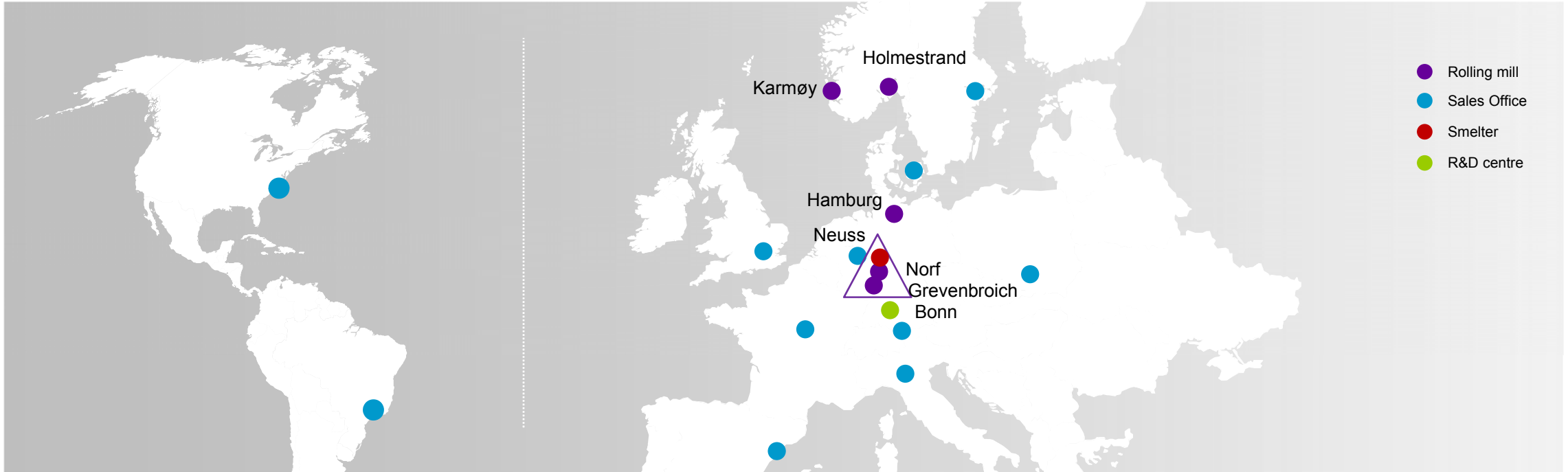




# Rolled Products

**Kjetil Ebbesberg**  
Capital Market Day 2016

# Hydro Rolled Products



Strong European production base and global sales force

1 million tonnes of flat rolled products per year

Unique integrated aluminium cluster:

- Dedicated smelter
- World's largest rolling mill
- Dedicated conversion mills

Casthouse network and integrated recycling capacity

Industry-leading R&D facility

# Rolled Products: High-grading portfolio and improving cost position



Multi-year contract signed with Jaguar Landrover



Opening of UBC processing line



Trial production started at new automotive line 3



Cooperation agreement with Austin AI on scrap sorting solution for automotive

CMD 2015

CMD 2016

Alunorf hotmill expansion completed



Completion of power sourcing for Neuss smelter



1 year since launch of cultural enhancement program Renew

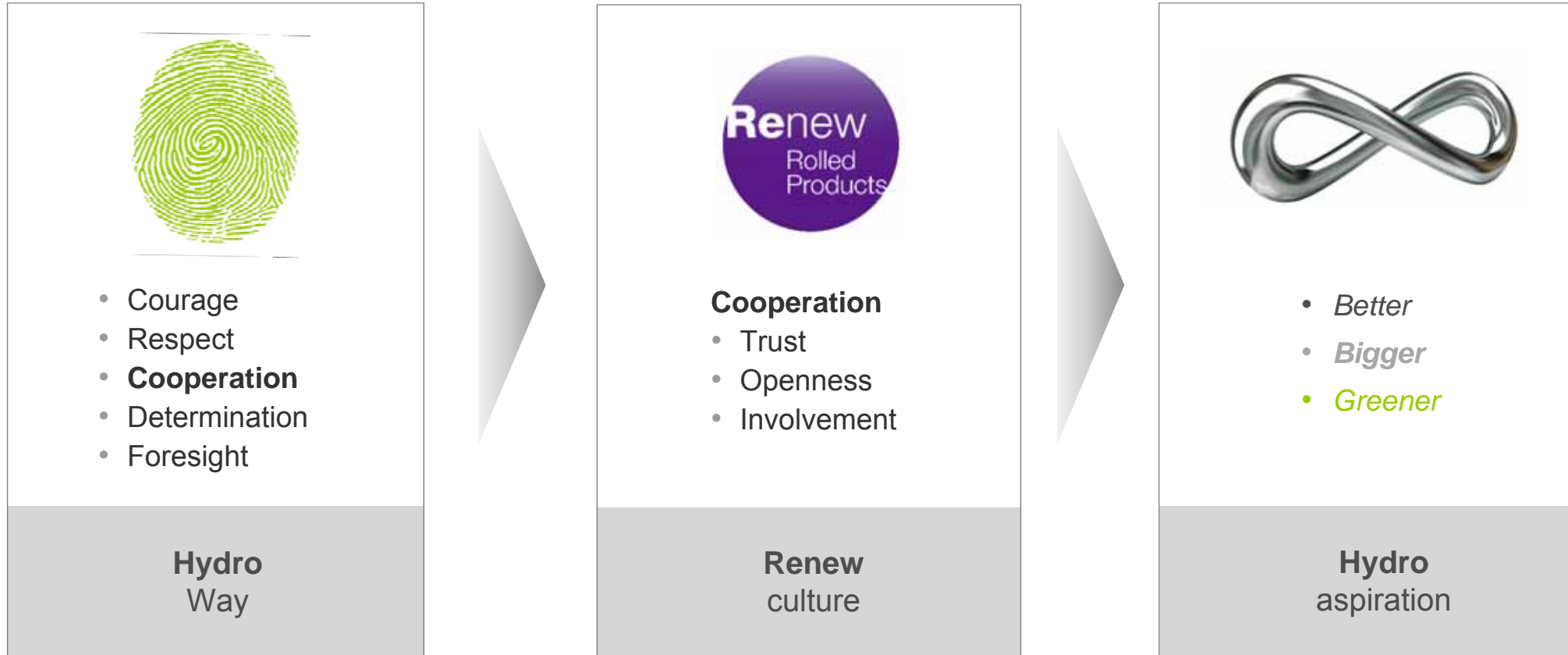


Ball supplier award for best Can Body supply



# Cultural enhancement program to lift cooperation and engagement

“Renew” Rolled Products to enable Better, Bigger, Greener targets



# Rolled Products strategic priorities

Building on solid foundation, pursuing attractive opportunities

## *Better*

- Improve safety performance and drive for operational excellence
- Differentiate through innovation, quality, service and lead time

## *Bigger*

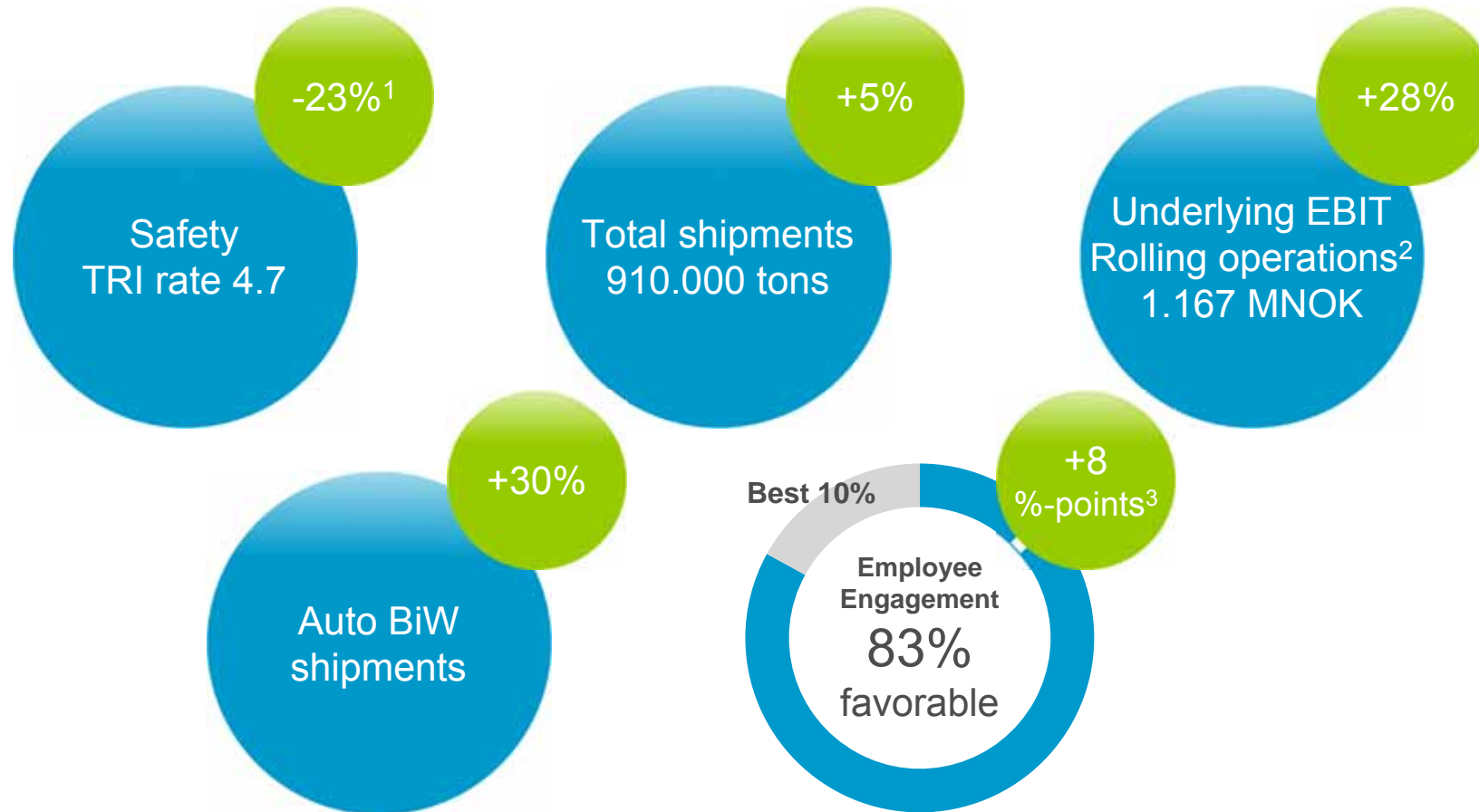
- Enhance market positions through product high-grading
- Strengthen relative industry position in our home markets and beyond
- Expand recycling
- Evaluate global automotive position

## *Greener*

- Leading provider of sustainable solutions to customers
- Comply with environmental requirements
- Key contributor to Hydro's overall carbon-neutrality ambition

# Improvements in Rolled Products

Q3 2016 – Q4 2015 vs Q3 2015 – Q4 2014



1) YTD 2016 vs YTD 2015

2) Rolling operations = Rolled Products area without Neuss smelter

3) Hydro internal monitor survey results 2016 vs 2014

# Strong positions in market segments

Portfolio high-grading and strong focus on quality and service as key elements for success



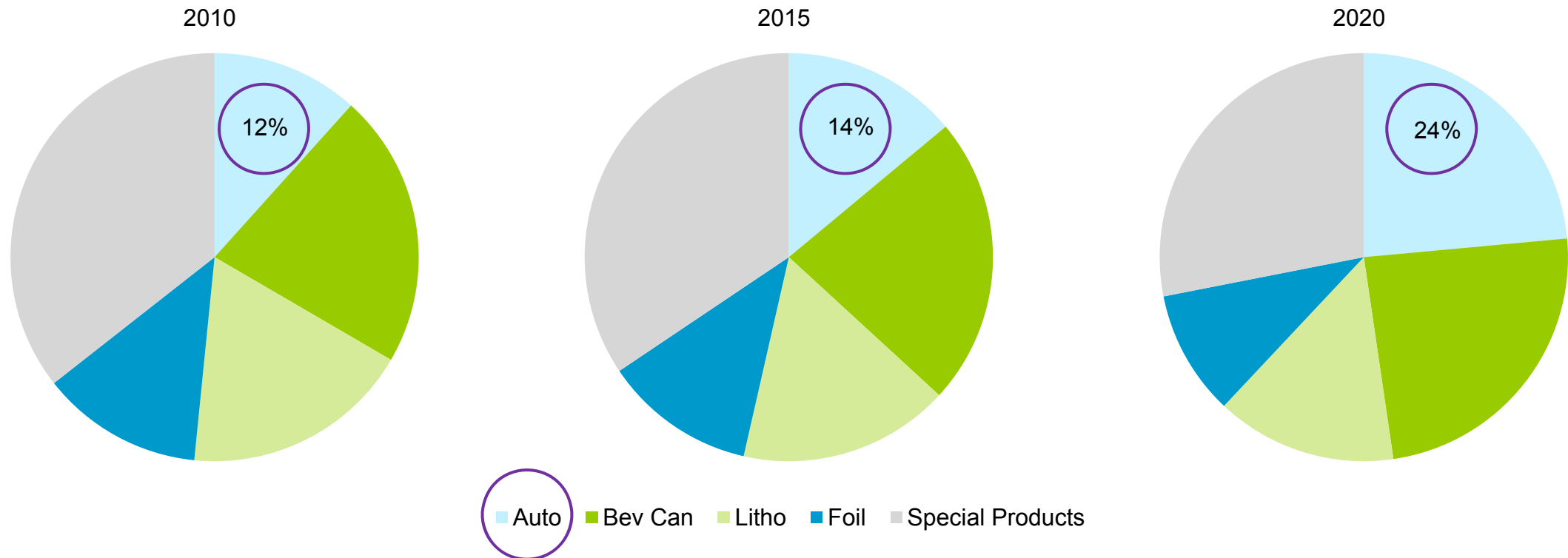
Ambition	Automotive	Foil	Beverage can	Lithography	Special products
Market growth* & drivers	<ul style="list-style-type: none"> <li>World ~12%</li> <li>Europe ~9%</li> <li>Steel substitution</li> </ul>	<ul style="list-style-type: none"> <li>World ~2%</li> <li>Europe ~0-1%</li> <li>Follows population growth</li> </ul>	<ul style="list-style-type: none"> <li>World ~2-3%</li> <li>Europe ~2-3%</li> <li>Material substitution</li> </ul>	<ul style="list-style-type: none"> <li>World ~0%</li> <li>Europe ~-3%</li> <li>Declining printing</li> </ul>	<ul style="list-style-type: none"> <li>Europe ~2-3%</li> <li>Building, renewables and other potentials</li> </ul>
Main customers					

\* Market growth as compound annual growth rate 2015 – 2020 in %  
 \*\* Now Ardagh  
 Source: CRU / Hydro analysis

# Expanding in higher-margin segments with increased ambition level

Pursuing attractive automotive growth opportunity

Sales by segment



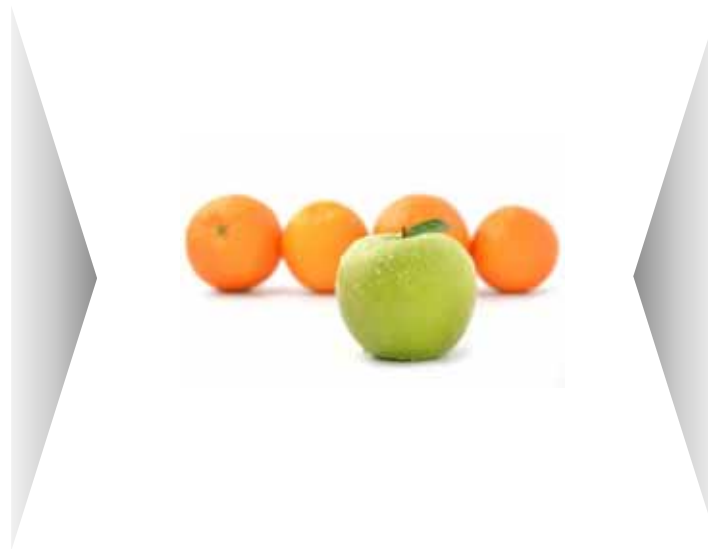


# It's all about serving our customers

Differentiation as key element of our strategy

## Parameters for differentiation

- Quality
- Service
- Supply Chain
- Innovation
- Recycling / Carbon footprint
- Long-term reliability



## Customers view on us

- Ball\* Vendor Rating 2015 TCS: Best in Class can body stock
- Alufoil Trophy 2016: Award for battery foil solution
- Agfa Graphics: Hydro as partner for end-of-life recycling solution
- ECCA Premium for HydroCoat Polyester
- Materialica Design + Technology Award for all-alu E-car body



\* Now Ardagh

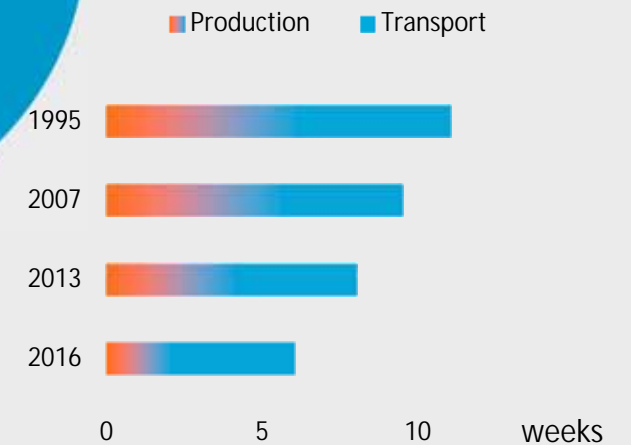
# Quality and service improvement for our customers

Global market leadership in lithographic sheets driven by quality and service

Quality –  
Plate cracking  
in one of the largest  
German printing shops  
reduced by 90% by  
introducing the new  
alloy 1052B



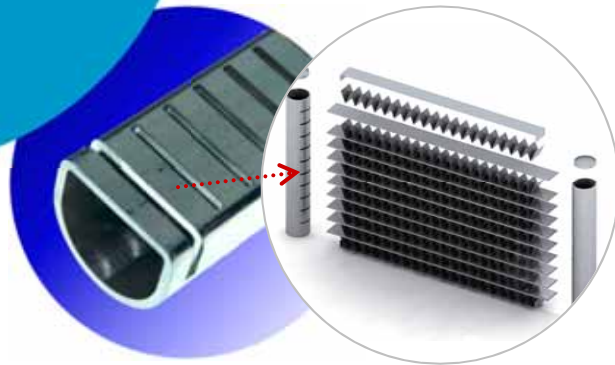
Service –  
Leadtime reduced  
from 11 to 6 weeks  
to support the need  
of our overseas  
customers



# Innovation as strong driver for increased competitiveness

Innovative solutions for automotive customers

Copper free header material for heat-exchanger – Creating a unique selling proposition by significantly enhancing corrosion resistance



Scrap sorting – Solution for Automotive developed by Austin AI (USA) and Hydro: sorting 5.xxx and 6.xxx alloys based on LIBS\* technology



\* Laser induced breakdown spectroscopy

# Production of used beverage can recycling started

Lowering the metal cost and contributing to Hydro's carbon neutrality target



- Opening ceremony May 3<sup>rd</sup> 2016
- Ramp-up ongoing
- Delay due to equipment performance issues
- Operations in stable mode, further improvement program ongoing
- Output of > 40kt/year liquid aluminium expected by second half 2017

# Automotive line 3 moves Hydro towards No. 2 position in European Body-In-White

Realizing an attractive growth opportunity



- EUR 130 million investment, on time and budget
- Trial production started in October 2016
- Ramp-up to total nominal capacity of 200,000 mt/year in 2017
- Includes dedicated skin pass mill for special surfaces, resulting in enhanced formability
- Contracting ahead of planned schedule

# NOK 900 million improvement ambition on track for 2019

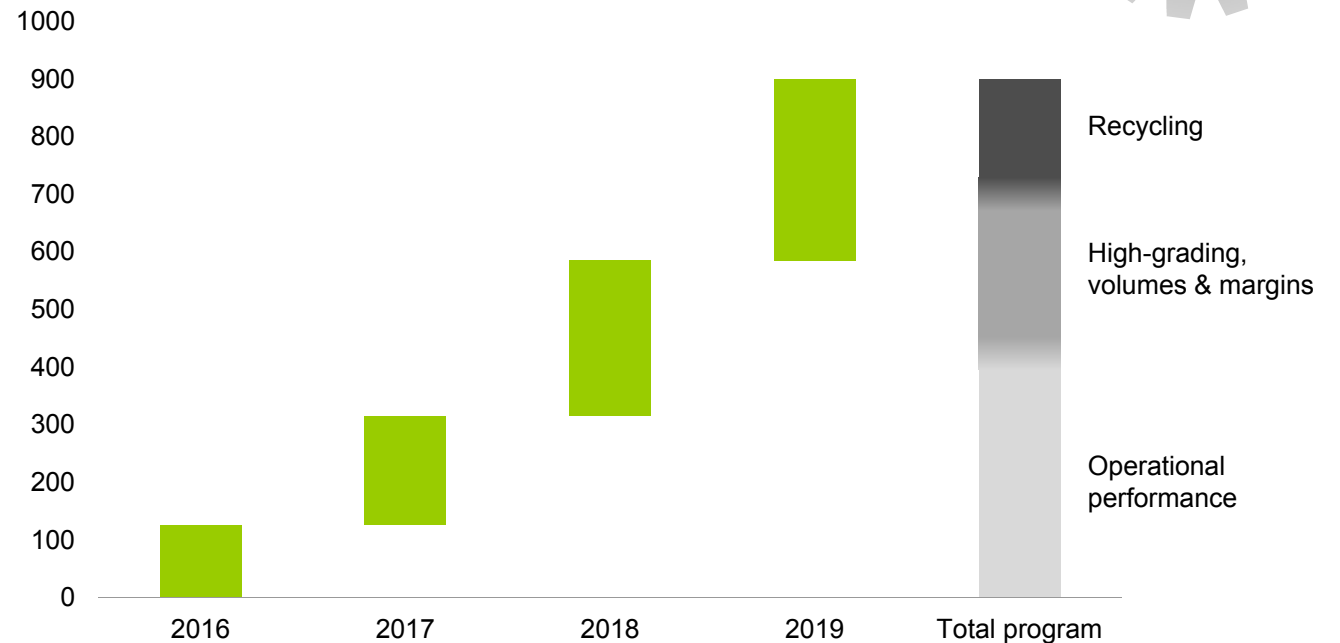
Delayed UBC line ramp-up in 2016, however not affecting final target

## Improvement driven by

- Automotive growth
- Recycling
- Operational performance
- Supply chain management
- Product high-grading
- Margin and portfolio mix
- Open and engaged culture

NOK 900 million to be delivered by end-2019

MNOK



# Rolled Products mid-term goals

Creating shareholder value with technology, product innovation and customer relations

Ambitions	Target	Timeframe	Progress <sup>1</sup>	Status
• Improve safety performance, strive for injury free environment	TRI <2	2020	4.7 <sup>2</sup>	●
• Realize ongoing improvement efforts <i>Better Rolled Products</i>	900 MNOK	2019	130 MNOK	●
• Differentiate through product innovation, quality and service	Min.1 step change	Annually	Cu-free header for HeX <sup>3</sup>	●
• Increase nominal automotive Body-in-White capacity	200,000 mt/yr	2017	Trial production started	●
• Complete ramp-up of UBC recycling line	>40,000 mt/yr	2017	Started, delayed ramp-up	●
• Increase post-consumed scrap recycling	>100,000 mt/yr	2020	41,000 mt/yr	●

*Better Bigger Greener*

1) Based on 2016 estimate unless stated otherwise  
 2) YTD Oct-2016, own employees  
 3) Heat-exchanger

● Ambition on track and on target  
 ● Ambition behind plan, but on target  
 ● Ambition will not meet the target