Summary
A remarkable stock performance

- 1913 to 1933: +9.8% +9.9%
- 1933 to 1953: +15.7% +17.4%
- 1953 to 1973: +9.6% +9.3%
- 1973 to 1993: +17.2% +11.1%
- 1993 to 2012: +7.2% +10.1%

Legend:
- CAGR Share
- CAGR Dividend

Graph showing the adjusted dividend and adjusted share price from 1913 to 2012.
Major trends shaping our markets

**INDUSTRY GLOBALIZATION & RESOURCE CONSTRAINTS**

**Natural Gas prices** (USD/mBtu)

- Asia: Rising trend from 2000 to 2012
- Europe: Mixed trend from 2000 to 2012
- N. America: Declining trend from 2000 to 2012

**Evolving Consumption & Demographics**

**World population** (billions)

- Urban: Increasing trend from 1950 to 2050
- Rural: Steady trend from 1950 to 2050

Source: United Nations

**APPETITE FOR INNOVATION**

**Mobile cellular subscriptions** (millions)

- China: Rapid growth from 1990 to 2010
- Europe: Moderate growth from 1990 to 2010
- N. America: Steady growth from 1990 to 2010

Source: World Bank
Where do we stand?

Fabienne Lecorvaisier
Chief Financial Officer
Delayed recovery

GDP Forecast

Source: IMF, World Economic Outlook Database, Gross domestic product
Contrast among business lines

Group: +5% to +7%
Large Industries: +8% to +9%
Industrial Merchant: +3% to +5%
Electronics: +4% to +6%
Healthcare: +7% to +8%

Compound Average Growth Rate 2010-2015

ALMA Range
Updated Forecast

INVESTOR DAY // December 11, 2013 // Where do we stand? //
Large Industries

**Sales**
- 2005: 2.7 (€bn)
- 2010: 4.0 (€bn)
- +8% - 9% CAGR 5 Years

**Geographic Mix**
- 2005: 10%
- 2010: 20%
- 2015: 40%
- Africa Middle East, Asia Pacific, Americas, Europe, Developing

**Product Mix**
- 2005: Cogen, HyCO, Air Gases
- 2010: Cogen, HyCO, Air Gases
- 2015: Cogen, HyCO, Air Gases

**In line**
- New geographies, China leadership
- HyCO boost, larger ASUs

**New**
- Major projects

**Focus**
- China + USA battlefields
- Reliability & customer intimacy
- Project execution
Industrial Merchant

Sales

- 2005: 4.2
- 2010: 4.8
- 2015: +3% to 5%

Geographic Mix

- 2005: 10%
- 2010: 20%
- 2015: 30%

Product Mix

- 2005: E&I & Other
- 2010: Cylinders
- 2015: Bulk & On-Sites

Unexpected

- Base erosion in Europe and Japan
- Small customers under pressure

New

- Invent future offers

Focus

- Adjust capacities and resources
- Load existing assets
- Cylinder offer, Specialty gases
Electronics

Sales

- 0.9 (2005)
- 1.2 (2010)
- +4% - 6% (2015)

Geographic Mix

- 2005: 20% Asia Pacific, 30% Americas, 40% Europe
- 2010: 20% Asia Pacific, 30% Americas, 40% Europe
- 2015: 20% Asia Pacific, 30% Americas, 40% Europe

Product Mix

- 2005: E&I & Other, ESG incl. ALOHA, Carrier Gases
- 2010: E&I & Other, ESG incl. ALOHA, Carrier Gases
- 2015: E&I & Other, ESG incl. ALOHA, Carrier Gases

In line
- Carrier gases competitiveness
- Global customers

Unexpected
- Photovoltaic market turbulence

Focus
- Positions in Asia
- Industry leaders

New
- ALOHA gaining momentum
Healthcare

**In line**
- > 1,000,000 patients
- M&A and new countries

**New**
- New therapies, new geographies
- Prepare for digital / connected future

**Focus**
- Strengthen the base (Europe), Innovation
- Pursue bolt-on M&A
- Contribute to reduce state budgets
2010-2015 G&S for Industries sustained sales

2015 estimated share of developing sales in GSI

32%

Notes:
- GSI: Gas & Services for Industries = Large Industries (LI) + Industrial Merchant (IM) + Electronics (EL)
- Estimated Sales CAGR 2010 to 2015
2010-2015 dynamic Healthcare

2015 estimated share of Healthcare sales in G&S

18%

+2%
+8%
+29%
+3%
+13%
+8%
+8%

Healthcare

Note: Estimated Sales CAGR 2010 to 2015
Resulting in a stronger G&S business mix

Segments
- LI: 40%
- IM: 34%
- EL: 10%
- HC: 16%

Geographies
- LI+IM+EL: 66%
- Advanced: 18%
- LI+IM+EL: 16%
- Developing: 56%
- HC: 18%

2010 2015e
Updated ALMA annual growth objective

Investment:
- Industrial: €10bn
- Financial: €2bn
- Total: €12bn

Development initiatives = start-ups + ramp-ups + acquisitions
Growth rate based on CAGR 2010 to 2015

Sales 2010 + 2% to +3%
Base + 4% to +5%
Development Initiatives + 5% to +7%
Sales 2015 + 4% to +5%
Reinforced efficiency programs

Cumulated efficiencies

€0.4bn

€0.8bn
+30% vs initial objective

Annual objectives

Steady margin improvement
Steady margin improvement

OIR / Sales

- LI
- LI excl. NG
- IM
- EL
- HC

(1) OIR margin excluding natural gas impact
Current investment decisions will deliver

![Bar chart showing industrial investment decisions and incremental sales from industrial projects from 2006 to 2015.]

(1) Industrial Special Growth Investment Decisions above €10m
Targeted industrial investment strategy

Estimated investment over the 2011 – 2015 period

€10bn

€2.6bn of projects in hand

€1.3bn of sales in hand

Large Industries
Industrial Merchant
Other Activities
Investment in hand

Electronics
Healthcare

Europe
Americas
Asia / Pacific
Africa / Middle-East

(1) Investment in Hand as of October 2013 corresponding of Special Investment under execution above €10m
€2bn of targeted acquisitions

Estimated acquisitions over the 2011 – 2015 period

- Large Industries
- Industrial Merchant
- Electronics
- Healthcare
- Other Activities
Continued value creation

(1) Reminder: Return On Capital Employed after tax: (Net profit before deduction of the minority interests – net finance costs after taxes) / weighted average for the year of (shareholders’ equity + minority interests + net indebtedness).

(2) 2012 and H1 2013 ROCE: pro-forma, including annualized profit impact of LVL Médical and Gasmedi acquisitions.
While acting responsibly

...in the way we contribute to our customers, our patients and the society at large

...in the way we build relationships with our shareholders and all other stakeholders

...in the way we develop our people and run our operations
Adjusted ALMA 2010-2015 Status

Keep Sales growth above Market

+1% to +2%
Above Market

Deliver +30% more efficiencies

€1.3bn over 5 years

Maintain ROCE\(^{(1)}\)

11% to 13%

Embed Responsibility

in the way we act and manage our operations and initiatives

\(^{(1)}\) Reminder: Return On Capital Employed after tax: (Net profit before deduction of the minority interests – net finance costs after taxes) / weighted average for the year of (shareholders’ equity + minority interests + net indebtedness).
What’s next

- Past & current investment will deliver
- From geographic strategy to market strategy
- Major trends creating new market opportunities
INDUSTRY GLOBALIZATION & RESOURCE CONSTRAINTS
What is driving industrial gas demand?

- Industry globalization
- Production growth
- Industry modernization
- Outsourcing
- Maximizing local resources
- Energy Independence
- Environment protection
- Competitive energy
Leading positioning in industrial clusters

Air Liquide positioned in > 60% of top 10 clusters

Zero Nitrogen interruption (1)

Up to 20% Capex reduction per ton

Up to 40% Opex reduction for N₂

Air Liquide presence

INVESTOR DAY // December 11, 2013 // Industrial Globalization & Resource Constraints //
Creating Industrial Gas Growth Opportunities

New investments on the U.S. Gulf Coast

- Over the fence LI market growth
- Proprietary technologies
- IM market growth

Increased synergies with customers:

- **O₂**
  - 50,000 tpd

- **H₂**
  - 800,000 Nm³/h

- **H₂**
  - Storage

- Gas & Ethylene Derivatives
- Methanol & Derivatives
- Syngas cleaning

- Oil well services
- Manufacturing
- Emission Monitoring

Gulf Coast pipeline systems … a competitive advantage since 1986

- Reliable and flexible supply
- New investment on existing pipeline infrastructure
- Leadership position throughout the Gulf Coast

3,200 km of pipeline

Over 20,000 tpd of O₂ capacity

World’s largest H₂ cavern
Leveraging our model and technologies

Co & By-products

Over the Fence

Customer

> 98% contracts renewed
Leveraging our model and technologies

Co & By-products

Air Liquide Technology

Over the Fence

Air Liquide Technology & Services

Increased value to the customer

Customer
Conclusion

LI MARKET

Above +8% per year

N°1 position

- Strong market potential driving growth
- Leveraging our proven strengths
- Leveraging strong customer loyalty

Growing faster than market to reinforce our leadership position
EVOLVING CONSUMPTION & DEMOGRAPHICS
Striking evolutions

**Americas population**
+19% from 2010 to 2030

**Asian urban population**
+46% from 2010 to 2030

**World urbanized population**
70% in 2050

**OCDE waste production**
x2 from 2010 to 2015

**In Advanced economies,**
people aged > 60 years
increase from 22% to 30% by 2050

**China urban private consumption**
from 10 in 2012
to 27bn RMB in 2022

**World middle-class**
from 2bn in 2009
to 5bn people in 2030

Next 20 years
**CO₂ emissions**
x2 vs 200 past years
... of our markets

2012 Sales
€5.3bn

30%
30%
15%
15%
10%

MATERIALS & ENERGY
AUTOMOTIVE & FABRICATION
FOOD & PHARMA
TECHNOLOGY & RESEARCH
CRAFTSMEN & NETWORK

2012 Sales and percentages
Leverage trends to boost our growth

- Improving metal fabrication performance
- Boosting recycling efficiencies through innovation
- Deploying proven technologies to developing economies
- Meeting more stringent food safety standards
- Answering to simplicity and higher mobility needs
A unique positioning to capture growth

**Competitiveness**

- Realignment of structure, with adjusted cost base
- Leveraging assets in promising markets and clusters

**Innovation**

- Client process expertise
- Entrepreneurship spirit

**MORE THAN 700 active patents**

- ALTEC Centers Worldwide
- 7

**+3%** bulk logistics efficiencies per year since 2010

**+22** standard filling plants since 2010
Different Healthcare systems

Health expenditures as a % of GDP

<table>
<thead>
<tr>
<th>Country</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>China*</td>
<td>5%</td>
</tr>
<tr>
<td>Mexico</td>
<td>6%</td>
</tr>
<tr>
<td>Russia</td>
<td>6%</td>
</tr>
<tr>
<td>Turkey</td>
<td>6.5%</td>
</tr>
<tr>
<td>South Korea</td>
<td>7%</td>
</tr>
<tr>
<td>South Africa</td>
<td>8.5%</td>
</tr>
<tr>
<td>Brazil</td>
<td>9%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>9.5%</td>
</tr>
<tr>
<td>Spain</td>
<td>9.5%</td>
</tr>
<tr>
<td>Italy</td>
<td>9.5%</td>
</tr>
<tr>
<td>Germany</td>
<td>11%</td>
</tr>
<tr>
<td>France</td>
<td>11.5%</td>
</tr>
<tr>
<td>USA</td>
<td>18%</td>
</tr>
</tbody>
</table>

*Including Taiwan

Sources: World Bank and World Health Organization
An expertise along the continuum of care

2012 REVENUE

- **Medical gases (hospitals)**: 36%
- **Chronic disease**: 45%
- **Prevention & Well being**: 19%
- **Home Healthcare**: 45%

**Acute disease**

- Market (2)
  - +3 to +5%

**Hygiene and specialty ingredients**

- Market (2)
  - +5 to +7%

**ACTING RESPONSIBLY**

- Committed in 30 countries
- Serving 7,500 hospitals and clinics
- Caring for 1 million patients at home

(1) 2012 Sales excluding Anios  
(2) Market expectation 2010-2020
A confirmed strategy

**Geographies**
- Consolidate positions
- Enter new Geographies
- Bolt-on acquisitions

**Markets**
- New innovative offers
- Other diseases
- Bolt-on acquisitions
- Competitiveness

Along the continuum of care
- Acute disease
- Chronic disease
- Prevention & Well being

Durable growth delivered over the years: +7% p.a.
New market emerging horizon 2020

1 million
Patients cared in 2013

25 million
Potential patients

Hospitals
Home Healthcare
Future Therapies

over 20 years of experience in Healthcare
APPETITE FOR INNOVATION
Mapping battlefields

Business model

TRANSFORMATIONAL

ADJACENT

CORE

Advanced technology

INVESTOR DAY // December 11, 2013 // Appetite for Innovation //
# From Core to Adjacent

<table>
<thead>
<tr>
<th>% EL Sales 2012</th>
<th>Sensitivity to Industry Cycles</th>
<th>Market Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrier Gases</td>
<td><img src="image" alt="42%" /></td>
<td>New Investments Energy cost reduction</td>
</tr>
<tr>
<td>Electronic Specialty Gas</td>
<td><img src="image" alt="24%" /></td>
<td>Msi wafers^1 m² FPD</td>
</tr>
<tr>
<td>Advanced Electronics Materials^2</td>
<td><img src="image" alt="4%" /></td>
<td>More complex customer needs</td>
</tr>
</tbody>
</table>

^1 million of square inches  
^2 ALOHA™, precursors for the SC industry

INVESTOR DAY // December 11, 2013 // Appetite for Innovation
**Advanced Electronic Materials: a promising new market**

<table>
<thead>
<tr>
<th></th>
<th>Basic ESG</th>
<th>Advanced Electronics Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Intensity</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Intellectual Property Intensity</td>
<td>-</td>
<td>++</td>
</tr>
<tr>
<td>Profitability</td>
<td>-</td>
<td>++</td>
</tr>
<tr>
<td>Sensitivity to Business Cycles</td>
<td>++</td>
<td>-</td>
</tr>
<tr>
<td>Growth Potential</td>
<td>+</td>
<td>++</td>
</tr>
</tbody>
</table>

**Overall**

- Less Attractive
- More Attractive

$1\text{bn}$ market by 2017

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Source: Linx consulting (2013)
ESG: Electronics Specialty Gases

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INVESTOR DAY // December 11, 2013 // Appetite for Innovation //
Biogas valorization: a promising new market

New Clients & usages
- Injection in the natural gas network
- Green chemistry
- Decarbonized mobility

New Business Models
- From Technology to equipment to Over The Fence
- Valorization of green certificates
- Feed-in tariffs
- Site take-over strategy

New technologies
- MEDAL™ membranes
- Liquefiers

An innovative offer: “Biogas valorization”

70%+ of GHG avoided

2.5 TWh = €100 m equipment or €200 m Biogas Sales p.a.

Already 30 references (10TWh)

ACTING RESPONSIBLY

INVESTOR DAY // December 11, 2013 // Appetite for Innovation //
H₂ Energy markets

New Clients & usages
- Forklifts
- Captive fleets
- Car owners

New Business Models
- Large infrastructure upfront deployment: innovative financing schemes

New technologies
- H₂ stations
- High Pressure supply chain
- Remote Monitoring and Tracking

An innovative offer:
“Hydrogen at the pump”

Up to 100,000 t CO₂ avoided

100,000 vehicles = €100m H₂ Sales

Already 3,000 Forklifts in US

INVESTOR DAY // December 11, 2013 // Appetite for Innovation //
New market emerging horizon 2020

Cars converted to Hydrogen

1%

€15bn

Potential market

Cars
Forklifts
Energy Storage
Mobility

Filling station
Anticipating the challenges of our markets

Enhance existing models

- INDUSTRY GLOBALIZATION & RESOURCE CONSTRAINTS
  - Large Industries

- EVOLVING CONSUMPTION & DEMOGRAPHICS
  - Electronics

- APPETITE FOR INNOVATION
  - Industrial Merchant
  - Healthcare

Create new opportunities

- Energy conversion
  - Energy conversion projects

- eHealth

- H₂ Mobility

- Biogas
Enhancing the model

2011 to 2015

Investment
€12bn

Next Cycle
< €10bn

Development initiatives = start-ups + ramp-ups + acquisitions
Estimate based on normal market conditions
BLs growth based on market estimates

- Large Industries: +6% to +10%
- Industrial Merchant: +2% to +6%
- Electronics: +2% to +6%
- Healthcare: +3% to +7%

Market Range
Next cycle targeted investment

€10bn

2016 to 2020 estimated investment

Large Industries
Industrial Merchant
Electronics
Healthcare
Additional boosters to strengthen growth

- Energy Transition
- e-Health
- Mobility & Digitalization

Booster
€1 bn
Development supported by a sustainable cash model

100€ Sales

+7% Growth

50% Pay-out

Cash Flow: 19€

Net Result: 10€

D&A: 9€

Dividends 5€

Equity 5€

Gearing: 60%

Debt +3€

17€ CAPEX + WCR

13€ Growth CAPEX

4€ Non-Growth CAPEX

+7€ Additional Sales

Capital intensity 1.8
Long term ambition

- Innovation
- Competitiveness
- Investment
- Sales above market
- Continuous margin improvement
- ROCE 11% to 13%