





LEADERSHIP WITH PASSION
2019 Sustainability Report of the LU-VE Group

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



HIGHLIGHTS

The "Air" division of the Alfa Laval Group joins the LU-VE Group



The most advanced technological solutions for transcritical CO₂ systems are presented at the international congress in Montreal



Investments and the development of solutions using natural refrigerants with lower environmental impacts continue



Over 3,000 collaborators worldwide



LU-VE is recognised as a good company to work for by the Istituto Tedesco di Qualità e Finanza (ITQF – German Institute of Quality and Finance) and earns the "Good corporate responsibility practices 2019" award presented by the Lombardy Region



Spirotech wins the "National Awards for Export Excellence" awarded by the EEPC and is recognised as a leading exporter in India



Matteo Liberali (CEO), Iginio Liberali (President), Pierluigi Faggioli (Vice President), Michele Faggioli (COO), Fabio Liberali (CCO).



LETTER FROM THE PRESIDENT



Dear Stakeholders,

An independent German institute has recently classified LU-VE S.p.A. as one of the leading companies in Italy for culture, career prospects and corporate well-being.

This is an important recognition and an honour, and I would like to thank everyone at the LU-VE Group for the commitment they have shown in the last year.

Thanks to the very recent acquisition of the AL AIR Division of Alfa Laval, our results are marked by two distinctive hallmarks of the LU-VE Group: our ability to innovate with cutting-edge technological solutions, and our ability to unite different cultures at the highest level. These represent the driving forces and competitive advantage singled out by our partners.

We constantly strive to offer highly efficient products able to minimise environmental impacts, improve quality of life in communities, preserve food and reduce food waste.

In an economic scenario characterised by highly changeable social, political, cultural and technological aspects, we have directed our path to knowledge, information and the application of our business model – which is based on the promotion of an integrated and shared culture – according to our intrinsic values, as summarised in our company motto:

Humility	To never forget to learn and better ourselves
Passion	To guide our work and our commitment
Brains	To be creative, proactive and customer-focused
Values	To promote personal and professional growth

We want our humility, passion, brains and values to have a social impact that creates value for our stakeholders and our people.

Happy reading.

Best regards,

Iginio Liberali
President, LU-VE Group



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1. “MAKE ONE (SUSTAINABLE) COMPANY”

1.1 A NEW STEP TOWARDS GROWTH

Combining experience, tradition and a vision of the future, the LU-VE Group is one of the leading global players in the commercial and industrial refrigeration and industrial air-conditioning sector. From 1986 to the present day, the LU-VE Group has introduced a series of innovative and successful solutions onto the market. Its success on the international market originates from its cutting-edge research and development policy and its respect for the fundamental principles of environmental preservation:

- reduced energy consumption;
- reduced use of refrigerant fluid;
- low levels of noise pollution;
- high levels of reliability over time;
- reduced dimensions.

Thanks to the acquisitions made in the last few years and its cutting-edge solutions, the Group now represents a benchmark for the entire industry.

The Group's trajectory for growth, which now spans over 30 years, continued in 2019 with the acquisition in April of the "Air" division of the Alfa Laval Group. The increase in production capacity is mainly the result of the production plants in Italy and Finland, bolstered by the Group's global business presence ensured through well-established and recognised brands such as Fincoil and Helpman.

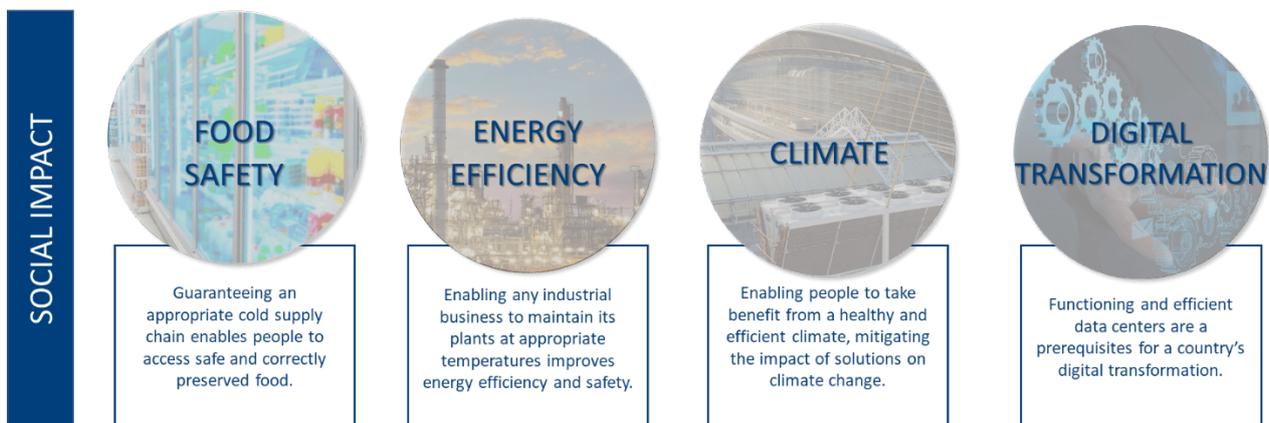


* LU-VE was founded in October 1985
METALLUVE was later absorbed into LU-VE
LU-VE Changshu was substituted by LU-VE Tianmen

With the ambition of maximising potential and internal collaboration, in 2014 the LU-VE Group launched the “Make One Company - Make One Culture” project. Characterised by the recent expansions, acquisitions and continuous growth, the project plays a strategic role in the Group's approach to the management of internal processes and market operations.

Ever faithful to the tradition of increasingly environmentally sustainable processes and products, the LU-VE Group launched a new range of products over three years ago, stating that the "*grey matter makes the skies bluer and the meadows greener*".

The "Make One Company" project thus consolidates the sustainability aspect: at the end of 2019, the Group outlined its plan to move towards an increasingly sustainable and more integrated approach to sustainable development. An initial mapping and analysis of the positive impact of the Group's business on the environment and local communities will enable the Group to more clearly identify the areas for development, structured as part of an action plan in line with the Group's business plan with the aim of minimising negative external effects resulting from its activities and optimising the value generated for the community.



THE LU-VE GROUP IS AGAIN AWARDED FOR ITS SOCIAL AND ENVIRONMENTAL SUSTAINABILITY PROJECTS

The “**Buone prassi di responsabilità sociale 2019**” (Good corporate responsibility practices) award assigned by the Lombardy Region and Unioncamere Lombardia to the LU-VE Group represents an important recognition of the Group's commitment to sustainability. The Group had already received the award in 2017, thus making its way onto the online database of good corporate responsibility practices on the website csr.unioncamerelombardia.it.

Specifically, the Group was recognised for its activities and initiatives relating to environmental sustainability, civil society and local communities, as well as good governance and responsible business management.

Today, the LU-VE Group is an international business consisting of 15 manufacturing companies in Italy, Czech Republic, Sweden, Poland, Russia, China, India, Finland and the United States, 8 sales companies and 4 representative offices.

The companies, production plants and representative offices of the LU-VE Group worldwide are listed below:

HEADQUARTERS		
1	LU-VE S.p.A.	Uboldo (VA) - Italy

MANUFACTURING COMPANIES		
1	LU-VE S.p.A.	Uboldo (VA) - Italy
2	LUVEDIGITAL S.r.l. (software production)	Uboldo (VA) - Italy
3	SEST S.p.A.	Limana (BL) - Italy
4	TECNAIR LV S.p.A.	Uboldo (VA) - Italy
5	MANIFOLD S.r.l.	Uboldo (VA) - Italy
6	THERMO GLASS DOOR S.p.A.	Travacò Siccomario (PV) - Italy
7	HEAT TRANSFER SYSTEMS (HTS) s.r.o.	Novosedly - Czech Republic
8	SEST-LUVE-POLSKA Sp.z.o.o.	Gliwice - Poland
9	LU-VE SWEDEN AB	Asarum - Sweden
10	"OOO" SEST LUVE	Lipetsk - Russia
11	LU-VE HEAT EXCHANGERS (TIANMEN), CO LTD	Tianmen - China
12	SPIROTECH HEAT EXCHANGERS PRIVATE LIMITED	New Delhi - India
13	ZYKLUS HEAT TRANSFER, INC.	Jacksonville – Texas, USA
14	AIR HEX ALONTE S.R.L.	Alonte (VI) - Italy
15	FINCOIL LU-VE OY	Vantaa - Finland

SPIROTECH, Bhiwadi, Rajasthan, India



LU-VE spa – Headquarters and Tecnair, Uboldo, Italy



SEST spa, Limana, Italy



“ООО” SEST LU-VE, Lipetsk, Russia



SEST-LUVE-POLSKA, Gliwice, Poland



HTS, Novosedly - Czech Republic



Air Hex, Alonte, Italy



LU-VE, Tianmen, China



Zyklus, Jacksonville, Texas, USA



LU-VE SWEDEN AB, Asarum, Sweden



TGD, Travacò Siccomario, Italy



LU-VE Fincoil OY, Vantaa, Finland



SALES COMPANIES		
1	LU-VE Contardo Pacific Pty. Ltd.	Thomastown - Australia
2	LU-VE Austria GmbH	Vienna - Austria
3	LU-VE Deutschland GmbH	Stuttgart - Germany
4	LU-VE France S.a.r.l.	Lyon - France
5	LU-VE Iberica s.l.	Madrid - Spain
6	LU-VE Netherlands B.V.	Breda - The Netherlands
7	“OOO” LU-VE Moscow	Moscow - Russia
8	LU VE Middle East DMCC	Dubai - United Arab Emirates

REPRESENTATIVE OFFICES		
1	Fincoil LU-VE Oy Denmark	Aarhus - Denmark
2	Fincoil LU-VE Oy Norway	Drammen - Norway
3	LU-VE Belgium, Ukkel	Bruxelles - Belgium
4	LU-VE S.p.A. Rep Off in Thailand	Bangkok - Thailand

1.2 THE GOVERNANCE MODEL AND INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM

The governance of the LU-VE Group aims to maximise the value created for shareholders and all stakeholders while monitoring business risks and ensuring the integrity and fairness of decision-making processes. LU-VE S.p.A. has adopted a **traditional corporate governance model** and complies with the Italian **Corporate Governance Code**. Its corporate governance structure, developed in line with the recommendations of the aforementioned Code and relative updates, consists of the Shareholders’ Meeting, the Board of Directors, the Board of Statutory Auditors and the Supervisory Body.

The **Internal Control and Risk Management System** is an integral part of the Governance Model and is described in the “Guidelines on the Internal Control and Risk Management System of the LU-VE S.p.A. Group” approved by the Board of Directors on September 21, 2017. The model is characterised by the involvement, with different roles and within the scope of their respective functions and attributions, of:

- a) the Board of Directors (BoD), which performs a strategic role and evaluates the adequacy of the Internal Control and Risk Management System of LU-VE S.p.A. and the LU-VE Group, and identifies within it:
 - i. one or more Directors responsible for establishing and maintaining an effective Internal Control and Risk Management System;
 - ii. a Control and Risk Committee, with the duty of supporting the assessments and decisions of the Board of Directors relating to the Internal Control and Risk Management System, as well as those relating to the approval of periodic financial

reporting. The Board of Directors also assigned responsibilities for sustainability topics to the Control and Risk Committee, as defined on February 19, 2019;

- b) the Internal Audit Manager, responsible for verifying that the Internal Control and Risk Management System is functioning and adequate;
- c) other roles and departments with specific duties regarding Internal Control and Risk Management, structured according to the size, complexity and risk profile of the business;
- d) the Board of Statutory Auditors which supervises: (i) compliance with the law and the deed of incorporation, as well as compliance with the principles of proper administration in the running of company activities; (ii) the adequacy of the organisational structure, the internal control system and the administrative/accounting system of the Company; (iii) the methods for concretely implementing the corporate governance rules laid out in the Italian Corporate Governance Code;
- e) the Supervisory Body established and functioning pursuant to Italian Legislative Decree no. 231/2001;
- f) Directors and control bodies of the subsidiaries, when present.

Relevant risks are subject to an annual report to the Control and Risk Committee and the Board of Directors from the Director responsible for the Internal Control and Risk Management System, who identifies them with the support of the competent corporate departments and the Internal Audit department; at the same time, the same Director specifies the mitigating actions carried out and/or to be adopted.

The Control and Risk Committee provides opinions to the Board of Directors in terms of the evaluation of the adequacy of the Internal Control and Risk Management System with respect to the characteristics of the company and the risk profile assumed, as well as its effectiveness.

With specific reference to non-financial information, the Board of Directors is also responsible for the approval of the Sustainability Report/Non-Financial Statement.

Furthermore, pursuant to Italian Legislative Decree no. 231/2001, LU-VE S.p.A. and the subsidiary SEST S.p.A. have adopted an **Organisation, Management and Control Model** (also "the Model"), updated during 2019 and approved in March 2020, intended to prevent and combat the risk of the commission of the offences laid out in the Decree itself, including the risks of the commission of offences against individuals, environmental crimes and corruption. The adoption and dissemination of the Model, supported by the constant monitoring of activities, allow the Company to rely on rules and control instruments that can prevent or promptly react to prevent the commission of any offences. In 2019, the Italian subsidiary Tecnair LV S.p.A. also adapted its internal system to the provisions of Italian Legislative Decree no. 231/01 and adopted its own Organisation, Management and Control Model pursuant to said decree, which was approved in March 2020. Furthermore, the duty of producing an Organisation, Management and Control Model pursuant to Italian Legislative Decree no. 231/2001 was extended to the subsidiary Air Hex Alonte S.r.l..

The process to introduce a whistleblowing system to enable employees to report any unlawful activity that may come to their knowledge as a result of their working activities, which began in 2018, will be finalised in 2020. This system, in line with the national legislative framework, aims to further protect employees against any form of unlawful activity and to promote the values of ethics that characterise the Group.

An integral part of the Model is the **Risk Assessment Document** drafted pursuant to the provisions of applicable law, which represents the mapping of risks present within the company and contains all of the procedures required for the deployment of prevention and protection measures to be enacted and the roles of those who need to implement them.

At the end of 2019 a process was launched to define the new audit plan for the 2020-2022 three-year period. The new risk assessment process, to be carried out in the first months of 2020, will enable the risk assessment document to be updated following the recent acquisition of the "Air" division of the Alfa Laval Group.

The assessment of non-financial risks updated in 2019 specifically considered the main risks at global level, the phases of the value chain, specific details of the manufacturing processes and the countries in which the Group operates. Non-financial risks were classified into different categories depending on the likelihood of occurrence and the potential impact. The majority of the risks identified were assigned a low or negligible score, such as the loss of sensitive data due to cyber attacks, consumer health and safety, and cases of discrimination, inequality or failure to respect equal opportunities within Group companies. The risks classified as "moderate" were duly described, along with the management methods adopted by the Group to mitigate such risks, in dedicated sections of the following chapters: The Well-Being of our People, Cutting-edge Solutions and Respect for the Environment.

While the protection of **human rights** was not identified as a material topic, in 2018 the Group nonetheless carried out an analysis focusing on forced and child labour, discrimination, respect for civil rights, political, economic and cultural rights and the violation of human rights across its supply chain, following the principles and criteria defined in the International Guidelines and Corporate Responsibility (ISO 26000), Social Accountability (SA 8000) and the Global Compact of the United Nations. In order to guarantee and protect workers' rights, the Group is committed to regularly monitoring the adequacy of this assessment, including in view of the commencement of business activities in new countries and organisational changes, and defining appropriate response systems.

To consolidate the process to monitor **the protection of human rights throughout the supply chain**, in 2019 a qualification questionnaire was created containing information about the sustainability management approach adopted by suppliers, aimed at verifying that the values, business ethics and principles of corporate and environmental responsibility of the LU-VE Group are shared by its suppliers. The questionnaire will be sent to all of the Group's major suppliers by the end of 2020. To ensure the efficient management of resources and the greater standardisation of the materials used in its manufacturing processes, the LU-VE Group aims to establish long-lasting, mutually beneficial relationships with its suppliers characterised by reliability and reciprocal trust. Meanwhile, audits of the Group's main suppliers, consolidated over the years, continued to be conducted.

CONFLICT MINERALS

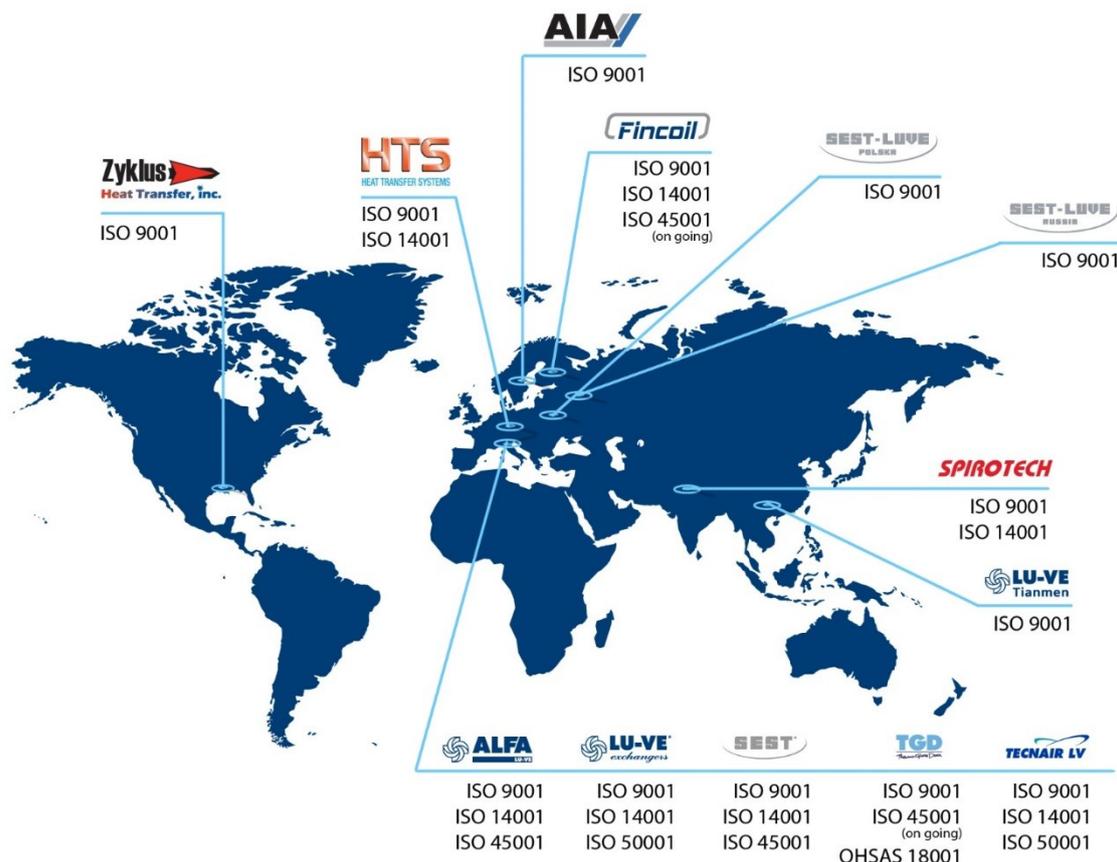
As part of the regular supplier assessment process carried out by the LU-VE Group, the CMRT (Conflict Mineral Reporting Template) must be completed by the Group's main suppliers.

This questionnaire aims to monitor the trade of "Conflict Minerals" in politically unstable regions, aimed at preventing the financing of armed groups, enforced labour or other human rights violations.

The ethical principles of the LU-VE Group are formalised in the **Code of Ethics** adopted by LU-VE, published on the Group's website, integrated in the General Purchase Conditions and distributed to all Companies in order that they ensure its adoption and compliance by employees and commercial partners. All recipients are entitled and required to understand and apply the Code of Ethics, as well as to report any gaps found or the need to proceed with any updates or adjustments.

The control principles laid out in the Model and in the Code of Ethics also apply, within the limits of the contractual relationship in force, to those whom, although not part of the Company, operate on the mandate or on behalf of it or are in any event linked to the Company by significant legal relationships, such as suppliers, advisors and trade partners.

As regards the management of company processes, certain Group companies have adopted quality (ISO 9001), environmental (ISO 14001), energy (ISO 50001) and health and safety (OHSAS 18001/ISO 45001) management systems in accordance with the corresponding standards. The progressive standardisation and development of these organisational models is one of the objectives defined at Group level. In particular, in 2019 HTS, the Group company registered in the Czech Republic, adopted a management system in line with standard ISO 14001 while SEST, the Italian company registered in Limana (BL) in Veneto, implemented an integrated health, safety and environment management system in line with ISO 45001 and 14001. As regards environmental certifications, in 2019 the Spirotech Heat Exchangers Private Limited site received the IGBC Green Factory Building – Gold certification.



1.3 THE TOPICS THAT TELL OUR STORY

This Sustainability Report presents the performance of the LU-VE Group on significant sustainability topics, focusing on the significant impacts of the LU-VE Group and their ability to influence stakeholders' decisions.

In the context of continued expansion and international growth, in 2019 the LU-VE Group decided to involve the Human Resources (HR) managers of all the Group's companies in the process to define said topics, with the aim of verifying the adequacy of the reported topics with regard to the priorities and needs of the Group.

The engagement of the HR departments, which took place as part of the "International HR Meeting" at the Uboldo headquarters in Italy, also represented the opportunity to share certain key elements aimed at ensuring a standardised approach to HR management at Group level, and to report on the steps towards sustainability taken thus far, the results achieved and the future objectives. It also offered an opportunity to illustrate the main global changes and subsequent challenges that businesses are confronting, with the ultimate goal of promoting a cultural of sustainability shared throughout the Group and facilitating the path towards sustainability.

Following the involvement of the HR managers and discussions with senior management, the nine topics identified by the materiality analysis were largely unchanged compared to the previous year. These topics, shown in the table below, have been associated with the three key elements of the LU-VE Group's business strategy: distinctive positioning, responsible growth and shared value.

MATERIAL TOPICS IDENTIFIED BY THE LU-VE GROUP

	Topic	What does it mean for the LU-VE Group?
Responsible growth	1. Growth strategies	Promoting growth strategies aimed at commercial expansion at domestic and international level through the development of new geographical markets and an increase in shares in existing markets, within a context characterised by the reduction of labour in Industry 4.0 and delocalisation within a global economy.
	2. Women, men and ideas	Safeguarding and strengthening the <i>know-how</i> of our people through professional growth paths which make it possible to provide customers with a competent and professional service, while motivating personnel and promoting talent.
	3. The well-being of our people	Promoting the well-being of our people and offering them a workplace in which every individual can best express their potential, guaranteeing equal opportunities and investing in security and the creation of an inclusive environment which is capable of welcoming the many people who find themselves working side by side with their different cultures, ethnicities and religions.
Distinctive positioning	4. Customer-focused approach	Generating enthusiasm among our customers through excellent products and services that meet their needs and the quality requirements defined at Group level, as well as supporting them throughout the product life cycle.
	5. Cutting-edge solutions	Promoting sector technological progress by investing in research concerning solutions capable of minimising the environmental impact and the noise emissions of finished products, also in collaboration with highly qualified partners linked to the world of universities and research.
	6. Sales ethics	Managing relationships marked by transparency with all Group <i>stakeholders</i> , ensuring compliance with regulations in force in terms of combating active and passive corruption and guaranteeing institutional communications and honest, truthful promotions based on factual information.
Creation of shared value	7. Economic and financial sustainability	Guaranteeing long-term economic results through adequate accounting management and the capacity to meet the needs of the market and of current and future customers.
	8. Reduction of environmental impact	Minimising the environmental impact of its production processes, enacting energy efficiency policies, reducing direct and indirect emissions, water consumption and the generation of waste.
	9. Quality of life	Offering solutions capable of boosting food preservation and ensuring control over temperature, humidity and air purity levels in specific environments (clean rooms) to increase service quality and improve quality of life.

1.4 WHAT WE DO: OUR PRODUCTS AND AREAS OF APPLICATION

The LU-VE Group designs, manufactures and markets solutions for the commercial and industrial refrigeration and air conditioning markets in over 100 countries. The Group also operates on the electrical appliance, mobile and Power Gen markets.

AREAS OF APPLICATION	PRODUCT TYPES			
	AIR COOLED HEAT EXCHANGERS	AIR COOLED EQUIPMENT	CLOSE CONTROL	INSULATED GLAZING
Commercial and Industrial Refrigeration	■	■		■
Air Conditioning			■	
Electrical Appliances				
Mobile	■			
Power Generation		■		
Special Applications		■		

In the **commercial refrigeration** segment, the Group develops applications for the supply chain involving the preservation, processing and storage of food products at controlled temperatures. Another aspect of this sector is **insulated glazing**, glass doors for refrigerated counters and display cases used to maintain the temperature and visibility of the goods on display.

The **air conditioning** sector includes the manufacture of products and components for air treatment in public and “technological” spaces - such as data centres, phone centres, operating theatres and clean rooms - in order to guarantee the control of temperature, humidity and air purity levels. In this field of application, **close control** systems enable the rigorous control of parameters such as temperature, humidity and air purity in controlled rooms, areas and particularly sensitive “technological” spaces, such as operating theatres and clean rooms.

In the **electrical appliance** and **mobile** sectors, the Group manufactures heat exchange and air conditioning systems mainly for the white goods¹ and refrigerated vehicles markets.

In the Power Gen sector, the LU-VE Group designs and develops technologically advanced applications for cooling systems used in energy production plants.

Finally, the **special applications** market consists of numerous different and extremely specialised applications. **Special applications** are developed for the heat exchanger market, particularly in relation to compressed air systems for industrial applications, electrical enclosures for large industrial systems and telecommunications plants.

Finally, thanks to its experience in the field of glass doors and systems, in 2019 the Group began to approach the digital signage sector, associated with the digital revolution and IoT for various applications including elevator cabins, hotels, refrigerator doors and fitness centre mirrors. Indeed, Gateway, the new technology launched by the LU-VE Group for content management (such as videos and images), transforms glass panels and mirrors into two, powerful and revolutionary communications systems.

¹ The white goods market refers to the production of electrical appliances such as refrigerators, washing machines and dishwashers.

2. RESPONSIBLE GROWTH

In the context of constant evolution in which the Group operates, the well-being of collaborators is one of the central topics in the management of human resources at Group and individual company level. Furthermore, in the light of the increasingly rapid expansion of the business it is important to maintain a high level of attention on preventing and monitoring occupational health and safety risks and on training, developing and consolidating the know-how of employees.

In this chapter we aim to illustrate the commitment to protecting and enhancing our employees, who we consider to be the driving force behind our Group's growth. The section dedicated to marketing strategies (§ Growth strategies) is followed by sections to illustrate the Group's approach to the growth of its employees and the development of skills (§ Women, men and ideas) and the protection of health and well-being (§ The well-being of our people).



2.1 GROWTH STRATEGIES

2.1.1. MARKETS, COUNTRIES AND EMPLOYEES

The LU-VE Group's business activities are benefiting from the current market trend driven by the demand for advanced solutions able to meet the dual objective of improving the living conditions of an increasingly expanding global population and reducing the environmental impact of increasingly high performance commercial solutions.

The Group's success in this global context has been ensured thus far by a conscious growth strategy that considers the cost of labour in the country in which the Group invests and the desire to maintain the existing workforce. The LU-VE Group has developed its organisation based on the skills and professional characteristics available locally in the countries in which its manufacturing facilities are located.

In 2019, the percentage of senior managers at the various offices of the Group recruited from local communities was unchanged compared to 2018 at 89.2%. In order to standardise this information at Group level, the calculation method for this indicator was changed to exclusively include employees classified as "Directors". The figure according to this calculation is 91.7%.

The Group's focus on strategic growth is first and foremost oriented towards its market of origin: founded in Italy, through the finalisation of the acquisitions of the Alfa Laval plants in the last year the LU-VE Group has confirmed its belief in Italy's economic growth over the medium to long term.

"I believe that rather than statistics, businesses are formed of women, men and ideas: our growth is the result of our investments in human capital and grey matter, our true raw materials. Thanks to the #ImpresaDay initiative we had the opportunity to enhance the advanced professional skills of our collaborators and consolidate our shared principles during a highly successful event."

Iginio Liberali, *Chairman of the LU-VE Group*

After the acquisition of the US company **Zyklus Heat Transfer Inc.** in June 2018, which enabled the Group to enter the US market and comprehensively consolidate its commercial presence, the expansion projects haven't ceased: in 2019 the largest acquisition yet, concerning the **"Air" division of the Alfa Laval Group**, was finalised, allowing the Group to become one of the three leading global operators in the sector, and the largest in Europe, and to consolidate its position in the *power gen* and commercial evaporator sectors.

During the year, the Group focused on consolidating its manufacturing capacities in its existing countries of operation: these activities included doubling the production capacity of the Gliwice plant in Poland and transferring the Chinese site to Tianmen, which increased the production area and enabled the construction of the employee dormitory and cafeteria. In Bhiwadi, India, Spirotech Heat Exchangers PVT Ltd. consolidated its position as one of the leading global operators in the air-cooled equipment sector and launched its own expansion project through the construction of a new manufacturing plant alongside the existing factory.

2.1.2 KEY FIGURES IN 2019

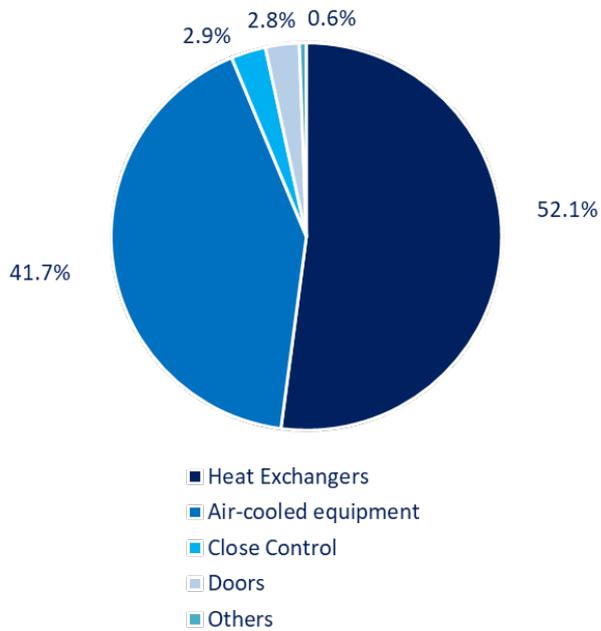
In line with previous years, in 2019 the growth strategies defined by the Board of Directors of the Parent Company with the support of the Group's senior management and the Management Committees of subsidiaries were implemented by two Strategic Business Units: *Cooling Systems* (for the sale of air-cooled equipment and close-control air conditioners) and *Components* (for the sale of air-cooled heat exchangers and special glass doors for refrigerated counters and display cabinets).

Overall, the Group's commercial division consists of internal units located at the sales branches and representative offices as well as at the manufacturing sites. These are supported by external agents, whose collaboration with the Group has been consolidated, with a deep understanding and knowledge of the product portfolio and the reference market.

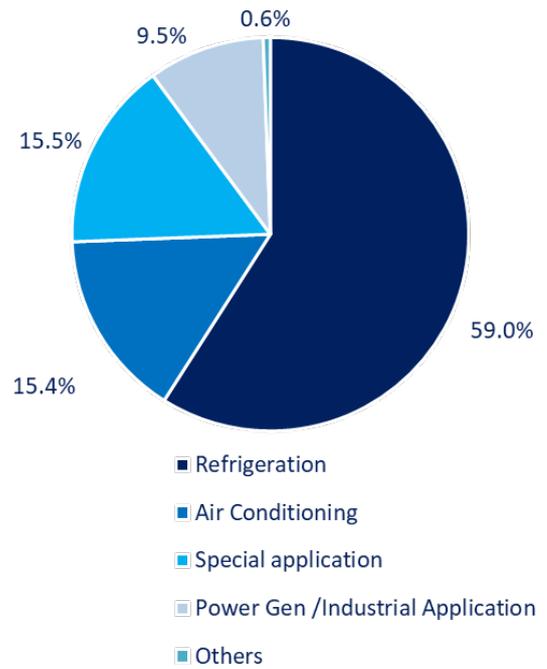
In 2019, the products most marketed by the LU-VE Group were heat exchangers, followed by air cooled equipment. Also as regards applications, the LU-VE Group reconfirms its considerable commitment in the refrigeration sector and slight growth in the *power generation* and industrial applications sector with respect to the previous year.



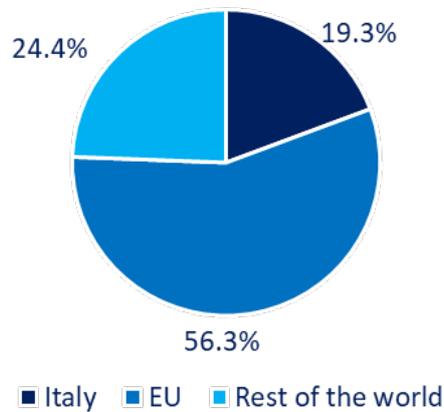
Breakdown of turnover by product type, 2019



Breakdown of turnover by sector, 2019



Breakdown of turnover by location, 2019



2.2 WOMEN, MEN AND IDEAS

2.2.1 HOW WE PROMOTE THE GROWTH OF OUR EMPLOYEES

According to the Group's strategic vision, the professional and personal development of our employees, whose ideas, skills, abilities and diversity bolster our competitive advantage, is both a driving force and strength.

The acquisitions and expansions that have characterised the Group in recent years pose new challenges with regard to managing an ever larger pool of human resources. In 2019 the aim to standardise the HR policies - from recruitment to performance appraisals and training methods - was achieved and a **Group HR management policy** was defined. This policy, aimed at implementing the key values defined in the Group Code of Ethics at operational level and promoting the adoption of a uniform approach, was presented during the last Group HR Meeting and shared with the Group HR department in order to ensure its local implementation and application within individual organisational departments.

HR LU-VE GROUP POLICY

The definition of a Group HR management policy is primarily aimed at recognising the strategic importance that LU-VE employees represent for the company's growth.

HR management objectives promoted by the new policy are of the utmost importance to the LU-VE Group and cover various aspects of well-being and professional development:

- Optimise the recruitment and selection process to attract and hire the best professional resources
- Provide excellent training programmes to all employees to develop theoretical and practical skills
- Create a working environment that promotes the exchange of cultures and skills
- Implement professional performance assessment programmes
- Continue to manage salaries and remuneration appropriately
- Respect the laws in the Group's countries of operation
- Prevent any instances of discrimination relative to political or religious beliefs, union membership, ethnic background, sexual orientation and data protection.
- Protect the health and safety of all employees

In 2019, the Group HR Department continued the project to adopt a standardised **performance appraisal** system: in 2018 the Group's HR Department began to develop an MBO (Management by Objectives) system for executives and managers, shared by all Group companies. In 2019 all specific objectives were mapped on a dedicated online platform and the system architecture was designed, breaking down the *Company Targets* associated with the financial performance of the Group into individual targets based on the skills development programme of the individual employee. The new MBO model has been operational since 2019 and will be fully applied to the new Group companies Zyklus, Air Hex Alonte and Fincoil in 2020.

In 2019, the project was launched to **map the roles and skills** of employees at all Group companies depending on the requirements of each company role. This mapping provides a comprehensive

overview of the Group's workforce and available skills. The assessment enables the definition of effective training plans in line with the Group's growth strategies, the application of balanced and opportune remuneration policies with respect to the reference market and internal dynamics, and the adaptation of the organisation in line with the Group's development strategies.

The Group has also begun to roll out the performance appraisal system to all employees, including white and blue collar workers. Given the volume of people involved, the project will proceed in stages, beginning with companies presenting the greatest organisational complexities before being gradually extended to all Group companies. The project is due to be rolled out in May 2020 and completed by the end of the year.

In order to ensure an appropriate level of employee engagement in the Group's development at all of its commercial and manufacturing companies, the Group has continued to develop an organic internal communications plan. In November 2019 the first newsletter was published in paper format and online at the Group's Italian sites, representing a meeting place for all employees of the LU-VE world and aimed at promoting engagement and creating awareness about the outlook, targets and initiatives of the Group. After the conclusion of the "pilot" project in Italian, which focused on business and social initiatives, an English version will be produced to reach all collaborators at the Group's various plants.

THE LU-VE GROUP PEOPLE FOR VENICE

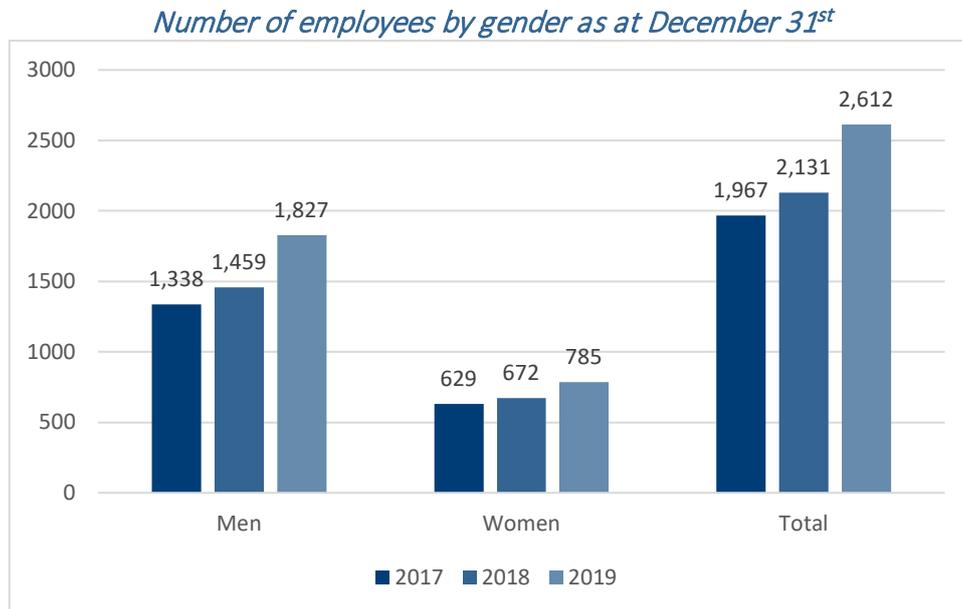
Following the floods that struck Venice in November 2019, all of the LU-VE Group's Italian sites opted to take part in the initiative promoted by Confindustria Veneto and Confindustria Venezia to raise funds and help the city to confront the damage caused by the extreme weather.

Group employees were able to choose to donate the equivalent of an hour's work to the city. The company also committed to double the total amount of money raised by granting to the city of Venice the same amount donated by employees.

2.2.2 KEY FIGURES IN 2019²

As at December 31, 2019 the LU-VE Group consisted of **3,169 collaborators³**, of which 2,612 were employees. The increase in employees in the year was mainly due to the acquisition of the Air division of the Alfa Laval Group, with approximately 400 new collaborators, and the significant growth of the Polish manufacturing site with around 150 new hires.

A total of 30% of the employees are women. The gender gap is due primarily to the characteristics of the business which, especially in past years, attracted primarily male workers.



² The percentages may not add up to 100% due to rounding.

³ The number of workers includes employees, temporary agency workers and contractors.

Overall, in 2019 60% of employees of the LU-VE Group were aged between 30 and 50, while 20% were under 30.

EMPLOYEES BROKEN DOWN BY PROFESSIONAL CATEGORY AND GENDER			
	2017	2018	2019
Executives	2%	2%	1%
Men	100%	97%	97%
Women	0%	3%	3%
Middle managers and white collar workers	27%	27%	31%
Men	65%	65%	66%
Women	35%	35%	34%
Blue collar workers	71%	71%	68%
Men	68%	69%	71%
Women	32%	31%	29%

EMPLOYEES BROKEN DOWN BY PROFESSIONAL CATEGORY AND AGE			
	2017	2018	2019
Executives	2%	2%	1%
Under 30 years of age	0%	0%	0%
30 to 50 years of age	45%	54%	44%
Over 50 years of age	55%	46%	56%
Middle managers and white collar workers	27%	27%	31%
Under 30 years of age	20%	22%	17%
30 to 50 years of age	65%	63%	65%
Over 50 years of age	15%	15%	17%
Blue collar workers	71%	71%	68%
Under 30 years of age	25%	25%	22%
30 to 50 years of age	58%	56%	57%
Over 50 years of age	17%	19%	21%

As at December 31, 2019, the Board of Directors was composed of 12 members, of which 3 were women. ⁴

NUMBER OF MEMBERS OF THE BOARD OF DIRECTORS BY GENDER, AS AT 31 DECEMBER			
	2017	2018	2019
Men	10	9	9
Women	3	3	3
NUMBER OF MEMBERS OF THE BOARD OF DIRECTORS BY AGE, AS AT 31 DECEMBER			
	2017	2018	2019
Under 30 years of age	0	0	0
30 to 50 years of age	4	3	1
Over 50 years of age	9	9	11
Total	13	12	12

In 2019, 84% of Group employees were employed on a permanent contract.

NUMBER OF EMPLOYEES BY CONTRACT TYPE AND GENDER									
	Permanent contract			Temporary contract			Total		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Men	1,152	1,223	1,554	186	236	273	1,338	1,459	1,827
Women	556	596	651	73	76	134	629	672	785
Total	1,708	1,819	2,205	259	312	407	1,967	2,131	2,612

NUMBER OF EMPLOYEES BY CONTRACT TYPE AND REGION									
	Permanent contract			Temporary contract			Total		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Italy	718	734	974	43	45	14	761	779	988
EU Countries	536	573	775	216	267	292	752	840	1,067
Non-EU Countries	454	512	456	0	0	101	454	512	557
Total	1,708	1,819	2,205	259	312	407	1,967	2,131	2,612

⁴ For more information on the Board of Directors, refer to the 2019 Report on Corporate Governance and Ownership Structure of the LU-VE Group.

NUMBER OF EMPLOYEES BY PROFESSIONAL TYPE AND GENDER									
	Full-time			Part-time			Total		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Men	1,327	1,449	1,814	11	10	13	1,338	1,459	1,827
Women	579	611	711	50	61	74	629	672	785
Total	1,906	2,060	2,525	61	71	87	1,967	2,131	2,612

With reference to the difference between the base salary and between the remuneration of women and men, the data provided in the table below is difficult to compare due to the presence of very different job levels and duties and the different number of men and women, particularly with regards to the company of the Spirotech Group where women cover very different roles to those of their male co-workers in the same category.

RATIO OF BASE SALARY OF WOMEN TO MEN (PERCENTAGE) ⁵									
	Executives			Middle managers and white collar workers			Blue collar workers		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Italy	-	63.6	71.7	77.3	79.2	78.6	99.3	97.8	101.9
EU Countries	-	-	-	69.1	71.4	72.5	89.2	67.4	69.2
Non-EU Countries	-	-	-	77.9	92.6	107.9	87.9	127.2	148.3

RATIO OF TOTAL REMUNERATION ⁶ OF WOMEN TO MEN (PERCENTAGE)									
	Executives			Middle managers and white collar workers			Blue collar workers		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Italy	-	53.8	65.0	75.0	76.4	76.6	92.0	93.8	99.6
EU Countries	-	-	-	66.1	71.6	70.9	97.1	75.3	71.1
Non-EU Countries	-	-	-	75.1	87.1	97.9	91.8	126.2	138.5

⁵ The calculation of the percentage ratio of base salary and remuneration does not include the 3 commercial companies established in 2019 and situated in Breda, Moscow and Dubai, as the data is not currently available. The Group aims to include the data within the reporting scope of next year's report.

⁶ Total remuneration: gross salary plus additional annually variable amounts, such as cash bonuses and available shares linked to individual performance and/or company productivity and all additional non-extemporaneous salary elements.

As regards training, every employee has the opportunity to take part in technical and management training courses. The course programme has been designed to provide everyone with the tools and skills needed to carry out their activities in line with the company's objectives and values.

Aside from individual training initiatives, meant to expand and supplement the technical and specialised skills of individual employees, *ad hoc* training courses have been organised for specific company roles.

In 2019, the LU-VE Group provided a total of 36,992 hours of training to its employees. In 2019 the training programmes mainly regarded the development of a shared culture of health and safety. Other courses regarded job-specific and environmental topics such as energy management, as well as management development programmes. In view of the increasing internationalisation of the Group, foreign language courses were organised at each company to promote inter-company communication.

AVERAGE HOURS OF TRAINING PER CAPITA BY GENDER AND PROFESSIONAL CATEGORY						
	Men			Women		
	2017	2018	2019	2017	2018	2019
Average hours of training per capita	15.2	14.4	15.5	12.3	10.6	11.1

	Executives			Middle managers and white collar workers			Blue collar workers		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Average hours of training per capita	16.5	14.0	16.2	23.0	22.5	21.1	10.9	9.7	11.0

2.3 THE WELL-BEING OF OUR PEOPLE

2.3.1 HOW WE ENSURE THE WELL-BEING OF OUR PEOPLE

The quality of the working environment is closely linked to employee well-being. In order to maximise the value generated by our employees, in 2019 the LU-VE Group again conducted a series of initiatives aimed at improving the health and safety at workplaces and promoting company *welfare*.

The **Group HR management policy** formalised in 2019 aims to define a series of shared guidelines to promote a culture of safety founded on awareness, the prevention of risks and the diffusion of responsible conduct at all levels of the organisation, aimed at prolonging, streamlining and improving the professional lives of employees within the Group.

This policy represents another step towards the challenging **target of “zero injuries”**.

LU-VE: FIFTH HIGHEST RANKING COMPANY FOR CULTURE AND CAREER

The **ITQF**, Istituto Tedesco di Qualità e Finanza (German Quality and Finance Institute), published a report listing the top 300 companies operating in Italy. In the 2019 edition, LU-VE S.p.A. came **fifth** in the Mechanical Industry category.



The study reviewed the 2,000 Italian businesses with the highest number of employees and analysed two main indicators: **corporate culture**, which included the working environment, sustainability, company values, customer focus and company welfare, and **career**, which included career networks, professional development, development prospects, incentives and requalification opportunities.

The analysis relied on "social listening", a method to collect fragments from online tests that contain at least one reference about the employer in question and finally attribute a score based on the two main criteria of corporate culture and career.

While health and safety is the responsibility of the individual companies, as part of the “Make One Company - Make One Culture” campaign, the Group, with the support of a specialist third-party provider, continued the analysis launched in 2018 of the **occupational health and safety management methods**, as well as the internal and external audits already carried out in the context of the ISO 45001/OHSAS 18001 occupational health and safety certifications. The analysis revealed a series of key actions to increase employee well-being and mitigate the health and safety risk associated with specific tasks and certain working environments, which will be implemented by 2020 in order of priority. These evaluations have also enabled the identification of certain areas of improvement in the design for the construction of the new manufacturing site in Poland.

In future years, the regular audits currently carried out with the support of external professionals will be conducted by LU-VE Group personnel with the aim of establishing a group of internal auditors to standardise the HSE audit processes in all of the Group's plants.

In line with the Group's goal to promote the health and safety of its employees and collaborators, in 2019 the **project to integrate and standardise** the management of HSE topics was launched. The project aims to further improve the monitoring of performance indicators and the comfort of the working environment at all of the Groups' plants, thus promoting more efficient production with a consequent boost in productivity.

The development of an occupational health and safety management model shared at Group level is also promoted through the adoption of an **organisational model** certified according to the new international occupational health and safety standards **ISO 45001**, a certification obtained for the SEST plant in Limana (BL), Veneto, and already held by the Air Hex Alonte plant in Italy acquired during the year. In line with the progressive standardisation of the Group's plants, the newly acquired Fincoil in Finland began the procedure to obtain the ISO occupational health and safety certification (for more information see paragraph "1.2 THE GOVERNANCE MODEL AND INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM").

Specifically, in 2019 new elements were highlighted for the definition of an **organisational and technical improvement plan**, beginning with a HSE assessment at the Group's Italian sites, with the aim of drawing up a series of strategies and guidelines at Group level.

Employee health checks were conducted in all companies in line with the provisions of current legislation and internal procedures, including in plants located in countries without legal requirements in this regard, and health protocols including specific examinations were defined to monitor workers' health. Certain Group companies also established a company welfare protocol to monitor general health conditions not directly associated with the working environment.

OCCUPATIONAL HEALTH AND SAFETY IN ITALY

In Italy - home to around 38% of the Group's entire employed workforce - several particularly significant occupational health and safety initiatives were carried out.

Health checks

In 2019 the health and safety programme implemented in previous years was intensified: with the primary aim of preventing occupational health and safety risks and not acting solely in response to critical situations, potential risks and the relative roles that could be exposed to them on a daily basis were investigated. The programme consists of a series of surveys conducted every one or two years on employee health, carrying out specific preventive medical examinations.

Evaluation of work spaces and the microclimate

The evaluation of the microclimate and the mitigation of chemical risk is an integral part of the programme to monitor employee health. In 2019, for example, following a specific risk assessment conducted in 2018, the Group allocated funds to improve the comfort of the working environment through the installation of modern air conditioning units in manufacturing plants, specifically in the furnace rooms at the Group's Italian and European sites. Also in 2019, the evaluation of the targeted actions to improve the ergonomics of work spaces and minimise the risks associated with repetitive movements, the transportation of loads and poor posture was completed.

Work-related stress assessment

Since 2014 the Group has monitored the trend of absenteeism and associates such data with an assessment of specific risks, thus activating a system designed to verify employee exposure to work-related stress (monitoring began in 2010 for Italian companies). In 2020 the 2018-2020 schedule to monitor the company workforce will be continued and will involve direct and indirect workers divided by group. The monitoring system, based on the guidelines published by the INAIL and shared with Employee Representatives, envisaged the measurement of work-related stress for company managers. This decision was based upon the principle that managers can play an active role in the management and mitigation of work-related stress for the entire company workforce, contributing to the promotion of a calm and balanced working environment.

THE LU-VE GROUP AND ITS RESPONSE TO A GLOBAL HEALTH EMERGENCY

The Group is carefully following the developments of the spread of the coronavirus and has adopted all of the necessary control and prevention measures, in coordination with local authorities and trade unions, at all affected sites.

The encouragement of smart working for white collar worker, aimed at all those whose roles enable them to work remotely, has been highly successful, leading to a significant reduction in the number of people at offices even before the recent decrees.

OUR RISK MANAGEMENT AND MITIGATION MODEL

In 2019 the LU-VE Group continued to pursue its commitment to occupational health and safety through the formalisation of the HR management policy. The policy reiterates the Group's objective of protecting the health and safety of its employees through appropriate preventive and protective measures, the correct application of existing company procedures and the provision of training and awareness-raising courses.

This strategy is consistent with the activities already implemented by Group companies, focused on monitoring and complying with existing legislation and the constant search for improvement initiatives able to gradually mitigate the occupational health and safety risks.

In order to consolidate the risk management model already adopted by the Group, in 2019 steps were taken to develop a standardised methodology shared by all Group companies for the assessment of occupational health and safety risks. The project will be gradually being implemented at each of the Group's plants, including those where there is no legal obligation to do so, and will enable the Group to better confront the levels of risk at the various sites, implementing improvement measures already adopted at other sites in the case of the most critical aspects. The Group risk assessment protocol will be implemented in the first quarter of 2020. The adoption of this process will enable legal matters to be monitored more effectively and allow the management of these topics to be standardised across all sites. Furthermore, as well as occupational health and safety aspects the project also extends to environmental topics, with the

aim of enabling these legislative aspects to be monitored more effectively and ensuring the adoption of a management approach standardised across all sites.

The new Group risk assessment model will follow the precautionary approach already adopted by the Group in this regard, with the aim of mitigating the risks associated with the failure to comply with internal procedures and current occupational health and safety legislation. Finally, the coordination and supervisory role played by the Group with regard to occupational health and safety risks is aligned with the operating activities of all of its manufacturing companies, who are required to adopt the necessary measures to implement the Group guidelines. Through specific targeted investments, the primacy aim of the individual companies is to ensure compliance with current legislation in the reference country. Moreover, systematic controls are carried out at site level on machinery and equipment and workers are provided with certified Personal Protective Equipment (PPE). In addition, employee work schedule and time off regulations are regularly respected in compliance with labour legislation and other regulations on workers' rights in the reference country.

In this context, the monitoring of injuries, carried out by individual manufacturing sites and at Group level, is a particularly central aspect. The centralised and coordinated control and monitoring of accidents, injuries, absenteeism, reporting and near misses are conducted regularly and shared with senior management.

Finally, occupational health and safety is subject to analysis following the acquisition of new manufacturing companies. Furthermore, once the acquisition is completed the Group begins the process to align the management of these topics and the associated risks to guarantee a uniform and coordinated approach.

With reference to risk management, in 2019 the Group adopted precise measures in all of its plants.

For example, direct action was taken aimed at **reducing noise to a minimum** at certain plants. The process to implement the improvement plants will be carried out at each plant, based on the risk assessments drawn up according to the Group's methodology.

Furthermore, in 2019 the Group's plants committed to identifying the most effective technological solutions to eliminate the risks associated with the repeated and onerous movement of loads. Where possible, manipulators and anti-gravity devices have been introduced and in other situations a turnover has been activated to reduce exposure; the process to implement the improvement plans will be carried out at each plant, based on the risk assessments drawn up according to the Group's methodology.

As regards the assessment of chemical risk and the relative environmental impact, Group companies have evaluated the use of chemicals with a view to their possible replacement with substances associated with a lower environmental impact and less risk to occupational health, as well as the introduction of new technologies to further improve the working environment.

RESPECT FOR HUMAN RIGHTS IN THE LU-VE GROUP

While the protection of human rights was not identified as a material topic, in 2019, while updating the non-financial risk analysis the Group continued activities to monitor aspects such as forced and child labour, discrimination, civil rights and the violation of human rights, not only through internal controls of work spaces of Group companies but also by requesting self-certification throughout the supply chain. With reference to 2019, the Group did not record any cases of violations of human rights deriving from the Group's activities or its business relations.

In 2019, the Group's attention on human rights topics concentrated on the Indian subsidiary Spirotech Heat Exchangers PVT Ltd. ("Spirotech"). Aware of the fact that the LU-VE Group operates, through the subsidiary, in a context where national and international organisations have given particular focus to social and human development⁷, in 2019 the Group focused its attention on assessing its own plants in India. With the aim of promoting European standards for the monitoring of human rights at all of the Group's sites, an HSE Assessment was carried out at the Indian company, which did not detect any instances of violation to human rights and confirmed the low risk of these topics. Confirming the desire to prevent any breaches to human rights, at the Bhiwadi site a Committee was established and formalised with the sole aim of monitoring cases of sexual harassment in the workplace.

The assessment activities carried out by the Group are supported by regular inspections and evaluations by its clients, some of whom belong to international groups which, like the LU-VE Group, operate worldwide.

TRAINING BREAKS

In 2018, the Federmeccanica-Assistal Fiom-Fim-Uilm National Health and Safety Commission identified "training breaks" as an innovative training method for occupational health and safety topics and introduced this approach into the national Guidelines. Moreover, the application of said guidelines in the metalworking sector would be periodically assessed and monitored. In 2019, six Training Breaks on environmental and energy-related topics were held at the Uboldo site, attended by around 250 employees.

First introduced and developed in the Group's Italian companies, the concept of training breaks consists of short training sessions (15-30 minutes) carried out during working hours for small groups of workers, focusing on individual aspects of health and safety and looking in particular at the risks related to their specific role, place of work, equipment and substances used and the relative safety procedures. These initiatives are based around the active involvement of employees and aim to promote the constant improvement and diffusion of the culture of safety and prevention.

⁷ "Business & Human Rights Ambitions and Actions in India. A primer for WBCSD members doing business in India", (2019) WBCSD, Confederation on Indian Industry, II-ITC Centre of Excellence for Sustainable Development



RELATIONS WITH TRADE UNIONS

Constructive dialogue with trade unions is of primary importance to the creation of a working environment based on employee dialogue and feedback.

The formal health and safety agreements with trade unions are subject to the laws of the countries in which the Group operates. In Italy, 100% of employees are covered by formal health and safety agreements. In China, there are currently no agreements in place with the trade unions concerning occupational health and safety, but the local subsidiary enters into an internal agreement with all workers who manage activities with health and safety risks, calling for risk training and awareness raising and the supply of personal protection equipment, the application of which is checked periodically, in addition to the performance of periodic health checks. In Sweden, a collective agreement covering 100% of the company population is entered into by the employers and trade unions. A similar system is in place in Germany. This type of contract does not exist in the other countries in which the Group operates.

As well as monitoring health and safety aspects, the Group is also committed to developing a **company welfare system**. The provision of benefits, applicable to certain Group companies and managed directly by HR Managers, differs from country to country depending on the requirements and cultures present within the Group. The Group HR Department oversees the adoption of these benefits and strives to ensure the adequacy of the various welfare packages. Benefits are provided to all employees, be they full-time or part-time, with the exception of the companies LU-VE HEAT EXCHANGERS (China), HEAT TRANSFER SYSTEMS (Czech Republic) and SPIROTECH HEAT EXCHANGERS (India), which provide benefits exclusively to full-time workers.

The main benefits of the LU-VE Group, 2019

	LU-VE S.p.A.	SEST S.p.A.	TECNAIR LV S.p.A.	THERMO GLASS DOOR S.p.A.	HEAT TRANSFER SYSTEMS (HTS) s.r.l.	SEST-LUVE-POLSKA Sp.z.o.o.	"000" SEST-LUVE	SPIROTECH HEAT EXCHANGERS PRIVATE LIMITED	LU-VE HEAT EXCHANGERS (CHANGSHU) LTD	LU-VE SWEDEN AB
Work-life balance (e.g. flexible working hours, incentives for commuters)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Promotion of healthy lifestyles (e.g. gym membership)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Support for workers' families (e.g. scholarships)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Medical insurance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

The LU-VE Group has a long history of supporting workers' children, whose abilities and commitment to academic study have led to the achievement of excellent results. In 2019 a total of 33 scholarships were awarded to the children of employees at the Italian companies SEST, LU-VE, Manifold, Tecnair and TGD.

2.3.2 KEY FIGURES IN 2019

Thanks to a significant increase in the number of occupational health and safety monitoring and assessment measures, as well as the increase in number of training hours on these topics, in 2019 there was a significant decrease in the number of accidents, equating to 32% at Group level. Meanwhile, the accident severity rate also fell by 42%.

ACCIDENT INDEXES ⁸ AND ABSENTEEISM RATES ⁹										
		Accident frequency rate			Accident severity rate			Absenteeism rate		
		2017	2018	2019	2017	2018	2019	2017	2018	2019
Italy	Men	19.5	23.8	12.8	609.5	539.0	386.4	4.4	4.9	4.5
	Women	13.7	3.4	3.1	746.5	398.4	272.5	6.4	7.2	5.5
EU Countries	Men	9.6	18.2	11.1	244.8	582.3	442.7	5.4	5.9	5.8
	Women	17.1	20.5	16.4	512.8	1,152.8	314.8	9.4	8.9	8.8
Non-EU Countries	Men	0.0	1.3	0.0	0.0	9.5	0.0	5.0	3.4	3.2
	Women	0.0	11.0	0.0	0.0	170.5	0.0	5.5	2.1	2.2
Total		11.1	14.7	8.6	373.9	496.5	290.1	5.7	5.4	5.1

In 2019, 8 accidents relating to external workers were recorded, with a specific frequency rate of 4.9 for men and a total at Group level of 4.7.

Finally, in 2019 there were two instances of occupational ill-health, one in Italy and one in Sweden, which were duly managed by the Companies in accordance with local authorities. Considering alleged cases, the occupational ill-health rate¹⁰ would be 3.07 for women in Italy and 0.92 for men in European countries, for an overall rate of 0.48 at Group level. No fatalities have been reported in the last three years.

⁸ The accident ratios were calculated as reported below:

- Frequency rate: number of accidents/hours worked*1,000,000
- Severity rate: number of days lost per accident/workable hours*1,000,000

Days lost considers the calendar days starting from the day subsequent to the accident.

The calculation of the frequency and severity rates of accidents in 2019 and 2018 did not include commuting accidents.

⁹ The absenteeism rate was calculated as reported below:

- Absenteeism rate: number of days of absenteeism/workable days*100

Reasons for absence considered were: injury, illness, unjustified absence, strike and absence for trade union reasons.

¹⁰ The occupational illness rate is calculated as the number of cases of occupational illness/hours worked*1,000,000

In the course of 2019, 358 employees left the Group, while 503 were hired.

NUMBER OF NEW HIRES AND TERMINATIONS BY GENDER						
	New Hires			Departures		
	2017	2018	2019	2017	2018	2019
Men	317	316	374	237	228	275
Women	121	123	129	63	105	83
Total	438	439	503	300	333	358
NUMBER OF NEW HIRES AND TERMINATIONS BY AGE						
Under 30 years of age	246	213	168	146	123	115
30 to 50 years of age	169	205	309	114	177	201
Over 50 years of age	23	21	26	40	33	42
Total	438	439	503	300	333	358
NUMBER OF NEW HIRES AND TERMINATIONS BY REGION						
Italy	80	66%	60	40	46	60
EU Countries	209	240	234	118	152	134
Non-EU Countries	149	133	209	142	135	164
Total	438	439	503	300	333	358

Since 2006, the LU-VE Group has supported the Alfa Cooperative through the “Come le scarpe nel frigorifero” (“Like shoes in the refrigerator”) project, aimed at promoting the integration of people with disabilities into concrete working roles that involve participation in normal company life. Indeed, this work plays a therapeutic role, favouring the social recognition of employees and thus boosting their self-esteem and personal dignity. Over the years, this consolidated partnership has enabled the integration of certain people of the Cooperative into the Group as employees. Since 2006, the Alfa Cooperative has employed around fifty workers with disabilities, approximately twenty of whom were operating at the Group's Italian companies at the end of 2019.

In 2019, the collaboration between Tecnaïr, a Group subsidiary, and Gaia Coop, a social cooperative that has provided electrical circuit boards to the LU-VE company for the last two years, continued, developing and enhancing the skills of people who have difficulty in finding employment in traditional work contexts thanks to the collaboration with the cooperative.

INBOUND AND OUTBOUND TURNOVER RATE BY GENDER

	Inbound turnover rate			Outbound turnover rate		
	2017	2018	2019	2017	2018	2019
Men	23.7%	21.7%	20.5%	17.7%	15.6%	15.1%
Women	19.2%	18.3%	16.4%	10.0%	15.6%	10.6%
Turnover rate	22.3%	20.6%	19.3%	15.3%	15.6%	13.7%

INBOUND AND OUTBOUND TURNOVER RATE BY AGE

Under 30 years of age	53.4%	42.1%	31.8%	31.7%	24.3%	21.7%
30 to 50 years of age	14.5%	16.7%	19.8%	9.8%	14.5%	12.9%
Over 50 years of age	6.8%	5.2%	5.0%	11.8%	8.2%	8.0%
Turnover rate	22.3%	20.6%	19.3%	15.3%	15.6%	13.7%

INBOUND AND OUTBOUND TURNOVER RATE BY REGION

Italy	10.5%	8.5%	6.1%	5.3%	5.9%	6.1%
EU Countries	27.8%	28.6%	21.9%	15.7%	18.1%	12.6%
Non-EU Countries	32.8%	26.0%	37.5%	31.3%	26.4%	29.4%
Turnover rate	22.3%	20.6%	19.3%	15.3%	15.6%	13.7%



3. DISTINCTIVE POSITIONING

The global demand for energy is characterised by two main drivers: firstly, advanced economies will be characterised by a slight increase in consumption due to increasing digitalisation and, therefore, by increased efficiency; secondly, developing countries will significantly increase consumption as a result of urbanisation and industrialisation.

Recognising the fight against climate change as a priority not only for the sectors in which it operates but for humanity as a whole, as a market leader the Group intends to continue to promote the research and development of highly efficient and environmentally friendly solutions and promote the use of natural refrigerants.

This section will deal with the methods whereby the LU-VE Group intends to stand out in the market, meeting customer needs (§ Customer-focused approach) and developing innovative solutions capable of minimising environmental impacts in the utilisation phase (§ Cutting-edge solutions). The last section of this chapter describes how the Group manages its *business* in compliance with regulations and its own values (§ Sales ethics).



3.1 CUSTOMER-FOCUSED APPROACH

3.1.1 HOW WE RESPOND TO OUR CUSTOMERS' NEEDS

The LU-VE Group is constantly committed to interpreting and anticipating current and latent market demand and transforming it into technologically advanced, cutting-edge products able to provide excellent and reliable performance over time. In fact, ensuring continuous product and service improvements to guarantee full customer satisfaction is one of the targets expressed in our *mission* and forms the basis of our Group culture.

In 2019 the Group continued its research into optimising plant performance, reducing production and operating costs throughout its life cycle. With regard to customer service, the Group's main focuses were optimising planning times and promoting a shared culture of customer management.

These initiatives express the Group's desire to become a partner and important interlocutor for customers from the planning stage onwards, aiming to create solutions that align with specific operating conditions and are thus able to guarantee optimum performance. Furthermore, the *co-design* process, which calls for customer engagement, responds to functionality and reliability needs while also limiting total product costs, with the aim of creating a competitive advantage for the customer.

In order to develop a customer-focused approach shared by all Group companies year after year, a project was launched to improve and standardise the calculation method of the costs relating to the Group's solutions. Focusing primarily on the *Components Business Unit*, the project involved the collaboration of various company departments, from IT to sales, and regarded the creation of a dedicated *tool* to provide access to a single database able to map the active production lines at various manufacturing sites, the technologies produced and the relative prices of products and components. Through this project the Group aims to provide greater flexibility and timeliness in its product delivery, in addition to promoting a standardised customer management approach at Group level and optimising synergies between the various manufacturing companies.

This innovation is even more strategic for special products; the Technical Office collaborates with the R&D Department to optimise each individual design and planning phase.

Furthermore, in 2019, the process to optimise the time scales for product design and delivery to the end client was continued with the introduction of **key technical roles for the management of special products during the planning phase**. In the same way, the offer management process was optimised to reduce order processing times through the continuous refinement of IT tools for automatic product configuration and "customisation" management. Finally, in 2019 the percentage of orders handled by the automatic configuration system increased by 49.8% compared to 2018, a particularly positive figure given the excellent result achieved in 2018 which recorded an increase of 26.7% compared to 2017.

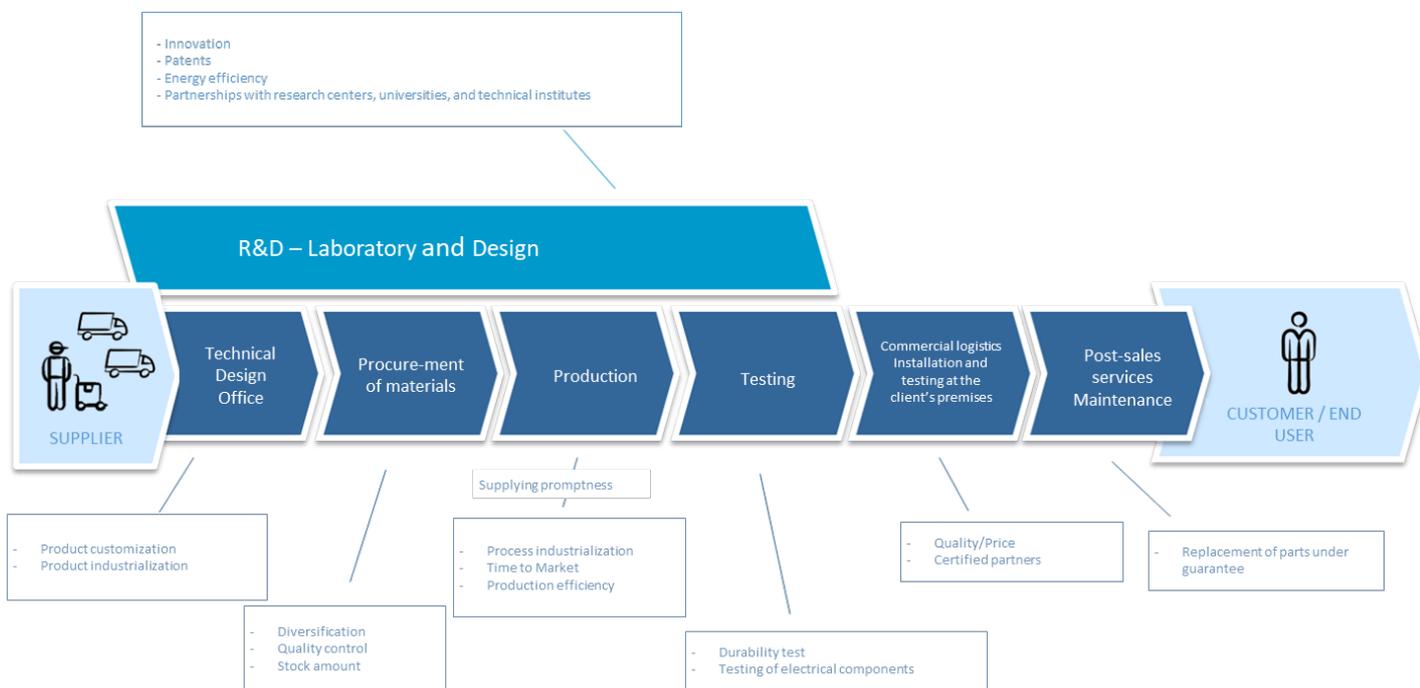
Moreover, in order to manage increasingly international production activities and to effectively connect the design and production phases in sites located in different parts of the globe, in 2019 the Group implemented a **platform to enable technical product information to be shared between sites**. The possibility to share information between different Companies and sites in a straightforward and structured way paves the way for a centralised planning system, as well as improving the efficiency of the entire production cycle.

The corporate culture of the LU-VE Group contributes to the success of the organisation, placing the customer at the centre through the ability to innovate and the spirit of initiative, both of which are key elements to the construction of long-lasting mutual trust.

The post-sales phase is also handled by a **commercial network** consisting of two divisions or *Strategic Business Units* with management centres divided by country and experts dedicated to specific product lines. Aside from standard products in the catalogue, our internal skills and resources allow us to develop highly customised products on the basis of the particular specifications and system performance requirements of customers.

Once the solution planning and development phase is complete, the Planning, Research and Development Department produces a detailed *Installation and Maintenance Manual* that contains the technical specifications and instructions for the correct use of the solution. This document also provides information on the presence of potentially harmful substances for the environment, as well as the product’s safety and disposal methods and the relative environmental impacts, based on applicable legislation. Customers have constant access to the *Customer Services* department of the Sales division for any subsequent maintenance requirements or requests for assistance.

Towards the customer, the Group’s activities from start to finish



QUALITY CONTROL

LU-VE Group products are tested before being introduced into the market. Controls are carried out in LU-VE Group laboratories or at the laboratories of the Group's technical *partners* such as universities or accredited centres. For the air cooled, close control and insulated glazing product categories, manufactured in Italy, the Group conducts health and safety impact assessments. Specifically, risk assessments are carried out relating to electrical safety, and further safety testing is conducted in accordance with European directives, such as the "Machines Directive 2006/42/EC", applicable to all machinery introduced into the European market.

Thanks to its partnerships with many suppliers, the Group is able to eliminate the majority of manufacturing defects, including those defined as "concealed", or which cannot be identified during the manufacturing and testing phase.

The recurrence of product defect events has historically been very limited, at a percentage which is considered natural for the business segment. In cases in which product defects are identified, the Group Company involved agrees on corrective actions to be taken with the customer and if necessary activates the insurance taken out to cover that eventuality. Nearly all customer returns are linked to product quality issues, which are typically related to defects that make the product unsuitable for use within the warranty period and cannot be repaired by the customer. Total returns in 2019 amounted to 0.1% of revenue, in line with 2018 and 2017.

3.1.2 KEY FIGURES IN 2019

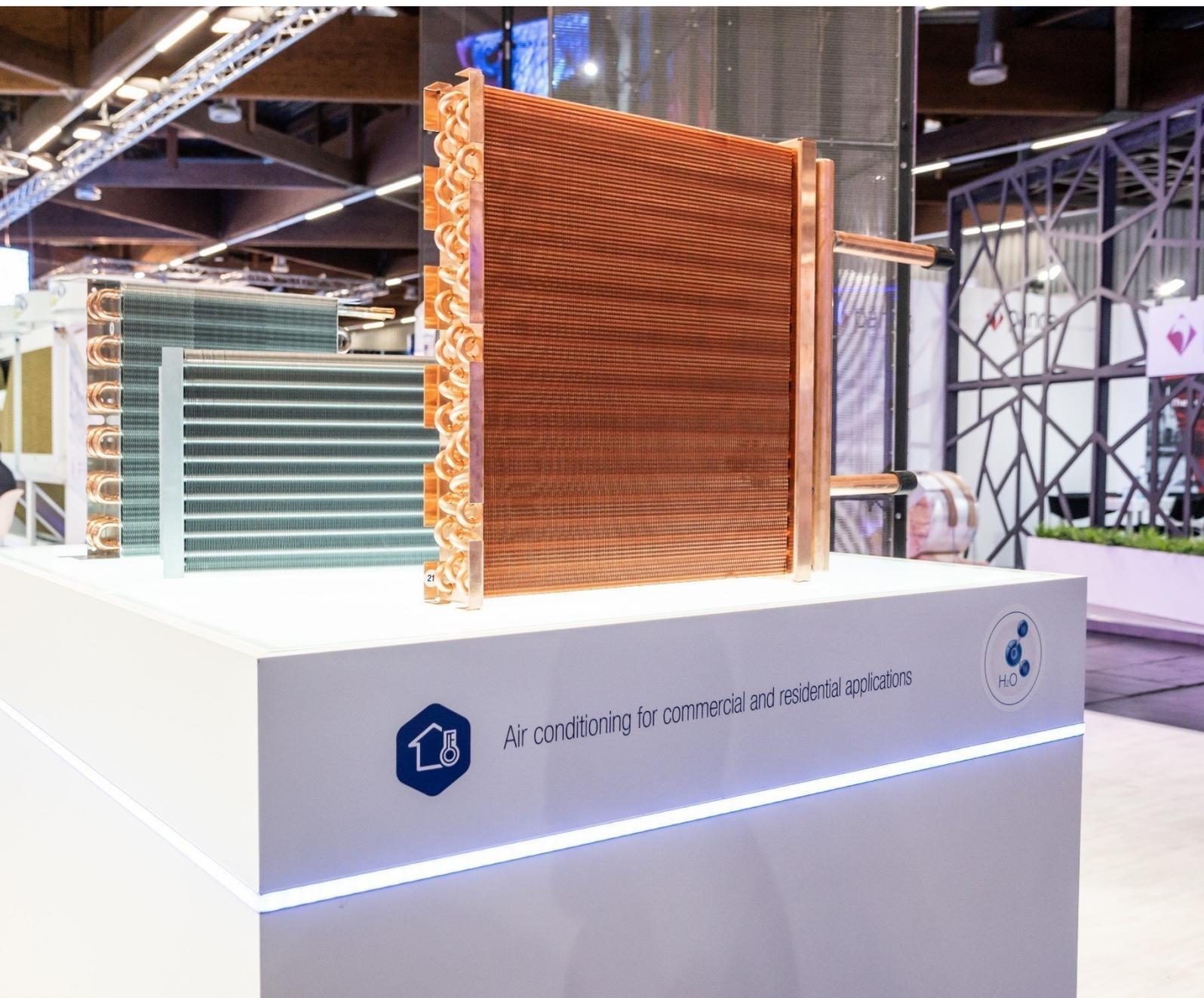
The Group monitors its customers' satisfaction through periodic analyses, the results of which aim to identify solutions to improve its commercial range. In particular, in order to ensure continuous feedback, as well as the *one-to-one* relationship between the customer and the sales representative the Group implements a **customer satisfaction survey** at least every two years.

In the last two-year period, the Group organised a *Customer Forum* in Russia which involved some of its key customers. The event held in 2018 was attended by over 82% of those invited and enabled the Group to compare itself with the demands of the markets in which it operates and to the relative products, as well as to compare the quality management systems implemented at Group level and by the Russian subsidiary. During the event, participants also took part in a guided tour of the manufacturing site of "OOO" SEST-LUVE, enabling them to get to know the technological and manufacturing business of the Group. Finally, the possibility of gaining a better understanding of the services offered by the Group was particularly well-received by participating customers.

HTS 2019: THE COMMITMENT TO CUSTOMER CARE

In 2019 the Group's *Sales Business Unit* focused on improving the services offered to its customers and, in particular, on the *delivery times* offered by its Czech plant.

The *On Time Delivery* indicator, defined as the ratio between number of products delivered within the time frames established with the customer and the total number of deliveries made, shows that in 2019 HTS achieved values above 90% in this regard. This result was achieved thanks to a series of targeted measures and the constant communication with its main customers.



3.2 CUTTING-EDGE SOLUTIONS

3.2.1 RESEARCH, TECHNOLOGY, LEADERSHIP

Technological development is a key factor in responding to the needs of a constantly evolving market. Overall, the Group's investments continue to be directed towards the development of alternative technologies aimed at minimising energy consumption during use, reducing the internal volume of refrigerant circuit and fluid, as well as mitigating the noise levels of the solutions, constantly surpassing the technological limits of existing applications.

When designing its solutions - managed by a dedicated Technical Department - the Group assesses the environmental impacts throughout the life cycle of the project according to the principles of the *Life Cycle Perspective*, *Design for the Environment*, *Life Cycle Assessment* and *Life Cycle Cost*, and works in accordance with the European Directive 2009/125/EC (ErP - *Energy related Products*) to minimise impacts overall.

In 2019 **research and development investments**, including those into natural refrigerant fluids, and the recent acquisitions continued, leading the Group to produce a broad range of innovative products that are technological leaders in the field at a global level. For example, the renewal of the Group's technical know-how in the field of air-cooled heat exchangers is thanks to the acquisition of the "Air" division of Alfa Laval, enabling the Group to further increase the performance and reliability of this range of products.

In 2019, the installation of high performance solutions continued, guiding innovations in the field of refrigeration in highly innovative contexts.

The Group supported the *Gulf Cooperation Council*¹¹ (GCC) in the installation of the first CO₂ plant in the Masdar area of Abu Dhabi, characterised by its innovative and sustainable vocation. In fact, Masdar City is one of the first ecologically sustainable city projects: each building is constructed using low-carbon cement, uses 90% recycled aluminium and is designed to reduce energy and water consumption according to the standards American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). Specifically, the evaporators of the LU-VE Group and the *gas cooler* with adiabatic spray system have been chosen for the refrigeration systems of the new Carrefour store in the UAE, located in Masdar Mall, as they are in line with the goal of the GCC to develop innovative solutions able to maintain high energy efficiency in areas characterised by high temperatures.

NATURAL REFRIGERANT FLUIDS: THE CHALLENGES OF USE

The gradual introduction of **natural refrigerant fluids** such as carbon dioxide, ammonia and propane represents a valid alternative to hydrofluorocarbons (HFC) and enables the greenhouse gases associated with climate change to be significantly reduced. In fact, one kilogramme of carbon dioxide can have an environmental impact up to 4,000 times lower than one kilogramme of R-404A

¹¹ The *Gulf Cooperation Council* is a regional political and economic intergovernmental union that unites the Arabic countries in the Persian Gulf, with the exception of Iraq.

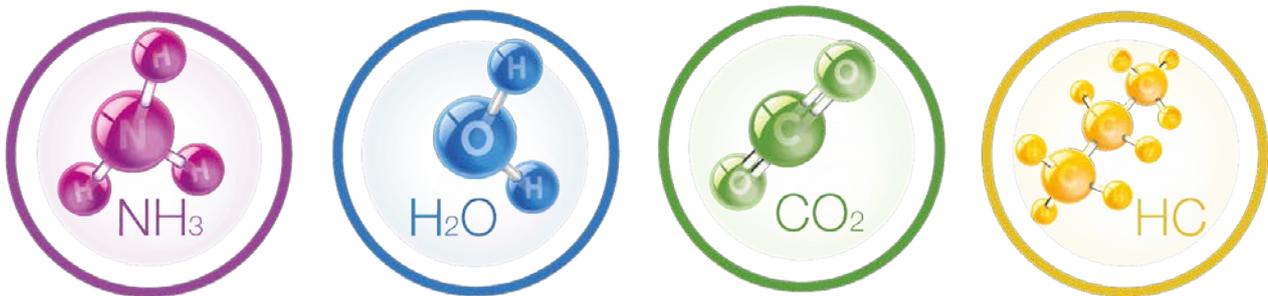
(which until recently was the standard refrigerant in the EU and still is in Non-EU Countries) in terms of global warming potential (GWP).

Natural refrigerant fluids gradually gaining traction in the refrigeration industry include carbon dioxide and hydrocarbons. Another fluid used in this context is ammonia, which has long been used in the refrigeration applications. However, solutions using natural refrigerant fluids are characterised by certain limitations that must be managed carefully to ensure *performance* and safety during use.

Carbon dioxide is a fluid that guarantees high levels of system safety thanks to its non-toxic and non-flammable characteristics, factors which enable its use in unlimited quantities. Moreover, CO₂ is characterised by high thermodynamic performance at medium and low temperatures and low production costs compared to other refrigerant gases. The main system considerations for its application as a refrigerant fluid are the high operational pressures of the fluid and its inefficiencies in conditions characterised by high external temperatures.

Ammonia is another high performance refrigerant fluid but is both toxic to humans and highly flammable, characteristics that limit its usage volume in many countries. Usually used in large refrigeration units, ammonia is the highest performing natural fluid but also presents various system limitations.

Hydrocarbons such as propane are characterised by physical properties that enable their use in a vast range of applications. However, problems such as flammability currently limit the use of hydrocarbons in small-scale refrigeration systems.



THE COMMITMENT OF THE LU-VE GROUP IN THE FIELD OF NATURAL REFRIGERANTS: 20 YEARS OF HISTORY

The LU-VE Group's interest and research into the field of refrigeration with natural fluids began in the late 1990s. This marked the beginning of a long journey - studied by numerous patents - aimed at increasing the competitiveness, both in terms of performance and cost, of solutions using natural refrigerants. An integral part of this strategy is the research into solutions that use a lower amount of refrigerant to exchange the same amount of heat.

The LU-VE Group was one of the first companies in the sector to apply *computational fluid dynamics* to explain fluid dynamic flows and heat exchange processes, as well as to install cutting-

edge equipment in its laboratories; around a decade ago, the Group installed a test chamber to test CO₂ exchangers in transcritical conditions. In the last ten years, the refrigeration market has significantly increased its focus on CO₂ systems: at the end of 2008 a total of 140 plants were installed in Europe; by 2019, there were over 30,000 installations worldwide.

The experience gained has led to the development of **software dedicated to the dimensioning of the CO₂ systems** calibrated with data from our laboratory. The project enables the machine's performance to be calculated during the design phase according to the specific specifications of the individual client and application, with the results then shared with the customer.

The Kigali Amendment (2016) to the Montreal Protocol is a document agreed between over 170 countries that defines the commitment to gradually reduce the greenhouse effect caused by HFC refrigerants. In this context, natural refrigerant fluids, such as CO₂, ammonia and hydrocarbons represent an important ally in delivering the commitments undertaken by the Montreal Protocol, as they are characterised by an Ozone Depletion Potential (ODP) of zero and low or zero Global Warming Potential (GWP).

In 2004, long before the Kigali Amendment, the LU-VE Group installed the **first transcritical CO₂ plant in Europe** (Coop Tägipark, Wettingen, Switzerland) in collaboration with numerous international partners. Transcritical systems work in conditions where the refrigerant fluid used is above the critical temperature (in the case of CO₂, the critical temperature is 31°C, a particularly low figure when compared to the critical temperature of HFC fluids). As a result, the energy efficiency of transcritical CO₂ systems may be reduced during the warmest times of the year.

The technologies developed by the Group, such as the *spray* and adiabatic solutions, help to **maintain a high level of energy efficiency** even in climatic conditions characterised by high external temperatures.

In 2016, for example, the LU-VE Group installed the first transcritical CO₂ system in Russia. The first installations of this kind in India and the Middle East took place in 2018. To ensure maximum heat exchange efficiency, the LU-VE Group provided the heat exchangers, gas coolers and air coolers at a supermarket in Amman, the capital of Jordan, to ensure maximum heat exchange efficiency. The project was part of an extensive partnership between the LU-VE Group and its trade partners and the Jordanian Ministry of Environment, financed by the Climate and Clean Air Coalition and coordinated by the United Nations Industrial Development Organisation (UNIDO). The project represents an important milestone in the distribution of environmentally friendly systems in subequatorial climates.

With regards to the increased use of CO₂ solutions, in 2019 the Group installed a CO₂ *gas cooler* with adiabatic panels and heat recovery systems at a supermarket in Gorinchem in the Netherlands, increasing the performance coefficient (the amount of heat introduced or imported compared to the energy used) by 33% compared to a conventional dry gas cooler.

The innovative technology allows the supermarket, warehouse and offices to be heated during the winter, using the heat recovered by the heat pump and avoiding the consumption of extra energy. Compared to other solutions on the market, the system has the great advantage of not requiring the water used in the adiabatic system to be treated, thus avoiding the risk of Legionnaire's disease and freezing often associated with this type of system. The use of CO₂ enables maintenance costs to be

reduced, avoiding the use of HFC refrigerants which are constantly rising in cost on the European market in response to the quota system that limits their export and production.



3.2.2 NEW SOLUTIONS AND PARTNERSHIPS IN 2019

The LU-VE Group is aware that technological innovation in the sector is bolstered by partnerships with various companies, sharing best practices and scientific research and publication activities.

The **international partnerships** with universities and specialist centres, several of which have been consolidated over the years, are promoted by the Group to further specific projects and experimental research activities. Some of these collaborations lead to the production of reports and scientific papers and promote the technological development of solutions in the sector. The results of innovative technologies and models are then protected with dedicated patents.

Active partnerships with Universities and Specialist Centres, 2019

PARTNER	PROJECT
Polytechnic University of Milan (Italy)	Research activities into thermal exchange Research activities into <i>close control</i> for operating theatres
Brno University of Technology (Czech Republic)	Development of new exchanger families
Danish Technological Institute (Denmark)	Experimentation of ammonia evaporators
University of Parma (Italy)	Development project on new products in the bonding sector
University of Trento (Italy)	Research activities into corrosion and the choice of materials
Experimental Glass Station in Murano (Italy)	Thermal insulation performance of insulated glazing
Norwegian University of Science and Technology (Norway)	Experimental research activities into the application of CO ₂ technologies in countries with tropical climates

Partnerships with universities and specialist centres have also contributed to the Group's power of innovation: one of the most recent solutions developed, *Armónia*, was created thanks to a research project in collaboration with the Danish Technological Institute and the Polytechnic University of Milan, while the long-standing partnership with the latter was also behind the development of the *Emeritus* project. A project was launched with the Department of Air Conditioning and Heating at the Polytechnic University of Warsaw (Poland) in October 2019 and is currently being developed. In particular, the LU-VE Group provided some of its machinery for use in practical activities during specialist refrigeration and air conditioning courses which involve around 300 students each year.

Since 1989 the LU-VE Group has published over 30 papers in collaboration with authoritative partners in the field of refrigeration and other sectors in which the LU-VE Group has an active presence.

INNOVATION AND RESEARCH TO RESPOND TO GLOBAL CHALLENGES

"Refrigeration for Human Health and Future Prosperity" is the title of the 2019 edition of the "International Congress of Refrigeration" organised by the International Institute of Refrigeration in Montreal, where businesses in the sector and researchers from all over the world share the latest technological advances and the results of their scientific activities to respond to the challenges of food security, health, energy efficiency, and the mitigation of environmental impacts and global warming.

During the event, the LU-VE Group presented two major studies carried out on the new applications of natural fluids in the field of refrigeration.

Specifically, "**New generation of low-charge ammonia unit coolers**" describes the new configurations of ammonia-based evaporators and the experiments conducted by the Group aimed at achieving high levels of efficiency with extremely reduced loads, while the study "**High efficiency air cooled heat exchangers for CO₂ applications**" shows how the use of CO₂ applications can offer significant reductions in environmental impact thanks to the careful planning and optimisation of the thermal exchange parameters, not just at low temperatures but also in areas characterised by warm climates and temperatures, overcoming the technical and operational difficulties presented by this kind of natural refrigerant.

DEBATE AT EUROPEAN LEVEL

During the 18th edition of the European Conference "The Latest Technology in Refrigeration and Air Conditioning", the results of the "**New CO₂ gas cooler for dry and wet operation**" research project were presented, describing the operational principle of the Emeritus solution and its benefits in terms of the performance of CO₂ applications.

In collaboration with the United Nations and the Environment Ministry, the European Conference held at Milan Polytechnic University in 2019 confronted the new technologies developed in the *Heating, Ventilation and Air Conditioning* sector, with particular reference to new refrigerants and the new European and international regulations.

At the event, the most recent research conducted by the Group into natural refrigerant fluids ("High efficiency air cooled heat exchangers for CO₂ applications" and "New generation of low-charge ammonia unit coolers") was presented.

Innovation is in our DNA



2019

R-Fin Patent



2018

Armonia



2017

Gateway



2016

Nidea



2016

Emeritus



2015

Zero Energy Glass



2015

Whisperer plus



2014

Plug&save



2012

Minichannel



2010

The Whisperer



2010

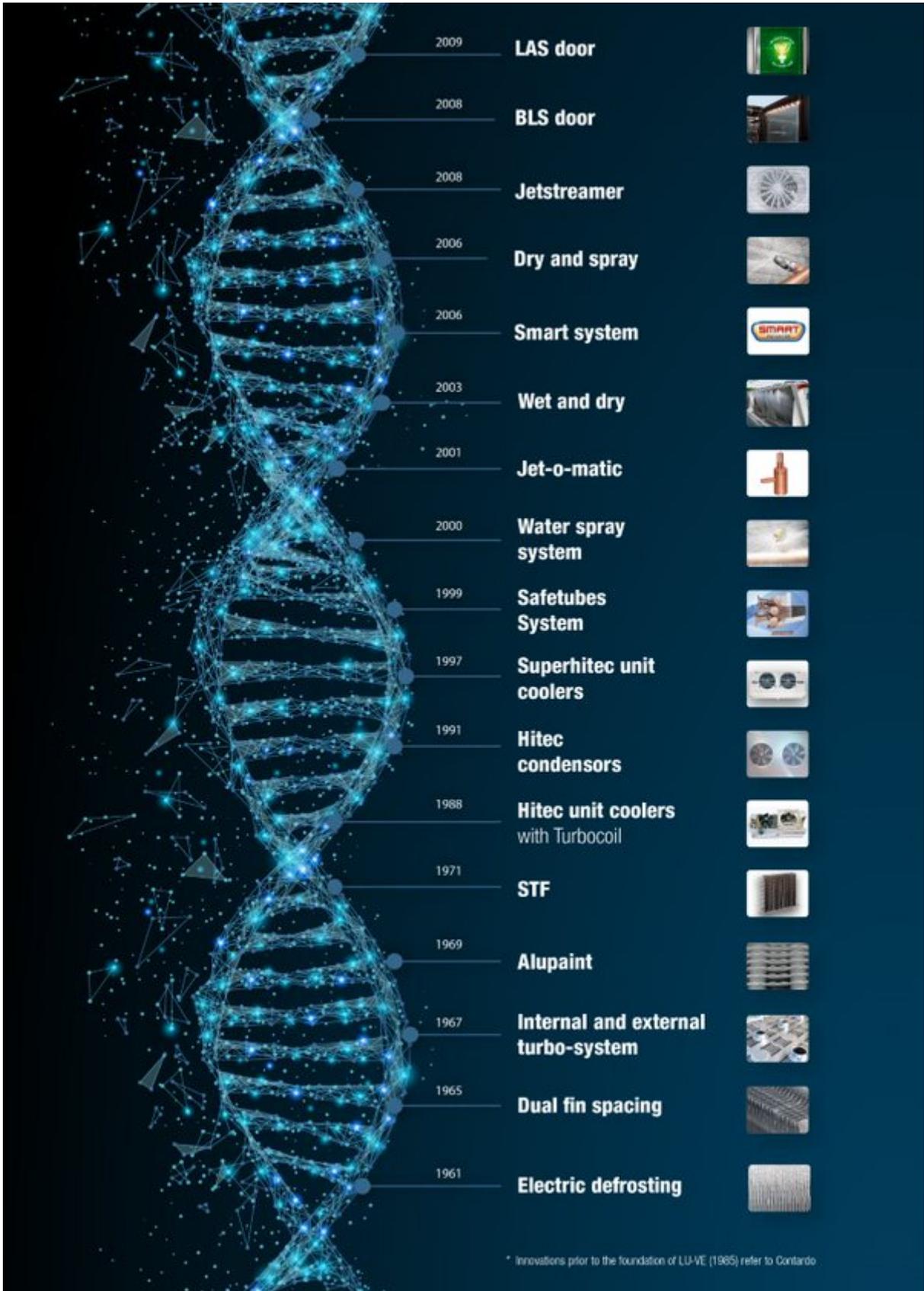
Line up - BLS door



2009

BLS Titan door







Armónia

ARMÓNIA

THE RANGE OF LOW VOLUME AMMONIA EVAPORATORS FOR INDUSTRIAL REFRIGERATION



Thanks to targeted system solutions developed through the partnership with the Polytechnic University of Milan and the Danish Technological Institute, Armónia **enables the quantity of refrigerant to be reduced by up to 67%** compared to traditional solutions, using 0.07 kg of fluid per kW of installed thermal power. This result, achieved thanks to a compact and efficient heat exchange geometric and an optimised circuit system, reduces operating costs and energy consumption.

Thanks to these innovations, the LU-VE Group has further reduced the volume of ammonia used in its heat exchangers which, as seen previously, use a lower volume compared to traditional units of the same capacity.

These results not only enable the **mitigation of health and safety risks** associated with ammonia-based systems, but also enable the size of the refrigeration unit within the manufacturing site to be reduced, thus reducing investment costs. The possibility of reducing the volume of ammonia also **enables the expansion of the field of application** of these solutions, which are often subject to regulatory limits, and, therefore, increases the environmental benefits associated with the introduction of natural refrigerants.

Developed for industrial refrigeration, the technology used by Armónia, which at the end of 2019 had been installed in 4,000 systems worldwide, may also be applied in other fields in the future thanks to its capacity to offer high levels of efficiency with significantly lower volumes of fluid.

At the 2019 International IARR Expo in Phoenix, Armónia was presented to the US market where ammonia-based solutions are already relatively widespread.



EMERITUS THE SPRAY SYSTEM AND ADIABATIC PRE-COOLING SYSTEM IN CO₂ APPLICATIONS



The Emeritus system, introduced and patented in 2016 and developed in collaboration with Milan Polytechnic University, combines the benefits of the *spray* system with those of the adiabatic pre-cooling system. Using these technologies, Emeritus can reduce **electricity consumption by up to 60% and water consumption by up to 95%** compared to traditional evaporation towers. In addition, there is a considerable reduction in noise levels, up to six decibels, and a significant increase in the overall efficiency of the refrigeration system, as it makes it possible to lower the condensation temperature and therefore the energy used by the system. Thanks to a sophisticated control system, Emeritus optimises the machine's performance under various climatic conditions.

As well as HFC refrigerant fluids, the solution can also be applied to natural fluids such as CO₂, ammonia and water. Thanks to its performance-optimising characteristics, Emeritus significantly **increases the efficiency of CO₂ solutions in extremely hot climates**, effectively overcoming what for many years was considered one of the principle barriers preventing the widespread use of CO₂

systems. The result of continuous research, the Emeritus system was designed to function in subcritical conditions even in the hottest months of the year: the plant is able to maintain high levels of efficiency even below the minimum threshold, when the external temperature exceeds 31°C, fully utilising the refrigerating potential of carbon dioxide.

The Emeritus system is subject to continuous improvement: in 2019 the Group's R&D Department filed two new patents for the optimisation of the evaporators used in CO₂ refrigeration systems; thanks to the new technology, the ratio between exchanged heat and the quantity of material used is even more efficient (+78.8% for copper and +31.6% for aluminium), with a further reduction of the environmental impacts generated by the use of these plants.

In 2019, Emeritus was presented at the ISH Expo in Frankfurt and the DCW Expo in London, focusing on its applications for data centres and in CO₂ refrigeration systems. In China and the Middle East, where the first CO₂ plants were installed, these solutions were presented respectively at China Ref Expo in Shanghai, an international refrigeration, air-conditioning, heating and ventilation tradeshow, and at the food and beverage trade fair Gulfood Manufacturing in Dubai.



Minichannel

MINICHANNEL SOLUTIONS TO REDUCE ENVIRONMENTAL IMPACTS



Minimising the internal volume of heat exchangers, and therefore the quantity of refrigerant fluid, **broadens the field of application of propane as a refrigerant fluid**. Thanks to the introduction of the cutting-edge technology Minichannel, which uses a special ribbed tube measuring only 5mm in diameter, the LU-VE Group has enabled **internal volume of the heat exchangers to be reduced and, consequently, a 68% reduction in propane used** to exchange the same amount of heat, compared to traditional systems.

Furthermore, the new version of the Minichannel heat exchanger, which uses CO₂ as its refrigerant liquid, was introduced to the market in 2019.

Minichannel is therefore **crucial to reducing the load of refrigerants** in propane applications, which are often limited by law, and is particularly efficient in reducing electricity and water consumption, making these solutions among the most competitive and environmentally friendly on the market.

In 2019 the Group also introduced the new range of evaporators for refrigerator units which, thanks to the optimised use of materials, enables a further reduction in the environmental impact generated: efficiency in terms of the ratio of thermal kW exchanged to amount of material used rose by 66.6% for copper and 56.8% for aluminium.



by TGD[®]
Mirabilia

GLASS DOORS

ENERGY SAVING WITH THE HOT GAS DEFROST SYSTEM TECHNOLOGY



In the field of glass doors, in 2018 the LU-VE Group introduced an innovative and efficient defrosting system using the *Hot Glass Defrost System* technology.

The new system is superior to traditional defrosting systems which use electrical resistance and, thanks to an internal circuit heated by the heat produced by the machine itself, **enables a reduction in electricity use of 82%**. This new system also significantly reduces heat loss into surrounding environments and offers a higher level of defrosting efficiency.



TECNAIR LV

T Series - Cold Hat

For keeping your corridors and racks cool

COLD HAT

OPTIMISING DATA CENTRE SPACE



Given the increasing demand for storage and power, space is becoming the true limiting factor for data centres. To confront the expansion and exponential increase in server power density, the LU-VE Group has developed the Cold Hat technology which frees up space previously taken up by air conditioners by positioning the air cooling systems above the server cabinets.

In fact, the Cold Hat technology has been designed to intake warm air emitted from the top of the server and convert it in the cold aisle where the air intakes of the various electronic devices are located, maximising the energy efficiency of the environments and increasing the performance of the data centres.

Thanks to the technology developed by the Group, Cold Hat can increase efficiency by almost 17% compared to traditional In-Row solutions where the cooling system is located by the server. This reduction offers two economic advantages linked to a lower use of energy for the same level of

performance, and the more efficient use of space which enables more servers to be installed in the same area.



INTERNET OF THINGS (IoT) SOLUTIONS



Gateway – The IoT Mirror for Lift Cars is patented in Italy (Italian Patent No. 102017000031537 - European Patent Pending) and applies IoT technology to elevator cabin mirrors, transforming them into new, powerful and revolutionary systems of online communication.

Communication, digital signage and advertising – Already developed and on the market, Gateway shows information, photos, videos and advertising material with the possibility of changing content remotely and in real time. The mirror is transformed into a platform for selling advertising, offering rapid returns on investment.

The technology is in the advanced design phase for the following applications:

Emergency Support Mode – Gateway is transformed into a two-directional audio/visual communications system with a 24/7 help service: it improves communication and passengers' feeling of safety and detects any health emergencies, special requirements and false alarms.

Maintenance Support Mode – Gateway is transformed into a touch-screen video platform connected to a remote computer, providing access to instructions, manuals, videos and technical diagrams. This offers maintenance technicians a direct audio/video connection with the help centre and provides efficient support for planned and predictive maintenance, as well as for the visualisation of technical information (such as diagrams, videos in real time, operating parameters, etc.).



iMAGE

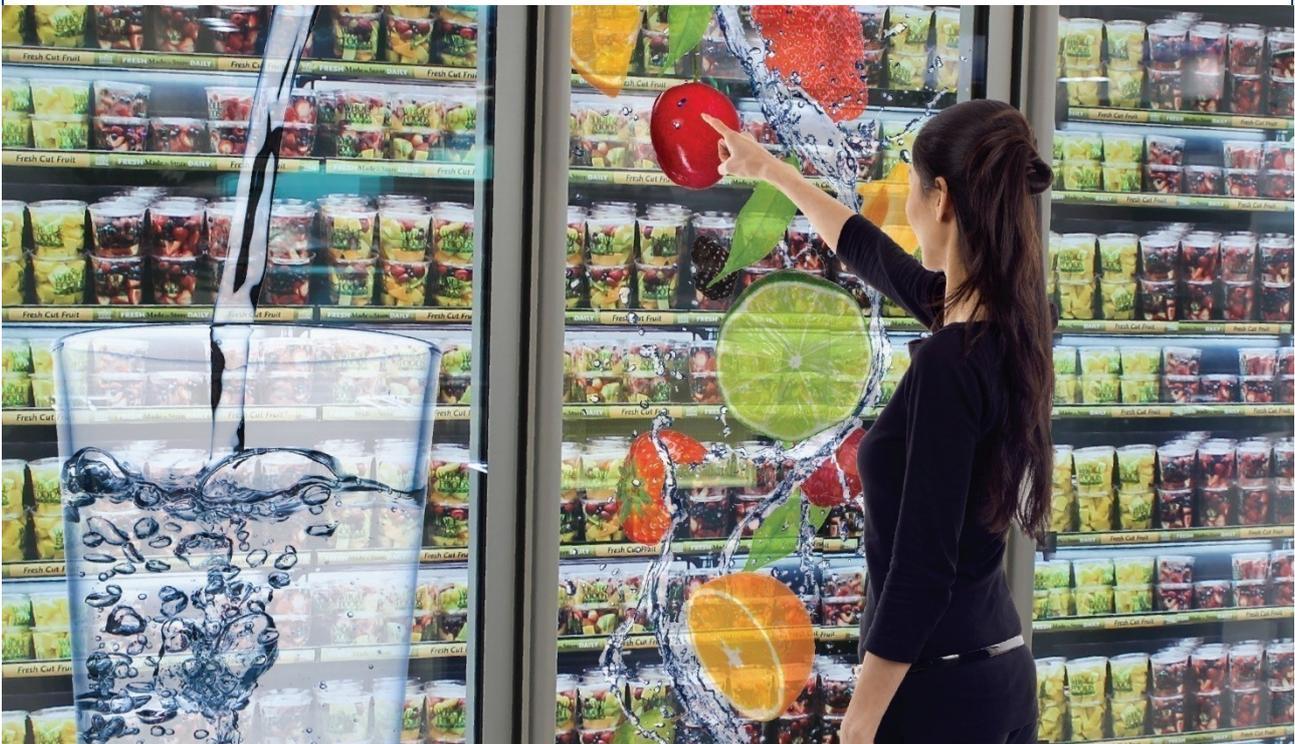
**iMAGE – Luxury Mirror Television
SMART MIRROR**



iMAGE – Luxury Mirror Television is a digitally animated mirror that becomes a TV screen, drawing viewers' attention to audiovisual communication.

Thanks to the elegant and technologically advanced design, iMAGE is well suited to luxury hotel lobbies or guest rooms, yachts, high class bars and restaurants, spas and fitness centres, and any other refined setting where the systems appeal brings added value that complements the luxurious context.

Compact, subtle and extremely lightweight, the technology can be applied to a broad range of applications, with high potential for tailor-made solutions designed for the client and the intended environment.



Magic Vision by TGD®

MAGIC VISION THE MAGIC OF MARKETING

Magic Vision is a glass door system for commercial refrigerators and freezers that incorporates a transparent HD video screen on the inside. It has three different configurations:

Video mode - This mode plays almost any video file in HD, uploaded locally by commercial memory devices or remotely by GSM and Wi-Fi.

Touch Display mode - The touch-screen mode transforms the door into a digital interactive tool able to combine promotional and data collection activities. It offers a major direct marketing opportunity optimised through data collection.

Integrated mode - The door can incorporate an Android PC to enable the management of any personalised digital tool such as sensors, web-cams and lights.

Magic Vision can also be equipped with an artificial intelligence system for facial recognition. The system is able to profile users facing the door and provide important data for the owner of the commercial operation.

OUR MODEL TO GUARANTEE INNOVATION IN THE LONG-TERM

The proposal of innovative technological solutions in line with market *trends* represents an essential competitive advantage to ensure the Group's business in the long-term. In the context of risk assessment, while the likelihood that the Group is not able to effectively drive technological innovation is considered remote, this would be particularly significant in the case that the Group did not intercept a *disruptive* innovation within the sector.

The Group has historically occupied a leading position in the field of design, research and development. These activities are led by a dedicated Department that operates in accordance with guidelines defined at Group level intended to maximise energy efficiency, starting from the instructions set forth in the European *Energy related Products (ErP)* Directive.

In addition, so as to pursue research and development objectives, the Group has adopted a policy for investment in research structures and methodologies and boasts consolidated collaborations with many universities and research centres in Europe and worldwide. The results of innovative technologies and models are then protected with dedicated patents.

The Group's research and development laboratory, located at the Uboldo site, is at the cutting edge in Europe in terms of size as well as expertise, being one of the few in the world capable of conducting performance testing on CO₂ fuelled equipment applied to evaporators and condensers.

3.3 SALES ETHICS

3.3.1 PRINCIPLES, RULES AND RESPONSIBILITIES

Aware of the central role that it now plays in its sectors of operation, the Group remains committed to ensuring the respect of international and local laws and regulations, as well as the principles of business ethics which have always underpinned the LU-VE Group's relations with its collaborators, customers, shareholders and local communities.

Following the acquisitions that have characterised the last few years, the Group intends to promote a shared culture and approach to commercial management and is committed to expressing the principles defined in the Code of Ethics through concrete actions, as well as implementing appropriate internal control systems to ensure that all Group companies operate in line with the Group's approach.

The activities of the LU-VE Group are based on **principles of honesty, transparency, loyalty, integrity and correctness**, as defined in the Code of Ethics.

The Group operates in compliance with any regulatory provisions applicable in Italy and in every other Country in which the Group Companies operate, and rejects any conduct that is incompatible with the Code of Ethics, the applicable regulatory provisions and any internal regulations. The achievement of results which are consistent with the interests of the Company and the Group must, therefore, always be based on conduct and procedures that are compatible with the Group's ethics. The Code of Ethics also establishes explicit behavioural restrictions and an associated penalty system applicable both internally and externally to the Group's business activities, concerning integrity, the fight against active and passive corruption and conflicts of interest.

Another key theme of the Code of Ethics is the promotion of the principle of transparency with respect to all stakeholders and the responsibility to the general public, whose economic and social development may be influenced by the activities of the Group Companies, even if only indirectly. Moreover, LU-VE S.p.A., SEST S.p.A. and Tecnaïr LV S.p.A. have adopted **an Organisation, Management and Control Model pursuant to Italian Legislative Decree 231/2001** aimed at preventing the criminal liability of organisations, while the subsidiary Air Hex Alonte S.r.l. has also been tasked with preparing a similar model (for more information see paragraph 1.2 of this Sustainability Report).

To ensure transparency and corporate communication for financial aspects, a structured procedure is in place with shared responsibilities with regard to ordinary disclosure and the disclosure of so-called price-sensitive information. With reference to sales communications, however, the Communication Department and the Marketing Managers of the Sales Department, working jointly with the CEO, the CCO, the CFO and the Sales & Marketing Director, are responsible for ensuring the consistency and uniformity of such information.

EUROVENT-CERTIFIED SINCE 2000

To ensure the transparency of sales communications based on facts, the Group has voluntarily signed up to the Eurovent certification scheme.

This certification guarantees that the information specified in the catalogue is consistent with the actual performance of the solutions, in terms of power, air flow, energy consumption, noise levels

and construction characteristics, as a result ensuring the solution's capacity to provide optimal operating conditions and minimum costs, for the entire lifecycle of the system.

In 2000, LU-VE S.p.A. was the first company in Europe to obtain the prestigious **Eurovent "Certify All" certification** for unit coolers, condensers and *dry coolers*. In 2019, LU-VE products passed the laboratory testing laid out by the certification procedure for the twentieth year in a row, which calls for an annual verification of certain models of the ranges selected on a sample basis by Eurovent and tested at specialised international institutions.

The Group has set itself the objective of obtaining the first Eurovent certification for exchangers operating with liquid CO₂. Achieving this aim would equate to the Group's recognition as the **benchmark standard** for the entire sector and for subsequent certifications. In particular, the LU-VE Group aims to complete the certification procedure by 2020. There are currently no Eurovent-certified CO₂ products on the market.

ASME CERTIFICATION

In 2019 LU-VE S.p.A. renewed the ASME certification used by the Group for several years for certain products and required on certain markets. The ASME code represents the manufacturing standard for pressure boilers and devices certifying the mandatory manufacturing, control, testing and certification requirements in North America.

3.3.2 KEY FIGURES IN 2019

In the reporting period, the LU-VE Group did not identify any cases of incidents of corruption, or legal actions for anti-competitive, anti-trust or monopolistic behaviours. Furthermore, the Group was not subject to any penalty or assessment of non-compliance with laws or regulations regarding the environment and the communication of product information.

4. CREATION OF SHARED VALUE

Creating shared value means consolidating the competitiveness of a company while improving the economic, social and environmental conditions of the communities in which it operates.

To this end, the Group aims to progressively integrate sustainability into its business, from the development of new products and the entry onto new markets to the operational management of all of its business processes, in order to create value and promote the mutual participation of its stakeholders: employees, customers, suppliers, local communities and businesses.

This section deals with the methods implemented by the Group in order to guarantee long-term economic and financial sustainability (§ Economic and financial sustainability), generating shared value for its shareholders and investors, employees and suppliers. The second part focuses on key aspects and actions aimed at mitigating the impact of production processes with regard to safeguarding future generations and local communities (§ Respect for the environment). Finally, this chapter describes the methods by which the Group aims to improve quality of life within the company (§ Quality of life).



4.1 ECONOMIC AND FINANCIAL SUSTAINABILITY

4.1.1 VALUE GENERATED FOR STAKEHOLDERS

The LU-VE Group aims to maintain its cutting-edge position in the development and technological innovation of refrigeration systems.

The ability to innovate and develop cutting-edge technologies represents a key strategy to ensuring a business' profitability in the refrigeration and conditioning sector and guaranteeing added value for its customers in the long term. Investments in R&D, the presence of one of the biggest R&D laboratories in Europe and the improvement and optimisation of its commercial market presence are testaments to the Group's economic results.

To ensure efficiency and quality when responding to market and customer demands, the Group has implemented a system of specific departments based on the various areas of expertise. Economic and financial *performance* monitoring is managed by the Administration, Finance and Control Department, which also handles the definition of the budget, including the collection of information from the various Companies and a subsequent phase of sharing it with the CEO and the COO, followed by approval by the Board of Directors of the Parent Company. Furthermore, the Department regularly monitors the progress of the various Group Companies to verify the budget information.

From a financial perspective, the Group is constantly committed to minimising net working capital in order to remain in a position of minimum risk for investors and to maintaining an adequate and competitive cost of production that can be reconciled with the best technological levels and the timing accepted by customers as well as by the market.

THE SUSTAINABLE ECONOMIC DEVELOPMENT OF THE LU-VE GROUP IN CHINA

The LU-VE Group's capacity to encourage a positive relationship between Italy and China and to seize reciprocal opportunities and commercial potential was recognised at the "China Awards 2019" in the "Top Investors" category. The awards ceremony was held at the Leonardo da Vinci Museum of Science and Technology in Milan as part of the 14th edition of the "China Awards", an event promoted by Fondazione Italia Cina and Class Editori and sponsored by the Ministry of Foreign Affairs, the Ministry of Economic Development, the Ministry of the Environment and the Italian-Chinese Chamber of Commerce, in partnership with the Italian Chamber of Commerce in China.

The Fondazione Italia Cina and the other institutions involved in the event recognised the LU-VE Group's focus towards sustainable economic development with the opening of the new factor in Tianmen in Hubei province, equipped with cutting-edge technology in the industrial refrigeration sector and with a low environmental impact. The new site covers a surface area of approximately 19,000 square metres, of which 15,000 are devoted to manufacturing processes, twice as many as the previous plant in Changshu.

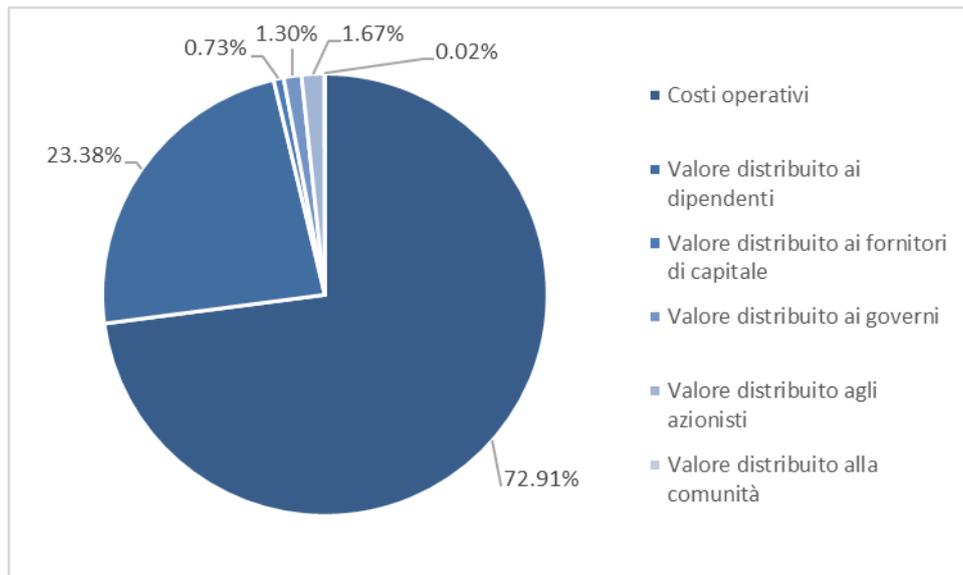
"It is an honour to receive this award for the third time," commented Iginio Liberali, Chairman and Founder of the LU-VE Group. "It is a recognition of the great work that the LU-VE Group is doing in China. In China, we are bucking the general economic trend. Remaining true to our tradition of increasingly ecologically sustainable processes and products, three years ago we launched our new range of products characterised by a low environmental impact."

Iginio Liberali, *Chairman of the LU-VE Group*

4.1.1 KEY FIGURES IN 2019

DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED (IN THOUSANDS OF EURO)			
	2017	2018	2019
Economic value generated	279,167	313,753	394,133
<i>Revenues and operating income</i>	270,032	306,869	391,581
<i>Financial income</i>	1,633	1,241	2,062
<i>Change in inventories</i>	7,502	5,643	489
Economic value distributed	256,573	284,304	356,578
<i>Operating costs</i>	191,152	211,759	259,997
<i>Value distributed to employees</i>	56,280	62,823	83,361
<i>Value distributed to capital providers</i>	1,462	1,483	2,588
<i>Value distributed to governments</i>	3,219	2,932	4,631
<i>Value distributed to shareholders</i>	4,416	5,265	5,944
<i>Value distributed to the community</i>	44	42	57
Economic value retained	22,594	29,449	37,555

Breakdown of economic value distributed in 2019



4.2 RESPECT FOR THE ENVIRONMENT

4.2.1 POLICY, MANAGEMENT MODEL, COORDINATION

The Group is committed to promoting a sense of responsibility to the environment across all levels of the organisation, and its actions are oriented towards observing all environmental protection requirements.

With the aim of defining a standardised approach to the management of environmental aspects at its manufacturing sites, last year the Group resolved to define a shared **environmental policy** aimed at protecting and safeguarding the environment and standardising the commitments defined in the policies adopted by certain companies that have implemented an ISO 14001 environmental management system and in the Group Code of Ethics. The creation of a Group environmental policy will be completed in 2020, based on the environmental policies developed by other companies during the year.

In 2019 the planned **environmental and occupational health and safety assessments** at the Group's manufacturing facilities continued: in addition to the five production plants evaluated in 2018, the Indian plant of the subsidiary Spirotech was also assessed. The assessment of these aspects at the plant in Bhiwadi, Rajasthan, represented an opportunity to identify a set of possible actions, including improvements to those provided by the laws and regulations of the country in question, to increase the efficiency of manufacturing activities and reduce their environmental impacts.

In order to promote common practices, in 2018 a **coordinator** was appointed at Group level with responsibility over HSE matters, reporting directly to the COO. The coordinator will be responsible for ensuring the correct implementation of the improvement measures identified by the *assessments* and promoting the adoption of a management model standardised at Group level.

Several Group Companies have already adopted an organisational model certified according to international environmental management standard **ISO 14001**, while certain Group Companies in Italy have developed an energy management model certified according to international standard ISO

50001. In 2019, the plant in Limana, Italy, implemented an integrated health, safety and environment management plan in line with standards ISO 45001 and 14001. Finally, the Group remains committed to gradually obtaining certifications at its other sites and standardising the environmental management systems.

For Group companies which have implemented an environmental management plan under standard ISO 14001, an environmental impact assessment and a contextual analysis were carried out to identify the most approximate methods of environmental management.

"Since our foundation, we have been pioneers in upholding the essential principles of environmental protection: lower energy consumption, the reduced use of refrigerant fluid, low noise levels, high levels of reliability over time and reduced use of space. Today we are an international group with our heart and mind firmly rooted in Italy, yet we have replicated our original model wherever we manufacture and operate, placing the work of the men and women who have made LU-VE's history at the very centre of our development."

Iginio Liberali, *Chairman of the LU-VE Group*

4.2.2 KEY FIGURES IN 2019

Total energy consumption by the Group's manufacturing companies was **210,165 GJ** in 2019 and includes electricity sourced from the national grid, of which 2,333 GJ was certified as renewable, energy generated by the solar panel systems in place at the Group's sites and fuel used by the company fleet, the central heating systems and for production processes. The increase in energy consumption is mainly due to the introduction of Zyklus into the reporting boundary and the completion of the works to double the capacity of the manufacturing plant in Poland.

Thanks to various new re-lamping initiatives during the year and other energy efficiency measures already implemented in 2017 (such as the introduction of a post-combustion unit in Limana and the replacement of some of the lighting system with LED bulbs at the Uboldo site), total savings are estimated to be 6,550 GJ a year, of which 50 GJ relates to the initiatives developed in 2019 alone.

In line with last year, the photovoltaic panels at the Italian facilities made it possible to cover internal energy requirements for more than 2,400 GJ and satisfy a portion of the national grid electricity demand, equal to almost 300 GJ.

ENERGY CONSUMPTION WITHIN THE ORGANISATION			
ENERGY CONSUMPTION FROM FUELS (GJ)			
	2017	2018	2019
Natural Gas	83,793	87,453.4	86,183
Diesel	9,409.1	10,968.8	8,869.4
Gasoline	557.4	903	925
LPG and propane	1,599.6	4,302.6	7,893.7
Total	95,359.1	103,627.8	103,871.1
ENERGY CONSUMPTION FROM ACQUIRED ENERGY (GJ)			
Electricity from the national electricity grid	81,042	85,391.8	96,962
District heating	6,822.6	7,648.1	6,921.5
Total	87,864.6	93,039.9	103,883.4
ELECTRICITY SELF-GENERATED FROM RENEWABLE SOURCES (GJ)			
Electricity from photovoltaics generated and consumed	2,729	2,597.4	2,411
Electricity from photovoltaics generated and sold	392.8	307	288.1
Total	3,121.8	2,904.5	2,699.1

DIRECT GHG EMISSIONS (SCOPE 1) (tCO_{2eq})			
	2017	2018	2019
Refilling of refrigerant gas ¹²	220.4	78	15.7
Fuel consumption	5,603.6	5,527.3	5,554.8
Total	5,824	5,605.3	5,570.5

INDIRECT GHG EMISSIONS (SCOPE 2)¹³ (tCO_{2eq})			
	2017	2018	2019
Electricity (market-based)	12,831.4	13,577	16,308.9
Electricity (location-based)	11,289.4	11,903.3	13,846.5
District heating	374.1	398.3	338.5

¹² In 2018 the refrigerant gases considered for the calculation of Scope 1 GHG emissions are: HFC-134a, R404A, R410A; while in 2019: R410A.

¹³ Total emissions are expressed in CO_{2eq} although the Scope 2 (location-based) emissions deriving from the consumption of electricity are expressed in CO₂, as the portion attributable to CH₄ and N₂O gases is not significant.

Total (market-based)	13,205.5	13,975.3	16,647.4
Total (location-based)	11,663.5	12,301.5	14,185

Aside from greenhouse gas emissions, the main emissions of aeriform pollutants coming from the Group's manufacturing activities were also mapped. These emissions were calculated from the direct measurements taken by consultancy firms and certified laboratories and through estimates based on the manufacturing activities of the Group's various sites.

OTHER ATMOSPHERIC EMISSIONS (kg)			
	2018	2019	
CO	1,316	1,630	
NOx	5,357	5,347	
Particulate	462	452	
VOC	4,867	5,286	
Oil mist	164	216	
Heavy metals	Copper	187	198
	Iron	165	137
	Zinc	13	4
	Aluminium	16	4
	Tin	3	5
	Lead	3	5

Water consumption trends within the Group are in line with the increase in production and change in perimeter, which in 2019 extended to include the company Zyklus. As regards water discharges, however, a significant variation can be seen in the values relative to discharge into surface water, owing to the introduction of a new calculation method at Group level which excludes rainwater, where possible.

WATER WITHDRAWAL BY SOURCE (m³)			
	2017	2018	2019
Municipal water procurement	33,943	37,596	62,350
Owned wells	153,786	149,638	146,100
Other	1,888	2,318	1,762
Total	189,617	189,552	210,212

WATER DISCHARGES (m³)¹⁴			
	2017	2018	2019
Discharge into surface water	8,586.7	175.3	314.8
Discharge into sewer network	173,151.3	177,456.7	192,109.7
Other	8,196.5	8,196	9,368
Total	189,934.5	185,828	201,792.5

Specifically, the item "other" relating to withdrawals refers to the use of cisterns for process water and drinking water at the Indian plant. The part of the item "other" relating to discharges refers to the transfer as waste or transfer within painting systems or testing tanks, or the reuse of treated water for irrigation at the Group's Indian plant.

As regards hazardous waste, the main types of hazardous waste deriving from Group operations are chemical compounds, such as lubricating oils and solvents, while as regards non-hazardous waste, the main types are processing scraps such as aluminium, copper, iron, packaging cardboard and, for some of the Group's Italian companies, waste water resulting from manufacturing activities and disposed of as waste, in the absence of the sewer network.

¹⁴ In view of more accurate information that became available during the 2019 reporting process, data relative to 2017 and 2018 recast from those previously published in the 2018 Sustainability Report. For historical data published previously, refer to the 2018 Sustainability Report.

HAZARDOUS AND NON-HAZARDOUS WASTE BY DISPOSAL METHOD(T)			
	2017	2018	2019
Total hazardous waste	318.5	241.0	375.8
Recycling or reuse	77.8	106	182.3
On-site storage ¹⁵	20.7	16.2	75.5
Disposal in landfill	56.2	77.8	73.2
Energy recovery ¹⁶	-	8.5	5.6
Other ¹⁷	163.8	32.6	39.1
Total non-hazardous waste	5,240.1	5,887.7	5,894.8
Recycling or reuse	4,909.6	5,460.9	5,554.6
On-site storage	54.5	36.4	91.9
Disposal in the landfill	101.1	91.9	121.7
Energy recovery ¹⁸	-	34.9	34.4
Other ¹⁹	174.9	263.6	92.2
Total waste	5,558.6	6,128.7	6,270.6

Please note that in 2018, as part of a test conducted in a controlled environment at the facility of the company SEST S.p.A. certain anomalies were observed in the levels measured at one of the two cisterns used to store processing effluents. Following a number of controls, the company emptied the tanks, issued immediate notification of the methods pursuant to Article 242 of Italian Legislative Decree 152/06, and subsequently updated the Authorities on the progress of the activities. At the same time, as agreed with the local authorities the company acted to implement the measures necessary to ensure the safety of the area and to investigate any impact on the environmental matrices. The result of the environmental assessments, including after the works implemented by the Group, did not identify any risks for human workers present at the site.

In 2019 no significant spills (such to impact the water, soil and subsoil matrices) were recorded.

¹⁵ The item "On-site storage" includes temporary storage pending disposal pursuant to the provisions of applicable law.

¹⁶ For 2017 waste destined for energy recovery was included under the category 'Recycling, reuse and recovery'.

¹⁷ The category 'Other' refers primarily to waste disposed of through chemical/physical treatment and biological treatment for both hazardous and non-hazardous waste.

¹⁸ For 2017 waste destined for energy recovery was included under the category 'Recycling, reuse and recovery'.

¹⁹ The category 'Other' refers primarily to waste disposed of through chemical/physical treatment and biological treatment for both hazardous and non-hazardous waste.

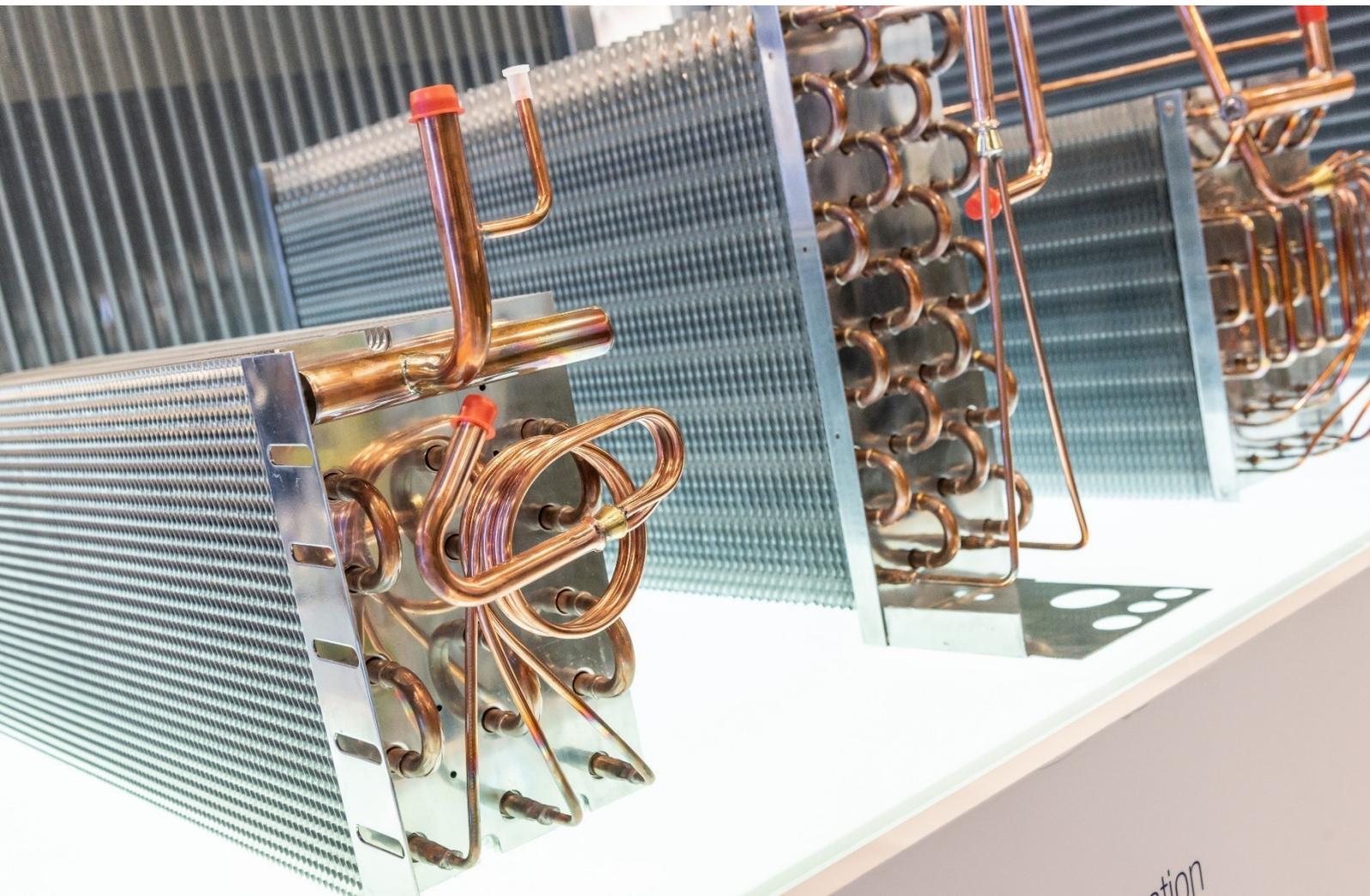
OUR ENVIRONMENTAL RISK MANAGEMENT AND MITIGATION MODEL

Having assessed the non-financial risks, the LU-VE Group has identified the management of water consumption and discharge, the management of atmospheric emissions and waste management as key issues upon which to focus its attention.

In order to adequately monitor possible risks associated with these environmental aspects, every Group Company has an appointed representative responsible for overseeing and managing environmental aspects at each manufacturing site. This representative is also responsible for disclosures to local authorities and, where necessary, may engage specialist third-party companies (for example, in relation to investigations regarding atmospheric emissions and waste treatment).

Processes to monitor the environmental performance of production sites with regard to the environmental aspects deemed to be significant are in place at Group level. The identification of an HSE coordinator at Group level for 2018 represents another step in sharing *best practices* among the Group's various manufacturing companies and the implementation of optimisation measures.

Furthermore, the Group adopts a preventive approach in the management of environmental risks through the presence of management systems in line with international standard ISO 14001, which provides for the analysis of significant environmental risks at each individual site. The Uboldo site in Italy and the Group's factory in India already hold this certification. These models will be rolled out to other foreign sites in the future.



4.3 QUALITY OF LIFE

4.3.1 A MORE LIVEABLE, ADVANCED AND AWARE WORLD

In a period characterised by the progressive reduction in the quality and availability of natural resources, the refrigeration market is acquiring an increasingly central role in guaranteeing widespread food safety and well-being. The great developments in the refrigeration sector in the last 150 years have helped to improve people's quality of life in various contexts, from nutrition - ensuring that food is preserved correctly, to technology, thanks to cooling systems in place at *data centre* rooms, to health and the medical sector.

In particular, thanks to its own refrigeration solutions, the LU-VE Group aims to increase people's quality of life, ensuring that food is preserved correctly and controlling temperature, humidity and air purity levels in certain environments.

The Group's awareness of the value and significance of the solutions designed for humans is an expression of its desire to actively contribute to the food safety and quality and is closely related to its willingness to respond to contemporary social challenges such as food waste and safeguarding health.

Thanks to the knowledge and expertise matured over many years by the Design, Research and Developments Department, the Group is able to focus on constantly improving its technologies in order to offer diverse and specific solutions for every socio-economic context in which the Group operates.

In 2019, the LU-VE Group again consolidated its commitment to sharing its *know-how* and distinctive skills to promote the adoption of high-performance and environmentally friendly solutions, with particular reference to warm climates. Furthermore, the Group conducted new experiments to continue to ensure the quality of close control systems.

4.3.2 KEY INITIATIVES IN 2019

In 2019 the **INDEE project** was continued, aimed at sharing technological *know-how* in the natural refrigerant refrigeration sector with the Indian market. Specifically, the LU-VE Group authorised the Indian Institute of Technology Madras to install a pilot CO₂ refrigeration system to carry out training activities and conferences on the subject of natural refrigerants.

In fact, in partnership with the University of Norway the Group has developed a demonstrative system capable of simulating the operating conditions of a transcritical plant and evaluating the sustainability of CO₂ fluids in the process of conserving foodstuffs.

During the project, participants were able to expand their understanding of aspects relating to the dimensions of CO₂ refrigeration systems and learn about the application of this technology in countries characterised by hot climates such as India.

SPIROTECH'S CONTRIBUTION TO LOCAL COMMUNITIES

In 2019, the Group's Indian subsidiary Spirotech launched various Corporate Social Responsibility (CSR) projects in line with the provisions of The Companies Act, which introduced the obligation for large companies to dedicate 2% of their profits to CSR initiatives. Spirotech's commitment to promoting the development of local communities was also formalised in its Corporate Social Responsibility Policy, which aims to support the government in consolidating the welfare measures aimed at the company by implementing initiatives with social and environmental benefits in the medium and long term.

The most significant projects supported in the last two years include the creation of a digital library for blind or partially sighted people, carried out in collaboration with the National Association for the Blind (NAB), the largest network of volunteers to assist blind people in India. Thanks to the funds allocated by Spirotech, over 1,500 hours of audiobooks and 3,000 eBook pages have been digitalised. The project will benefit the digital library's membership of over 27,000 people and the 250 students at the NAB school.

Furthermore, in 2019 Spirotech launched a partnership with the LEU Foundation with the aim of supporting children and young people in disadvantaged urban areas by providing access to education and employment opportunities. The funds donated by Spirotech to the association will contribute to the purchase of books and school materials, the professional development of teachers, and will help to increase the number of beneficiaries of the projects implemented by the Foundation.

Finally, in the field of sustainable development Spirotech has sponsored a project to plant trees in the area adjacent to the plant in the industrial area of Kaharani in Bhiwadi.

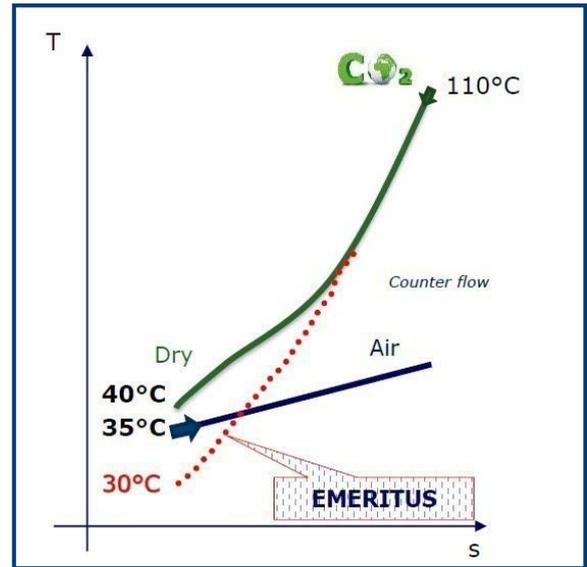
Raising awareness among local communities is part of a wider plan to move the so-called “CO₂ equator”, enabling these technologies to be applied in countries where the climatic conditions would have previously rendered this impossible. This aim is of strategic importance to the sustainability of the refrigeration sector as India is currently characterised by a growing population and increasing demand for air conditioning and refrigeration systems. In this regard, the diffusion of more efficient technologies could help to reduce the sector's environmental impacts.

CO₂ SOLUTIONS: EXCEEDING THE LIMITS IN HOT CLIMATES

In terms of its thermo-physical properties, CO₂ is characterised by a high evaporation temperature and low viscosity, making it a highly efficient refrigerant fluid with low pressure losses but which presents specific system limitations. In particular, compared to HFC fluids CO₂ requires higher pressures, increasing as the external temperatures rise. For example, at an external temperature of 30°C, CO₂ requires a level of pressure over five times that required by HFC fluids.

To overcome these barriers and optimise system performance, in transcritical conditions it is necessary to lower the outlet temperature of CO₂ as much as possible. Lowering the output temperature can be achieved by designing a circuit that brings the temperature of the CO₂ closer to that of the external temperature, or by reducing the so-called parasitic heat, namely the heat exchanged by the hot and cold pipes of the unit.

The LU-VE Group's response to the challenges that characterise CO₂ refrigeration systems is the Emeritus system which, thanks to its combination of adiabatic pre-cooling technology and the spray system, enables the outlet temperature of CO₂ to be reduced when operating in sub-critical conditions at temperatures over 30°C.



In fact, it is only thanks to the system developments and technological solutions introduced by the LU-VE Group that CO₂ refrigeration systems have become competitive and high-performing even in conditions characterised by very high external temperatures.

With reference to close control systems, the trend in operating room systems is seeing an increasingly widespread use of unidirectional filtering ceilings, commonly referred to as “laminar ceilings”. These ceilings make it possible to generate a unidirectional flow of perfectly sterile air which descends at low speed so as not to create any turbulence and consequently avoid the possibility of contamination, rather than having the traditional blast of clean air which mixes with the internal air and slowly dilutes its contamination. In this manner, the air is free of any form of particulate within the sterile area of the operating table.

In 2018, laboratory tests conducted by Milan Polytechnic University aimed at measuring turbulence under filtering ceilings in operating theatres and, in particular, compliance with technical regulations, revealed the capacity of the ceilings produced by the LU-VE Group to guarantee levels of turbulence that were significantly lower than the legal requirement.

The close control air conditioning solutions offered by the LU-VE Group provide multiple benefits. First of all, these solutions offer greater patient protection as particulate, a possible carrier of virological or bacterial contamination, cannot come into contact with the wound or surgical instruments. In addition, the unidirectional flow makes the room more usable as it considerably improves the recovery time, or the period of time required after each operation for the air conditioning system to dilute contamination until returning to the required air quality level. The recovery time declines from roughly 15 minutes for a room with turbulent air distribution to just a few seconds for a room with unidirectional distribution.

5. METHODOLOGICAL NOTE

This document is the third Consolidated Non-Financial Statement (the “NFS” or “Sustainability Report”) pursuant to Italian Legislative Decree no. 254 of 30 December 2016, implementing Directive 2014/95/EU, of the companies belonging to the Group comprising LU-VE S.p.A. and its subsidiaries (the “Group” or the “LU-VE Group”). As provided for by Article 5 of Italian Legislative Decree no. 254/16, this document constitutes a separate report featuring dedicated wording to identify it as the Non-Financial Statement required by legislation.

This NFS has been produced to the extent necessary to provide a clear understanding of the Group's activities, progress, results and impact, considering the material topics envisaged by Articles 3 and 4 of Italian Legislative Decree no. 254/16.

The topics reported in this document were confirmed following an analysis of the trends and the Italian and global context, both in terms of national and international trends and current non-financial reporting trends. Similarly, the *stakeholders* and the main requests identified are unchanged from those indicated in the 2018 Sustainability Report.

In line with the requirements of the Decree, the reporting scope includes all LU-VE Group Companies consolidated line-by-line. As concerns the environmental data and aspects relating to product safety, in the three-year period only the Group's manufacturing companies have been taken into consideration, with the exception of LUVEDIGITAL S.r.l., as the environmental impacts of the sales offices and of LUVEDIGITAL were not deemed significant. It is noted that for these aspects the 2019 data does not include the companies AIR HEX ALONTE S.R.L. and FINCOIL LU-VE OY as they were acquired during the year. Finally, the 2019 data includes the company Zyklus Heat Transfer Inc. acquired in 2018 as the consolidation process was completed.

In 2019 the main organisational changes relate to the incorporation into the Group of the companies AIR HEX ALONTE S.R.L. (Alonte, Italy) and FINCOIL LU-VE OY (Vantaa, Finland), which specialise in the production of air cooled heat exchangers, resulting from the acquisition of the "Air" division of Alfa Laval. For details on the corporate structure, aside from the information reported in this document, reference may be made to the Group's annual documents: the Consolidated Financial Statements and the Report on Corporate Governance and Ownership Structures, both available on the company's website.

The data and information provided in this document refers to the activities carried out by the LU-VE Group in 2019 (from January to December 2019), when not specified otherwise. Furthermore, to provide a fair representation of performance, the use of estimates was limited as much as possible; when estimates were used, they were based on the best methodologies available and duly identified. Any recast of previously published comparative data is clearly indicated as such.

The document was prepared in accordance with the fifth generation of the guidelines on sustainability reporting of the Global Reporting Initiative (GRI), the 2016 GRI Sustainability Reporting Standards, according to the “Core” option and in accordance with the required principles of content and quality. The end of the document contains a table with a content index relating to the GRI requirements, both general and connected to specific material topics.

The principles for the definition of report content are suggested by the GRI and include:

- **Completeness:** the material topics dealt with in the document are covered in their entirety and reflect the most material environmental, social and economic impacts for the Group's activities, thus enabling stakeholders to fully assess the Company's *performance* in the reporting year.
- **Sustainability context:** the *performance* of the LU-VE Group presented in this document is portrayed within the wider context of the sustainability of the Company's business.
- **Inclusion of stakeholders:** this document reports on the Group's *stakeholders* and the methods in which their interests are considered when defining the report's content.
- **Materiality:** the topics reported on were identified based on their relevance for the Group's business, as well as its *stakeholders*. In 2019 the Group began an internal stakeholder engagement process, focusing in particular on the Human Resources departments of all Group companies, and next year aims to gradually enter into dialogue and engage with categories of external stakeholders with reference to non-financial topics. Furthermore, the Group intends to identify the most suitable engagement tools and methods in response to the characteristics and requirements of the various reference groups.

For any clarifications or details on the topics dealt with in this Sustainability Report, please contact: investor.relations@luvegroup.com

To ensure the quality of the information reported, in drafting the report the principles of report quality were followed as suggested by the GRI.

- **Accuracy:** the document content provides an adequate level of detail to understand and evaluate the sustainability *performance* of the LU-VE Group in the reporting period.
- **Reliability:** the data presented in this document were gathered, processed and validated by the managers of each function with the collaboration of a consulting firm. The economic data is consistent with that set forth in the Financial report.
- **Clarity:** the use of clear and accessible language and graphs and tables to represent the Group's *performance* make this Report usable and easy to understand for stakeholders.
- **Comparability:** the indicators presented in the Report are laid out for the 2017-2019 three-year period and accompanied by a comment relating to their trends so as to enable comparisons between Group *performance* over time.
- **Balance:** the content of this document reports on the LU-VE Group's *performance* in the reporting period in a balanced manner.
- **Timeliness:** the Report takes into consideration events that took place after 31 December 2019 which could be significant for the assessment of the Group's *performance* on the part of stakeholders.

The main stakeholders, whose requests were taken into consideration during the topic selection process, are listed in the table below. In 2019 stakeholder expectations were broadly in line with those identified by the Group.

Stakeholder	Main expectations	Main instruments for listening and engagement
<i>Shareholders and Investors</i>	<ul style="list-style-type: none"> Management of the privileged information of LU-VE S.p.A. Long-term economic and financial sustainability Profitability 	<ul style="list-style-type: none"> Insider Register One-to-one meetings Dedicated communications Press releases Website
<i>Customers</i>	<ul style="list-style-type: none"> Service improvement and development Capacity to meeting requirements in product design Service vicinity Project customisation in the pre-sale phase 	<ul style="list-style-type: none"> Customer satisfaction analysis Group Customer Care Service Website Social networks
<i>Local communities</i>	<ul style="list-style-type: none"> Contribution to the creation of value for the region Being transparent and providing information on business matters Sharing and disseminating capacities and skills 	<ul style="list-style-type: none"> Website Social networks Press releases
<i>Employees</i>	<ul style="list-style-type: none"> Respect for workers' rights Contribution to individual well-being Protection of occupational health and safety Listening capacity Adequate training for skills development 	<ul style="list-style-type: none"> Ideas mailbox Company intranet Dedicated training meetings Dedicated internal communications Climate and satisfaction surveys International meetings on specific topics (e.g. HR meetings)
<i>Regulatory entities and other associations</i>	<ul style="list-style-type: none"> Maintenance of the certifications obtained in terms of solution quality and safety, performance and consumption 	<ul style="list-style-type: none"> Certification audit
<i>Suppliers and Trade associations</i>	<ul style="list-style-type: none"> Being transparent and providing information on business matters 	<ul style="list-style-type: none"> Dedicated meetings Annual and Sustainability Report Dedicated communications
<i>Media</i>	<ul style="list-style-type: none"> Clear and prompt communications Being transparent and providing information on business matters 	<ul style="list-style-type: none"> Website Social networks Press releases

The NFS considers the entire value chain of the LU-VE Group.

As regards the value chain, the starting point and distinctive characteristic at the base of the Group's activities is the **design** of marketed solutions. The constant search for innovative technological solutions, made possible thanks to continuous collaborations with Universities and Research Centres, enables the Group to respond to the specific needs of its clients while actively contributing to improvements in the sector.

Based on the characteristics of the end solution, the Group activates **procurement** procedures to obtain the raw materials - copper, aluminium, steel and iron sourced mainly from the European Union - and semi-finished components such as motorised fans and other catalogue and specialist parts. To ensure the efficient management of resources and the greater standardisation of the materials used in its manufacturing processes, the LU-VE Group aims to establish long-lasting, mutually beneficial relationships with its suppliers characterised by reliability and reciprocal trust. With the dual aim of developing the understanding of its pool of suppliers and effectively monitoring the environmental and occupational health and safety procedures of those suppliers, the LU-VE Group

applies procurement procedures based on a certification and evaluation system of specific categories of suppliers of semi-finished components that will gradually be brought into operation and extended. For several years the Group has carried out *audits* on most of its Italian suppliers, focusing on the quality of service or of the supplied goods or environmental and occupational health and safety aspects, depending on the case.

As well as controlling the **quality** of the supplied goods, the Group can count on various **manufacturing facilities** located near or in the immediate vicinity of the main markets it serves. When the manufacturing process is complete, before the product is transferred to the logistics department, **final testing** is carried out. This activity is meant first and foremost to verify the exchanger's seal against any leaks as well as to control the electrical components.

The product is then sent to customers all over the world.

The phases of our value chain



Note: the LU-VE logo denotes activities managed directly by the Group



In consideration of the Group's value chain, for each material topic the scope of impacts and the *GRI Disclosure* applied are indicated.

MATERIAL TOPICS IDENTIFIED BY THE LU-VE GROUP		Scope of impacts		
	Topic	Parties generating impacts	Type of impact	Reconciliation with GRI Topics
Responsible growth	1. Growth strategies	Entire Group	Generated by the Group	202 - Market presence
	2. Women, men and ideas	Entire Group	Generated by the Group	404 - Training and education 405 - Diversity and equal opportunity
	3. The well-being of our people	Entire Group ²⁰	Generated by the Group	401 - Employment 403 - Occupational health and safety
Distinctive positioning	4. Customer-focused approach	Entire Group	Generated by the Group; To which the Group contributes	416 - Customer health and safety
	5. Cutting-edge solutions	Entire Group	Generated by the Group	417 - Marketing and labelling
	6. Sales ethics	Entire Group	Generated by the Group; To which the Group contributes	205 - Anti-corruption 206 - Anti-competitive behaviour 307 - Environmental compliance 419 - Socioeconomic compliance
Creation of shared value	7. Economic and financial sustainability	Entire Group	Generated by the Group	201 - Economic performance
	8. Reduction of environmental impact	Entire Group	Generated by the Group; To which the Group contributes	302 - Energy 303 - Water 305 - Emissions 306 - Effluents and waste
	9. Quality of life	Entire Group	Generated by the Group; To which the Group contributes	N/A

For each material topic, the report identifies a company management and organisational model, a formalised policy including those of due diligence, the results achieved through them and several non-financial performance indicators, as well as the main risks, generated or suffered, connected to the material topics and which derive from the Group's activities, its products, services or commercial dealings, including, when relevant, the supply and sub-contracting chains. Specifically, the

²⁰ As regards occupational health and safety, the persons who generate impacts are employees and temporary agency workers. As a first step in 2019, on the basis of the significance of the data and information relating to non-employed workers, the Group has included data relative to temporary agency workers within the reporting scope. The Group will develop the analysis regarding the significance of other non-employed workers in order to assess the need to collect data from the employers of external collaborators and suppliers who operate at the Group's sites and/or under the direction of the Group, but whose data is not directly controlled by the Group.

management of significant non-financial risks identified by the risk assessment is reported under the respective chapters.

The relationship between the areas of Italian Legislative Decree 254 and the material topics, subject to this non-financial reporting, is described below.

		1. Growth strategy	2. Well-being of our people	3. Women, men and ideas	4. Customer- focused approach	5. Cutting-edge solutions	6. Business ethics	7. Economic and financial sustainability	8. Reduction of environmental impact	9. Quality of life
Environment	Use of energy resources					x			x	
	Water resources								x	
	Greenhouse gas emissions					x			x	
	Atmospheric emissions					x			x	
	Other impacts (waste, consumption of raw materials, logistics)					x			x	
Society	Health and safety		x							
	Gender equality		x							
	Dialogue with trade unions		x							
	Other relevant aspects			x						x
Respect for human rights	<i>not currently deemed material</i>									
Anti-corruption							x			

Please note that the topic of human rights is not currently considered significant by the Group based on assessments conducted by the Parent Company Departments in relation to the activity carried out by the Group and the characteristics of its relations with customers, suppliers and employees. Therefore, this topic is not reported on within this document.

This NFS has been subject to an assessment of compliance by an independent auditing firm. In this regard, the independent auditing firm has issued a separate report declaring the compliance of the information provided to the provisions of Article 3, paragraph 10 of Italian Legislative Decree 254/2016. This assessment was conducted according to the procedures identified in the "Report of the auditing firm" annexed to this document.

This document was approved by the Board of Directors of LU-VE S.p.A. on 18 March 2020 in consultation with the Control and Risk Committee responsible for sustainability topics since 2019. The document is published on the website of the LU-VE Group (www.luvegroup.com) in the "Investor relations - Sustainability" section.

5.1 THE CALCULATION METHODOLOGY

Some methodological information is provided below concerning several indicators used in this Sustainability Report.

When the reporting standard requires non-financial information broken down by region, the following distinctions have been drawn:

- Italy, including LU-VE S.p.A., TECNAIR LV S.p.A., MANIFOLD S.r.l., LUVEDIGITAL S.r.l., SEST S.p.A., THERMO GLASS DOOR S.p.A. (TGD) and AIR HEX ALONTE S.R.L.;
- European Union countries, including HEAT TRANSFER SYSTEMS (HTS) s.r.o. (Czech Republic), LU-VE SWEDEN AB (Sweden), SEST-LUVE-POLSKA Sp.z.o.o. (Poland), LU-VE France s.a.r.l. (France), LU-VE Deutschland GmbH (Germany) and LU-VE Iberica s.l. (Spain), LU-VE Austria GmbH (Austria), and LU-VE Netherlands B.V. (Netherlands);
- Non-European Union countries, including LU-VE HEAT EXCHANGERS (TIANMEN) CO LTD (China), SPIROTECH HEAT EXCHANGERS PRIVATE LIMITED (India), “OOO” SEST-LUVE (Russia) and LU-VE Contardo Pacific Pty Ltd. (Australia), Zyklus Heat Transfer Inc. (USA), FINCOIL LU-VE OY (Finland), “OOO” LU-VE Moscow (Russia) and LU VE Middle East DMCC.

5.1.1 THE EMPLOYEES OF THE LU-VE GROUP

For each reporting year, the calculation of the Group’s personnel (broken down by geographical area, gender, contract type and work type) is based on the data received from the various sales and manufacturing branches and is expressed in the Head Count at December 31st. Furthermore, employees on secondment - one at LU-VE S.p.A. and two at SEST S.p.A - were considered among the workforces of the companies with whom the employment contracts are held, specifically HEAT TRANSFER SYSTEMS (HTS) s.r.o., “OOO” SEST-LUVE and LU-VE HEAT EXCHANGERS (TIANMEN) LTD.

For each year, the calculation of dismissed workers includes contract terminations as at 31/12 of the previous year, while it does not include employees dismissed as at 31/12 of the year in question, as these are considered as part of the workforce until said date.

The hiring and turnover rate, broken down by gender, age and geographical area, is calculated using the number of employees relative to the type of subdivision considered.

Following the acquisition in 2019 of the companies AIR HEX ALONTE S.R.L. and FINCOIL LU-VE OY, please note that the workforce data for 2018 and the new hires and departures in 2019 cannot be compared with the workforce data of 2019.

5.1.2 ACCIDENT RATES

The accident rates were calculated as reported below:

- Frequency rate: number of accidents/hours worked*1,000,000
- Severity rate: number of days lost per accident/workable hours*1,000,000
- Absenteeism rate: number of days of absenteeism/workable days*100
- Occupational illness rate: number of cases of occupational illness/hours worked*1,000,000

The calculation of the indexes for the three years includes only employees, while interns or personnel working on the basis of project contracts were excluded.

Commuting accidents are not included in the calculation of the frequency and severity rates in 2018 and 2019.

The calculation of the accident frequency and severity rate and the absenteeism rate, broken down by geographical area and gender, includes hours worked and any accidents of the three workers on secondment in the country from which the employees have been seconded (Italy).

5.1.3 SALARY AND REMUNERATION

To calculate the ratio of basic salary and the ratio of total remuneration of women to men, broken down by geographical area and professional category, the salary of the three workers on secondment was considered with reference to the country to which the employees have been seconded.

5.1.4 ENVIRONMENTAL ASPECTS

Please note that, following the inclusion within the reporting scope of the environmental data for 2019 relative to the company Zyklus Heat Transfer Inc., the environmental data cannot be compared with previous years. However, to enable the comparison of data from previous years, in line with the various environmental aspects any irregular trends are noted, specifying the cases in which these relate to the inclusion of the American subsidiary within the Group.

5.1.5 ENERGY CONSUMPTION

The conversion factors used to standardise energy consumption come from the DEFRA “UK Government GHG Conversion Factors for Company Reporting – Fuel properties” table for the years 2017, 2018 and 2019.

Energy savings have been calculated from comparative analyses based on direct measurements, where available, carried out before and after the implementation of energy optimisation measures. In the absence of direct measurements, the data reported has been derived from estimates based on expected consumption values.

5.1.6 GREENHOUSE GAS EMISSIONS

Emissions were calculated in terms of CO₂ equivalent (gases including: CO₂, CH₄, N₂O) according to the following methodology:

- **Direct emissions (Scope 1):** emissions linked to refrigerant gas leaks, the consumption of natural gas and diesel for heating and fuel for the company car fleet, were calculated using the emission factors reported in DEFRA’s “UK Government GHG Conversion Factors for Company Reporting” in the 2017, 2018 and 2019 editions.
- **Indirect emissions (Scope 2):** indirect emissions correspond to the consumption of electricity and heat from district heating. The calculation of emissions linked to electricity calculated according to the “market-based” approach used the factors presented in Figure 4 of the document “European Residual Mixes 2018” published by the Association of Issuing Bodies in 2019, for European countries, and the factors published by the Center for Resource solutions

("2018 Green-e Energy Residual Mix Emissions Rates") for the United States of America. For the countries for which the residual mix emission factors are not available, in accordance with the provisions of the reporting standards, the same factors as those in the "location-based" method were used. For the calculation of the latter in 2019, the factors presented in "Table 49 - Main socio-economic and energy indicators" published by Terna in the "International Comparison" section were considered, according to the most recent version available at the time of publication of this document (2017 data), while for 2018 and 2017 the respective previous editions were used. Lastly, for the calculation of emissions relating to consumption from district heating, the coefficients used are those reported in DEFRA's "UK Government GHG Conversion Factors for Company Reporting" in the 2017, 2018 and 2019 editions.

The indicators reported represent the best possible estimate on the basis of the data available when this document was prepared.

6. GRI CONTENT INDEX

“In accordance-core” option

General Standard Disclosures

General Standard Disclosures	Description of General Standard Disclosures	Page, references, notes and any omissions
Organisational profile		
102-1	Name of the organisation	LU-VE Group
102-2	Activities, brands, products and services	§ What we do: Our products and areas of application, p. 23-24 § Cutting-edge solutions p. 60-68
102-3	Location of headquarters	Via Caduti della Liberazione, 53, 21040 Uboldo VA, Italy
102-4	Location of operations	§ A new step towards growth, p. 8,10,17
102-5	Ownership and legal form	§ A new step towards growth, p. 10, 17 Report on Corporate Governance and Ownership Structure 2019, “Information on Ownership Structure” section
102-6	Markets served	§ A new step towards growth, p. 10,17 § What we do: Our products and areas of application, p. 23
102-7	Scale of the organisation	§ A new step towards growth, p. 8 § What we do: Our products and areas of application, p. 23-24 § Women, men and ideas, p. 31 § Economic and financial sustainability, p. 73
102-8	Information on employees and other workers	§ Women, men and ideas, p. 33-34 § Methodological Note, p. 90
102-9	Supply chain	§ What we do: Our products and areas of application, p. 23-24 § How we respond to our customers' needs, p. 47-48 § Methodological Note, p. 86-87
102-10	Significant changes to the organisation and its supply chain	§ Growth strategies, p. 26-28 § Methodological Note, p. 84
102-11	Precautionary principle or approach	In all of its actions, the LU-VE Group applies the principle of prudence by carefully monitoring its activities. § The governance model and internal control and risk management system, p. 17-20
102-12	External initiatives	§ The governance model and internal control and risk management system, p. 17-18, 20 § Respect for the environment, p. 74-75 § Methodological Note, p. 84
102-13	Membership of associations	Eurovent Certification (LU-VE S.p.A.), Unindustria Varese (LU-VE S.p.A. and Tecnaïr LV S.p.A., Manifold Srl), Associazione Italiana Condizionamento dell’Aria, Riscaldamento e Refrigerazione [Italian Air Conditioning, Heating and Refrigeration Association] (Tecnaïr LV S.p.A.)
Strategy		
102-14	Statement from senior decision-maker	§ Letter to <i>stakeholders</i> , p. 5
Ethics and Integrity		
102-16	Values, principles, standards and norms of behaviour	§ The governance model and internal control and risk management system, p. 17-20 § Sales ethics, p. 69-70
Governance		

General Standard Disclosures	Description of General Standard Disclosures	Page, references, notes and any omissions
102-18	Governance structure	§ The governance model and internal control and risk management system, p. 17-18

Stakeholder engagement

102-40	List of <i>stakeholder</i> groups	§ Methodological Note, p. 86
102-41	Collective bargaining agreements	§ The well-being of our people, p. 41
102-42	Identifying and selecting <i>stakeholders</i>	§ Methodological Note, p. 85-86
102-43	Approach to stakeholder <i>engagement</i>	§ Methodological Note, p. 85-86
102-44	Key topics and concerns raised	§ The topics that tell our story, p. 21 § Methodological Note, p. 85-86

Reporting practice

102-45	Entities included in the consolidated financial statements	§ Methodological Note, p. 84
102-46	Defining report content and topic Boundaries	§ The topics that tell our story, p. 21 § Methodological Note, p. 85-86, 88-89
102-47	List of material topics	§ The topics that tell our story, p. 21 § Methodological Note, p. 88-89
102-48	Restatements of information	§ Methodological Note, p. 84 § Respect for the environment, p. 78
102-49	Changes in reporting	§ Methodological Note, p. 84
102-50	Reporting period	§ Methodological Note, p. 84
102-51	Date of most recent report	April 4 th , 2019
102-52	Reporting cycle	Annual
102-53	Contact point for questions regarding the report	§ Methodological Note, p. 85
102-54	Claims of reporting in accordance with the GRI Standards	§ Methodological Note, p. 84-85
102-55	GRI Content Index	§ GRI content index, p. 93-98
102-56	External assurance	§ Report of the auditing firm, p. 99-101

Specific Standard Disclosures

Specific Standard Disclosures	Description of Specific Standard Disclosures	Page, references, notes and any omissions
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Economic performance indicators

Economic performance

GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Economic and financial sustainability, p. 72
GRI 103-3		
GRI 201-1	Direct economic value generated and distributed	§ Economic and financial sustainability, p. 73-74

Market presence

Specific Standard Disclosures	Description of Specific Standard Disclosures	Page, references, notes and any omissions
GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Growth strategies, p. 26-27
GRI 103-3		
GRI 202 -2	Proportion of senior management hired from the local community	§ Growth strategies, p. 26
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Sales ethics, p. 69-70
GRI 103-3		
GRI 205-3	Confirmed incidents of corruption and actions taken	§ Sales ethics, p. 70
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Sales ethics, p. 69-70
GRI 103-3		
GRI 206-1	Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	§ Sales ethics, p. 70
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Respect for the environment, p. 74-75
GRI 103-3		
GRI 302-1	Energy consumption within the organisation	§ Respect for the environment p. 76 § The calculation methodology, p. 91
GRI 302-4	Reduction of energy consumption	§ Respect for the environment, p. 75 § The calculation methodology, p. 91
GRI 302-5	Reductions in energy requirements of products and services	§ Cutting-edge solutions, p. 51-54
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GRI 103-2	Management approach disclosures	§ Respect for the environment, p. 74-75
GRI 103-3		

Specific Standard Disclosures	Description of Specific Standard Disclosures	Page, references, notes and any omissions
GRI 303-1	Water withdrawal by source	§ Respect for the environment, p. 77
Emissions		
GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Respect for the environment, p. 74-75
GRI 103-3		
GRI 305-1	Direct (Scope 1) GHG emissions	§ Respect for the environment, p. 76 § The calculation methodology, p. 91-92
GRI 305-2	Energy indirect (Scope 2) GHG emissions	§ Respect for the environment, p. 76-77 § The calculation methodology, p. 91-92
GRI 305-6	Emissions of ozone-depleting substances (ODS)	In 2017 the company LU-VE HEAT EXCHANGERS (TIANMEN) CO LTD recorded 8.9 kg of R401a refrigerant gas leaks, equating to 0.326 kg of CFC-11 equivalent for 2017. In 2018 and 2019 no leaks of refrigerant gases with ozone-depleting potential greater than 0 were identified. Source of emission factors: Ozone Secretariat UNEP, Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer (10 th edition, 2016).
GRI 305-7	Nitrogen oxides (NOx) and sulphur oxides (SOx) and other significant air emissions	§ Respect for the environment, p. 77 § The calculation methodology, p. 91-92
Effluents and waste		
GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Respect for the environment, p. 74-75
GRI 103-3		
GRI 306-1	Water discharge by quality and destination	§ Respect for the environment, p. 78
GRI 306-2	Waste by type and disposal method	§ Respect for the environment, p. 79
GRI 306-3	Significant spills	§ Respect for the environment, p. 79
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Sales ethics, p. 69-70
GRI 103-3		
GRI 307-1	Non-compliance with environmental laws and regulations	§ Sales ethics, p. 70

Social performance indicators

Specific Standard Disclosures	Description of Specific Standard Disclosures	Page, references, notes and any omissions
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Women, men and ideas, p. 29
GRI 103-3		§ The well-being of our people, p. 41
GRI 401-1	New employee hires and employee turnover broken down by age, gender and region	§ The well-being of our people, p. 44-45 § The calculation methodology, p. 90
GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	§ The well-being of our people, p. 41-42
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ The well-being of our people, p. 36-41
GRI 103-3		
GRI 403-2	Types of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities broken down by geographic area and gender	§ The well-being of our people, p. 43 § The calculation methodology, p. 90-91
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Women, men and ideas p. 29-30
GRI 103-3		§ The well-being of our people, p. 40-41
GRI 404-1	Average hours of training per year per employee and gender	§ Women, men and ideas, p. 35
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Women, men and ideas p. 29-30
GRI 103-3		
GRI 405-1	Diversity of governance bodies and employees by category according to gender, age and other diversity indicators	§ Women, men and ideas, p. 32-33 § The calculation methodology, p. 90
GRI 405-2	Ratio of average salary of women and men	§ Women, men and ideas p.34 § The calculation methodology, p. 91
Customer health and safety		
GRI 103-1	Management approach disclosures	§ Methodological Note, p. 84, 88

Specific Standard Disclosures	Description of Specific Standard Disclosures	Page, references, notes and any omissions
GRI 103-2		§ Customer-focused approach, p. 47-49
GRI 103-3		
GRI 416-1	Assessment of the health and safety impacts of product and service categories	§ Customer-focused approach, p. 49
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Cutting-edge solutions, p. 51-54
GRI 103-3		§ Sales ethics, p. 69-70
GRI 417 - 2	Incidents of non-compliance concerning product and service information and labelling	§ Sales ethics, p. 70
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GRI 103-1		§ Methodological Note, p. 84, 88
GRI 103-2	Management approach disclosures	§ Sales ethics, p. 69-70
GRI 103-3		
GRI 419-1	Non-compliance with laws and regulations in the social and economic area	§ Sales ethics, p. 70
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GRI 103-2	Management approach disclosures	§ Quality of life, p. 81-83
GRI 103-3		

**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
LU-VE 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 LU-VE S.p.A. and its subsidiaries (hereinafter "LU-VE 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 18, 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 the "Global Reporting Initiative Sustainability Reporting Standards" established in 2016 by GRI – Global Reporting Initiative ("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.

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 LU-VE 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 LU-VE S.p.A. and with the employees of HEAT TRANSFER SYSTEMS (HTS) s.r.o., "OOO" SEST-LUVE, SEST S.p.A., SEST-LUVE-POLSKA Sp.z.o.o., SPIROTECH HEAT EXCHANGERS PRIVATE LIMITED and we carried out limited documentary verifications, in order to gather information about the processes and procedures which support the collection, aggregation, elaboration 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 parent company and subsidiaries 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 and sites, operational headquarters and production site in Uboldo for LU-VE S.p.A., headquarters and production site in Limana for SEST S.p.A., operational headquarters and production site in Bhiwadi for SPIROTECH HEAT EXCHANGERS PRIVATE LIMITED, 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 LU-VE Group as of December 31, 2019 is not prepared, in all material aspects, in accordance with article 3 and 4 of the Decree and the GRI Standards.

DELOITTE & TOUCHE S.p.A.

Signed by
Massimiliano Semprini
Partner

Milan, Italy
April 8, 2020

This report has been translated into the English language solely for the convenience of international readers.

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