

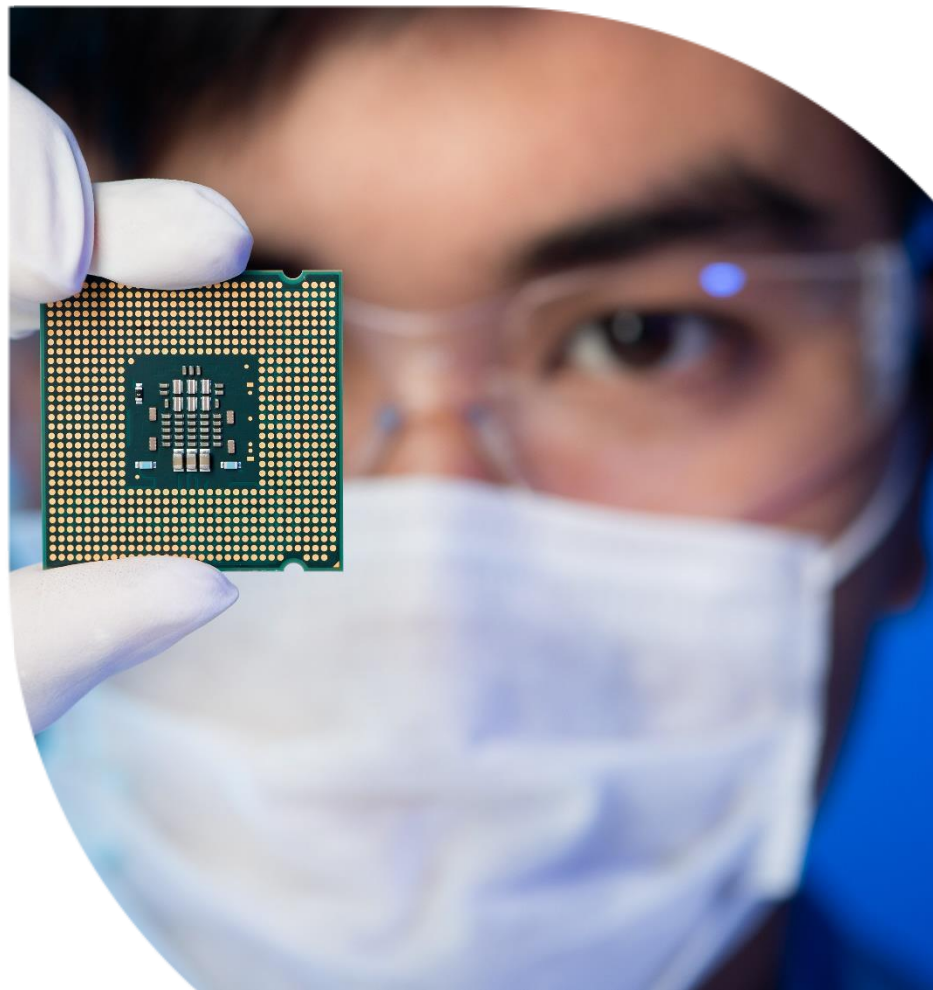
Q1 2019 Activity

Continued sustained growth
Very active business
development

Fabienne Lecorvaisier, Executive VP

Michael Graff, Executive VP

Paris, 26 April 2019



Q1 Well Aligned with NEOS Objectives

- Continued sustained sales growth: +9%, comparable +5%
- Action plans launched for increased efficiencies > €400m/year
- Strong cash flow
- Pursued active business development

FX Tailwind, Solid Markets

Forex Impact⁽¹⁾

+2.9%

Energy impact⁽¹⁾

+0.7%

Markets



Chemicals
Oil & gas
Steel



Metal Fab.
Construction
Energy
Food & Pharma
Techno & Research



Integrated Circuit

Outlook Q2 19



(1) On Group Q1 2019 sales

High G&S Growth, Recovering E&C and Strong GM&T

Sales in €m	Q1 18	Q1 19	Q1 19/18 As published	Q1 19/18 Comparable
Gas & Services	4,831	5,237	+8.4%	+4.8%
Engineering & Construction	85	93	+7.6%	+5.0%
Global Markets & Technologies	94	111	+18.2%	+15.9%
Group Total	5,010	5,441	+8.6%	+5.0%

Very Active Quarter

Performance Focus



Launch of accelerated efficiency plans

Technologies and Innovation



Grand opening of Tokyo Innovation Center with Electronics WBL customers



Equity stake in Hydrogenics, electrolysis H₂ production

M&A



Acquisition of Tech Air in the U.S.

Long-Term Contracts



€50m ASU contract in Russia



Investment to build the world largest electrolyzer in Canada



Contributing to Climate objectives

Solid Growth Levers

— G&S comparable sales growth

— WBLs —

**Industrial
Merchant**



+3%

**Large
Industries**



+5%

Healthcare



+5%

Electronics



+14%

— Main Geographies contributing —



Asia, Europe, Africa & Middle East



Developing Economies



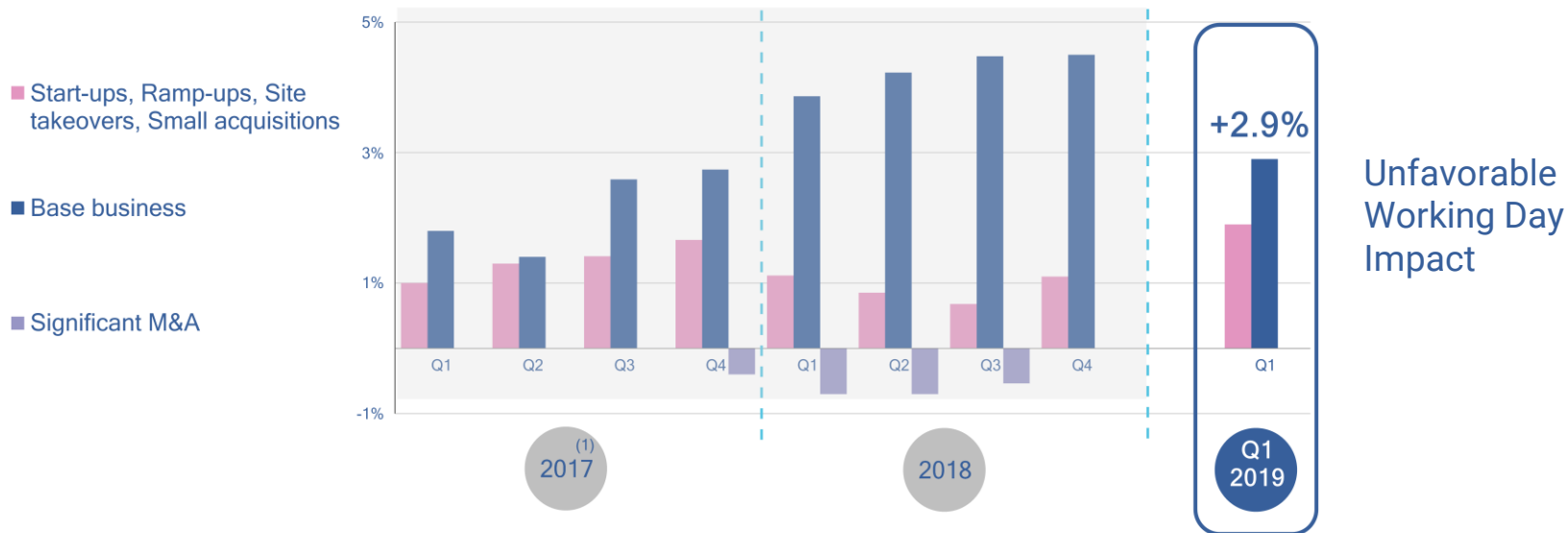
Europe, Americas



Asia, Americas

Solid Base Business

— G&S quarterly growth analysis



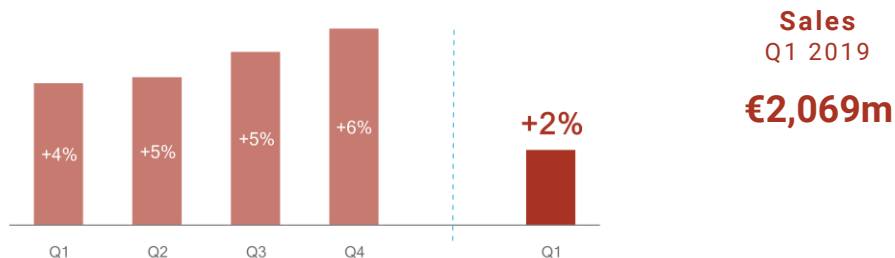
Unfavorable Working Day Impact

(1) Comparable growth based on 2016 adjusted sales

Q1 - Solid Americas and Europe

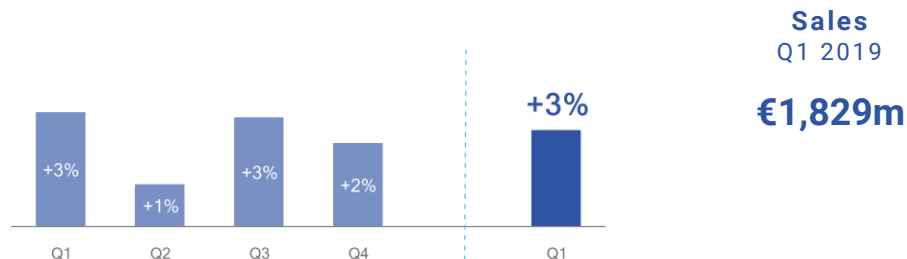
— G&S comparable sales growth

Americas - Strong activity in EL and HC



- LI: high comparison basis; strong H₂ volumes
- IM: solid cylinder volumes in most markets; One fewer working days
- Dynamic HC in the U.S. and South America
- EL: very strong in all segments

Europe - Continued strength in IM and HC

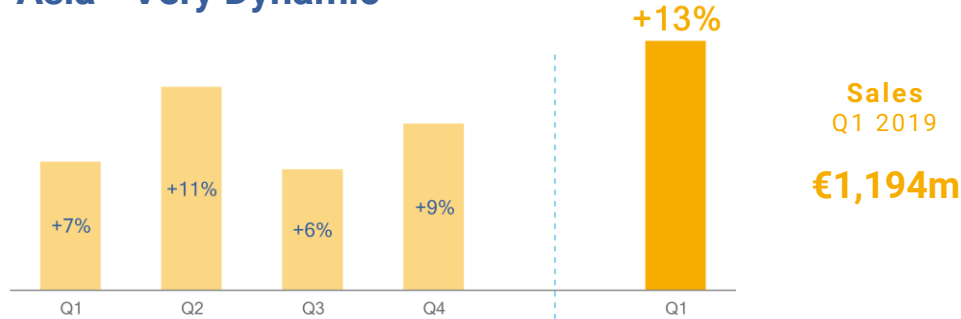


- LI: Strong H₂ for refining in Benelux; low Cogen; Ramp-Ups in Turkey and Kazakhstan
- IM: solid cylinder volumes, higher pricing
- HC: consistent organic growth across Europe; strong HHC, diabetes therapy in Nordics

Q1 - Strong Momentum in Asia, Robust Growth in AME

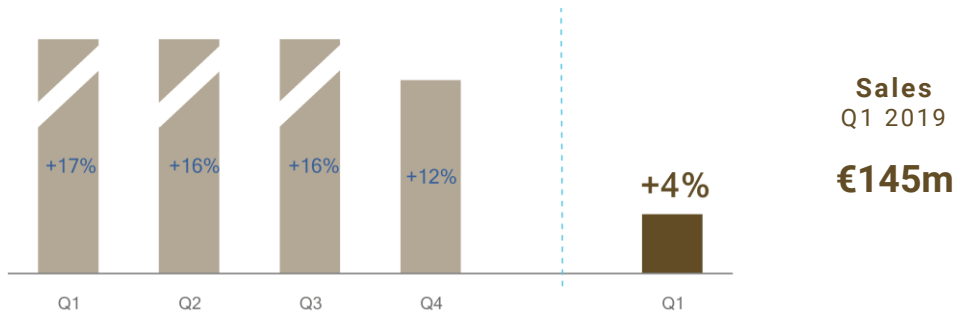
— G&S comparable sales growth

Asia - Very Dynamic



- **LI:** Ramp-Ups in China, high H₂ volumes in Singapore
- **IM:** China with high bulk and cylinder volumes, sales >+15%; positive Japan
- **EL:** Start-Ups in Carrier Gases, very strong Advanced Materials, buoyant E&I

AME - Softening Effect of Major LI Start-Up

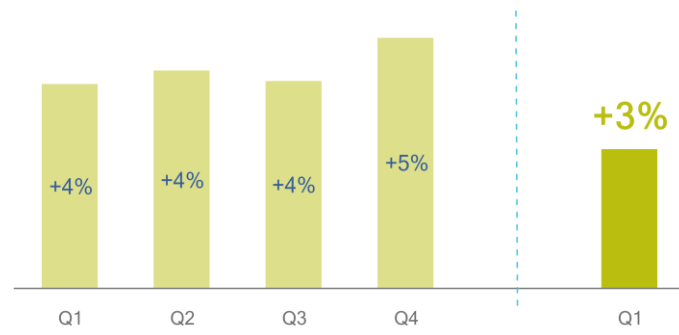


- **LI:** solid performance post impact of Dec'17 Start-Up in South Africa
- **IM:** continuous high growth in Middle-East and India

Q1 - Robust IM, Start-Ups in LI

— G&S comparable sales growth

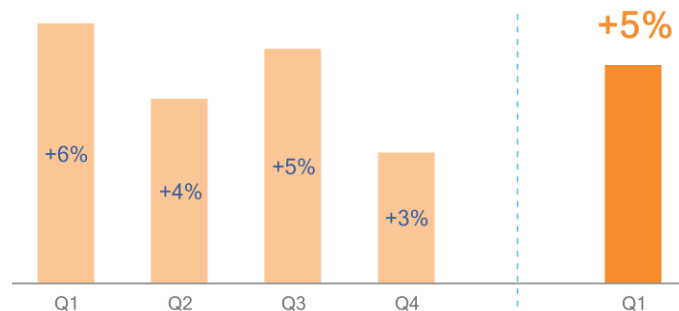
Industrial Merchant - Solid Growth



Sales
Q1 2019
€2,365m

- One fewer working days
- Cylinder volume growth
- Pursued strong pricing at +3.3%

Large Industries - Strong Activity



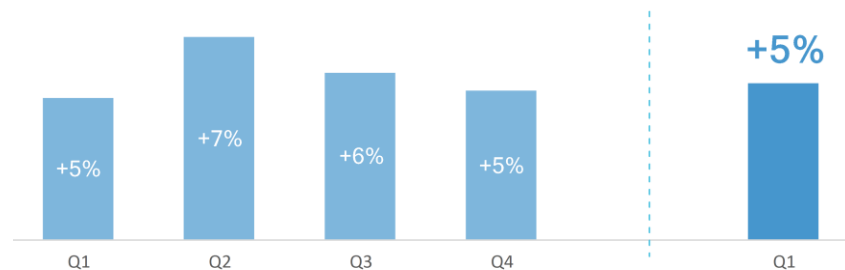
Sales
Q1 2019
€1,490m

- High contribution from **Start-Ups** and **Ramp-Ups**
- **Very strong H₂** volumes and **solid air gases**
- **High comparison** basis in Americas

Q1 - Consistent HC, Continued Very High Growth in EL

— G&S comparable sales growth

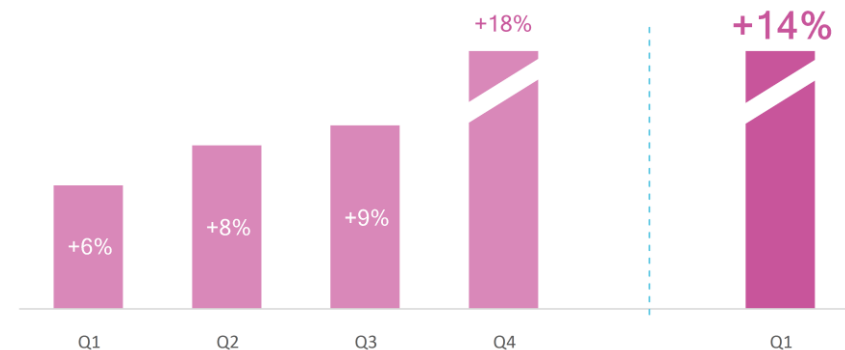
Healthcare - Steady Organic Growth



Sales
Q1 2019
€897m

- **High single-digit** growth in HHC, limited impact from bolt-on acquisitions
- **Very strong** Medical Gases in Americas with Proximity care and success of innovative cylinders

Electronics - Strong Growth in All Segments



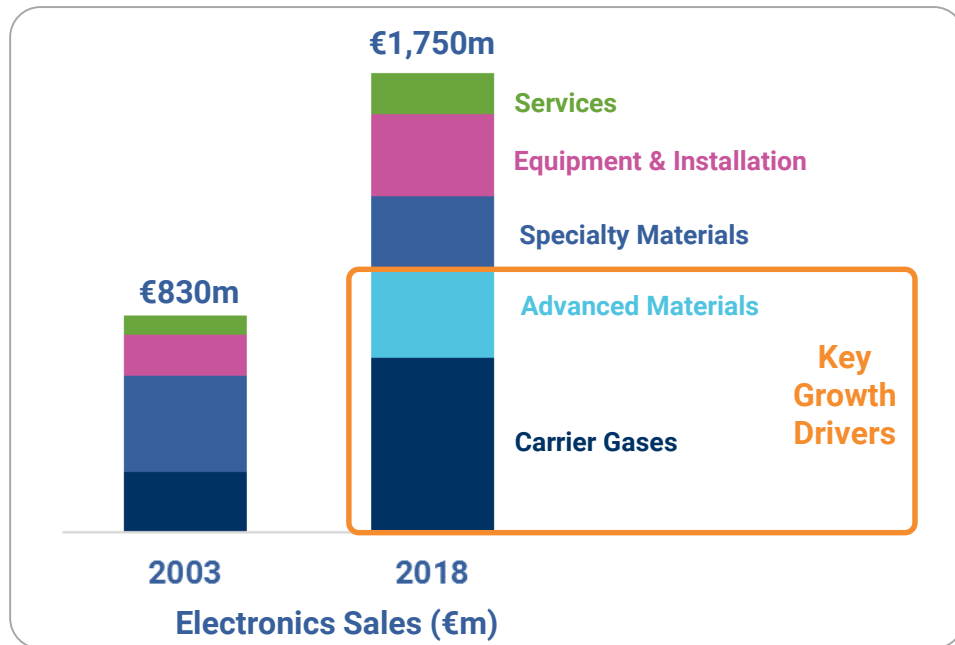
Sales
Q1 2019
€485m

- **Dynamic** demand
- **Double-digit growth** in Carrier Gases; 3 Start-Ups
- **Strong Advanced Materials**, success of enScribe™
- **Buoyant E&I**

EL - Differentiation through High Value Products



Carrier Gases and Advanced Materials
key growth drivers

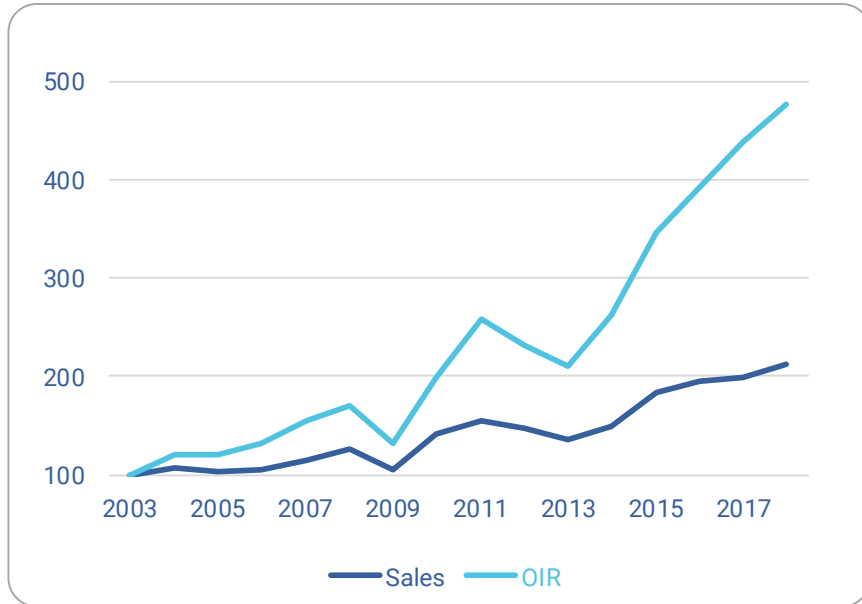


- **Global leader, #1 in Asia, #1 in China**
- **Partnership approach** enabling customer technology advancement
- **Balanced** exposure in the **Integrated Circuit** market: **logic, memory and analog**
- **Record** signing, **very strong** sales backlog

EL - Stronger Margin Mix



OIR versus Sales -
Base 100 in 2003



- **Innovation-driven** growth enhancing **margin mix**
- New Offers in **Standard Plant** to **meet evolving needs** of industry



- Continuous drive for efficiencies in Opex and Capex

- **Bringing value** through new **Advanced Materials**

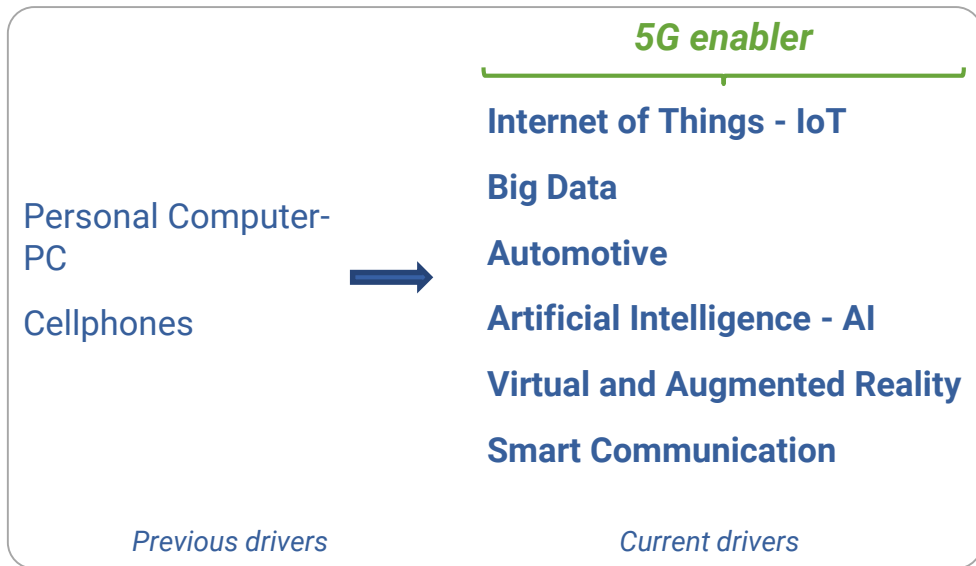


- R&D innovation co-development
- High value molecules enabling customer technology

EL - Capturing Growth in an Expanding Industry



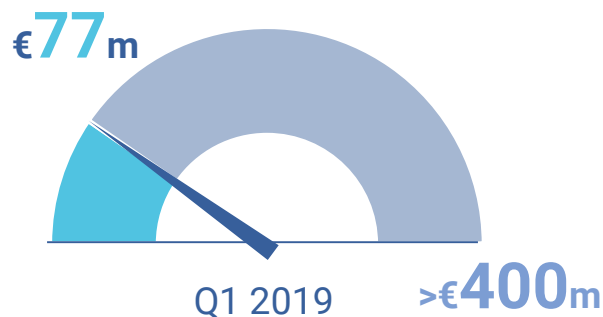
FROM → TO



- “Chips” will be in **everything enabling IoT, AI and Automotive**
- **Key market drivers are all connected**
- **5G connectivity enables enhanced development** of market drivers
- **Air Liquide growth** driven by Semiconductor production **volumes** and industry Capex

Strengthened Efficiency Program Launched

2019 efficiencies



- Energy optimization: China, Germany, India
- Routing optimization: U.S., China, France
- Helium losses reduction in cylinders in China
- ~30% linked to climate objectives

Cumulated efficiencies

Target in 2020
>€1.5bn

New program launched:

- Airgas efficiencies
 - Organization agility - mutualization
 - Leverage on digital
- additional yearly
€100m

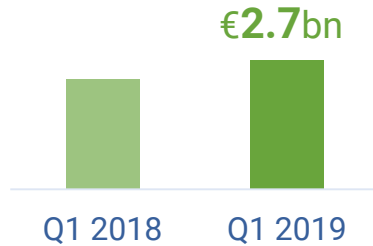
Cash Flow

20.3%⁽¹⁾

(1) Operating Cash Flow before change in Working Capital Requirements/Group Revenue

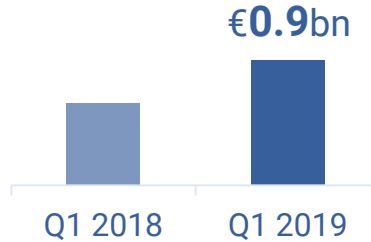
Decisions and Opportunities at High Level

Investment Opportunities⁽¹⁾ 12-month portfolio



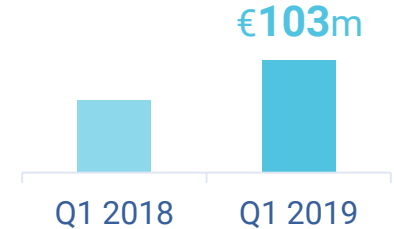
- **Well-balanced by geography**
- ~€20m average project size
- **38%** linked to climate objectives

Q1 2019 Investment Decisions⁽¹⁾



- **High** level of signings
 - Equity stake in Hydrogenics
 - Largest electrolyzer, Canada
 - Biomethane project, Norway
- **Acquisition** of a major Industrial Merchant distributor in the U.S.

Q1 2019 Start-up/Ramp-up Sales Growth Contribution

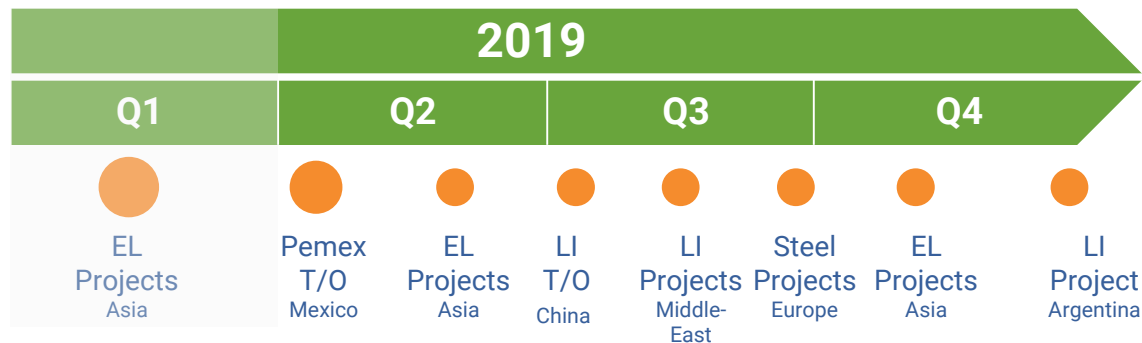


- **7** Start-Ups, out of which **3** for EL
- **1 CO₂ purification** plant in the U.S., **circular economy**

(1) See definitions in appendix

Confirmed Start-Ups Forecast

Major Start-Ups



Sales growth contribution - FY 2019

>€300m

Note: T/O = Take Over

2019 Outlook

Q1 2019

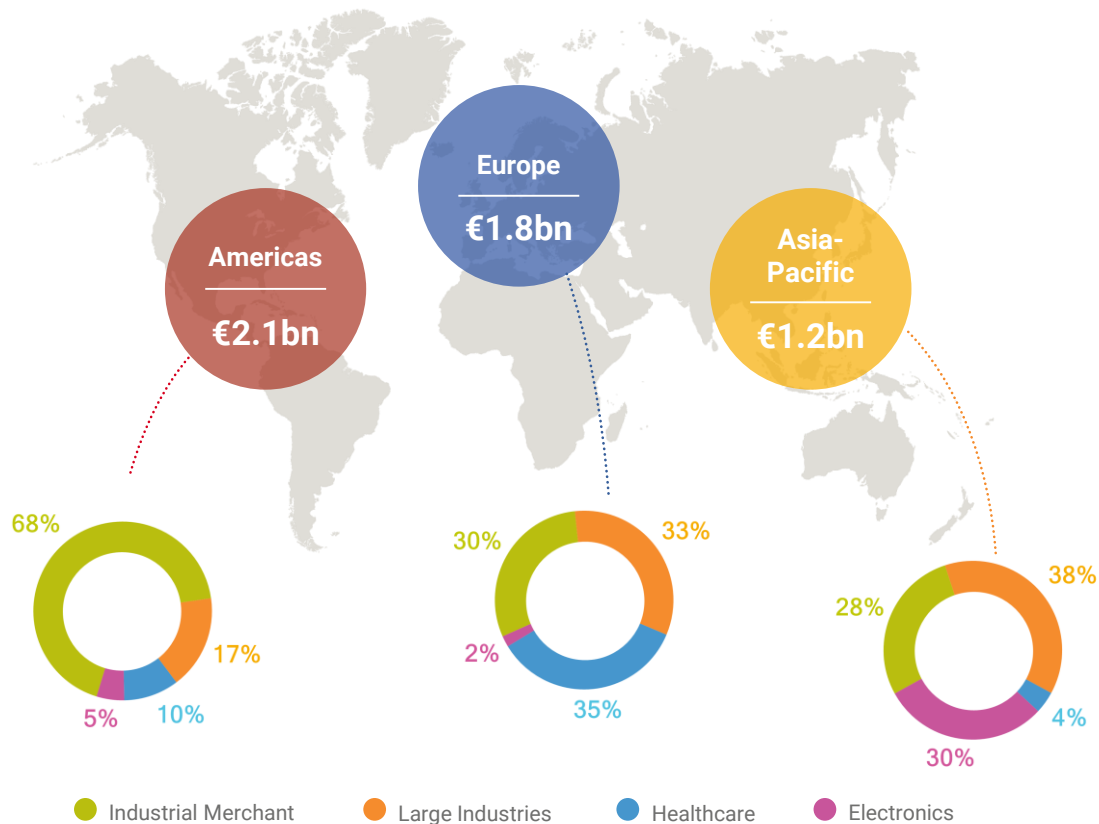
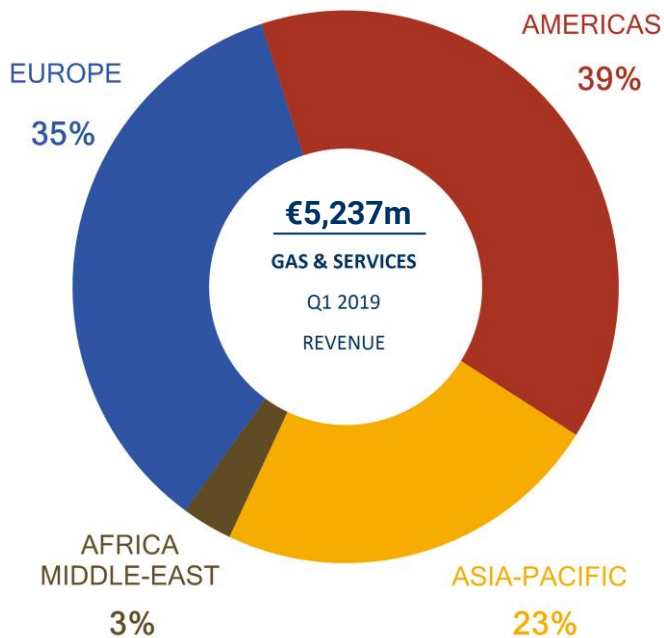
- Continued sustained growth in G&S
- Action plans deployed for increased efficiencies
- Strong cash flow
- Expanding investment opportunities

2019

“Assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2019, calculated at constant exchange rate”

Q1 2019 Appendix

Q1 2019 G&S Revenue Breakdown by Region



Americas

Q1 Gas & Services Sales: €2,069m

Industrial Merchant

- **Most end-markets** contributing to growth, particularly Metal fabrication.
- **Solid** demand for **cylinders** in U.S. and Canada, stable hardgoods in U.S.
- **Strong pricing** **+3.8%**

Large Industries

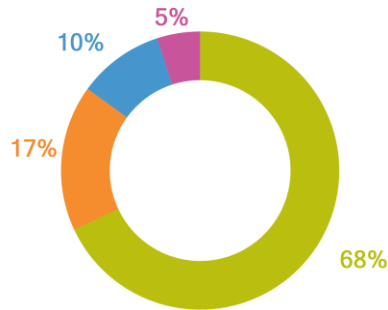
- **High H₂ volume** in North America
- **High price comparison** vs Q1 18 linked to severe weather condition
- **Dynamic Latin America**

Healthcare

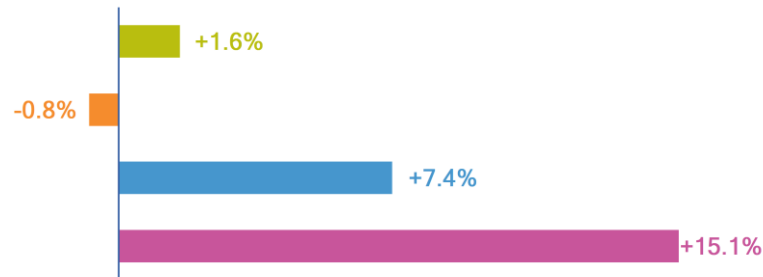
- **Strong Medical gases** in the U.S. with Proximity care & digital cylinders
- **Limited** bolt-on acquisitions
- **Dynamic** HHC in Brazil, Argentina and Columbia

Electronics

- **Strong momentum** in Carrier Gases, Advanced Materials and E&I



Q1 19/18 Comparable growth : **+2.4%**



Europe

Q1 Gas & Services Sales: €1,829m

Industrial Merchant

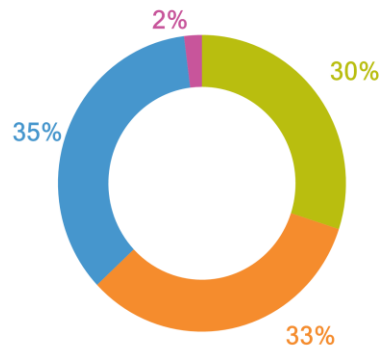
- **Broad based** geographic growth
- **Proactive** actions to develop cylinder sales
- **Stronger** pricing: **+3.2%**
- Dynamic **Eastern Europe**

Large Industries

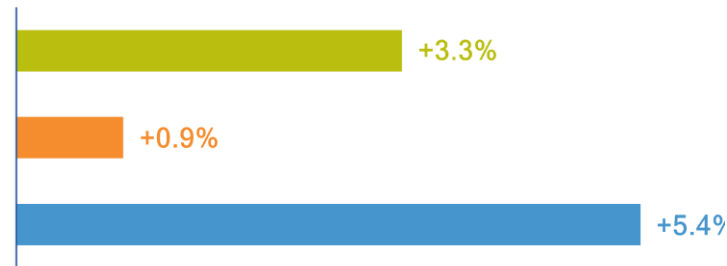
- **High refining demand** (Benelux)
- **Solid growth of air gases** sales in France and Germany
- **Ramp-Ups** in Turkey and Kazakhstan
- **High comparison** effect for **Cogen** activity

Healthcare

- **Very steady organic growth**
- **Strong HHC**, especially with increased number of **patients with diabetes treated** in Scandinavia, France and Spain
- **Medical gases growth** despite pricing pressure



Q1 19/18 Comparable growth : **+2.8%**



Asia-Pacific

Q1 Gas & Services Sales: €1,194m

Industrial Merchant

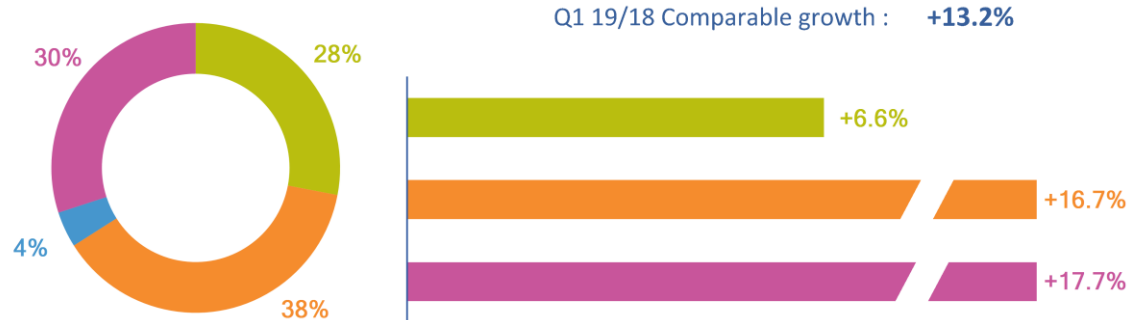
- **Very dynamic China** >+15%, strong bulk (O₂ and Ar) and cylinders
- Strong Helium across the zone
- Improving Japan, lower Australia

Large Industries

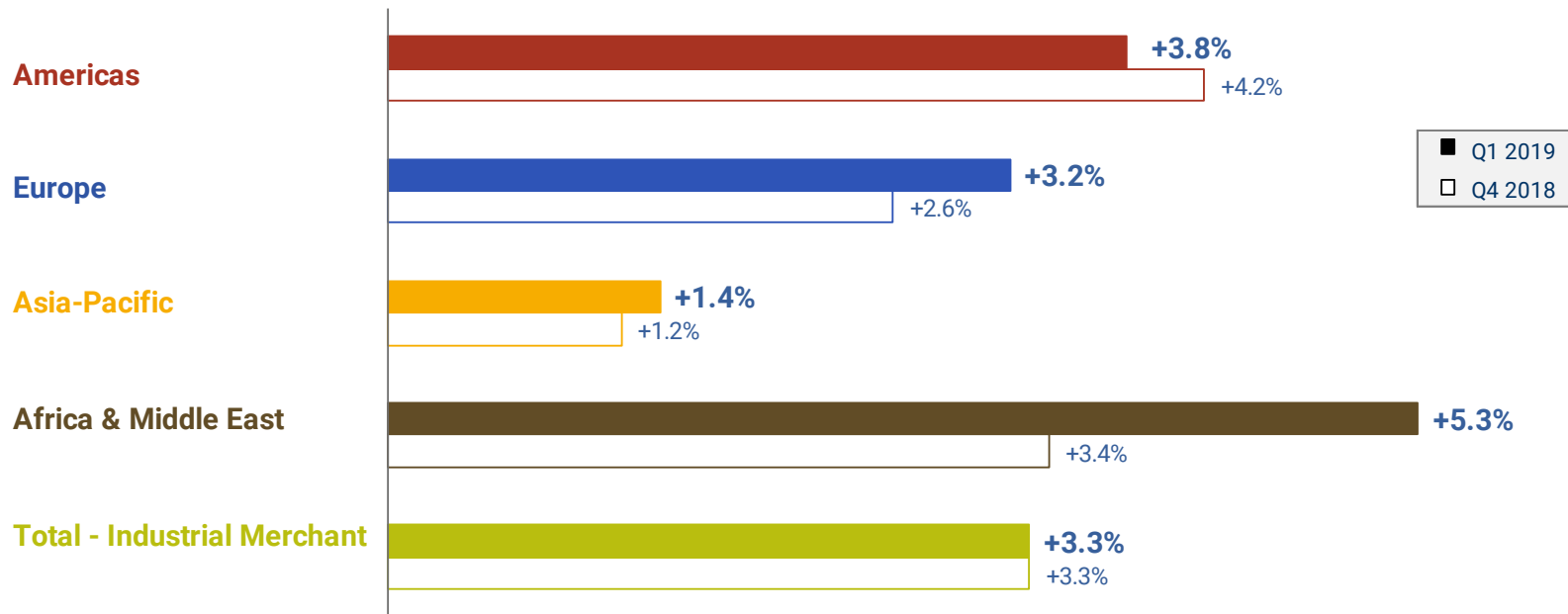
- **3 Start-Ups in China** in Q4 2018
- Strong H₂ in Singapore

Electronics

- >+10% growth in **Carrier Gases** China and Singapore
- **Dynamic Advanced Materials** South Korea, Taiwan and Japan
- **Buoyant E&I** sales >+50%



Industrial Merchant Pricing



Q1 2019 - E&C Gradually Recovering, Strong Growth in GM&T

E&C

€93m

+5%

Sales

€147m

-23%

Order Intake

GM&T

€111m

+16%

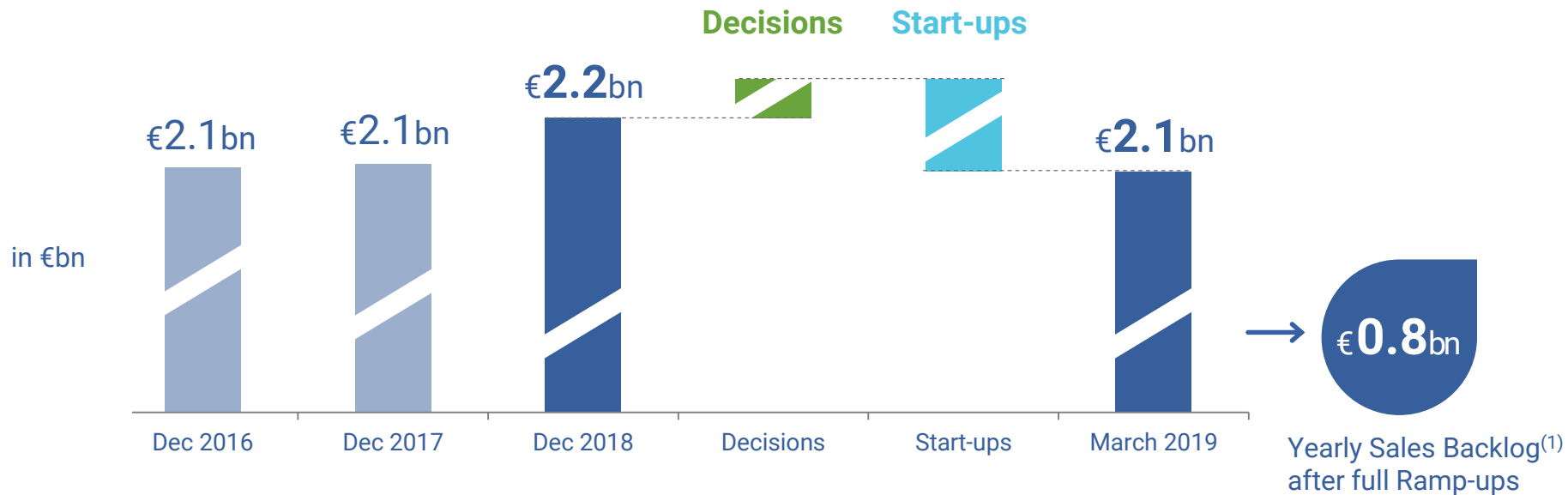
Sales

€127m

+4%

Order Intake

Steady Backlog > €2bn



See definitions in appendix

Impact of Currency and Energy on G&S Revenue

Currency	In €m	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19
€/USD		(258)	(147)	+15	+55	+138
€/CNY		(26)	(4)	(5)	(7)	+10
€/JP¥		(24)	(17)	+1	+8	+16
Others		(105)	(90)	(72)	(57)	(23)
Total currency impact		(413)	(258)	(61)	(1)	+141
	Average rate	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19
€/USD		1.23	1.19	1.16	1.14	1.14
€/CNY		7.81	7.60	7.92	7.89	7.66
€/JP¥		133.1	130.1	129.6	128.8	125.1
Natural Gas	In €m					
Natural Gas Impact		(14)	+30	+82	+87	+5
Electricity	In €m					
Electricity Impact		(2)	+21	+36	+38	+27

Revenue Analysis by Quarter and by Business Line

Sales in €m	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q1 19/18 as published	Q1 19/18 comparable
Large Industries	1,365	1,353	1,454	1,513	1,490	+9.1%	+5.1%
Industrial Merchant	2,208	2,293	2,312	2,368	2,365	+7.1%	+2.8%
Healthcare	850	864	862	910	897	+5.6%	+5.4%
Electronics	408	428	438	481	485	+19.0%	+13.7%
Gas & Services	4,831	4,938	5,066	5,272	5,237	+8.4%	+4.8%
Engineering & Construction	85	95	105	145	93	+7.6%	+5.0%
Global Markets & Technologies	94	119	100	161	111	+18.2%	+15.9%
Group Total	5,010	5,152	5,271	5,578	5,441	+8.6%	+5.0%

Revenue Analysis by Quarter and by Geography

Sales in €m	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q1 19/18 as published	Q1 19/18 comparable
Americas	1,901	1,973	2,017	2,091	2,069	+8.9%	+2.4%
Europe	1,753	1,711	1,779	1,868	1,829	+4.3%	+2.8%
Asia-Pacific	1,016	1,091	1,099	1,153	1,194	+17.5%	+13.2%
Middle-East, Africa	161	163	171	160	145	-10.1%	+3.8%
Gas & Services	4,831	4,938	5,066	5,272	5,237	+8.4%	+4.8%
Engineering & Construction	85	95	105	145	93	+7.6%	+5.0%
Global Markets & Technologies	94	119	100	161	111	+18.2%	+15.9%
Group Total	5,010	5,152	5,271	5,578	5,441	+8.6%	+5.0%

G&S Revenue Growth by Quarter and by Impact

	Growth as published	Natural Gas	Electricity	Currency	Significant perimeter	Comparable growth
Q1 2018	-4.3%	-0.3%	-0.0%	-8.3%	-0.7%	+5.0%
Q2 2018	+0.1%	+0.6%	+0.4%	-5.3%	-0.7%	+5.1%
Q3 2018	+5.8%	+1.7%	+0.7%	-1.3%	-0.5%	+5.2%
Q4 2018	+8.1%	+1.8%	+0.7%	+0.0%	+0.0%	+5.6%
Q1 2019	+8.4%	+0.1%	+0.6%	+2.9%	+0.0%	+4.8%

Investment Cycle – Definitions

• Investment opportunities at end of the period

- Investment opportunities under consideration by the Group for decision within **12** months.
- Industrial projects with investment value > **€5m** for Large Industries and > **€3m** for other business lines.
- Includes asset replacements or efficiency projects. Excludes maintenance and safety.

• Investment backlog at end of the period

- Cumulated industrial investment value of projects decided but not yet started.
- Industrial projects with value > **€10m**, including asset replacements or efficiency projects, excluding maintenance and safety.

• Sales backlog

- Cumulated expected sales per year generated by the current investment backlog after full ramp-up.

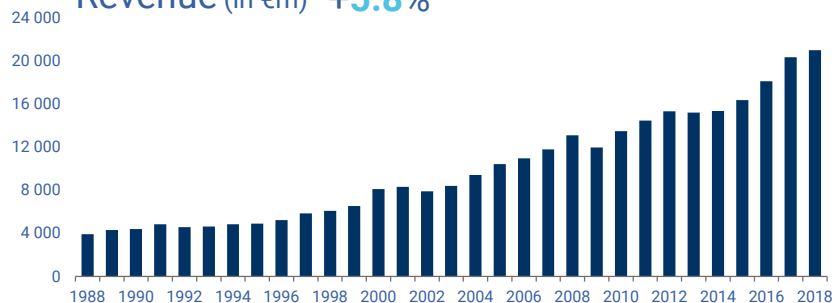
• Decisions of the period

- Cumulated value of industrial and financial investment decisions.
- Industrial, growth and non-growth projects including asset replacements, efficiency, maintenance and safety.
- Financial decisions (acquisitions).

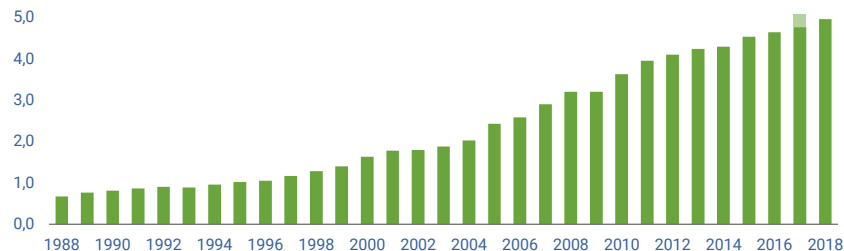
Regular and Sustained Performance

— CAGR over 30 years⁽¹⁾

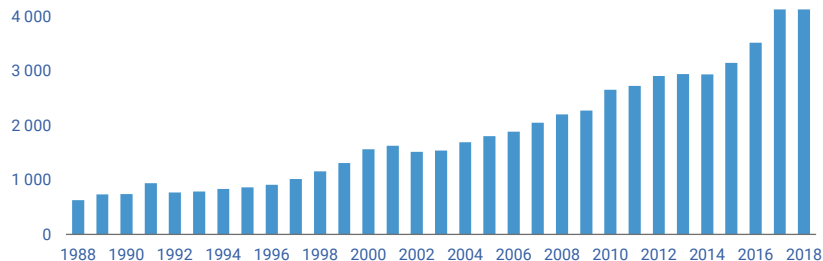
Revenue (in €m) **+5.8%**



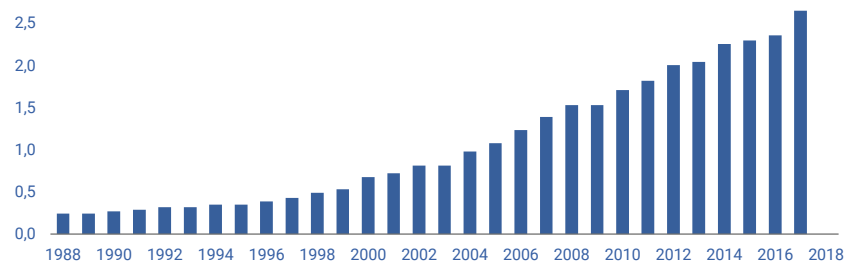
EPS⁽²⁾ (in €) **+6.9%**



Cashflow (in €m) **+6.5%**



Dividend⁽²⁾ (in € per share) **+8.3%**



(1) Calculated according to prevailing accounting rules over 30 years.

(2) Adjusted for the 2-for-1 share split in 2007, for attributions of free shares and for a factor of 0.974 reflecting the value of the rights of the capital increase completed in October 2016.

For further information, please contact:

Investor Relations

Aude Rodriguez ☎ + 33 (0)1 40 62 57 08

Ludmilla Binet ☎ + 33 (0)1 40 62 57 37

Muriel Légeron ☎ + 33 (0)1 40 62 50 18

Joseph Marczely ☎ + 1 610 263 8277

Communication

Alexandra Rocca ☎ + 33 (0)1 40 62 50 93

Annie Fournier ☎ + 33 (0)1 40 62 51 31

www.airliquide.com

L'Air Liquide S.A.

*Corporation for the study and application of processes developed by Georges Claude
with registered capital of 2,361,913,658.50 euros*

Follow us on Twitter @AirLiquideGroup

Corporate Headquarters:

75, Quai d'Orsay

75321 Paris Cedex 07

Tel : +33 (0)1 40 62 55 55

RCS Paris 552 096 281