



Norsk Hydro

Stian Hasle

2017 Navigating the Nordics Seminar

Better Bigger Greener

A resource-rich and fully integrated global aluminium company

Hydro with strong market positions globally



Extrusion ingot, sheet ingot, primary foundry alloys and wire rod

** Primary foundry alloys

*** Outside China

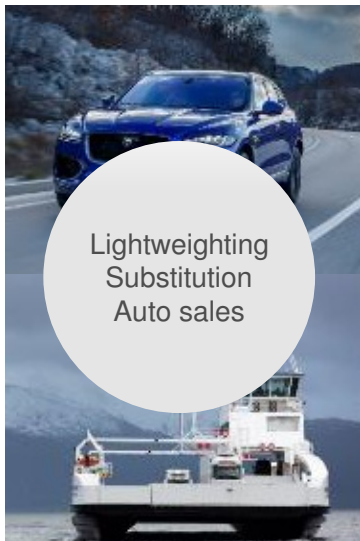


Volatile markets,
solid demand growth

Aluminium's reach is growing in response to key long-term trends

Substitution continues to be a key driver for aluminium

Transport



Lightweighting
Substitution
Auto sales

4-5%

Packaging



Urbanization
Sustainability
Substitution

3-4%

Building & construction



Urbanization
China moderating
Energy-efficient
buildings

2-3%

Electrical



Substitution
Urbanization
Electrification

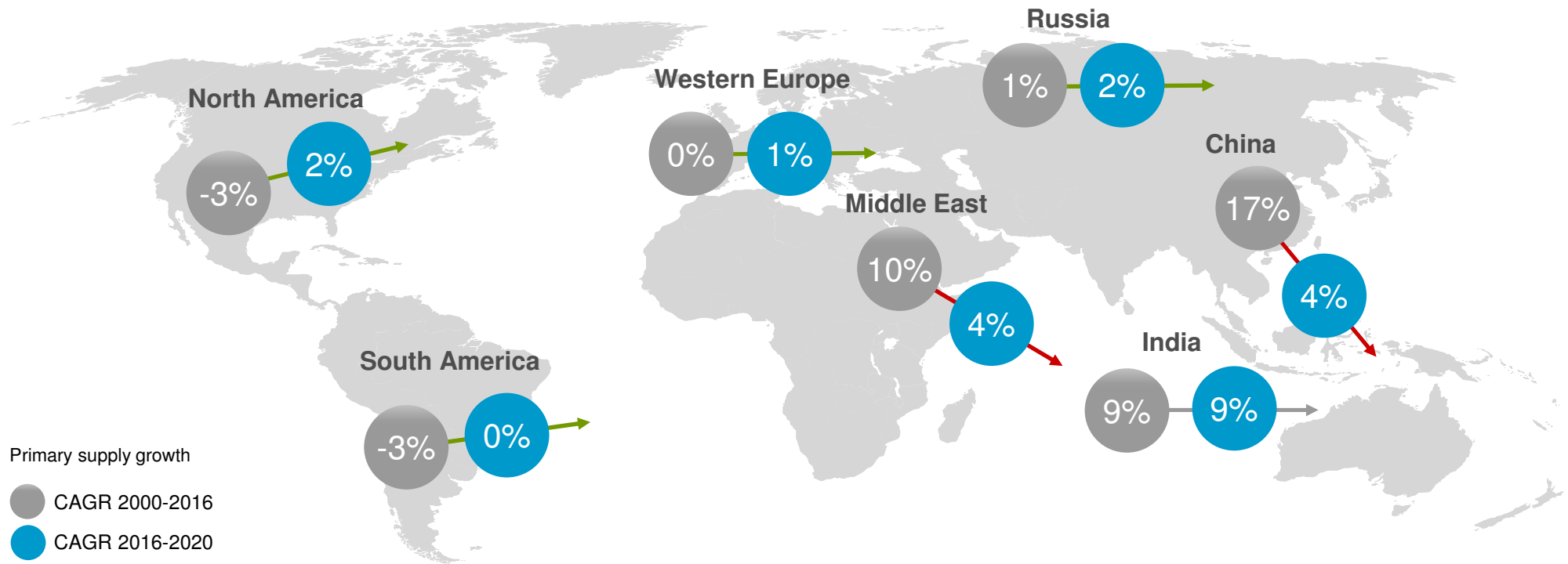
3-4%



Global semis demand for segment, CAGR 2016-2025

Primary supply growth moderating

Chinese and Middle East primary production growth coming down

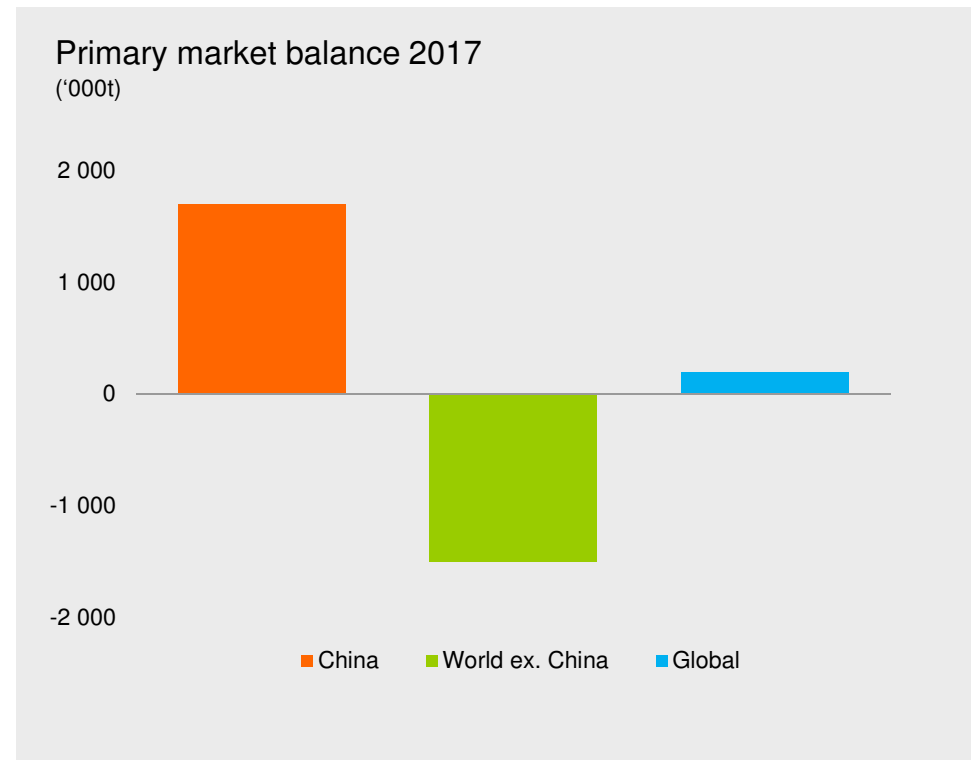
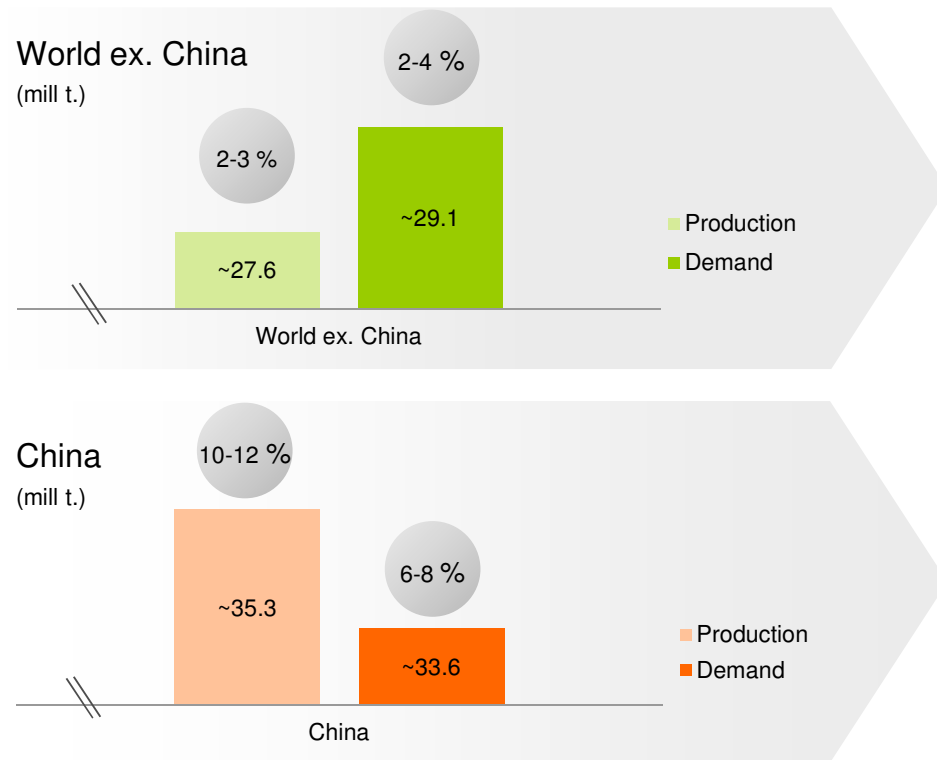


Primary supply growth
● CAGR 2000-2016
● CAGR 2016-2020

Source: CRU

Primary aluminium market expected to be largely balanced in 2017

2017 global demand growth outlook 4-6%



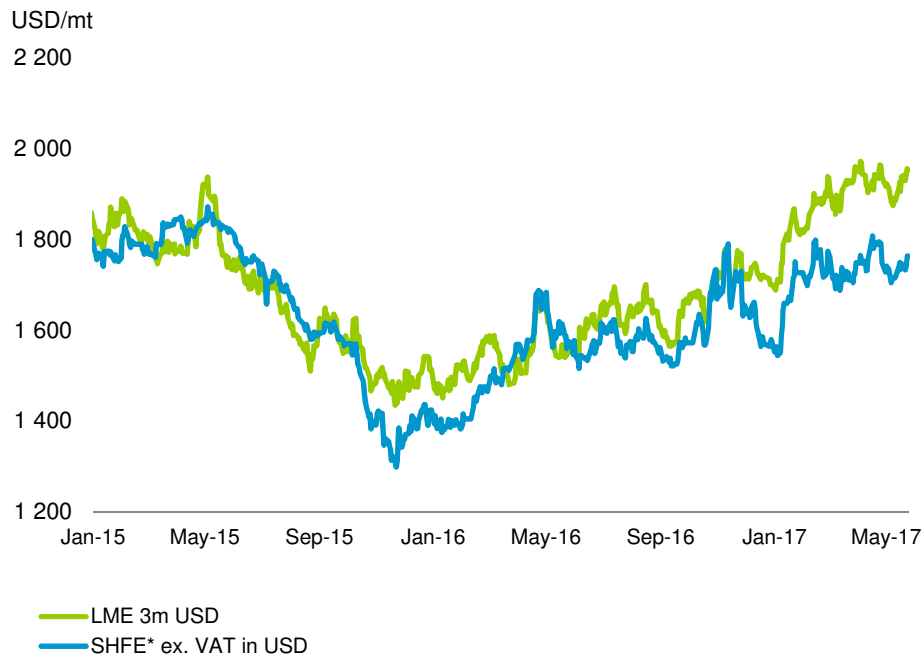
Source: GRU, Hydro analysis

x% Growth from 2016 to 2017

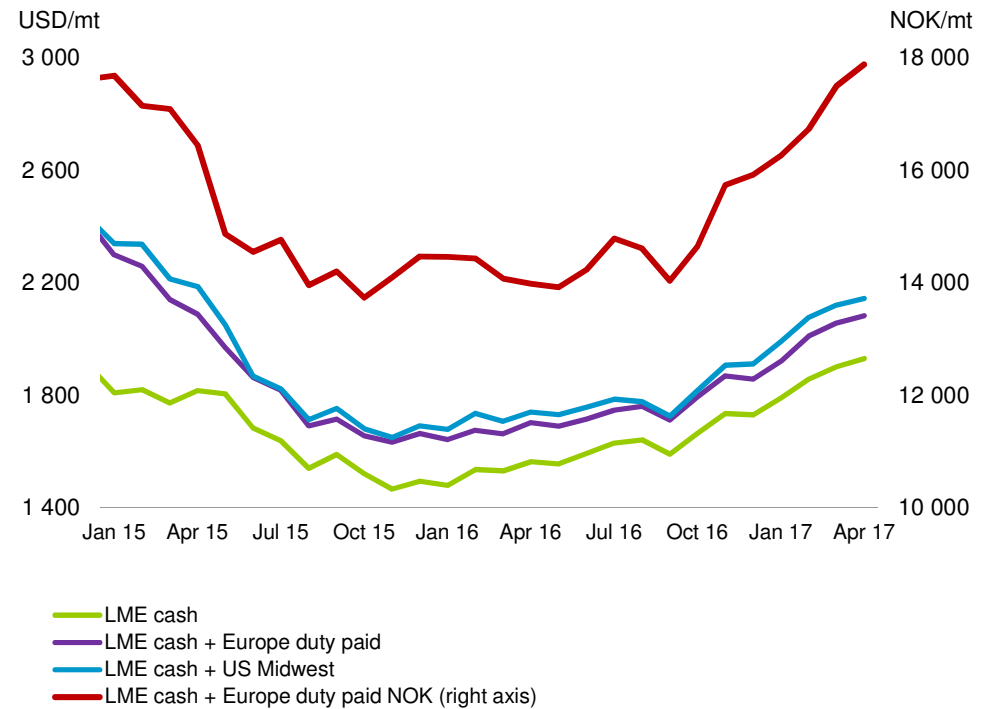
Increasing average all-in aluminium prices in 2017

Widening arbitrage between LME and SHFE in Q1-17 compared to Q4-16

LME and SHFE aluminium prices



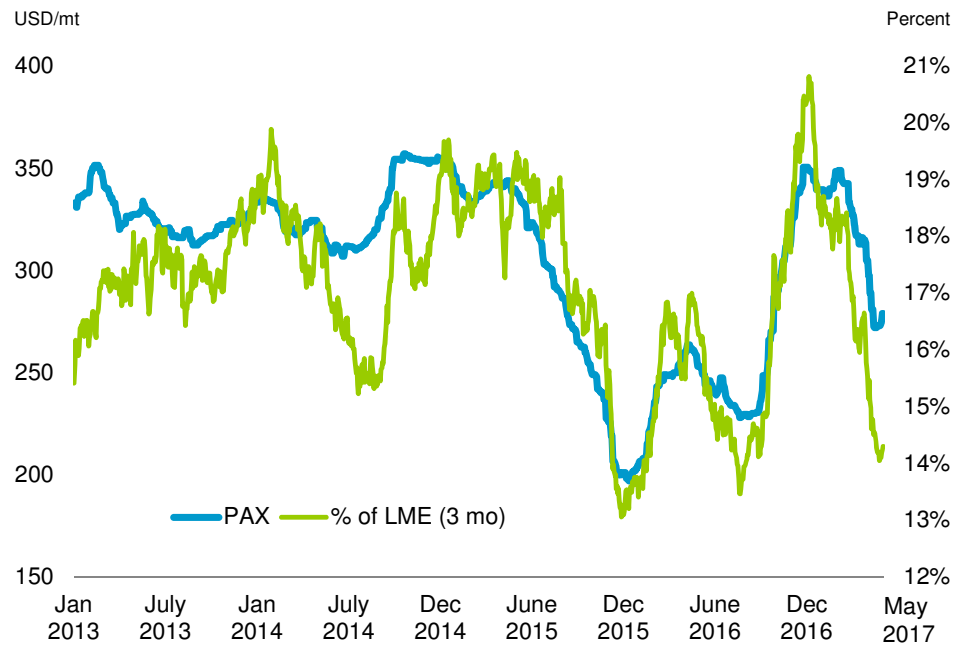
All-in aluminium prices



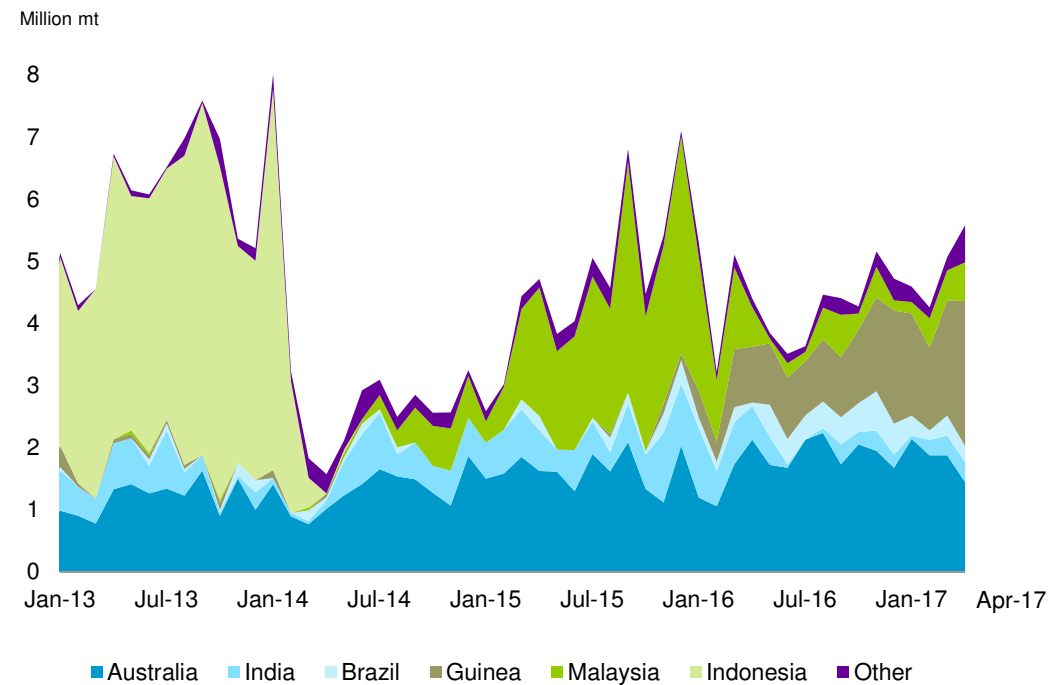
Source: Metal Bulletin, Platts, Reuters Ecowin, Hydro analysis
 * Shanghai Futures Exchange

Declining alumina prices, Atlantic bauxite exports to China rise

Platts alumina index (PAX)



Monthly Chinese bauxite imports



Source: Platts, Ecwin, China Customs



Further strengthening
Hydro's solid position

Conducting business the Hydro Way

Safety and environment



Safety performance (TRI) at industry benchmark

2.6*

2020 ambition of a TRI rate below 2.0 and zero fatalities

In progress



Carbon-neutral from a life-cycle perspective

On track

Close reforestation gap by 2020

On track

Corporate responsibility

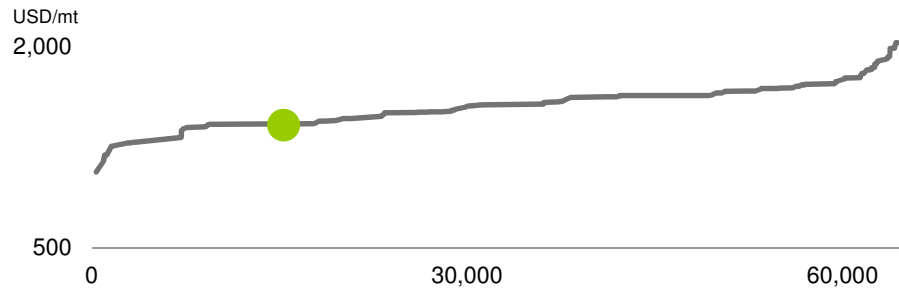


* TRI rate for own employees 2016 – total recordable incidents per million hours worked

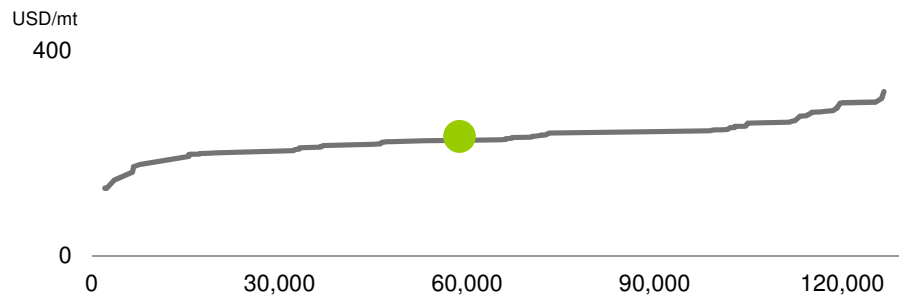
Operational leadership among peers

Solid cost positions in aluminium value chain

Smelter BOC curve by company (2017)

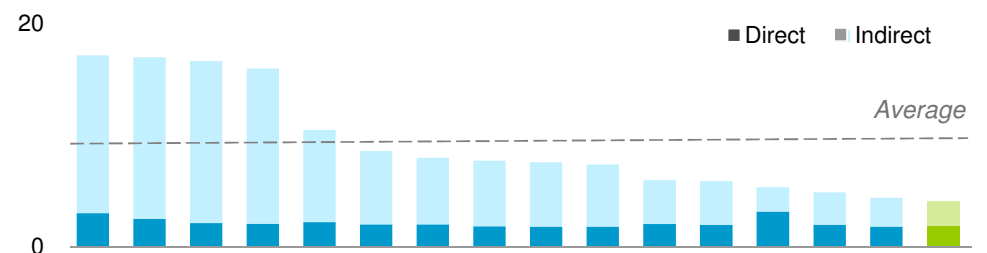


Alumina BOC curve by company (2017)



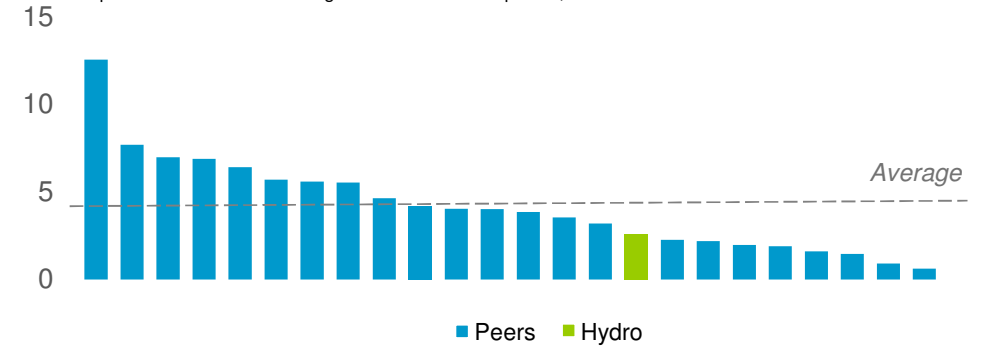
Lowest CO₂ emissions

Tonnes CO₂/tonne aluminium, 2016



Among the best on safety performance

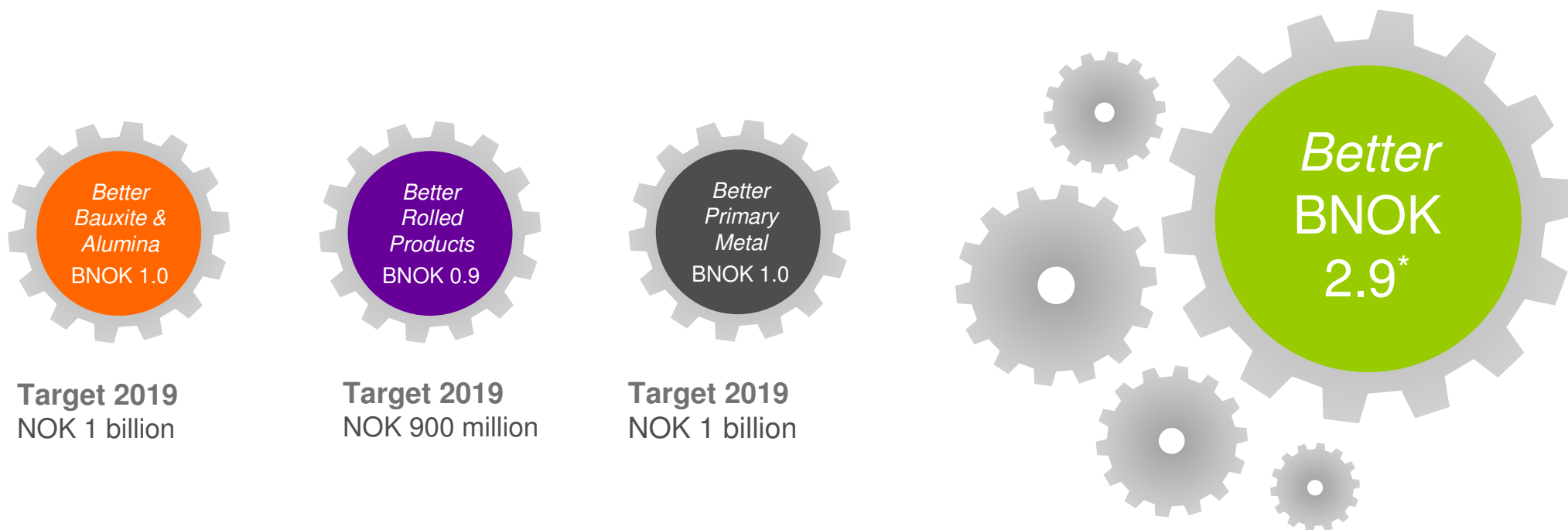
Incidents per 1 mill hrs worked among ICMM member companies, 2016



Source: CRU, International council on mining and metals (ICMM)

Proven track-record of productivity gains continues

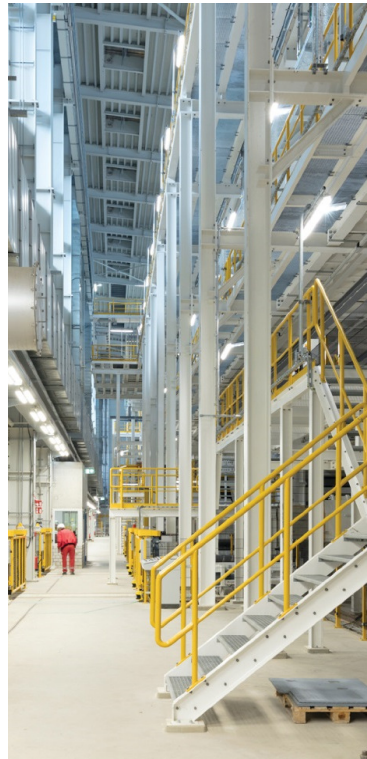
Industry's most ambitious improvement efforts on track, with NOK 1.4 billion delivered in 2016

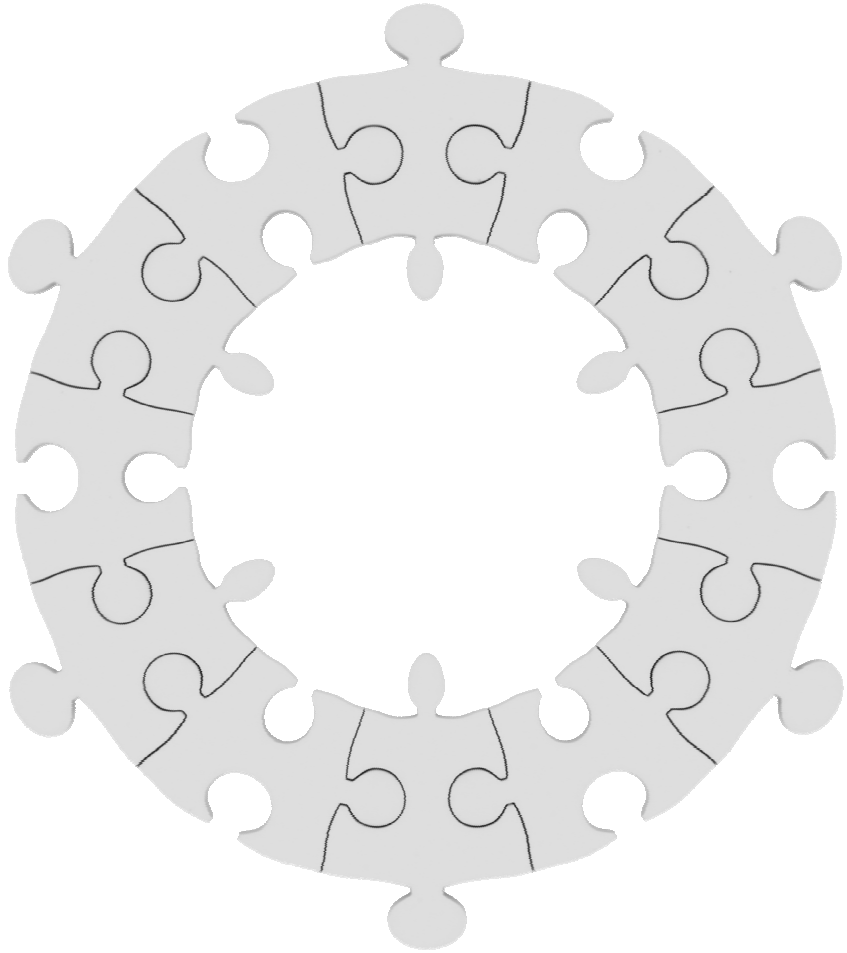


* Real 2015 terms. Includes some larger investments of NOK ~3 billion NOK in 2015-2019: AL3 and UBC in Rolled Products. Creep projects in Primary Metal. Alunorte debottlenecking in B&A.

2017: Inaugurating new automotive line & technology pilot

Quadrupling body-in-white capacity to 200,000 mt/year & verifying world's most climate-efficient electrolysis

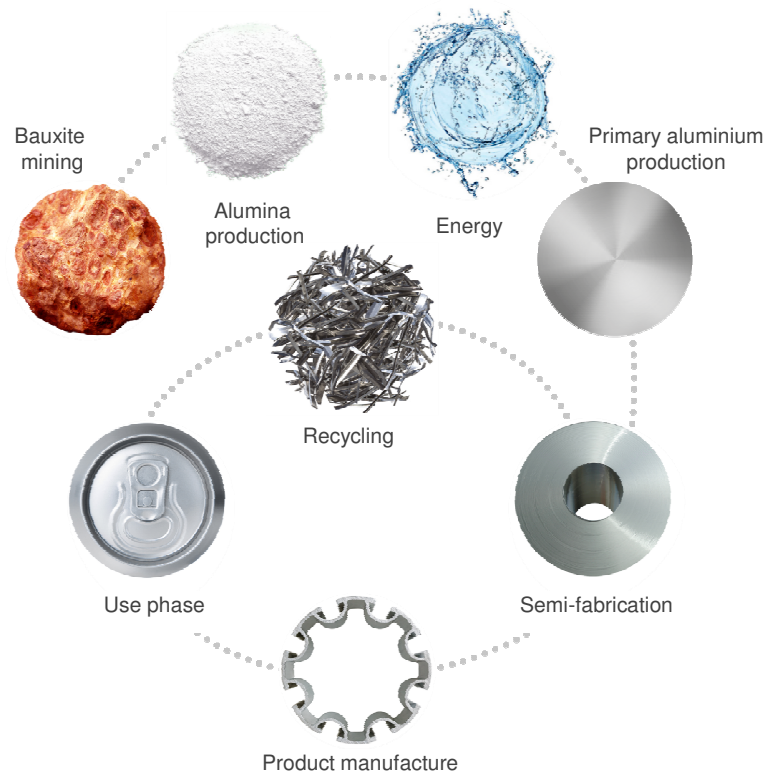




Hydro's strategic direction

Full value chain approach for higher value creation

Dedicated business models in each area combined within an overall company framework



Benefits of Hydro's integrated model

Operations and technology

- Operational excellence
- Continuous improvements
- Technology and innovation

Customers and markets

- Customer cooperation
- Commercial edge & innovation
- Market understanding

Responsibility and climate

- Value chain control
- Sustainability and climate
- Compliance and responsibility

Growth and exposure

- Business development
- Growth opportunities
- Full cycle exposure

Hydro's strategic direction

Tailoring our competitive advantages to the key drivers and challenges in the world of tomorrow

Better



Hydro improvement drive continues at full pace

- Continue improvements drive
- Capture commercial opportunities
- Extend technology and innovation lead

Bigger



A solid platform for building an even stronger Hydro

- Further strengthen relative industry position
- Enhance market positions and high-grade portfolio
- Mature selective growth projects for when time is right

Greener



Hydro aims to be climate neutral by 2020

- Turn leading HSE/CSR position into competitive advantage
- Deliver on fast-developing customer demands
- Capitalize on strong climate position over time

Global aluminium's most ambitious climate strategy

Carbon-neutral by 2020 from a life-cycle perspective

Hydro's climate strategy

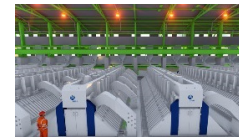
Climate and energy-
efficiency in production

Use-phase benefits

Recycling



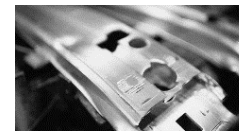
Value-creating implementation examples



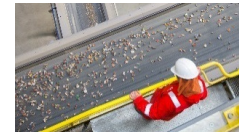
Karmøy technology pilot
Primary Metal, Norway



Alunorte Fuel Switch Project
Bauxite & Alumina, Brazil



Automotive line 3
Rolled Products, Germany



UBC recycling line
Rolled Products, Germany



Clervaux upgrade
Primary Metal, Luxembourg



Hydro 2017

- Safety first
- Deliver on *Better* improvement ambition
- Strengthen competitive position
- Maintain financial strength and flexibility

