



Building tomorrow, together with science

ANRT – Air Liquide R&D Presentation
11/01/2024

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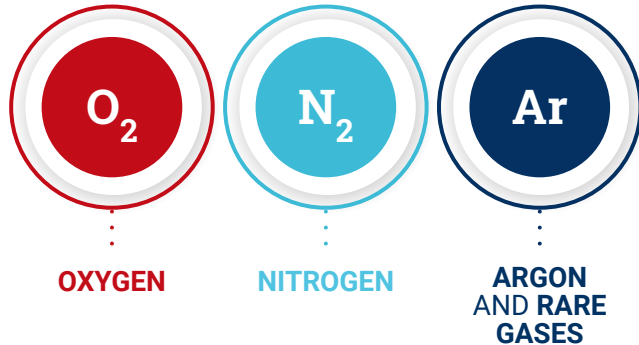
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Our scientific territory: Essential small molecules

Oxygen, nitrogen and hydrogen are essential small molecules. They embody Air Liquide's scientific territory and have been at the core of the company's activities since its creation in 1902.

Separating the components of **air**
to take advantage of their properties



Producing molecules from the
natural resources of the planet



2022 Key Figures



67,100
EMPLOYEES



PRESENT IN
70+ COUNTRIES



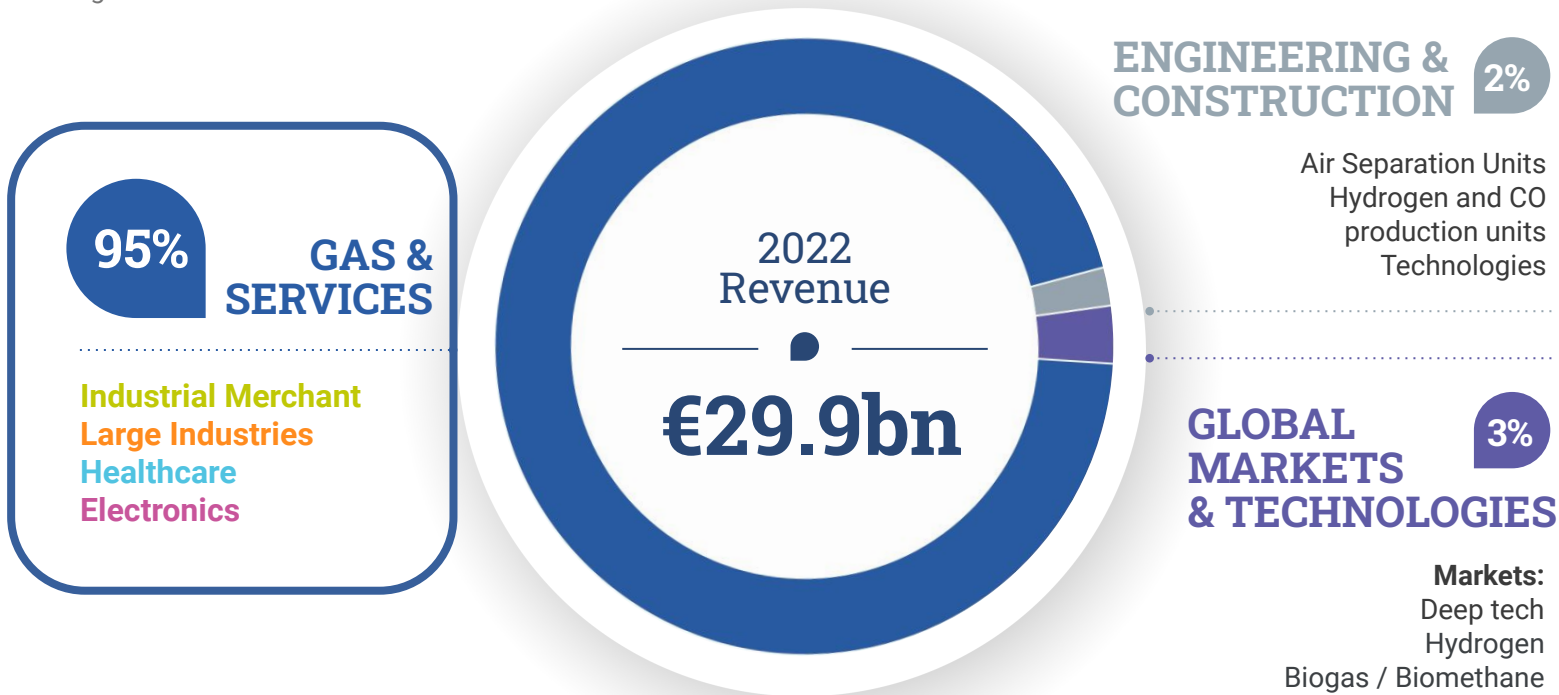
MORE THAN
3.9 MILLION
CUSTOMERS &
PATIENTS



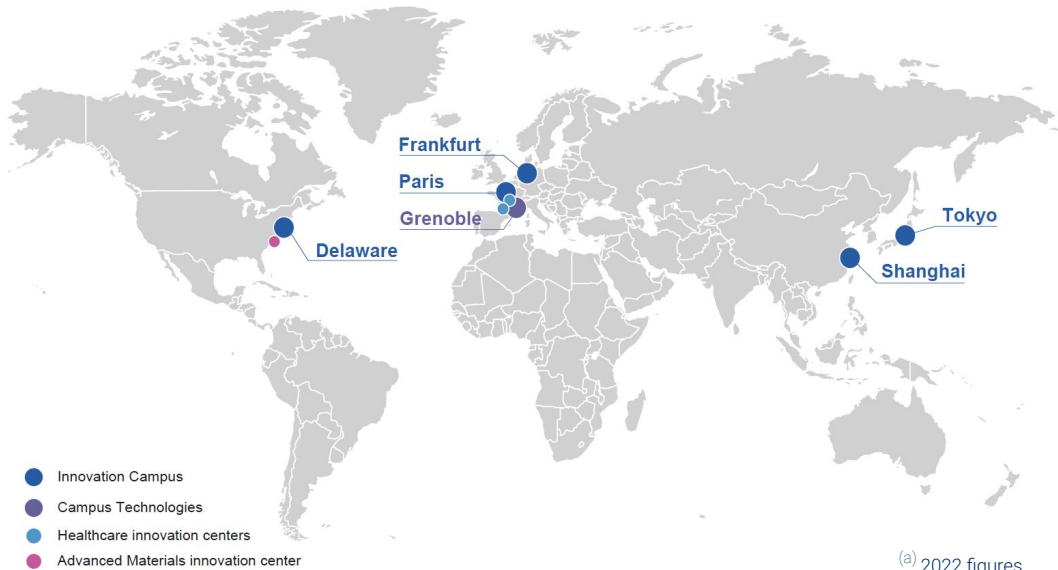
REVENUE
€29.9bn

Group revenue at €29.9Bn

2022 figures



Innovation at the heart of the Group's strategy



^(a) 2022 figures

Innovation & Technologies as a driving force of *ADVANCE*



**Climate solutions
for industry
and mobility**



**Digital, Data and AI
to support industry
and healthcare
transformation**



**Advanced
Materials and Deep
Tech to open new
markets**



01

Connection to Business Business Pull

Our Campuses around the world



Connection with key stakeholders

Connection through Innovation Campuses



August 26, 2022 : proud to host at **Innovation Campus Delaware** U.S. Secretary of Energy, U.S. Secretary of Labor, Senators, the Governor for a productive discussion of energy future and the key role that hydrogen will play.

3rd Air Liquide Scientific Challenge

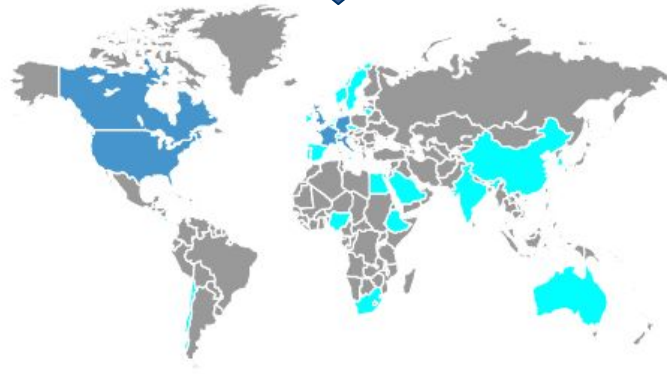
Data sharing
for
decarbonization



Energy storage
using essential
small molecules

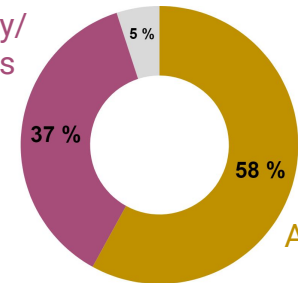


Electric Heating
for H₂ production



15,000 visits on the website
119 Proposals
29 Countries

Industry/
star-ups



Academics

Experts + Jury

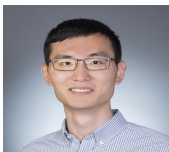


Pr. Steven CHU
Nobel Prize Laureate
Former US Secretary of Energy
Stanford University



Pr. Isabelle RYL
Director of PRAIRIE at INRIA
Awarded French National Order
of Merit

Data sharing for decarbonization



Can LI
Purdue University, USA

Energy storage using essential small molecules



Miguel MADEIRA
University of Porto, Portugal

Electric Heating for H₂ production



Enrico TRONCONI
Politecnico di Milano, Italy

**50,000 €
Scientific Prize**

+

**Long term
Collaboration**
(1st and 2nd Challenges:
13 publications, 18 patents,
1 start-up...)

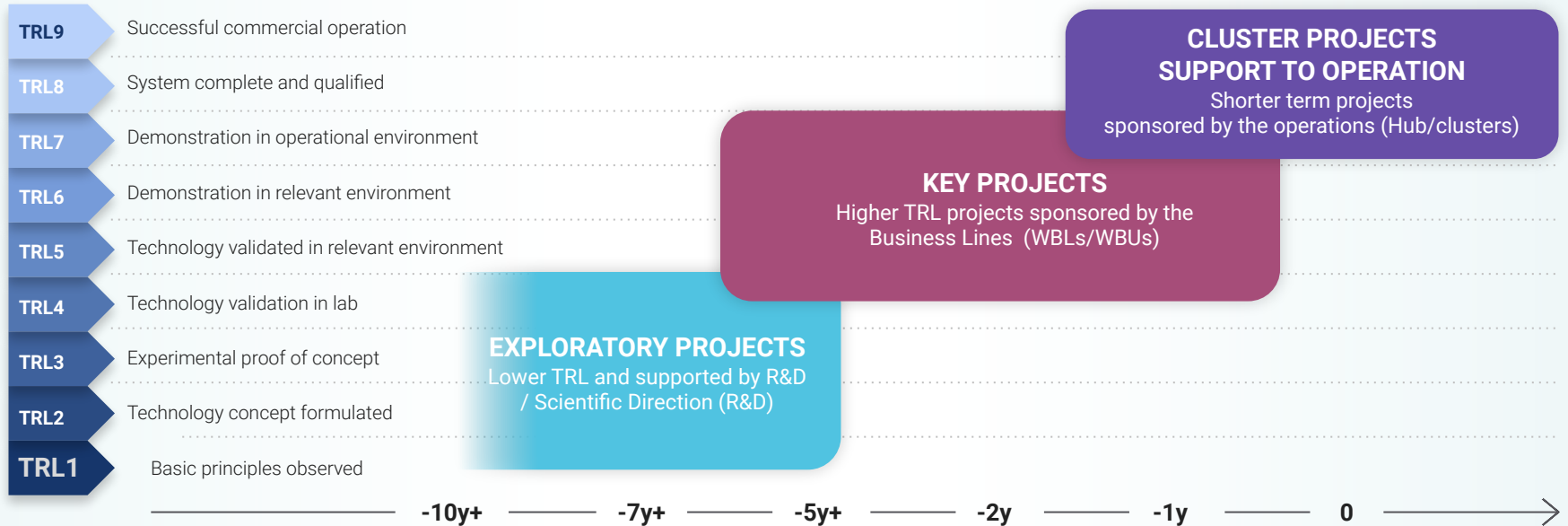


02

Portfolio management, and selectivity on impactful climate solutions

An R&D project portfolio to impact the business

Over the short, medium and long term





03

HR: Talent developments and competency mapping

Steer talents development, and impact performance



Recruit **young talents**

- Recruitment of **young scientists**
- 50% New graduates
- 40 % in average are PhD holders



Develop **technical leaders**

- Lead the **Technical Community Leaders program (TCL)** to identify potential experts at the earliest stage
- R&D is a reservoir of talents for other entities



Foster **Diversity and Inclusion**

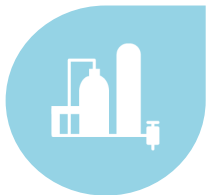
- More diversity: educational background, gender, nationalities, experiences
- **M[]re programme** (35% Women in M&P positions, 3 out of 5 campuses led by Women)



Develop **engagement & cooperation**

- **“My Voice”**: voice of employees
- Early adopters to “Citizen at work”
- Reinforce cooperation between teams and campuses

Competency mapping: 8 scientific expertises



Process Engineering



Combustion



Materials science



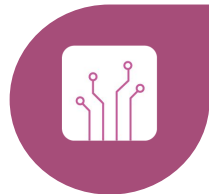
Design & Manufacturing



**Computational & Data
science**



Analytical science



Fine chemistry



Life science

Act for all



Citizen @Work

An opportunity for our employees to devote time to a project or a mission supporting the Group's sustainability objectives in their local communities



Universcience Palais de la découverte

Renewal of Palais de la découverte partnership. Main sponsor of the Chemistry room. Researchers transferring their passion towards science in the upcoming years.



Family days

Family Day in Campuses in 2023. "Journée découverte" in ICP to proudly show to all families our daily work to impact positively the planet.

Q&A