



Air Liquide at a Glance

Investor Presentation

FY 2017



1

Air Liquide in Brief

The World Leader in Gases, Technologies and Services for Industry & Health

Established in
1902



>2 M
Clients

~65,000
Employees

1.5 M
Patients

FY 2017
Group Figures

>€20bn

Sales

16.5%


OIR margin



80 countries

Our activities

Shared resources and expertise to serve diverse customers



ENGINEERING & CONSTRUCTION
Designing and building production units


GLOBAL MARKETS & TECHNOLOGIES
Developing new markets requiring a global approach or markets with significant technological content

- 
Energy transition
- 
Maritime
- 
Scientific exploration


PRODUCTION

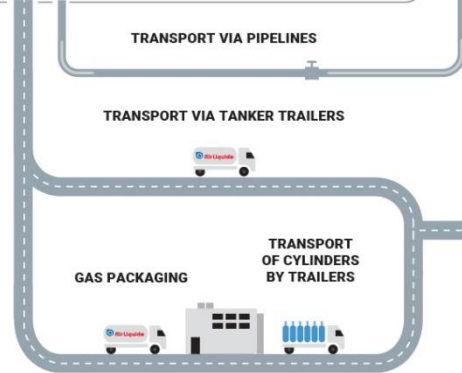
CENTRALIZED PRODUCTION

- Air Separation Units (oxygen, nitrogen, argon)
- Hydrogen and carbon monoxide production units



ON-SITE PRODUCTION AT CUSTOMERS'





SECTORS SERVED / GAS & SERVICES ACTIVITIES

-  Chemicals
-  Refining
-  Metals

LARGE INDUSTRIES
Produce and deliver in large quantities

-  Materials & energy
-  Automotive & manufacturing
-  Food & pharmaceuticals
-  Technology & research
-  Professionals & retail

INDUSTRIAL MERCHANT
Supplying industrial and speciality gases, application technologies and services

-  Hospitals
-  Home healthcare
-  Hygiene/ Specialty ingredients

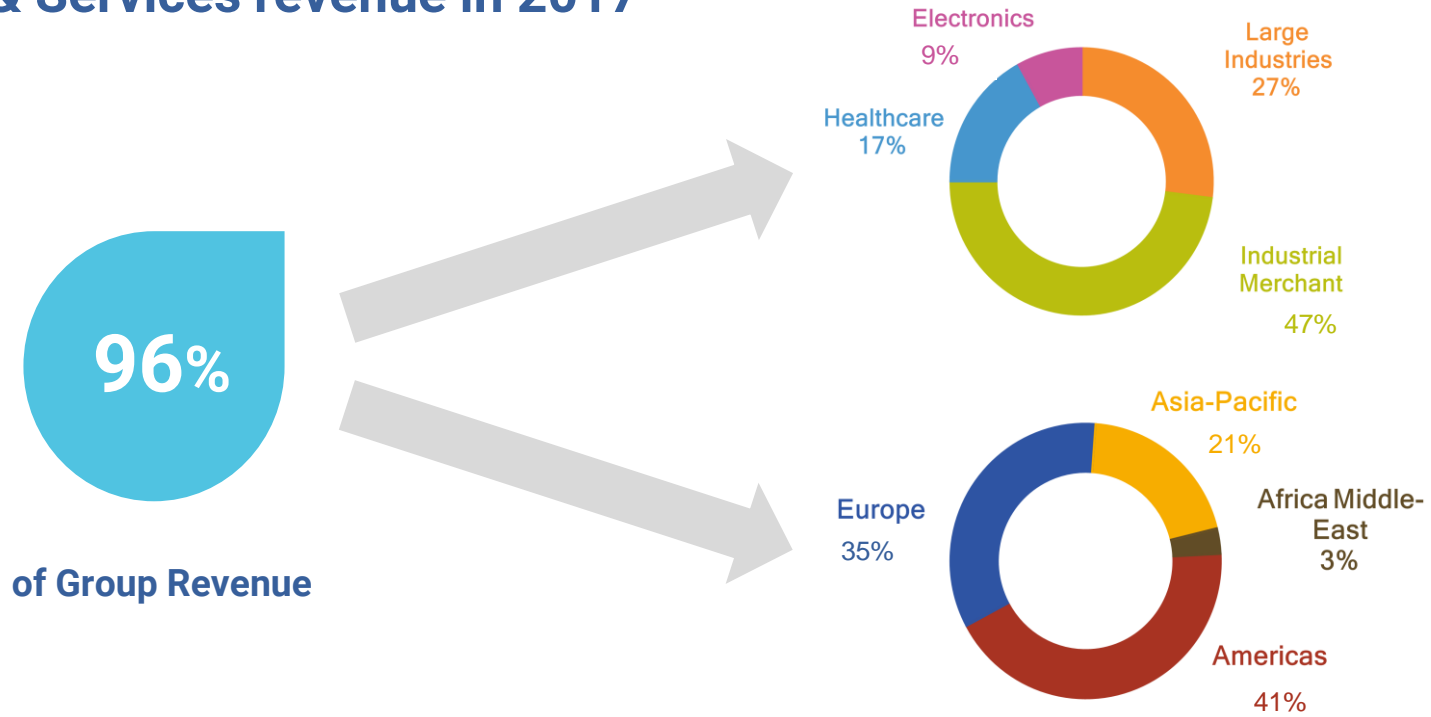
HEALTHCARE
Supporting patients, all along the continuum of care, from hospital to home

-  Semi-conductors
-  Flat panels
-  Photovoltaic

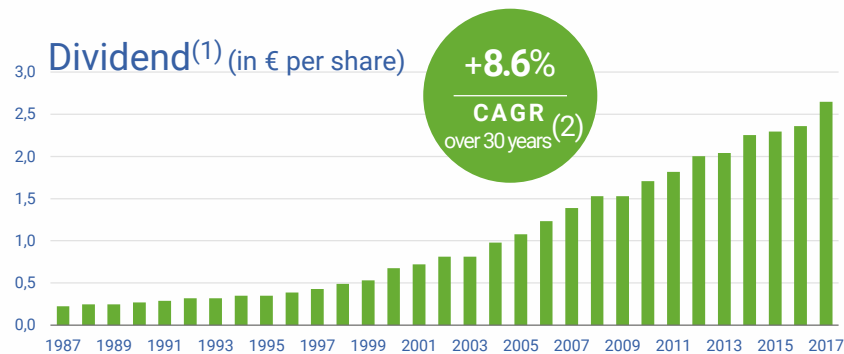
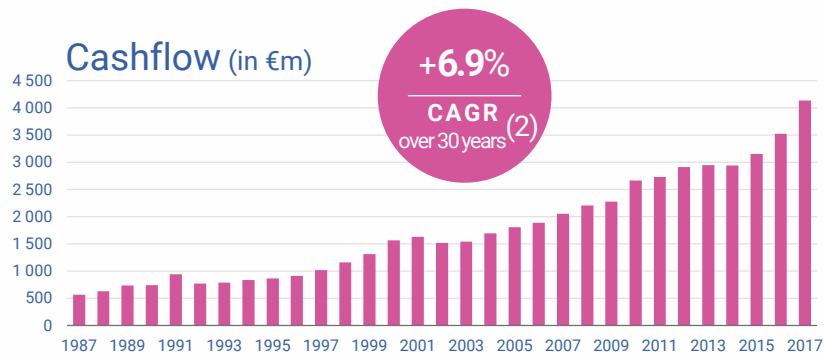
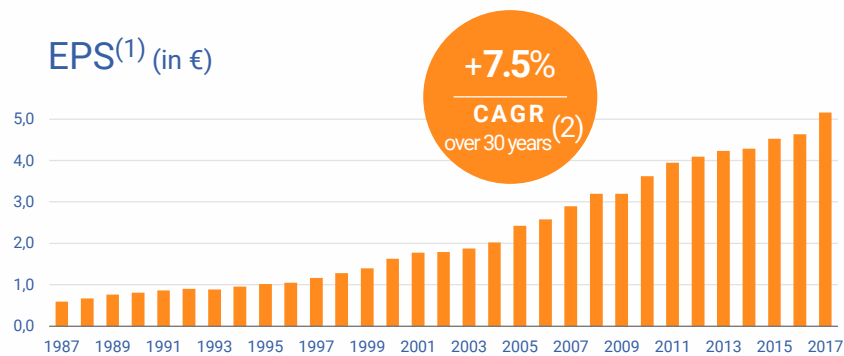
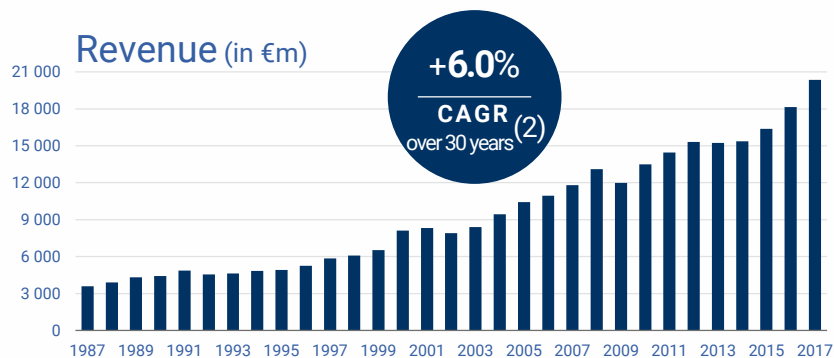
ELECTRONICS
Designing, manufacturing and providing molecules for this sector

A Balanced Footprint by Business Line and Geography

Gas & Services revenue in 2017



Regular and Sustained Performance



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

2

Airgas: A Game-Changing Acquisition May 2016

Airgas: A Key Industrial Merchant Player in the U.S.

- **Major player in the U.S. market**

- Leader in packaged gas
- Major supplier of hardgoods

- **Multi-channel distribution network with unmatched reach**

- Largest footprint and asset base in the U.S.
- Coupled with best-in-class e-commerce platform



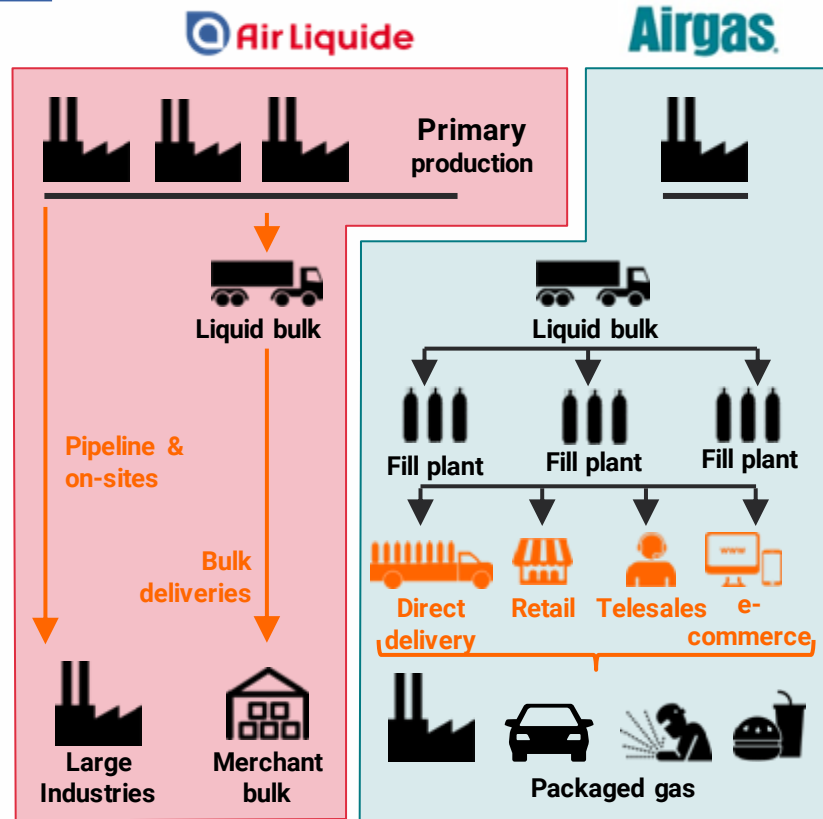
- **Solid track record of value creation**

- Unparalleled sales growth since 1982
- Proven operational excellence

- **Unrivalled customer base**

- >1 million customers
- Resilient profile with diversified customer segments

Strong Business Fit between Airgas and Air Liquide



- Air Liquide: focus on upstream
- Airgas: focus on downstream
- Highly complementary businesses
- Implied synergies
- Improved customer reach

➤ **U.S. operations merged
October 1st, 2016**

Expected Synergies > US\$300m

Cost Synergies



Revenue Synergies

- Cross-selling
- Product availability
- Gas applications
- Small on-site generators

Timeline for delivery of synergies



3

NEOS 2016-2020 A Customer-Centric Transformation

Air Liquide Ambition



- Lead our industry
- Deliver long-term performance
- Contribute to sustainability

For

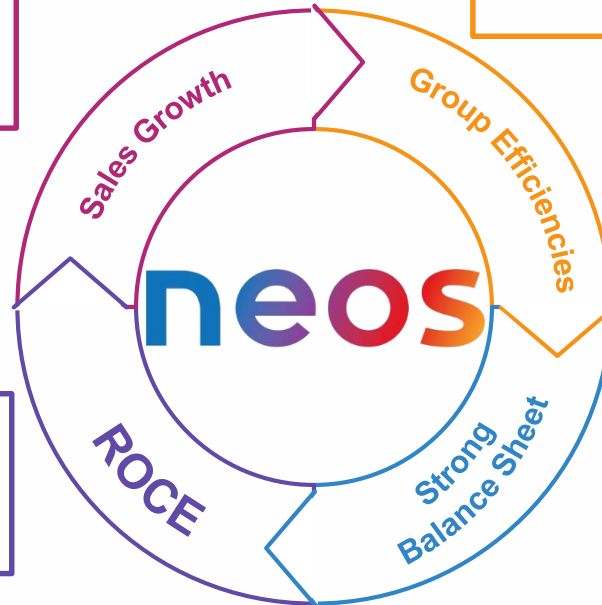
Profitable Growth over the Long-term

- Operational Excellence
 - Customer experience
 - Cost competitiveness
- Selective Investments
 - Aligned with Air Liquide new business profile
- Open Innovation
 - Core
 - Disruptive
- Network Organization
 - Digital workplace
 - Speed
 - Best practices

Financial Objectives

+6% to +8%
CAGR 2016-2020⁽¹⁾

Efficiencies >€300m on average/year⁽²⁾
+ Airgas synergies >\$300m



>10%
after 5-6 years

Maintain
“A” range rating

Capex/Sales 2017-2020: 10% to 12%

(1) Including Airgas scope effect in 2017 contributing +2% to the CAGR (2) Over the 2017-2020 period

Corporate Sustainability Objectives

For better health *e.g.*

- Foster clean mobility
- Develop Healthcare



For better environment *e.g.*

- Help customers lower GHG* emissions
- Grow with reduced carbon intensity

- e.g.*
- Continue to improve Safety
 - Do business responsibly
 - Extend Air Liquide Foundation

*GreenHouse Gas

4

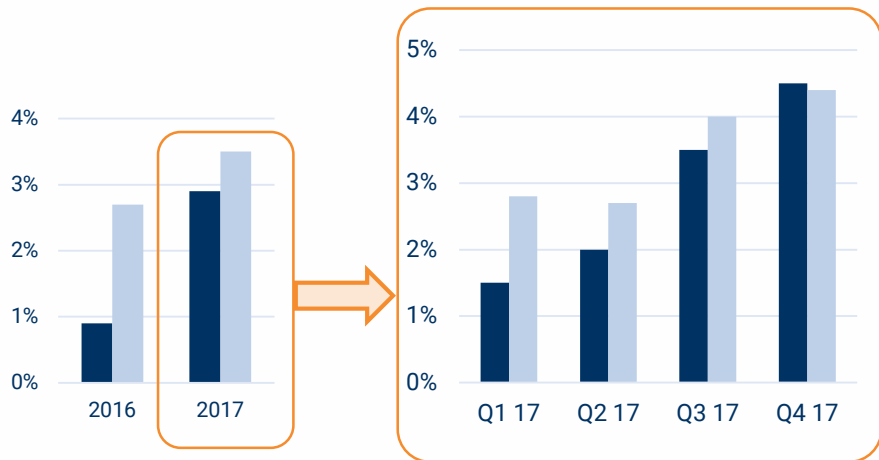
FY 2017 Highlights

Highlights

- Sales reached a new level in 2nd half with improved operating margin
- Increased dividend proposal
- Strong cash-flow, reduced net debt and continued improvement in ROCE
- Airgas synergies ahead of plan
- NEOS, delivering in the short-term and investing for the long-term

Improved Performance

Step-up in sales growth in 2nd half

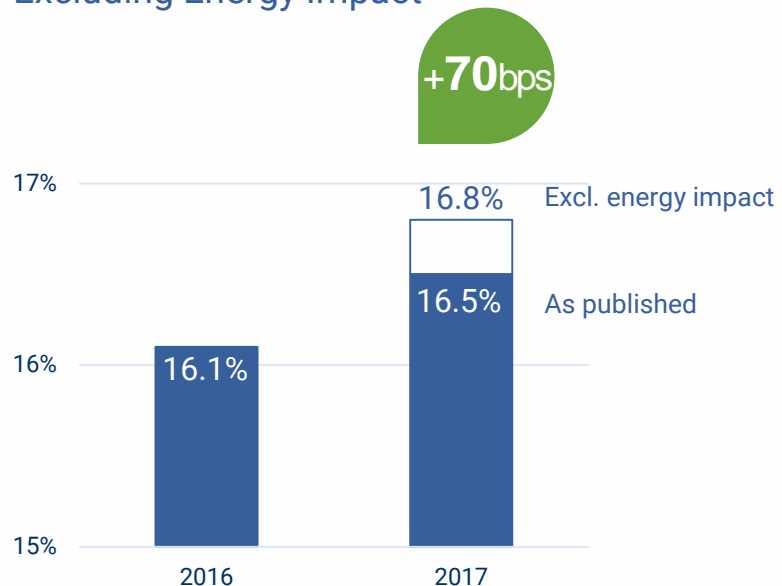


Comparable sales growth

- Group
- Gas & Services

Improved Operating Margin⁽¹⁾

Excluding Energy Impact



(1) Group margin vs. 2016 adjusted group margin

Increased Dividend Proposal

Net Profit



As published



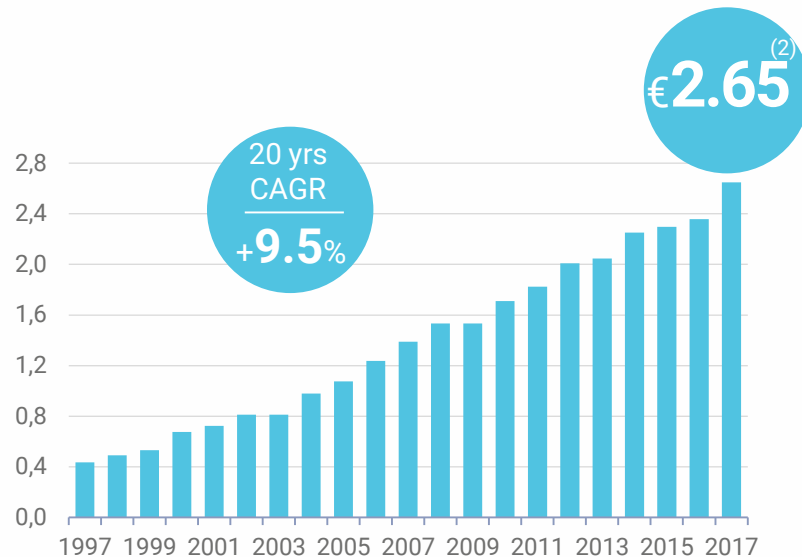
As published



Excluding non-cash
non-recurring items & taxes

Dividend Growth: +12%

Dividend⁽¹⁾
in € per share

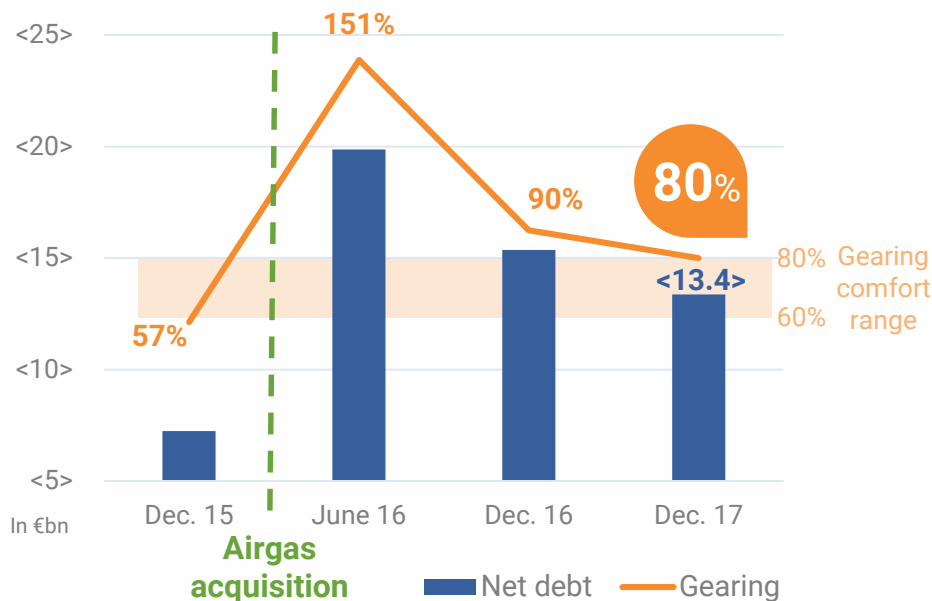


(1) Historical data adjusted for attribution of free shares and for a factor 0.974 reflecting the value of the rights of the capital increase completed in October 2016

(2) Subject to approval at the combined shareholders' meeting scheduled for 16 May 2018

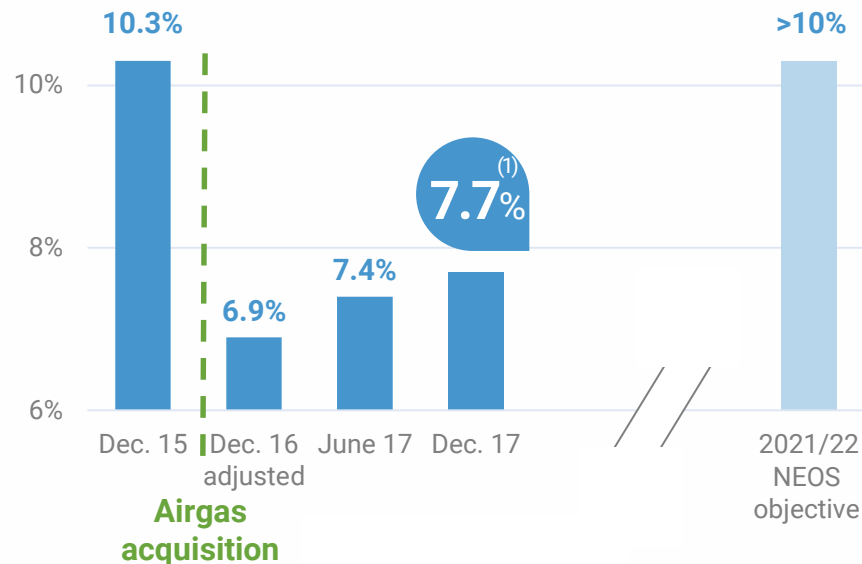
Improved Cash Flow and Balance Sheet

Reduced Net Debt and Gearing



Continued Improvement in ROCE

Excl. 2017 positive impact on net profit of non-cash one-off items



(1) As published 2017 ROCE = 8.2%

Airgas Synergies Ahead of Plan

Synergies US\$40m ahead of initial 2017 target

- Cost synergies delivered faster
- Cumulated synergies end of 2019:
 - **in excess of US\$300m**
 - **pace and higher level of cost synergies**
 - **revenues synergies ramping**



US\$
215m

Cumulated Synergies
Dec. 2017

Leveraging the Airgas model

Expansion of customer centric management in the Group

Delivering in the Short-Term...



Mega trends

Energy & Healthcare



Biogas



Energy efficiency



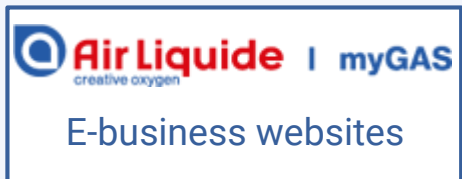
Digital



Smart Innovative Operations (SIO)



Voice of the Customer (VoC)



Group



Strategic asset review



New organization

... and Investing for the Long-Term

Research & Development

- Renewal of R&D centers
- ✓ Over 3 years
- ✓ Cumulative €130m investments

Innovation

- 2017 ~€290m spending in innovation
- ALIAD: cumulative ~€80m investments in start-ups

Energy Transition

- Hydrogen Council
- CO₂ capture

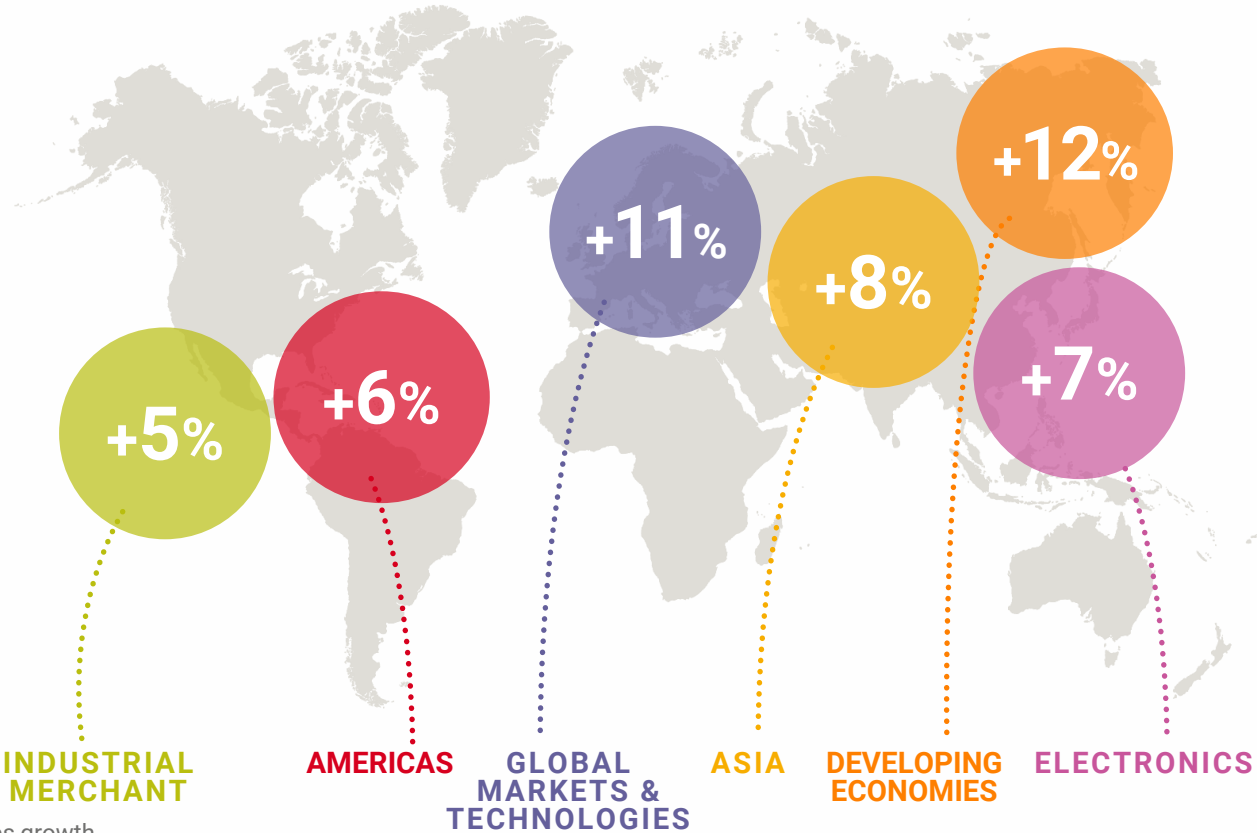
Digital

- Data analytics
- Transforming operations

5

Focus on Q4 2017 Sales

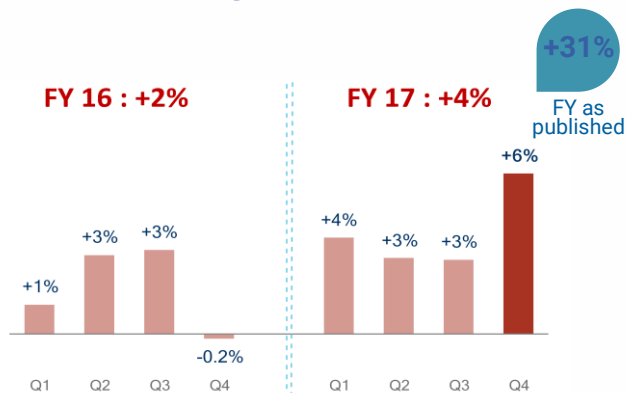
Key Growth Drivers in Q4 2017



Comparable sales growth

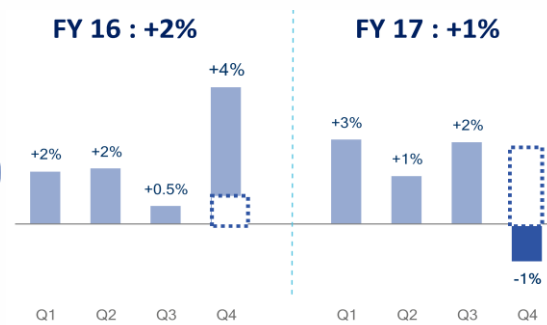
Q4 - Accelerating Americas, Sustained IM in Europe

AMERICAS
FY 2017
€8,150m



G&S Comparable Sales Growth

EUROPE
FY 2017
€6,776m



--- Excluding the impact of the one-off in Q4 2016

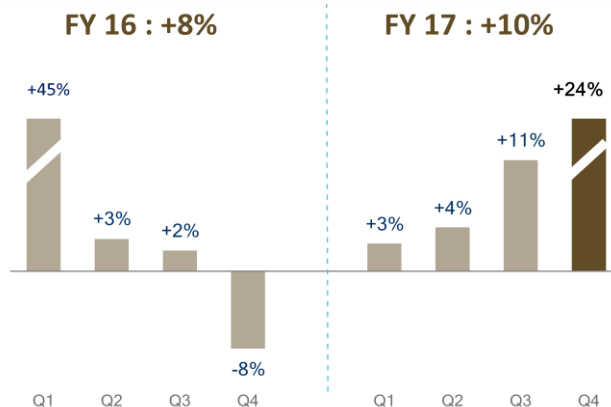
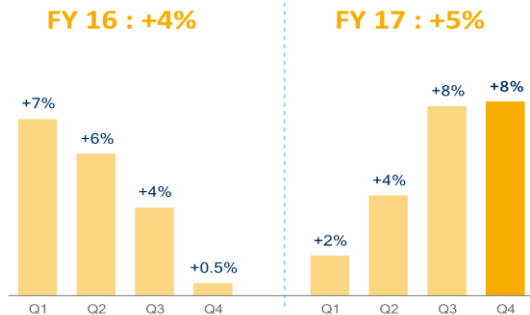
Strong IM and LI in Americas

- **LI: rebounding** after hurricanes
- **IM: growth accelerating to >+6%**
- **EL: dynamic Advanced Materials**, low E&I
- **Strong HC** in Latin America and Canada

Improved underlying activity

- **LI: solid H₂ demand**; high comparison effect
- **IM: sustained growth above +3%**; bulk and cylinder volumes up
- **Solid HC**, still low contribution from acquisitions

Q4 - Very Strong Asia and Middle-East



G&S Comparable Sales Growth

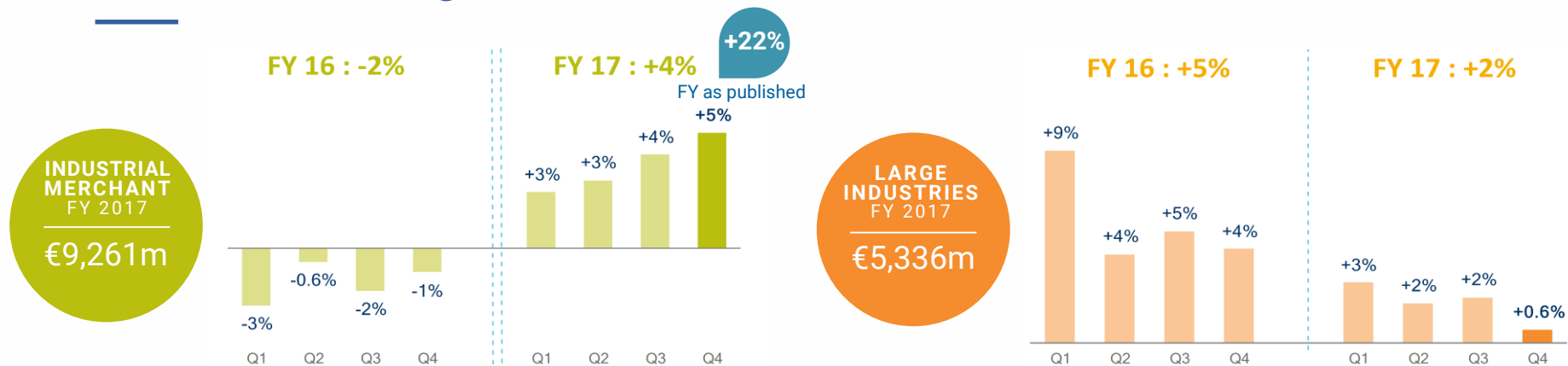
Very good momentum in all WBLs

- **LI:** ramp-ups in China, high volumes
- **IM:** China driving growth with **strong volumes and pricing**; low equipment sales in Japan
- **EL:** **accelerated growth**, strong Carrier Gases, dynamic Advanced Materials, high E&I

High growth in all WBLs

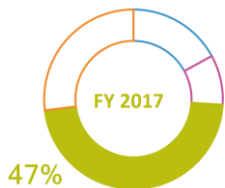
- **LI:** high loading at **Yanbu (KSA)**; major start-up in **South Africa** end December
- **IM:** volumes improvement throughout the region
- Strong **HC** in **South Africa**

Q4 - IM Driving Growth, LI Outlook Positive



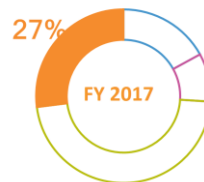
G&S Comparable Sales Growth

Continued increase in IM



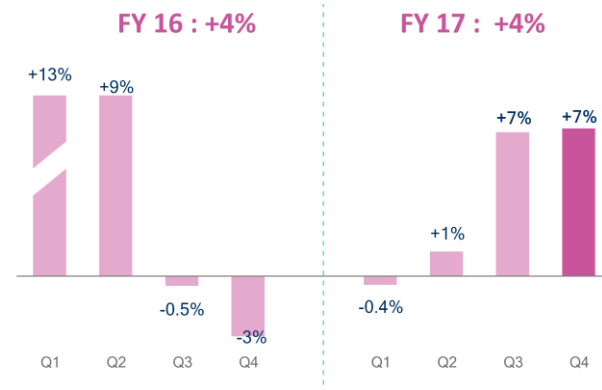
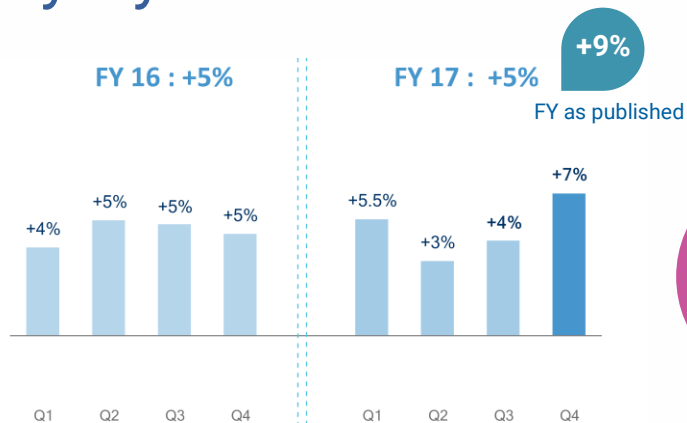
- **Accelerating in North America**
- **Very strong China, dynamic developing economies**
- **All end-markets up**
- **Firming pricing, +1.7%**

High volumes offset by Q4 2016 one-off



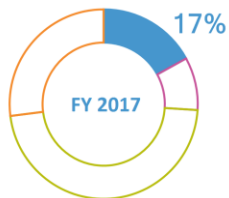
- **High air gases and H2 volumes in Americas**
- **Ramp-ups in China**
- **Major start-up in South Africa**
- **Europe: sales slightly up excl. exceptionals**

Q4 - Very Dynamic HC and EL



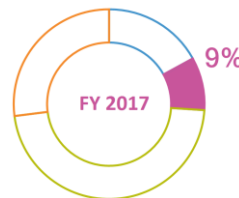
G&S Comparable Sales Growth

Steady activity, high contribution from acquisitions



- **Very strong Americas**
- Dynamic development in **Asia**
- High growth in **Medical Gases**

Double-digit growth in Asia



- **Ramp-ups** in Carrier Gases
- **New contracts** in Asia, **high E&I**
- Strong **Advanced Materials**

6

2017 Performance and Investment Update

Improved OIR Margin in line with NEOS

In €m	FY 16	FY 16 Adjusted	FY 17	FY 17/16	FY 17/16 Adjusted Comparable
Revenue	18,135	19,812	20,349	+12.2%	+2.9%
Purchases	(6,693)		(7,721)	+15.4%	
Personnel expenses	(3,659)		(4,138)	+9.6%	
Other net income and expenses	(3,172)		(3,348)		
Operating profit before depreciation	4,611	4,916	5,142	+11.5%	
Depreciation and amortization	(1,587)	(1,727)	(1,778)	+12.0%	
Operating Income Recurring	3,024	3,189	3,364	+11.2%	+7.5%
OIR Margin	16.7%	16.1%	16.5%		+40bps
OIR margin excluding energy effect			16.8%		+70bps

Efficiencies Above NEOS Target

FY 17 Efficiencies

€
323m

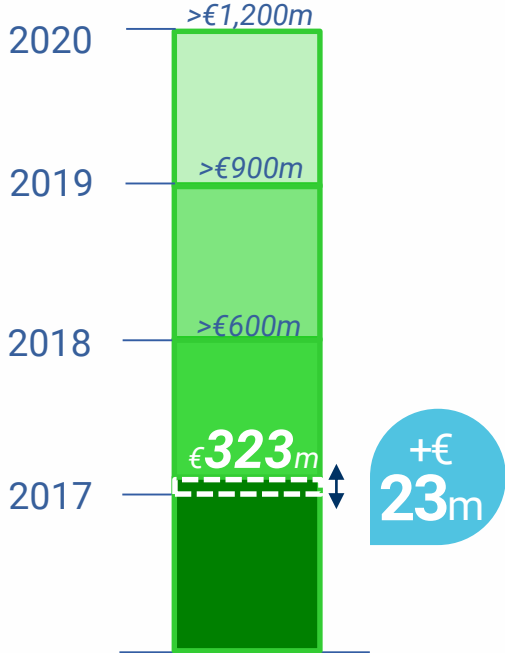


- Procurement
- Industrial
- Others



- Industrial Merchant
- Large Industries
- Healthcare
- Electronics
- E&C, GMT, Corporate

NEOS Cumulated Efficiencies



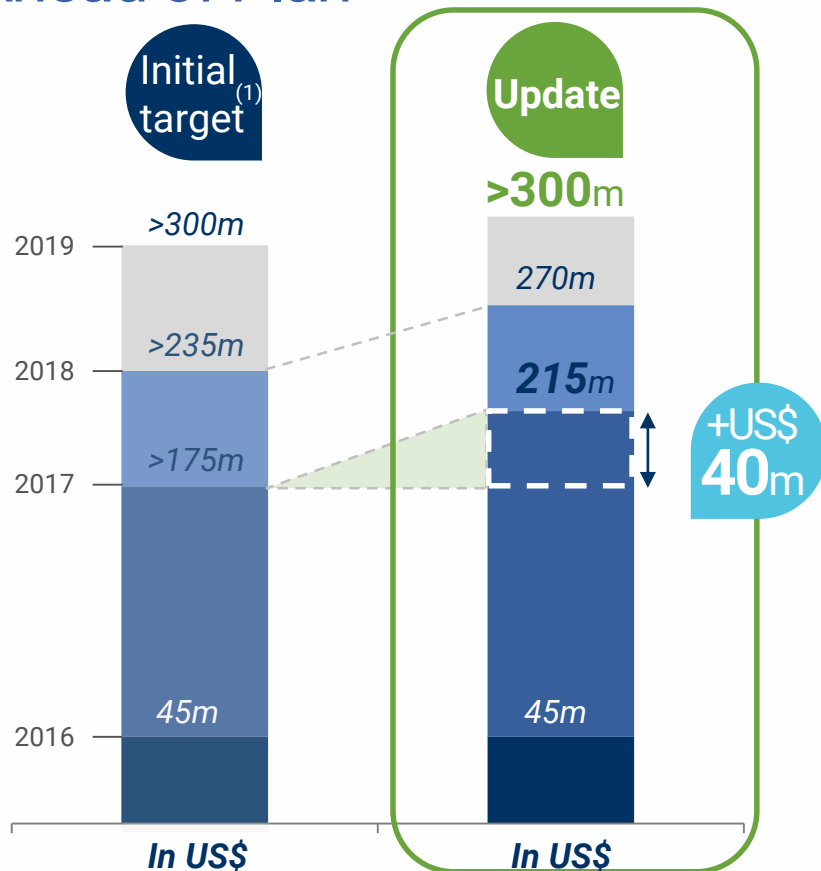
2017 Airgas Cumulated Synergies Ahead of Plan

US\$
215m

- Costs ~US\$190m
- Revenue ~US\$25m

- **2017 costs synergies US\$40m above initial target**

- Higher procurement synergies
- Cylinder management integration faster than expected



(1) Defined in 2016

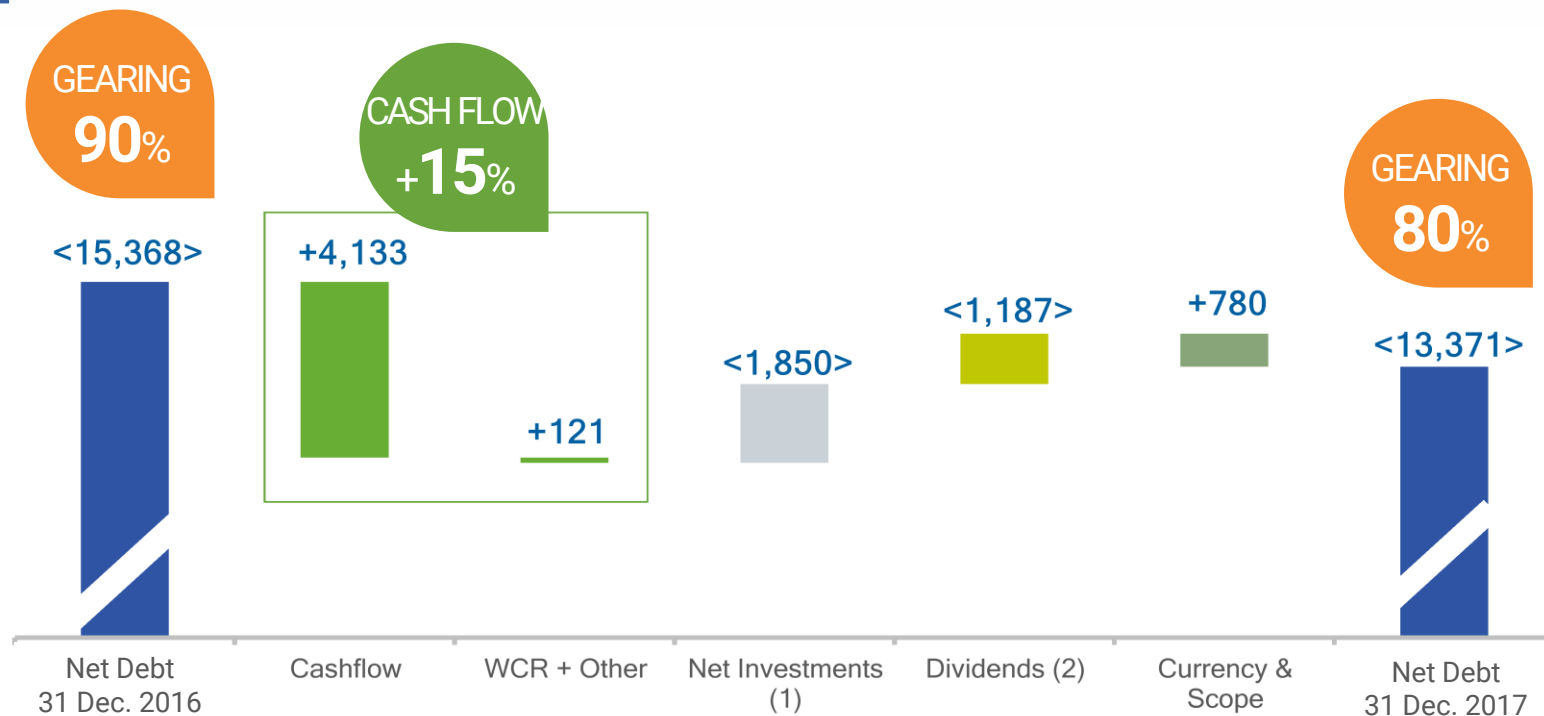
Positive Non-cash Exceptionals, Net Profit Recurring +10%

In €m	FY 16 As Publ.	FY 17 Recurring	FY 17 Recurring / FY 16 As Publ.	Non-cash items	FY 17 As Publ.	FY 17/16
Revenue	18,135	20,349	+12.2%		20,349	+12.2%
Operating Income Recurring	3,024	3,364	+11.2%		3,364	+11.2%
Other non-recurring operating income & expenses	36	56		(400)	(344)	
Operating income	3,060	3,420			3,020	
Net financial costs and other net financial expenses	(403)	(474)		(15)	(489)	
Income taxes	(747)	(793)		586	(207)	
Share of profit of associates	6	5			5	
Minority interests	(83)	(92)			(92)	
Net result from discontinued operations	11	(37)			(37)	
Net profit (Group share)	1,844	2,029	+10.0%	171	2,200	+19.3%
Earnings per share (in €)	4.64	4.76	+2.6%		5.16	+11.2%

Recurring FY 2017 = FY 2017 excluding non-cash one-off items

FY 2016 Earnings Per Share adjusted for free share attribution of October 2, 2017.

Significant Debt Reduction



(1) Including acquisitions, transactions with minority shareholders, net of divestitures.

(2) Including share purchases and capital increases.

Selected Investments for the Future

Investment Opportunities⁽¹⁾ 12-month portfolio



- **Continued active bidding**
- Small to medium size projects
- Americas 1st geography, then Europe and Asia

2017 Investment Decisions⁽¹⁾



- **Long-term contracts**
- **2 take-overs**
- **EL contracts** in Asia and Americas
- **Acquisitions** in HC and IM **accelerating** in H2

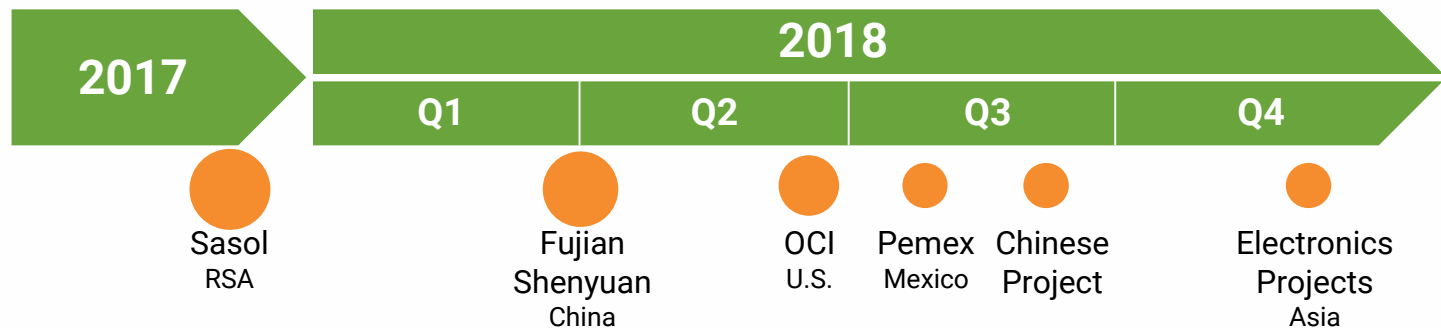
2017 Start-up/Ramp-up Sales Growth Contribution



- **Above** the €170m forecasted
- 19 start-ups including **1 major in AME**

(1) See definitions in appendix

Starting-up Major LI Units in a Dynamic Environment



- 2018 forecasted additional sales

>€
370m

- Increased bidding activity on new projects

2018 Outlook

2017

- Step change in sales with improved performance
- Airgas synergies ahead of plan
- Moving forward with NEOS

2018

- Deliver major LI start-ups
- Continue to focus on growth & operational excellence
- Pursue business transformation; leverage the Airgas model
- While investing for the future

“Assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2018, calculated at constant exchange rate and excluding 2017 exceptionals⁽¹⁾.”

(1) exceptional non-cash items having a net positive impact on 2017 net profit

Appendix

Sales Growth Accelerating in G&S, E&C Stabilizing

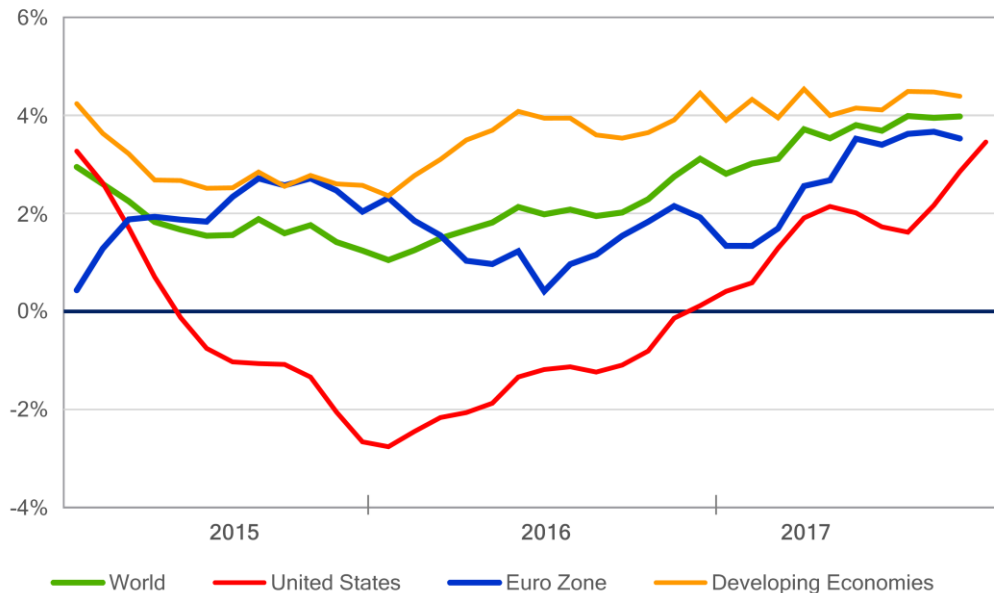
Sales in €m	FY 16	FY 17	FY 17/16 As published	FY 17/16 Comparable ⁽¹⁾	Q4 17/16 Comparable ⁽¹⁾
Gas & Services	17,331	19,642	+13.3%	+3.5%	+4.4%
Engineering & Construction	474	335	-29.3%	-28.1%	+3.0%
Global Markets & Technologies	330	372	+12.8%	+13.9%	+11.0%
Group Total	18,135	20,349	+12.2%	+2.9%	+4.5%

(1) Refer to appendix for definitions

Better Economic Environment

Step-up in IP growth, expected to stabilize in 2018

Industrial Production Year on Year in % (3-month rolling average)



Source: Coe-Rexecode

Negative FX Impact⁽¹⁾

-1.6%

FY 2017

-5.4%

Q4 2017

Low Energy impact in Q4⁽¹⁾

+1.5%

FY 2017

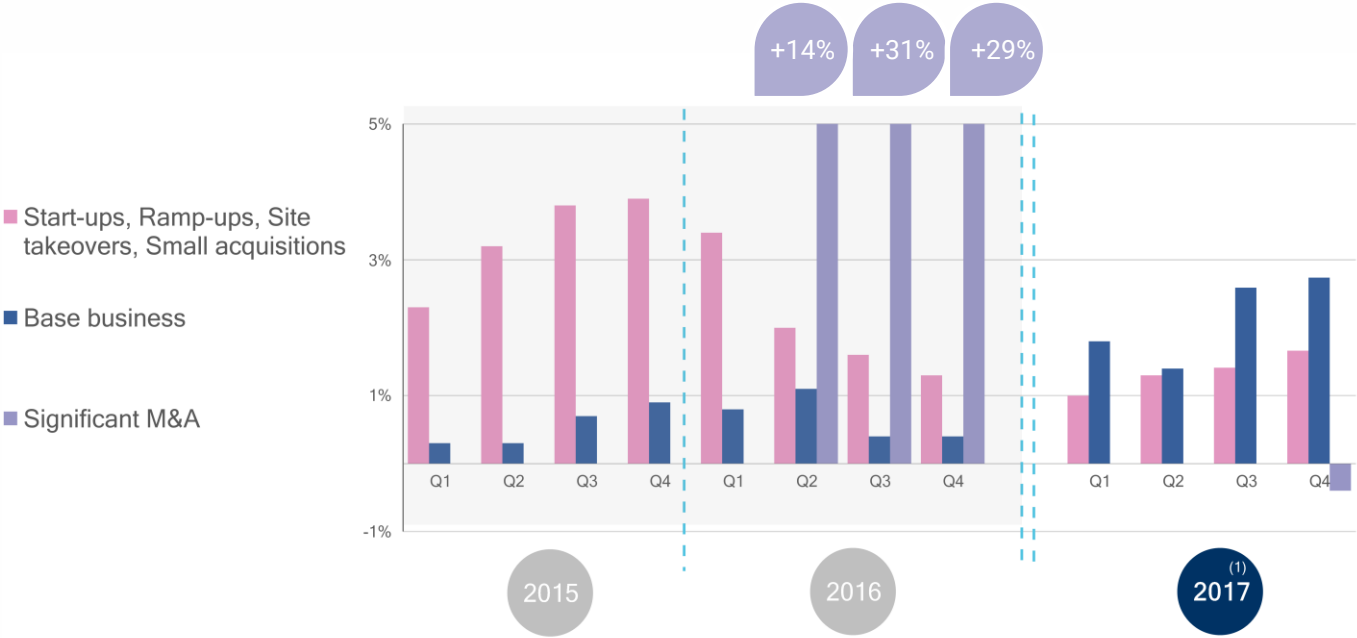
+0.5%

Q4 2017

⁽¹⁾ On Group sales, based on 2016 adjusted sales

Base Business Contribution Firming-Up

G&S Quarterly Growth Analysis



19
START-UPS
in FY17

➤ **Strongest base business since Q1 2014**

(1) Comparable growth based on 2016 adjusted sales

Americas

Q4 Gas & Services Sales: €1,931m

INDUSTRIAL MERCHANT

- **IM accelerating** in U.S.
- Bulk and cylinder **volumes up**
- **Positive pricing**
- **All end-markets** positive
- Hardgoods significantly up

LARGE INDUSTRIES

- **Back to growth** following hurricanes
- **High** air gases and H2 volumes
- Very strong growth in South America and Canada

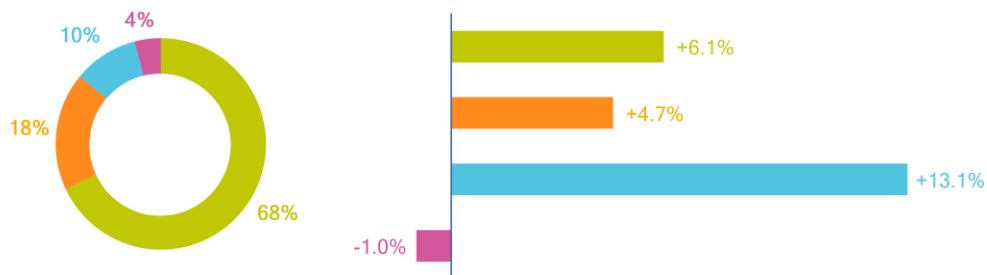
HEALTHCARE

- **Dynamic South America:** Brazil and Argentina
- **Canada:** solid growth

ELECTRONICS

- Very Strong **Advanced Materials**
- Lower E&I sales vs. high Q4 2016

Q4 17/16 Comparable growth : **+6.2%**



In €m	FY 2017	Growth as published	Comparable growth ⁽¹⁾
Sales	8,150	+30.8%	+3.9%
OIR	1,365	+26.8%	
OIR/Sales	16.8%	-50bps	+120bps ⁽²⁾

(1) Refer to appendix for definitions

(2) Excluding impact of energy and compared to the adjusted 2016 operating margin

Europe

Q4 Gas & Services Sales: €1,748m

INDUSTRIAL MERCHANT

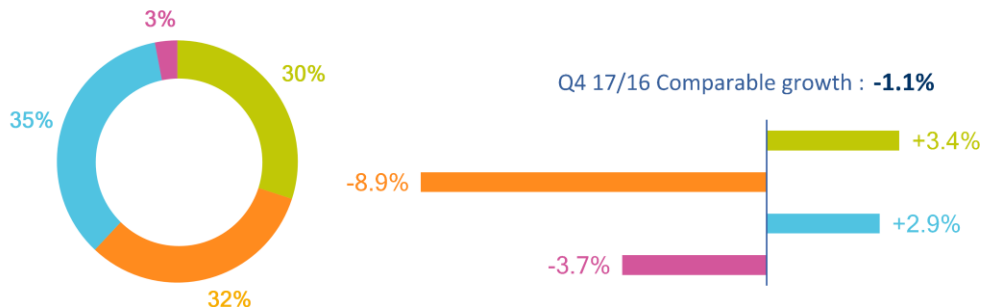
- Despite **1 less working day**, positive Q4 growth
- **Broad-based strength**, especially Eastern Europe
- Bulk and cylinder **volumes up**
- **All end-markets** growing

LARGE INDUSTRIES

- Decline as expected due to **high comparison effect** – customer indemnity
- **Solid H2** demand
- Eastern Europe impacted by stoppage in Ukraine

HEALTHCARE

- Solid **Healthcare**
- Lower M&A, tariff pressure
- Medical gases impacted by **1 less working day**
- Solid **Hygiene and Specialty Ingredients**



In €m	FY 2017	Growth as published	Comparable growth ⁽¹⁾
Sales	6,776	+2.8%	+1.3%
OIR	1,309	-0.7%	
OIR/Sales	19.3%	-70bps	-40bps ⁽²⁾

(1) Refer to appendix for definitions

(2) Excluding impact of energy

Asia-Pacific

Q4 Gas & Services Sales: €1,039m

INDUSTRIAL MERCHANT

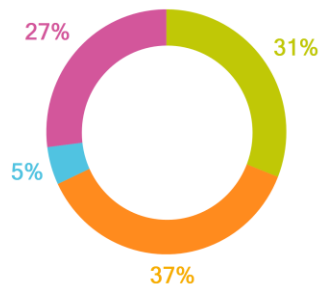
- **China again >+15%** with very strong growth both in cylinders and bulk
- **Strong pricing**
- Flat Australia, decreasing Japan

LARGE INDUSTRIES

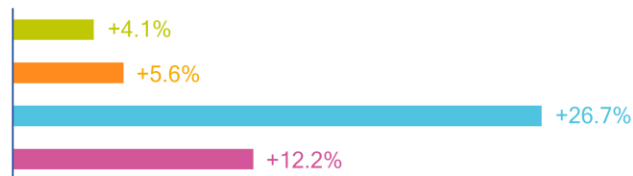
- Several **ramp-ups in China**
- **High** air gas volumes in **Singapore**
- Positive Australia

ELECTRONICS

- **Double digit growth** (China, Korea, Japan, Singapore)
- Very **dynamic Advanced Materials**
- Strong growth in **carrier gases**
- High level of **E&I sales**



Q4 17/16 Comparable growth : **+7.8%**

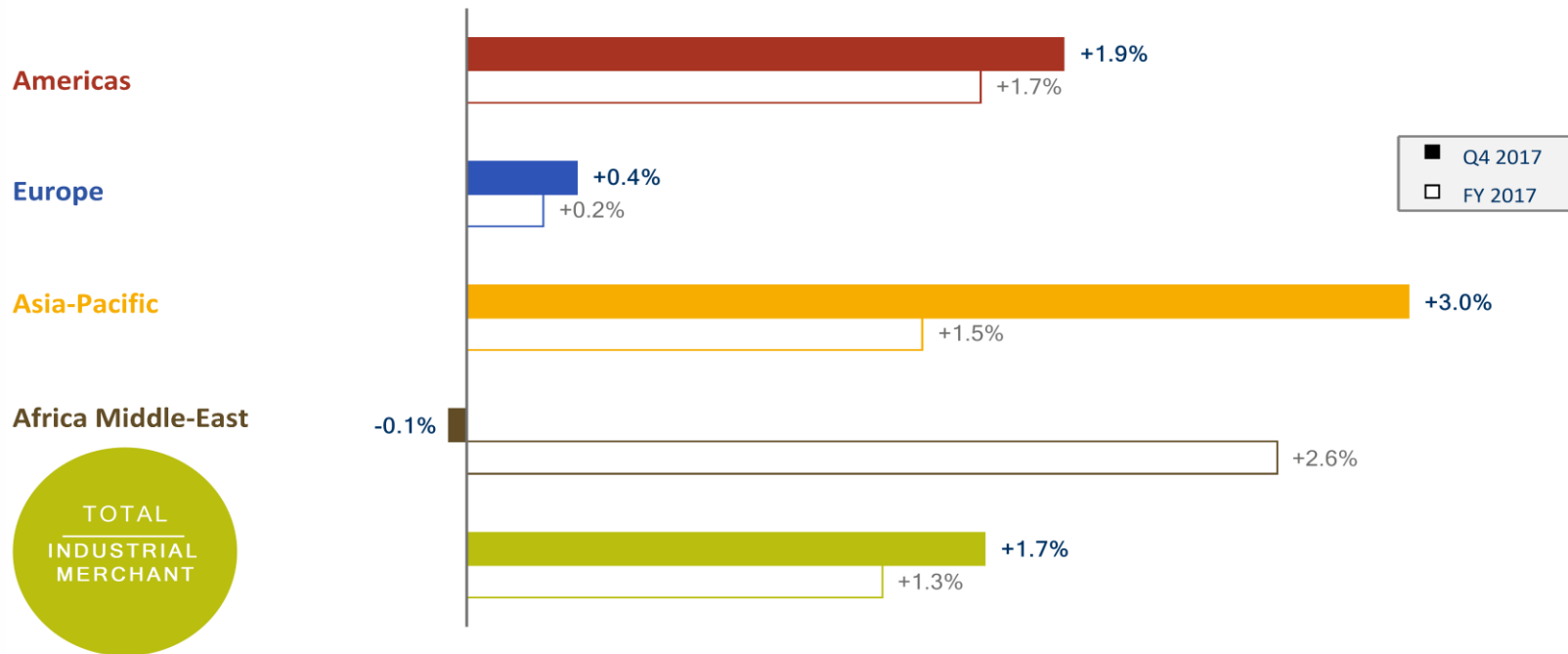


In €m	FY 2017	Growth as published	Comparable growth ⁽¹⁾
Sales	4,081	+3.7%	+5.3%
OIR	804	+10.2%	
OIR/Sales	19.7%	+120bps	+140bps ⁽²⁾

(1) Refer to appendix for definitions

(2) Excluding impact of energy

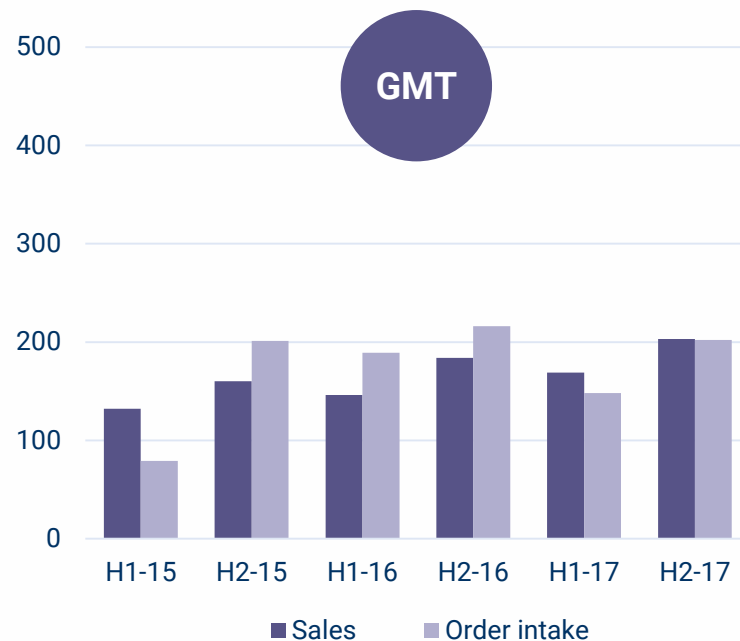
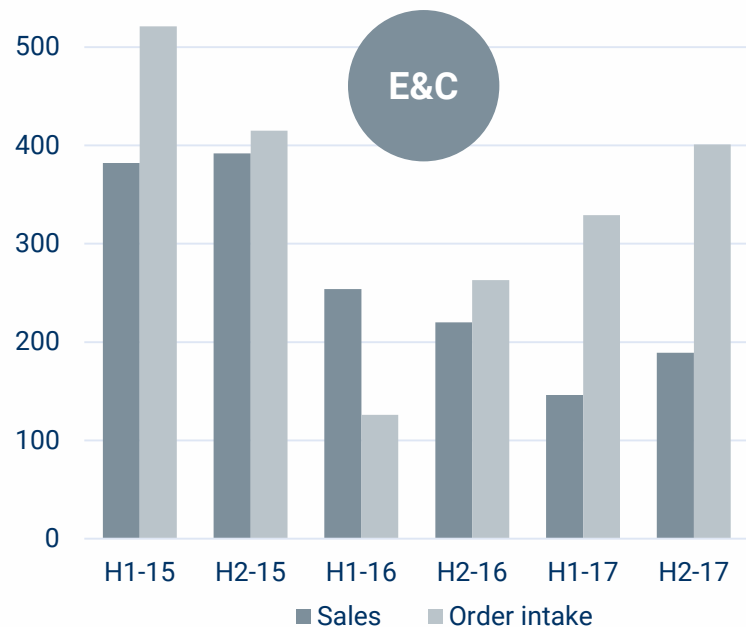
Industrial Merchant Pricing



Refer to appendix for definitions

Low E&C, Developing GMT

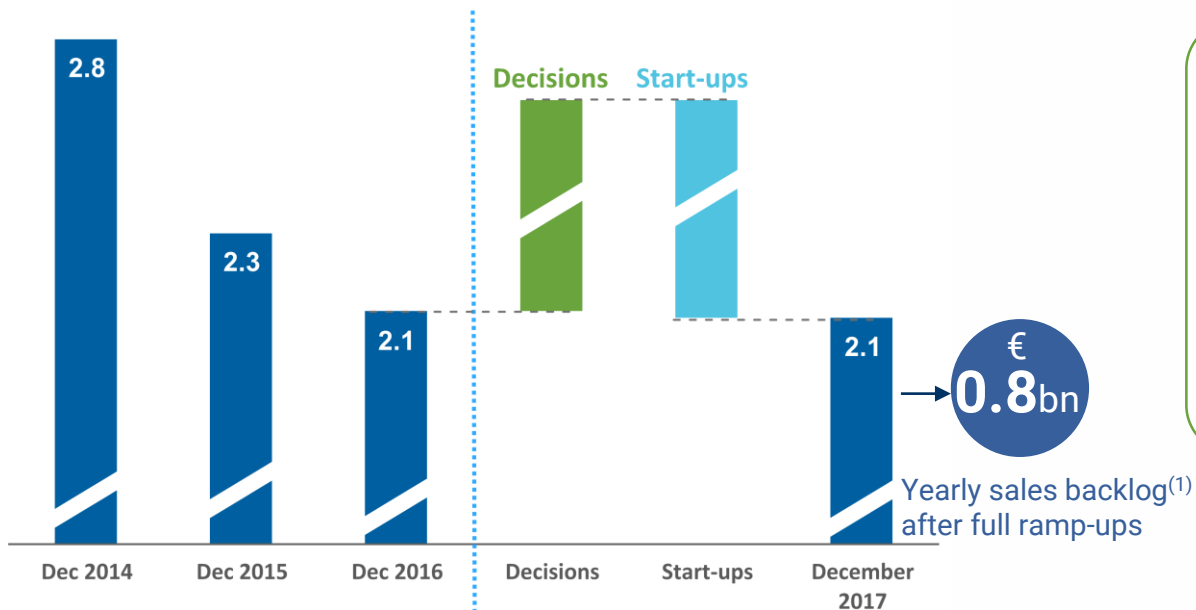
Sales and Order intake⁽¹⁾ – in €m



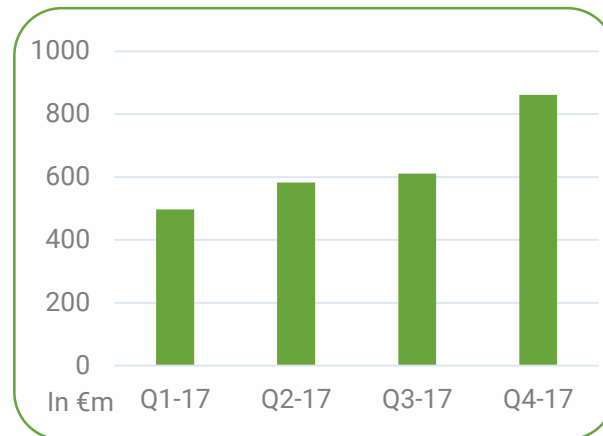
(1) Group and third-party order intake

Stable Backlog despite Major LI Start-Up in Q4

Investment Backlog⁽¹⁾ in €bn

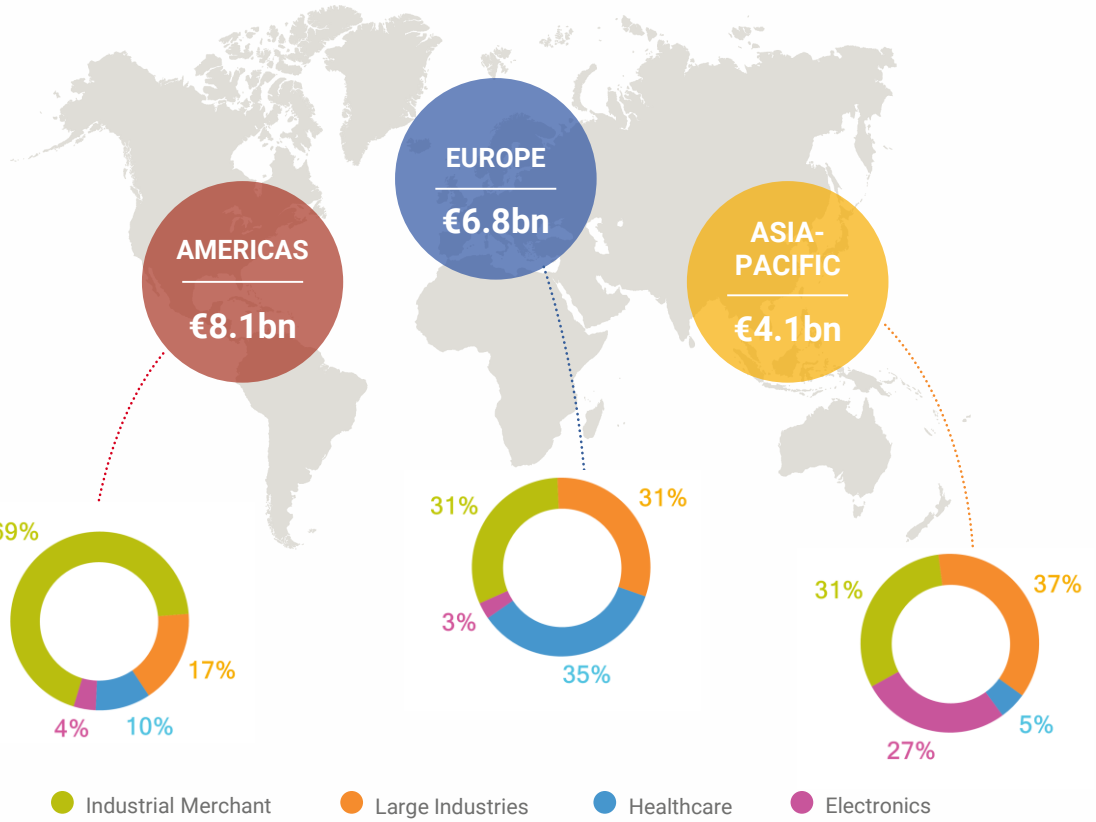
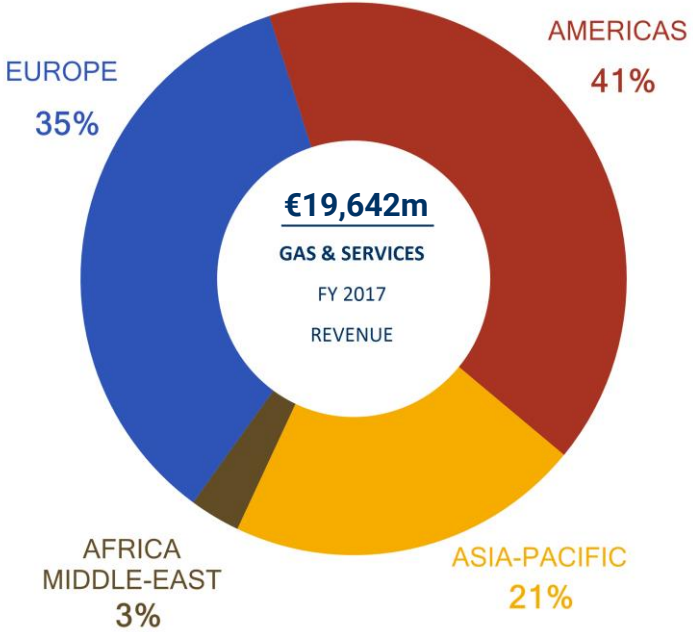


Increasing Investment Decisions

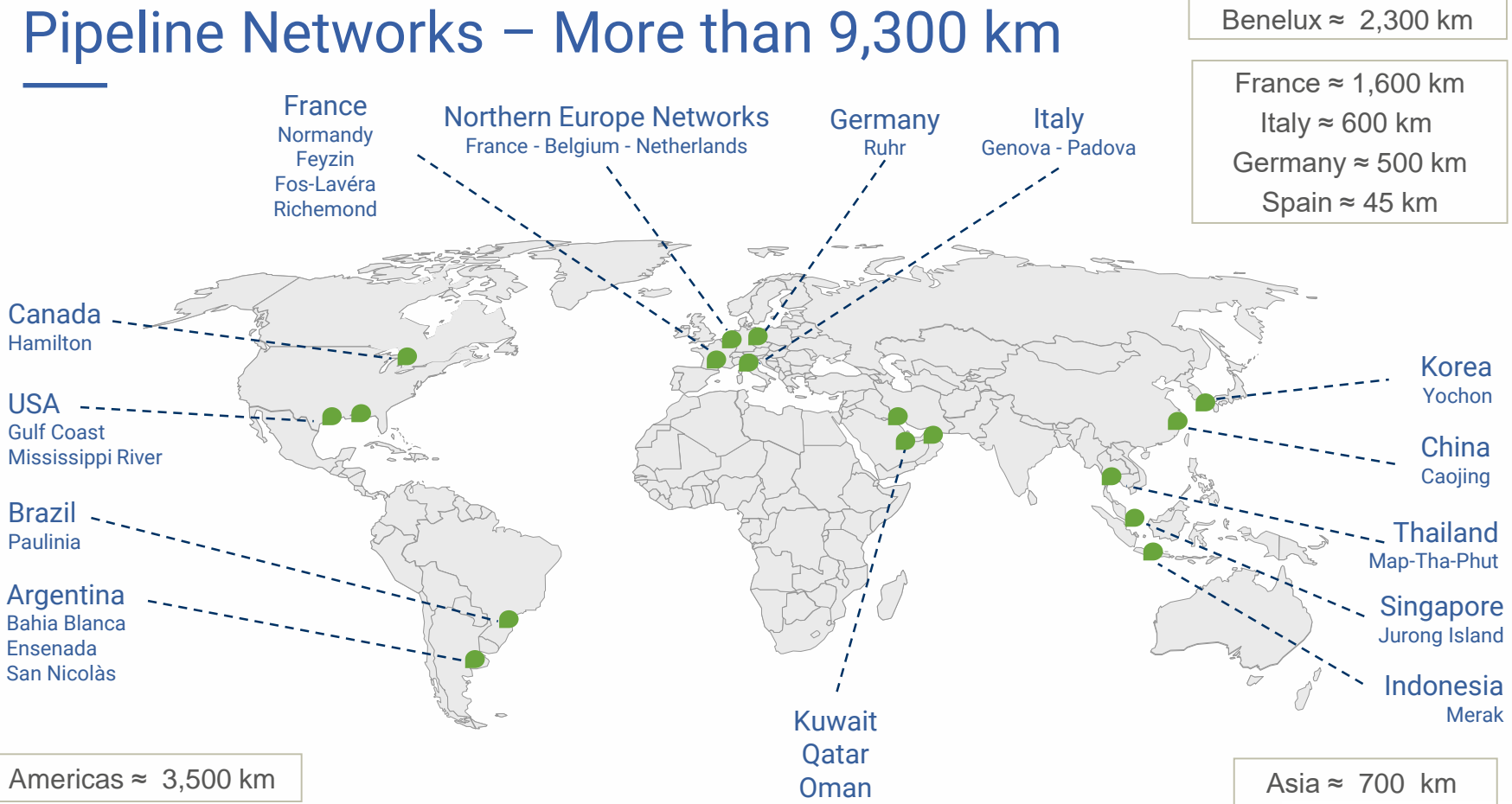


(1) See definitions in appendix

FY 2017 G&S Revenue Breakdown by Region

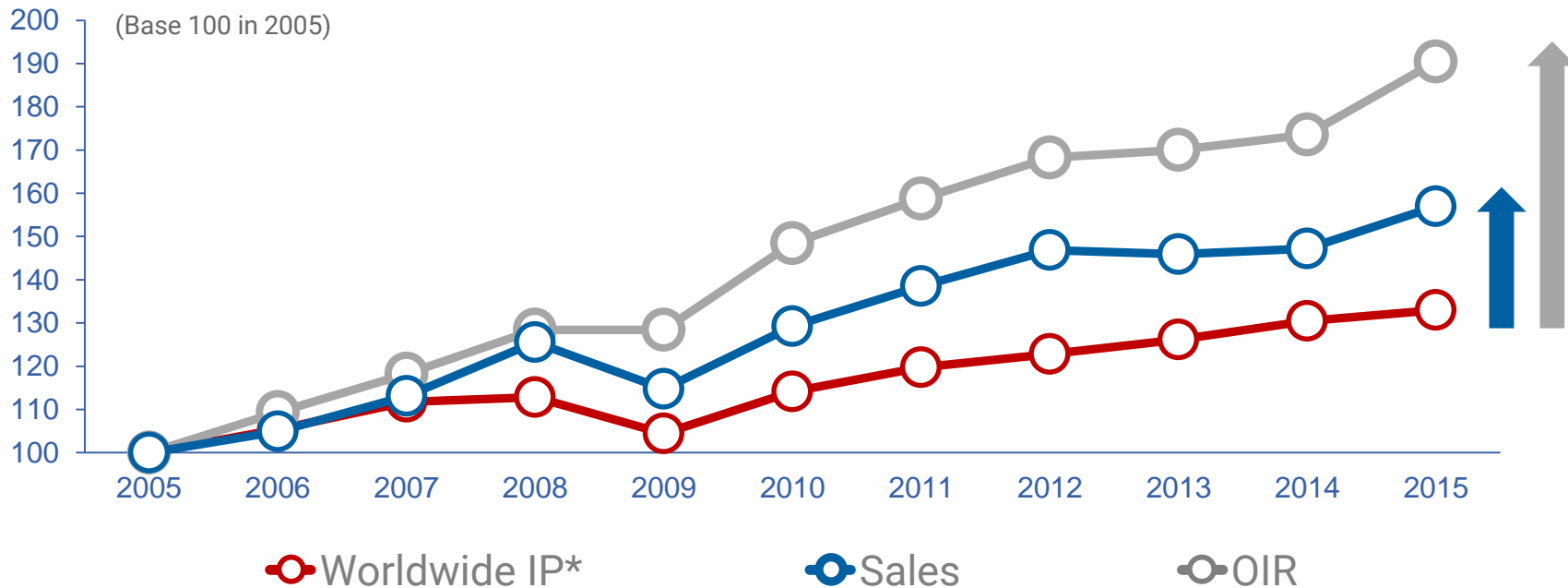


Pipeline Networks – More than 9,300 km



Both Growth and Resilience

Air Liquide Sales & OIR versus Worldwide Industrial Production over 10 Years



*Source: coe-rexecode

Consolidated P&L

In €m	FY 2016	FY 2017	Non-cash items	FY 17 excl. non cash items
Revenue	18,135	20,349		20,349
Cost of goods	(13,524)	(15,207)		(15,207)
Operating income recurring before depreciation	4,611	5,142		5,142
Depreciation and amortization expense	(1,587)	(1,778)		(1,778)
Operating Income Recurring	3,024	3,364		3,364
Net non-recurring operating income	36	(344)	(400)	56
Operating income	3,060	3,020		3,420
Net finance costs & other net financial expenses	(403)	(489)	(15)	(474)
Income taxes	(747)	(207)	586	(793)
Share of profit of associates	6	5		5
Net profit from discontinued operations	11	(37)		(37)
Profit for the period	1,927	2,292	171	2,121
- Minority Interest	83	92		92
- Net Profit (Group share)	1,844	2,200	171	2,029
Basic earnings per share (in €) (1)	4.64	5.16		

(1) FY 2016 Basic earnings per share adjusted for the free share attribution of October 2, 2017

Consolidated Balance Sheet Simplified - In €m

ASSETS	31/12/16	31/12/17	EQUITY AND LIABILITIES	31/12/16	31/12/17
Goodwill	13,890	12,840	Shareholders' equity	16,742	16,318
Fixed assets	22,003	20,137	Minority interests	383	400
Other non-current assets	960	1,059	Total equity	17,125	16,718
Total non-current assets	36,853	34,036	Provisions & deferred tax liabilities	4,971	4,401
Inventories & work in-progress	1,323	1,334	Non-current borrowings	14,890	12,522
Trade receivables & other current assets	4,090	3,963	Other non-current liabilities	504	241
Cash and cash equivalents *	1,576	1,694	Total equity and non current liabilities	37,490	33,882
Total current assets	6,989	6,991	Provisions & deferred tax liabilities	280	333
Assets held for sale	276	0	Trade payables & other current liabilities	4,103	4,266
Total assets	44,118	41,027	Current borrowings*	2,064	2,548
	31/12/16	31/12/17	Total liabilities	6,447	7,145
Net debt	15,368	13,371	Liabilities held for sale	181	0
Net debt ratio	89.7%	80.0%	Total equity and liabilities	44,118	41,027

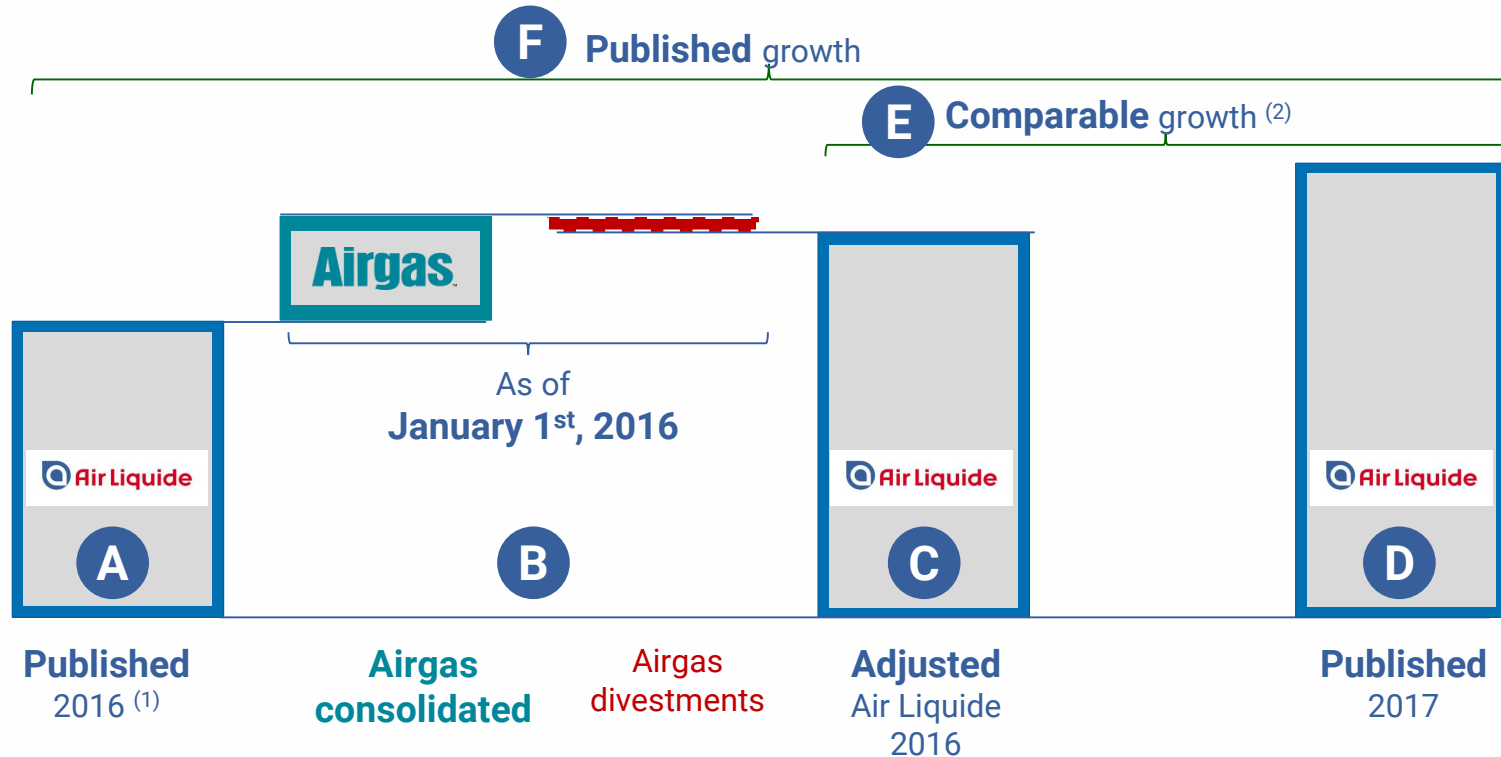
* Including fair value of derivatives

Cash Flow Statement

In €m	FY 2016	FY 2017
Funds provided by operations	3,523	4,133
Changes in Working Capital	331	188
Other items	(158)	(67)
Net cash from operating activities	3,696	4,254
Purchase of PPE* and intangible assets	(2,259)	(2,183)
Purchase of financial assets and the impact of changes in scope	(12,165)	(140)
Proceeds from sale of PPE*, intangible and financial assets	830	477
Net cash in investing activities	(13,594)	(1,846)
Distribution	(1,019)	(1,099)
Increase in capital stock	3,361	70
Purchase of treasury shares	4	(158)
Transactions with minority shareholders	(14)	(4)
Impact of Exchange rate changes and net indebtedness of newly consolidated companies & others	(563)	780
Change in net indebtedness	(8,129)	1,997

* PPE: Property, plant and equipment.

Adjusted Sales Used as a Comparison Basis (1/2)



(1) Excluding Air Liquide Welding and Aqua Lung

(2) Excluding currency and energy price fluctuation impact

Adjusted Sales Used as a Comparison Basis (2/2)

A	Published 2016 excluding Air Liquide Welding and Aqua Lung	Published 2016 Air Liquide sales excluding Air Liquide Welding and Aqua Lung (IFRS 5, discontinued operations)
B	Airgas consolidated - Airgas divestments	Published 2016 Airgas sales with divestments fully completed as of January 1 st , 2016
C	Adjusted Air Liquide sales	2016 starting point: A + B
D	Published 2017	Published 2017 Air Liquide sales
E	Comparable growth	Growth between 2016 adjusted Air Liquide sales and published 2017 sales D excluding change and energy versus C
F	Published growth	Growth between published 2016 Air Liquide sales, excluding Air Liquide Welding and Aqua Lung, and published 2017 Air Liquide sales D versus A

2016 comparable sales growth excluding currency, energy price fluctuation and Airgas impact

Comparable sales growth for Americas for Q4 16, FY16 are estimated due to the merger of Airgas and Air Liquide US operations

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).

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