



**SOLVAY**

asking more from chemistry®

# Essential Chemicals

Pascal Juéry

A resilient cash generator



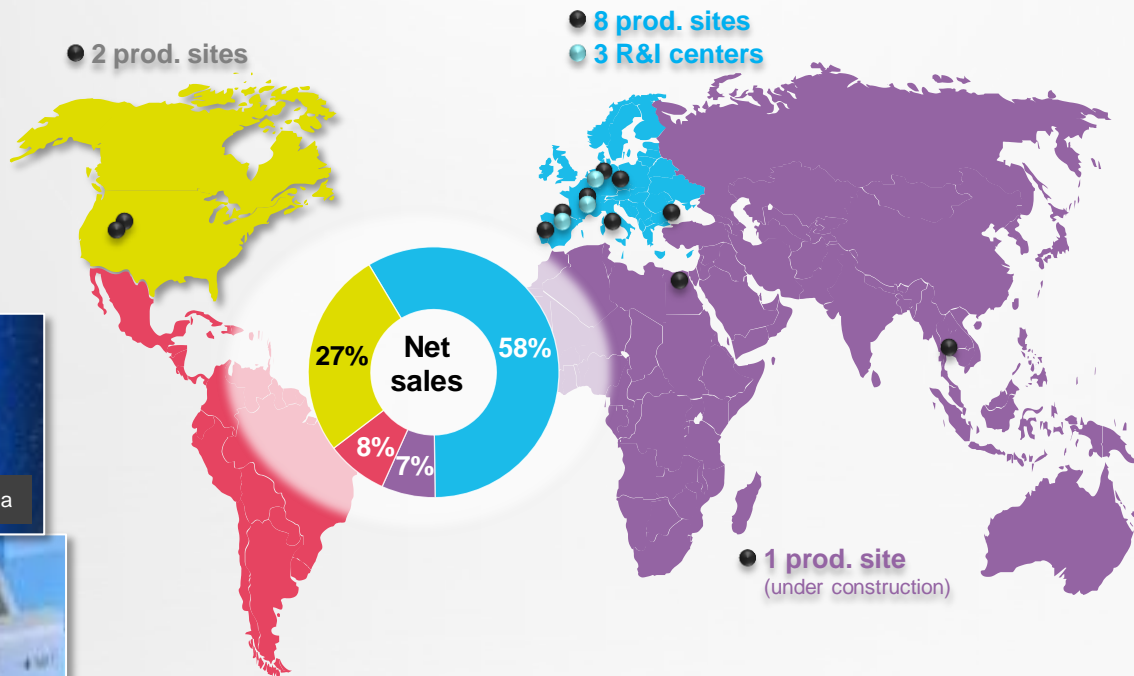
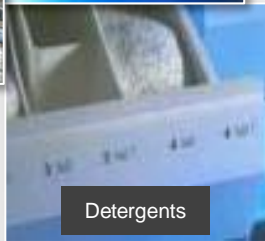
# Essential Chemicals Soda Ash & Derivatives

Market leader with “world-class” soda ash assets

# Soda Ash & Derivatives at a glance

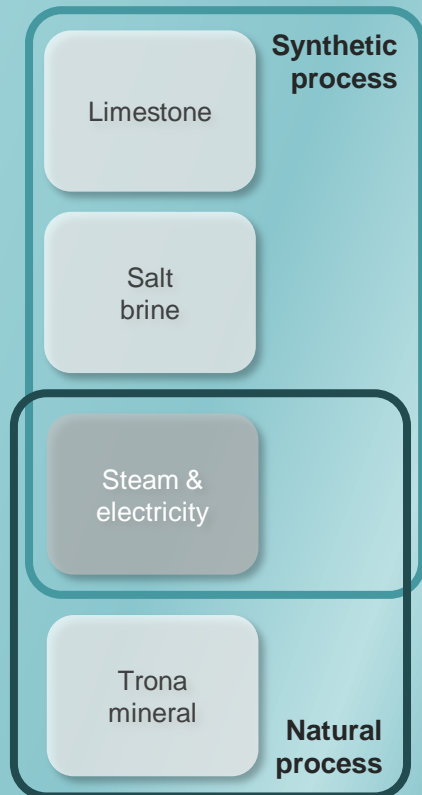
Net sales  
2013e  
**€ 1.4 bn**

REBITDA  
2016 CAGR  
**mid single digit**



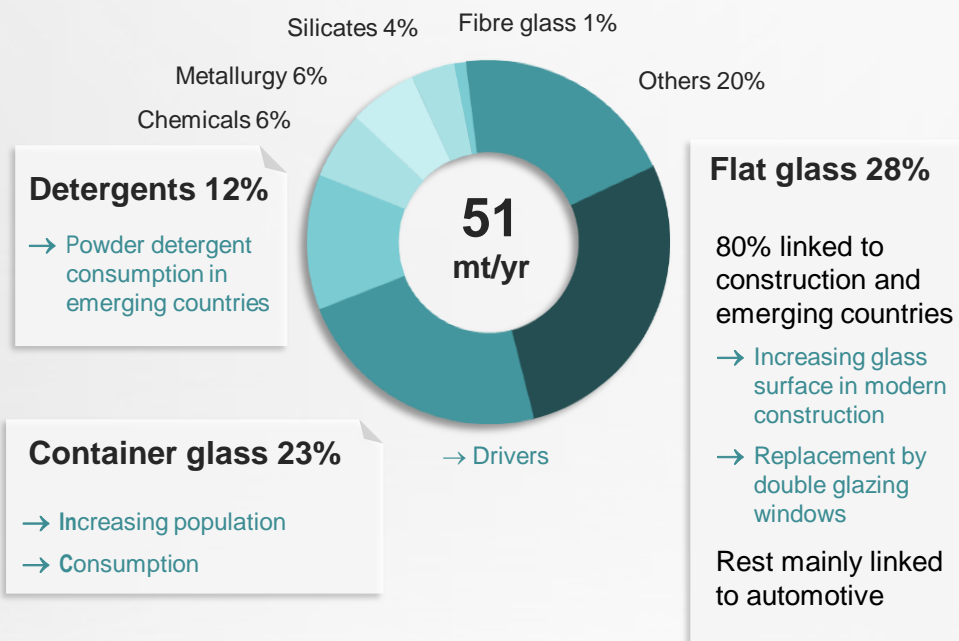
# Secured supply and diversified market in soda ash

Solvay vertically integrated for key raw materials and energy



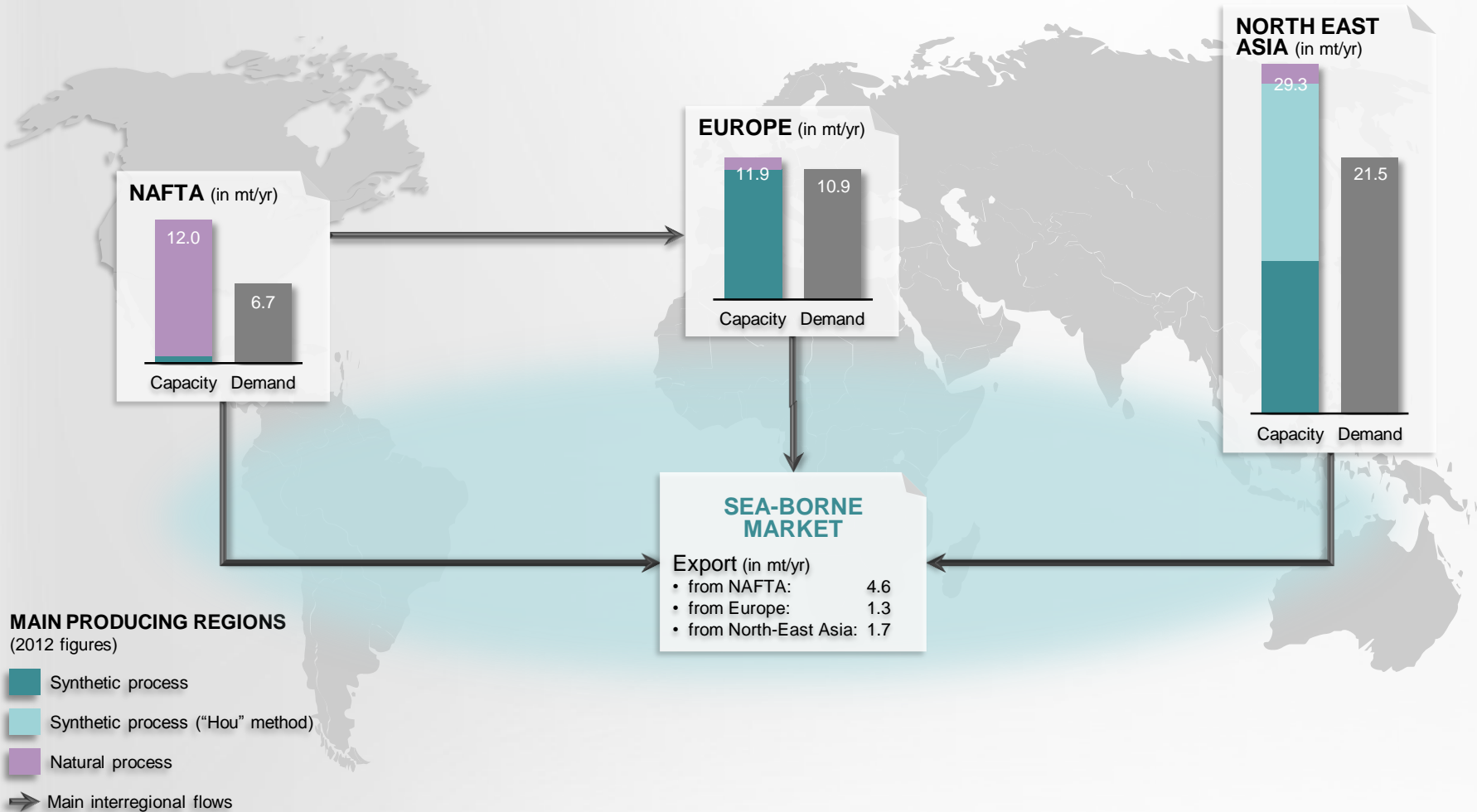
Diversified markets driven by GDP growth

Total market volumes (2012)  
CAGR 2.5%





# Soda ash market is global with regional supply/demand dynamics



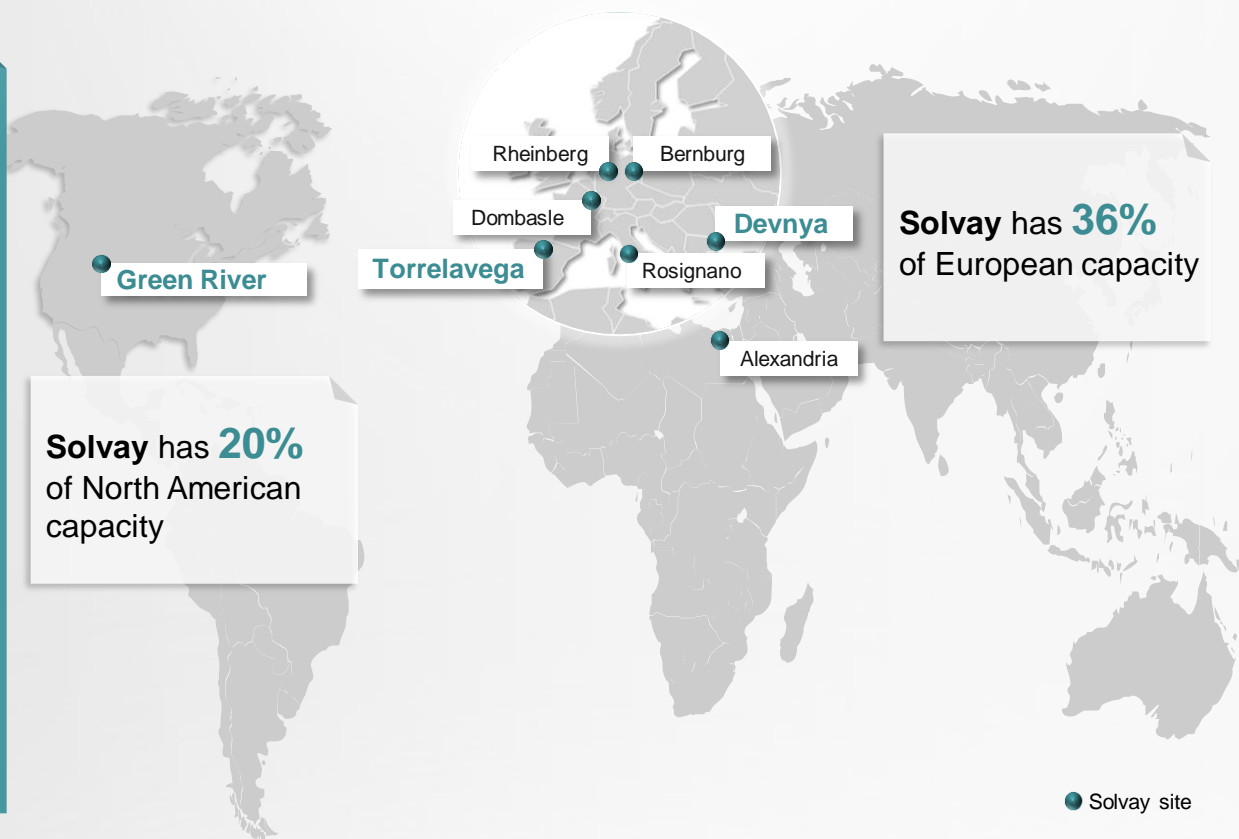
# Market leader with “world-class” soda ash assets

## Solvay assets

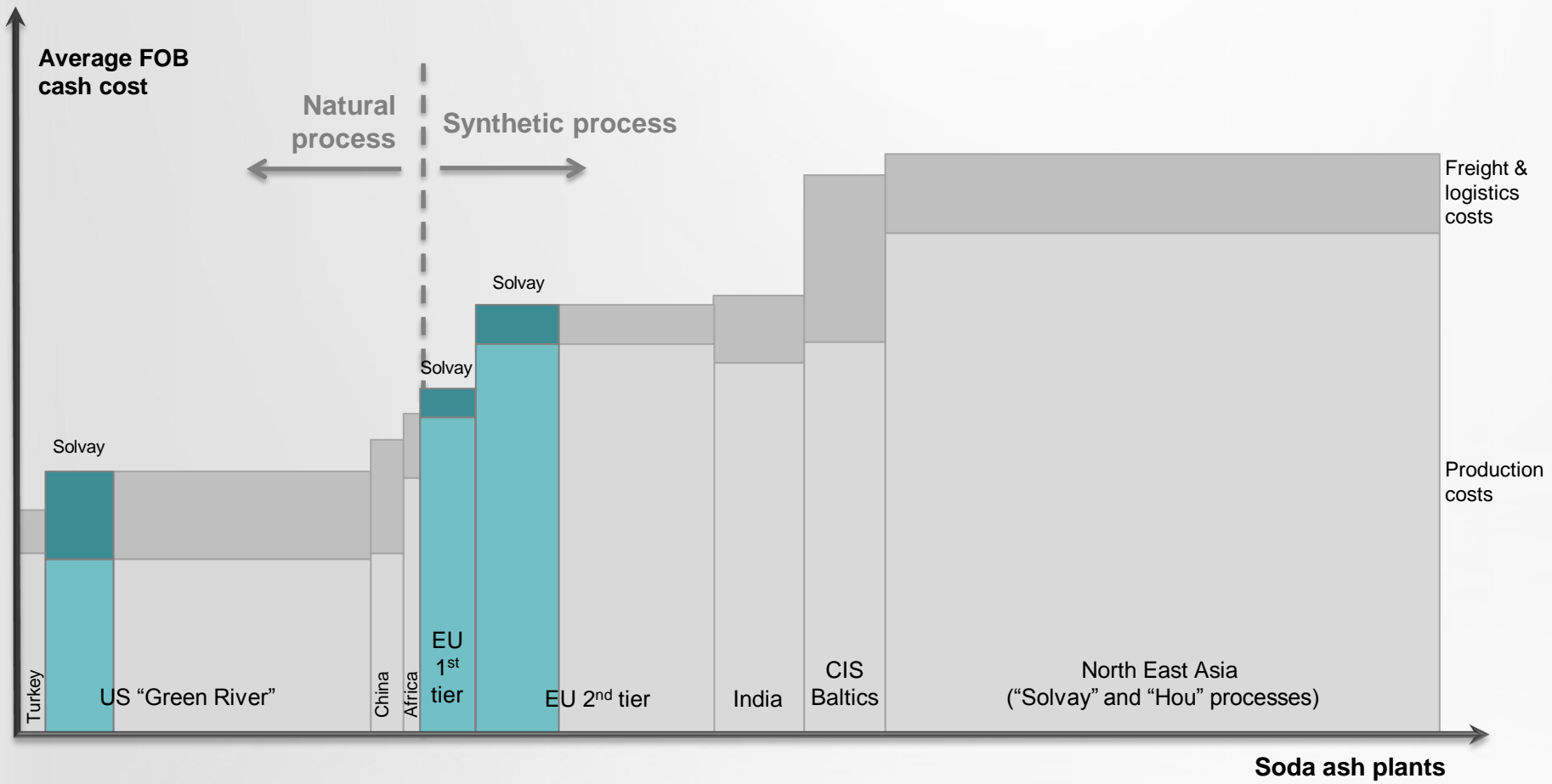
**60% “world-class” assets**  
addressing regional and export markets

- **Green River** (US, Wyoming)
  - Natural soda ash production
  - 2.5 mt/yr capacity further ramping up by 12%
- **Devnya and Torrelavega** (Europe)
  - At delivered cash cost comparable to natural process
  - 2 mt/yr capacity

**40% “local” assets**  
addressing local markets



# Cost is a key success factor in the soda ash industry



Source, Solvay based on external databases

# European soda ash supply/demand to improve in next 3 years

2014-2016

**Restructuration** started with **closure** announcements

- Solvay Pova (0.2 mt/yr)
- Tata Winnington (0.5 mt/yr)

Production **capacity utilization** rate to **increase**

- Following restructuring at the supply side
- Following slight expected growth in demand

2017-2019

**Kazan project**

- Potentially adding 2.5 mt/yr production capacity
- Based on natural production process
- Cash cost expected at same level as best-in-class European synthetic assets

Further **restructuring** among least competitive assets in the European industry can be expected



# Breakthrough actions to enhance competitiveness in Europe

## Key actions

### Variable costs

- **Energy costs**
  - 18% reduction of total steam consumption
  - 44% decrease in CO<sub>2</sub> emission right deficit
- **Raw materials and logistics**

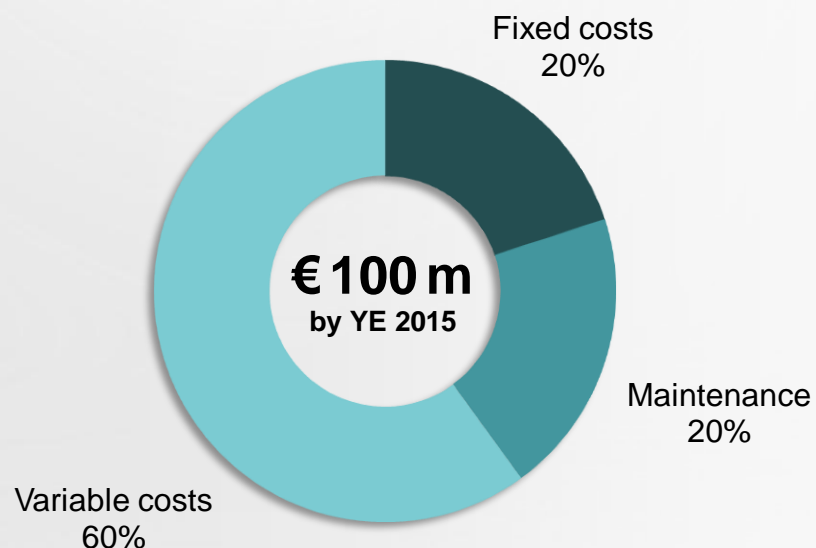
### Fixed costs

- **Closure** of Povia plant in January 2014
- Reduction by 450 positions

**Maintenance** savings across plants reducing cost base by 20%

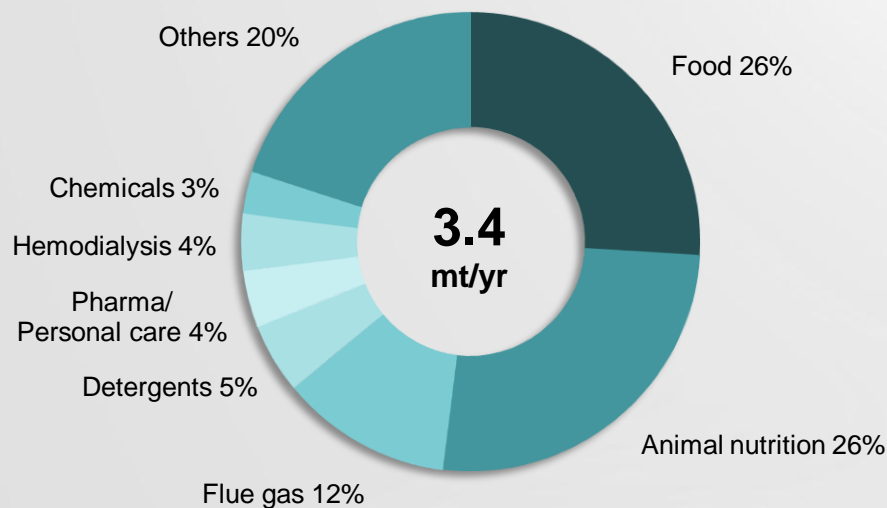
Potential further **restructuring** to be considered, according to market developments

## Split of cost savings



# Market maker in Bicarbonate, a profitable growth story

## Global Bicarbonate demand



Total market volumes (2012)

## Bicarbonate market dynamics

Global **market** growing at **2x GDP rate**, driven by

- Food needs
- Environmental regulations
- Aging population

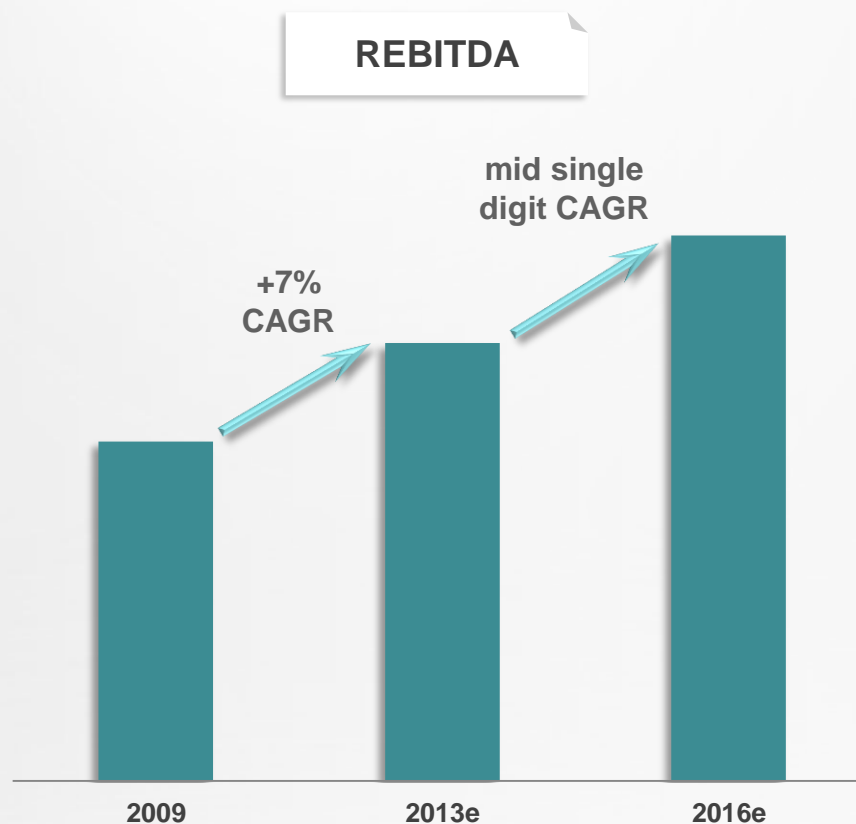
**Solvay** is the market leader, actively developing the bicarbonate market through **innovative high-value applications**


**100 kt/yr plant under construction** in Thailand to develop Solvay's Asian sales

**Solvay is driving the market through new high-value applications**

# Solvay Soda Ash well placed with high-quality assets

- Breakthrough **operational excellence** actions across **European** soda ash plants to further reinforce competitiveness
- **Ramping up capacity** of natural soda ash production in **US**
- **Market maker** for **bicarbonate**, selectively expanding activities in Europe and Asia





# Essential Chemicals Hydrogen Peroxide

Global market & technology leader

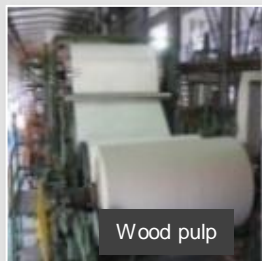
# Hydrogen Peroxide at a glance

Net sales  
2013e

€ 0.4 bn

REBITDA  
2016 CAGR

 double  
digit



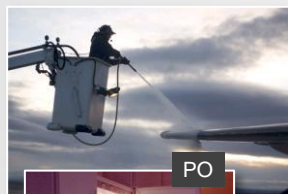
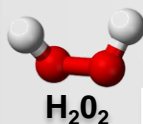
Wood pulp



Thai HPPO\* plant



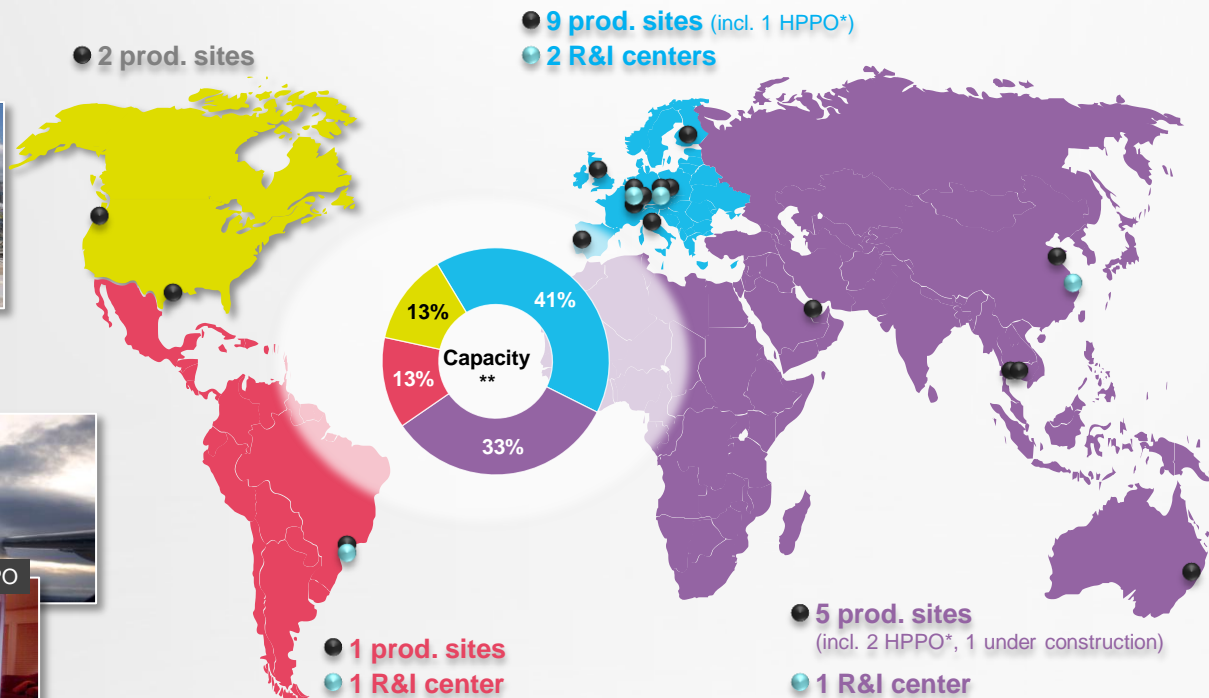
Metals & Mining



PO



Aseptic packaging



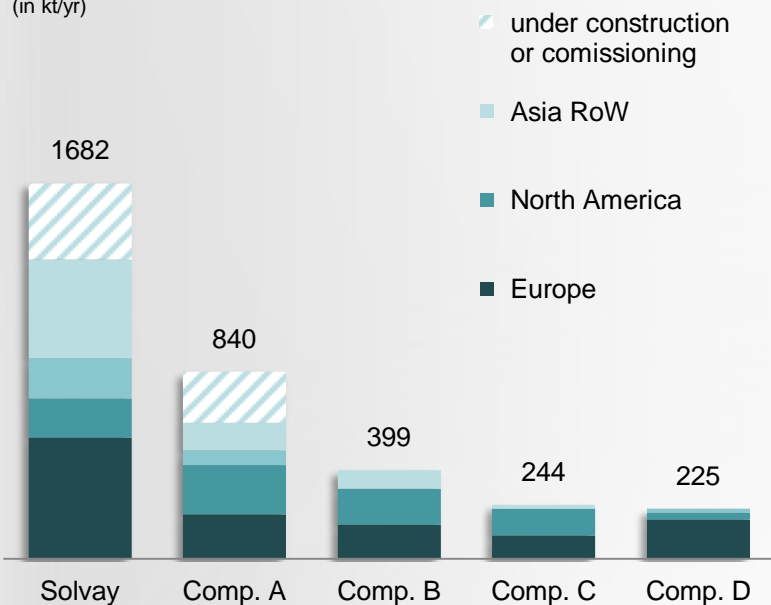


# Solvay, market and technology leader for hydrogen peroxide

## Global market leader

- Solvay is a global leader
- Continued investments in new markets

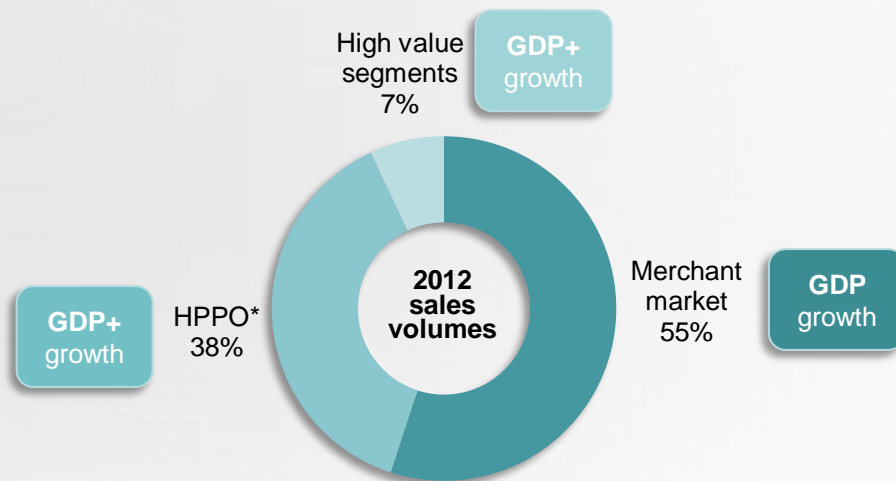
**H<sub>2</sub>O<sub>2</sub> capacity**  
(in kt/yr)



## Global technology leader

- Innovative applications and products
- Process efficiency

## Present on all markets



# HPPO\* business is a game changer generating strong growth

## HPPO application to **grow faster** than Propylene Oxide (PO) market

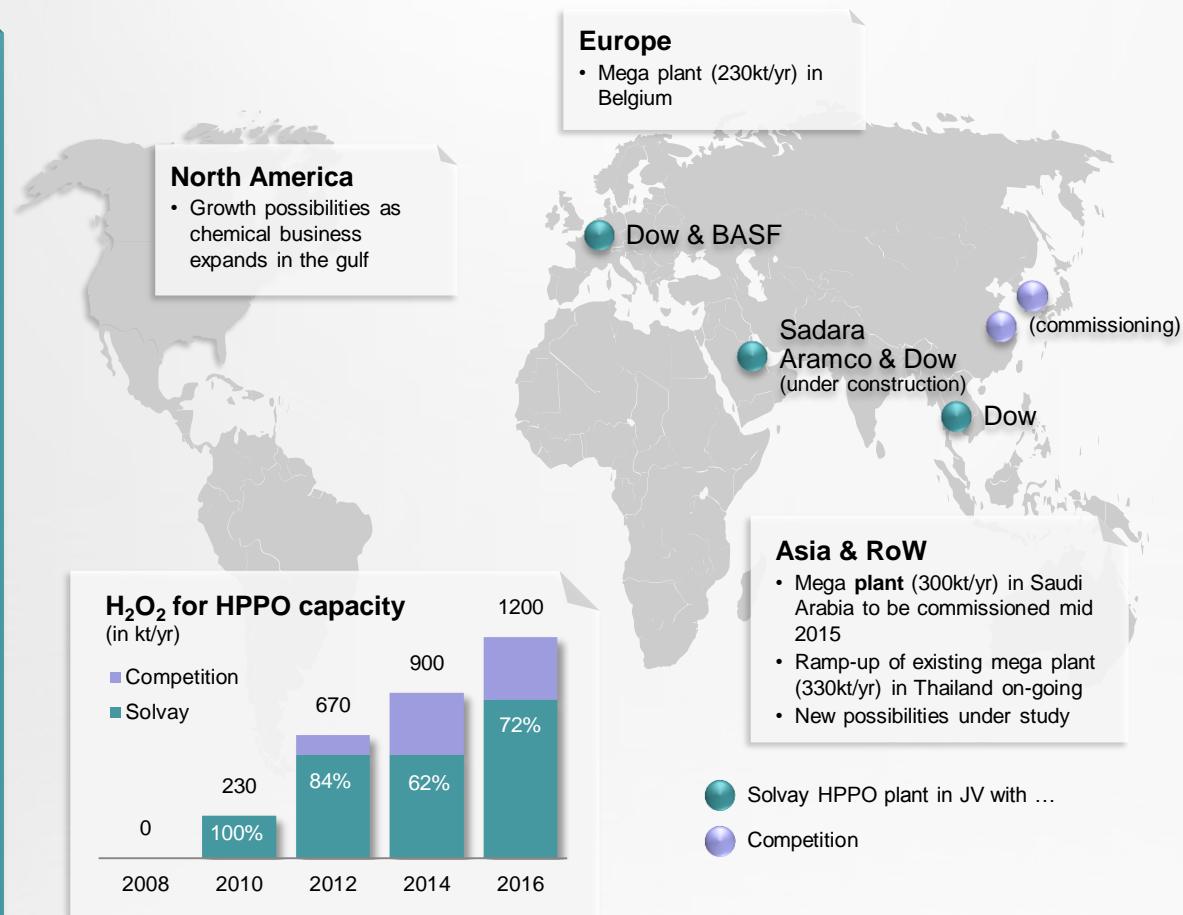
- New plants favor more efficient H<sub>2</sub>O<sub>2</sub> technology (50% of new capacity since 2008)
- PO market to grow at GDP with 1 new mega plant required every 2 years

## Business set-up allows for **stable returns**

- Captive plants (in JV set-up)
- LT contracts / reduced exposure to market dynamics & energy costs

## Solvay leader in HPPO

- Only 2 players capable of building HPPO mega plants
- Partnerships with Dow and BASF for future units on top of current 3 plants



# Solvay to maintain leadership in the merchant market

## Wood pulp bleaching to grow with global GDP, with contrasted evolution

- Shifting segments: Tissue & diapers vs. paper
- Shifting geographies: Growing (LatAm & Asia) vs. mature markets (Europe & US)

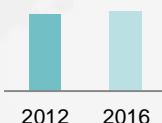
## Other applications to grow with new uses of H<sub>2</sub>O<sub>2</sub>

- Mining
- Chemicals
- Textile
- Environment, ...

### North America Solvay #2

Sales volumes  
CAGR +1%

- Focus on high value products
- Growth in Mini-AO technology
- Growth in oil & gas market



### Europe Solvay #1

Sales volumes  
CAGR +1%

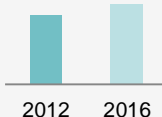
- Expand in new geographies (CIS)
- Focus on high value applications



### Latin America Solvay #1\*

Sales volumes  
CAGR +4%

- Grow wood pulp
- Focus on high value products
- Launch 1<sup>st</sup> customer on site tailor-made plant



### Asia Pacific Solvay #2

Sales volumes  
CAGR +12%

- Expand in new territories
- Expand in new applications



# Innovation gives opportunities for new sustainable markets

## High value applications

### Paramove™

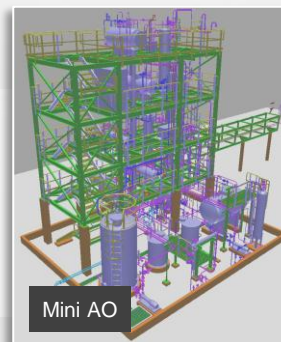
Integrated pest management control in fish farming



## New business model

### Mini AO

New concept of small & robust production units tailored to and located on customers' premises



## Process excellence

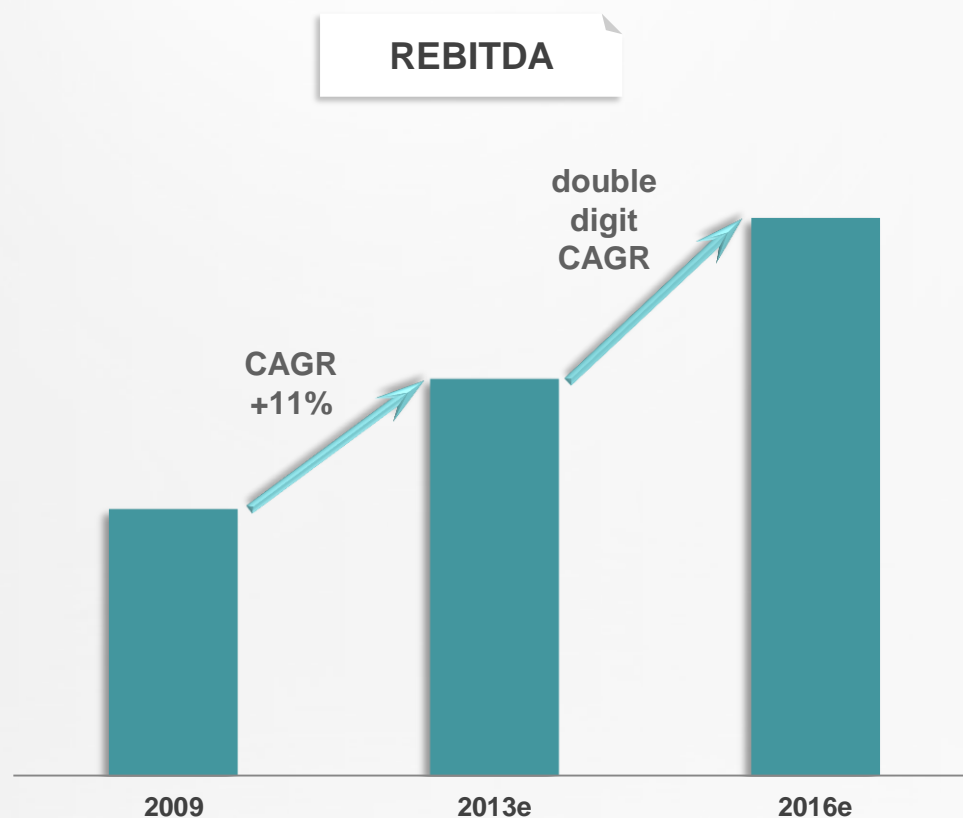
### Excess heat recovery

Recovery of low temperature energy in process



# Global market and technology leader in hydrogen peroxide

- Global **market leader** in **all markets**
- Business driven by **strong growth** dynamics
  - GDP growth in **merchant market**
  - GDP+ growth in **HPPO**
  - **Innovation** providing further opportunities







## Essential Chemicals, a resilient cash generator