

Innovative Drive

Regional Growth  
Markets  
Process  
Optimisation  
Healthcare  
Energy & Environment  
Leading Technologies

Capital Markets Days 2014

## Workshop Integrated Gases Model

LeadIng.

  
THE LINDE GROUP

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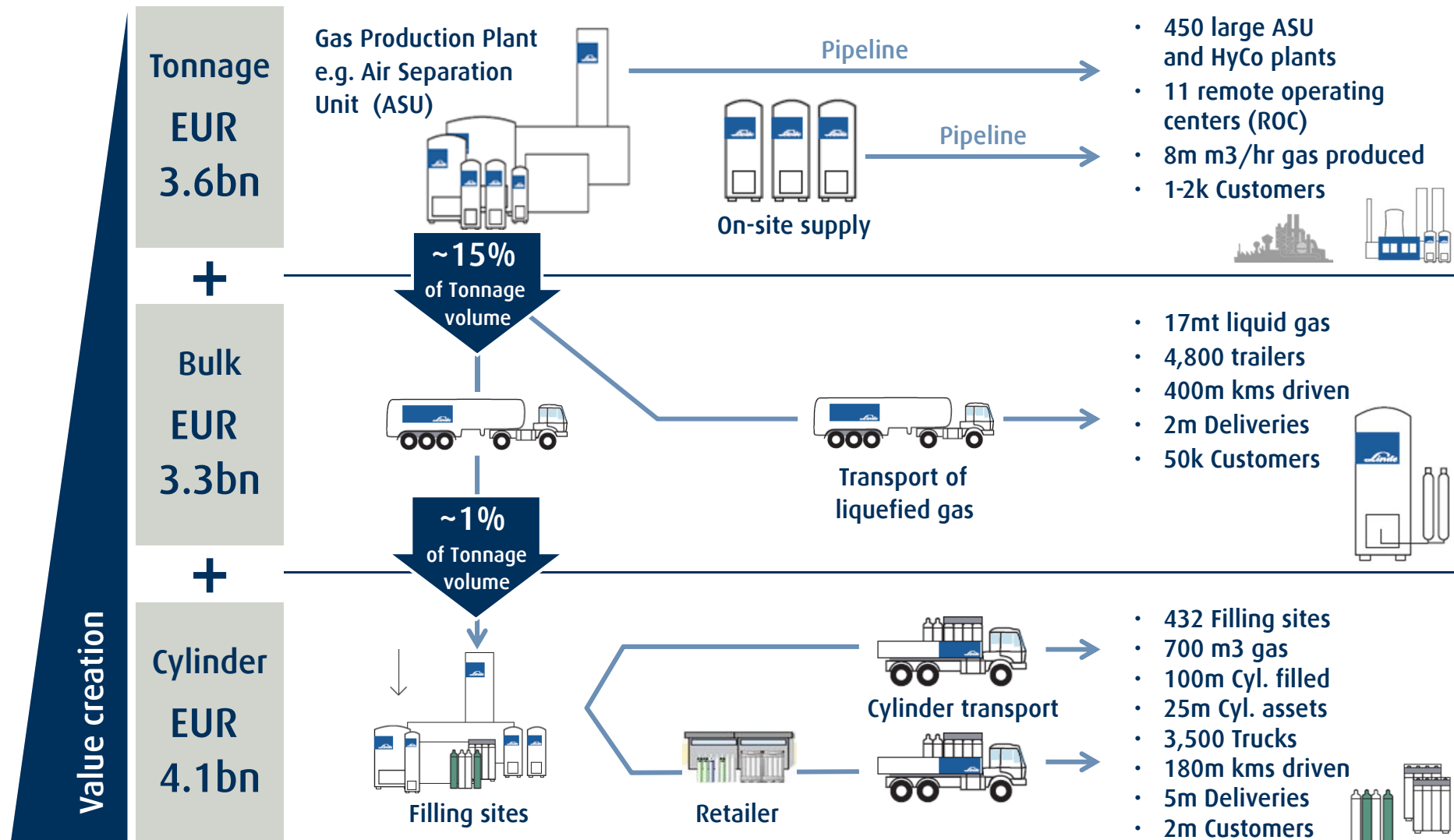
31 October 2014

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Linde is fully leveraging the integrated model where the value creation increases as you go downstream



To strengthen the integrated model Linde has differentiating skills and assets in each of the three core segments



## Global Market Position

## Key differentiators

### Cylinder, #1

- Footprint strongholds with high density network, established asset base and high service quality
- Linde LeadSite/LeadArea best practices for operational efficiency
- Comprehensive specialty gases capabilities



### Bulk, #1

- Broad range of application technologies with high integration into customer processes and excellent value/molecule ratio
- Operational optimiser ensuring supply reliability and efficiency



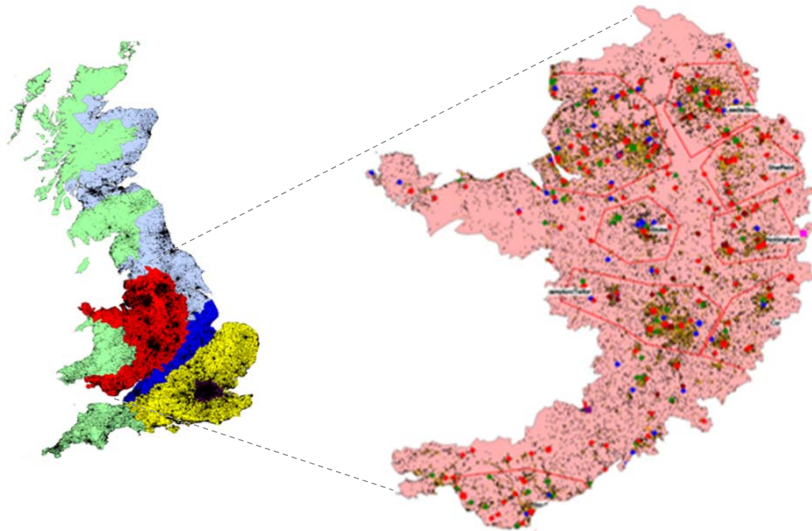
### Tonnage, #2

- Proprietary Linde Engineering plant technology (competitive capex, high efficiency, reliability, flexibility)
- Remote operating centers optimising production parameters in real-time
- Full range solution provider incl. mix of EPC/BOO models & mega projects



## Market Zone concept operationalises global PGP strategy on local level

### Market Zones: Example UK



### Detailed strategy within each Market Zone



Customer segmentation



Understanding of customer needs by segments



Definition and validation of PSOs



Definition of integrated channel strategy

### Definition of Market Zones based on

- Industries
- Existing customers and channels
- Competitive landscape and dynamics
- Commercial models/pricing

### Key benefits

- Optimised channel structure
- Tailored promotions and campaigns
- Accelerated cross selling
- Immediate customer feedback loops
- Containment of competition

## High density network and rigorous rollout of best practices ensure Cylinder Supply Chain competitiveness



### Productivity

1. Site labour productivity booster
2. Site layout & filling system optimisation
3. Stock control
4. First time quality

### Centralisation

1. Consolidated cylinder testing
2. Filling site network optimisation
3. Centralised supply chain planning

### Delivery

1. Optimised scheduling
2. Improved delivery performance and customer service
3. Tight contractor management
4. New fleet design

Safe & efficient sorting

Layout changes

New quality processes

Consolidated testing & maintenance

Cross border supply chain

Stock optimisation

Effective asset use

Improved vehicle design

Optimised loads/routes



## Bulk Applications create customer value through high degree of process integration



### Description

### Customer Value

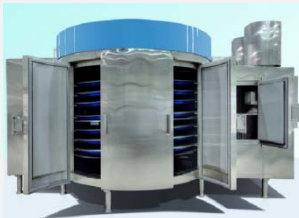
#### HIGHJET® TDI



- LOX application for cast iron production based on jet nozzles
- Conversion of pressure to velocity so that additional combustion air is mixed with the oxygen stream

- Savings of up to EUR 6/ t cast iron
- Increase in melt rate +30%
- Emission reductions for CO/CO2 (-30%) and SO2 (-20%)
- Typical payback of investment <12 months

#### CYROLINE® XF 700



- Large capacity spiral freezer, unique in this capacity range and efficiency
- LIN or LIC operated
- Airflow profile results in extremely high heat transfer rates

- Energy to freeze reduced by 50%
- More compact design requiring ~50% less stainless steel
- Yield savings of 0.5-2% depending on product

#### AIROX®



- Melting of copper with air-oxygen fuel burners
- Flexible O2 enrichment: 30-40% during melting, ~20% during waiting and casting

- 20-30% higher melt rate that can be adjusted to process needs
- Up to 30% lower fuel consumption
- Productivity increase

# Power Zones create sustainable competitive advantages in Bulk

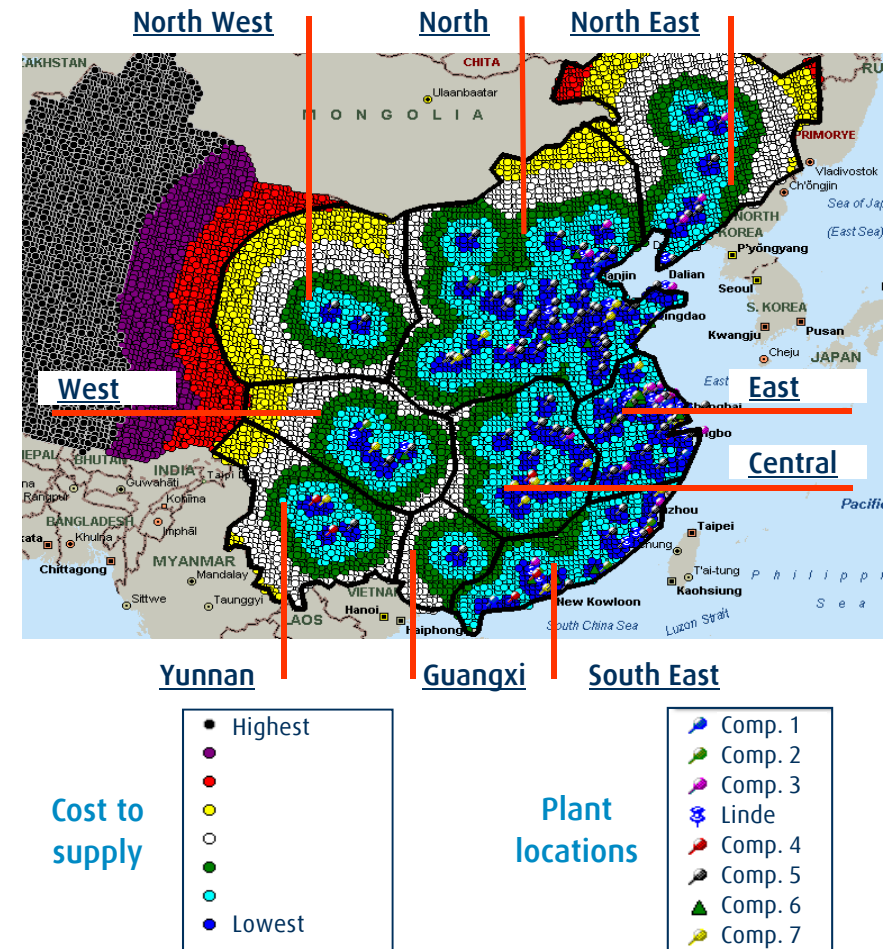
## Power Zone Concept

- Cost to supply a customer is based on **combined production and distribution cost**
- Economically viable distribution radius for Bulk product (LOX, LIN, LIC) is **200-500 km**
- Power Zone analysis overlays geographic map with
  - Cost to supply
  - Customer locations
  - Competing sources

## Characteristics of each zone determine

- Capacity and supply planning
- Sales plan and pricing strategy
- Competitor strategy

## Example China



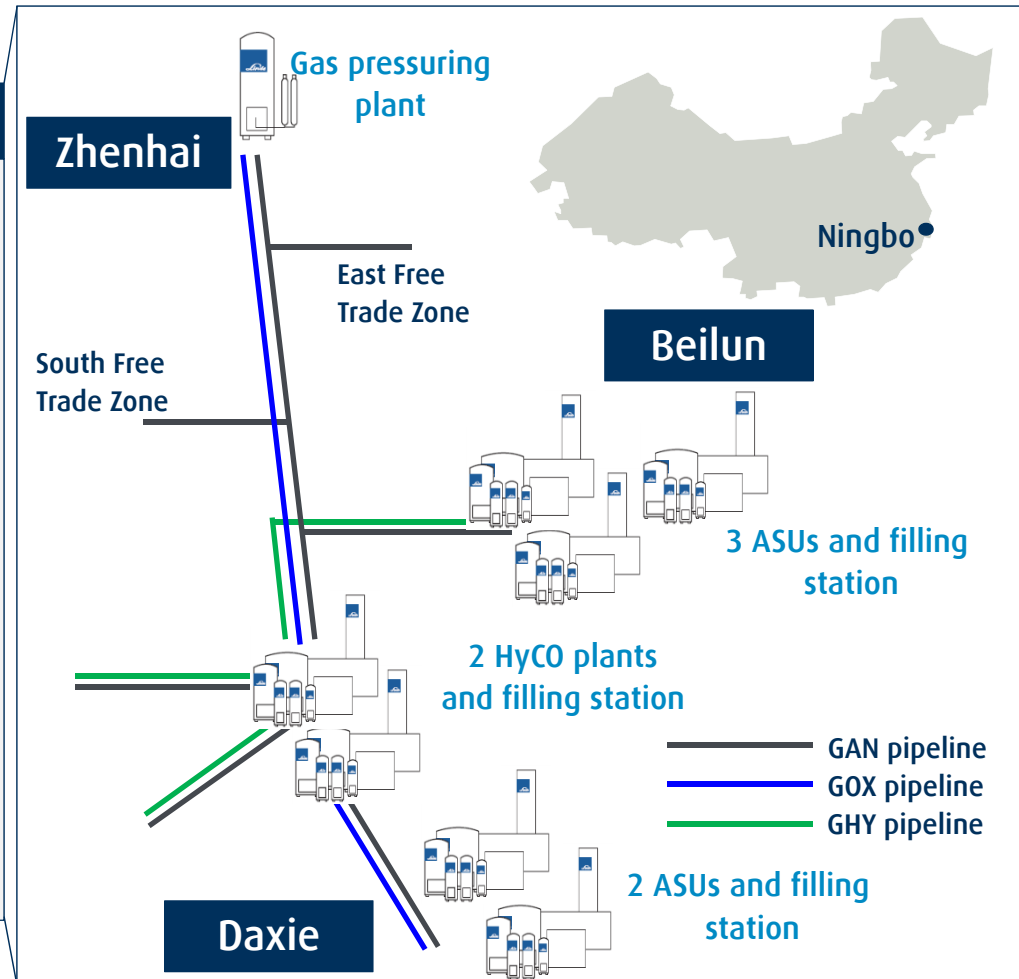


Combined with a cluster approach the integrated model leads to a strong incumbency position with superior returns

### Fully integrated cluster Ningbo

- Pipeline (~140km) between 5 ASUs and 2 HyCOs
- Liquefiers to supply bulk (LOX, LIN, LAR)
- 3 filling stations within the cluster
- 39 Tonnage, 221 Bulk and numerous Cylinder customers in Steel, Chemicals, Electronics, etc.

- ✓ Strong Linde market share
- ✓ Superior returns
- ✓ Capacity balancing opportunity
- ✓ Highest supply reliability
- ✓ Lower volatility
- ✓ Growth at least in line with cluster growth
- ✓ Ability to optimize plant operations

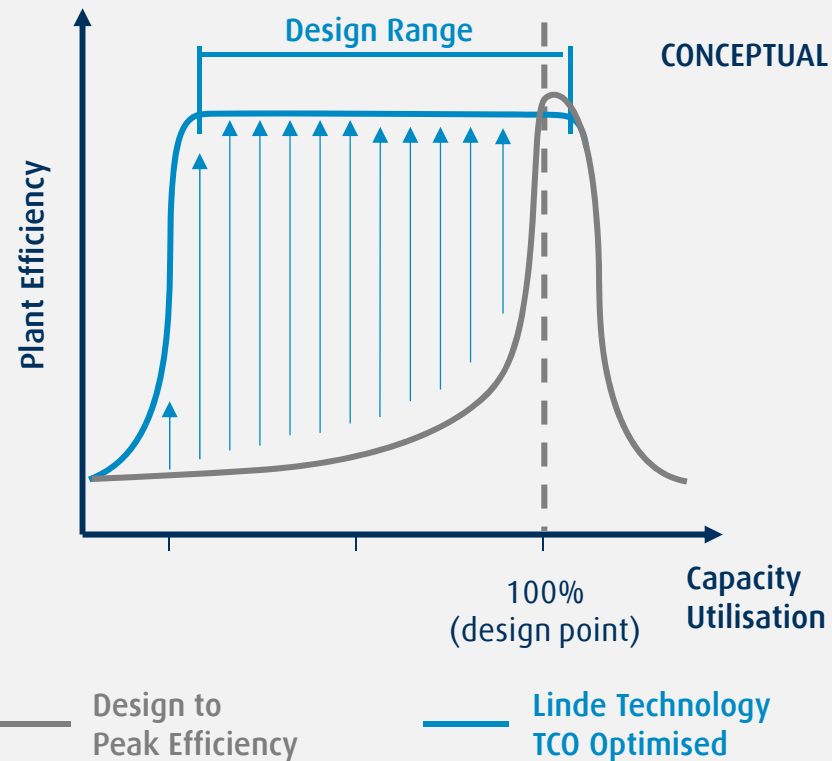


85% of our capacity is based on integrated assets\* - 20% of capacity is part of clusters

\* Based on air separation units (ASU)

Proprietary Linde design and real time optimisation provide flexibility in times of volatile demand and energy prices

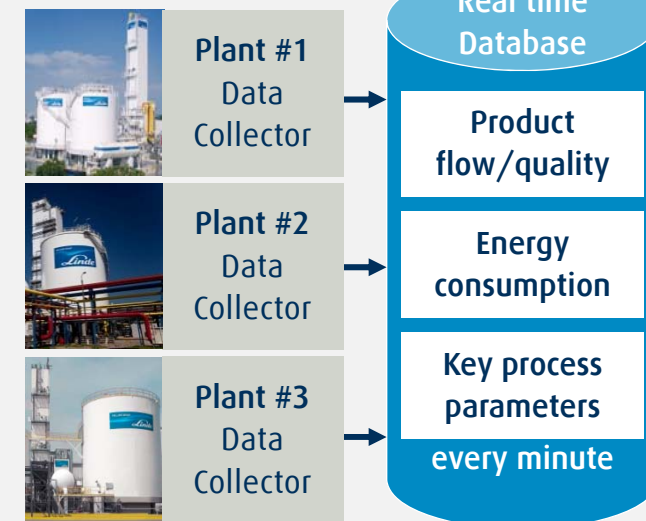
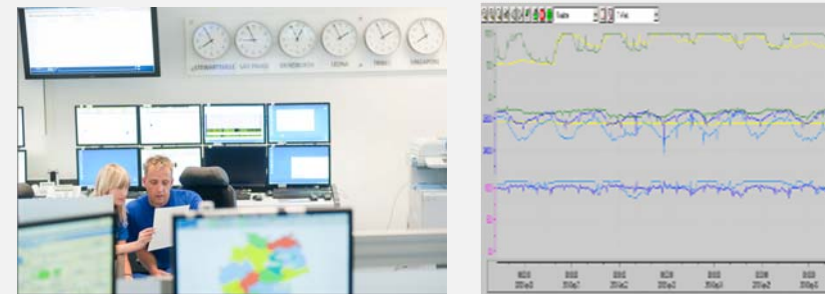
## Optimisation of ASU Design



TCO optimised plants based on modular design

## Remote Real Time Optimisation of ASUs

### Efficiency monitoring

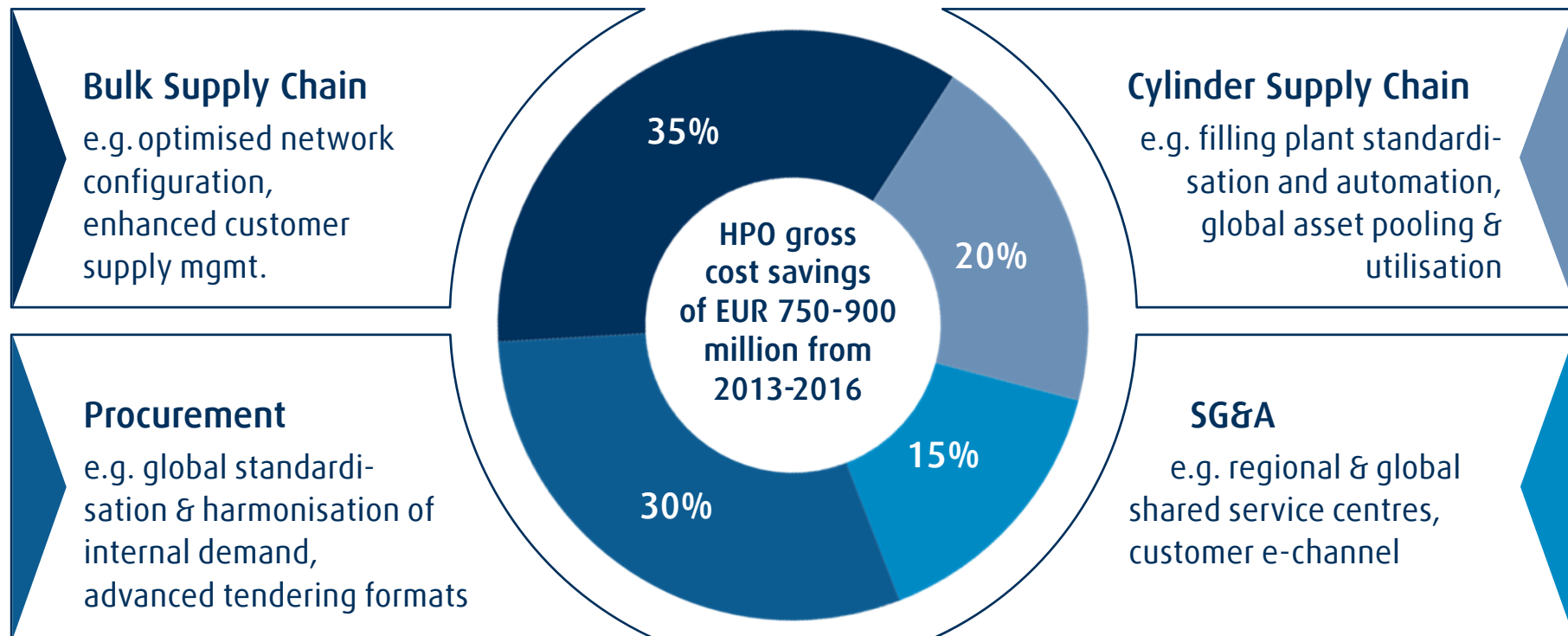


Going forward we have three “pillars” of opportunities in our core business



HPO	Growth	Customer Experience
<p><b>Strong HPO contribution delivered 2009-2012</b> EUR 780m gross cost reduction</p> <p><b>Significant further value potential identified</b> EUR 750-900 m gross cost savings targeted for 2013-2016</p> <p><b>Implementation of program on-track against plan</b> Contribution target realised in 2013 and delivery in 2014 expected on plan</p>	<p><b>Leadership position in emerging growth markets</b> #1 in Greater China, South East Asia, Eastern Europe, South Africa</p> <p><b>Strong contribution from investments in 2014-2015</b> EUR 1.6bn of CAPEX projects going on-stream with large share in Growth Markets</p> <p><b>Attractive trend-driven growth potential</b> Industrial gases market continuing to outgrow global GDP</p>	<p><b>Putting the customer first in all of our business</b> Launched global customer experience (CX) program</p> <p><b>End-to-end optimisation of customer interactions</b> Targeted initiatives to improve customer interface, processes and behaviors</p> <p><b>Embedding customer focus within the organisation</b> Dedicated CX champions in each country</p>

**HPO: Implementation of next wave HPO measures is on-track to deliver EUR 750-900m gross savings p.a. by 2016**



- More than 5,500 tangible improvement initiatives defined as part of HPO program
- More than 80% of HPO target for 2016 already backed-up by specific measures

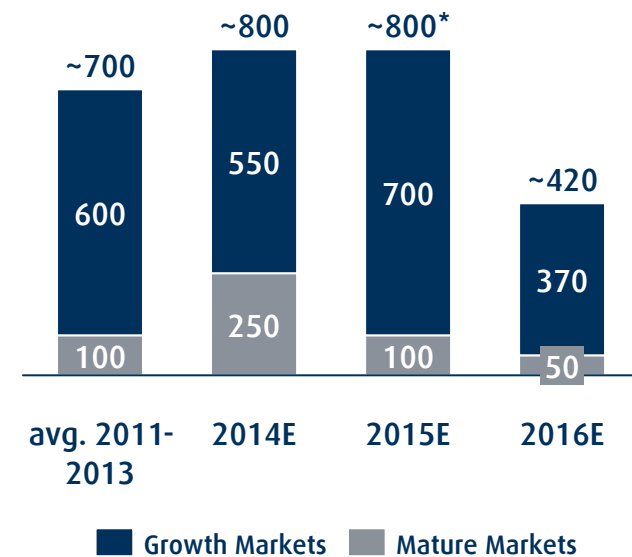
## Growth: Strong pipeline of plants coming on-stream in 2014-2015 to capture growth in Growth Markets

### New plants going on-stream by 2014/15/16



### Total capex of committed projects by on-stream date (projects > € 10 m)

[EUR m]



Around 80% of project investments are allocated to Growth Markets

\* Adjusted for impact of Chongqing

## Customer Experience: Global program launched to put the customer first in all of our business



### Tangible benefits targeted

Happy customers spend **3x** more than any other group

**70%** of customer defections are due to a poor experience

Dissatisfied customers tell **16+** people about their poor experience

### Employee Engagement Campaign



- Global communication campaign
- Dedicated CX champions

### Customer Experienced Initiatives – Selected Examples

- Institutionalised customer involvement in portfolio development (products & services)
- Established personal reward system to recognise excellence in customer service
- Strengthened customer focus in all relevant processes to make it easier to do business with us
- Improved customer access to service centers e.g. introduced online service platforms



# Investor Relations



## Financial calendar

Full year report 2014:	13 March 2015
Report Q1 2015:	30 April 2015
AGM 2015:	12 May 2015
Dividend payment:	13 May 2015

## Linde share information

Type of share:	Bearer shares
Stock exchanges:	All German stock exchanges
Security reference number:	ISIN DE0006483001 CUSIP 648300

## Linde ADR information

Ticker Symbol:	LNEGY
DR ISIN:	US5352230204
Depository Bank:	Deutsche Bank
Structure:	ADR Level I, Sponsored

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