

Digital transformation: inauguration of the first remote operation center for Air Liquide units in France

Air Liquide inaugurated today in France, in the frame of the *Connect* project, an operation center that is unique in the industrial gas sector. It enables the remote management of production for 22 of the Group's units in France, optimizing their energy consumption and improving their reliability. With "technological showcase" certification from the Industry of the Future Alliance¹, *Connect* represents an investment of €20 million². This project is based on the implementation of new digital technologies at French production sites and on the creation of new skills.

Like a control tower, the remote operation and optimization center, located near Lyon, in Saint-Priest, has a nationwide vision of customer needs for oxygen, nitrogen, argon and hydrogen. Capable of **stopping or restarting a site remotely**, the center adapts the production level of the plants according to customer demand. Thanks to this center, the workflows of each unit are adapted **in real time to the needs of each customer**. The volume of production and the delivery of gases to customers are optimized throughout the country.

Through the analysis of **big data** 24/7 for **22 sites in France**, Air Liquide is developing **predictive maintenance** for production sites by identifying the weak signals that precede a malfunction. **Algorithms** devised by Air Liquide engineers are used to fine-tune equipment adjustments in plants in order to **optimize energy consumption**, leveraging nearly 15 years of data gathered from all industrial sites.

In the plants, new technologies (**touch tablets, 3D scanning, video tutorials, etc.**) are also being introduced to **simplify maintenance** and **inspection** management operations and the organization of daily tasks for operators.

The remote operation and optimization center has given rise to new skills: **"real-time pilots"** who are in constant contact with sites and **"analysts"** who study the production and optimization of energy consumption.

With the creation of the operating center and the introduction of new technologies into the daily work of production unit technicians, *Connect* is part of Air Liquide's **open innovation** approach between production sites teams, i-Lab, the innovation lab of Air Liquide, and the French ecosystem of **technology start-ups**.

Guy Salzgeber, Senior Vice-President and member of the Air Liquide Group's Executive Committee supervising Europe Industries, said: **"We are proud to implement the first industrial gases remote operation center, which contribute to strengthen the Group's competitiveness. The Group's digital transformation is taking a new step, enabling Air Liquide to even better anticipate the needs of its industrial customers while strengthening the reliability of its production units."**

¹ [The Industry of the Future Alliance](#) (Alliance Industrie du Futur) brings together professionals from industry and digital fields

² Air Liquide investment decision in the first half of 2016

Air Liquide France Industrie

Air Liquide France Industrie is a subsidiary of the Air Liquide Group and brings together all of the Group's industrial gases production and commercialization activities in France, with 3 complementary business lines: Large Industries, Industrial Merchant, and Electronics. The subsidiary has nearly 2,400 employees working at 80 sites located across France and helping more than 300,000 customers optimize their performance durably: from craftsmen to petrochemical companies and from testing laboratories to the automobile, aerospace, steel and agrifood industries.

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The world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 68,000 employees and serves more than 3 million customers and patients*. Oxygen, nitrogen and hydrogen are essential small molecules for life, matter and energy. They embody Air Liquide's scientific territory and have been at the core of the company's activities since its creation in 1902.

Air Liquide's ambition is to lead its industry, deliver long term performance and contribute to sustainability. The company's customer-centric transformation strategy aims at profitable growth over the long term. It relies on operational excellence, selective investments, open innovation and a network organization implemented by the Group worldwide. Through the commitment and inventiveness of its people, Air Liquide leverages energy and environment transition, changes in healthcare and digitization, and delivers greater value to all its stakeholders.

Air Liquide's revenues amounted to €16.4 billion in 2015, and its solutions that protect life and the environment represented more than 40% of sales. On 23 May 2016, Air Liquide completed its acquisition of Airgas, which had revenues amounting to \$5.3 billion (around €4.8 billion) for the fiscal year ending 31 March 2016. Air Liquide is listed on the Paris Euronext stock exchange (compartment A) and belongs to the CAC 40 and Dow Jones Euro Stoxx 50 indexes.

* Following the acquisition of Airgas on 23 May 2016