifications.

 The collection of performance data for the implementation of continuous improvement projects with a view to preventing potential complaints.

To the above, the following specific commitments were added:

- Careful, rigorous, replicable and certifiable measurement of the environmental impacts of products.
- Design and development of products with limited environmental impact following the internal guidelines for "sustainable" products. As usual, the Group worked to increase the use of energy from renewable sources in the processes, to broaden the portfolio of products made with "eco-friendly" processes and to promote products with intrinsic characteristics of better sustainability (e.g. organic polymers or recycled polymers).
- Transparent and truthful product communication, whether mandatory or voluntary, informative or promotional.

## RESEARCH AND DEVELOPMENT

(DMA) Constant development of products aimed to timely respond to market and customers needs characterized RadiciGroup's work also in 2015.

This activity, for which the Group shows a good degree of flexibility, is also associated with production assistance for the development and improvement of processes and know-how. All this with a focus on optimizing costs, improving the quality standards of the products and reducing the environmental impact of the processes.

This commitment is accompanied by broader projects,

involving, with different roles, the R&D departments of the Specialty Chemicals Area at the beginning and Performance Plastics Areas and Synthetic Fibres & Nonwovens at the end.

The most significant projects of 2015 as far as product innovation were:

- Polyamides from renewable sources.
- Materials for Metal Replacement for automotive applications.
- The "long chain polyamides" project in the plastics industry.
- The polyamide staple fibre for technical applications.
- Copolyamides and semi-aromatic polyamides.
- A new highly transparent copolymer.

## MEASUREMENT OF IMPACTS

## INDICATOR G4- PR1

A fundamental element for the realization of new products, as shown many times, is the exact knowledge of the impacts that all the processing steps involve, from raw material extraction to end-of-life, going through process efficiency.

This to be able to evaluate strategies for improvement as regards the existing supply, and to work at the same time on the development of new articles designed to have limited impact and to be easily recycled at end-of-life, optimizing to the maximum the use of raw materials

(eco design).

This last choice has triple value: it minimizes the withdrawal of resources from the environment, it contributes to the reduction of what is intended for disposal, and, through the use of recycled raw materials, it re-injects them into the production cycle, further helping to preserve precious natural resources.

Since 2010 RadiciGroup has been committed to a rigorous quantification of the impacts of processes and products through internationally recognized measurement tools. In particular:

- The LCA (Life Cycle Assessment) analysis, which in 2010-2011 affected all major polyamide and polyester based products of the Group that take into account the entire life cycle of a product, with subsequent updates as prerequisites for EPD and PEF.
- The EPD (Environmental Product Declaration), a certification governed by the International EPD® System, one of the most qualified operators for environmental declarations, usable to monitor and improve the environmental, technical and quality performance of products. This solution was adopted by the Group's Performance Plastics and Synthetic Fibres & Nonwovens areas.
- The PEF (Product Environmental Footprint), which involved initially the Specialty Chemicals area and later the Synthetic Fibres & Nonwovens area. It is a development project for a methodology to calculate the environmental footprint of products launched in 2013 by the European Commission. It is a system that regulates the calculation, assessment, third party validation and notification to all Stakeholders of the environmental impact of products and services.

SUSTAINABILITY REPORT 2015

THE RADICI FIL EPD PROJECT TOOK SHAPE IN 2015. THE 
PERFORMANCE PLASTICS AREA CONTINUES ON ITS WAY
PROCESSING TWO NEW EPDS

In 2015, Radici Fil S.p.A. analyzed the production cycle of their Radifloor®, yarns for textile flooring applications, and measured their environmental impacts from the extraction of raw materials up to and including all processing steps including when the yarns leave the plant.

The EPD ofRadifloor®, compliant with the standard ISO14025, which regulates environmental declarations, was prepared following the provisions of the International EPD System, which has specific guidelines for building materials with internationally recognized product rules (PCRs). The EPD was certified by Certiquality, accredited for quality, environment and safety management systems and product certification.

An important milestone in Spring 2015 also from Radici Novacips S.p.A., which produced two new EPDs for the measuring and declaration of the environmental impact of its Heramid®.

After obtaining in 2014 the certification for the EPD issuance and management system and realizing the environmental declaration of Radilon® S and A (technopolymers based on PA 6 and 6.6), Radici Novacips S.p.A., the lead company of RadiciGroup Plastics, measured and declared the environmental impact of its post-industrial Heramid® technopolymers. In addition to this, it measured the impact of the polyamide waste recovery service, a process that allows the company to obtain the secondary raw material at the base of Heramid® production.

The impact measurement of the mechanical waste recovery service is important and innovative; it translates into objective data also on the secondary raw material used for Heramid® production. This data shows clearly that the mechanical recovery of plastic materials, the choice made by RadiciGroup, turns out to have a very limited impact on the environment, lower than other recovery methods such as for example depolymerisation.

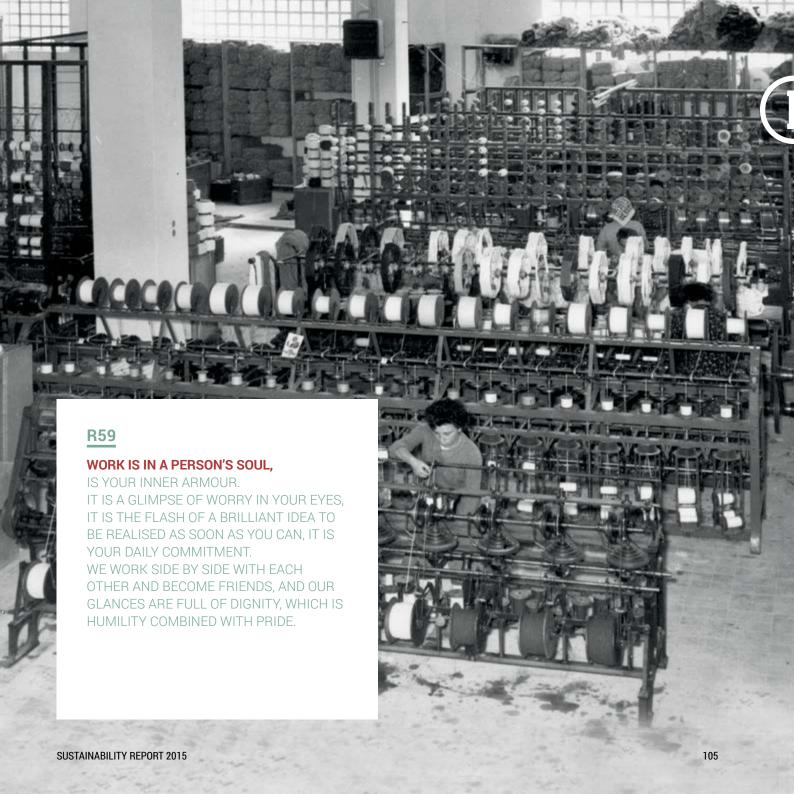
RADICIGROUP WITH RADICI YARN, EUROJERSEY AND HERNO 
PRESENT THE FIRST SCIENTIFIC SUSTAINABILITY STUDY ON A
PIFCE OF FASHION IN FUROPE

Radici Yarn, Eurojersey and Herno, three excellences of the textile field, mapped the environmental impact of a men's jacket at all stages of its production process between 2015 and 2016, starting with the raw materials, and then on to production with polymerisation, spinning, woven and packaging, deciding to make the commitment to sustainability a subject of competitiveness and circular economy.

The project, conducted using the PEF methodology, enabled the production chain to declare the environmental performance of the article to the final consumer and to identify the environmental value of products Made in Italy "from the yarn to the consumer's cupboard", passing through the entire production chain. All that well before the launch of law no. 221 of 28 December 2015, which regulates the environmental provisions to promote green economy measures.

Among the most interesting elements as regards performance that have emerged from the figures:

- The making of the Herno piece resulted in 90% fewer CO<sub>2</sub> emissions than a similar garment made outside Europe.
- The same jacket made outside Europe produced an environmental cost of 5.22 euro compared to 1.97 euro if made in Italy. The study took into account that a finished garment in other parts of the world can cost less in terms of production, but it has a much higher cost with regard to the environment: +165%.

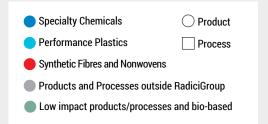


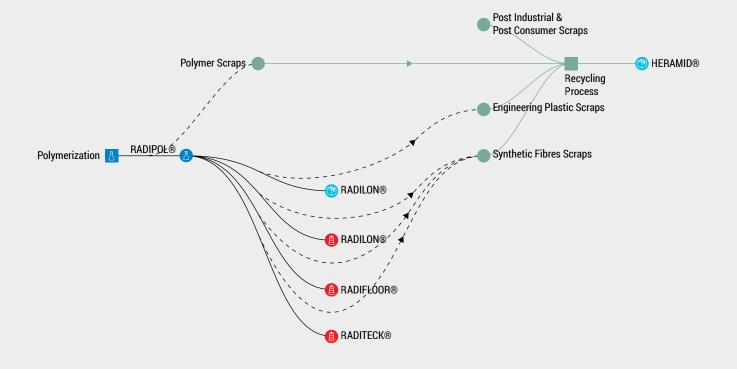


# **SYNERGY & INTEGRATION**

# SUSTAINABILITY

PA 6 AND PA 6.6 - RECYCLING PROCESS







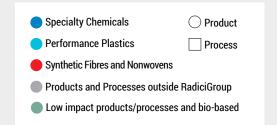


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## **SYNERGY & INTEGRATION**

# SUSTAINABILITY

PET - RECYCLING PROCESS







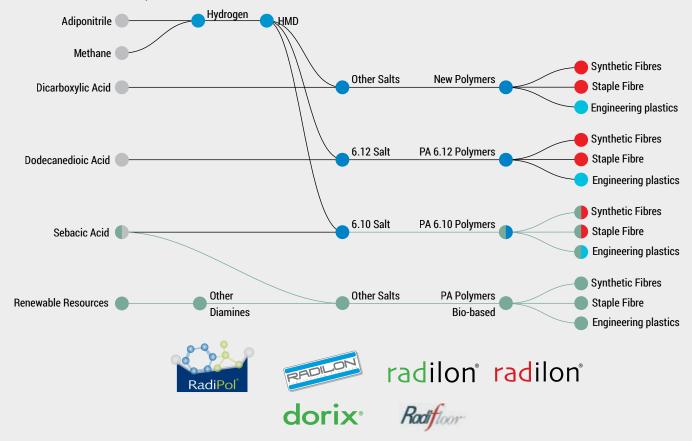
# **SYNERGY & INTEGRATION**

# PA6.10, PA 6.12 AND OTHER POLYMERS

Specialty Chemicals
 Performance Plastics
 Synthetic Fibres and Nonwovens
 Processi e prodotti esterni a RadiciGroup
 Processi e prodotti a limitato impatto/bio-based

Partial upstream integration from monomers to semi-finished products. Specific know-how in the Business Areas Performance Plastics and Synthetic Fibres. Value added:

- Sustainable raw materials from renewable sources (polyamide 6.10 and other polymers)
- Long- chain polyamides with better chemical properties
- · High-temperature resistant polyamides
- · Market driven developments



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#### RADICIGROUP'S PRODUCTS WITH LIMITED ENVIRONMENTAL IMPACT



#### Manufactured using recycled raw materials

Heramid®: PA6 and PA6.6 engineering plastics

r-Starlight®: polyester textile yarn r-Radyarn®: polyester textile yarn



#### Manufactured using biopolymers obtained from renewable source materials

Radilon® D: PA6.10-based engineering plastics Radilon® 6.10: PA6.10-based textile yarns dorix® 6.10: PA6.10-based staple fibre

Radilon® PX: bio-based engineering plastics and textile yarns

dorix® PX: bio-based staple fibre Radifloor® PX: bio-based BCF yarn

CornLeaf®: Ingeo™ polylactic acid (PLA) yarn



#### Solution-dyed saving water and energy

Radifloor®: PA6 BCF yarn

dorix®: PA6 staple

Radilon® staple fibre: PA6 staple Radilon®: PA6 and PA6.6 textile yarn Radyarn®/Starlight®: polyester textile yarn

r-Radyarn®/r-Starlight®: recycled polyester textile yarn



#### Manufactured using clean energy

Radipol®: PA6, PA6.6 e PA6.10 polymers Radilon®: PA6 e PA6.6 engineering plastics Heramid®: PA6 and PA6.6 engineering plastics

Radifloor®: PA6 and PA6.6 BCF yarn Radigreen®: PA artificial grass yarn Radilon® staple fibre®: PA6 staple Radilon®: PA6 and PA6.6 textile yarn



# RADICIGROUP'S PRODUCTS WITH LIMITED ENVIRONMENTAL IMPACT

Along with the study on impacts, there have been some other major guidelines in place for some time now for the development of limited impact products within the Group:

- The use of materials derived from post industrial recycled (polyamide) and post-consumer (polyester) material.
- The use of biopolymers, deriving in whole or in part from plant sources, which increases the percentage of use of renewable resources in the Group.
- The use of energy also from a renewable source, mainly hydroelectric.
- The use of the mass dyeing process that allows good water and energy savings.

In addition to this, the work for the realization of high performance engineering polymers that can be used in place of metals. These materials combine lightness and sturdiness and replace items traditionally made with metal alloys, ensuring a reduced environmental impact by virtue of lightness and performance.

### THE PERFORMANCE PLASTICS AREA INTRODUCES INNOVA- INVESTIGATION TO SUSTAINABLE METAL REPLACEMENT SOLUTIONS

In 2015, the Performance Plastics area presented some new product developments with the goal of combining maximum performance and sustainability for its Customers.

In particular, the Business Area worked on Metal Replacement, through RADISTRONG® A, a speciale polyamide whose technical features make it an ideal solution in critical applications that require high performance, not reachable with the traditional technopolymers.

The use of technopolymers to replace metals has central importance for the market: the use of plastic components means reduced weight, greater product design freedom, less wear, contribution to CO2 reduction and at the same time maximum performance.

Additionally, products made from plastics have greater opportunities for reuse and a longer life cycle. These important features allow for improved sustainable performance.

# PRODUCT COMMUNICATION INDICATOR 64- PR3

Also in 2015, RadiciGroup tried to maintain transparent and truthful communications to foster a proper understanding on the part of customers and all stakeholders of the technical, marketing or promotional information tied to the products.

A fundamental part of this commitment is contained in section 7.2.3 "Customer communications" according to ISO 9001:2008, in particular, the following:

"The organization shall determine and implement effective arrangements for communicating with customers in relation to:

- a. Product information.
- b. Questions, management contracts or orders and updates thereto.
- c. Customer feedback, including complaints.

In concrete terms, this focus resulted in compliance with the provisions for labelling and product documentation of the applicable legislation in each country where (or toward which) the Group operated and in some additional commitments. The latter, voluntary, show the importance attributed by RadiciGroup to the theme of product communication, namely:

- Compliance with the provisions of the EPD system guidelines for transparent, scientifically founded and documented environmental product communication.
- Compliance with the UNI 11505: 2013, pertaining to the presence of recycled materials in synthetic fibres, in particular as regards the Group's recycled polyester products.
- Respect of the internal code of communication called "NO GREEN WASHING", established to foster understandable communication on sustainability that is above all not misleading.
- Maintenance, on the Group's website, of a vast repository of information that allows comparability of information, both for products and of a general nature, over time.

 The online news in all of the Group's major languages, to foster better understanding of the information in the native language of potential users and, not least, of the RadiciGroup employees themselves.

Before coming to the RadiciGroup plants, Suppliers are given a questionnaire from the Companies regarding their respective products, in order to check for compliance with applicable regulatory requirements, the possible presence of dangerous or controlled substances or the absence of so-called "conflict minerals".

After verifying the statements in the questionnaire, the products are effectively used in the Group's sites.

All RadiciGroup's products leave our sites together with their respective data sheets, reporting their description, characteristics and application areas among other things. If required, they also have their safety data sheets in accordance with the REACH (Registration, Evaluation, Authorization and Restriction of Chemical substances) regulation, which, besides the components of a product, identify any risks to human health and the environment and provide information about its disposal or on personal protective equipment to be used for handling it.

In addition, some specific labels, certifications or declarations accompanying the Group's products attest to their compliance with requirements of special applications. Among these, the following are important:

- for the Business Synthetic Fibres & Nonwovens Area: the OEKO-TEX® Standard 100, an independent control and certification system valid throughout the world, guaranteeing the absence of harmful substances or substances prohibited by law or whose use is regulated and the respect of health protection parameters;
- across the board for all business areas, depending on the product concerned: the "Food Contact Compliance" certification or test report, certifying the suitability of materials in contact with food, be it direct or indirect. Through careful analysis of documents, verification of compliance with the requirements from the design stage and implementation of GMPs (Good Manufacturing Practices), plus the execution of spe-

- cific suitability tests at certified and specialized laboratories, the safety of end users is quaranteed;
- across the board for all business areas of the Group, depending on the product concerned and intended for the auto industry: to satisfy the stringent technical specifications outlined in the quality management standard for automotive industry suppliers ISO TS 16949:
- across the board for all business areas: verification of the absence of SVHC (Substances of Very High Concern, extremely hazardous substances) after each update issued by the ECHA (European Chemicals Agency, the European Agency for Chemical Substances). In the case where an SVHC substance is used, one proceeds, where possible, by replacing the raw material containing such a substance.

#### **INDICATOR G4-PR6**

In 2015, moreover, a need was emphasised by those working in the textile industry for the statement by companies on compliance with lists of substances, drawn up on a voluntary basis, requiring the absence of certain classes of chemicals from processes and products.

RadiciGroup attaches great importance to this need and believes that it opens up a prospect to a process of greater sustainability for the entire textile supply chain and to better safety and health for consumers.

For this reason, the Group had an open and frank dialogue with the promoters of these lists. It also expressed, to Customers who requested said compliance, complete willingness to address the issues at stake, in the belief that from dialogue and the common search for solutions winning strategies may arise.

#### INDICATOR G4-PR2 and 4

Particular attention to quality, safety and clear communication regarding the products meant that in the reporting period no non-compliance incidents were met with mandatory standards, voluntary codes concerning health and safety or labelling in any RadiciGroup company.

THE PERFORMANCE PLASTICS AREA INTRODUCES, AS A FIRST IN THE GROUP, THE PRODUCT STEWARDSHIP & REGULATORY AFFAIRS FUNCTION

An important organizational innovation was implemented in the Performance Plastics area through the introduction of the function "Product Stewardship & Regulatory Affairs".

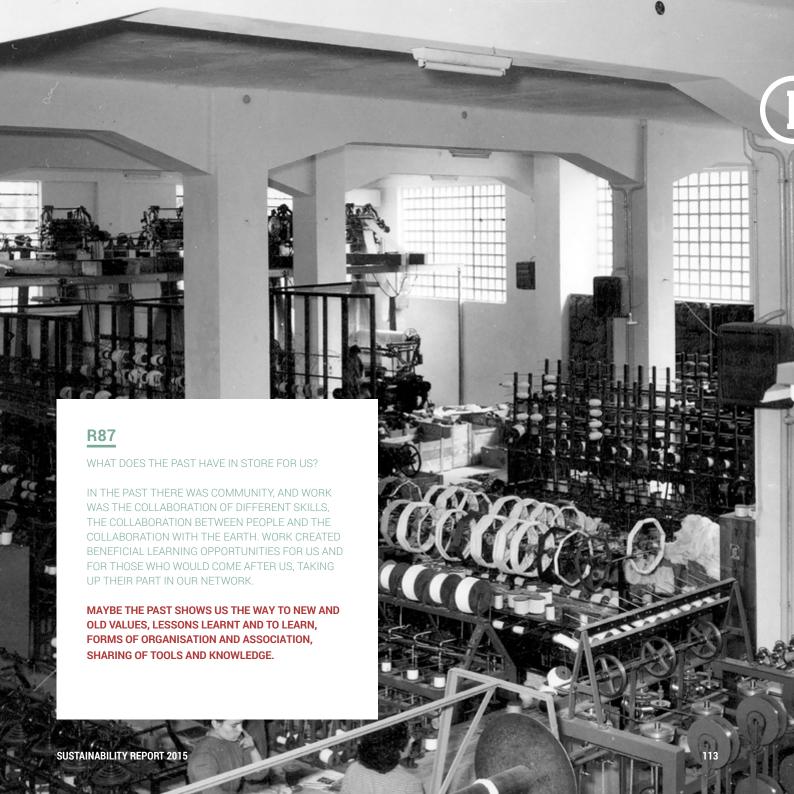
This function's purpose is to monitor compliance of the main laws and regulations applicable to the products. An extensive collection of information from raw material Suppliers, subsequently processed and transmitted to the pertinent functions, now provides the essential database to check the safety and regulatory compliance of each product.

The centralization of this function, which works actively at European level, but also provides support to the sites outside Europe, allows us to align all the production facilities of the Performance Plastics area on a single standard, determined by the most stringent regulations applicable.

The inclusion of this function as part of Research and Development will also facilitate compliance with regulatory requirements starting from the design of a product. In addition, through the continuous update on regulatory trends, a proactive approach has been gradually developing that aims to the highest safety standards.

Our future engagements on the topic:

- Working for the expansion of the limited impact product portfolio in accordance with the expressed guidelines and testing new solutions for sustainable products.
- Collaborating with the Trade Associations to address critical issues and needs of consumers and society with regard to limited impact products.
- Working at Group level and within each Business Area for increasingly more homogeneous, objective, timely and complete product communication..





# VALIDATION G LETTER





#### AUDIT OF THE 2015 RADICIGROUP SUSTAINABILITY REPORT

#### Audit Scope

Certiquality S.r.l. has been selected by Radici Partecipazioni S.p.A. to review the RadiciGroup Sustainability Report for the year 2015, in order to assess compliance with the Global Reporting Initiative (GRI) G4 guidelines in accordance with the Core option which provides for the disclosure of generic disclosures of management approach (DMA) and at least one performance indicator for each material aspect identified. 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 "G4 Sustainability Reporting Guidelines", as published by the GRI in 2013, 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 (balance, comparability, accuracy, timeliness, clarity and reliability of the system for managing data and information);
- compliance of the Report Content in accordance with the Core GRI G4 guidelines.

The audit was conducted using audit procedures which were adopted by Certiquality in compliance with the UNI EN ISO 19011:2012 standard.

#### Audit Methods

Audit activities were carried out by following the modus operandi below:

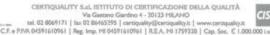
- analysis of the document entitled "Bilancio di Sostenibilità RadiciGroup 2015", with special reference to the principles and contents described in the GRI guideline (Report Boundary Setting, Standard Disclosures and Performance Indicators);
- interviews with the staff directly or indirectly involved in the procedures for data and information management (from data collection to subsequent processing);
- review of documents and records available at the headquarters of Radici Partecipazioni S.p.A. and in a representative sample of production plants (Radici Plastics Ltda - Brasil by conference call; Radici Plastics Co. Ltd. - Suzhou China by call conference; TPR in Gandino; Noyfil in Chignolo d'Isola; Logit Sro - Czech Republic by conference call; Radici Chimica in Novara; Radici Chimica Deutschland by conference call; Noyfil Andalo in Valtellino) within the Report Boundary, concerning applicable procedures for data collection, recording and processing as well as technical and regulatory aspects of company activities.

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 audit (please refer to the Deloitte & Touche report dated 13th June 2016) 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.











#### **Audit Findings and Recommendations**

The 2015 Sustainability Report is the first edition to have been drafted according to the G4 version of the GRI. Such report provides a comprehensive overview of the overall connections of the group companies with the context in which they operate. Numerical Performance Indicators are represented over the 2013-2015 triennial period, enabling an assessment of trends over time. 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 commercial offices is not significant when taking the group into consideration and is therefore entirely justified.

Risk assessment and analysis, stakeholder engagement and the assessment of aspect materiality for the purpose of defining the Report Content, are processes which have been further explored and which are currently being completed, although there remains room for improvement. Over the past few years, a number of actions to promote stakeholder engagement has been undertaken (e.g. a code of ethics for customers and suppliers; locally-relevant Facebook profiles) which demonstrate, among other things, the management's commitment to spreading sustainability values both within and outside the organization, as well as being a testimony to the policies of the group and of its constituent companies and to the numerous initiatives currently underway. The high level of involvement of company representatives in the GRI working group is also an indication of the desire to adequately spread sustainability culture in all business units.

The data collection and data processing system is sufficiently well-structured and documented at central level, while in certain cases leaving room for improvement in a few individual business units.

The audit has revealed a few opportunities for improvement, however, and more specifically:

- presentation of the materiality analysis could be improved by unifying the various partial analyses contained in the document and by better highlighting the correlation between each material aspect identified and the outcomes of stakeholder engagement activities;
- assumptions and criteria for the collection and subsequent processing of data should be defined in a clear and unambiguous manner, via a procedure or guideline, for each indicator or data to be reported, in order to ensure a consistent and methodologically correct approach by each business unit of the group;
- traceability of processing at site level, from primary data to the data sent to the headquarters' working group for consolidation at group level could be improved;
- supply chain issues, having been identified as a material aspect but having been only partially addressed so far, should be considered further.

#### **Audit Conclusions**

The review of the 2015 "Bilancio di Sostenibilità RadiciGroup" did not give rise to any significant issues, neither as regards compliance with the principles of the G4 GRI guidelines, nor as regards its content in terms of reported information or Performance Indicators, while still leaving some room for improvement. The report, in view of the audit activities conducted, meets the Core option level.

28th July 2016

Certiquality S.r.l. General Manager Umberto Chiminazzo

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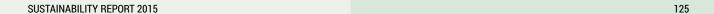
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#### **R97**

# THE LOCAL COMMUNITY IS WHAT CAN REALLY MAKE A DIFFERENCE.

BECAUSE THE COMMUNITY IS WHERE A GREATER SENSE OF RESPONSIBILITY, A STRONG SENSE OF BELONGING, A SPECIAL ABILITY OF CARE TAKING AND A KINDER CREATIVITY CAN GROW.

IT IS A DEEP LOVE FOR THE EARTH, AS WELL AS THINKING "WHAT ARE WE LEAVING BEHIND FOR OUR CHILDREN AND GRANDCHILDREN?"