



Hindalco Industries Ltd.

A Sustainable Business Model

Transforming towards a Resilient, Reliable and Responsible future



Motilal Oswal Annual Investor Conference 2019

20th August, 2019

Presented by : Satish Pai, Managing Director

Hindalco's - 3 R of Sustainable Business Model

RESILIENCE

Resource Security

- Fully integrated aluminium business model providing support in low commodity cycle
- Long term supply contracts with miners assures uninterrupted supply of copper concentrate

Balanced Product Portfolio (LME v/s Non LME linked)

- ~70% EBITDA (Rs. 16,627 crore) of the total business in non-LME Linked in FY19

Strong Balance Sheet

- Consolidated Net Debt to EBITDA at 2.69x as on 30th June 2019

RELIABILITY

Operations

- Steady operational performance in India
- Novelis' continued focus on optimizing manufacturing operations and product mix to maximize its capacity in favorable market conditions

Stakeholder Engagement

- Supplier Engagement
- Customer Centricity
- Employee Stewardship

Product Stewardship

- Focus on downstream & VAP
- Recycled metal

RESPONSIBILITY

Environment Sustainability

- Environmental Stewardship
- Climate Change

People

- Occupational safety & Health

Community

- Social Initiatives (CSR)

ADITYA BIRLA



HINDALCO

Our Resilience

Resource Security (Coal & Bauxite)

COAL



Coal Procurement Options



Linkage coal

Long term coal linkage contract with Coal India; typically for 5 years



Captive mines

Acquired 4 coal blocks in 2015 located in close proximity to most of the smelters



Open Market Purchase

Via e-auction route

MTPA – Million Tonnes Per Annum

ALUMINA (Input : Bauxite)



Integrated Alumina



Self sufficient in Alumina (the intermediate product for Aluminium smelting) with capacity of 3.0 MT to feed its 1.3 MT Aluminium Capacities



Access to excellent quality bauxite with a most economical cost of Alumina from Utkal Alumina (Hindalco's wholly owned subsidiary) Utkal Expansion by 500 Kt on track & to be commissioned by FY21



All its Alumina refineries located in close proximity to the bauxite mines is an added advantage



Excellent Logistics - Bauxite is transported through a long distance conveyer belt – considered as an engineering marvel

Diversified & Balanced Portfolio

Leading Global Industry Player



Aluminium*	
Alumina	2.9 Mt
Primary Metal	1.3 Mt
VAP (excluding Wire Rods)	321 Kt

Copper*	
Copper Cathode	347 Kt
Copper Rods	245 Kt
DAP	303 Kt

Aluminium Flat Rolled Products (FRP)	
#1 Rolled Products Supplier Worldwide	
Global Presence	Shipments 3.3 Mt
Global leader in Aluminium recycling	Focused on premium segments

Key Highlights (FY2018-19)



Consolidated Revenue
USD 18.7 billion



Consolidated EBITDA
USD 2.4 billion



Global operations across
10 countries



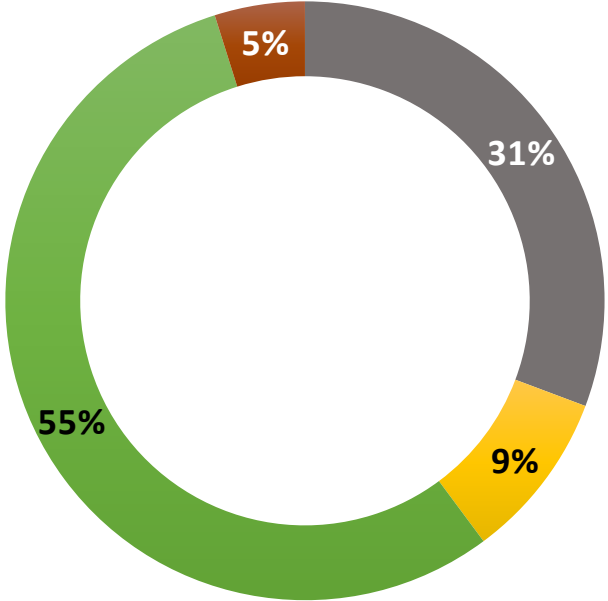
~36,000 employees
across the world

Represents Non-LME Linked (conversions) business * FY19 production volumes

Diversified & Balanced Portfolio

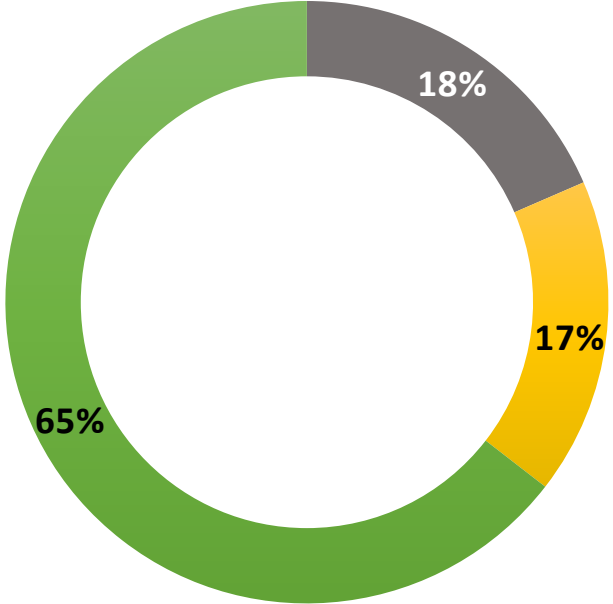
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FY19 – Consolidated EBITDA split (%)
Rs. 16,627 crore



■ Aluminium ■ Copper ■ Novelis ■ Other Income

FY19 – Consolidated Revenue split (%)
Rs. 130,520 crore

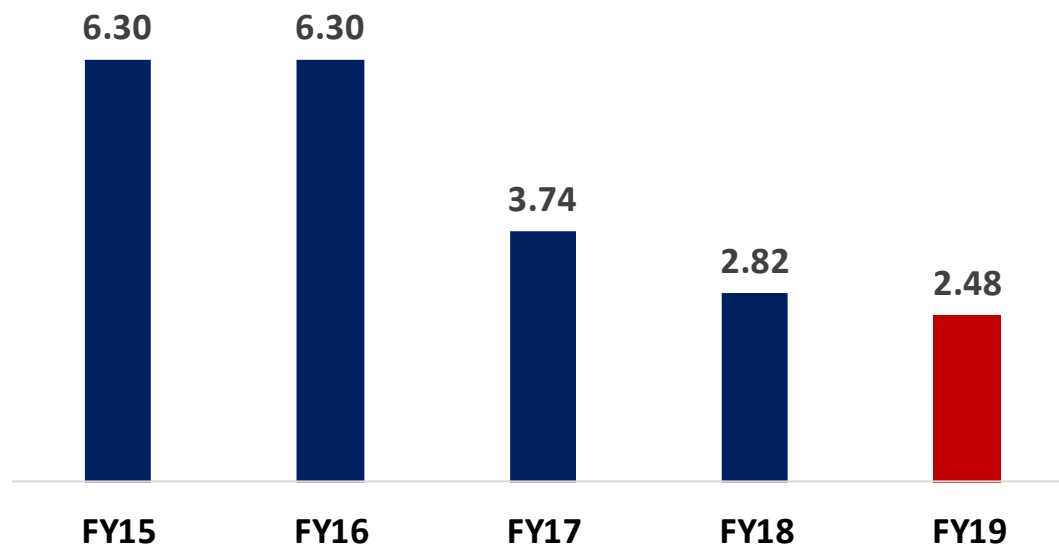


■ Aluminium ■ Copper ■ Novelis

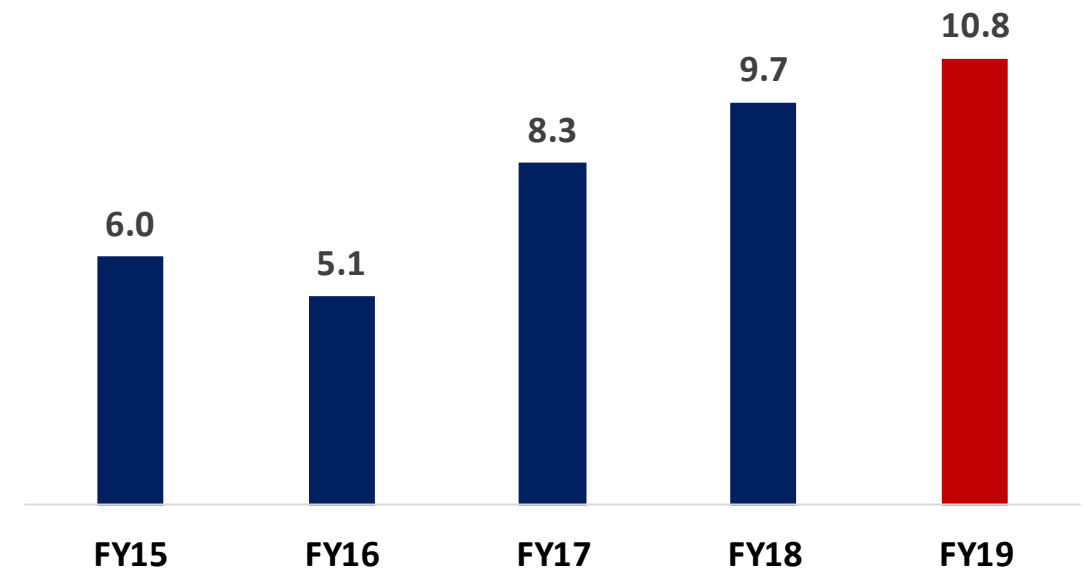
Non-LME Linked (conversions) business contributed ~70% to EBITDA in FY19 and ~79% in Q1 FY20

A Strong Balance Sheet

Consolidated Net Debt / EBITDA (x)



Consolidated Return on Capital Employed – Pre-Tax (%)



Prepaid more than Rs. 10 billion of Long term loans in last 3 years

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HINDALCO

Our Reliability

India Aluminium : Manufacturing Excellence



Capacity
1,500 Kt

Utkal Alumina



Capacity
360 Kt

Mahan Aluminium

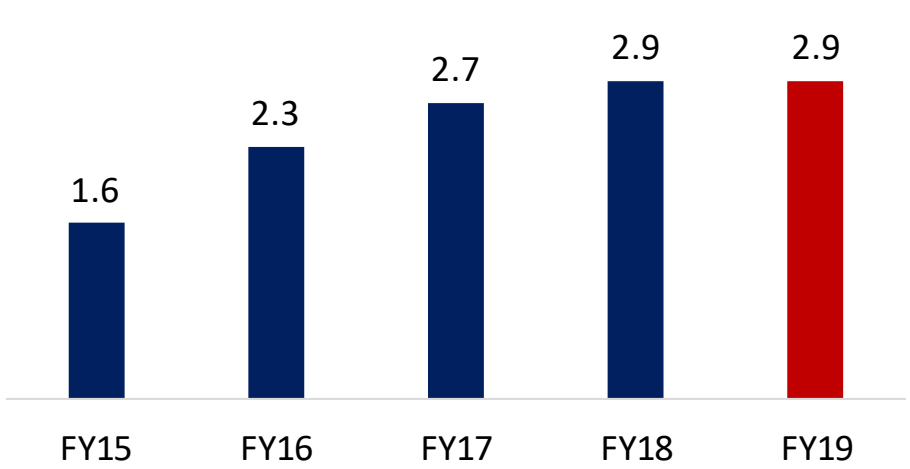


Capacity
360 Kt

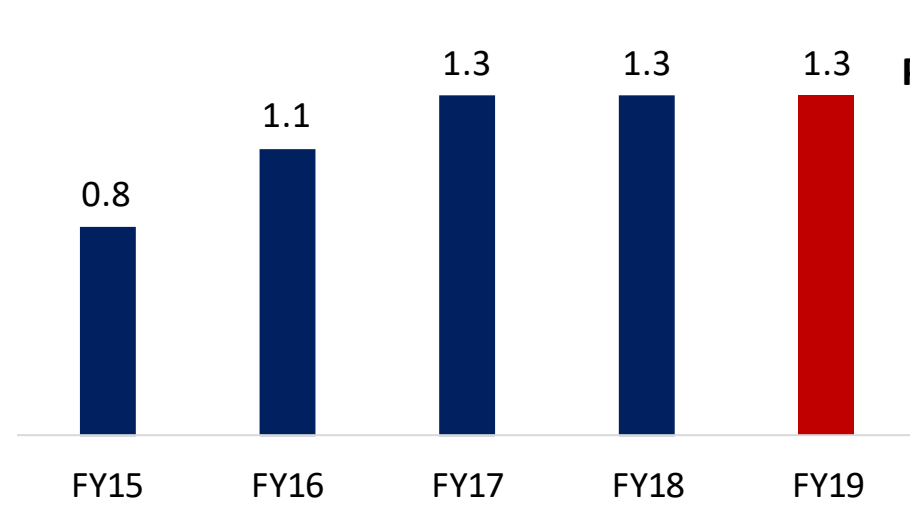
Aditya Aluminium

Implemented 3 large greenfield projects in the past few years

Stable Production across all locations in Alumina & Aluminium



Alumina Production in Utkal (in Mt)



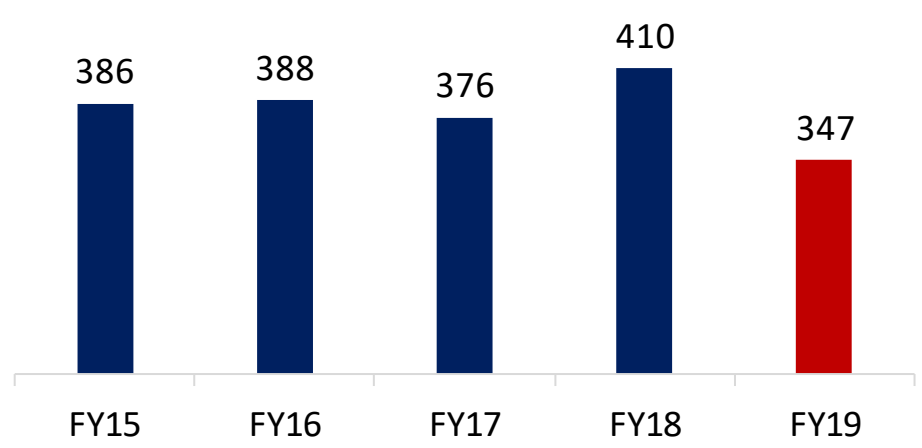
Aluminium Metal Production (in Mt)

Copper India: Manufacturing Excellence

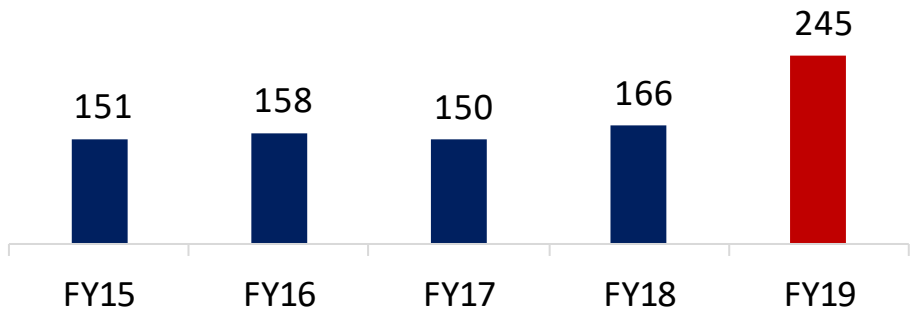


Commissioned the new CCR#3 facility at Dahej with a capacity of ~240 Kt in Q4 FY18

One of the Largest Single Location Copper Smelters in Asia



Copper Cathode Production (in Kt)



Of above, Copper Continuous Cast Rod (CCR) production (in Kt)

Cathode production was highest ever in FY19

Novelis : Manufacturing Excellence

- Completed more than 1 decade post acquisition

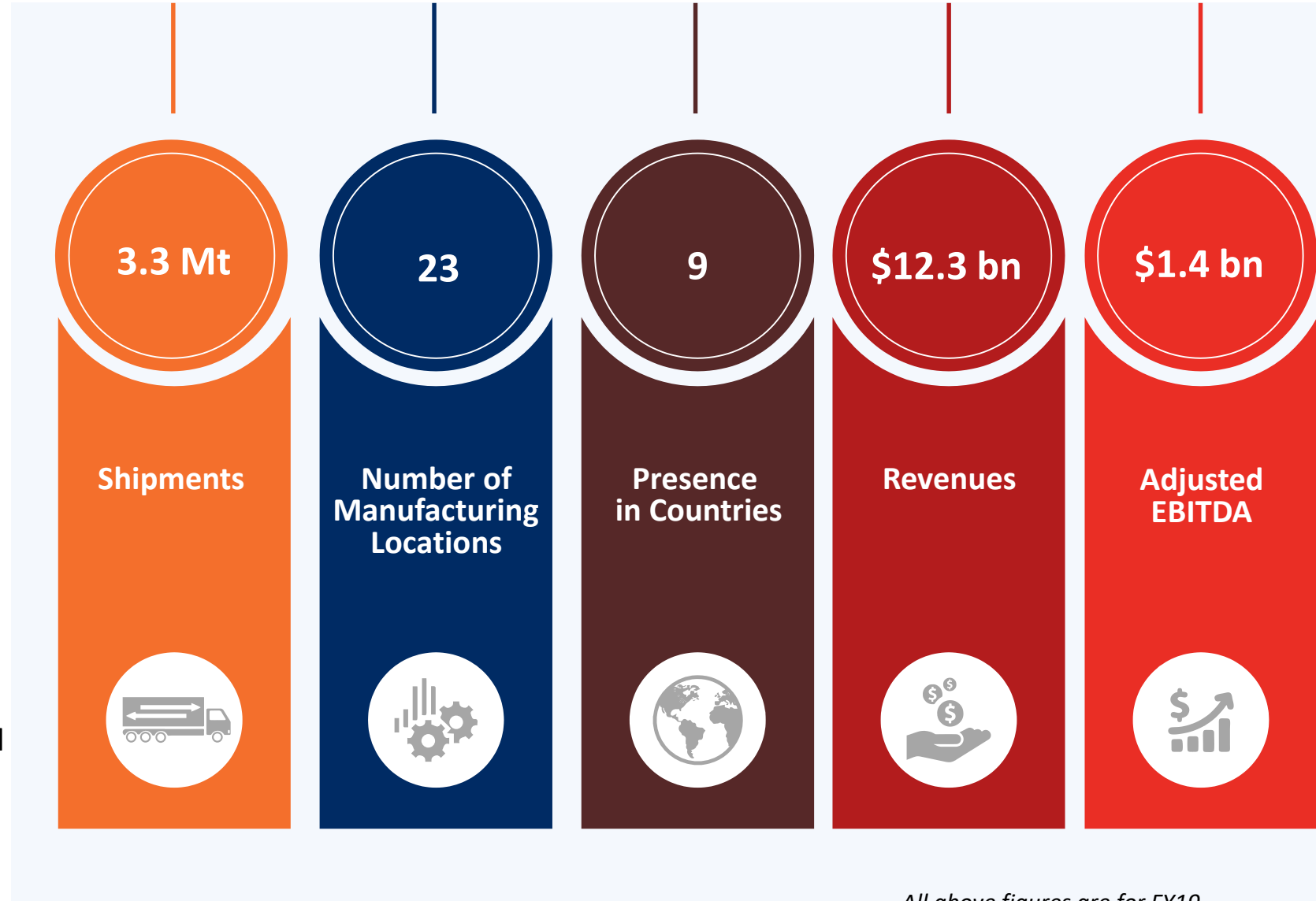
- One of the most successful acquisitions among Indian conglomerates

- **Headline statistics**

1 in Roller
in Recycler

- **Competitive advantages/differentiators**

- Global footprint, customer partnerships, quality & service, closed loop recycling, first mover advantage in Auto



All above figures are for FY19

Hindalco's Supplier Risk Assessment, Mitigation

Procurement Analytics

Spend Analytics

Market Analysis

Supplier Performance Analytics

Procurement Process Management

Process Management

Performance Management

Capability Development & Training

Risk mitigation

Co-developed and presented Second Revision IS 8502 - Petroleum Coke Specification

Ban on PET Coke in 2018 had a direct impact on availability of CP Coke for Hindalco

Worked with Global and Indian PET Coke manufacturers for updating BiS standard as applicable for non-fuel applications

New ways of doing business

Moving beyond supplier-customer relations for raw material security

Development of alternative sourcing strategy by forging partnership with adjacent industries

Steel manufacturers to ensure Coal Tar availability to our suppliers

Hindalco's Approach to Customer Centricity

In January 2019, Hindalco launched an innovative, lightweight and cost-efficient aluminium bulker makes travel efficient and sustainable for its customers.

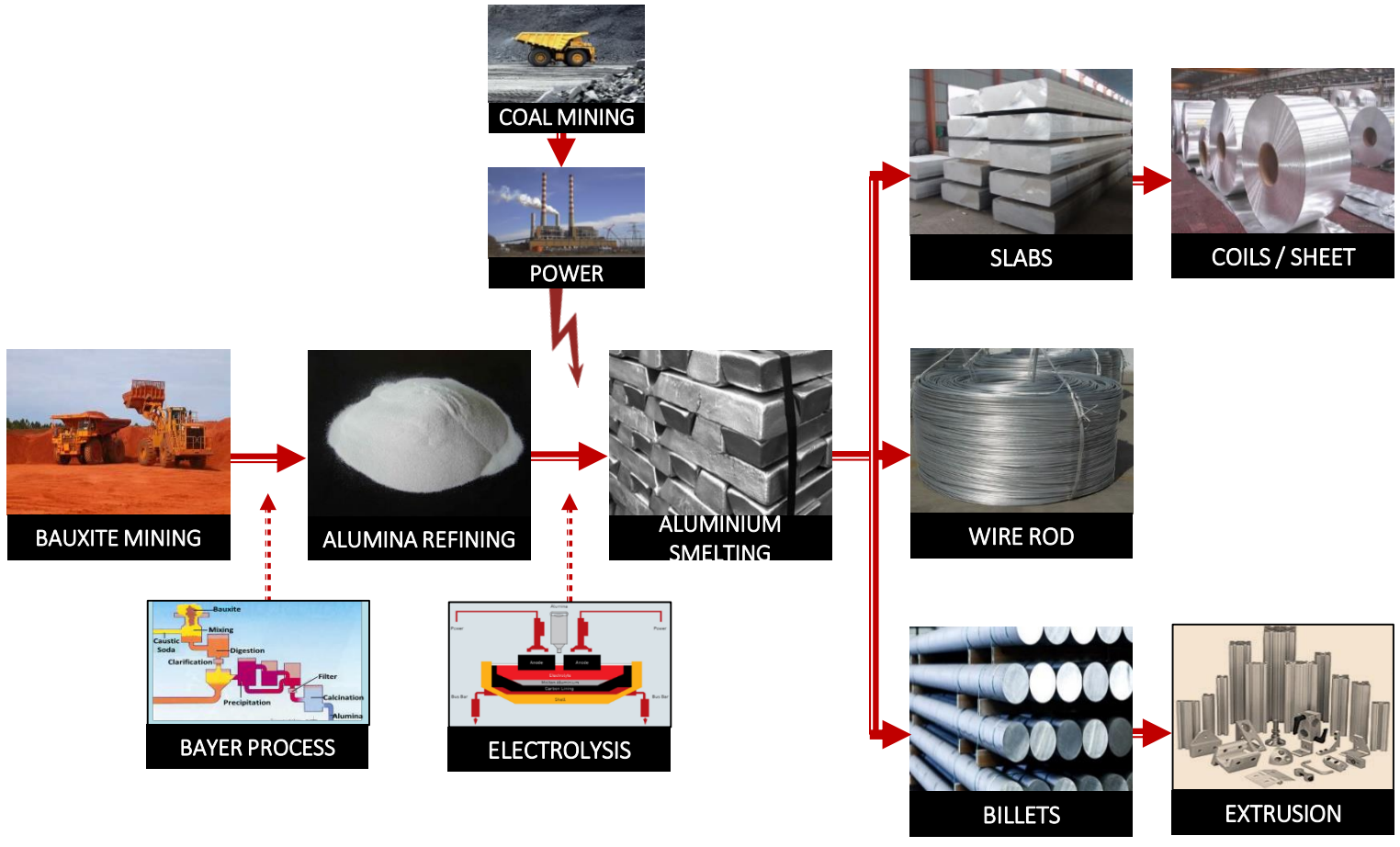


- The first bulker customised Aditya Birla Group company – Ultratech
- Replaced steel making it 50% lighter than steel bulker
- For UltraTech, benefits will be :
 - Saving up to 13,000 litres of fuel p.a.
 - A lifespan that is three times higher than steel bulker
 - Carrying additional 2 tonnes of cement in every trip
 - Scrap value at 70%

Product Stewardship : Focus on Aluminium Downstream in India

Currently ~76% products sold as commodity

Plans to sell ~60-70% products to end customers



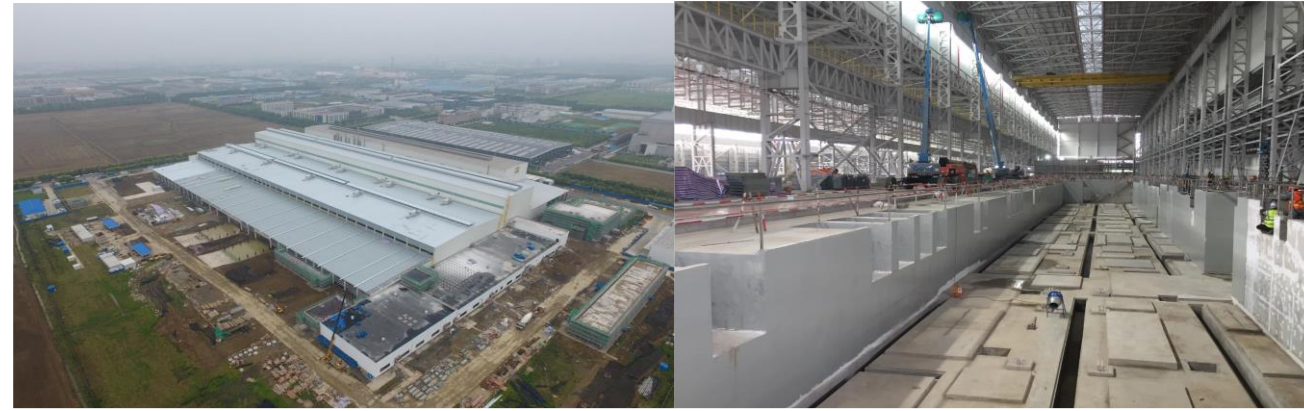
Planning to get into end of life scrap processing towards its recycling initiatives in India

Novelis - Strategic Capacity Expansion Plans

- **New expansion projects are underway in all 3 projects :**
 - 200kt greenfield automotive finishing lines in the U.S. to begin customer qualification late FY20
 - 100kt automotive finishing expansion in China commissioning in FY21
 - 100kt rolling and 60kt recycling expansion in Brazil commissioning in FY22
- **Organic expansions progressing well and on budget**
- **Recycled contents in FY19 reached 61%**



Expansion of automotive finishing lines at Guthrie, Kentucky, US



Expansion of automotive finishing lines at Changzhou, China

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HINDALCO

Our Responsibility

Environmental Stewardship: Waste, Emissions, Effluent Management

Solid Wastes:

- Inventory all hazardous and non-hazardous wastes
- **Targets:** follow mitigation hierarchy – Prevent, Reduce, Recycle, Dispose

Air Emissions:

- Mapping emissions from processes, power plants
- **Targets:** Regulatory compliance on discharge limits and monitoring

Liquid Effluents:

- Segregate different types, focus on recycle, reuse
- **Targets:** Reduction in freshwater consumption, no groundwater use



Bauxite Residue (BR) Management Plan – 5R + 1S Approach



Reduce

- the quantity of BR/tonne of alumina through ore beneficiation

Redesign

- the alumina refining process to make BR quality more amenable to recycle, re-use

Recover

- rare earths from BR

Storage

- of BR in Bauxite Residue Management Areas (BRMAs)

Recycle, re-use

- in cement industry
- in construction industry- roads, railways, bricks
- for back-filling

Rehabilitation

- of BRMAs that have exhausted their capacity

- Bring down on-site storage from 98% in 2018 to 20% in 2022
- Increase recycle to cement, construction from 8% in 2018 to 40% in 2022
- Use 40% for mine rehabilitation by backfilling by 2022

Recycling Bauxite Residue - Construction

Opportunities in Construction

- Building through bricks, paver blocks, roof sheets, plastering material
- Making of roads
- Making of railway embankments
- Soil conditioning



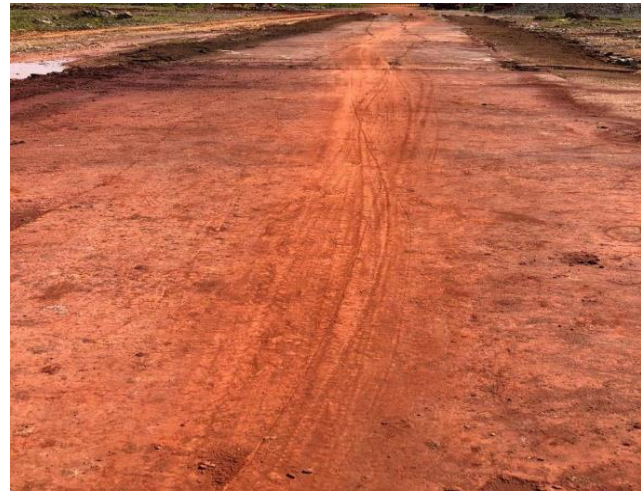
Bricks



Paver Blocks



Roof Sheets



Roads



Plastering Material

Climate Change and Aluminium

PROS

- Aluminium is infinitely recyclable
- Life cycle of an aluminium product is a renewable "cradle-to-cradle"
- 95% less energy to recycle aluminium than to produce primary metal
- Light-weighting of transport offering reduction in vehicular GHG emissions
- Replace plastic packaging for food, pharmaceuticals

CONS

- Aluminium smelting is energy intensive (Al_2O_3 bond to be broken)
- Process GHG emissions - PFCs + use of carbon as anode
- Need for continuous, reliable power – traditional use of fossil fuels in India



Increase in recycling



More use of Aluminium in Automotive



Focus on Energy Efficiency & Renewable Energy



Occupational Safety & Health

- Safety is the language spoken
 - Inherently Safer Processes
 - State of art, latest technology at all new facilities
 - No use of bulk chlorine for water treatment
- Attention to minuscule details when it comes to safety
- Benchmarked and at par with best in industry
- Uniform 11 world class safety & 4 occupational health standards across Hindalco.
 - Implementation completely owned by line functions
 - Direct involvement of ~2,733 line function officials and ~671 subject matter experts

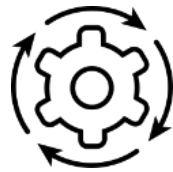


To Sum up

Leading with a balanced and sustainable business model



Resilience in low LME environment with resource security and a balanced product mix



Operational excellence



Focus on environment sustainability



Thank You



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HINDALCO

Questions ?

