



# The leading force in aluminium

Adding value across the value chain

Svein Richard Brandtzæg, President and CEO

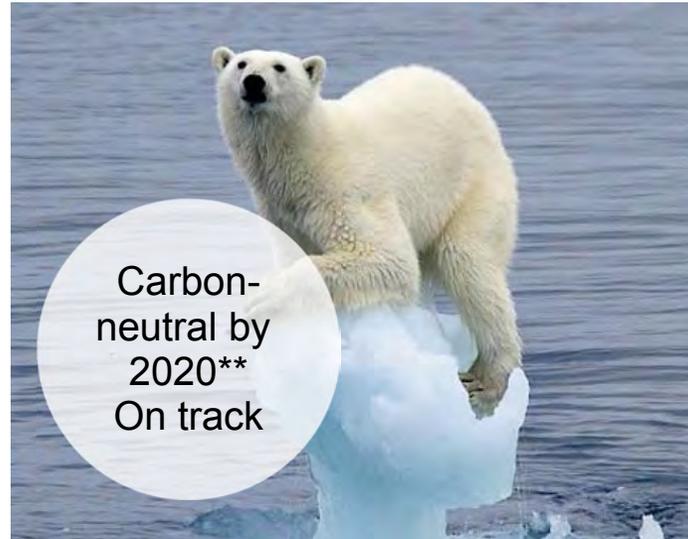
# Lifting the bar for responsibility and sustainability

Good for our people, great for business



## Safety first

Aiming for an injury-free work environment



## Part of the solution

Implementing the industry's most ambitious climate strategy



## Good citizen

Making a positive difference, being a partner for social development

\*Own employees until end-October, including Extruded Solutions  
\*\*From a life-cycle perspective

# Main developments during 2017

## Bauxite & Alumina



Record-high bauxite & alumina production



Start-up of new state-of-the-art dry disposal of bauxite residue using press filter

## Primary Metal



Karmøy technology pilot on track for first metal Q4 2017



Launch of low-carbon aluminium products 4.0 and 75R

## Rolled Products



Inauguration of Automotive line 3



Completed modifications at UBC recycling facility

## Energy



1.65 TWh wind-based power sourcing\*



Developing solution to secure continued RSK production

## Extruded Solutions



Becoming 100% owner in Sapa



Record Sapa results through 2017

\* 1.65 TWh from 2021-2039

# Integration of Extruded Solutions on track

The Hydro model allows all business areas to be run according to their specific business drivers and needs



## Organizational structure in place

- New corporate management board for Hydro and management group for Extruded Solutions established
- All corporate staffs of former Sapa incorporated into Hydro or re-assigned into Extruded Solutions
- Extruded Solutions included in Hydro's decentralized operating model



## Initial synergy potential confirmed

- Confirmed synergies of MNOK 200 per year
- Integration costs estimated at MNOK 400 over the next two-year period
- Further synergy potentials being developed, including innovation and R&D



## Systems integration on track

- Emergency preparedness in place from Day 1
- Mapping of all IS/IT systems on track and integration roadmaps established
- Reporting routines established for HSE, finance and viability



## **Aluminium gaining momentum on favorable fundamentals**

# Geopolitical uncertainty, robust global growth



Global gross domestic product growth 2018  
% y-o-y

3.2%

2.1%  
Europe

2.4%  
North-  
America

6.5%  
China

Source: Global Insight

# China sentiment shifting due to rising environmental concerns

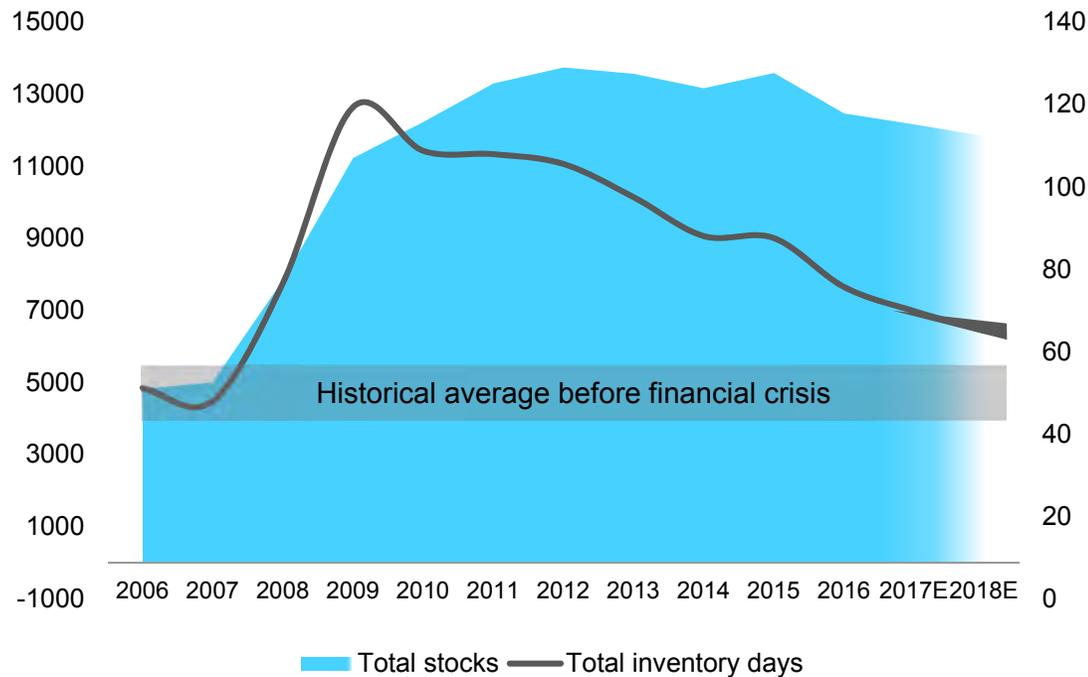
- Aluminium demand continue to grow, but at more moderate level
- Financing becoming increasingly restricted
- Bauxite resources depleting domestically, increasing dependency on imports, in particular from Guinea
- Increasing raw material prices
  
- Combination of environmental concerns and supply-side reform leading to significant capacity reductions in China
  - Supply-side reform already taking effect, shutdowns of ~3 million mt of smelter capacity and capacity under construction halted
  - Winter shutdowns now the main focus and uncertainty



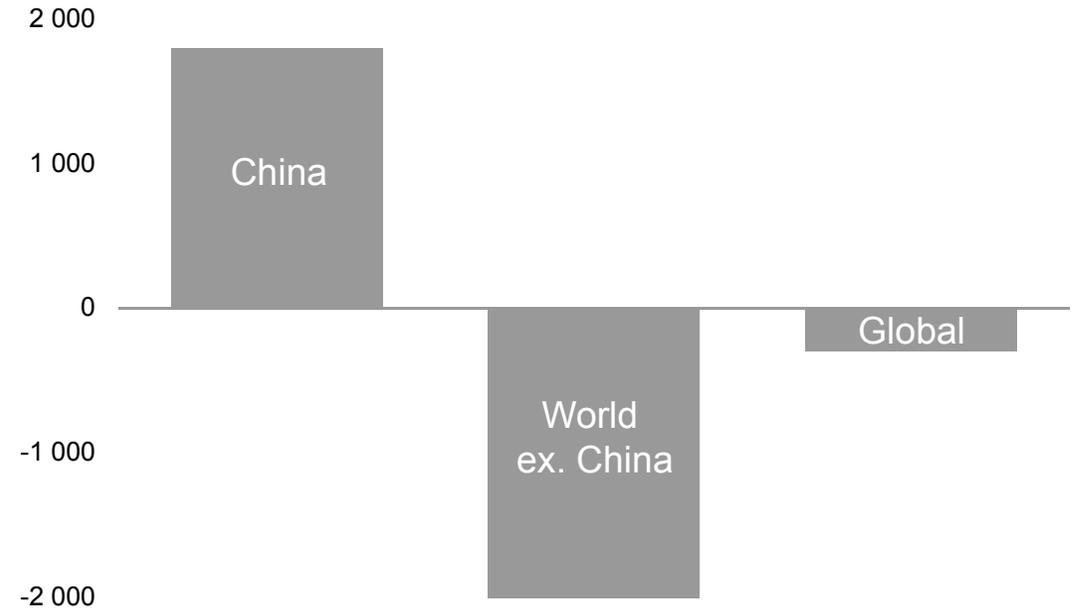
# Global aluminium market expected to be largely balanced in 2018

Inventories trending towards historical levels

Inventory levels, reported and unreported  
Global, in thousand tonnes



Expect largely balanced primary market in 2018



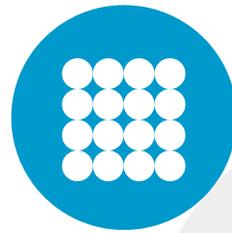
Source: CRU, Hydro analysis

# Continued strong long-term outlook for aluminium

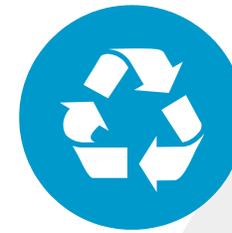
CAGR 2017-2027



Semis  
**~3%**



Primary  
**2-3%**



Recycling  
**3-4%\***

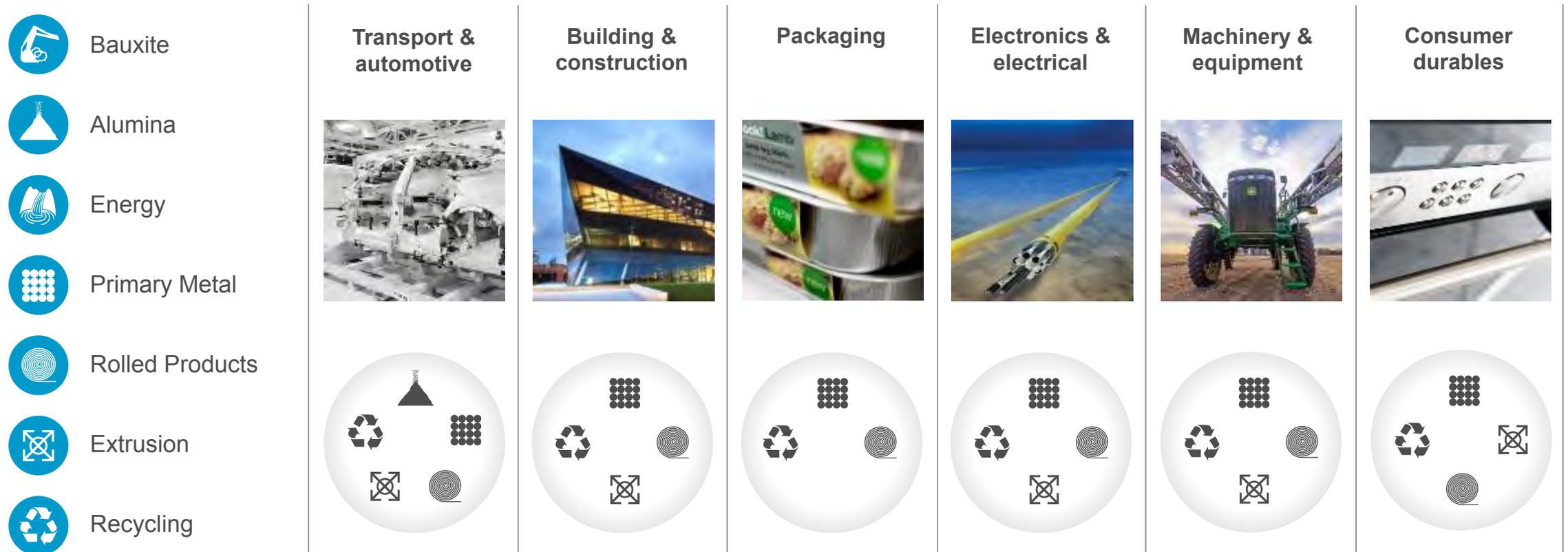
Source: CRU, Hydro analysis  
\* Process and post-consumer scrap



## **Delivering on Hydro's overall strategic direction**

# Fully integrated across the aluminium value chain and markets

Broad products and solutions offering from bauxite to end-user products



# Hydro – differentiating through the integrated model

		RioTinto										
 Bauxite	●	●	●	●	●						●	●
 Alumina	●	●	●	●	●						●	●
 Energy	●	●	●		●						●	●
 Primary Metal	●	●	●	●	●			●			●	●
 Rolled Products	●		●		●	●	●		●	●	●	●
 Extrusion	●					●	●			●		●
 Recycling	●					●	●		●	●		●

Source: graphical illustration based on company websites/reports, CRU

# Strong global presence throughout the aluminium value chain

Built on market understanding, customer closeness and competence



## The complete aluminium company

- High-quality bauxite and alumina production in Brazil
- Primary production in Norway, Germany, Qatar, Slovakia, Brazil, Canada, Australia
- 10 TWh captive hydropower production
- European #2 in rolled products
- World leader in aluminium extruded profiles
- Remelting in the US, European recycling network
- Unparalleled technology and R&D organization

<sup>1</sup> Outside China

<sup>2</sup> Extrusion ingot, sheet ingot, primary foundry alloys and wire rod

<sup>3</sup> Primary Foundry Alloys

# Better, Bigger, Greener

Hydro's aspiration for higher value creation

## Better

### Raise performance and improve customer offering

- Extend Hydro's leadership in advanced technology and product innovation
- Create value through raw materials access, customer collaboration and integrated model
- Continue benchmark performance and ensure attractive returns over the cycle

## Bigger

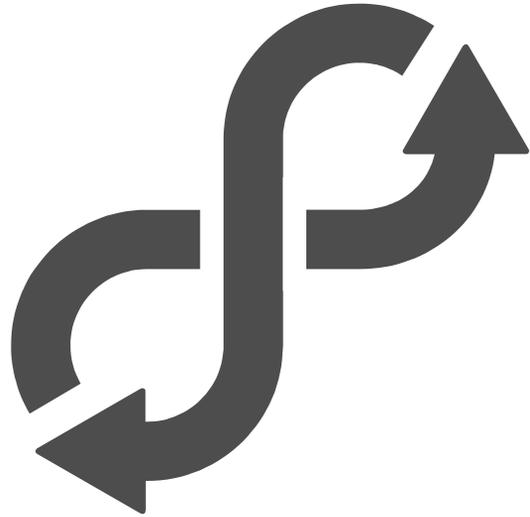
### Expand the use of aluminium and strengthen Hydro's platform for growth

- Promote Hydro and aluminium through value-adding products and solutions for our customers
- Be the preferred partner and most trusted voice of the aluminium industry
- Pursue selective growth from raw materials to products, solutions and recycling

## Greener

### Lead the transition towards sustainable solutions

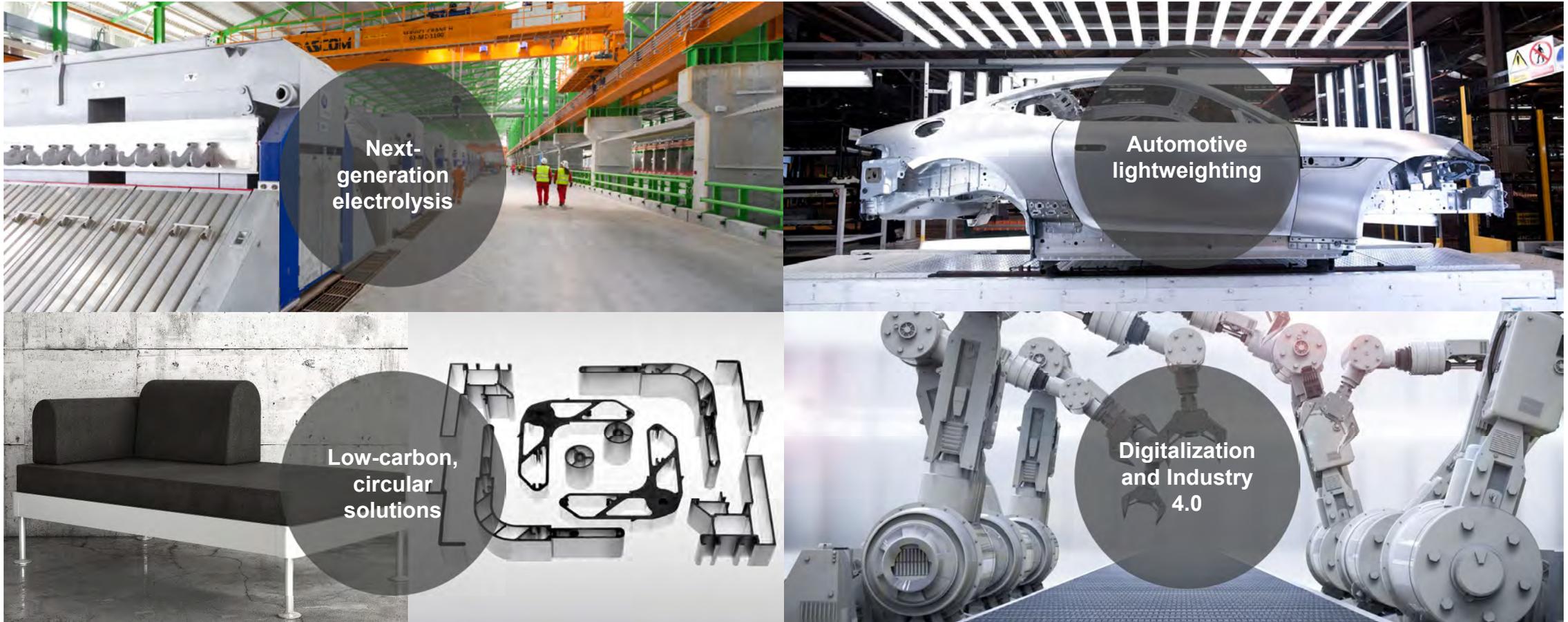
- Advocate aluminium as a building block for the low-carbon, circular economy
- Continue to improve footprint from own production, recycling and sustainable solutions
- Making a positive difference by strengthening local communities and our business partners



## Creating value across the aluminium value chain

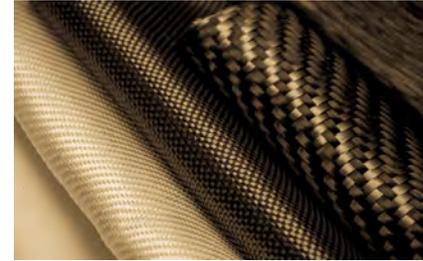
# Leading the industry in innovation, R&D and product development

Driving technological development to support customers, increase market share and lift efficiency



# Why aluminium?

Hydro's strategic direction aims to realize full potential of aluminium's strong qualities and versatility



## Aluminium

- ✓ Lightness and strength
- ✓ Durability and formability
- ✓ Corrosion resistance
- ✓ Conductivity
- ✓ Recyclability
- ✗ Energy-intensity

## Steel

- ✓ Strength and durability
- ✓ Recyclability
- ✓ Price
- ✗ Weight
- ✗ Corrosion
- ✗ Energy-intensity

## Copper

- ✓ Conductivity
- ✓ Corrosion resistance
- ✓ Recyclability
- ✗ Price
- ✗ Weight
- ✗ Energy-intensity

## Composites

- ✓ Lightness
- ✓ Strength
- ✗ Price
- ✗ Recyclability
- ✗ Climate footprint
- ✗ Energy-intensity

## PVC

- ✓ Lightness and formability
- ✓ Corrosion resistance
- ✓ Price
- ✗ Climate footprint
- ✗ Recyclability
- ✗ Durability

For illustrative purposes only

# Hydro launches its first certified sustainable products

Converting our industry-leading climate position into products for the low-carbon, circular economy

## LOW CARBON PRODUCTS

Infinite solutions



**4.0** has a guaranteed maximum carbon footprint of 4 kg CO<sub>2</sub>/ kg aluminium

**75R** has a guaranteed minimum post-consumer scrap content of 75%



# Operational and commercial excellence

*Focus on cost efficiency and process technology  
Centralized business model*

*Focus on margin management and product innovation  
Decentralized business model*



## Bauxite & Alumina

- Increased and stabilized production at Alunorte and Paragominas
- Raw material efficiency
- Commercial and procurement improvements



## Energy

- Highly competitive operational costs
- Strong effort on global sourcing activities
- Commercial excellence



## Primary Metal

- Increased productivity and improved consumption factors
- Continued move towards higher-margin segments



## Metal Markets

- High share of value-added products
- Increased use of post-consumer scrap



## Rolled Products

- High-grading portfolio
- Roadmaps to solve operational and ramp-up challenges
- Strong customer collaboration and satisfaction



## Extruded Solutions

- Successful value-over-volume strategy
- Strong customer collaboration and satisfaction

*Raw materials, processing and energy*

*Primary production, marketing and recycling*

*Products and solutions*

# Industry-leading improvement drive

Improvement target lifted to NOK 3.0 billion 2016-2019, NOK 1.7 billion realized by end-2017

*Better*

**BNOK  
3.0<sup>1)</sup>**

## Bauxite & Alumina

### BNOK 1.3 in 2019

- High production at Alunorte and Paragominas, commercial and procurement contributing positively
- Expect to reach BNOK 1.1 already in 2017
- Increasing 2019 ambition from BNOK 1.0 to BNOK 1.3

## Rolled Products

### BNOK 0.7 in 2019

- Operational and ramp-up issues reducing improvement speed
- Behind the 2017 target
- Expect to reach original BNOK 0.9 target with 1-year delay

## Primary Metal

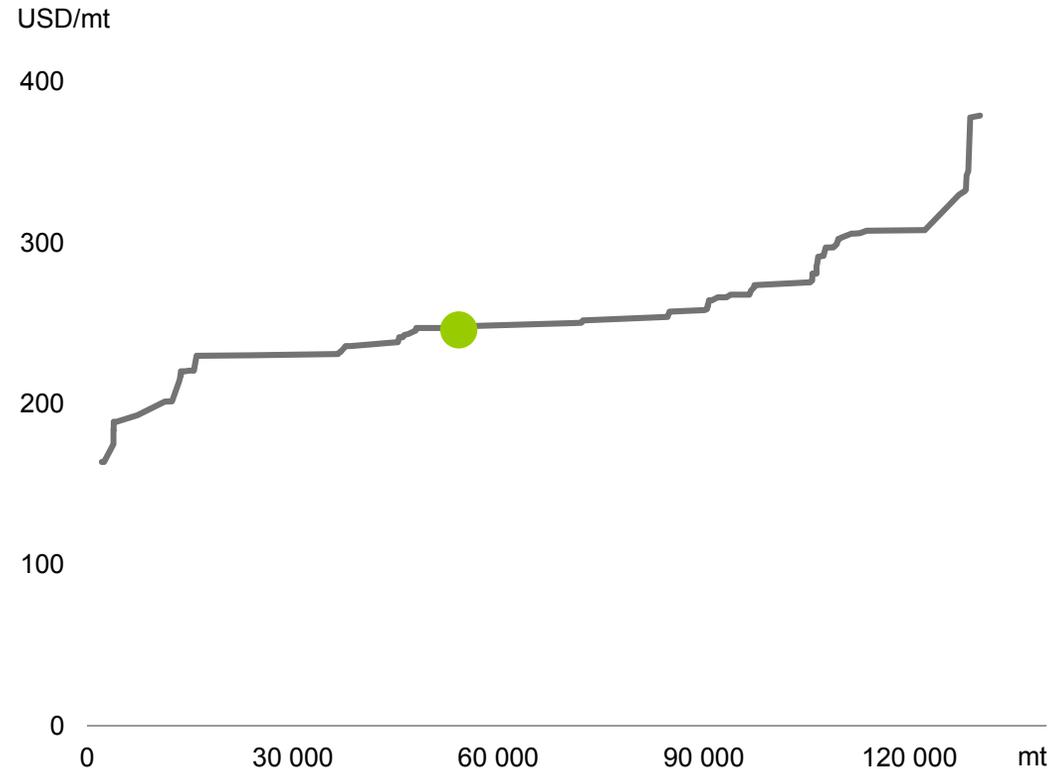
### BNOK 1.0 in 2019

- Improved overall performance, negative impact from Albras performance
- Behind the 2017 target
- On track for 2019 target

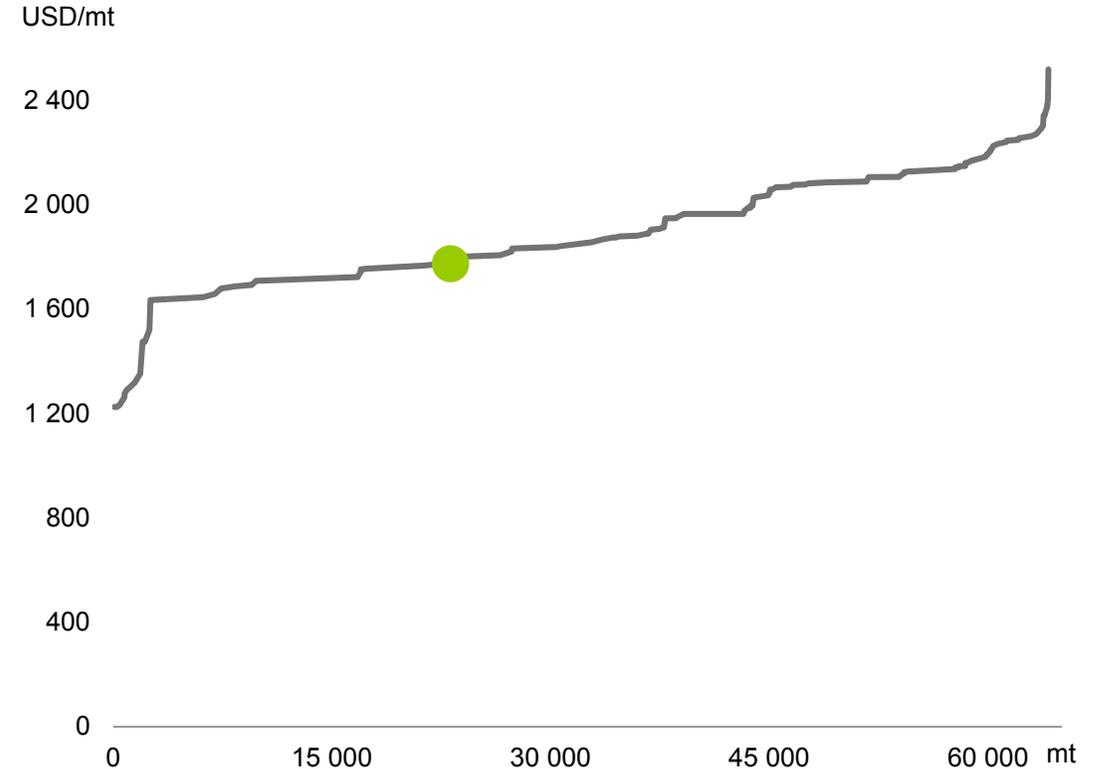
1) Real 2015 terms. Includes some larger investments of NOK 3-3.5 billion NOK in 2015-2019: AL3 and UBC in Rolled Products. Creep projects in Primary Metal. Alunorte debottlenecking in B&A.

# Among the best positioned in the industry upstream

Alumina BOC curve by company (2017)



Smelter BOC curve by company (2017)

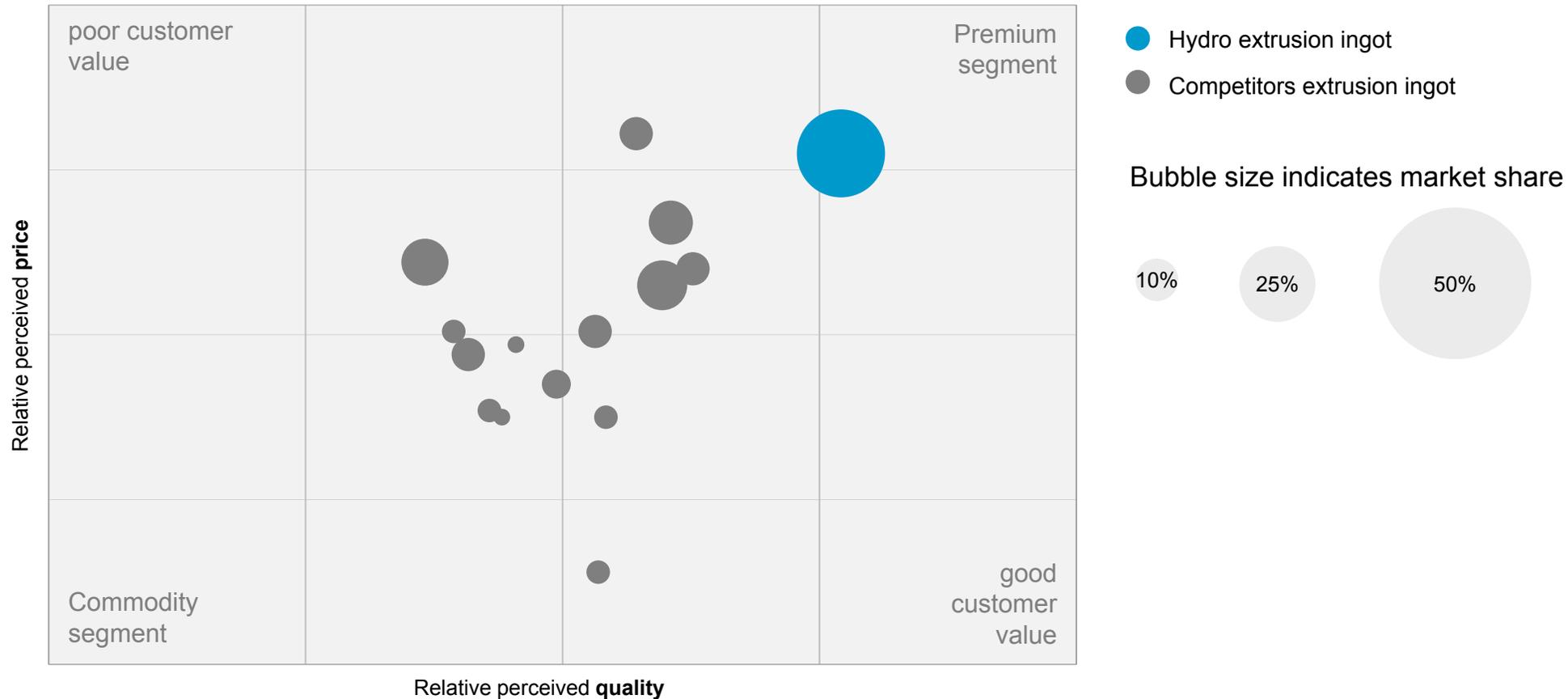


Source: Republished under license from CRU International Ltd

Assumptions: Aluminium cost curve: LME USD 2 100, alumina USD 465, NOK/USD 8.2. Alumina cost curve: caustic soda USD 600, USD/BRL 3.26

# Primary aluminium in premium segment for casthouse products

Extrusion ingots customer value survey 2017\*



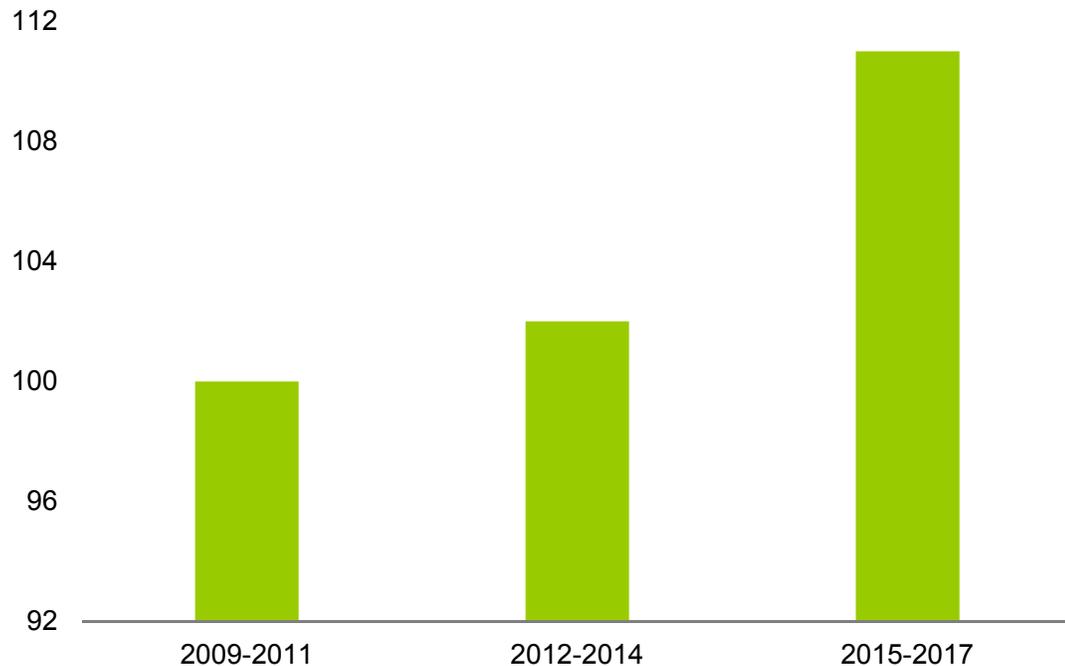
\*2017 Customer satisfaction survey for Europe performed by Malik (PIMS)

# Strong and improving customer satisfaction downstream

Competence, flexibility and advanced products are key success factors

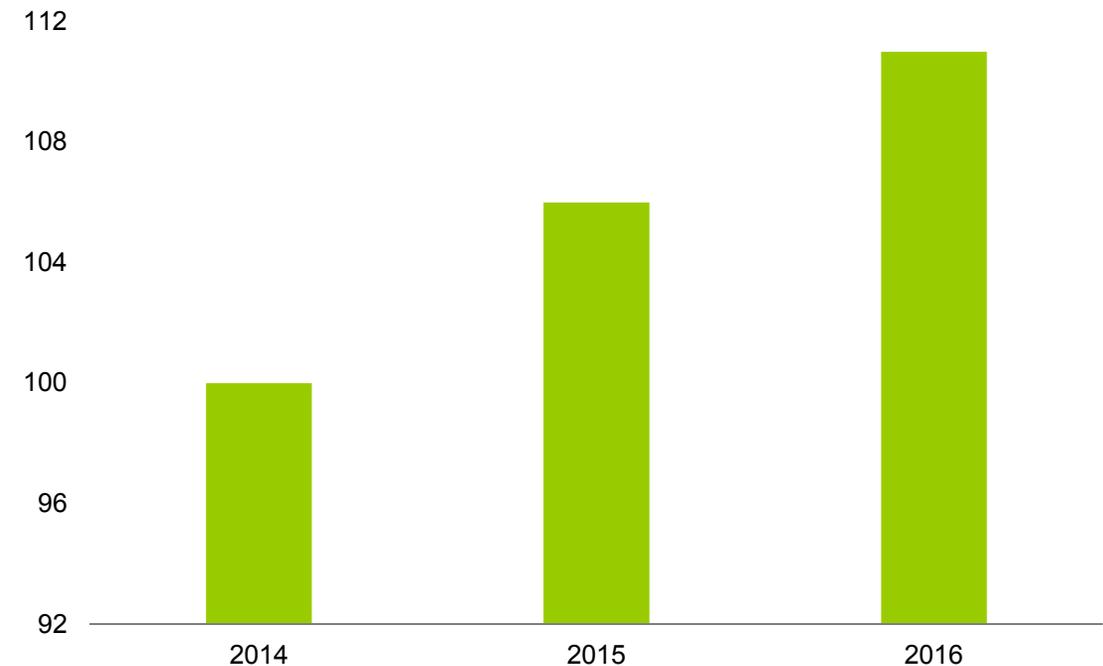
Rolled Products customer satisfaction survey\*

Satisfaction level indexed



Extruded Solutions Europe customer satisfaction survey\*\*

Satisfaction level indexed



\* Customer survey measuring satisfaction level for customers of Rolled Products. Survey is performed by external company (Skopos) and results are based on answers to a standard set of questions. Rating between 0-100 and indexed in the graph.

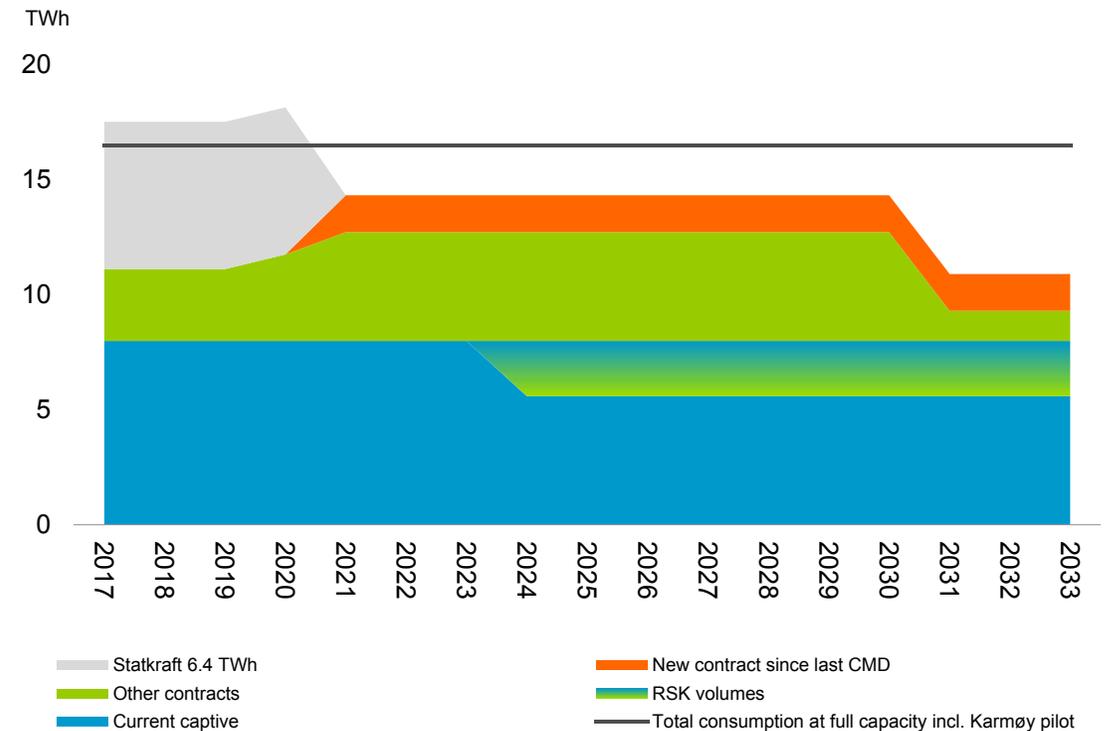
\*\* Customer survey measuring satisfaction level for customers of Extruded Solutions Europe. Percentage of customers being «very pleased» or «pleased» are indexed in the graph

# Securing long-term competitive power sourcing for smelter portfolio

1.65 TWh/year from 2021 sourced for the Norwegian smelter portfolio since last CMD



Sourcing platform for fully-owned smelters, Norway\*

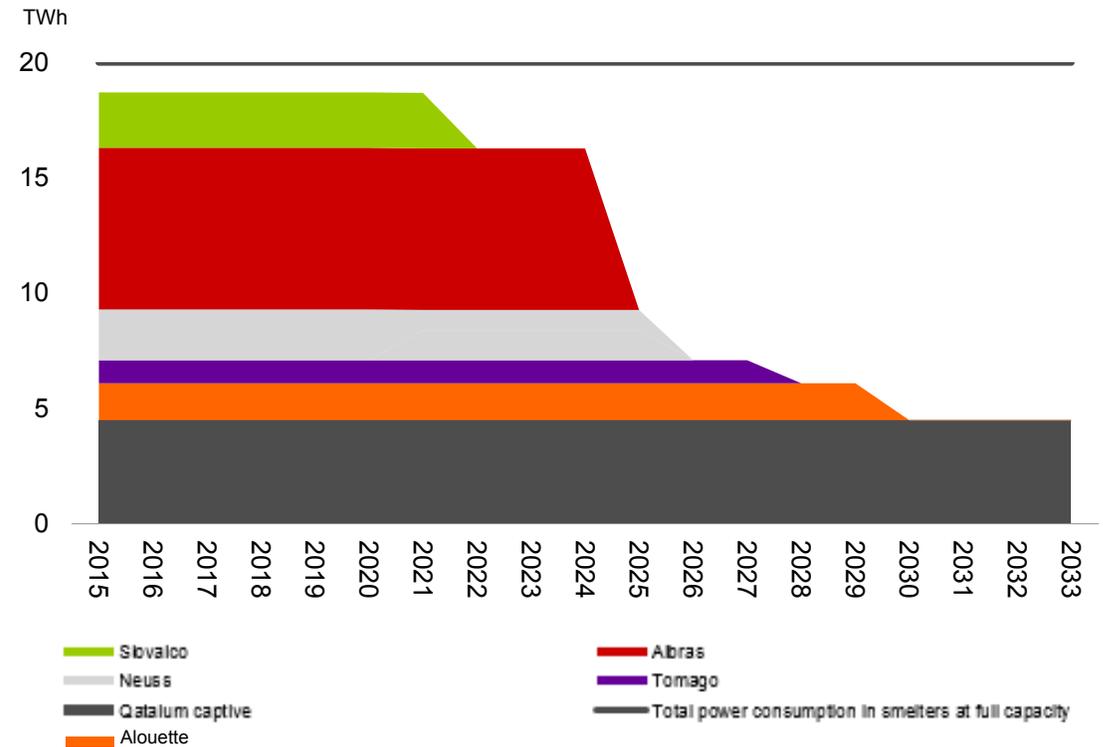


\* Net 8 TWh captive assumed available for smelters

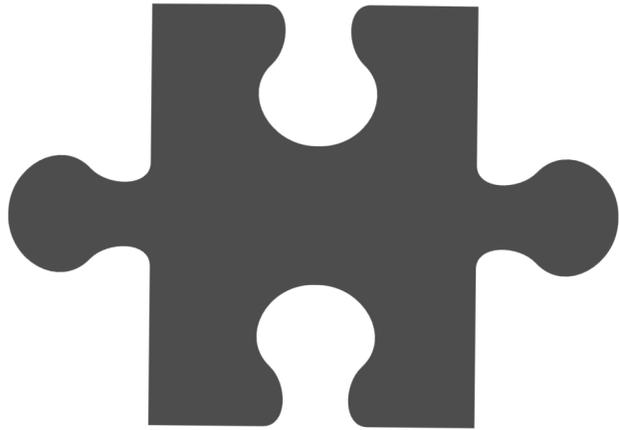
# Securing long-term competitive power sourcing for smelter portfolio



Sourcing platform for JVs and Neuss smelter\*



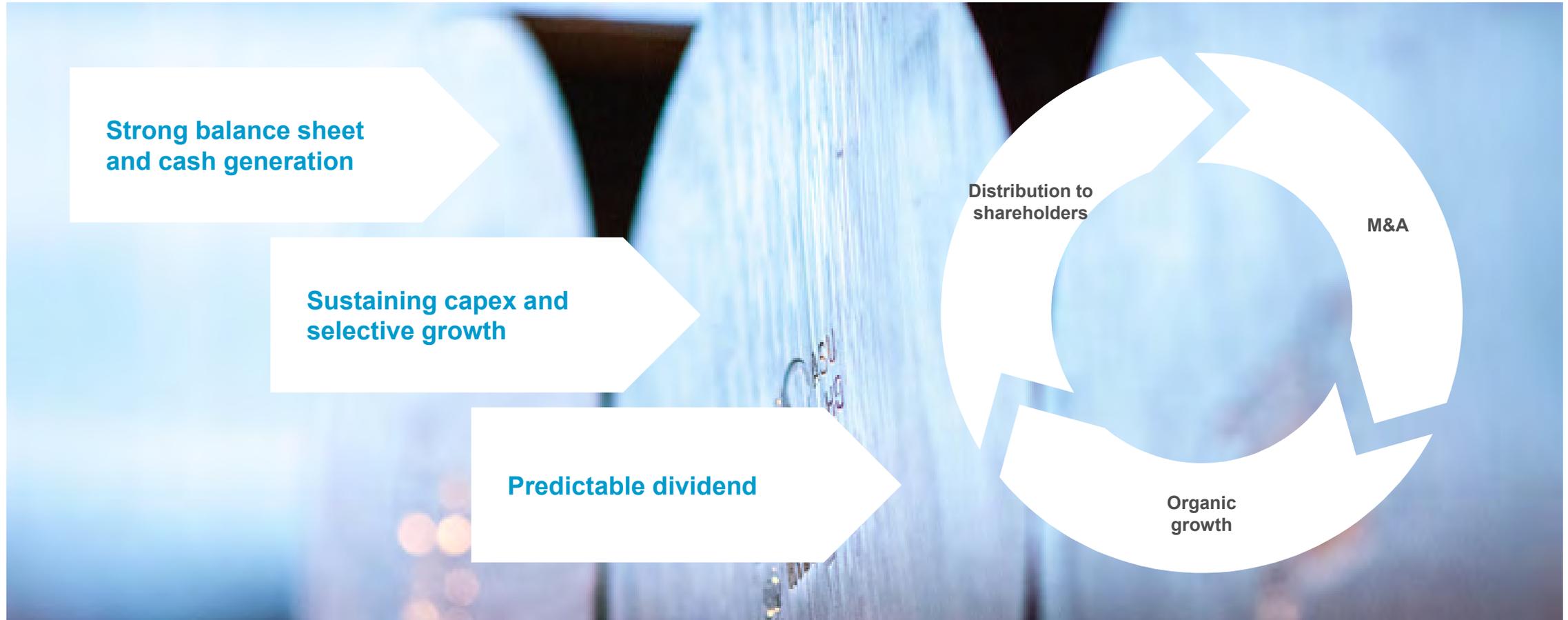
\* Albras and Sivalco on 100% basis



## **Our financial framework for increased value-creation**

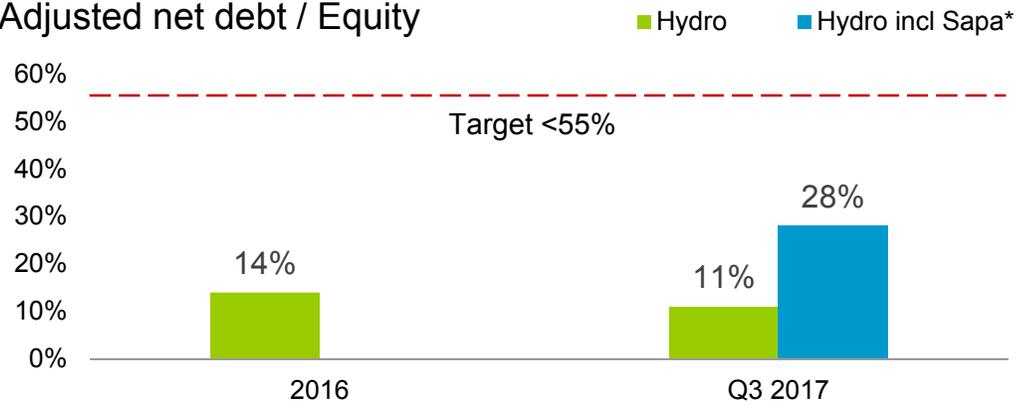
# Driving long-term shareholder value

Priorities for cash over the cycle

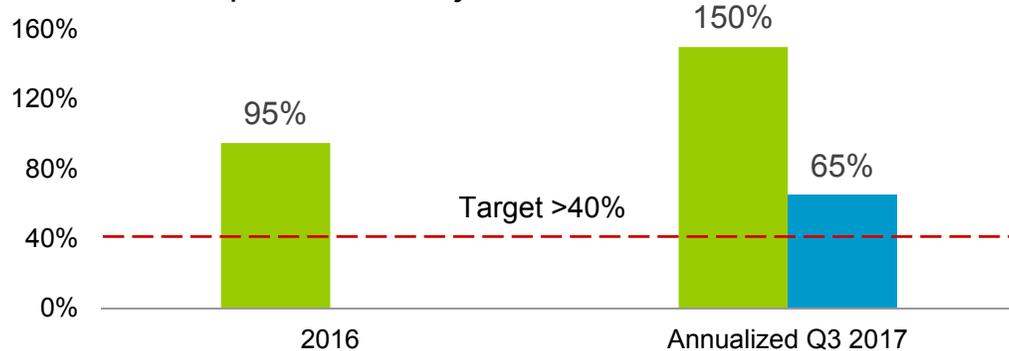


# Strong balance sheet and cash generation

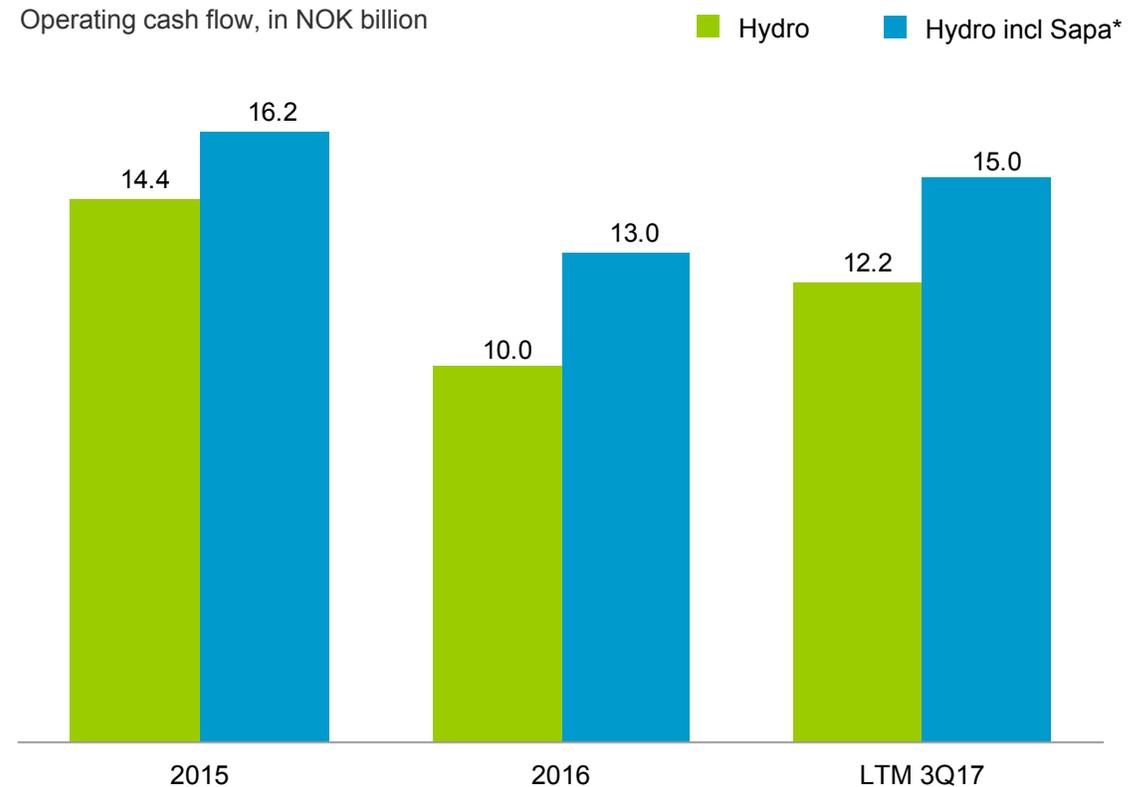
Adjusted net debt / Equity



Funds from operations / Adjusted net debt



Cash flow generation strengthened by Sapa-acquisition\*\*



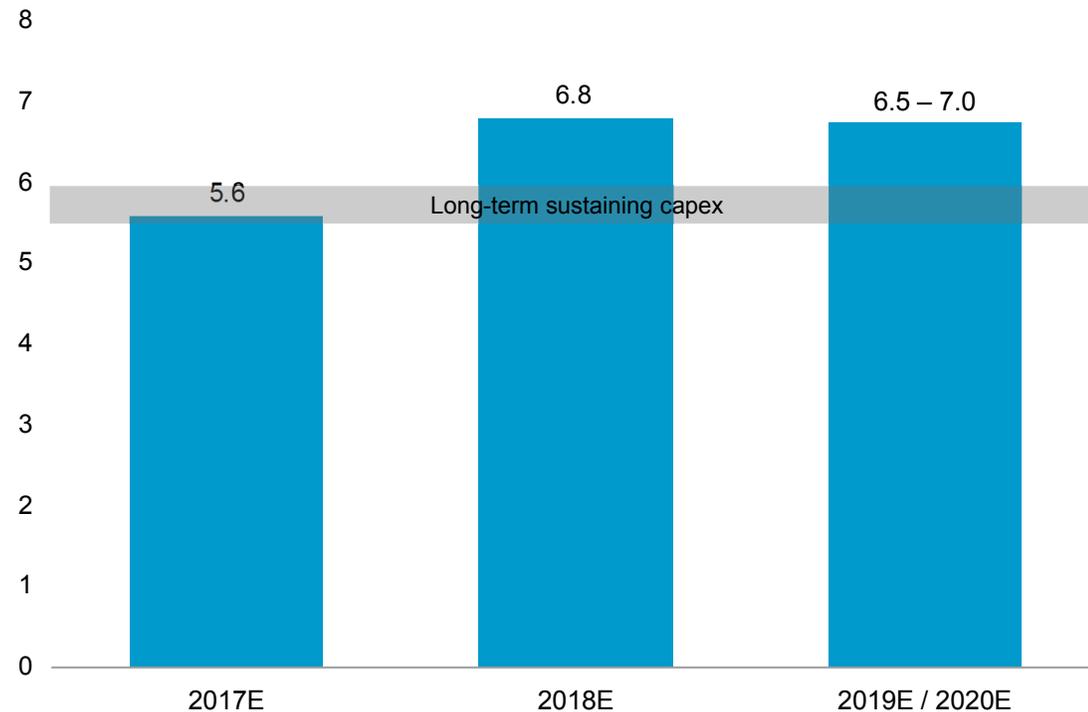
\* Estimate including Sapa

\*\* Cash flow from operations; directly from cash flow statement Hydro/Sapa

# Capital allocation - sustaining capex

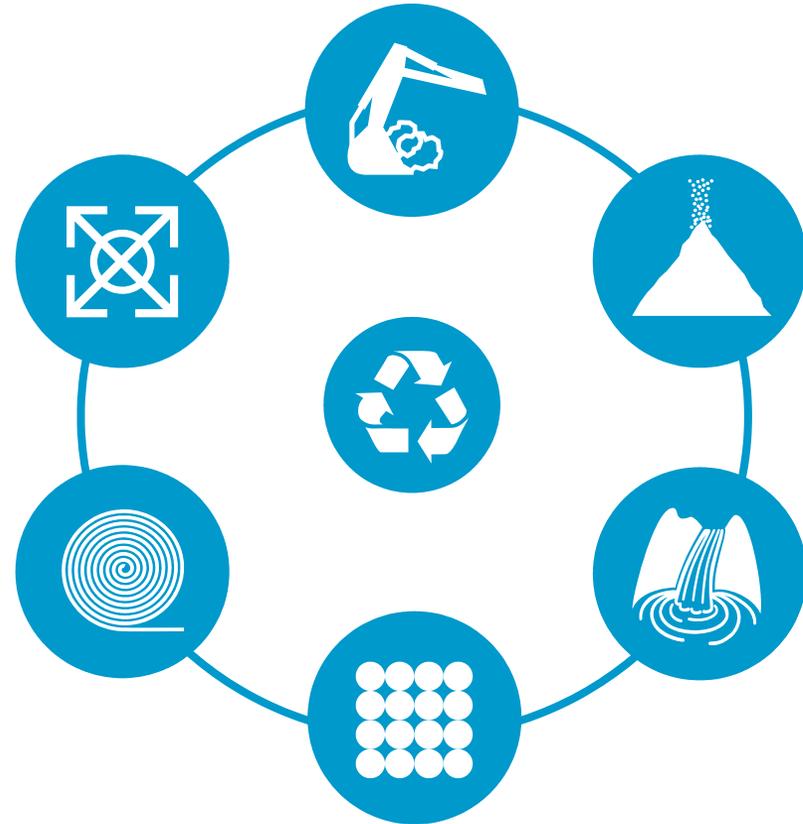
## Sustaining capital expenditures

In NOK million



- Long-term sustaining capex BNOK 5.5 – 6, including Extruded Solutions
- Main sustaining projects 2018-2020:
  - Bauxite residue disposal area
  - Opening of new bauxite mining area
  - Pipeline replacement
  - Primary rectifiers and asset integrity Albras
  - Smelter relining

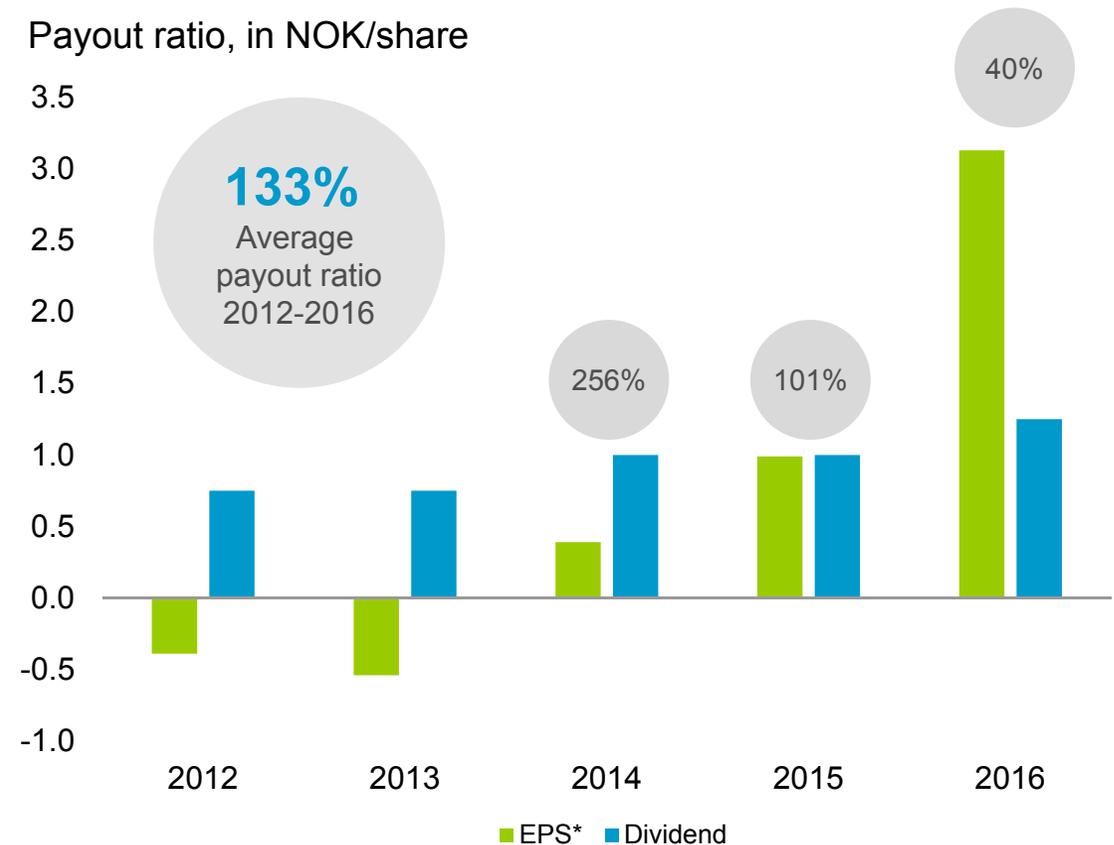
# Capital allocation – selective growth



- Presence in full value chain and all market segments gives increased growth opportunities
- Projects evaluated on strategic and economic merit
  - Differentiated cost of capital between business areas
- Incremental growth projects 2018 – 2020 includes smaller creep and productivity improvements
- Capex related to specific growth projects will be announced when decision is made

# Dividend policy

- Aiming for competitive shareholder returns compared to alternative investments in peers
- Dividend policy:
  - Ordinary dividend: 40% of net income over the cycle
  - Floor of NOK 1.25 per share, committed to a predictable dividend level
- Five-year average ordinary payout ratio 2012-2016 of 133%
- Share buybacks and extraordinary dividends as supplement in periods with strong financials and earnings outlook



\* Earnings per share



## Hydro 2018

Lifting performance, driving value creation, extending industry leadership

- Maintaining financial strength and flexibility, providing attractive returns over the cycle
- Strengthening competitiveness and resolving operational challenges
- Differentiating through the integrated model and integrating Extruded Solutions