



Sustainability Report 2018

Key Elements

VISION

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

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 application development.

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, production sites and communities.

APPLICATIONS



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.

RadiciGroup Sustainability Report



It is the Sustainability Report of **RADICI PARTECIPAZIONI AND ITS ASSOCIATE COMPANIES**.

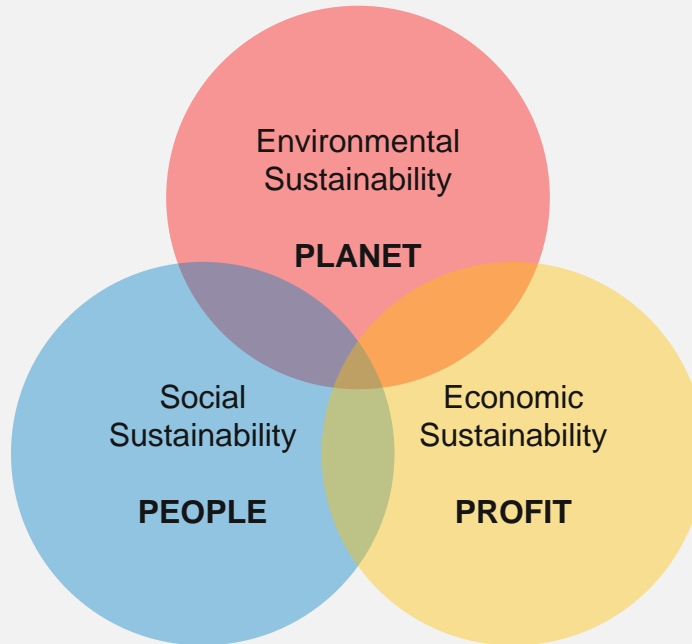
22 PRODUCTION SITES AND THE HOLDING COMPANY supplied data for the Report.

It contains **MORE THAN 20 QUALITATIVE AND QUANTITATIVE DISCLOSURES**.

MORE THAN 70 PEOPLE collaborated to create it.

It is externally assured by the independent certification body Certiquality in accordance with the **«GLOBAL REPORTING INITIATIVE STANDARDS - CORE OPTION»**.

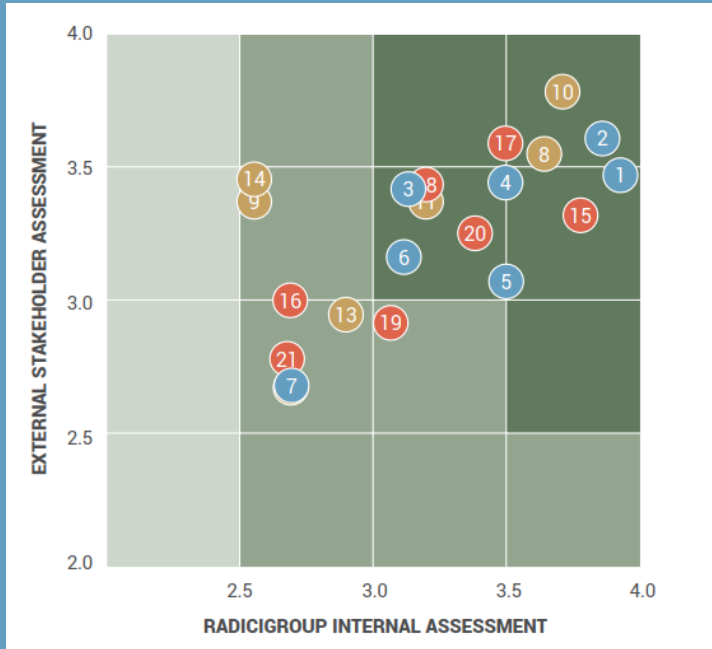
The equilibrium of these three factors helps us progress in the sustainability path...



Also the UN Sustainable Development Goals (SDGs) are guiding us in our sustainability path...



The Materiality Analysis led us to identify important sustainability topics



Materiality Matrix

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21 topics were analysed internally



Stakeholders were involved



13 items were finally classified as «material» or relevant

Material topics, i.e. strategic as for sustainability



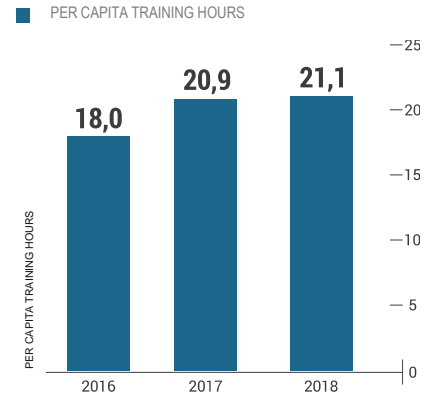
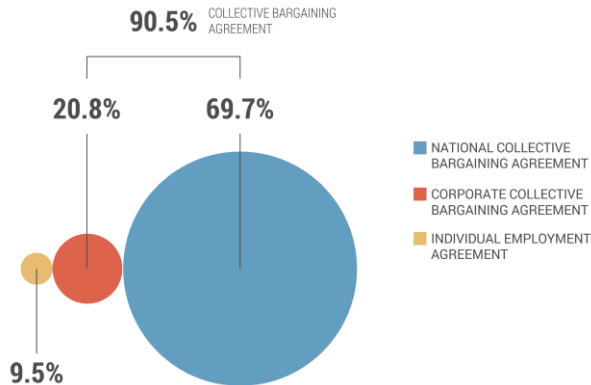
ENVIRONMENTAL DEVELOPMENT	1	Energy
	2	Emissions
	3	Water
	4	Waste
	5	Raw Materials
	6	Product sustainable innovation and measurement of product environmental impacts
SOCIAL DEVELOPMENT	8	Employment
	10	Occupational health and safety
	11	Employee training and education
	15	Economic performance
ECONOMIC AND MANAGEMENT DEVELOPMENT	17	Customer satisfaction
	18	Compliance
	20	Certifications and integrated management systems

3,100 people worldwide...



Since 1941 RadiciGroup companies have been growing in harmony with local communities. Today RadiciGroup meets the challenges of globalization and multiculturalism through:

- Continuous employee training.
- Scrupulous respect of labour rights.
- Hiring of young people, especially in developing countries.



Our «business card»: limited impact products



Recyclable products: they can become raw materials once again.



Products made from recycled raw materials: after a mechanical recycling process, they are transformed into high performance polymers or fibres.



Products made from biopolymers, obtained from renewable raw materials not competing with food resources.



Products made using energy from renewable sources, mainly hydroelectric plants.



Products coloured using the solution dyeing technology, saving high quantities of water and energy.

Our «business card»: limited impact products



Sustainable products, duly «measured»...



We use many different measurement systems, with one aim:

To assess the impact of products in a **SCIENTIFIC, REPLICABLE** and possibly **CERTIFIABLE** manner in order to:

- Count on solid bases.
- Rely on (measured) deeds and not on simple words.
- Help the culture of transparency grow in the market.

Some measurement systems currently used by RadiciGroup

**Life Cycle Assessment
LCA**

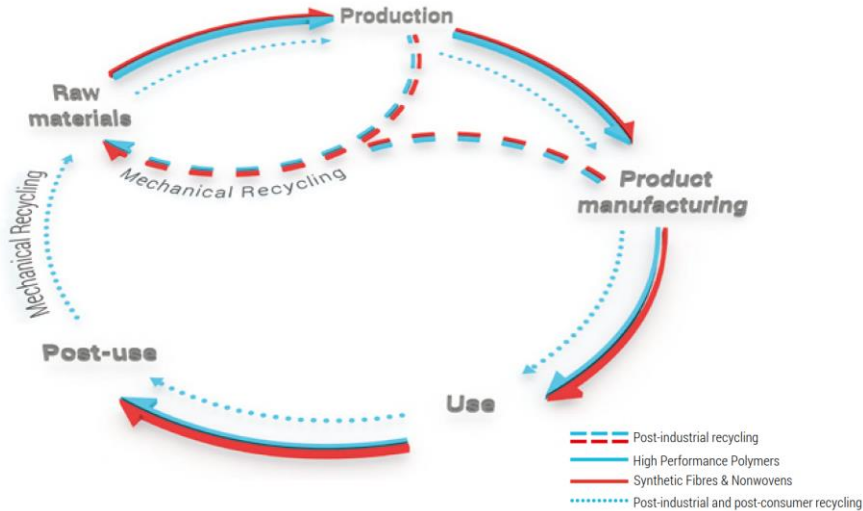
**Product Environmental Footprint
PEF**

**Environmental Product Declaration
EPD**

Global Recycled Standard

Oeko-Tex Standard 100

Circularity Ingredients: «valuable» recycling, up the production chain



We mechanically recycle all our polyamide fibre and polymer scraps turning such scraps into high performance polymers for the most challenging applications in the car, furniture, clothing sectors.

MANAGEMENT SYSTEMS PROVIDE SOLID BASES FOR SUSTAINABILITY THROUGH:

- The continual improvement principle, that is essential to progress in the sustainability path.
- The risk-based approach that improves reliability, reputation, and fosters business continuity

RADICIGROUP CERTIFICATIONS

21 ISO 9001 Quality Certifications

15 ISO 14001 Environmental Certifications

10 OHSAS 18001 Health & Safety Certifications

7 IATF 16949 Quality Certifications

6 ISO 50001 Energy Certifications

2 ISO 45001 Health & Safety Certifications

WATER

INDEX - USE OF WATER RESOURCES PER UNIT PROCESSED

	2016	2017	2018
MI/t	0.089	0.086	0.083

-7% use of water resources per unit processed (2016-2018)

WATER RECYCLED AND REUSED

	2016	2017	2018	
WATER SAVINGS				
<i>m</i> ³	Water withdrawn	88,222,258	91,563,512	86,464,234
<i>m</i> ³	Water recycled	58,870,072	59,815,885	59,257,811
%	Water saved	67%	65%	69%
n	Saved value	1.67	1.65	1.69

69% water saving in 2018

Water reused up to **60 times** in RadiciGroup plants

Data source: RadiciGroup Sustainability Report 2018

ENERGY

INDEX – TOTAL PRIMARY ENERGY CONSUMPTION FROM NON-RENEWABLE FOSSIL SOURCES PER UNIT PROCESSED

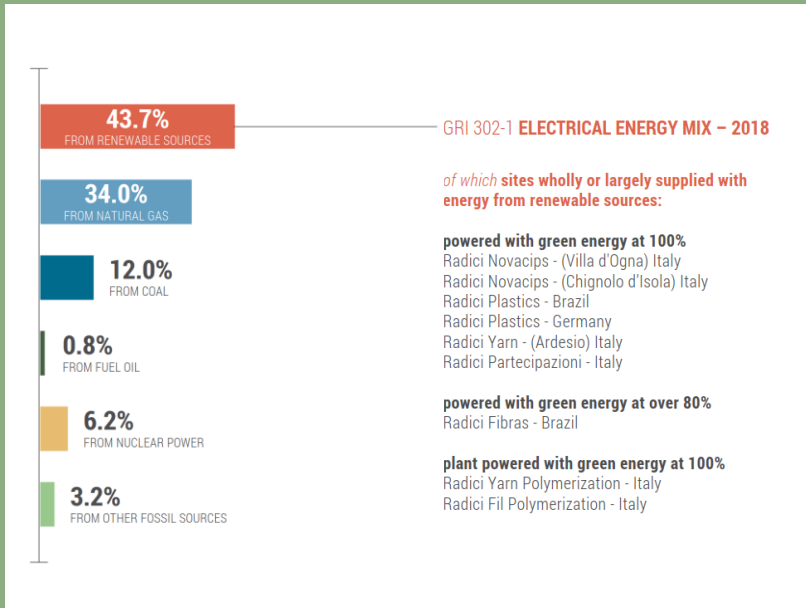
	2016	2017	2018
GJ/t Total primary energy (Direct+Indirect) from fossil sources	6.24	6.19	6.02
GJ/t Total direct primary energy	1.83	1.74	1.71
GJ/t Total indirect primary energy	4.41	4.45	4.31
GJ/t Indirect primary energy - Electricity	1.72	1.98	1.87
GJ/t Indirect primary energy - Steam	2.69	2.47	2.44
GJ/t Indirect primary energy - Heating	0.00	0.00	0.00
GJ/t Indirect primary energy - Cooling	0.00	0.00	0.00

-3.5% energy consumption from primary **fossil source** per unit processed (2016-2018)

-21% compared to 2011

Data source: RadiciGroup Sustainability Report 2018

ENERGY MIX



Data source: RadiciGroup Sustainability Report 2018

An electric energy mix boasting a quantity of

Green Energy

that exceeds

43% in 2018.

Circularity Ingredients: the reduction of emissions



EMISSIONS

GRI 305-4 INDEX- TOTAL DIRECT AND INDIRECT GHG EMISSIONS PER UNIT PROCESSED

	2016	2017	2018
tCO ₂ /t	0.495	0.489	0.446

NATIONAL STANDARD BENCHMARK MIX AND RADICIGROUP MIX (ELECTRICITY)

	2016	2017	2018
tCO ₂ eq. Indirect emissions from electricity – standard national mixes	170,831	175,026	175,085
tCO ₂ eq. Indirect emissions from electricity - RadiciGroup selected mix	116,645	137,956	124,084
tCO ₂ eq. Difference	54,186	37,071	51,001
% Difference	31.7%	21.2%	29.1%

Data source: RadiciGroup Sustainability Report 2018

-10% emissions
per unit processed (2016-2018).

-56% emissions
per unit processed compared to 2011.

-29% indirect emissions thanks to RadiciGroup selected mix.

The million-dollar question: is sustainability economically sustainable?



**Value added rises, the use of resources falls.
Our Group's development is profitable and sustainable**

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

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

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

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

WATER RESOURCES TO TOTAL NET VALUE ADDED

		2016	2017	2018
MI/€	Water resources (GRI 303-3) to total net value added	0.00043	0.00035	0.00031

Data source: RadiciGroup Sustainability Report 2018