



# Air Liquide's Healthcare Business

Press Kit 2017

Throughout the world, Air Liquide Healthcare's "raison d'être" is to provide effective products and services all along the continuum of care, and an optimal support. The current society has to face plenty of economic, technological and healthcare challenges. As a responsible company, our objective is to add value and to remain loyal to our principles of safety, reliability, quality, and communication with all the stakeholders. In each of our activities, we are committed and inventive, with a long-term vision. Our values, our methodology, and our passionate and dedicated teams are essential to our success.

All together, we strive to anticipate patient and healthcare professional needs worldwide.

*“ Every day, the Air Liquide Group’s know-how, expertise and experience contribute to our commitment of responsibility and long-term performance. ”*

**Diana Schillag**, Vice President, Healthcare Global Operations

# THE HEALTHCARE ACTIVITY WITHIN THE AIR LIQUIDE GROUP

Today, Air Liquide Healthcare serves more than **15,000 hospitals** and clinics worldwide and more than **1.4 million patients** at home with the support of **15,000 committed employees**.

## 3,111 M€

2016 Revenue

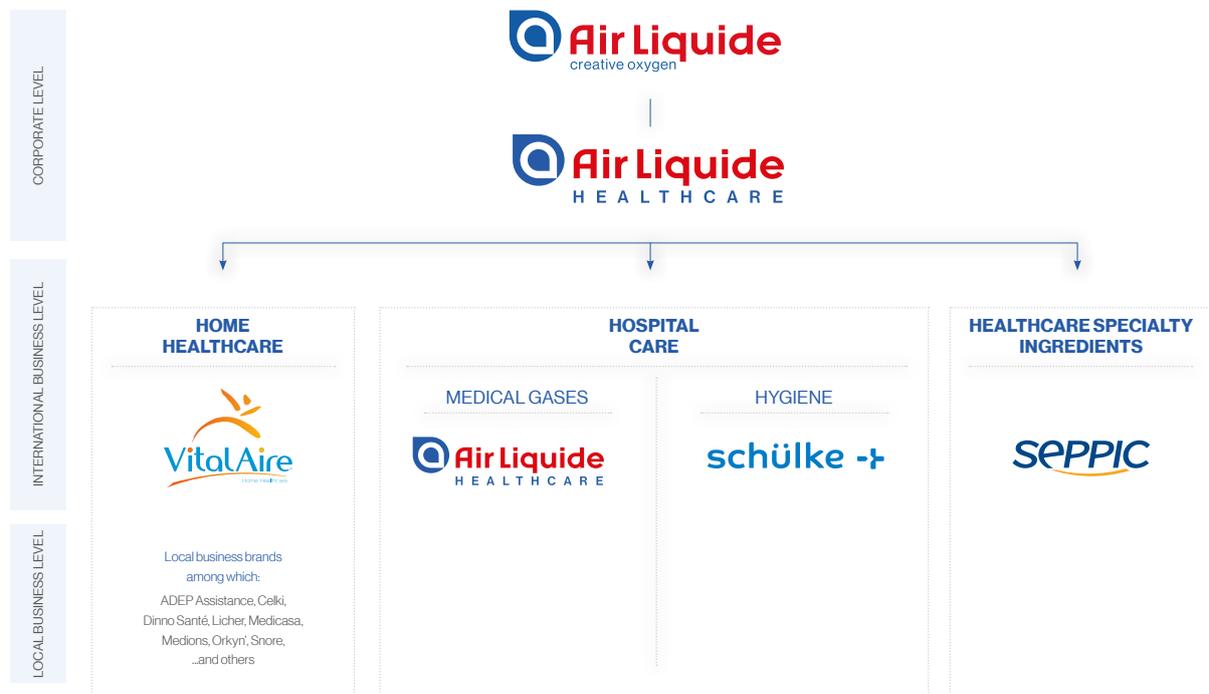
## 18%

of Gas and Services  
2016 Revenue

### 2016 Healthcare Revenue by activity

- Home Healthcare: 50%
- Medical Gases: 30%
- Hygiene: 10%
- Speciality Ingredients: 10%

### Structure of Air Liquide Healthcare



# ANSWERING THE PUBLIC HEALTH CHALLENGES



## Main Public Health challenges

The access to healthcare and its cost constraints are more than ever the main challenges for all the healthcare players, and the healthcare authorities in particular. This is due to the demographic evolutions involving ageing populations, the increase in the number of people suffering from chronic diseases and the advent of new pandemic risks.

## Urban challenges

- Improve the quality of life of patient care at home.
- Reinforce the compliance to treatments at home for patients suffering from chronic diseases for a better treatment efficacy.
- Prevent relapses and re-hospitalizations to optimize global care and contribute to cost control.

As a player in the home healthcare sector, Air Liquide Healthcare is involved in improving chronic patient care in coordination with the healthcare teams.

## Challenges at the hospital

- Ensure a quality treatment to the patient for an optimized hospitalization period.
- Fight with efficacy the infection risks and hospital-acquired infections.
- Pain management.

The Group provides medical gases, medical equipment and hygiene products used specifically during critical interventions, in emergency services, in surgery theater or in intensive care units.

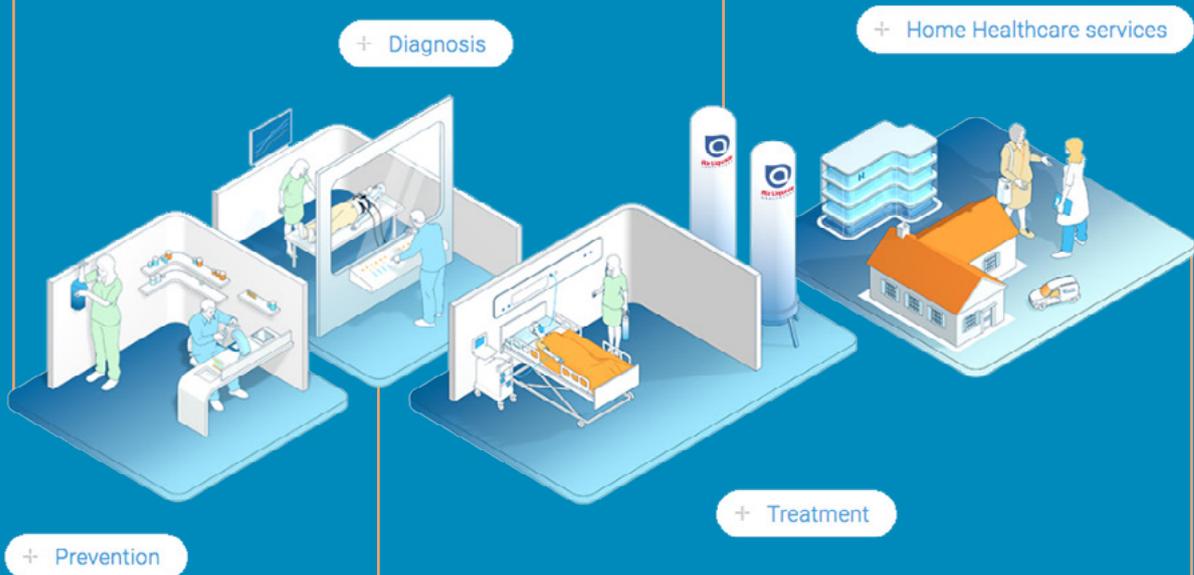
Air Liquide Healthcare's mission is to provide customers with medical products, specialty ingredients and services which contribute to protect vulnerable lives from hospital to home all along the continuum of care.

# THE CONTINUUM OF CARE

## 1. Prevention

To protect vulnerable lives, **prevention** is one of the key components of the healthcare activity:

- by developing hygiene products, Schülke, our dedicated entity helps to fight against hospital-acquired infections and pandemics,
- by providing adjuvants of vaccines, SEPPIC, our affiliate dedicated to healthcare specialty ingredients, contributes to prevent animal infectious diseases which could be transmitted to humans.



## 2. Diagnosis

To support **patients for diagnosis**, Air Liquide provides services and solutions such as diagnosis centers for sleep apnea in some countries.

## 3. Treatment

All along the continuum of care at the **hospital**, **either at the** emergency units, in surgery theater or in intensive care units, the medical gases and associated services provided by Air Liquide Healthcare allow to treat different pathologies, to manage pain, to anesthetize and improve cardio-respiratory functions during critical episodes.

## 4. Home Healthcare

Through the **Home Healthcare activity**, Air Liquide Healthcare offers services and support programs to improve treatment compliance, autonomy and the quality of life of patients.

# HOME HEALTHCARE SERVICES WITHIN AIR LIQUIDE

50%

of 2016 healthcare  
revenue

N°1

in Europe

1.4 MILLION  
patients

With innovative and adapted support offers, Air Liquide commits to improve chronic patient care through a better quality of life and the optimization of cost control.

# THE GROUP'S OFFER

## Respiratory assistance

- Oxygenotherapy for the severe form of COPD, Chronic Obstructive Pulmonary Disease, (3rd cause of death in the world, after ischemic cardiopathy and stroke)<sup>1</sup>.
- Ventilation for some chronic respiratory diseases.
- Systems of positive airway pressure for the sleep apnea syndrome (which impacts 1 to 6% of the population worldwide aged over 40)<sup>2</sup>.

## Infusion therapy at home

for diabetes, Parkinson's disease, immunodeficiency or pulmonary arterial hypertension.

## Nutrition assistance

The multidisciplinary teams including pharmacists, nurses or nutritionists support patients at home with medical equipment. They train patients and caregivers regarding the use of the medical equipment and the respect of safety and hygiene regulations.

They also guarantee the correct follow-up of the medical prescription and the treatment compliance.



1. <http://www.who.int/mediacentre/factsheets/fs315/en/>

2. The World Health Organization. Chronic respiratory diseases [www.who.int/gard/publications/chronic\\_respiratory\\_diseases.pdf](http://www.who.int/gard/publications/chronic_respiratory_diseases.pdf)



## Medical equipment

Air Liquide Healthcare develops products dedicated to patient needs and to improve daily comfort through its Air Liquide Medical Systems affiliate.

Its offer:

- **ventilators with digital** interfaces for the home healthcare ventilation services,
- **telemonitoring** for the sleep apnea treatments,
- a range of **masks** adapted for each patient.

# AIR LIQUIDE IN THE HOSPITAL

**30%** of 2016 healthcare  
revenue

Air Liquide Healthcare provides over **15,000 hospitals and clinics with medical gases** used in surgery theaters, intensive care units or in emergency services.

The medical gases enable the teams to treat, to manage pain, to anesthetize and to improve respiratory diseases.

Main molecules	Domain of application
Oxygen-O <sub>2</sub>	Respiratory diseases or intensive care
Nitric Oxide-NO (KINOX™ and VasoKINOX™)	Resuscitation
Nitrous oxide-N <sub>2</sub> O	Anesthesia
O <sub>2</sub> /N <sub>2</sub> O (KALINOX™)	Anesthesia or analgesia
Xenon-XE (LENOXe™)	Anesthesia
Carbon dioxide - CO <sub>2</sub>	Celioscopy procedures
Medical air	Respiratory diseases or intensive care

Medical gases are drugs which are delivered by the local Healthcare Authorities through market authorization based on pre-clinical and clinical trial results. The manufacturing sites of Air Liquide medical gases are authorized by the healthcare authorities to guarantee the safety of gases administered to patients. They are delivered in a gas or liquid form using specific transport and provided by trained staff.

# HYGIENE AND SPECIALTY INGREDIENTS WITHIN AIR LIQUIDE

## Hygiene

Air Liquide Healthcare answers infectious challenges in hospitals (hospital-acquired infections) and pandemic threats (SRAS: serious acute respiratory syndrome) through its dedicated expert affiliate.

**schülke** →



Schülke is a worldwide player and a European leader in hospital disinfection with a complete range of disinfectants, specifically for surgery theater, patient rooms, surgery tools and medical equipment such as endoscopes, ultrasound probes and hand hygiene for the hospital staff. Through a broad range of antiseptics, Air Liquide Healthcare is also a major player in the treatment of wounds, the preparation of surgery and the prevention of hospital-acquired infections.

## Healthcare specialty ingredients

As a subsidiary of Air Liquide Healthcare, SEPPIC has created and developed innovative specialty ingredients for the healthcare sector for more than 60 years, particularly excipients and actives, for the vaccine, pharmaceutical, nutrition and cosmetic markets.

**SEPPIC**



As a leader of several product ranges, SEPPIC has scientific expertise in chemistry, formulation, biology, biotechnology, immunology and transformation of natural products:

- on the adjuvant of the vaccine market and in the development of human immunotherapy,
- in the coating for pharmaceutical companies,
- in the cosmetics market through its complete range of thickening, stabilizing, green emulsifiers and active ingredients.

# RESEARCH AND DEVELOPMENT

## Medical gases

The interdisciplinary approach in the research and development team at Air Liquide enables the involvement of pulmonary specialists, anesthetists, pharmacists, pharmacologists, experts in pain management and engineers. In the preclinical programs and clinical trials, Air Liquide assesses the potential of medical gases and demonstrates their efficacy, safety and benefits in new indications.

## Medical equipment

Through **Air Liquide Medical Systems**, specialized in medical equipment, Air Liquide Healthcare focuses on technological progress and develops medical equipment which is essential for patients and customers.

To reach this goal, Air Liquide meets specialized researchers in several fields (regulation systems of ventilators which are used by patients who suffer from chronic or severe respiratory diseases, digital applications and software, patient interfaces and ventilation masks, etc).

## Hygiene

The researchers of the Group are committed to improving protection against infections due to bacteria and harmful viruses. Their expertise in the fight against infections is focused on hospital-acquired infections and dangerous infectious sites within the hospitals.

## Speciality ingredients

With more than 175 active patented inventions, Air Liquide reinforces its innovation efforts in the domains of polymers, emulsifiants and active principles.

## Home Healthcare

Air Liquide Healthcare develops, evaluates and integrates new technologies such as medical equipment and telemonitoring to improve treatment compliance and patient quality of life.

# A RESPONSIBLE GROUP



## THE FOUNDATION

263 philanthropic projects in 50 countries, a budget of 3 million euros over 5 years and 330 employees in 3 areas: Healthcare and respiratory disease, environment and micro-initiatives.

## EFA'S PARTNERSHIP



Partner of the European Federation of patient associations who suffer from allergies and respiratory diseases (EFA), we support its efforts to inform and increase awareness of COPD among the General Public and European public authorities.

## THE HELSINKI DECLARATION

Initiated by the European Board of Anesthesiology (EBA) and the European Society of Anesthesiology (ESA), the Helsinki declaration underlines the key role of anesthesia in the patient safety. We are one of the first companies to have signed the Helsinki declaration.

# GROUP KEY FIGURES



The word leader in gases, technologies and services for industry and health



**9** Research and Development sites, **15** main engineering centers



Present in **80** countries



Around **300** patents filed each year



Approximately **67,000** employees



2016 Revenue: **18,135** millions Euros  
2016 Net Profit: **1,844** million Euros



More than **3 million** customers and patients



Communication Corporate

Caroline Philips  
+ 33 (0)1 40 62 50 84

Aurélie Wayser Langevin  
+ 33 (0)1 40 62 56 19

Caroline Brugier  
+ 33 (0)1 40 62 50 59

Air Liquide Healthcare Communications:

Muriel Doucet  
muriel.doucet@airliquide.com  
+ 33 (0)1 49 69 46 46

Coralie Gazzeri  
coralie.gazzeri@airliquide.com  
+ 33 (0)1 49 69 45 40



Follow us on Twitter @AirLiquideGroup

[www.airliquide.com](http://www.airliquide.com)