

# 2019

## SUSTAINABILITY REPORT SOL GROUP

Consolidated non-financial statement pursuant  
to Italian Legislative Decree no. 254/2016



# CONTENTS

---

---

**02** LETTER TO STAKEHOLDERS

**06** THE KEY NUMBERS

**08** OUR IDENTITY

- 09** About us
- 11** Mission and values
- 12** A past in constant evolution
- 15** Sustainability, a global goal
- 19** Generated and distributed value
- 20** The Group's development and investments

---

**22** GOVERNANCE SYSTEM

- 23** Corporate Governance
- 24** Governance of sustainability

**30** CUSTOMERS, PATIENTS AND SUPPLIERS

- 31** The SOL Group for industry
- 34** The SOL Group for healthcare
- 40** The SOL group for Biotechnologies
- 42** Energy production from renewable sources sector
- 43** Customer and patient satisfaction
- 44** Suppliers

**46** THE ENVIRONMENT

- 47** Main environmental aspects
- 48** Energy consumption
- 49** Greenhouse gas emissions
- 53** Waste
- 53** Water consumption and wastewater
- 55** Primary production plant certifications

---

**56** PEOPLE AND THE COMMUNITY

- 57** Our people
- 62** Commitment to the community

**64** SHAREHOLDERS AND FINANCIAL INSTITUTIONS

- 65** Financial data
- 66** Financial community

**68** MATERIALITY ANALYSIS

- 69** Identification of priority stakeholders and material issues

---

**72** METHODOLOGY

**74** PERFORMANCE INDICATORS

**78** GRI CONTENT INDEX

---

**83** INDEPENDENT AUDITOR'S REPORT

**86** GLOSSARY

# 2019

# SUSTAINABILITY

# REPORT

# SOL GROUP

Consolidated non-financial statement pursuant  
to Italian Legislative Decree no. 254/2016

# LETTER TO STAKEHOLDERS

## SUSTAINABILITY ALWAYS: EVEN IN THE PANDEMIC EMERGENCY

Traditionally this letter should comment, for the benefit of the reader, on the efforts that the SOL Group put forth and the results it achieved in 2019, under the banner of and with respect to the values of sustainability and social responsibility that inspire it. However, the **emergency of these past few weeks** that is disrupting the world and the lives of all of us with the appearance and spread of COVID-19 is so serious that we cannot fail to address it immediately. As we will see, moreover, we will always and regardless speak of sustainability.

First of all, we would like to thank our **4,320 collaborators**, no one excluded, who are demonstrating a great sense of **responsibility, strength and will, dedication and civic spirit**, and also great **courage**.

SOL is called upon, today in Italy but day after day more and more also in all the other countries in which it operates, to ensure that **medical oxygen**, together with the systems for delivering and distributing it, reaches tens of hospitals and thousands of patients affected by the virus. This in a context in which the number of patients in need of oxygen dramatically increases every day and the most involved hospitals have to be able to deliver five to seven times more oxygen than normal. Without oxygen, many patients would have no chance of surviving the disease.

At the same time, Vivisol is called upon to ensure that thousands of patients continue to receive **life-saving** mechanical ventilation, enteral and parenteral nutrition, integrated home care assistance and oxygen therapy at home every day, the latter also to combat the virus.

The Group's companies must also ensure that the hundreds of companies that continue to operate along the chemical, pharmaceutical, food and water purification chains never lack the supply of our technical gases and services, essential for them to continue to produce safely, for the benefit of our **communities**, severely challenged by the quarantines and rules that have been imposed by the authorities in order to stop the spread of the epidemic.

Of the 1,218 women and men of the Group in Italy, 550 are currently using **agile working methods**, working in shifts to oversee essential functions both at the headquarters in Monza and in the territorial locations. But 668 of them continue to work in the primary plants and gas filling centres every day, visiting hospitals daily for Total Gas Management services or the emergency installation of medical systems, going to patients' homes for Vivisol life-saving services, along with doctors and nurses, liquid oxygen and cylinder transporters who have collaborated with us externally, often for many years. Lastly, others continue their biotechnological research to help science defeat the virus.

All the other 3,102 international colleagues of the Group are gearing up to deal with probable similar emergencies in their respective countries, also thanks to the pooling of experiences in Italy. Some of them have already been hard at work in the trenches in these past few weeks.

Everyone has our gratitude and admiration for the decisive contribution they are making **to the sustainability of our society**, to allow Italy and all the other countries in which our Group operates to defeat the virus and to rise again, to resume the path of development with stronger societies toughened up by adversity.

Meanwhile, in 2019 the SOL Group took a new positive step forwards on its development path. Turnover exceeded the threshold of 900 million Euro with 8.5% growth and high profitability. The growth was sustained thanks to significant investments for 103.3 million Euro.

In addition to those for the purchase of tangible and intangible assets, considerable resources were also devoted to strengthening the Group through partnerships and targeted acquisitions. In this sense, there



was a great deal of focus on the Domestic Care sector in 2019. In São Paulo, Brazil, the acquisition of the majority of **P PAR Partecipacoes** opens up new interesting prospects in a great country like Brazil, but also throughout South America. In Basel, Switzerland, the acquisition of **Spitex Perspecta** strengthens us in a territory not far from the Canton of Geneva and that of Vaud, where Sitex already operates, with undoubtedly synergies and new potential. In Germany, the acquisitions of **Intensivservice Wanninger** and **Medtek Medizintechnik**, the latter in December 2018, reinforce the critical mass of our presence in one of the largest and most important countries in Europe, where Vivisol companies are among the market leaders.

The Group has maintained a high level of attention to the health and safety of its 4,320 employees and the environmental impact of its activities; it has also continued to invest in research and development, as shown in the many numbers and examples shown on the following pages.

2020 is already proving to be a very difficult year, and increasingly so in the coming weeks and months, both because of the uncertainty about the duration of the pandemic before it can be defeated and because of the uncertainty about the state of our societies and economic systems in Europe and the world once the emergency is overcome.

However, we are certain that if we, Italians and others, are able to fight together, united, if we are able to respect the rules, to continue to do our duty, to commit ourselves with a sense of responsibility and dedication, our country, Europe and the world will be able and will successfully overcome this terrible situation more toughened and stronger than before.

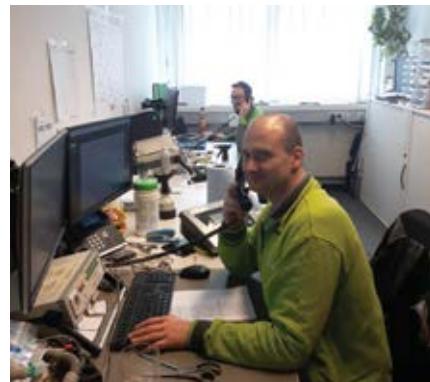
Surely this will happen for us, the women and men of SOL.



Aldo Fumagalli Romario  
SOL Group Chairman



Marco Annoni  
SOL Group Deputy Chairman





Thank  
You!



# THE 2019 KEY NUMBERS

	2015	2016	2017	2018	2019
--	------	------	------	------	------

## THE ECONOMIC DIMENSION

(million Euro)

	2015	2016	2017	2018	2019
Group's net sales	674.2	703.4	756.8	833.5	<b>904.3</b>
Technical gas area net sales	363.6	373.1	369.2	403.2	<b>412.6</b>
Home care area net sales	339.8	360.0	387.6	430.3	<b>491.7</b>
Gross operating margin	148.4	167.6	167.2	186.9	<b>211.3</b>
Operating result	65.6	80.9	76.2	89.7	<b>88.7</b>
Operating result before non-recurring charges	65.6	80.9	76.2	90.6	<b>98.8</b>
Investments	89.8	103.7	99.3	99.8	<b>103.3</b>

## THE ENVIRONMENTAL DIMENSION

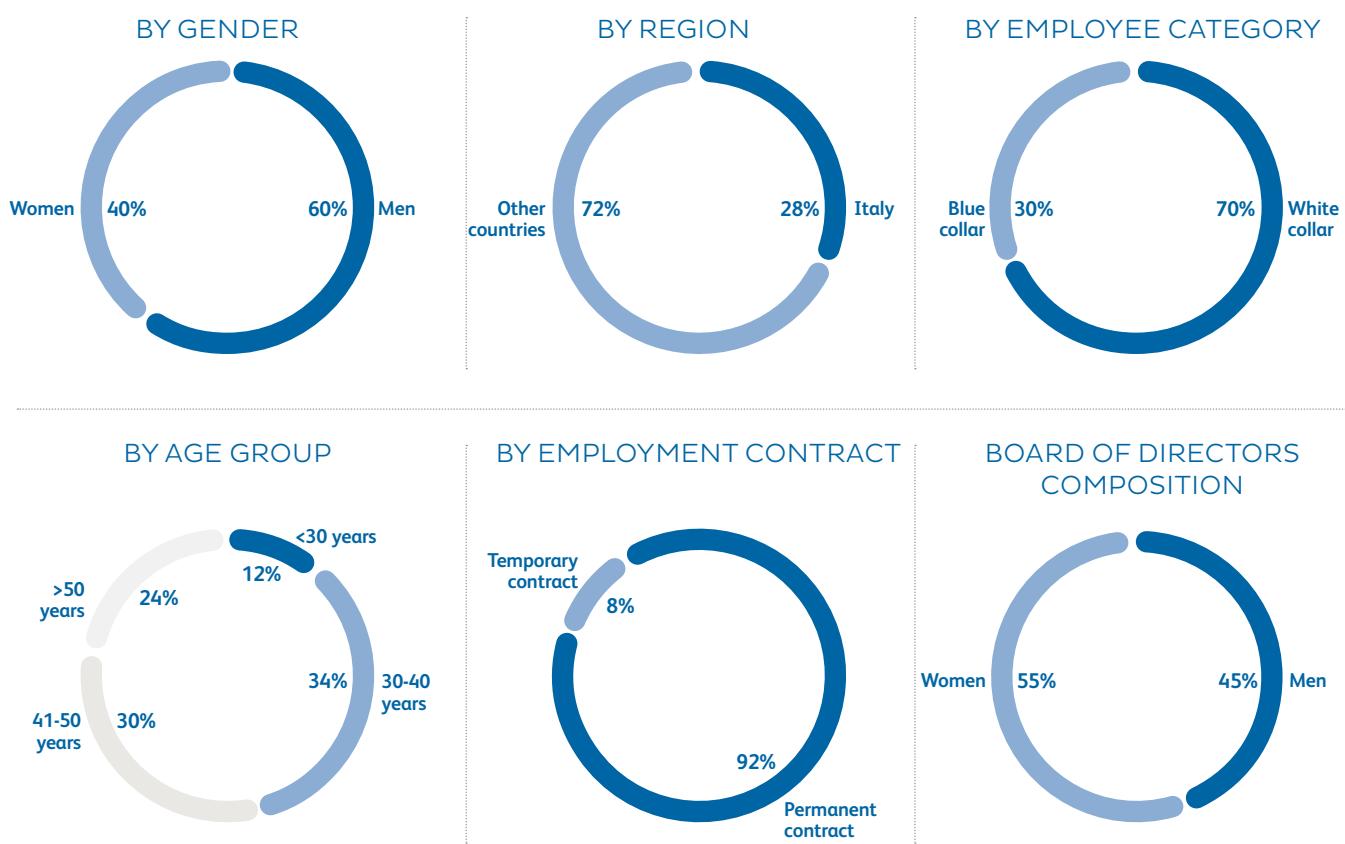
Specific consumption of electrical energy (ASU; base 2015=100)	100	98	96	98	<b>97</b>
Electrical energy produced (GWh)	77	108	77	101	<b>90</b>
Greenhouse gas emissions (tonnes CO <sub>2</sub> equivalent)					
- Direct emissions	29,426	26,383	39,765	45,372	<b>41,792</b>
- Indirect emissions	240,159	239,357	256,467	270,539	<b>281,310</b>
- Direct emissions for products transportation	31,000	50,611	48,951	52,175	<b>52,801</b>

## THE PEOPLE

Number of employees as of December 31 <sup>st</sup>	2,995	3,127	3,556	3,958	<b>4,320</b>
- Italy	986	995	1,136	1,194	<b>1,218</b>
- Other countries	2,009	2,132	2,420	2,764	<b>3,102</b>
Training hours	30,000	38,700	50,501	64,739	<b>71,821</b>
Work-related injuries					
- Injury rate	3.6	4.0	2.9	4.6	<b>3.4</b>

## SOL PEOPLE IN 2019

### DIVERSITY



### NEW EMPLOYEE HIRES



# OUR IDENTITY



**29** COUNTRIES  
ON 4 CONTINENTS

**904.3** MILLION  
EURO  
NET SALES

**4,320** EMPLOYEES

## ABOUT US

Founded in Italy in 1927, the SOL Group operates in the sectors of the production, applied research and marketing of **technical and medical gases, home care services, biotechnology and energy production from renewable sources**.

It is present in 29 countries with 4,320 employees and serves over 50,000 industrial customers, 500 major medical customers and 500,000 patients. In 2019, its net sales came to 904.3 million Euro.

Parent company SOL Spa has been listed on the Borsa Italiana since July 1998.



In the **industrial sector**, SOL Group supplies technical gases (compressed, liquefied and cryogenic), equipment, systems and services to customers operating in most industrial sectors: steel, metallurgy, glass and ceramics, metal fabrication, chemistry and pharmaceuticals, food and beverage industry, oil industry and services for the environment and transport of goods and people.

In the **healthcare sector**, SOL Group supports hospitals (public and private), Scientific Hospitals and Care Institutions, University Hospitals, Clinical Research Centres, Medically Assisted Procreation Centres, nursing homes and assisted-living centres, providing medical gases, medical devices for the administration and dosing of medical gases, equipment, gas distribution systems, plant management services, electro-medical equipment, sterilisation plants and the turnkey construction of cryobiological rooms and laboratories.



In the **Homecare sector**, the Group, which operates through Vivisol, that succeeded into being one of the leading Homecare Provider throughout Europe and beyond, provides benefits and therapies to chronic patients who are being treated, on behalf of National Health Services, outside a protected environment such as the hospital. Vivisol is able to take complete care of chronic patients who frequently are afflicted also by disabling diseases and conditions of social fragility, and need life support therapies and cures to be maintained in their social and emotional context, thus improving their living conditions and therapeutic adherence. Vivisol provides home therapies in the respiratory field, such as oxygen therapy, mechanical ventilation invasive and non-invasive, the treatment and diagnosis of respiratory sleep disorders; in the infusion field, with enteral and parenteral artificial nutrition therapies and home dialysis; telemedicine and telemonitoring services, highly complex medical and nursing services including palliative care and the provision of aids.

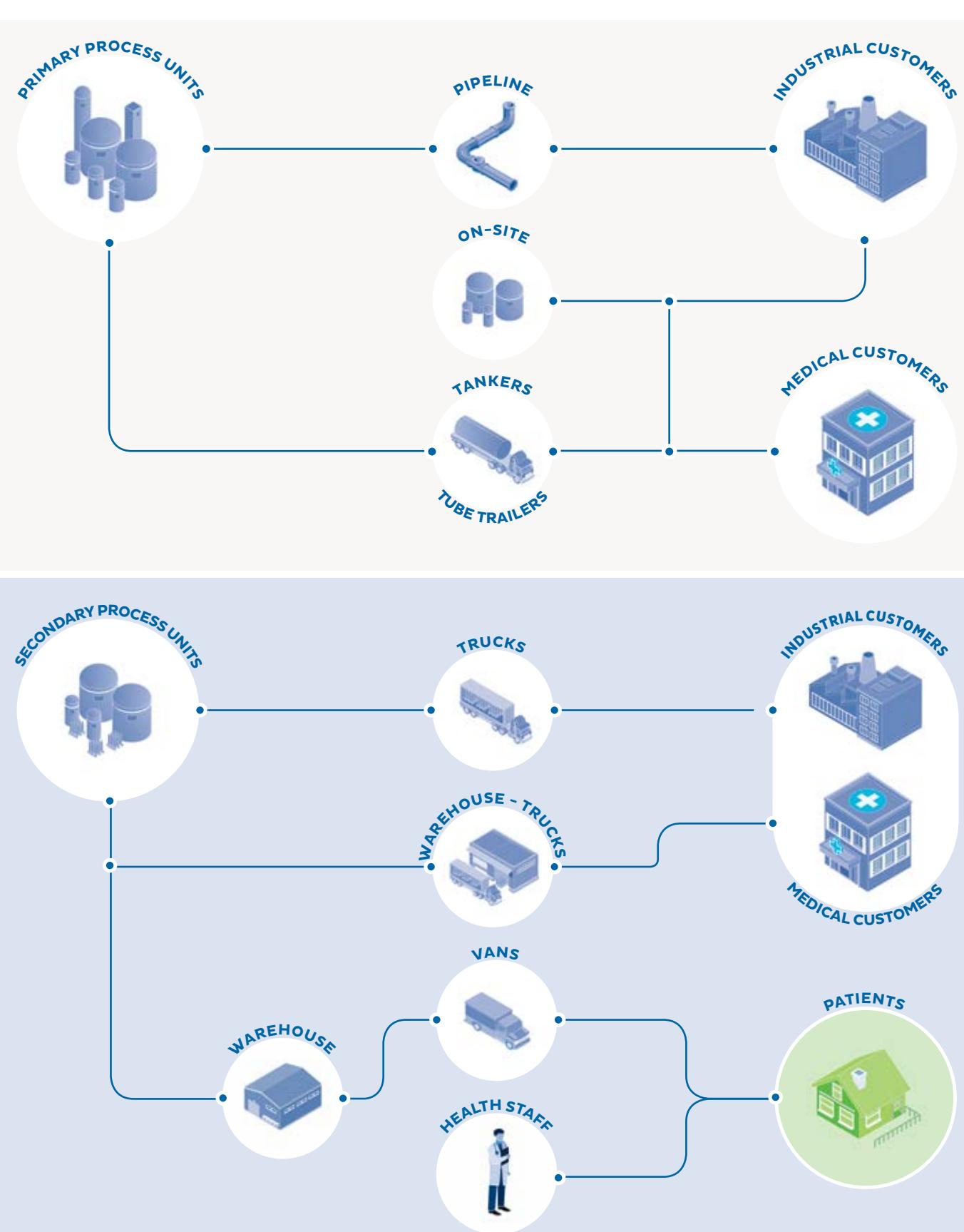


In the **biotechnology sector**, SOL Group works on the research and development of tests and analytical services in the field of human and animal research and clinical diagnosis, research and development of biotechnological molecules, genomic and molecular genetic diagnostics, development of bioinformatic pipelines for the management of clinical data, development of tests and analytical services in the food, environmental and industrial fields.



In the **production of energy from renewable sources**, SOL Group has built 16 hydroelectric plants in Albania, Bosnia and Herzegovina, North Macedonia and Slovenia since 2002.

## THE VALUE CHAIN OF THE SOL GROUP



## MISSION AND VALUES

The SOL Group seeks to provide its customers with **innovative and technologically advanced solutions** at all times and to offer patients the best possible home care services, contributing to **improving the quality of life** on the planet.

The values in which the SOL Group believes and from which it takes daily inspiration are:

**Ethical behaviour:** in interpersonal relations, towards employees, customers, suppliers and all stakeholders.

**Safety:** we consider the workplace safety of all employees and collaborators, as well as the safety of the products and services we provide to our customers and patients, as a top priority.

**Customer satisfaction:** we are committed to providing our customers with innovative and technologically advanced solutions at all times and to improving the quality of life of our patients, guaranteeing them the best treatment and the finest home care.

**Balanced development:** we strive to create balanced economic growth and constant development over the long term, employing resources efficiently and orienting them constantly towards change.

**Environmental protection:** we seek to safeguard the environment by optimising processes, and therefore using energy resources in the best possible way, and by developing technologies and services that help our customers improve their environmental efficiency.

**Development of human resources:** we believe that attracting and retaining new talents and, in a broader sense, training and developing the capacities of individuals are fundamental tools for the success of the SOL Group.

The SOL Group adopted its own **Code of Ethics** in 2006, which is a tool for the implementation of good behavioural practices, a landmark and a guide for those working at SOL



and those interested in pursuing its mission. It expresses the commitments and responsibilities that all SOL employees assume in conducting any business activity. Particular attention is devoted to the protection of occupational health and safety, the prevention and fight against corruption, as well as the protection of the environment and respect for human rights.

The Code was reviewed in 2017 with the aim of further highlighting the principles and conduct that must characterise relationships with all stakeholders. A clear and simple style was adopted to make sure that the contents are immediately comprehensible.

## A PAST IN CONSTANT EVOLUTION

1927

Giovanni Annoni and Aldo Fumagalli founded the SOL Group with the **first two plants** for the production of oxygen and acetylene in Livorno and Ancona.



1960

Alessandro and Renzo Annoni, Giulio and Ugo Fumagalli Romario, the second generation, launched an ambitious project for the **innovative development** of SOL: these were the years of the first technical gas production plants, located close to the Group's major key customers, such as steelworks and glass-makers.

1970

SOL became **a leading operator in the sector in Italy** thanks to the transition from a regional market strategy to a national one. This was made possible by embracing the major transformations taking place in the technical gas industry at the time due to the development of technologies for the storage and distribution of gases in cryogenic liquid state.

1984

The **Group also began to grow in Europe**, developing plants, branches and joint ventures in most European countries over the years, also seizing opportunities stemming from the opening of new markets in South-Eastern Europe.

1986

SOL was one of the first companies in Europe to introduce a new form of treatment, developed in the US, for patients affected by serious respiratory disorders. This treatment involves significant quantities of oxygen and a highly specialist **home care service**. In 1986 **Vivisol** was established, a company dedicated to developing this market.



1998

In order to be more competitive on the international markets, the parent company SOL Spa was listed on the **Milan Stock Exchange**. The arrival of the third generation of the Annoni and Fumagalli Romario families at the helm of the company, together with a young executive management team from outside the families, allowed the Group to pursue its strategy of internationalisation.

2002

The Group entered the **renewable hydroelectric energy production** sector, acquiring and developing hydroelectric power plants in Slovenia, Bosnia Herzegovina, Albania and Macedonia for an overall installed capacity today of around 31 MW.

## 2010

The SOL Group expanded its borders **beyond Europe**, founding the joint venture SicgilSOL in **India** in 2010.

Taking advantage of the experience it had acquired in the creation and management of cryobanks for the storage of biological samples, in 2010 the Group entered the **biotechnology sector**.

## 2012

SOL entered **Turkey** with a joint venture in the home care sector and the constitution of a company dedicated to the development of industrial activities.

## 2014

With the acquisition of the German company SKS, SOL became one of the **most important players** in the market for **CO<sub>2</sub> production in Germany**.



## 2015

SOL entered the **Moroccan** market with the acquisition of a 100% stake in Flosit, and the **Brazilian** market through a joint venture with a local entrepreneur.

Capo d'Orlando station was built in Italy for the supply of **hydrogen vehicles**, produced solely thanks to photovoltaic panels.

## 2017

SOL expanded its activities in the biotechnology sector by acquiring **Personal Genomics**, a Verona-based company specialised in DNA sequencing and genetic data interpreting services.

The Group continued along the path of promoting more sustainable mobility, entering the **Liquefied Natural Gas** market.

## 2018

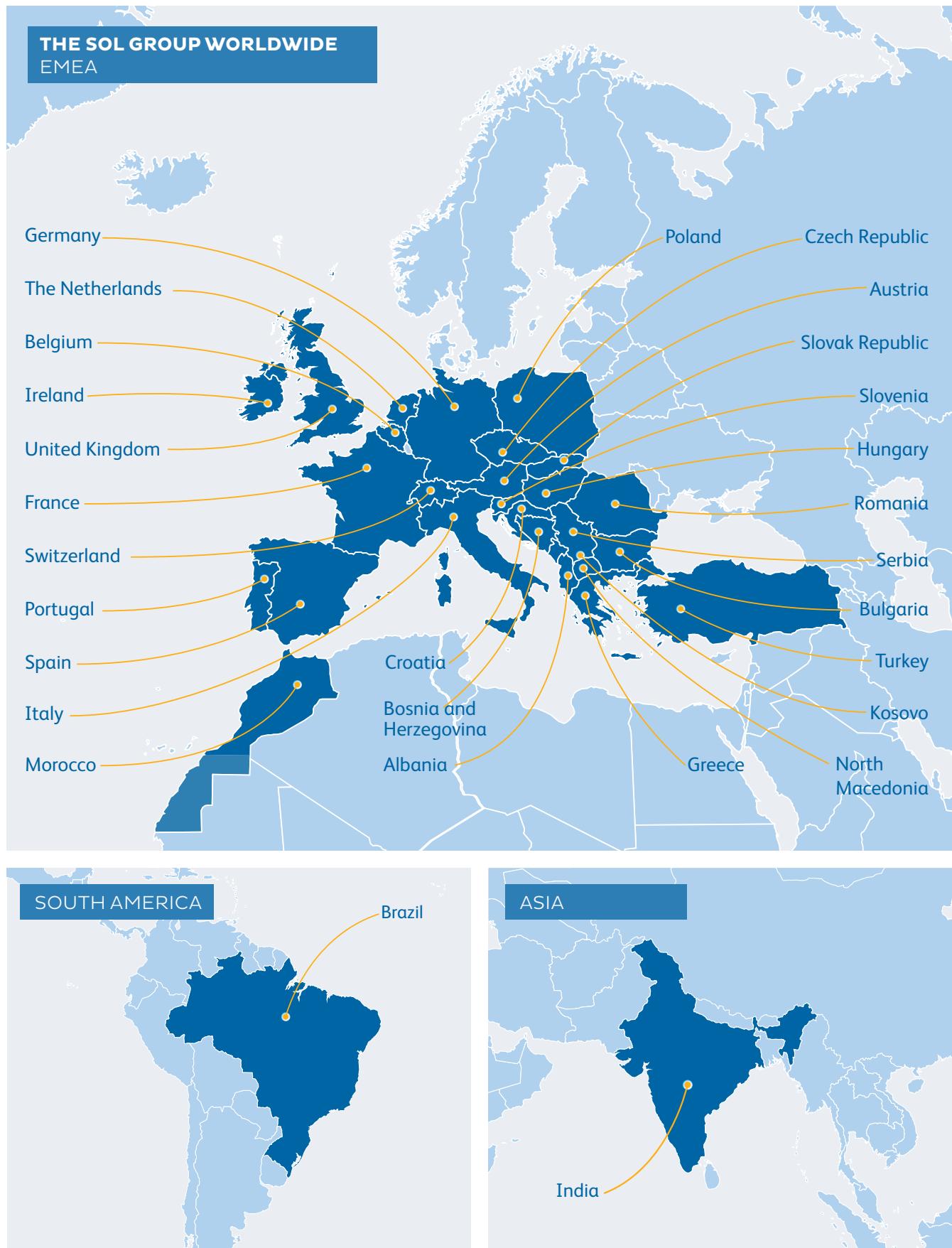
The Group acquired two companies in Poland specialising in **palliative care**, Pallmed and Medseven. In addition, it established a **Centre for the testing and maintenance of cylinders and packs** with the aim of increasing container quality to further guarantee the health and safety of patients, clients and production personnel.

A plant for the **recovery and production of carbon dioxide** was built in Bulgaria at a factory that produces Bioethanol, contributing to the reduction of emissions of this gas into the atmosphere.

## 2019

The Group strengthened its international presence in the **home care sector**: in **Brazil**, by acquiring the majority of P Par Partecipacoes, heading Global Care Assistencia Domiciliar, Unit Care Servicos Medicos and DN Global Homecare, in **Germany** with Intensivservice Wanninger and in **Switzerland** with Spitex Perspecta.





# SUSTAINABILITY, A GLOBAL GOAL



In September 2015 the United Nations defined **17 Sustainable Development Goals** (SDGs) to be achieved by 2030, which represent common sustainable development goals and constitute an important reference for the international community.

Achieving them cannot be without the commitment of institutions, civil society, non-governmental organisations (NGOs) and businesses.

Aware of its role in sustainable development, the SOL Group has connected its activities to the UN Agenda with the aim of highlighting its contribution to achieving 7 of the 17 goals.



## SUSTAINABILITY FOR EMPLOYEES

For **employees**, the SOL Group has always invested in improving the **well-being of people** to foster involvement, a connection with the company and to create a collaboration-oriented climate. Principles such as **meritocracy**, respect for **equal opportunities**, **listening** to employees' needs, **health and safety** protection are considered essential, in accordance with the responsibility that the Group assumes for maintaining a serene and favourable working environment.



## SUSTAINABILITY FOR THE INDUSTRIAL SECTOR

Technological innovations and high-quality products are the basis of the offer for **industrial customers**, ensuring safer, cheaper and environmentally friendly performance.

**Improving water quality:** the use of oxygen in wastewater treatment makes the purification process more effective, reducing environmental impact and ensuring better control over the treatment.

Disinfection with ozone protects the watercourses where wastewater is re-emitted after treatment from bacterial pollution and also avoids the use of chlorine compounds.

**Reduction of energy consumption and emissions:** SOL designs and manufactures different types of oxy-fuel combustion burners for the metal and glass industry which, compared to the use of air alone, guarantee greater efficiency and a consequent reduction in energy consumption and emissions into the atmosphere.

**On-site plants:** producing gas directly on industrial customer premises using on-site plants, where the characteristics of the gas and the needs of the customer allow it, resulting in a lower environmental impact. In fact, atmospheric pollution caused by road transport is avoided and energy consumption is reduced since the process, specialising in just a single gas with specific characteristics, consumes less energy than a traditional centralised plant.

**Promoting more sustainable mobility:** every year resources and energy are invested to support the development and use of fuels with a lower environmental impact, such as hydrogen and Liquefied Natural Gas, with the aim of reducing emissions.

**Increase in safety:** the nitrogen produced by SOL is often used to render inert environments and systems that could be at risk of explosion or fire, safeguarding the safety of workers.

**Reduction of food waste:** thanks to food freezing systems and storage systems in protective atmospheres without preservatives, SOL contributes to the reduction of food waste and of substances harmful to human health.



## SUSTAINABILITY FOR HEALTHCARE

The SOL Group constantly seeks to give a better contribution to the challenges and needs posed within the healthcare sector, both by hospitals and by patients who use home care services.

That's why SOL believes that hospitals must not only be supplied with traditional medicinal gases (oxygen and nitrous oxide), but also with new and specialised medicines such as Neophyr, a medicinal gas produced in the Monza pharmaceutical workshop and used in intensive care, the active ingredient of which is nitrous oxide. The SOL Group also provides systems for their use and, above all, services – such as sanitation - that allow the customer and doctors to focus on the main purpose of their activity: patient care.

**The safety of patients, operators** and all figures present in healthcare facilities is a primary objective. The experience gained and continuous feedback allows SOL to innovate products and services for the purpose, among others, of making them inherently safer: examples are the integrated reducing valves for compressed gas packages, safety and protective devices for handling cryogenic gases and safety and monitoring sensors for the rapid analysis of hazardous atmospheres.

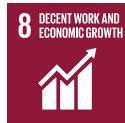
The reduction of the Group's environmental impact is pursued through **transportation efficiency, the computerisation** of accounting and reporting **documents** and **optimising inventory** thanks to the use of management systems that monitor tank levels and track the packages distributed in healthcare facilities.

Over the years, the SOL Group has flanked these hospital services alongside increased attention to **patient treatment**: the healthcare worker seeing to home oxygen delivery is not merely seeing to logistics, but takes on a true role as healthcare worker, taking charge of the patient's **clinical governance** by providing targeted therapeutic hospital and home care services.

Patients with chronic conditions can therefore count on integrated care services at their home which, if conditions allow, guarantee as independent and high-quality a life as possible, avoiding hospitalisation thanks to an efficient remote monitoring service.

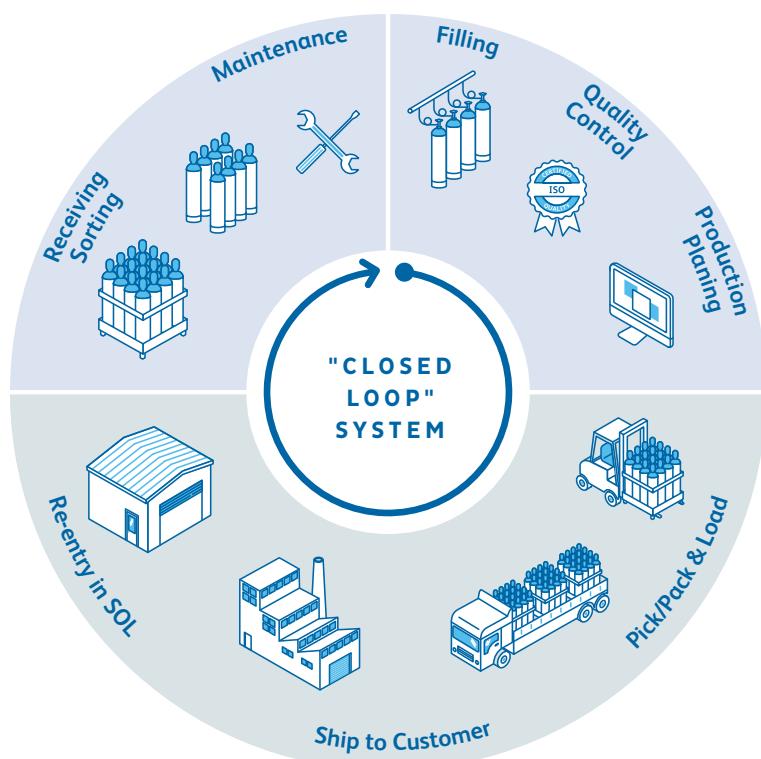
Lastly, there are several advantages of **genomic diagnostics** which the Group makes available to its customers:

- **Prevention:** by performing tests on a healthy population, there is a higher probability of being able to take prompt action to prevent certain illnesses.
- **Early identification of problems:** by screening new-born babies and carrying out predictive tests on a population that is at high risk of a specific illness it is possible to identify anomalies in advance and, potentially, take early action.
- **Assistance for the ill:** by identifying DNA mutations it is possible to modulate personalised treatments to improve the effectiveness of healthcare.



## SAFE PRODUCT MANAGEMENT

Sol uses reusable containers (such as cylinders, cylinder packs and dewars) for each service involving **the distribution of bottled products** for a period of several years. Taking charge of the different phases of use of the containers it owns, from filling and distribution to maintenance, the Group implements a real "**closed loop**" system. Furthermore, seeing to the inspection, maintenance and testing aspects ensures that all the safety and compliance requirements of the containers are guaranteed.



The safety of products is monitored both in the production phase and during transportation, right up to the final professional user, using risk assessment processes.

The SOL Group takes part in national and international working groups on product safety matters in order to stay constantly updated on the evolution of regulations and to be able to operate in harmony with other companies in the sector.

The **management of the Safety Data Sheets** (SDS) of all substances and for all companies operating in the European Union is centralised at the Monza headquarters. There are currently more than 4,000 available SDSs in 20 languages. All of the safety data sheets and all of the labels applied to mobile containers conform to Regulation 1272/2008 (CLP - Classification, Labelling and Packaging), which regards the European standardisation of the classification and labelling of hazardous substances and preparations.

As regards REACH (Regulation on Registration, Evaluation, Authorisation and restriction of Chemicals), following the registration process of 6 substances marketed by SOL in 2018, SOL obtained registration as Only Representative for the Albanian subsidiary in 2019.

**Product traceability**, and in particular for medical gas containers, provides information on their location at any time in order to make timely withdrawal actions, in case flaws were found in the products delivered.

## INVESTING FOR CUSTOMER SAFETY: THE NEW SOL TESTING CENTRE



**60,000**  
CYLINDERS ANNUALLY  
PROCESS

**1,000**  
PACKS ANNUALLY  
PROCESS

**136**  
TRAINING HOUR  
PER EMPLOYEE

The maintenance and testing of cylinders and cylinder packs are very critical phases, as they can have an **impact on the safety** of the end user (customer) and all operators who manage the production and distribution phases of the containers, and on the **quality of the product** contained therein (the containers are used in the industrial sectors, in the food sector, in laboratories for pure gases and for medicinal gases and medical devices). The use of gases can save lives and the cylinder containing them must always ensure **maximum reliability and safety**.

The new SOL Testing Centre arises from the need to internally manage the testing and maintenance activities of cylinders for compressed and liquefied gases hitherto entrusted mainly to qualified external testing centres in outsourcing.

The Centre covers over 22,000 square metres and is located in Pignataro Maggiore, in the Campania Region (Italy). It is able

to process more than **60,000 cylinders and 1,000 packs** annually with a single work shift. It is a centre of excellence currently able to manage cylinders and packs throughout the Group.

The Centre's design was guided by **high standards of quality, technological innovation, safety and efficiency**.

A **management software** (Supervisor) has been implemented, to which all the machines are connected throughout the production process: valve functionality check, automatic measurement of the physical parameters of the cylinder, internal inspection, sandblasting, hydraulic testing, painting. The system allows **organising, planning production, tracking and processing data**: each operation performed is recorded and stored in a dedicated database, organised into digital files for individual containers to allow complete **traceability and historicity of the tests and processes performed**.

**Integrated and innovative control systems**, combined with the **automation** of numerous phases of the process which reduce the manual handling of cylinders, guarantee a high degree of **safety of the operating processes** and the operators themselves. In a standard maintenance or testing process, an operator must handle each individual cylinder on average between 12 and 15 times. Thanks to the high degree of **automation** of the SOL Testing Centre, the processing cycle involves only 4 manual operations to **safeguard operator safety**.

The Centre's operators participated in an intense, **specific training** plan, which includes periodic refresher sessions. In 2019, more than 1,700 hours of training were provided, equal to approximately **136 hours per employee**.

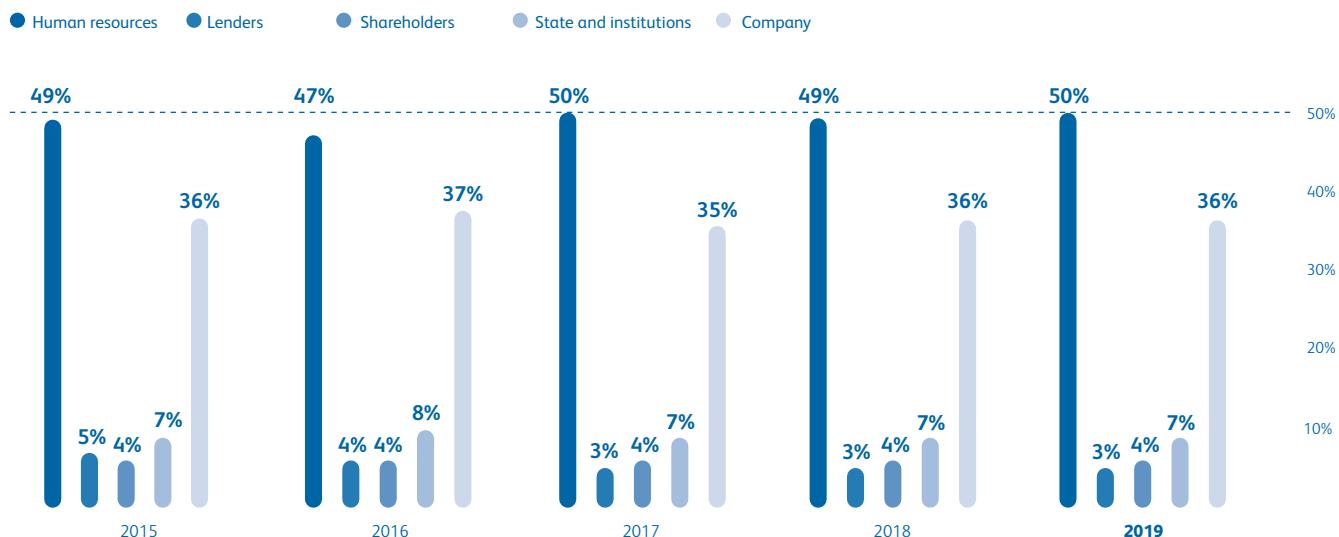
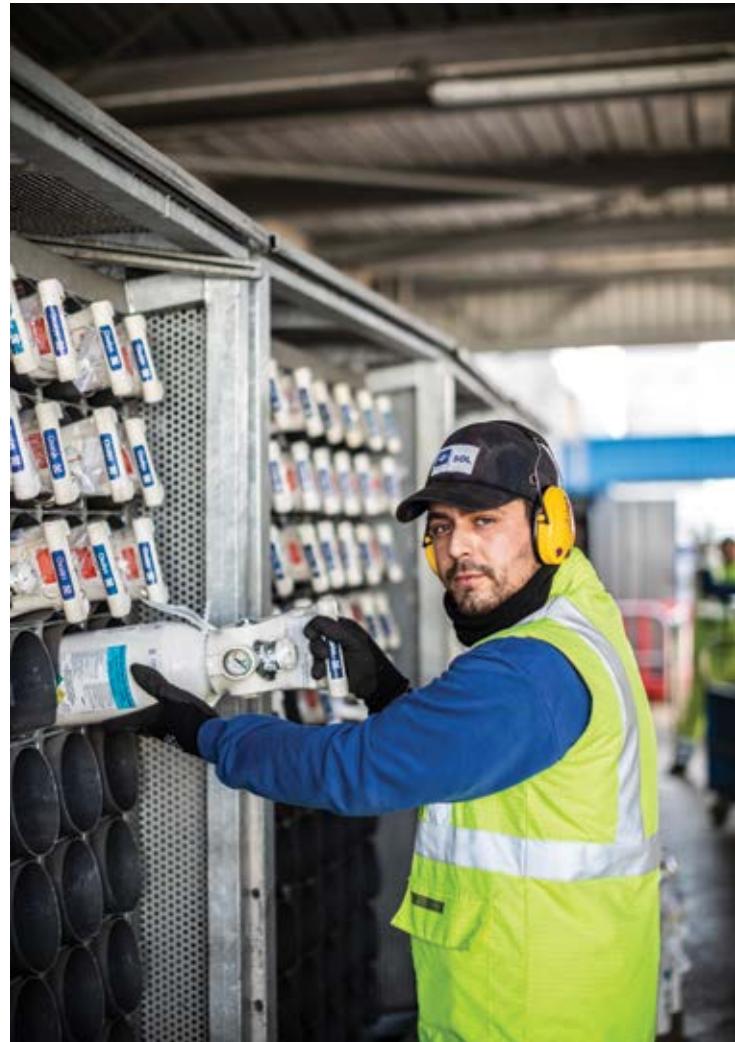
In compliance with current legislation, the processes have been verified and certified by **Certification Bodies specialised** in the manufacture and periodic review of transportable pressure equipment (TPED).



## GENERATED AND DISTRIBUTED VALUE

The direct economic value generated and distributed, expressed as the economic increase produced by the SOL Group's activities and distributed to the main categories of stakeholders, allows the Sustainability Report to be connected to the financial statements.

In 2019, the economic value generated for stakeholders was 406 million Euro, an increase of 37 million Euro compared to 2018 (+10%). This amount was then distributed to stakeholders as employee wages (human resources), returns on loans granted (lenders), return on risk capital (shareholders), taxes (state and institutions) and amortisation and non-distributed profits (company system).



The distribution of the economic value to shareholders for the 2019 fiscal year corresponds to the dividend that the Board of Directors will propose to the Shareholders' Meeting.

## THE GROUP'S DEVELOPMENT AND INVESTMENTS

### ACQUISITIONS

In 2019, important corporate operations were carried out in the **home care sector**.

P Par Partecipacoas Ltda was acquired in **Brazil**, based in São Paulo, a holding company that owns three Brazilian companies operating in the home-care sector, which are the Global Care Assistencia Domiciliar Ltda, the Unit Care Servicos Medicos Ltda and DN Global Homecare Ltda. The Group also acquired Intensivservice Wanninger GmbH based in Regensburg, **Germany**, and Spitex Perspecta based in Basel, **Switzerland**.

### MAIN INVESTMENTS

During the 2019 financial year **53 million Euro** of investments were made in the **technical gases area**, and **50,3 million Euro in the home care sector**.

In Italy, at the San Martino Buon Albergo plant in Verona, work began on the construction of the new unit for the production of liquid nitrogen and the enhancement of the total production of oxygen and argon from the existing plant. In Salerno, the new liquefied methane storage plant for the Southern Italian market is under way.

In **Hungary**, work is being completed on the construction of the new secondary production plant in Budapest of the subsidiary SOL Hungary.

In **Albania**, works in the construction of a new sulphur dioxide production plant have been completed in Tirana.

In **Spain**, a new secondary production unit was built in Barcelona.

In **Poland**, work is under way to extend the subsidiary Pallmed's palliative care facility in Bydgoszcz.

In **India**, the nitrous oxide production plant was successfully commissioned at the secondary production plant in Ranipet.

The **program for the improvement, modernisation and streamlining of the production plants has continued**.



This activity concerned in particular the primary production units of Novara, Italy, with the installation of a new on-site plant, and the unit of Kavadarci in North Macedonia, as well as the secondary production units of Ancona and Padua in Italy, Tilburg in the Netherlands, Wiener Neustadt in Austria and Bucharest in Romania.

Various on-site plants were built and put into operation for the production of nitrogen and Singas (nitrogen, hydrogen and carbon oxide based mixtures) both in Italy and abroad, and the vehicles for the transportation, distribution and sale of products were enhanced with the acquisition of cryogenic tankers, cryogenic liquid tanks, cylinders, dewars and electromedical devices in order to support the Group's development.

Finally, the investments to improve the information systems also continued.

## HOME CARE, PRESENCE IN BRAZIL STRENGTHENED

Constantly assessing its opportunities for **international development**, in 2019 the SOL Group increased its presence in the field of home care in **Brazil** through the acquisition of **85% of P Par Partecipacoes**, the holding company that controls the companies **Global Care** Assistencia Domiliar Ltda, **Unit Care** Servicos Medicos Ltda and **DN Global** Homecare Ltda.

Each of these companies operates in the field of home care, responding to the needs of specific target users. **Unit care** helps **paediatric patients**, taking charge of both home care and the subsequent physical and mental rehabilitation of the child

(always at home) after the treatments carried out. **Global Care and DN Global**, on the other hand, mainly treat **adult patients** in need of complex care, offering a wide range of home care services such as palliative care, management of chronic problems due to aggravated wounds, incontinence, physiotherapy treatments, speech therapy.

The SOL Group therefore continues its journey, making the **expertise of Vivisol**, consolidated in Europe, a winning card that confirms the Group as one of the main world operators in Homecare.



# GOVERNANCE SYSTEM

---

**127** CERTIFIED UNITS  
ISO 9001

---

**18** CERTIFIED UNITS  
ISO 13485

---

**75** CERTIFIED UNITS  
OHSAS 18001/ISO 45001

---

**26** CERTIFIED UNITS  
ISO 22000

---

**24** CERTIFIED UNITS  
ISO 14001

---

**56** PHARMACEUTICAL  
WORKSHOPS

## CORPORATE GOVERNANCE

The SOL Group's corporate governance and control system refers directly to the central role of the Board of Directors of the parent company SOL Spa.

The system is based on the concept of **balance** in the representation and roles of the governing bodies, **dialogue with stakeholders** and on **transparency**, both in relation to the market and to internal procedures.

The **SOL governance structure** comprises the following bodies: Board of Directors, Shareholders' Meeting, Board of Statutory Auditors and Independent Auditors.

The Board of Directors has the primary role of governing and managing the company with the basic objective of creating value for shareholders, in accordance with legislation and the Group's mission and values.

The Board of Directors assesses all of the most significant projects, including those relating to sustainability performance.

The Board of Directors of the Company, at its meeting of 20 February 2020, examined the **new version of the Code of Conduct for listed companies** promoted by Borsa Italiana that was approved on 31 January 2020 (available on the website [www.borsaitaliana.it](http://www.borsaitaliana.it)). With a leaner structure, the new Code introduced, in particular, a greater ranking of recommendations in relation to both the size of the issuing company and the characteristics of its shareholders. Therefore SOL Spa, which does not currently adhere to the Code of Conduct for listed companies, has positively assessed the changes and simplifications introduced and at its meeting of 20.2.2020 the Board of Directors resolved to adhere to the new Code of Conduct for listed companies starting from the financial year beginning on 2021, January 1st.

For further information on Corporate Governance, please see the "Investor Relations" section of the website [www.sol-group.com](http://www.sol-group.com)

## THE INTERNAL CONTROL SYSTEM

The internal control system is the set of principles, rules, procedures and standards aimed at monitoring and preventing fraud against the Company and the market as well as to prevent the commission of offences reflecting an apparent interest or benefit of the company by either top management or, more generally, all its employees, ensuring compliance with laws in every area of the Company's and the Group's activities based on the principles of fairness, transparency, efficiency and reliability of corporate management.

The system is guided by the **Code of Ethics** and all internal regulations and procedures, which constitute, as a set, the integrated Quality, Safety and Environmental Management System.

Furthermore, both SOL Spa and Vivisol Srl have adopted an **Organisation, Management and Control Model** established by Italian Legislative Decree no. 231/2001 and subsequent amendments and additions, which forms an integral part of the internal control system. The Model of SOL Spa was then also extended to Sol Gas Primari Srl, thereby constituting a spin-off of the parent dedicated to primary production.

Both SOL Spa and Vivisol Srl have formed their own **Supervisory Bodies** which have the necessary independence to verify compliance with the Organisation, Management and Control Model pursuant to Italian Legislative Decree no. 231/2001 and, more generally, respect for the Code of Ethics.

The Organisation, Management and Control Models, first drafted in 2006, were most recently revised at the end of 2018, with a major revision and simplification of the text that took account of the experience gained over ten years, both in the evolution of corporate organisation and considering regulatory and jurisprudential updates. The Code of Ethics now implemented by almost all Group companies in Italy and abroad was also updated and expanded in 2017.

During 2019, training sessions were organised for SOL and Vivisol employees to ensure the dissemination of the principles and behaviours defined within the Model and to illustrate the main changes introduced. Further innovations in the field of crimes falling within the category of those required for the purposes of Italian Legislative Decree 231 were analysed for a future updating of the Model.

The SOL Group is also strongly committed to protecting and respecting the **principles of free market and competition**. In 2017 a specific **Antitrust Compliance Program** was adopted and the **Antitrust Code** and **Handbook** were approved by the Board of Directors and disseminated, which very simply and clearly explained the fundamental principles of the legislation to be observed. These documents have been translated into English, distributed to all Group companies and been the subject of specific training sessions dedicated to all recipients of the Program.

An **Antitrust Function** was also created, which is covered by the Legal Affairs Department for Italy and by the Country Managers for the Group's non-Italian companies. It is responsible for monitoring the implementation of the Antitrust program and providing assistance in this area to everyone in the Group. Among its other duties, the Antitrust Function also organises training events to promote the awareness and understanding of the regulation's contents.

During 2018, also in light of the entry of the European Directive on the **general data protection** (the so-called "GDPR") into force, a DPO (Data Protection Officer) was appointed in the countries where required by law and a Directive was published, valid at Group level, which defines the basic rules that all Group companies must know for the collection, processing and management of personal data. After this, the

Group continued with a widespread training campaign, also via distance learning, using the communication tools available. An audit of the Group's privacy management system was carried out by an external company in 2019. The analysis confirmed the substantial adequacy of the SOL Privacy Management System to the EU Regulation and identified those areas of improvement that will be implemented during 2020.

The systematic monitoring of the correct application of the corporate governance principles takes place via a system that involves the presence of dedicated company structures which carry out monitoring, control and risk management activities of company risks.

The Board of Directors of parent company SOL Spa has created the **Internal Control Function** that responds to it, which is tasked with ensuring that internal operating and administrative procedures are correctly respected. The Internal Control Function reports directly to the Board of Directors. Verification activities are performed both at the management offices of the Monza headquarters and at the sites of the Group's operating companies. The internal control function makes use of the structures and personnel included in the various Departments, assigning them with control and risk assessment tasks.

## GOVERNANCE OF SUSTAINABILITY

Sustainability has been central to the SOL Group's strategy since its establishment. The approach adopted by the Group integrates sustainability into the planning and control systems and therefore into the management of the functions related to the economic activities managed.

On 28 November 2016 the **Corporate Social Responsibility (CSR) Committee** was set up with Directors, General managers and Central managers appointed as its members. The CSR Committee validates the sustainability goals, coordinates, and stimulates the operating structures of all of the Group's companies.

For 11 years now, the SOL Group has chosen to communicate its economic, environmental and social performance with the Sustainability Report. The 2018 Sustainability Report was chosen from 800 reports and awarded by the

committee of the ConsumerLab.it association for its clarity and communicative effectiveness that demonstrates SOL's sensitivity and attention in involving stakeholders in sustainable matters.



## MANAGEMENT SYSTEMS

The SOL Group has chosen to organise its Quality, Safety and Environmental Management System in an integrated way in order to guarantee coverage of all its activities, emphasising synergies.

The governance of the Management systems, the re-examination of their proper functioning and the verification of their effectiveness is entrusted to the **Quality, Safety and**

**Environmental Management System Steering Committee** (CGSQ) made up of the Executive Directors, General Managers and Central Directors.

The **Central Quality, Safety and Environmental Regulatory Affairs Management** (DIQS) instead deals with the operational aspect of the management systems, reporting annually to the CGSQ.

The DIQS presents the progress of the projects and activities to the Executive Directors and Central Directors on a quarterly basis.

**Policies** are documents at the foundation of the Management system and are signed by the Chairman and General Managers of the Group. These set out the principles underlying the work of the Group's companies and define the objectives that Management intends to pursue in the various areas. The SOL Group has recently introduced a new corporate governance tool, **Directives**. These documents are issued at corporate level and are obligatorily received by all the Group companies.

## THE REGULATORY AFFAIRS DEPARTMENT

Oxygen, medicinal air and nitrous oxide, Donopa (a mixture of oxygen and nitrous oxide) and Neophyr (whose active substance is nitrogen monoxide) are the main **drugs** that the Group distributes in the healthcare sector in hospitals and, with regard to oxygen, in patients' homes. Also in the healthcare sector, the Group produces and markets **gas for medical devices**, such as liquid nitrogen for cryopreservation and cryotherapy and carbon dioxide for laparoscopy, and **medical equipment and systems** that are used in medicine for diagnostic and therapeutic purposes (from oxygen distribution systems in hospitals to home mechanical fans).

Within the DIQS Department, the **Regulatory and Pharmaceutical Affairs Department** (DARF) serves to support, control and coordinate all SOL Group companies in the authorisation process for the production, distribution and marketing of gases for medicinal use and medical devices.

Drugs and medical devices are subject to strict controls and the documentation necessary for the authorisation process is increasingly complex. The **pharmaceutical workshops** which produce the drugs must be authorised by the Drug Agencies, bodies that verify that all phases of the production process follow GMP (Good Manufacturing Practices) at national level. Compliance with these guidelines guarantees the quality of medicinal products, which in turn is a fundamental prerequisite for the medicinal product to be defined as safe and effective. The manufacturer of a medical device

must obtain the **CE marking**, which proves that its product complies with the safety and health requirements laid down in the legislation in force. CE markings (for Class 2 and 3 devices, which are those prevalent in the Group) are issued by Notified Bodies, facilities (laboratories or companies) authorised by the competent authorities of the European Union countries.

The DARF is also responsible for managing all **post-marketing activities**. Once a medicinal product or medical device has been placed on the market, the manufacturer must regularly monitor any adverse effects or lack of efficacy of the products concerned (pharmaco-vigilance for medicinal products and material-vigilance for medical devices). The company procedures establish that each Group company sends specific reports to DARF for the collection of reports, for analyses and for the evaluation of any notification to the competent authority.

### MEDICAL GASES: Marketing Authorisations in

**23** European countries;

**56** production workshops in **14** countries

### MEDICAL DEVICES:

DM gases produced in

**16** units and distributed in **15** countries.

**5** Group companies are manufacturers (i.e. holders of CE markings) for medical gas distribution plants or equipment.

## RESPONSIBLE CARE

SOL Spa has subscribed to **Responsible Care** in Italy since 1995, the voluntary program of the world's chemical industry, supported in Italy by Federchimica, in which it plays an active part with its own representative on the Managing Committee.

On 7 January 2015, **SOL** also adhered to the "**Responsible Care Global Charter**", committing itself to promoting the principles and contents of the initiative in all countries where the Group is present.

On 23 April 2015 the subsidiary **Flosit** also subscribed to the program, promoted in Morocco by the "**Fédération de la Chimie et de la Parachimie**".

The implementation of the "Responsible Care" Program at SOL Spa is checked every two years by a certification body.

## RISK ANALYSIS

SOL Group's activities, products, services and supply chain, as well as its commercial relations, are exposed to social and environmental risks.

SOL Group adopts a **risk mapping and assessment** methodology that assigns a relevance score to each risk according to the impact assessment, the probability of occurrence and the management system in place. The analysis of the context in which SOL Group operates, including the expectations of the Group's main stakeholders, was a fundamental part of the process.

The main risks regarding non-financial matters to which the Group is exposed are the following:

**Environmental matters:** potential risks related to the electricity consumption of the Group's primary transformation plants, potential risks related to direct and indirect greenhouse gas emissions, potential risks related to outbound logistics, with particular reference to road transport.

**Social matters:** potential risks related to compliance with existing regulations regarding information to customers and patients, risks related to the supply of products and services that address customers' needs, potential risks related to the traceability of the origin of products and services, potential risks regarding the suppliers of services in the home care sector and in general the management of social and environmental risks along the supply chain, potential risks related to the market and the respect for human rights, with particular reference to the supply chain.

**Employees's related matters:** potential risks related to employees' health and safety and to compliance with legislation concerning occupational health and safety.

**Compliance with laws and regulations matters:** potential risks of non-compliance with laws and regulations, including the issue of bribery and corruption.

To face the potential risks identified, the company carried out an assessment of the protections for each activity, of any shortcomings to be remedied and changes for improvement. For the identification of risks related to material issues and the risk responses reference is made to the table in the chapter "Materiality analysis".

The Company Managers are coordinated by Central Quality, Safety and Regulatory Affairs Management and are the governing bodies that oversee the main **environmental, health and safety risks**.

Furthermore the Company Managers, supported by any local or corporate designated functions, also oversee the **risks related to employees' management and the issues covered by the Code of Ethics**. The Code of Ethics, which includes issues such as protecting the safety, health and environment, respect for human rights and preventing and combating corruption, applies to all those who come into contact with the Group, including suppliers, partners and customers.

The Group has activated **processes and management systems in order to mitigate the most relevant risks**, in order to guarantee the correct control of the matters. In particular, the Group's units have obtained certifications such as ISO 9001, OHSAS 18001/ISO 45001, ISO 14001, ISO 50001, ISO 13485, ISO 27001 and ISO 22000. Thanks to the new requirements introduced by the standards ISO 9001 and ISO 14001, a new risk analysis process was implemented in relation to business activities and assessing opportunities. The analysis included reference to the sustainability issues that are relevant to the SOL Group, in particular the risks potentially present in product production phases and service delivery, as well as in business relationships. The assessment was extended, where relevant, to the supply chain.

The Group has also adopted specific Policies signed by the Chairman and by the General Managers containing the principles that underlie the activities of the Group's companies, in particular:

- **Quality management** policy of SOL Group companies;
- **Food safety** policy of SOL Group companies;
- **Energy management** policy of SOL Group companies
- **Information security and business continuity management** policy of SOL Group companies;
- **Safety and Environment** principles of SOL Group companies;
- **Principles and values** on which personnel policies are based in SOL Group companies and the **Social Media Policy** for the responsible use of social media.

## CERTIFICATIONS

The SOL Group launched the certification process for its Units in 1994. The main Italian locations were first certified according to ISO 9001, and other standards have gradually been implemented in relation to Group activities. The scope was then extended to other locations and countries.

The following table shows the situation of the certifications obtained by the SOL Group as of December 31st, 2019, broken down by country and Company (see the glossary for a description of the scope of reference of the various standards).

Country	Company	ISO 9001 Quality	OHSAS 18001/ ISO 45001 Health and safety of employees	ISO 14001 Environment	EMAS Environment	ISO 50001 Energy	ISO 13485 Medical devices	ISO 27001 Data security	ISO 22000 Food safety
<b>TECHNICAL GASES SECTOR</b>									
Albania	GTS	1	1	1			1		1
Austria	SOL TG	1					1		
Belgium	SOL Spa Feluy	1		1					1
	BTG	1							
Bosnia-Erzegovina	TGP	1		1					1
	TGT	1							
Bulgaria	SOL Bulgaria	2	2						3
Croatia	UTP	2							
	SOL Croatia	2							
France	Behringer France	2					2		
	SOL France	3							
Germany	SOL Deutschland	3							2
	SOL Spa Francoforte	1				1			1
	SOL Kohlensäure	1				3			1
	CT Biocarbonic <sup>1</sup>	1			2				1
Greece	SOL Hellas	2		1			1		2
India	Sicgilsol <sup>1</sup>	3							
Ireland	Irish Oxygen	1							
Italy	SOL Spa	21	28	3			2	1	
	SGP	7	9	3	2			1	2
	ICOA	1		1			1		
	SG Lab	1					1		
	CTS	1							
	Behringer	2					2		
	Medes	1					1		
	Tesi	1							
	Sterimed	2	1	1			2		
	REVI	1	1	1			1		

<sup>1</sup> Jointly controlled company, consolidated by adopting the equity method.

North Macedonia	TGS	3							3
	SOL SEE	2							1
Morocco	Flosit	1							
The Netherlands	SOL Nederland	2	3						2
Romania	GTH	1	1						1
Serbia	SOL Srbija	1							1
Slovenia	SPG	1	1	1	1	1			1
	TPJ	1	1	1		1			1
Turkey	Gebze Gaz	1							
	SOL TK	1							1
Hungary	SOL Hungary	1							

**HOME CARE SECTOR**

Austria	Vivisol Heimbehandlungsgeräte	2							
Germany	Vivisol Deutschland	4							
	Pielmeier	1							
Greece	Vivisol Hellas	2							
Italy	Vivisol	19	20	1			2	1	
	Vivisol Calabria	1							
	Vivisol Napoli	1							
	Vivisol Silarus	1							
The Netherlands	Vivisol Nederland	1						1	
Poland	Pallmed	1						1	
United Kingdom	Dolby Medical Home Respiratory Care	3	4	4				2	
Spain	Vivisol Iberica	4	3	4			1		
Switzerland	Sitex	1							

**BIOTECHNOLOGIES SECTOR**

Italy	Biotechsol	1						1	
	Cryolab	1							
	Diatheva	1							
	Personal Genomics	1							

**TOTAL**

127    75    24    3    8    18    8    26

In addition to the certifications listed in the table, the Pure Gas Plant in Monza (SGPM) and GTS in Albania have been accredited as test laboratories in accordance with **ISO 17025**.

The reconditioning plant in Verona has instead been certified according to **ISO 14065**, focused on bio-contamination control systems.

In 2019, the Group's Information Systems Department (DISI) obtained certification according to the standard **ISO 22301**, a standard relating to the management of business continuity and which, in particular, provides for the implementation of appropriate actions to address interruptions that may occur as a result of adverse events or scheduled interruptions.

## SEVESO DIRECTIVE

Because of the kind of gases they produce and the quantities they stock, 22 Group plants fall into the field of application of Directive 2012/18/EU (Seveso Directive). Directive 2012/18/EC makes it obligatory to adopt a specific safety management system and, therefore, to be periodically subjected to controls by the Authorities. Four checks were conducted in 2019, all of which had successful outcomes.

## INDUSTRIAL EMISSIONS DIRECTIVE

Some Units of SOL Spa and SGP Srl fall under the field of application of European Directive no. 75 of 24/11/2010, "Industrial Emission Directive" (IED), which governs the granting, renewal and review of Integrated Environmental Authorisations. The company has authorisations for its hydrogen (Ravenna), nitrous oxide (Cremona, Marcianise and Tilburg) and acetylene (Ancona) production plants.





# CUSTOMERS, PATIENTS AND SUPPLIERS

---

OVER  
**500,000** PATIENTS  
SERVED

---

OVER  
**50,000** INDUSTRIAL  
CUSTOMERS

## THE SOL GROUP FOR INDUSTRY



### FOCUS ON THE CUSTOMER

The development plan of the SOL Group focuses on continual research into **innovative technological solutions** which, through the use of technical gases, enable its customers to pursue goals in the area of **energy and production efficiency**, the improvement of **environmental compatibility** and the **protection of the health** of their employees.

To achieve these objectives, the solutions offered to customers include, in addition to the supply of technical gases, the most advanced **gas application** technologies, the construction of specific plants to be combined with customer processes and the provision of the necessary maintenance and

technical assistance services. Gas application technologies and related services are developed and constantly updated by the Group's marketing services in response to customer needs and specialised for multiple sectors of the environment and industry such as, for example, the food, metallurgical, chemical, pharmaceutical and petroleum industries.

The gases produced and distributed by SOL are: oxygen, nitrogen, argon, hydrogen, carbon dioxide, sulphur dioxide, acetylene, nitrous oxide, gas mixtures, high purity gases, food gases, gaseous helium, liquid helium, gases for electronics, ammonia, combustible gases for industrial use and liquefied natural gas (LNG).

## LIQUEFIED NATURAL GAS: SOL'S TECHNOLOGY AND KNOW-HOW FOR CLEAN AND SUSTAINABLE ENERGY

Thanks to its extensive experience and expertise in the production, transport, storage and use of cryogenic gases, SOL has added **Liquefied Natural Gas** (LNG) to its list of products, **a clean and highly sustainable energy solution**.

Liquefied Natural Gas is a cryogenic fluid obtained by purification and liquefaction of the natural gas at about -160 °C. This makes it possible to transport large quantities of product through specific cryogenic tanks, also at great distances from sources or in areas not reached by methane pipelines.

Gas combustion significantly reduces emissions of carbon dioxide and other pollutants such as SO<sub>x</sub>, NO<sub>x</sub> and fine dust compared to conventional fuels, proving to be the best

solution currently available to limit the environmental impact of heavy road transport and maritime transport, as well as of the industrial sector.

The SOL Group has been active in the LNG sector from the moment its use began in the transport sector. The Group is able to develop and propose technologies, plants and services that allow its efficient use, designing and creating plants for the production of thermal energy and energy efficiency through cogeneration and refuelling stations for heavy (LNG truck) and light (gaseous methane car) traction.





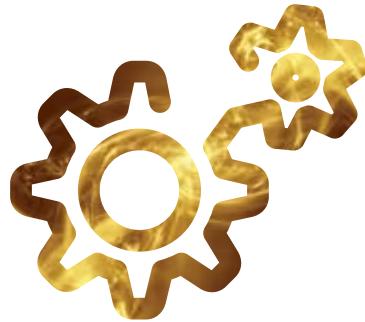
## FOOD & BEVERAGE

### Industries served

- Agriculture
- Fish
- Red and white meat
- Fruit and vegetables
- Milk and derivatives
- Ready meals
- Bread and pastries
- Ice cream
- Beverages
- Wine and oil
- Catering

### Technologies and solutions for:

- Carbonic fertilisation with CO<sub>2</sub>; increase in production and in quality and look of the product
- Fumigation and pest control with CO<sub>2</sub> of biological agricultural products for which no chemical products, such as phosphine, can be used
- Fish and mussel farming with O<sub>2</sub>; increase in production and quality of the finished product.
- Cooling, flash freezing, cryogenic freezing, IQF with Lin o LCO<sub>2</sub>; improved quality of frozen product, taste characteristics maintained, better aesthetic aspect, reduced freezing times and space saving.
- Packaging in atmosphere modified with N<sub>2</sub> and CO<sub>2</sub>; shelf life optimisation, improved aesthetic aspect, freshness maintained
- Transport at temperature controlled with Lin or dry ice: safeguarding of freezing chain to preserve quality of food and avoid spread of bacteria
- Gassing, pressing with nitrogen, water dosage: plastic bottle weight reduction.



## METAL PRODUCTION

### Industries served

- Carbon and stainless steel
- Aluminium
- Ferrous products and cast-iron
- Nonferrous products: zinc, lead, copper, magnesium
- Semifinished products and forges
- Mineral extraction
- Precious metal processing
- Glass and ceramics
- Cement and lime

### Technologies and solutions for:

- Oxy combustion and hyper oxygenation with oxygen: reduction of exhaust gas volumes and methane used for combustion, helping safeguard the environment and at the same time increasing productivity
- Wall and fall burners, with conforming flame, low NOX: plant designed to optimise emission reduction and limited environmental impact, adaptable to the various types of furnace present.
- Inertisation and degassing with argon, nitrogen and SF6: maintenance and improvement of quality of metals produced, reduced waste. Substitutes such toxic chemical compounds as chlorine
- After burners with oxygen: complete treatment of emissions, limiting quantity and environmental impact



## METAL FABRICATION

### Industries served

- Thermal treatments
- Carbon and stainless steel processing
- Aluminium and nonferrous metal processing
- Automotive industry
- Aeronautical and railway construction
- Shipyards
- Construction sites
- Boilers
- Tools

### Technologies and solutions for:

- Controlled protective and reactive atmospheres with nitrogen and hydrogen
- Endothermic and exothermic atmospheres with solmix controlled carbon potential
- Keying with Lin: products made not using heat but cold, limiting fuel consumption.
- Lin soldering of electronic cards: reduced waste and manual elimination of defective cards, increasing production quality
- Cutting and laser welding with nitrogen and oxygen: increased productivity and product quality
- Oxy cutting and oxyacetylene welding, Mig/Mag, Tig and plasma welding and welders.
- Gas distribution automation and plant: reduced manual operations help reduce risk of accidents
- Pressure & fugitive tests with helium and nitrogen: guarantees tightness of components treated, reducing risks of leakage of products, also toxic products, from plant where they are used (e.g. offshore oil wellhead valves).



## CHEMISTRY & PHARMA

### Industries served

- Basic and inorganic chemistry
- Synthetic intermediates
- Polymers
- Fine chemistry
- Bulk pharmaceuticals
- Pharmaceutical specialities
- Cosmetics
- Herbalism
- Plastics and rubber

### Technologies and solutions for:

- Inert and protective atmospheres with nitrogen: reduction of risk of accident from contact of products with oxygen, at the same time preserving their quality.
- Fluxing, pressurisation and stripping with nitrogen: plant cleaning with reduced use of polluting chemical additives.
- Grinding and micronisation with Lin and gaseous nitrogen: increased quality of ground product.
- Packaging in inert and sterile atmosphere of pharmaceutical products: preserving and guaranteeing product quality.
- VOC treatment and solvent recovery with Lin: reduced environmental emissions and at the same time recovery of the chemical products they contain
- Cryogenic cleaning with CO<sub>2</sub>: replaces cleaning methods using water, solvents or sandblasting, thus limiting the environmental impact of residues.

## OIL & GAS

### Industries served

- Extraction
- Transport and pipelines
- Refining
- Raw materials and finished products stocking
- Off-shore
- Components and equipment

### Technologies and solutions for:

- EOR processes with nitrogen and CO<sub>2</sub>: increased extraction productivity avoiding the need for new wells
- Fluxing, pressurisation and stripping: plant cleaning with reduced use of polluting chemical additives.
- Controlled cooling with Lin: reduced plant maintenance times, faster cooling and less risk for operators.
- Inertisation and drying with nitrogen: plant maintained in controlled stand-by, limiting accident risks and permitting fast restart
- Cryogenic cooling with Lin: permits work on filled pipes without need for emptying.
- Claus processes with oxygen: improved and optimised recovery of sulphur from refinery flows and lower emissions.
- Control and regulation of technical and special gases, management and maintenance of emission control units: emission control units are kept efficient, reducing the risks of accidental emissions.
- LNG Services: gas stations, cryogenic equipment and LNG-powered trucks.

## ENERGY & ENVIRONMENT

### Industries served

- Multiutility
- Wastewater purification
- Purification
- Waste Management
- Special waste management
- Incineration
- Chemical, pharmaceutical, fabric and leather, food, paper, petrochemical and extraction industries.

### Technologies and solutions for:

- Waste water treatment with O<sub>2</sub>: makes purification more effective and increases purification capacity, reducing environmental impact and giving better control.
- Waste water treatment with ozone: reduction of colour, micro contaminants, nitrates: optimization of treatments, with reduced environmental impact
- AOP processes with ozone: on-site environmental clean-up, less removal of terrain and combustion treatments having higher environmental impact.
- Deodorising waste water with oxygen: reduced environmental impact.
- Disinfection with ozone: watercourses receiving treated wastewater are protected from bacterial pollution without the use of chlorine compounds.
- Reduction of surplus sludge with oxygen: less sludge to send for disposal, reduced environmental impact.
- pH control with CO<sub>2</sub>: this substitutes mineral acids (sulphuric and hydrochloric) which leave pollutants in the water.
- Recarbonation and remineralisation of drinking water with CO<sub>2</sub>: makes water drinkable meeting legal requirements using a certified food additive.
- Oxy-combustion of waste with O<sub>2</sub>: reduction of aeroform emissions and increased control of incinerator plant with widely varying waste loads (tourist areas).
- Afterburners with O<sub>2</sub>: complete treatment of emissions, limiting quantity and environmental impact.
- VOC treatment and solvent recovery: reduced environmental emissions and recovery of the chemical products they contain.

# THE SOL GROUP FOR HEALTHCARE



## SOL FOR THE HOSPITAL SECTOR

The new healthcare and therapeutic protocols require scientifically and technologically updated products, services and devices, which allow obtaining the best performance and the best possible therapeutic result.

The SOL Group therefore acts as a partner for the **supply of products, services and equipment**, allowing the healthcare system to focus on its core business of delivering the "health" product to a very particular customer - the patient.

## Design and development of medical devices

**The SOL Group designs, manufactures and manages Medical Devices** such as centralised plants for the production and distribution of medical gases, endocavitary aspiration and the evacuation of anaesthetic gases; devices for the administration of drugs, devices for the emergency management of gases; accessories and consumable materials for the administration of drugs and the use of gases.

In this context, SOL has accredited its own **mobile laboratory for verifying the quality of the medical gases administered** at the terminal distribution units.



## Total Gas Management services

The Total Gas Management (TGM) service offers healthcare structures the possibility of **optimising the supply, management and maintenance of medical gas packs and tanks, as well as medical devices and related systems**. The service is designed on a case by case basis in order to satisfy the requirements of different organisational models.

The SOL Group uses the web platform **InfoHealth® SOLution** to manage the traceability of medical gas packages and mobile medical devices, supplies and stock, the ordinary and extraordinary maintenance of medical devices (including electromedical equipment) and plant technology. Validated according to Good Manufacturing Practices, the platform **guarantees traceability**, contributing to patient safety.

## Preparation and distribution of antineoplastic drugs

The focus on **healthcare worker safety** is a priority also in the design and construction of laboratories for handling antineoplastic drugs, where personal exposure to hazardous chemicals must be kept under strict critical thresholds. The adoption of the latest technologies ensures accuracy in the dosages of therapies and eliminates the risk of potential handling errors, thus ensuring maximum **safety for the patient**.

## Electromedical equipment management services

SOL acts as a partner for the **routine management and operation management of electromedical equipment**, from the simplest devices to diagnostics for life-saving therapies.

## Sanitising services

SOL offers **specialised hygiene programs** that meet the needs of public and private users: from the design, development and operation of surgical iron sterilisation plants and water and air treatment and sanitation systems, to the provision of customised integrated services for the sanitisation of industrial and civil environments.

## OUR JOURNEY IN CRYOBIOLOGY

Start of the cryobiological containers distribution in Italy.

**1990**

Management in outsourcing of cryobiological rooms at hospitals.

**2004**

Design and building of the first whole cryobiological room.

**2016**

**1996**

Realization and management of cryobiological rooms at foreign hospitals.

**2014**

Acquisition of Cryolab quotes, specialized company in Cryobiology.

**2019**

Realization of the 120<sup>th</sup> cryobiological room.

### Ambulance management services

Patient care begins from the moment they are transferred to hospital. For this reason, SOL is able to provide ambulance managers with medical and electromedical devices **for their vehicles, maintenance and safety verification** services, **vehicle sanitisation** services and structured and voluntary staff training.

### Monitoring services

SOL offers a complete range of services for **environmental, particle, microbiological, microclimatic and specific substance monitoring** (e.g. anaesthetic gases in operating environments), custom-designed for each type of room in the hospital facility according to the actual risk of exposure established by current regulations.

### Design and development of biobanks

The service of **designing and creating cryo-biological rooms** is aimed at public and private structures that carry out scientific research, assisted reproduction and manipulation for cell, tissue and organ transplants and need to preserve their biological samples for long periods of time in liquid nitrogen. Turnkey solutions are offered, including the design, construction of premises, provision of all devices and maintenance and training services.

### Disaster Recovery

The Disaster Recovery service guarantees public and private structures the **transfer and conservation** of precious **biological samples** to cryobiological rooms owned by the SOL Group in emergency situations. In particular, Cryolab, the joint venture with Tor Vergata University of Rome, is authorised by the Italian Ministry of Health and the Italian National Transplant Centre for the long-term and disaster recovery conservation of human gametes and blood.

### Bioshipping

The Bioshipping service makes it possible to **transport biological samples between health structures in completely safe and traceable conditions**, with continuous temperature monitoring.

This service is becoming increasingly popular and important and is also used for delicate and often unique samples such as gametes. Cryolab, in particular, is able to satisfy the **reliability** and very high specialisation requirements established by applicable regulations for Medically Assisted Procreation structures.

### Training services

**Training in the safe use of medical gases, their containers and accessories** is fundamental for the correct administration and handling of products.

Training is provided through **ECM courses**, which can be accredited upon the request of the customer. These can be held both residentially and remotely in order to satisfy the needs of structures and individual students.

## INFOHEALTH®: CLINICAL ENGINEERING JUST A CLICK AWAY

Aware of the importance of maintaining biomedical technologies within a healthcare facility, SOL has proposed a range of modular and flexible solutions with the aim of **managing**, in an integrated manner, the entire **biomedical technology park** at all stages of the life cycle of each piece of equipment.

InfoHealth® software was created with the precise aim of making the technical and economic administration of medical devices more efficient. The ability to remotely control instrumentation and technical equipment through registries, to manage intervention requests and the scheduling of maintenance and certification interventions

allows keeping **the status of the instruments** under control, also optimising the costs of devices maintenance.

InfoHealth® is a **simple and intuitive platform** that can be used by different users thanks to personalised registration and access systems. The system interface changes according to the user's role and needs, presenting specially enabled functions.

The platform is completely **web-based**, is accessible through the main browsers and designed to be easily accessible via smartphones or tablets.

Every single access is recorded as well as every action carried out by individual users, ensuring the **traceability** and history of all data.

In 2019 a **Disaster Recovery** solution was developed that, in addition to normal **system backup** operations, ensures the full availability of data and continuity of service in the event of unforeseen events or interruptions in the primary Data Center.

The continuous development and updating of the Infohealth® platform is possible thanks to the skills of SOL, **Tesi** and **Revi**, the Group companies operating in the specific field of **clinical engineering**.





## VIVISOL FOR HOME CARE ASSISTANCE

Vivisol has established itself in Italy, throughout Europe and Brazil as one of the leading **Home care Providers** of technological and health services for complex therapies and often life support for chronic patients.

In a demographic and epidemiological context characterised by progressive population ageing and the increased incidence of major chronic diseases, the role of Home care Providers becomes increasingly relevant for the **better management of chronic patients** who often suffer from multiple conditions as well as fragility. In fact, adequate models of home care provided by specialised providers have a positive impact both on the health and well-being of patients and on the sustainability of different national healthcare systems.

Vivisol has a **widespread presence in all the countries in which it operates** thanks to a territorial network of Health Service Centres and Operational Centres active 365 days a year, 24 hours a day, from which home activities are coordinated and managed for over 500,000 patients worldwide.

## Respiratory therapies

Vivisol provides **oxygen therapy** services for patients with respiratory failure, both at their home and in different places, thanks to the **ViviTravel** service, designed to follow patients travelling throughout Europe.

Through partnerships with well-established global manufacturers, over the years Vivisol has used the best technologies to guarantee the patient complete management of respiratory therapy with invasive and non-invasive **home mechanical ventilation**. Supporting ventilatory therapy, Vivisol assists the most complex patients who are often suffering from neuromuscular diseases, also with complementary technologies and assistance including bronchoaspiration, cough assistant, humidifier. Vivisol also carries out an **aerosol therapy service**, often used in the treatment of various diseases thanks to its effects.

Vivisol is one of the leading companies in the market for the diagnosis and **treatment of respiratory sleep disorders**. Innovative diagnostic solutions and personalised therapeutic care are supported by remote monitoring of patient status to improve adherence to therapy.

## Infusion therapies

To support patients requiring intravenous or subcutaneous home drug therapy, together with industry experts Vivisol has designed a series of dedicated services: services for **artificial nutrition**, for **insulin therapy**, for **immunotherapy**, for the **treatment of pain** and for **Parkinson's disease**.

Each service involves a careful **selection of the medical device** by a highly specialised multidisciplinary team, **training** the patient and their caregiver, on the use of the device, the coordination of activities for the management of the patient upon return from the hospital and the dietary and nursing care dedicated to them, with the aim of ensuring therapeutic continuity at home, in complete serenity.



**Mon accompagnant santé à domicile**

**InfuSol** was created in 2019, the new brand of the SOL Group's Homecare division dedicated to infusion therapies, now active in France.

## Advanced Homecare

Vivisol provides **home healthcare and social care services** for patients with temporary or chronic clinical needs through medical, nursing and rehabilitation teams. The various health activities are managed by 24-hour Operations Centres and on IT platforms that allow fluid communication between Vivisol operators and the patient's clinical contact, thus ensuring the reliability and efficiency of a system built on the patient's needs. Vivisol has specific know-how in the **management of highly complex patients**, who are guaranteed the personalised care of their needs that integrates health services with the management of life support technology. Vivisol has a structured network of **Palliative Care** aimed at patients with oncological and degenerative diseases for which there are either no therapies or they are ineffective for a significant prolongation of life. These benefits can be provided at the patient's home or in Hospice (as in Germany and Poland). Vivisol also has specialised facilities such as clinics dedicated to psychogeriatrics to assist the neuro-psychological decay of elderly patients, and protected apartments for people with complex disabilities which are designed according to the clinical-care needs of the patient.



One of Vivisol's strengths is the **continuous training** of its healthcare professionals and technical professionals, who are constantly specialised through specific training courses for the different home activities to offer increasingly high-quality service.

### Telemedicine services

Vivisol has well-established experience in **Telemedicine** services that allow the clinical contact person to remotely monitor various parameters of the patient's clinical situation. Vivisol has developed an innovative home device, the **Resmon Pro Diary**, which allows anticipating the onset of exacerbations and complications of the Chronic Obstructive Pulmonary Disease (COPD) and promptly intervening with appropriate drug treatments, thus reducing hospitalisations and related health costs. The device analyses the data thanks to a patented algorithm and sends it to the Vivisol telemedicine platform equipped with an alert system that signals the possible risk of exacerbation in progress.

### Healthcare aids

Vivisol has extensive experience and great skills in the **management and supply of healthcare aids**, with which it offers a service including delivery to the patient's home, technical assistance, maintenance, sanitation, disinfection and online software for the computerisation of data.

Thanks to the information technologies applied to overcome disabilities, Vivisol provides an **alternative augmentative communication** service that allows patients without motor skills to have autonomous communication, including through an **eye pointer**.

## HOME DIALYSIS: A SUSTAINABLE SOLUTION

**Chronic kidney disease** (CRD) is one of the world's main health problems, affecting about **10% of its population**. When the proposed therapies are no longer effective and the disease evolves to a terminal stage, the proposed alternatives are dialysis and kidney transplantation. As for dialysis, about **90% of patients** are treated in **hospital facilities**, resulting in high costs for the national healthcare system and a strong social impact for patients.

On the other hand, there are several advantages that derive from home therapy: **minimisation of hospital admissions**, creating significant savings for the national health system, **customisation of care**, guaranteed by services which can be adapted to the needs of the patient and have a positive impact on the **patient's quality of life**, no longer forced to go to hospital.

To date, home dialysis services are divided into **haemodialysis treatment** and **peritoneal dialysis** treatment. While the first solution involves the extraction of the patient's blood for extracorporeal purification, the second involves the introduction into the peritoneal cavity of an exchange fluid and exploits the patient's peritoneum as a natural membrane (thin membrane that envelops the abdominal viscera), thus proving to be a less invasive treatment.

Since 2019 Vivisol has offered **haemodialysis therapies at patients' homes**, providing a service ranging from the provision of devices suitable for the house, to **patient assistance** by competent technical health personnel. Technological solutions for **remote patient monitoring** and periodic visits by healthcare professionals ensure the effectiveness and safety of the therapeutic

model proposed. In addition, an efficient logistics structure with widespread deployment in the territory coordinates home interventions, making the service highly flexible and operational.

For **peritoneal dialysis therapies**, Vivisol aims to provide the same complete and efficient model of care, with the aim of encouraging treatments at home and improving the quality of life of patients and their families. It is in this spirit that the SOL Group has decided to invest in companies dedicated to the research and development of innovative drugs, able to provide solutions to the major causes of chronic end-stage renal failure.



## THE SOL GROUP FOR BIOTECHNOLOGIES



—

### Genomic diagnostics

**Personal Genomics**, the genetics laboratory accredited by the Veneto Region and certified by SIGUCERT, provides pre- and post-natal diagnostic screening services which are important for ensuring the correct development of newborn babies, as they allow the early diagnosis of numerous diseases which, if diagnosed in time, can be treated. These activities are joined by genetic and bioinformatic analyses which make Next Generation Sequencing technologies and advanced bioinformatic tools available to preventive and precision medicine.

**Diatheva** develops innovative diagnostic systems which allow identification and quantification using DNA amplification techniques of pathogens in any matrix and for any requirements. Compared with traditional techniques such as cultures, the new Diatheva systems can reduce the time required to obtain results to just a few hours and are aimed principally at the food and environmental control sectors where fast analytical results are critical for making decisions that affect the safety of people and the environment.

### Biotechnology and biomedical research and applications

Diatheva is focused on the research, development, production and marketing of new and innovative products (such as monoclonal antibodies, recombinant proteins, molecular kits) for research, diagnosis and clinical application in the hospital, environmental, veterinary and food sectors, with a particular focus on the field of oncology, microbial and viral infections and pharmacogenetics.

Diatheva aims to translate basic research results into industrial applications in the biomedical and industrial fields by cooperating with public and private companies and research institutions.



## A NEW GENETIC TEST FOR AUTISM SPECTRUM DISORDERS

Autism spectrum disorders (ASDs) include a series of **early onset neuro-developmental** disorders characterised by impaired social skills, such as learning to play with others, communication problems and repetitive behaviours. ASD is a common condition (1 in 150), is usually diagnosed between two and four years of age and seems to affect more males than females (4:1). Scientific studies show a **general increase** in the diagnoses of autism and related syndromes, which have more than doubled in the last decade.

The cause of the onset of ASD is not yet known, although current estimates attribute equal weight to **genetic and environmental factors**. Genetic factors may involve both new mutations, i.e. mutations that have arisen in the affected subject but are absent in the parents, and inherited mutations. Genetic investigations in families with at least two members with this condition have identified a number of genes most frequently associated with autism. Compared to the tests used to date and limited to the study of abnormalities of chromosome regions in patients with ASD or intellectual disabilities (e.g. aCGH), the **sequencing of the entire genome** (WGS) has a considerably higher diagnostic potential because it is able to simultaneously search for DNA alterations in all genes and relevant regions.

**Personal Genomics**, a SOL Group company since 2017, certified UNI EN ISO 9001 and SIGUCERT (certification issued by the Italian Society of Human Genetics), operates as a **Medical Genetics Laboratory** and aims to provide genetic tests and services in the world of research and clinical diagnosis. The company has obtained institutional accredi-



ditation from the Veneto Region, which will allow the disbursement of its services on behalf of the National Healthcare Service.

Personal Genomics recently developed a **genetic test for autism spectrum disorders** which is performed with a simple blood draw. The test is based on sequencing the entire genome using Next Generation Sequencing (NGS) technology and bioinformatics analysis targeting genes and chromosomal regions currently associated with autism spectrum disorders. The test allows detecting both small sequence variations (single nucleotide polymorphisms, small insertions and deletions) and some large chromosomal rearrangements (deletions or duplications) based on the data in the reference databases. In addition, post-test

analyses can be performed by looking in the parent genome for the presence or absence of the same mutations detected in the affected individual, to determine whether they have been inherited or whether they are new.

ASD diagnostics is increasingly referring to genetics for the **enormous potential** it offers. The result of the test, in addition to helping to understand the causes of the disorder, will greatly strengthen the molecular knowledge of specific phenotypes of ASD and also allow building a targeted and familiar rehabilitation intervention.

## ENERGY PRODUCTION FROM RENEWABLE SOURCES SECTOR



**HYDROSOL**

The production of technical gases is highly dependent on electricity, which is mostly produced from fossil fuels like gas, coal and oil that have a considerable negative impact on the environment.

One of the objectives the SOL Group has pursued since 2002 is the production of electricity from renewable sources in order to mitigate the indirect environmental impact of its activities.

To date, the Group has 16 Group plants with a total installed capacity of 31 MW, located in Slovenia, Albania, Bosnia and Herzegovina and North Macedonia.

It can be estimated that **29,577 tonnes of CO<sub>2</sub> equivalent emissions in the atmosphere were avoided** in 2019 thanks to the generation of electricity in the Group's power plants (35,091 tonnes of CO<sub>2</sub> equivalent in 2018).



## CUSTOMER AND PATIENT SATISFACTION

Customer and patient satisfaction is a **priority** for SOL and must be monitored constantly, checking the quality of service offered and identifying the areas for intervention with a view to continuous improvement.

Their satisfaction is constantly kept under control thanks to **key performance indicator (KPIs) monitoring** (customer and patient complaints, response times to customer orders and patient requests, etc.) in order to promptly activate the necessary corrective actions.

In addition, in 2019 some Group companies carried out **ad hoc surveys** which demonstrated very positive results. In the industrial and medical sector, 355 customers were involved in Albania, Bosnia Herzegovina, Bulgaria, Croatia, France, Greece, Ireland, Morocco, Slovenia and Turkey. In the homecare sector, 1,401 patients were involved in Brazil, Ireland, the Netherlands, Poland and Spain and feedback was collected from 1,780 patients in the UK alone.

## VIVISOL, LEADER IN TECHNOLOGICAL INNOVATION FOR ITS PATIENTS

Last November at the **Aboutpharma Digital Awards**, Vivisol won an important award dedicated to projects that enhance the implementation of the digital sphere in healthcare.

The award was given for the **Resmon project**, which reflects the perfect synergy of technology with **high scientific content** and **innovation** with the home care provider, the primary actor in the context of chronic disease management.

**Resmon Pro Diary** allows the early identification of exacerbations in patients with Chronic Obstructive Pulmonary Disease and the subsequent optimal management of chronic disease. With **remote home monitoring of patients with COPD**, the Resmon Pro Diary device can predict any worsening of the disease, even before symptoms occur. This leads to the preventive treatment of patients, and exacerbations and thus the irreversible deterioration of their state of health are avoided.

Of the 261 projects presented in the 10 categories envisaged, for 370 total applications, Vivisol's project was awarded **Best Project in the HTA, Patient and Market Access category** in front of an audience of representatives from the most important Italian and international companies.

The selection was made by a jury of experts from the world of industry, institutions, associations and universities (Confindustria, Google, La Sapienza University, the Italian Federation of Mutual Doctors, Federfarma, the Italian Association of Clinical Engineers, Cittadinanzattiva, the Italian Drug Agency).

The award took into account the impact that the Resmon project has on the **quality of life of patients**, also considering the coefficient of real innovation, effective implementation and usability.



## SUPPLIERS

SOL is aware that the supplier's role is central in all development phases of a project, an idea and the image of the company itself. The suppliers the company maintains contact with are asked to assume the SOL value system.

Suppliers are required to read and adhere to the Group Code of Ethics and, in Italy, also the Organisation, Management and Control Model pursuant to Italian Legislative Decree no. 231/01, as well as the Group's safety and environment policies.

The companies that are part of the SOL Group are essentially '**local' businesses**'. Production facilities are built close to customers and distribution is usually carried out within the home country of the vendor company.

The main products and services purchased by the Group companies are electricity and transport, maintenance and technical assistance services. A wider choice exists for supply sources in respect of capital goods: sales means (cylinders, tanks, tankers, etc.), plants and equipment.

In 2018 the Group issued a **new directive** valid for all Group companies in relation to the **supplier evaluation** process in a **risk analysis** logic. When selecting its partners for the supply of goods and services that are critical for safety, quality and the environment, SOL uses a qualifying process to establish whether a potential partner meets the requirements demanded by company procedures. Possession of these requisites is verified by objective methods such as the filling out of questionnaires and, where necessary, the carrying out of audits at supplier premises. Several training sessions on the contents of the directive were held in 2019 for the Quality Managers of all Group companies. A questionnaire was then submitted to verify the effective transposition of the new supplier qualification process: to date it has been implemented by 60% of the companies that responded to the questionnaire (58% redemption), and the remaining companies have committed to do so by the end of 2020.

During 2019, 105 supplier audits were performed (100 in 2018), which mainly concerned aspects connected to quality, environment and health and safety.





# THE ENVIRONMENT

---



**29,577** TON CO<sub>2</sub> EQUIVALENT AVOIDED THANKS  
TO THE PRODUCTION OF ENERGY  
FROM RENEWABLE SOURCES

**48,633** TON CO<sub>2</sub> EQUIVALENT AVOIDED THANKS  
TO THE CREATION OF ON-SITE PLANTS

# MAIN ENVIRONMENTAL ASPECTS

---

**Electricity consumption in production plants** and the **distribution of products** to customers, hospitals and patients are the most significant environmental aspects for the SOL Group.

The activities of the SOL Group have a fairly limited impact on biodiversity as the production units are relatively small and located in industrial areas.

Furthermore, the substances produced and handled by the SOL Group do not pose a contamination risk to the soil and subsoil. Some units have been constructed in locations that have soil and groundwater contamination problems, but these have other causes and pre-dated the arrival of SOL.

The table shows the raw materials used for the main types of production units and the environmental aspects connected to these activities.

The environmental data presented in this Report refer to the types of plants listed below, unless otherwise indicated.

TYPE OF UNIT	Nº	RAW MATERIALS	ENVIRONMENTAL ASPECTS
<b>AIR SEPARATION UNITS (ASU)</b>	15	The process of air separation for the production of oxygen, nitrogen and argon is a physical one that uses atmospheric air as its raw material.	The process has significant indirect environmental impacts due to the consumption of a great deal of electricity. On the other hand, it does not use raw materials other than atmospheric air and involves negligible emissions of CO <sub>2</sub> , sulphur oxides (SO <sub>x</sub> ) and nitrous oxides (NO <sub>x</sub> ), already present in the treated air.
<b>HYDROGEN PRODUCTION PLANTS</b>	2	These use natural gas and water (steam) as raw materials, which chemically react with each other to produce hydrogen.	Hydrogen production plants emit CO <sub>2</sub> as a sub product of the chemical reaction and negligible quantities of nitrous oxides (NO <sub>x</sub> ). Added to this is the consumption of methane for heating process currents.
<b>NITROUS OXIDE PRODUCTION PLANTS</b>	3	These use ammonium nitrate, either solid or in water solution, as a raw material in a thermal dissociation process.	N <sub>2</sub> O production plants can emit the gas produced (greenhouse gas) from their vents and consume electricity to bring the ammonium nitrate to reaction temperature. Chemicals (H <sub>2</sub> SO <sub>4</sub> , KMnO <sub>4</sub> , NaOH) are used for the purification of nitrous oxide.
<b>ACETYLENE PRODUCTION PLANTS</b>	4	These use calcium carbide as a raw material, a solid that decomposes in water.	One by-product of this process is calcium hydroxide which, where possible, is used in industry or agriculture. Otherwise the lime is disposed of as waste.
<b>PLANTS FOR PURIFYING AND LIQUEFYING CARBON DIOXIDE</b>	6	The raw material is carbon dioxide itself, obtained as a by-product from chemical plants or from natural underground deposits. The carbon dioxide is purified and liquefied with the use of energy.	CO <sub>2</sub> production plants can emit the gas produced (greenhouse gas) from their vents. On the other hand, the carbon dioxide obtained in this way is reused in industrial applications instead of being emitted directly into the atmosphere.

## ENERGY CONSUMPTION

The SOL Group uses **electricity, methane and steam** as energy vectors.

The Group's most significant environmental impact is the electricity consumption in its primary production plants. In fact, both the compression of gases and their liquefaction are highly energy-intensive operations: it is estimated that this consumption represents about 90% of the consumption of the whole Group. In contrast, the methane and steam consumption in primary production plants and the electricity consumption in secondary production plants and offices are considered negligible.

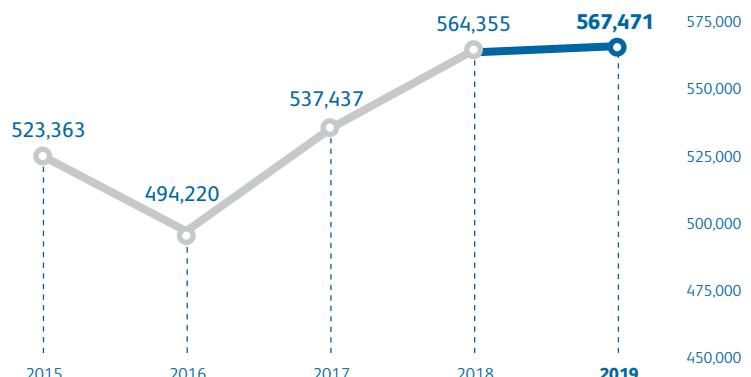
In light of its highly energy-intensive activities, since 2002 the Group has invested in the production of energy from renewable sources, acquiring 7 hydroelectric power plants and constructing another 9 in Albania, Bosnia Herzegovina, North Macedonia and Slovenia, for a total installed power of around 31 MW. The electricity produced and sold on the grid in 2019 was equal to 90 GWh, corresponding to 15% of the Group's energy consumption.

The actions to reduce energy consumption include care in the design and operation of production sites, process optimisation and renovation of plants, to which an important percentage of investment budget is set aside each year.

Consumption is however considerably influenced by customer demand and the start-up (or shutdown) of production plants.

In particular, the increase in consumption in 2019 is due to an increase in production compared to a slight improvement in the efficiency index because better performing plants were in operation.

### ELECTRICITY CONSUMPTION (MWh)



Currently the Group has not signed specific contracts for the supply of electric energy from renewable sources.

### ELECTRICITY CONSUMPTION PER M<sup>3</sup> OF GAS PRODUCED (Base 2015=100)



Indicator related to electricity consumption per gas produced is calculated on the basis of the electricity consumption of air separation units (ASU)

## GREENHOUSE GAS EMISSIONS

The SOL Group's emissions can be separated into:

- **direct emissions** from its production plants;
- **indirect emissions** deriving from the consumption of electricity by the primary production plants;
- **direct emissions connected with deliveries** to customers and patients.

Furthermore, the **emissions avoided** thanks to the installation of technical gases self-production plants, called "**on-site plants**", at customers' premises have been calculated. This solution, where the characteristics of the gas and the customer's needs allow it, represents an alternative to the traditional supply of cylinders or liquefied cryogenic gas which takes place via road transport. This implies a benefit from an environmental perspective, as on-site plants have lower specific energy consumption compared to centralised production plants, furthermore, emissions due to road transport are avoided. In 2019, the carbon dioxide emissions avoided totalled **48,633 tonnes** of CO<sub>2</sub> equivalent.

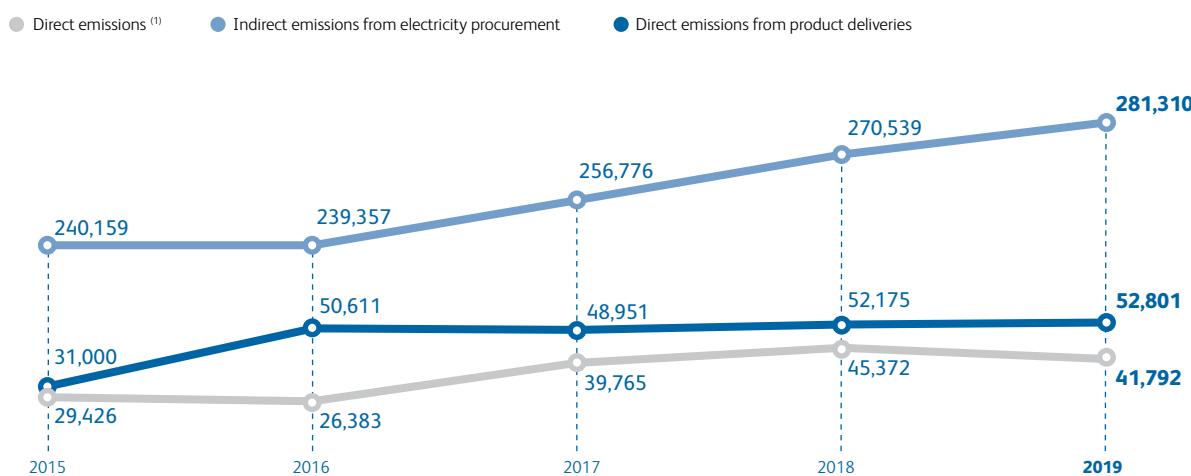
### Direct emissions

The direct emissions of greenhouse gases are due to:

- carbon dioxide: a by-product in plants producing hydrogen through the steam reforming of methane, emitted in plants producing CO<sub>2</sub> or vented during the dry ice production process;
- nitrous oxide: emitted from plants producing N<sub>2</sub>O from ammonium nitrate;
- HFC (hydrofluorocarbons): used in plant refrigeration circuits.

Direct emissions decreased mainly due to a lower restoration of Fgas in the plant process refrigeration circuits and lower emissions in the nitrous oxide bottling process.

### GREENHOUSE GAS EMISSIONS (tCO<sub>2</sub> equivalent)



<sup>(1)</sup> Emissions from the Italian units in Caserta and Cremona in Italy were estimated. The emissions from company cars are currently not available.

### Indirect emissions

Starting with an analysis of the energy supply mix, the indirect emissions generated by the production of the electricity acquired by the SOL Group for its production plants were calculated. These emissions came to around **281,310 tonnes of CO<sub>2</sub>** equivalent (calculated according to the "market-based" method), higher than 2018 mainly due to the increase in production.

### Direct emissions from deliveries to customers and patients

Starting from 2016, the monitoring of emissions as a result of delivery activities was extended to all product types:

- products in tankers and tube trailers;
- products in mobile containers;
- home care products.

Attention to transportation is of fundamental importance as regards environmental and safety aspects.

Products are distributed mainly by road and to an extremely widespread customer base.

The chemical and physical characteristics of the main products also make it necessary to use special vehicles for transportation (heavily insulated tankers for cryogenic liquids) or special containers (cylinders for compressed gases and base units for liquid oxygen for home care use). In both cases, the unfavourable ratio between the tare weight and the weight of the transported products results in a low level of fuel consumption efficiency per product unit sold.

Bearing these restrictions in mind, the SOL Group's actions to reduce fuel consumption and therefore its environmental impact have consisted of:

- developing production units spread as widely as possible across the country in order to reduce the journey lengths of vehicles;
- the periodical upgrading of the company fleet, particularly with the purchase of next-generation heavily insulated tankers, with a better ratio between the weight of the transported product and the total weight;
- the adoption of logistics management methods aimed at optimising routes.

Rainbow, the software for planning the distribution of liquid products adopted and fine-tuned in 2012 for companies operating in Italy, has gradually also been adopted by all of the other companies.

A total of 91.3 million kilometres were travelled.

Based on the type of vehicle for the three main types of products transported, total forecast emissions came to around 53,000 tonnes of CO<sub>2</sub> equivalent.

### KILOMETRES TRAVELED PER M<sup>3</sup> OF CRYOGENIC GASES TRANSPORTED IN TANKERS

(Base 2015=100)



## CO<sub>2</sub> RECOVERY: AN EXAMPLE OF CIRCULAR ECONOMY



Carbon dioxide is a gas with numerous applications in the industrial sector: from water treatment to metal processing to food processing, as well as for the cooling, freezing and transport of food. The sources of this gas are natural underground deposits or as a by-product of chemical and biological processes.

For several years now, the SOL Group has decided to invest in plants that **recover** this gas from production processes, which **would otherwise be released into the atmosphere**. Thanks to SOL, this gas is instead recovered, purified and marketed in liquid form.

Examples include the plants in Bulgaria (Ihtiman) and Germany (Zeitz) that recover CO<sub>2</sub> from bioethanol. These plants recovered **87,840 tonnes of CO<sub>2</sub>** in 2019, which would otherwise have been released into the atmosphere.

In 2019 a consortium was created in Italy, of which SOL holds 50%, for the recovery of CO<sub>2</sub> from biogas generated by the anaerobic digestion of the organic fraction of municipal solid waste (FORSU).



## BIOMETHER, THE SUSTAINABILITY OF THE BIOMETHANE CHAIN

In 2019 the **BioMether** project was completed, an initiative co-financed by the LIFE+ program (EU financial instrument) and the Emilia Romagna Region, created with the aim of launching the **biomethane supply chain in the Emilia Romagna region**. The Biomether project was developed by SOL in collaboration with ART-ER, CRPA Lab, IRETI, IREN, IREN Smart Solutions and Herambiente, which saw the creation of two pilot plants with innovative biogas purification (or upgrading) technology for the production of biomethane for its introduction into the natural gas network and/or for use for autotraction.



**Biomethane** is a gas consisting mainly of **methane produced by the anaerobic digestion of biomass**, obtained by an **upgrading** process that generates greenhouse gas emissions 75%-200% lower than fossil fuels, proving to be a **renewable source** in line with the EU 2020 targets.

Biomether's objective is to demonstrate the technical feasibility and **sustainability of the production** and use of biomethane thanks to monitoring that will continue until 2022.

The project provided for the construction of **two plants** in **Ravenna** and **Roncoceci**, which respectively produce biogas from non-hazardous waste landfill and sewage sludge. In particular the Ravenna plant, in addition to being the first in Italy to produce fuel for local public transport, is also the **first biomethane production plant from landfill biogas built in Italy**. The plant consists of two purification steps: the first, more "traditional" one in which the CO<sub>2</sub> present in the biogas is removed through the use of polymer membranes, as also takes place in the Roncoceci plant, while the second step is specific for production plants of biomethane from landfill biogas, called **polishing**, in which nitrogen, typically present in large quantities in landfill biogases, is removed.

The **biomethane obtained** from the first site will be used to power the buses of the **Ravenna public transport service**, while biomethane from the second site will supply the **IREN Group's methane vehicles** and two of the **three Polo TGIs** Volkswagen has provided for product testing. The objective is to demonstrate the sustainability of biomethane, given its **low emissions** and reduced negative impact on air quality.

Each year the plants are able to produce **14,656 Sm3 of biomethane, saving 28.76 tCO<sub>2</sub>** of carbon dioxide. The project is an important example of **circular economy**, where a commonly considered waste product is promoted to recyclable and sustainable resource. SOL won the **Responsible Care award** in 2017 with this project.

With the final conference **Biomethane in Emilia-Romagna** held on 27 September in Bologna, the regional guidelines were presented, drafted by Biomether for the development of the sector in the region.



## WASTE

The majority of the waste produced derives from activities carried out:

- **in our primary production plants**, related to maintenance activities: non-hazardous waste (mainly scrap iron, packaging and insulating materials) and hazardous waste (mainly used oil, used for the lubrication of machines, and ammonia solution from ammonia conditioning);
- **in the specialised maintenance centres of the Group**: testing of cylinders and cryogenic containers, repair of electric and electronic equipment.

The only waste material directly generated by the production processes adopted in the Group's units is calcium hydroxide (lime), a by-product of the acetylene production process which, when it cannot be sold, must be disposed of as hazardous or non-hazardous waste depending on its characteristics.

The increase in non-hazardous waste was mainly due to work on the construction of the new VSA in Slovenia, mainly excavated land, rocks and concrete. The reduction in hazardous waste is due to the sale of calcium hydroxide.

The other types of waste produced vary from year to year depending on the number and type of maintenance activities carried out.

## WATER CONSUMPTION AND WASTEWATER

For the SOL Group, managing water resources means:

- optimising the use of water in its plants by reducing withdrawals to a minimum also through investments in recycling;
- research and application at customer sites of technologies which, by using technical gases, can improve processes such as the treatment of wastewater or the purification of water for public use.

Most of the withdrawn water is used in the cooling circuits of machinery in primary process units. These systems are **closed circuit**: the consumed water is the water reintroduced into the circuit to compensate for evaporation.

The quantities used in secondary process units and offices are negligible and are therefore not reported.

The figure for 2019 has slightly improved thanks to optimisation works on some industrial water-cooling systems.

Water effluents in production plants are periodically controlled. Analyses show that their concentration is well below legal limits.

### WASTE PRODUCED (tonnes)

	2015	2016	2017	2018	2019
<i>Non-hazardous waste</i>	515	1,111	2,223	2,272	<b>8,521</b>
<i>Hazardous waste</i>	1,757	2,273	1,117	1,505	<b>545</b>

### WATER WITHDRAWALS (Megalitres)

	2015	2016	2017	2018	2019
<i>Aqueduct</i>				126	62
<i>Well</i>				1,271	1,419
<b>TOTAL</b>	2,135	1,337	1,397	1,481	<b>1,371 (533)</b>

Withdrawals from areas with water stress are shown in parentheses.

## WASTEWATER PURIFICATION FOR ENVIRONMENTAL PROTECTION

The SOL Group has been active for many years in the development of **solutions to support the environment**, thanks to the targeted application of the properties of technical gases to **treat solid, liquid and aeriform waste**, which allows substantially reducing the impact they have on the ecosystem.

An example of this is **Ecojet** technology applied to **purification plants**, which provides for the introduction of pure oxygen in the sewage treatment process known as "**activated sludge**", where biodegradable pollutants present in the wastewater are decomposed by biological oxidation. The supply of oxygen greatly improves the treatment's effectiveness.

In 2019 SOL also implemented Ecojet technology at the purification plant of a **major customer in the food sector** which produces and packages fruit juices, beverages and tomato puree.

The processing of fruit and vegetables requires the use of large amounts of water which, contaminated by the pollutants resulting from the treatment, must be purified in a special plant before being reintroduced into the environment.

The solution provided by SOL has allowed the customer to obtain **maximum purification performance** from its plant, allowing it to operate in respect of the environment even during its most intense production periods. In addition, the efficiency of the Ecojet system in the rapid and easily controlled delivery of pure oxygen into the activated sludge tanks allows **better management of the energy resources** of the purification plant.



## PRIMARY PRODUCTION PLANTS CERTIFICATIONS

Country	Unit	Plant type	ISO 14001	ISO 50001	EMAS	OHSAS 18001/ ISO 45001
ALBANIA	Tirana	Sulphur dioxide production				+
BELGIUM	Feluy	Air separation (ASU)	+			
BOSNIA ERZEGOVINA	Petrovo	Carbon dioxide production	+			
BULGARIA	Devnya	Carbon dioxide production				+
	Devnya	Air separation (ASU)				+
GERMANY	Burgbrohl	Carbon dioxide production		+		
	Francoforte	Air separation (ASU)		+		
	Zeitz <sup>1</sup>	Carbon dioxide production		+		
ITALY	Ancona	Produzione ac Acetylene production etilene	+			+
	Augusta	Air separation (ASU)				+
	Marcianise	Nitrous oxide production				+
	Cremona	Nitrous oxide production	+			+
	Cuneo	Air separation (ASU)				+
	Mantova	Air separation (ASU)	+		+	+
	Monza	Special gas production				+
	Novara	Air separation (ASU)				+
	Piombino	Air separation (ASU)				+
	Ravenna	Produzione idrogeno	+			+
	Salerno	Air separation (ASU)				+
	Verona	Air separation (ASU)	+		+	+
THE NETHERLANDS	Tilburg	Nitrous oxide production				+
SLOVENIA	Jesenice	Air separation (ASU)	+	+	+	+

<sup>1</sup> Production plant for CT Biocarbonic, a jointly controlled company consolidated by adopting the equity method

# PEOPLE AND THE COMMUNITY



**92%** EMPLOYEES WITH  
PERMANENT CONTRACTS

OVER  
**71,000** TRAINING HOURS  
PROVIDED

**83%** OF THE GROUP COMPANIES ACHIEVED  
THE "ZERO ACCIDENTS" GOAL

## OUR PEOPLE

People have always been a **strategic asset** for the SOL Group, as they are the essential and fundamental element for the very existence of the company. The corporate objectives can only be achieved with their dedication and professionalism, their skills and the ability to work in an integrated manner.

The Group's constant development brings an increase in the number of people who join the Group from year to year: SOL's objectives are their involvement in the project, the sharing of values and their growth, considering **internationalisation** and **inclusion** as an integral part of the Group's principles, culture and progress.

### PERSONNEL TRENDS

Thanks to foreign acquisitions in Brazil, Germany and Switzerland, in 2019 SOL welcomed **258 new employees**, registering an increase of 9% compared to the total number of employees of the previous year. However, net of corporate changes, the increase was 3%.

At 31 December, SOL counted 4,320 employees, of whom 60% were men and 40% women, **92%** are employed with **permanent** contracts.

Attention to employees' well-being and stability is also ensured by the measures taken by SOL aimed at creating a

collaborative environment that ensures adequate support for balancing work with the needs of personal and family life. The Group has 576 voluntary part-time positions in place, corresponding to 13% of employees.

In the face of the Group's continued growth, the contribution of young talent is considered a valuable and fundamental resource for future development open to innovation. This led to the entry of 777 employees in 2019, 30% of whom were under 30 years of age.

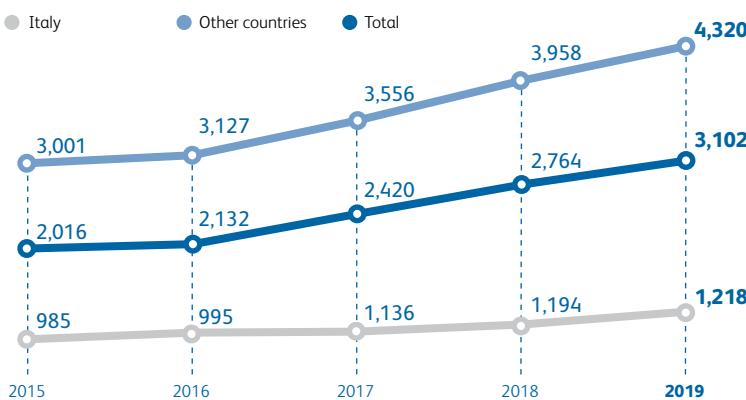
The Group's **overall turnover** was 15%: lower in Italy (8%) than abroad (18%). In particular, abroad has increased slightly in relation to the different dynamics of the local and highly competitive labour markets in which the Group operates and the different composition of the workforce of each company.

The **overall rate of absenteeism** was 4% in 2019 but the rates in Italy and abroad were quite different. In Italy, it came to 2%, well below both the national average for the sector and the average for industry as a whole, while abroad it was 5%, with oscillations that are still in line with the average data of each country.

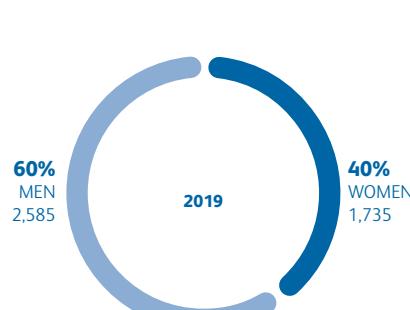
In addition to these employees, the Group employs over 2,000 external collaborators for certain services provided to patients at home, such as nurses, doctors and physiotherapists.

### EMPLOYEES BY REGION

(n.)



### EMPLOYEES BY GENDER



## TRAINING AND SKILLS DEVELOPMENT

Employee training is an essential element for the Group, which considers its people's skills as an enrichment and value to be safeguarded for operational excellence and the achievement of company objectives.

With the specific intention of meeting the training needs of each level and conveying a message of corporate involvement and collaboration for staff growth, in 2019 the SOL Group revised its **Onboarding** program, an initiative established for new hires. In addition to bringing the new arrivals into contact with all that is SOL, its history and the organisation of its business, the activity offers first brief training meetings (directed by the quality, health and safety and regulatory affairs departments) and the opportunity to get to know the function manager of each new hire. Starting in 2019, the new hire project was organised according to a timely scheduling system, updated every six months and shared with the Board of Directors.

The **SOL YOuth Academy** project aimed at young talent was launched in 2018 and successfully carried out in 2019 as well. The training school is entirely dedicated to employees under the age of 35 and seeks to develop Project Management and Business Presentation skills through team working, sharing and collaboration activities, with the aim of identifying and training tomorrow's leaders. During 2019, the organisational foundations were laid for **SOL YOuth Academy International**, an international version of the project that will be launched in 2020 and envisages the participation of colleagues from different countries.

With the aim of promoting and encouraging the specialisation of employees, SOL provides funding for **specialisation and qualifying study courses**, allowing employees of any age and level to pursue training suitable for their professional role.

In 2019, 71,821 total hours were devoted to training, recording an average of 17 hours per employee (16 in 2018).

The desire to maintain close contact with young graduates and make itself a reference point has always pushed SOL to cultivate **partnerships** with different **universities** over the years. In particular, the Group interacts regularly with the **Politecnico di Milano** thanks to frequent meetings throughout the year. Through these moments of contact with students, SOL has the opportunity to make itself known and to provide assessment, orientation and recruiting activities, offering a fundamental service for young people. The Group continues to provide training projects for the **Collège des Ingénieurs Italia**, a management training institute, by making the skills and experiences of its people available. The initiative is not limited to the sharing of specialised know-how but lies in the opportunity to hire young talents studying to obtain their master's Degrees after they complete internships with the company lasting 6 months.

## IMAGINE THE FUTURE OF HOME CARE

The project involved **Vivisol's sales force** in a moment of reflection, led by an external trainer, on how customers, patients, services, competitors and technologies in home care have changed in the last five years and how they will change in the future.

At the end of the session, a "Once Upon a Time" blog was created for internal use that gathered all the different contributions and some graphics that, thanks to the presence

of visual aids, synthesised the reflections of the working day into posters.

The results of the day allowed the identification of training gaps with respect to the new market scenarios in order to create a skills development path that will end in 2020.



## PROTECTING DIVERSITY

SOL recognises diversity as a wealth and an opportunity for self-discovery and acceptance of others; gender equality and culture are common values in all the companies of the Group.

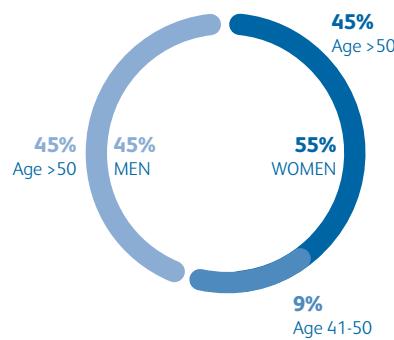
The progressive extension of our activities in new countries requires us to pay increasing attention to the **national and cultural differences** present within the Group companies. The SOL Group's aim is to promote local resources at all levels of the organisation, giving priority to local managers and assigning control and monitoring tasks to central functions.

The multiplicity and wealth of the SOL Group is clear when considering the following indicators:

- 40% of employees are women. The presence of women, slightly up compared to 2018, is more consistent among white collar employees, accounting for 53%;
- SOL employees are distributed in the following age groups: 20 years (12%), 30 years (34%) and 40 years (30%), those over 50 represent 24% of the company population.

Moreover, the number of women who sit on the Board of Directors of parent company SOL Spa rose from five to six, representing 55% of the 11 members.

## COMPOSITION OF THE SOL SPA BOARD OF DIRECTORS AS OF DECEMBER 31<sup>ST</sup>, 2019



## INTERNAL COMMUNICATIONS AND ENGAGEMENT

The SOL Group considers internal communication an important support for the creation of **corporate culture** and the **growth** of people and the organisation, encouraging and promoting the exchange of information, knowledge and experience.

The desire to inform and involve all people has led to the adoption of different communication tools. First and foremost is the company's house organ, **SOL News**, renewed in 2017 to reach the entire company population.

In this context, the company intranet **SOLConnect** also plays a fundamental role, as it is full of useful information not only for the correct management of the integrated management system procedures, but to allow everyone to be an active part of company life as well, also thanks to the news periodically published in reference to local and global events.

Thematic newsletters are another way of communicating with all colleagues: examples include **Safety Alerts** sent by HSE Management and other corporate departments. Through these periodic communications, SOL intends to provide its people with the necessary tools to cope with new regulations or to manage critical situations, starting from specific events in the sector.

In 2019 Vivisol in Austria carried out a **climate survey** with the aim of evaluating the strengths and areas of improvement of the business climate. The results of the survey were analysed and communicated to the employees involved, and specific internal meetings were held to assess the data and define any necessary improvement actions. In 2019 Vivisol Nederland implemented an intervention plan in response to the areas of improvement that emerged from its business climate survey carried out in 2018.

The objective for 2020 is to create a real **HR Community** that brings together the HR Managers of the Group companies who, at an annual event, meet to share best practices and define guidelines at Corporate level on the main issues concerning human resources management.

## SOLCONNECT, THE PLATFORM THAT COMMUNICATES THE SOL WORLD

The new **SOLConnect corporate intranet** was created in 2019, a communication platform of the SOL Group that has officially been in place since 1 January 2020.

The system was built on a common infrastructure with the aim of responding to the characteristics and **needs of the Group at international level** by assigning each user the specific work area to which they belong, within which they can **share their respective work tools and systems**. Everyday colle-

agues from different SOL companies work to keep the information in the main database always relevant, complete and up to date, taking advantage of the system as a **collective sharing desktop**.

SOLConnect continues to be the **source of the Group's documents and information**, in particular for quality, safety and environment activities.



New **applications**, called **iApps**, will be progressively developed to ensure both totally new workflows and updates to existing ones. The first of these will be dedicated to the management of Non-Conformities and complaints so that all Group companies use the same classification, management flow and reporting methods.

### REMUNERATION AND INDUSTRIAL RELATIONS

The SOL Group makes no distinction between the sexes in the management of remuneration policies which are based on merit, competences and results for each role.

Where required by local legislation in the countries in which it operates, the SOL Group applies the **collective contracts for the relevant sector** or, alternatively, salaries above the minimum legal wage.

64.6% of the SOL Group's employees are covered by collective labour agreements, including 100% of Italian employees and 50.7% of employees in other countries.

On average, wages and salaries, which are monitored by local managers and Personnel and Legal Affairs Central Management, are better than those of the market.

In 2019, the total remuneration paid to the Chairman and Chief Executive Officer Aldo Fumagalli Romario was 14.31 times the average total remuneration of Group employees in Italy. (1)

Every year, all managers are required to evaluate the performance of their staff and to refer wage increase and/or career development proposals to the relevant departments and Personnel and Legal Affairs Central Management.

In any case, the salary increases established by collective bargaining in the sector or by current legislation are guaranteed and where union representation is present, supplementary contracts are negotiated that can include production and/or participation bonuses connected with corporate productivity profitability parameters such as quality improvement and injuries prevention.

Furthermore, the Group strives to promote tools that protect the health of employees and their families, and those that integrate the pension services established by local laws.

Personnel and Legal Affairs Central Management directly manages industrial relations for all Italian companies in the Group and supports overseas companies, intervening when necessary.

SOL is an active member of the chemical industry confederation (Federchimica) and takes part in negotiations in Italy for the renewal of the chemical and chemical-pharmaceutical national collective labour agreements and in other joint schemes by the social partners.

At corporate level SOL maintains periodic relations with its unions based on the utmost cooperation and transparency. No labour disputes occurred in any of the Group companies and in 2019 there were **no recorded hours of strike action**.

<sup>(1)</sup> The overall salary includes gross annual remuneration plus the variable components. All employees of SOL Spa and of the other companies whose payroll is managed directly by Personnel and Legal Affairs Central Management are considered.

## HEALTH AND SAFETY

The Group has always put the health and safety of its people first and continues to consider it one of its priorities. Consequently, this issue represents a **fundamental aspect** of the management of the theme of sustainability for SOL and contributes to the Group's operational excellence: at the heart of the strategy, there are the constant commitment of all, training, reporting and analysis of accidents and near misses and the sharing of experiences throughout the Group.

Employee training is absolutely essential: all employees are involved in constant **awareness and training** activities aimed at reducing the possible risks and ensuring high levels of workplace safety. To this end, periodic meetings are organised, also with the contribution of external specialists, to enhance expertise and to stimulate collaboration between units and share management methods.

A training project has been launched in Italy which is dedicated to Safety Executives, Supervisors and collaborators in the country, called "**Safety Fridays**". The course was provided by the Group's HSE Management in Distance Learning mode and addressed select topics based on elements that emerged during audits, inspections or requests from participants requiring further attention.

8 sessions were organised in 2019, with 282 total participants and 398 hours of training provided.

The project feedback was very positive, so much so that it will be proposed again in 2020 with some innovations: in-

volvement of other company functions as teachers, and provision of the course in Italian and English to extend this mode of training and updating in all countries where the Group is present.

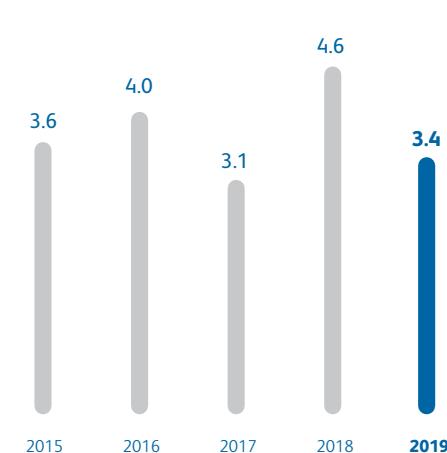
2019 also offered other important occasions for discussion and to share experiences and best practices regarding the environment, health and safety issues, especially the annual meeting of the **SERP (Safety and Environment Reference Person)** managers, as well as the meeting for **all ASPPs (Prevention and Protection Service Officers)**.

The SOL Group has various specific **communication tools**: these include "Safety alerts" which highlight events that have taken place in the sector, urging employees to respect correct rules of conduct, and "Quarterly Accident Reports" which explain and analyse accidents that have occurred in the Group and in other companies in the sector that belong to Assogastecnici and EIGA.

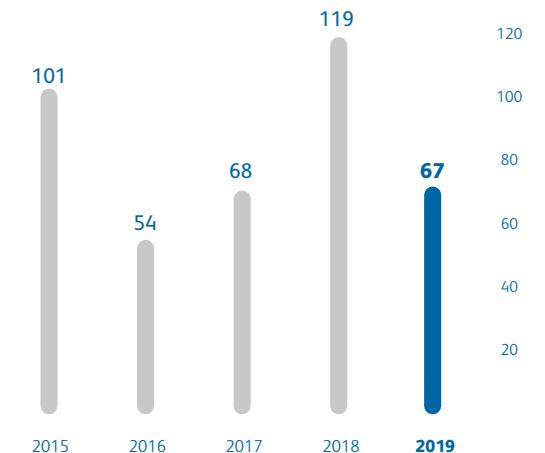
The Group's injury rate (IR) and severity index (SI) improved in 2019. The injuries that occurred were mainly due to trips and slips that caused a high number of days of absence.

In 2019 the "zero accidents" goal was met by 85% of the companies in Italy and 81% of the companies abroad. Furthermore, there were no cases of occupational disease.

**INJURY RATE**  
(number of injuries/ $10^6$  hours worked)



**SEVERITY INDEX**  
(days of absence/ $10^6$  hours worked)



## COMMITMENT TO THE COMMUNITY

---

For two years now, the SOL Group has been working to offer a work-school alternation path, **signing an agreement with Paolo Frisi Scientific High School in Monza**. Starting in June, five students were given the opportunity to work alongside a company tutor to have an internal perspective on work in the company.

The SOL Group has always supported bodies, institutions, associations and sports clubs that operate in harmony with its values, making financial contributions and offering them the benefit of its expertise.

In **Italy**, the SOL Group provided its support to the La Meridiana Cooperative in Monza this year as well, promoting the **SLAncio** project which provides people affected by invalidating neurological and neuromuscular diseases with assistance, and the **Il Paese Ritrovato** project, a small village without architectural barriers designed for the free movement of people with dementia.

Vivisol actively supports research by funding grants and scholarships in favour of different medical hospitals, such as the **Institute of Biomedicine and Molecular Immunology of Palermo**, which carries out important outpatient medical and welfare activities in the diagnosis and therapy of bronchopulmonary diseases, and the **Medicine Department of the University of Rome**, for which a contribution for neurological research has been granted.

Vivisol has also renewed its support to the **Anna Meyer Paediatric Hospital Foundation** for a project for the creation of a database of paediatric patients undergoing long-term home ventilation, and to the **ANT Italia Foundation** which provides specialist home medical care services to cancer patients free of charge.

Several contributions were made in the specific field of pneumology in favour of university hospital centres such as **Sant'Orsola General Hospital in Bologna** for the development and implementation of the sleep laboratory, and **Molinette Presidium in Turin** for respiratory physiotherapy.

This year the SOL Group also participated in the 19th edition of the **Milan Marathon**, the event in support of ViviDown Onlus. The company took part in the relay event with its two teams, SOL and Vivisol.

In **France** Vivisol France, France Oxygen and MBAR supported organisations for clinical research into respiratory illnesses. In addition to supporting various associations in the **Netherlands**, Vivisol sponsored the **Villa Pardoes Winter Run 2019**, a charitable race, which also had Group employees participate.

### ASSOCIATIONS

#### International industry associations

SOL Spa and Irish Oxygen are members of IOMA (International Oxygen Manufacturers Association), which gathers together the world's leading operators in the technical and medical gases sector. The principal objective of the association is to coordinate the harmonisation of safety rules so that operational practices are the same throughout the world.

SOL Spa, SOL Nederland, BTG, SOL Deutschland, Irish Oxygen and Vivisol Austria are members of EIGA (European Industrial Gases Association), which gathers together Europe's leading operators in the technical and medical gases sector.

To date, the SOL Group is present with its representatives on the Board of EIGA, in four Councils (Stefania Mariani is Chairwoman of the Medical Gases Council), in 15 Working Groups and in 28 Ad hoc Groups/Task Forces, contributing to the definition of industry standards and best practices.

SOL Spa is a member of the European, Middle Eastern & African Society for Biopreservation & Biobanking (ESBB).

In Italy, SOL is a member of Federchimica and Assogastecnici; within Assogastecnici SOL is present in all the Steering Committees (Giulio Bottes is Chairman of the Steering Committee of the Medicinal Gas Group for Hospital Services). Vivisol is a member of Confindustria Dispositivi Medici (Confindustria Medical Devices), in which it has promoted the creation of the association "Home & Digital Care" (of which Claudio Petronio is Chairman), an association that brings the main Home care providers and digital health professionals together.

## FROM GERMANY TO TURKEY FOR BORDERLESS ASSISTANCE

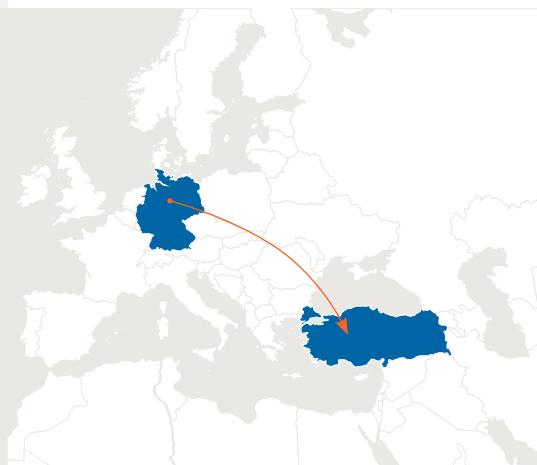
Thanks to the creation of an **impressive logistical team**, in December Vivisol was able to allow a patient who was assisted at home in Germany to return to his homeland in Turkey, bringing him closer to the affection and care of friends and family.

The patient's difficult clinical condition, no longer self-sufficient and in need of daily nursing support, complicated the **organisation of an air transfer**, explicitly requested and strongly desired by the patient. The remoteness of the countries and the high costs associated with the journey had made it difficult for his family members to travel, who over the years had always endeavoured to be close to him.

For this reason, Vivisol, after an initial moment of hesitation given the organisational complexity that such a task would entail for the guarantee of patient safety, decided to

use its resources and energy to make it happen.

Important teamwork between German and Turkish colleagues gave shape to a real **flying intensive care** unit (directly supported by ViviCare), allowing the assisted patient to make a **very special journey**.



### Other associations

**FBN-I** – The Family Business Network gathers over 3,600 family-run companies, with 16,000 members from 65 countries, with the goal of helping family businesses to develop and prosper over the generations through the exchange of experiences and new ideas.

**AIDAF** – Italian Association of Family Businesses, which brings together Italian family-run companies that share the guiding values of business ethics, meritocracy, social responsibility and a healthy development model of family businesses.

**Aspen Institute Italia**, which promotes and encourages the development of enlightened leadership that is open to dialogue and able to face the challenges of a global society.

**ISPI (Istituto Studi di Politica Internazionale)** – Institute for International Political Studies, one of the oldest and most prestigious Italian institutions specialising in international activities which, among other things, constitutes a benchmark for companies and institutions intending to extend their range of action abroad, offering materials and ad hoc meetings.



# SHAREHOLDERS AND FINANCIAL INSTITUTIONS

---

**952.3** MILLION EURO  
CAPITALISATIONS

---

**904.3** MILLION EURO  
NET SALES

---

**103.3** MILLION EURO  
INVESTMENTS

---

**43.7%** SALES  
IN ITALY

## FINANCIAL DATA

During 2019, **the technical gases** sector showed **sales growth** of 2.3% over the previous year, achieving sales to third parties totalling 412.6 million Euro, with slightly increasing volumes in all sectors of use.

The sales growth was more marked in other European countries than in Italy and was especially greater in the mechanical engineering, food and chemical-pharmaceutical industries.

The **hospital sector**, on the other hand, has found **stability**, with still-shrinking prices mainly due to policies to reduce spending.

The **home care business** had **significant growth** (+14.3% with sales to third parties totalling 491.7 million Euro) achieved more in foreign countries, thanks to a continuous commitment to the development of new products and services, which flanks and complements the oxygen therapy activities.

Overall in the health sector, Group sales totalled 592 million Euro, equal to 65.5% of total sales.

The adoption of the new IFRS16 accounting standard resulted in lower lease costs of 14.5 million Euro, higher depreciation of 13.9 million Euro, as well as higher net financial charges of 0.9 million Euro.

In terms of costs, it should be noted that the gross operating margin grew to 24.4 million Euro compared to 2018, equal to 13%.

It should also be noted that, compared to 2018, there was less energy production of hydroelectric plants due to low rainfall, the end of the proceeds from the white certificates related to previous investments for energy efficiency, a significant increase in transport costs and electricity.

The operating result, without non-recurring charges, increased by 8.2 million Euro compared to 2018, equal to 9%.

The Group's net debt, net of debt for leases which were not considered in 2018, decreased by 5.7 million Euro, even against the technical investments and acquisitions made in 2019.

Indebtedness indices remain very solid, with the debt/equity ratio of 0.50 and the cash flow cover reduced to 1.38.

### NET SALES

(million Euro)



	2015	2016	2017	2018	2019
<b>Number of countries</b>	27	28	28	29	<b>29</b>
<b>Capitalisation <sup>(1)</sup></b>	749	722.8	964.1	986.8	<b>952.3</b>
<b>Group's net sales <sup>(1)</sup></b>	674.2	703.4	756.8	833.5	<b>904.3</b>
<b>Technical gas area net sales <sup>(1)</sup></b>	363.6	373.1	369.2	403.2	<b>412.6</b>
<b>Home care area net sales <sup>(1)</sup></b>	339.8	360.0	387.6	430.3	<b>491.7</b>
<b>Gross operating margin <sup>(1)</sup></b>	148.4	167.6	167.2	186.9	<b>211.3</b>
<b>Operating result <sup>(1)</sup></b>	65.6	80.9	76.2	89.7	<b>88.7</b>
<b>Operating result before non-recurring charges <sup>(1)</sup></b>	65.6	80.9	76.2	90.6	<b>98.8</b>
<b>Group's cash flow <sup>(1)</sup></b>	112.9	127.5	127.3	142.6	<b>157.9</b>
<b>Net profit <sup>(1)</sup></b>	32.4	44.1	40.2	51.9	<b>49.3</b>
<b>Group's investments <sup>(1)</sup></b>	89.8	103.7	99.3	99.8	<b>103.3</b>
<b>% net sales in Italy</b>	48.2	47.1	46.0	45.7	<b>43.7</b>

<sup>(1)</sup> in millions of Euro

## FINANCIAL COMMUNITY

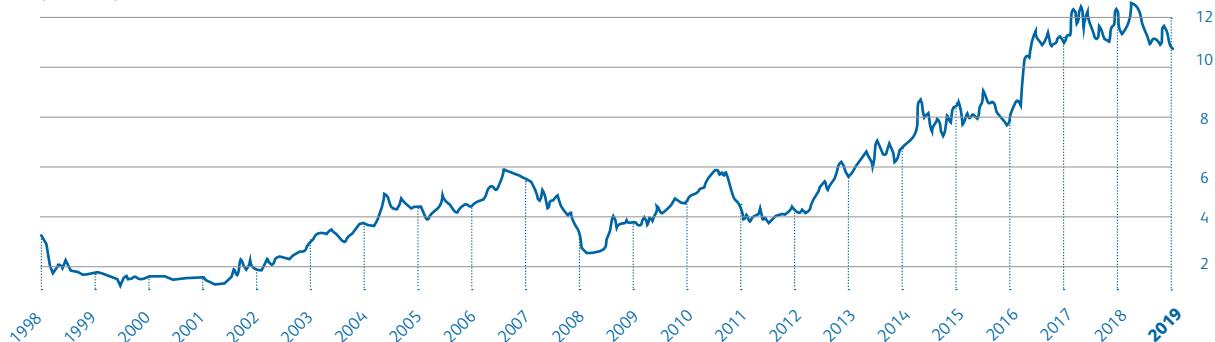
The main communication tools for shareholders are the Financial Statements and the Sustainability Report, published respectively in the Investor Relations/Financial Publications section and in the Sustainability/Sustainability Reports section of the Group's website ([www.solgroup.com](http://www.solgroup.com)).

For this reason, in addition to complying with legal obligations, the financial statements have been enriched, in particular in the sections "Explanatory notes" and "Management report", with useful information for a better understanding of the activities carried out.

The communication activity with shareholders and investors is also powered by:

1. the periodic publication of press releases on the Group's website and their dissemination to institutional investors;
2. participation in conferences promoted by financial institutions;
3. meetings and conference calls with investors and analysts.

## PERFORMANCE ON THE STOCK EXCHANGE (in Euro)





# MATERIALITY ANALYSIS

---



# IDENTIFICATION OF PRIORITY STAKEHOLDERS AND MATERIAL ISSUES

The SOL Group believes that doing business in a sustainable way means creating value for all those involved in the economic, environmental and social spheres. To do this, it is necessary to take account of the opinions and expectations of all of its stakeholders, because they guide the Group's actions and push it to improve on a continuous basis.

For this reason, we maintain open channels of communication with all those that can influence the decisions and actions of the Group and whose actions and decisions can be influenced by SOL.

The stakeholders considered important to the SOL Group are:

1. Associations
2. Environmental associations
3. Authorities and public bodies
4. Shareholders, investors and financial institutions
5. Patients
6. Customers

7. The community
8. Employees
9. Suppliers and partners

The definition of the relevant aspects for the Group and its stakeholders initially envisaged a comparison of material issues with industry best practices. Subsequently, the issues were shared with the General Managers of the SOL Group, in conjunction with the context analysis update of the Integrated Quality, Safety and Environmental Management System.

The issues resulting as material from these analyses, which were then shared with the Board of Directors of SOL Spa, are summarised in the following graph.

The 2020 objective is to create a questionnaire to directly collect the requests of the Group's main stakeholders: indicatively customers, suppliers, associations, employees, patients.

## ECONOMIC RESPONSIBILITY AND GOVERNANCE

1. Balanced economic development
2. Compliance with laws and regulations

## PRODUCT RESPONSIBILITY

1. Product information and responsible communication
2. Product and service quality
3. Research and Innovation
4. Traceability and sustainability of products and services

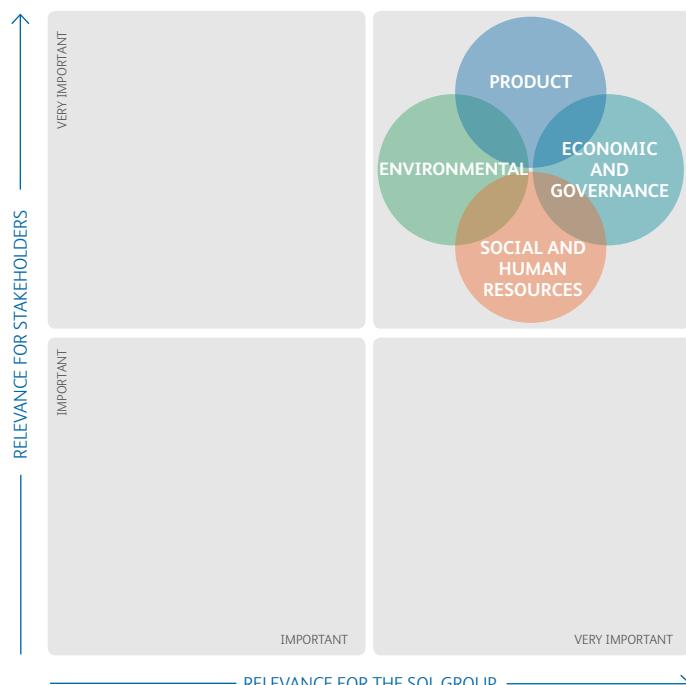
## CORPORATE SOCIAL RESPONSIBILITY AND HUMAN RESOURCES

1. Professional development of people
2. Attention to people
3. Employees Health and safety
4. Supplier Environmental and Social Assessment
5. Cooperation with the public authorities

## ENVIRONMENTAL RESPONSIBILITY

1. Environmental impact of production
2. Energy efficiency
3. Environmental impact of products
4. Environmental impact of transport

## MATERIALITY MATRIX



## TABLE OF THE BOUNDARY OF MATERIAL TOPICS FOR THE SOL GROUP AND RECONCILIATION WITH THE RELATED TOPIC GRI

Area	Material topic	GRI aspect	Where the impacts occur	Type of impact
<b>ECONOMIC RESPONSIBILITY AND GOVERNANCE</b>	Balanced economic development	Economic Performance	SOL Group	Caused by the Group
		Anti-corruption		Caused by the Group
	Compliance with laws and regulations	Anti-competitive Behavior	SOL Group, suppliers	Caused by the Group and directly linked through its business relationships
<b>PRODUCT RESPONSIBILITY</b>		Customer Privacy		Caused by the Group
	Product information and responsible communication	Marketing and Labeling	SOL Group	Caused by the Group
	Product and service quality	Customer Health and Safety	SOL Group, suppliers	Caused by the Group and directly linked through its business relationships
	Research and Innovation	Topic-specific Standards not present	SOL Group	Caused by the Group
<b>CORPORATE SOCIAL RESPONSIBILITY AND HUMAN RESOURCES</b>	Traceability and sustainability of products and services	Customer Health and Safety	SOL Group	Caused by the Group
	Professional development of people	Employment		Caused by the Group
		Training and Education	SOL Group, suppliers	Caused by the Group and directly linked through its business relationships
	Attention to people	Diversity and Equal Opportunity		
	Employees Health and safety	Occupational Health and Safety	SOL Group	Caused by the Group
	Supplier Environmental and Social Assessment	Supplier Environmental Assessment		
		Supplier Social Assessment	SOL Group	Caused by the Group
<b>ENVIRONMENTAL RESPONSIBILITY</b>	Cooperation with the public authorities	Topic-specific Standards not present	SOL Group	Caused by the Group
		Energy		
	Environmental impact of production	Water and Effluents	SOL Group	Caused by the Group
		Emissions		
		Effluents and Waste		
	Energy efficiency	Energy	SOL Group	Caused by the Group
	Environmental impact of products	Effluents and Waste	SOL Group, suppliers and partners, customers, patients	Caused by the Group Caused by the Group and directly linked through its business relationships
	Environmental impact of transport	Emissions	SOL Group, suppliers and partners, customers, patients	Caused by the Group Caused by the Group and directly linked through its business relationships

### Identification of risks related to material issues

In addition, for every non-financial aspect identified as significant in the materiality analysis, the following table summarises the main risks incurred or generated by the Group through its activities and along the value chain, as well as the major actions taken in response to such risks.

Topics of Italian Legislative Decree no. 254/2016	Material topics	Risk identification	Risk response
<b>FIGHT AGAINST BRIBERY AND CORRUPTION</b>	Compliance with laws and regulations	Potential risks related to non-compliance with laws and regulations (concerning anti-competitive behaviour, corruption, privacy)	<ul style="list-style-type: none"> <li>- Implementation of the Code of Ethics</li> <li>- Adopting a model of organisation, management and control pursuant to Italian Legislative Decree no. 231/2001 by the parent company SOL SpA and Vivisol Srl</li> <li>- Employee Training</li> <li>- Audit activities</li> <li>- Adoption of an Antitrust Compliance Program, an Antitrust Code and a Handbook</li> <li>- DPO appointments (Data Protection Officer) and publication of a procedure according to GDPR</li> <li>- Certification according to ISO 27001/ISO 22301</li> <li>- Investments in IT security systems</li> </ul>
<b>SOCIAL MATTERS</b>	Product information and responsible communication	Potential risk of misinformation	<ul style="list-style-type: none"> <li>- Training employees and partners who work on behalf of SOL</li> </ul>
	Product and service quality	Potential risk of losing customers and profits	<ul style="list-style-type: none"> <li>- Monitoring customer and patient satisfaction</li> <li>- Adoption of a Directive on the qualification process of suppliers and service providers</li> <li>- Audit activities</li> <li>- Training employees and partners who work on behalf of SOL</li> <li>- Adoption of an integrated quality, safety and environment system</li> <li>- Certification according to ISO 9001</li> </ul>
	Research and Innovation	Potential risk of missing business opportunities	<ul style="list-style-type: none"> <li>- Participation in international research calls</li> <li>- Permanent presence in technical working groups at national and international trade associations</li> </ul>
	Traceability and sustainability of products and services	Potential risk of failing to ensure product traceability and potential risk to the health and safety of consumers	<ul style="list-style-type: none"> <li>- Adoption of software for product traceability</li> <li>- Implementation of a management system for Pharmacovigilance and Materialvigilance</li> <li>- Training employees and partners who work on behalf of SOL</li> <li>- Audit activities</li> <li>- Certification according to ISO 13485</li> </ul>
	Supplier Environmental and Social Assessment	Potential social and environmental risks along the supply chain	<ul style="list-style-type: none"> <li>- Adoption of a Directive on the qualification process of suppliers in terms of risk analysis</li> <li>- When selecting its partners for the supply of goods and services that are critical for safety, quality and the environment, SOL uses a qualifying process to establish whether a potential partner meets the requirements demanded by company procedures.</li> </ul>
	Cooperation with the public authorities	Potential risk of not conducting open and transparent dialogue	<ul style="list-style-type: none"> <li>- Cooperation with authorities in technical working groups</li> </ul>
<b>EMPLOYEES' RELATED MATTERS</b>	Management and development of human resources	Potential risk related to the lack of adequate and qualified staff	<ul style="list-style-type: none"> <li>- Collaboration with various universities, social development</li> <li>- Group training program</li> <li>- Recognising and investing in young resources through international programs</li> <li>- Structured company process of recruitment and onboarding</li> <li>- Retention and development plans</li> </ul>
	Employees health and safety	Potential risks related to employees' health and safety and to compliance with legislation concerning occupational health and safety.	<ul style="list-style-type: none"> <li>- Adoption of an integrated quality, safety and environment system</li> <li>- Personnel training</li> <li>- Audit activities</li> <li>- Certification according to OHSAS 18001/ISO 45001</li> </ul>
<b>RESPECT FOR HUMAN RIGHTS</b>	Human rights	Respect for human rights, with particular reference to the supply chain	<ul style="list-style-type: none"> <li>- Implementation of the Code of Ethics</li> <li>- Training employees and partners who work on behalf of SOL</li> <li>- Adoption of a risk-based Directive on the supplier approval and evaluation process</li> </ul>
<b>ENVIRONMENTAL MATTERS</b>	Environmental impact of production	Potential risks associated with the consumption of electricity by the Group's primary processing plants, the potential risks of direct and indirect emissions of greenhouse gases	<ul style="list-style-type: none"> <li>- Adoption of an integrated quality, safety and environment system</li> <li>- Monthly monitoring of the main environmental KPIs</li> <li>- Certification according to ISO 14001/50001</li> <li>- Audit activities</li> <li>- Training employees and partners who work on behalf of SOL</li> </ul>
	Energy efficiency	Potential risk associated with low waste management control throughout the value chain	<ul style="list-style-type: none"> <li>- Compliance with local regulatory systems on waste management in relation to product life cycle</li> <li>- Adoption of an integrated quality, safety and environment system</li> <li>- Certification according to ISO 14001</li> <li>- Audit activities</li> <li>- Training employees and partners who work on behalf of SOL</li> </ul>
	Environmental impact of products	Potential risks related to outbound logistics, with particular reference to road transport	<ul style="list-style-type: none"> <li>- Progressive implementation of software for logistics planning</li> <li>- Monitoring kilometres travelled</li> </ul>

# METHODOLOGY

---



This document is the Consolidated Non-Financial Statement (hereinafter also the "Sustainability Report"), drafted in compliance with the Italian Legislative Decree no. 254/2016 and, as envisaged in Art. 5 of the aforementioned Decree, constitutes a separate Report from the Management Report. This document addresses the issues considered relevant envisaged in Art. 3 and 4 of Italian Legislative **Decree no. 254/2016 with reference to the year 2019** (January 1 to December 31), to the extent necessary to ensure an understanding of the Group's activity, its progress, its results and the social and environmental impact produced by the same.

The reporting **scope** of the Sustainability Report is the same as the SOL Group's Consolidated Financial Statements as of December 31<sup>st</sup>, 2019 (§ "Group Composition and scope of consolidation" of the Consolidated Financial Statements). In 2019 P Par Partecipacoes was acquired in Brazil, Intensivservice Wanninger in Germany and Spitex Perspecta in Switzerland.

For environmental data and information, see the chapter "The environment", which explains any eventual variations in the scope of reporting, which do not limit the understanding of the Group's activities or its impact.

The content of this Report refers to 2019 and, in particular, the activities carried out by the SOL Group during the year, unless otherwise noted. Data relating to previous years is reported where possible for comparative purposes, making it possible to assess longer-term trends in the Group's activities. Restatements to previously published comparative data are clearly indicated. Furthermore, in order to guarantee a correct representation of the performance and reliability of the data, estimates have been limited as much as possible. Where estimates were used, they were based on the best available methodologies and suitably indicated.

The Sustainability Report has been prepared in accordance with the **Global Reporting Initiative Sustainability Reporting Standards: Core option** defined in 2016 by the Global Reporting Initiative (GRI). Regarding the specific standards GRI 403 (Occupational Health and Safety) and GRI 303 (Water and Effluents), the latest version of 2018 was adopted.

The information contained in the Report refers to **issues identified as material** and the related indicators that reflect the significant economic, environmental and social impacts of the organisation or that could substantially influence the evaluations and decisions of the Group's stakeholders. The materiality analysis updated in 2019 and shared with the Board of Directors of SOL Spa served as a guideline for defining the content to report, in line with the expectations

of stakeholders. During 2020, the stakeholder engagement process will be expanded, creating a questionnaire that will be sent to the Group's main stakeholders.

The emissions aspect, within the topic of the environmental impact of production, was significant only in terms of CO<sub>2</sub> emissions. It should be noted, however, that with regard to other emissions, some production plants hold an Integrated Environmental Authorisation. The Authorisation provides for the monitoring of emissions of NOx, VOC, NH3 and CO into the atmosphere and the annual notification of the same to the Competent Authority. There were no out of bounds in the reporting period.

The SOL Group has published an annual Sustainability Report since 2009. This Sustainability Report was **approved by the SOL Spa Board of Directors** on 27 March 2020.

The Report was subject to a **limited assurance engagement** according to the criteria set out by the ISAE 3000 Revised principle. This engagement was carried out by Deloitte & Touche S.p.A. which, at the end of the work performed, issued a specific report with regard to the compliance of the information provided in the Consolidated Non-Financial Statement prepared by SOL Group as required by Italian Legislative Decree no. 254/2016.

The Group has envisaged a **continuous improvement** process with regard to material sustainability issues in order to comply in an increasingly virtuous way with regulations and best practices in the sector. More specifically, with regard to the theme of respecting human rights, in 2006 the Group adopted a Code of Ethics (updated in 2017) which has specific provisions on human rights issues. In fact, the SOL Group undertakes to support the protection and defence of human rights according to the principles laid down by the Universal Declaration of Human Rights (1948), and acknowledges the principles established by the basic Conventions of the ILO (International Labour Organisation). The Code of Ethics applies to everyone who carries out work for the SOL Group (including all employees, interns, agency staff) and administrators of SOL Group companies. The Code of Ethics also applies to all those who, in various capacities, come in contact with the Group (such as suppliers, partners, customers etc.). During 2018, given the importance of increasingly monitoring the supply chain, the Group adopted a new directive valid for all Group companies in relation to the supplier assessment process in terms of risk analysis, including aspects related to human rights. Several training sessions were organised in 2019 for the Quality Managers of all Group companies.

The Group will continue its commitment to the analysis and reconciliation of SOL's activities and priorities and the SDGs.

# PERFORMANCE INDICATORS

## PEOPLE

### Employee trends

	2017			2018		
	n.	%	n.	%	n.	%
<b>Employees by gender and employee category (data as of December 31<sup>st</sup>)</b>						
White collar	2,426	100%	2,763	100%	3,035	100%
- Men	1,287	53%	1,366	49%	1,438	47%
- Women	1,139	47%	1,397	51%	1,597	53%
Blue collar	1,130	100%	1,195	100%	1,285	100%
- Men	1,038	92%	1,070	90%	1,147	89%
- Women	92	8%	125	10%	138	11%
<b>Employees by age group and employee category (data as of December 31<sup>st</sup>)</b>						
White collar	2,426	100%	2,763	100%	3,035	100%
- Up to 30	279	12%	316	11%	383	13%
- 30-40	822	34%	955	35%	1,007	33%
- 41-50	807	33%	864	31%	964	32%
- Over 50	518	21%	628	23%	681	22%
Blue collar	1,130	100%	1,195	100%	1,285	100%
- Up to 30	140	13%	146	12%	144	11%
- 30-40	386	34%	431	36%	452	35%
- 41-50	307	27%	320	27%	339	27%
- Over 50	297	26%	298	25%	350	27%
<b>Absenteeism rate of employees by gender and region (data referred to 2019)</b>						
Italy		%		%		%
- Men		2,5%		2,9%		2,4%
- Women		2,4%		4,1%		3,5%
Other countries		2,8%		4,1%		5,0%
- Men		4,3%		3,3%		4,3%
- Women		3,5%		5,6%		5,8%

		2017		2018		2019
Employees by region and employment contract (data as of December 31 <sup>st</sup> )	n.	%	n.	%	n.	%
<b>Italy</b>						
Permanent contract	1,065	100%	1,107	100%	1,153	100%
- Men	784	74%	810	73%	847	73%
- Women	281	26%	297	27%	306	27%
Temporary contract	71	100%	87	100%	65	100%
- Men	50	70%	55	63%	40	62%
- Women	21	30%	32	37%	25	38%
<b>Other countries</b>						
Permanent contract	2,218	100%	2,498	100%	2,834	100%
- Men	1,391	63%	1,470	59%	1,614	57%
- Women	827	37%	1,028	41%	1,220	43%
Temporary contract	202	100%	266	100%	268	100%
- Men	100	50%	101	38%	84	31%
- Women	102	50%	165	62%	184	69%
<b>Employees by gender and employment type (data as of December 31<sup>st</sup>)</b>						
Part-time	379	100%	477	100%	576	100%
- Men	89	23%	98	21%	107	19%
- Women	290	77%	379	79%	469	81%
Full-time	3,177	100%	3,481	100%	3,744	100%
- Men	2,236	70%	2,338	67%	2,478	66%
- Women	941	30%	1,143	33%	1,266	34%
<b>New employee hires (data referred to 2019)</b>						
<b>By gender</b>						
- Men	330	14,2%	374	15,4%	372	14,3%
- Women	270	21,9%	368	24,2%	405	23,3%
Total	600	16,9%	742	18,7%	777	17,9%
<b>By region</b>						
- Italy	127	11,2%	149	12,5%	126	10,3%
- Other regions	473	19,5%	593	21,5%	651	20,9%
Total	600	16,9%	742	18,7%	777	17,9%
<b>By age group</b>						
- Up to 30	192	45,8%	246	53,2%	233	44,2%
- 30-40	239	19,8%	275	19,8%	272	18,6%
- 41-50	117	10,5%	151	12,8%	150	11,5%
- Over 50	52	6,4%	70	7,6%	122	11,8%
Total	600	16,9%	742	18,7%	777	17,9%
<b>Turnover due to resignations and dismissals (data referred to 2019)</b>						
<b>By gender</b>						
- Men	192	8,3%	266	10,9%	324	12,5%
- Women	145	11,8%	220	14,5%	323	18,6%
Total	337	9,5%	486	12,3%	647	14,9%

		2017		2018		2019
<b>By region</b>						
- Italy		58	5,1%	58	4,9%	99
- Other countries		279	11,5%	428	15,5%	548
<b>Total</b>		<b>337</b>	<b>9,5%</b>	<b>486</b>	<b>12,3%</b>	<b>647</b>
<b>By age group</b>						
- Up to 30		84	20,0%	116	25,1%	133
- 30-40		128	10,6%	192	13,9%	210
- 41-50		76	6,8%	93	7,9%	162
- Over 50		49	6,0%	85	9,2%	142
<b>Total</b>		<b>337</b>	<b>9,5%</b>	<b>486</b>	<b>12,3%</b>	<b>647</b>
<b>Training hours provided (data as of December 31st)</b>						
	<b>n.</b>	<b>%</b>	<b>n.</b>	<b>%</b>	<b>n.</b>	<b>%</b>
<b>By gender</b>						
- Men	33,590	67%	39,438	61%	43,073	60%
- Women	16,911	33%	25,300	39%	28,748	40%
<b>Total</b>	<b>50,501</b>	<b>100%</b>	<b>64,739</b>	<b>100%</b>	<b>71,821</b>	<b>100%</b>
<b>By Employee category</b>						
- White collar	34,326	68%	50,089	77%	54,894	76%
- Blue collar	16,175	32%	14,649	23%	16,927	24%
<b>Total</b>	<b>50,501</b>	<b>100%</b>	<b>64,738</b>	<b>100%</b>	<b>71,821</b>	<b>100%</b>
<b>Average training hours provided<sup>1</sup> (data as of December 31st)</b>						
	<b>n.</b>		<b>n.</b>		<b>n.</b>	
<b>By gender</b>						
- Men	14,45		16,19		16,66	
- Women	13,74		16,62		16,57	
<b>Total</b>	<b>14,20</b>		<b>16,36</b>		<b>16,62</b>	
<b>By Employee category</b>						
- White collar	14,15		18,13		18,07	
- Blue collar	14,31		12,26		13,20	
<b>Total</b>	<b>14,20</b>		<b>16,36</b>		<b>16,62</b>	

<sup>1</sup> In countries where there is no system for collecting data on training hours by gender or role, these figures were estimated on the basis of the composition of the company population in that company

## PEOPLE

Health and Safety (data as of December 31<sup>st</sup>)

		2015	2016	2017	2018	2019
<b>Injury rate</b>						
<b>Italy</b>						
Technical and medical gases sector	n.	4,8	6,6	1,8	3,5	4,1
Home care sector	n.	0,0	0,0	0,0	2,0	0,0
Biotechnologies sector	n.	0,0	0,0	3,9	2,1	5,7
<b>Other countries</b>						
Technical and medical gases sector and energy production	n.	5,3	6,5	3,0	5,3	4,2
Home care sector	n.	3,2	2,6	4,0	5,3 <sup>3</sup>	2,9

**Severity index****Italy**

Technical and medical gases sector	n.	165	142	55	42	151
Home care sector	n.	0	0	0	14	0
Biotechnologies sector	n.	0	0	146	16	106

**Other countries**

Technical and medical gases sector and energy production	n.	109	74	114	203	55
Home care sector	n.	72	19	50	133 <sup>3</sup>	49

**Employability**

Medical examinations	n.	901	859	653	1.130	1.335
Clinical analyses	n.	567	601	578	662	549
Additional tests <sup>(1)</sup>	n.	453	456	400	428	527

<sup>(1)</sup> Electrocardiograms, spirometry, audiometry, etc.

**ENVIRONMENT**

(data as of December 31<sup>st</sup>)

		2015	2016	2017	2018	2019
<b>Waste disposal</b>						
<b>Landfill</b>						
Non-hazardous	t.	172	436	1,492	1,332	1,285
Hazardous	t.	1,700	2,241	1,069	1,463	457
<b>Recovery</b>						
Non-hazardous	t.	343	675	630	675	7,101
Hazardous	t.	57	32	44	31	57
<b>Incineration</b>						
Non-hazardous	t.	-	-	101	265	136
Hazardous	t.	-	-	4	11	27

It should be noted that with regard to emissions, the reporting standard used (GRI Sustainability Reporting Standards 2016) provides for two different approaches to calculating indirect emissions: "Location-based" and "Market-based".

The "Location-based" approach (shown in the "GRI Content Index" table) provides for the use of average emission factors related to the specific national energy mix of electricity production. The "Market-

based" approach (reported in the chapter "The environment") provides for the use of emission factors defined on a contractual basis with the electricity supplier. In the absence of specific contractual agreements between the Organisation and the electricity supplier (e.g. purchase of Guarantees of Origin), the emission factor related to the national "residual mix" was used for the "Market-based" approach, where available.

**GREENHOUSE GAS EMISSIONS**

Direct emissions

Direct emissions from product deliveries

Indirect emissions according to the market-based method (European Union countries)

Indirect emissions according to the market-based method (Bosnia-Herzegovina, North Macedonia and Morocco)

Indirect emissions according to the location-based method

**SOURCES OF EMISSION FACTORS USED**

UK Government GHG Conversion Factors for Company Reporting (DEFRA), Conversion Factors 2019

Association of Issuing Bodies (AIB), European Residual Mixes 2018

International Energy Agency (IEA), Emissions Factors 2018 edition

# GRI CONTENT

# INDEX

## UNIVERSAL STANDARDS

GRI Standard	Page number	Information
<b>GRI 101: FOUNDATION (2016)</b>		
<b>GRI 102: GENERAL DISCLOSURES (2016)</b>		
<b>Organisational profile</b>		
<b>102-1</b>	SOL Spa	Name of the organisation
<b>102-2</b>	9; 31-42	Activities, brands, products, and services
<b>102-3</b>	Back cover	Location of headquarters
<b>102-4</b>	9; 14	Location of operations
<b>102-5</b>	9; 23	Ownership and legal form
<b>102-6</b>	9; 31-42	Markets served
<b>102-7</b>	6; 9; 65-66	Scale of organisation
<b>102-8</b>	57; 75	Information on employees and other workers
<b>102-9</b>	44	Supply chain
<b>102-10</b>	20	Significant changes to the organisation and its supply chain
<b>102-11</b>	26; 70-71	Precautionary Principle or approach
<b>102-12</b>	15-17; 25-29	External initiatives
<b>102-13</b>	60; 62-63	Main partnerships and affiliations
<b>Strategy</b>		
<b>102-14</b>	2-3	Statement from senior decision-maker
<b>102-15</b>	26; 70-71	Key impacts, risks, and opportunities
<b>Ethics and integrity</b>		
<b>102-16</b>	11 Code of Ethics of SOL Group	Values, principles, standards, and norms of behaviour
<b>Governance</b>		
<b>102-18</b>	23-24	Governance structure of the organisation
<b>Stakeholder Engagement</b>		
<b>102-40</b>	69	List of stakeholder groups
<b>102-41</b>	60	Collective bargaining agreements
<b>102-42</b>	69	Identifying and selecting stakeholders
<b>102-43</b>	69	Approach to stakeholder engagement
<b>102-44</b>	69	Key topics and concerns raised

Reporting practice		
<b>102-45</b>	73	Entities included in the consolidated financial statements
	Consolidate financial statement 2019 of SOL Group	
<b>102-46</b>	69-70	Defining report content and topic boundaries
<b>102-47</b>	69	List of material topics
<b>102-48</b>	No restatements were made of the information contained in the 2018 Sustainability Report.	Restatements of information
<b>102-49</b>	69-70	Changes in reporting
<b>102-50</b>	73	Reporting period
<b>102-51</b>	The Sustainability Report 2018 was published on April 17th, 2019	Date of most recent report
<b>102-52</b>	73	Reporting cycle
<b>102-53</b>	Back cover	Contact point for questions regarding the report
<b>102-54</b>	73	Claims of reporting in accordance with the GRI Standards
<b>102-55</b>	78-82	GRI content index
<b>102-56</b>	83-85	External assurance

## TOPIC-SPECIFIC STANDARDS

GRI Standard	Page number	Omission	Information
<b>GRI 200: ECONOMIC SERIES (2016)</b>			
<b>Material topic: ECONOMIC PERFORMANCE</b>			
<b>GRI 103: Management Approach (2016)</b>			
<b>103-1</b>	69-70		Explanation of the material topic and its Boundary
<b>103-2</b>	21; 65-66		The management approach and its components
<b>103-3</b>	21; 65-66		Evaluation of the management approach
<b>GRI 201: Economic performance (2016)</b>			
<b>201-1</b>	19		Direct economic value generated and distributed
<b>Material topic: ANTI-CORRUPTION</b>			
<b>GRI 103: Management Approach (2016)</b>			
<b>103-1</b>	69-70		Explanation of the material topic and its Boundary
<b>103-2</b>	11; 23-24		The management approach and its components
	Code of Ethics of SOL Group		
<b>103-3</b>	11; 23-24		Evaluation of the management approach
<b>GRI 205: Anti-corruption (2016)</b>			
<b>205-3</b>	During 2019 there were no confirmed cases of corruption		Confirmed incidents of corruption and actions taken
<b>Material topic: ANTI-COMPETITIVE BEHAVIOR</b>			
<b>GRI 103: Management Approach (2016)</b>			
<b>103-1</b>	69-70		Explanation of the material topic and its Boundary
<b>103-2</b>	11; 23-24		The management approach and its components
	Code of Ethics of SOL Group		
<b>103-3</b>	11; 23-24		Evaluation of the management approach
<b>GRI 206: Anti-Competitive Behavior (2016)</b>			
<b>206-1</b>	The main legal actions concerning anti-competitive practices are described in the Management report and in the Explanatory notes of SOL Group.		Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices

**GRI 300: ENVIRONMENTAL SERIES (2016)****Material topic: ENERGY****GRI 103: Management Approach (2016)**

<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	24-28; 47-48; 55 Energy management policy of SOL Group companies Safety and environment principles of SOL Group companies	The management approach and its components
<b>103-3</b>	24-28; 47-48; 55	Evaluation of the management approach

**GRI 302: Energy (2016)**

<b>302-1</b>	48	Energy consumption within the organisation
<b>302-3</b>	48	Energy intensity

**Material topic: WATER AND EFFLUENTS****GRI 103: Management Approach (2016)**

<b>103-1</b>	69-70	Explanation of the material topic and its boundary
<b>103-2</b>	26; 53; Safety and environment principles of SOL Group companies	The management approach and its components
<b>103-3</b>	26; 53	Evaluation of the management approach

**GRI 303: Management Approach (2018)**

<b>303-1</b>	26; 53	Interactions with water as a shared resource
<b>303-2</b>	26; 53	Management of water discharge-related impacts

**GRI 303: Water and effluents (2018)**

<b>303-3</b>	53; The water withdrawn is only fresh water ( $\leq 1,000 \text{ mg/l}$ total dissolved solids)	Water withdrawal
--------------	---	------------------

**Material topic: EMISSIONS****GRI 103: Management Approach (2016)**

<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	24-26; 29; 47; 49-50 Safety and environment principles of SOL Group companies	The management approach and its components
<b>103-3</b>	24-26; 29; 47; 49-50	Evaluation of the management approach

**GRI 305: Emissions (2016)**

<b>305-1</b>	49-50	Energy direct (Scope 1) GHG emissions
<b>305-2</b>	49-50; Indirect emissions, calculated according to the location-based methodology, are equal to 199,453 tonnes of CO <sub>2</sub> equivalent	Energy indirect (Scope 2) GHG emissions

**Material topic: EFFLUENTS AND WASTE****GRI 103: Management Approach (2016)**

<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	24-25; 53 Safety and environment principles of SOL Group companies	The management approach and its components
<b>103-3</b>	24-25; 53	Evaluation of the management approach

**GRI 306: Effluents and waste (2016)**

<b>306-2</b>	53; 77	Waste by type and disposal method
--------------	--------	-----------------------------------

**Material topic: SUPPLIER ENVIRONMENTAL ASSESSMENT****GRI 103: Management Approach (2016)**

<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	44	The management approach and its components
<b>103-3</b>	44	Evaluation of the management approach

**GRI 308: Supplier Environmental Assessment (2016)**

<b>308-1</b>	44	New suppliers that were screened using environmental criteria
--------------	----	---

**GRI 400: SOCIAL SERIES (2016)****Material topic: EMPLOYMENT****GRI 103: Management Approach (2016)**

<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	57	The management approach and its components
<b>103-3</b>	57	Evaluation of the management approach

**GRI 401: Employment (2016)**

<b>401-1</b>	57; 75-76	New employee hires and employee turnover
--------------	-----------	--

**Material topic: OCCUPATIONAL HEALTH AND SAFETY****GRI 103: Management Approach (2016)**

<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	24-29; 55; 61; Safety and environment principles of SOL Group companies	The management approach and its components
<b>103-3</b>	24-29; 55; 61;	Evaluation of the management approach

**GRI 403: Management Approach (2018)**

<b>403-1</b>	24-29; 55; 61; Safety and environment principles of SOL Group companies	Occupational health and safety management system
<b>403-2</b>	24-29; 55; 61; Safety and environment principles of SOL Group companies	Hazard identification, risk assessment and incident investigation
<b>403-3</b>	24-29; 55; 61; Safety and environment principles of SOL Group companies	Occupational health services
<b>403-4</b>	24-29; 55; 61; Safety and environment principles of SOL Group companies	Worker participation, consultation and communication on occupational health and safety
<b>403-5</b>	24-29; 55; 61; Safety and environment principles of SOL Group companies	Worker training on occupational health and safety
<b>403-6</b>	24-29; 55; 61; Safety and environment principles of SOL Group companies	Promotion of worker health
<b>403-7</b>	24-29; 55; 61; Safety and environment principles of SOL Group companies	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships

**GRI 403: Occupational Health and Safety (2018)**

<b>403-9</b>	61; 76 ; In 2019, there were 26 recordable work-related injuries for employees. 12 injuries were instead recorded for third-party companies working on behalf of the SOL Group. There were no fatalities as a result of work-related injury nor high-consequence work-related injuries neither for employees nor for workers who are not employees but whose work and/or workplace is controlled by the organization. The hours worked by employees amounted to approximately 7.7 million (the figure is currently estimated, but the Group has begun a more systematic collection of this indicator). The hours worked by workers who are not employees but whose work and/or workplace is controlled by the Organization and the related rate are currently not available.	Work-related injuries
--------------	--	-----------------------

**Material topic: TRAINING AND EDUCATION****GRI 103: Management Approach (2016)**

<b>103-1</b>	69-70	Explanation of the material topic and its boundary
<b>103-2</b>	58	The management approach and its components
<b>103-3</b>	58	Evaluation of the management approach

**GRI 404: Training and Education (2016)**

<b>404-1</b>	76	Average hours of training per year per employee
--------------	----	---

**Material topic: DIVERSITY AND EQUAL OPPORTUNITY****GRI 103: Management Approach (2016)**

<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	11; 59 Code of Ethics of SOL Group	The management approach and its components
<b>103-3</b>	11; 59	Evaluation of the management approach

**GRI 405: Diversity and Equal Opportunity (2016)**

<b>405-1</b>	59; 74	Diversity of governance bodies and employees
--------------	--------	--

<b>Material topic: NON DISCRIMINATION</b>		
<b>GRI 103: Management Approach (2016)</b>		
<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	11; 59 Code of Ethics of SOL Group	The management approach and its components
<b>103-3</b>	11; 59	Evaluation of the management approach
<b>GRI 406: Non-Discrimination (2016)</b>		
<b>406-1</b>	During 2019 there were no confirmed cases of discrimination.	Incidents of discrimination and corrective actions taken
<b>Material topic: SUPPLIER SOCIAL ASSESSMENT</b>		
<b>GRI 103: Management Approach (2016)</b>		
<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	44 Code of Ethics of SOL Group	The management approach and its components
<b>103-3</b>	44	Evaluation of the management approach
<b>GRI 414: Supplier Social Assessment (2016)</b>		
<b>414-1</b>	44	New suppliers that were screened using social criteria
<b>Material topic: CUSTOMER HEALTH AND SAFETY</b>		
<b>GRI 103: Management Approach (2016)</b>		
<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	15-17; 24-25	The management approach and its components
<b>103-3</b>	15-17; 24-25	Evaluation of the management approach
<b>GRI 416: Customer Health and Safety (2016)</b>		
<b>416-2</b>	In 2019 there were no cases of non-compliance concerning the health and safety impacts of products and services	Cases of non-compliance concerning the health and safety impacts of products and services
<b>Material topic: MARKETING AND LABELING</b>		
<b>GRI 103: Management Approach (2016)</b>		
<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	15-17	The management approach and its components
<b>103-3</b>	15-17	Evaluation of the management approach
<b>GRI 417: Marketing and Labeling (2016)</b>		
<b>417-1</b>	15-17	Information and labelling required for products and services
<b>Material topic: CUSTOMER PRIVACY</b>		
<b>GRI 103: Management Approach (2016)</b>		
<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	24; 26-28 Information security management policy of SOL Group companies	The management approach and its components
<b>103-3</b>	24; 26-28	Evaluation of the management approach
<b>GRI 418: Customer Policy (2016)</b>		
<b>418-1</b>	In 2019, 10 data breaches were reported to the Guarantor of national privacy	Complaints about the violation of privacy and loss of customer data
<b>Material topic: RESEARCH AND INNOVATION</b>		
<b>GRI 103: Management Approach (2016)</b>		
<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	31-43	The management approach and its components
<b>103-3</b>	31-43	Evaluation of the management approach
<b>Material topic: COOPERATION WITH THE PUBLIC AUTHORITIES</b>		
<b>GRI 103: Management Approach (2016)</b>		
<b>103-1</b>	69-70	Explanation of the material topic and its Boundary
<b>103-2</b>	24-26 Code of Ethics of SOL Group	The management approach and its components
<b>103-3</b>	25-26	Evaluation of the management approach

## INDEPENDENT AUDITOR'S REPORT

**Deloitte.**

Deloitte & Touche S.p.A.  
Via Tortona, 25  
20144 Milano  
Italia

Tel: + 39 02 83322111  
Fax: + 39 02 83322112  
[www.deloitte.it](http://www.deloitte.it)

**INDEPENDENT AUDITOR'S REPORT  
ON THE CONSOLIDATED NON-FINANCIAL STATEMENT PURSUANT TO ARTICLE 3,  
PARAGRAPH 10 OF LEGISLATIVE DECREE No. 254 OF DECEMBER 30, 2016 AND  
ART. 5 OF CONSOB REGULATION N. 20267/2018**

**To the Board of Directors of  
SOL S.p.A.**

Pursuant to article 3, paragraph 10, of the Legislative Decree no. 254 of December 30, 2016 (hereinafter "Decree") and to article 5 of the CONSOB Regulation n. 20267/2018, we have carried out a limited assurance engagement on the Consolidated Non-Financial Statement of SOL S.p.A. and its subsidiaries (hereinafter "SOL Group" or "Group") as of December 31, 2019 prepared on the basis of art. 4 of the Decree, and approved by the Board of Directors on March 27, 2020 (hereinafter "NFS").

**Responsibility of the Directors and the Board of Statutory Auditors for the NFS**

The Directors are responsible for the preparation of the NFS in accordance with articles 3 and 4 of the Decree and "Global Reporting Initiative Sustainability Reporting Standards" established in 2016 by GRI – Global Reporting Initiative (hereinafter also "GRI Standards"), which they have identified as reporting framework.

The Directors are also responsible, within the terms established by Law, for such internal control as they determine is necessary to enable the preparation of NFS that is free from material misstatement, whether due to fraud or error.

The Directors are moreover responsible for defining the contents of the NFS, within the topics specified in article 3, paragraph 1, of the Decree, taking into account the activities and characteristics of the Group, and to the extent necessary in order to ensure the understanding of the Group's activities, its trends, performance and the related impacts.

Finally, the Directors are responsible for defining the business management model and the organisation of the Group's activities as well as, with reference to the topics detected and reported in the NFS, for the policies pursued by the Group and for identifying and managing the risks generated or undertaken by the Group.

The Board of Statutory Auditors is responsible for overseeing, within the terms established by law, the compliance with the provisions set out in the Decree.

**Auditor's Independence and quality control**

We have complied with the independence and other ethical requirements of the *Code of Ethics for Professional Accountants* issued by the *International Ethics Standards Board for Accountants*, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. Our auditing firm applies International Standard on Quality Control 1 (ISQC Italia 1) and, accordingly, maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Ancona Bari Bergamo Bologna Brescia Cagliari Firenze Genova Milano Napoli Padova Parma Roma Torino Treviso Udine Verona

Sede Legale: Via Tortona, 25 – 20144 Milano | Capitale Sociale: Euro 10.328.220,00 i.v.  
Codice Fiscale/Registro delle Imprese Milano n. 03049560166 – R.E.A. Milano n. 1720239 | Partita IVA: IT 03049560166

Il nome Deloitte si riferisce a una o più delle seguenti entità: Deloitte Touche Tohmatsu Limited, una società inglese a responsabilità limitata ("DTTL"), le member firm aderenti al suo network e le entità a esse correlate. DTTL e ciascuna delle sue member firm sono entità giuridicamente separate e indipendenti tra loro. DTTL (denominata anche "Deloitte Global") non fornisce servizi ai clienti. Si invita a leggere l'informatica completa relativa alla descrizione della struttura legale di Deloitte Touche Tohmatsu Limited e delle sue member firm all'indirizzo [www.deloitte.com/about](http://www.deloitte.com/about).

© Deloitte & Touche S.p.A.



### Auditor's responsibility

Our responsibility is to express our conclusion based on the procedures performed about the compliance of the NFS with the Decree and the GRI Standards. We conducted our work in accordance with the criteria established in the "International Standard on Assurance Engagements ISAE 3000 (Revised) – Assurance Engagements Other than Audits or Reviews of Historical Financial Information" (hereinafter "ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. The standard requires that we plan and perform the engagement to obtain limited assurance whether the NFS is free from material misstatement. Therefore, the procedures performed in a limited assurance engagement are less than those performed in a reasonable assurance engagement in accordance with ISAE 3000 Revised, and, therefore, do not enable us to obtain assurance that we would become aware of all significant matters and events that might be identified in a reasonable assurance engagement.

The procedures performed on NFS are based on our professional judgement and included inquiries, primarily with company personnel responsible for the preparation of information included in the NFS, analysis of documents, recalculations and other procedures aimed to obtain evidence as appropriate.

Specifically we carried out the following procedures:

1. Analysis of relevant topics with reference to the Group's activities and characteristics disclosed in the NFS, in order to assess the reasonableness of the selection process in place in light of the provisions of art. 3 of the Decree and taking into account the adopted reporting standard.
2. Analysis and assessment of the identification criteria of the consolidation area, in order to assess its compliance with the Decree.
3. Comparison between the financial data and information included in the NFS with those included in the consolidated financial statements of the SOL Group.
4. Understanding of the following matters:
  - business management model of the Group's activities, with reference to the management of the topics specified by article 3 of the Decree;
  - policies adopted by the entity in connection with the topics specified by article 3 of the Decree, achieved results and related fundamental performance indicators;
  - main risks, generated and/or undertaken, in connection with the topics specified by article 3 of the Decree.

Moreover, with reference to these matters, we carried out a comparison with the information contained in the NFS and the verifications described in the subsequent point 5, letter a) of this report.

5. Understanding of the processes underlying the origination, recording and management of qualitative and quantitative material information included in the NFS.

In particular, we carried out interviews and discussions with the management of SOL S.p.A. and with the employees of SPG - SOL Plin Gorenjska d.o.o., Energetika Z.J. d.o.o., VIVISOL France Sarl, France Oxygene Sarl, MBAR Assistance Respiratoire Sas, VIVISOL Deutschland GmbH, Vivicare GmbH, Kompass GmbH, Pielmeier Medizintechnik GmbH, Medtek Medizintechnik GmbH, Intensivservice Wanninger GmbH, VIVISOL Nederland B.V., Dolby Medical Home Respiratory Care Limited, TGS A.D., SOL SEE d.o.o., SOL Hydropower d.o.o., VIVISOL Brasil Ltda, Global Care Assistancia Domiciliar Ltda, Unit Care Servicos Medicos Ltda, PALLMED sp.zo.o. and MEDSEVEN sp.zo.o., SITEK SA, SPITEX PERSPECTA AG, VIVISOL Heimbehandlungsgeräte GmbH and we carried out limited documentary verifications, in order to gather information about the processes and procedures which support the collection, aggregation, elaboration



3

and transmittal of non-financial data and information to the department responsible for the preparation of the NFS.

In addition, for material information, taking into consideration the Group's activities and characteristics:

- at the group level:
  - a) with regards to qualitative information included in the NFS, and specifically with reference to the business management model, policies applied and main risks, we carried out interviews and gathered supporting documentation in order to verify its consistency with the available evidence;
  - b) with regards to quantitative information, we carried out both analytical procedures and limited verifications in order to ensure, on a sample basis, the correct aggregation of data.
- for the following subsidiaries, divisions and sites, Monza Headquarters and industrial sites of Jesenice (Slovenia) for SPG - SOL Plin Gorenjska d.o.o. and Energetika Z.J. d.o.o., site of Neufahrn bei Freising (Germany) for VIVISOL Deutschland GmbH, Vivicare GmbH, Kompass GmbH, Pielmeier Medizintechnik GmbH, Medtek Medizintechnik GmbH, Intensivservice Wanninger GmbH and the site of Vaux le Penil (France) for VIVISOL France Sarl, France Oxygene Sarl, MBAR Assistance Respiratoire Sas which we selected based on their activities, their contribution to the performance indicators at the consolidated level and their location, we carried out site visits, during which we have met their management and have gathered supporting documentation with reference to the correct application of procedures and calculation methods used for the indicators.

### **Conclusion**

Based on the work performed, nothing has come to our attention that causes us to believe that the NFS of the SOL Group as of December 31, 2019 is not prepared, in all material aspects, in accordance with article 3 and 4 of the Decree and GRI Standards.

### **Other matters**

The data for the year ended December 31, 2016 presented for comparative purposes in the NFS have not been subject to a limited or to a reasonable assurance engagement.

DELOITTE & TOUCHE S.p.A.

Signed by  
**Riccardo Raffo**  
Partner

Milan, Italy  
April 22, 2020

# THE GLOSSARY

**Cylinder:** container in steel or light alloy for compressed, liquefied or dissolved gases.

**Conditioning:** a production operation that consists in taking gas from a secondary storage tank and compressing it in a gaseous or liquid state and transferring it to mobile containers. Conditioning also includes the sequence of operations carried out on the containers from when they arrive at the centre to the storage of full containers ready for delivery.

**Seveso Directive (2012/18/EU and later modifications):** European standard intended to prevent and control the occurrence of major accidents, through the identification of one's sites at risk.

It governs industrial activities that involve the stocking and/or use of certain quantities of dangerous substances.

**Medical Device (DM):** any instrument, apparatus, equipment, machine, device, plant, reagent in vitro or for calibration, computer software, material or other similar or related product for use, alone or in culmination, on persons for one or more specific purposes of diagnosis, prevention, control, therapy or attenuation of an illness; for diagnosis, control, therapy, attenuation or compensation of a wound or handicap; for studying, substituting or modifying anatomy or a physiological process; for intervening on conception where the main desired action in or on the human body is not carried out with pharmacological or immunological means or through metabolism, but whose function can be aided by these means.

**EMAS (Eco-Management and Audit Scheme):** Regulation 761/2001 of the European Community. A voluntary instrument for implementing Community Environmental Policy aimed at continually improving the environmental performance of the companies and businesses adopting it.

**Dispenser:** container with vacuum insulated cavity to contain highly refrigerated liquefied cryogenic gases characterized and composed by interception, measurement and safety instruments.

**Air separation:** process of separation, by distillation, of gas components of the air, obtaining liquid and gaseous products.

**Medical gases:** both gases intended to be administered to the patient (such as medical oxygen, oxygen 93%, nitrous of medical nitrogen, medical air) and gases not intended for administration but used for other purposes in the processing of the same, such as air and nitrogen for foods or surgical instruments.

**Global Reporting Initiative (GRI):** a multi-stakeholder network instituted in 1997 and made up of companies, NGOs, associations of accountancy experts, business organisations and other international stakeholders involved in subjects relating to Corporate Social Responsibility. GRI's mission is to develop, supply and promote global reference guidelines for the drawing up of Sustainability Reports that describe the economic, environmental and social impacts that companies or organisations cause with their activities.

**Accident:** unexpected event with potential harmful effect to oneself, other people or third-party objects.

**Major accident:** event such as a serious spill, fire or explosion due to uncontrolled developments in activities in the presence or use of dangerous substances, that could cause grave danger for human health or the environment.

**Frequency index:** ratio between the number of accidents and hours worked multiplied by 1 million. It measures the frequency of accident occurrence.

**Severity index:** ratio between days of absence due to injury and hours worked multiplied by 1 million. It measures the severity of injuries.

**Injury:** undesired event in the workplace that provokes bodily damage or objectively verifiable illness.

**IPPC (Integrated Pollution Prevention and Control):** Strategy instituted with European Directive no. 75 of 24/11/2010 "Industrial Emission Directive" (I.E.D.) for minimising the pollution caused by various sources throughout the EU. All types of installation listed in Appendix 1 of the Directive must obtain integrated authorisation from the authorities of the various countries. It is based on the premise that the failure to adopt a common approach for controlling emissions into air, water and terrain could lead not to a reduction of pollution but to its transfer from one compartment to another.

**ISO 9001:** Recognised standard for Quality Management Systems which provides a method and reference standards for running an organisation in a smart and aware manner for customer satisfaction.

**OHSAS 18001/ISO 45001:** English standard specifying the requirements for a management system for health and safety at work, in order to enable organisations to provide safe and healthy workplaces, preventing work-related injuries and illnesses and proactively improving its performance. The standard has been superseded by the publication of the international standard ISO 45001 which will definitely repeal it in 2021, the date on which the transition of the management systems from OHSAS 18001 to ISO 45001 will have to be completed.

**ISO 13485 (Medical devices – quality management systems):** a standard specifically aimed at companies operating in the medical sector such as SOL, designed for those who apply targeted quality controls to medical devices.

**ISO 14001 (Environmental Management):**

ISO 14001 is a guarantor of the precise control of environmental aspects, reducing impact and ensuring legislative compliance, aimed at maintaining an Environmental Management System.

**ISO 22000 (Food Safety Management Systems):**

the standard defined for the effective control, improvement and development of food safety management, for organisations that want to ensure its safety.

**ISO 27001 (Information security):** the ISO 27001 standard defines the requirements for establishing and coordinating an Information Security Management System (logical, physical and organisational security), with the aim of protecting data and information from all kinds of threats, guaranteeing their integrity, confidentiality and availability.

**ISO 50001 (Energy Management):** standard aimed at helping organisations improve their energy performance, increasing energy efficiency and reducing climate and environmental impact.

**Sale equipment:** technical/technological equipment purchased from third parties and supplied for use to customers as part of a service, but destined to remain the property of SOL; for example, mobile containers, cold converters, etc.

**Policy (quality, safety, environment):** general principles and guidelines of an organisation, formerly expressed by top management.

**REACH:** EC Regulation no. 1907/2006 (Registration, Evaluation, Authorisation and Restriction of Chemicals). Its main aim is to improve the awareness of the dangers and risks deriving from chemical substances, aiming to ensure a high level of protection of human health and the environment.

Mobile container: container for compressed, liquid, dissolved and cryogenic gases used for packaging products. Mobile containers are: cylinders, drums, gas cylinders, cylinder bundles, dewars, base units and portable units.

**Residual mix:** refers to the average primary energy sources that were not intended for a specific entity or to an end consumer. If a consumer uses the power grid without having purchased a GO certificate, he then has to use the residual mix in the calculation of its footprint. The Residual mix is calculated for each year and country by organisations that are part of the European E-Track program, such as RE-DIIS.

**Responsible Care:** a voluntary program of the world chemical industry based on the implementation of principles and conduct concerning the safety and health of employees and environmental protection, and the commitment to communicate the results obtained aiming for continual, significant and tangible improvement.

**Food safety:** hygienic - sanitary prevention, for which food is subjected to strict controls that ensure correct preparation in accordance with its use and consumption, assuring its safety to the consumer.

**SIGUCERT:** The SIGU (Italian Society of Human Genetics) standard certifies the organisational, operational, management and professional requirements of Medical Genetics Laboratories to carry out special investigations (genetic testing) for the identification of genetic diseases.

**Quality, Safety and Environment System (SdG/QSA):** that part of the general management system that includes the organisational structure, planning, responsibilities, procedures, processes and resources for drawing up, implementing and maintaining active and well-defined quality, safety and/or environmental policies.

**Sustainability (see sustainable development)**

**Stakeholder:** all categories of subjects, private or public, individual or collective, internal or external, that can influence the success of a business or whose interests are involved in business decisions: customers, suppliers, investors, local communities, employees, unions, public administration, future generations, etc.

**Steam reforming:** process in which methane reacts with steam, in the presence of a catalyst, to produce hydrogen and CO<sub>2</sub>.  
**Primary storage:** liquefied cryogenic gas container filled directly by the production plant.

**Secondary storage:** liquefied cryogenic gas container filled by tankers, normally installed in secondary process units.

**Sustainable development:** the progress that helps meet current economic, environmental and social needs, consistent with the protection of the environment and the free goods (non-economic) of future generations.

**Primary process units:** units where gases are produced from raw materials.

**Secondary process units:** units where gases are conditioned and packaged, normally using gases coming from primary process units, into their physical form (which may be compressed gas or cryogenic liquid) in the containers (cylinders, cylinder bundles, drums or tanks) best suited for distribution to end users. These units also produce pure and high purity technical and medicinal gas mixtures.

## **ACKNOWLEDGEMENTS**

For several years now, the Sustainability Report has been a key instrument for keeping all of our stakeholders up to date on the commitments we have made and the initiatives we have carried out.

A sincere thank you goes to all those who contributed to creating this document, whether by helping to collect the information published or, in particular, through their daily commitment to translating the values shared by the SOL Group people into appropriate behaviour.

For further details please contact:

SOL Group Quality, Safety and Environmental Central Management, Regulatory Affairs  
[sustainability@solgroup.com](mailto:sustainability@solgroup.com)

### **SOL Spa**

#### **Registered office**

Via Borgazzi, 27  
20900 Monza · Italy

#### **Share Capital**

Euro 47,164,000.00 fully paid up

C.F and company register of Monza e Brianza  
n° 04127270157  
R.E.A. n° 991655  
C.C.I.A.A. Milano, Monza Brianza, Lodi

March 2020

Graphic design  
**M Studio, Milano**

Photo

**Denis Allard**  
**Renato Cerisola**  
**Alberto Giuliani**  
**Daniel Ghio**  
**Albatros Film**  
**Archivio SOL**





**SOL Spa**  
Via Borgazzi, 27  
20900 Monza  
Tel. +39 039 23961  
Fax +39 039 2396375  
[sustainability@sol.it](mailto:sustainability@sol.it)  
[www.solgroup.com](http://www.solgroup.com)