

# Hindustan Zinc Limited Management Presentation



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# Presentation Outline

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Zinc:  
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Operational  
Asset Base &  
Expertise

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Growth  
Narrative

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Silver Focus  
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# Hindustan Zinc's Distinctive Competitive Advantage

- World's **2<sup>nd</sup> largest** integrated **zinc producer** and **3<sup>rd</sup> leading silver producer**
- Fully integrated **India's only zinc-lead-silver producer** over five decades of expertise in mining and smelting
- **2<sup>nd</sup> highest zinc R&R base** globally with average grade of over 5% and 25+ years of mine life
- In the first decile of the global zinc mining cost curve, **lowest cost achieved in FY24** in last 3 years
- **75%+ market share** in India's primary zinc market
- Robust **EBITDA margin of over 50%** backed by operational excellence, technological advancements, cost optimization and strong resource base

- **Irreplaceable resource and asset base**, with technologies providing flexibility of running operations based on the market landscape
- Sustainability leader with **first rank in S&P sustainability** assessment globally, ESG focus with economic prudence
- **50%** power sourcing through **renewable energy sources** by 2026. Board approved the plan to increase it to 70%
- **Asia's first** low carbon 'green' zinc producer
- Consistently **AAA rated** by leading credit rating agencies
- One of the most valued metal and mining company in India with a **market cap of c.US\$ 25 Bn**




## Smelting Capacity

Zinc Smelting  
**913,000 TPA**

Lead Smelting  
**210,000 TPA**

Silver Refining  
**800 TPA**




 Total R&R  
**456.30 Mt**




 Ore production  
**16.52 Mt**



 Metal capacity  
**1.12 Mt**



 Total captive capacity  
**603.16 MW**

# India's only Zinc-Lead-Silver Producer & World's 2<sup>nd</sup> Largest Integrated Zinc Producer and 3<sup>rd</sup> Leading Silver Producer

## World's largest underground mine

### Rampura Agucha Mine

Reserves : 44.4 Mt  
 Resources : 24.8 Mt  
 Reserve Grade : Zn 11.0%, Pb 1.2%  
 FY24 Ore Production : 4.93 Mtpa

## Sindesar Khurd Mine

Reserves : 40.1 Mt  
 Resources : 68.9 Mt  
 Reserve Grade : Zn 3.1%, Pb 2.0%  
 FY24 Ore Production : 5.65 Mtpa

## Rajpura Dariba Mine

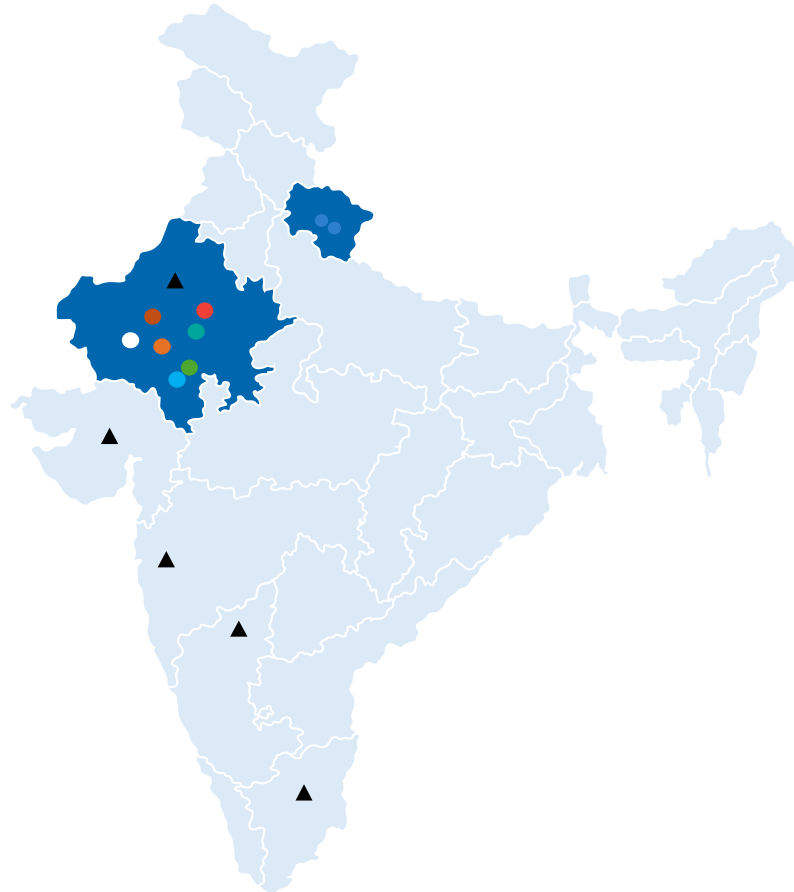
Reserves : 47.1 Mt  
 Resources : 40.5 Mt  
 Reserve Grade : Zn 5.4%, Pb 1.7%  
 FY24 Ore Production : 1.34 Mtpa

## Zawar Mining Complex

Reserves : 42.2 Mt  
 Resources : 100.6 Mt  
 Reserve Grade : Zn 2.6%, Pb 1.5%  
 FY24 Ore Production : 4.03 Mtpa

## Kayad Mine

Reserves : 1.3 Mt  
 Resources : 5.4 Mt  
 Reserve Grade : Zn 5.2%, Pb 0.7%  
 FY24 Ore Production : 0.56 Mtpa



## Single located largest zinc lead smelter globally

### Chanderiya Smelting Complex

Pyrometallurgical Lead Zinc Smelter: 105,000 tpa Zinc and 90,000 tpa Lead  
 Hydrometallurgical Zinc Smelter: 480,000 tpa Zinc

### Dariba Smelting Complex

Hydrometallurgical Zinc Smelter: 240,000 tpa Zinc  
 Lead Smelter: 120,000 tpa Lead

### Zinc Smelter Debari

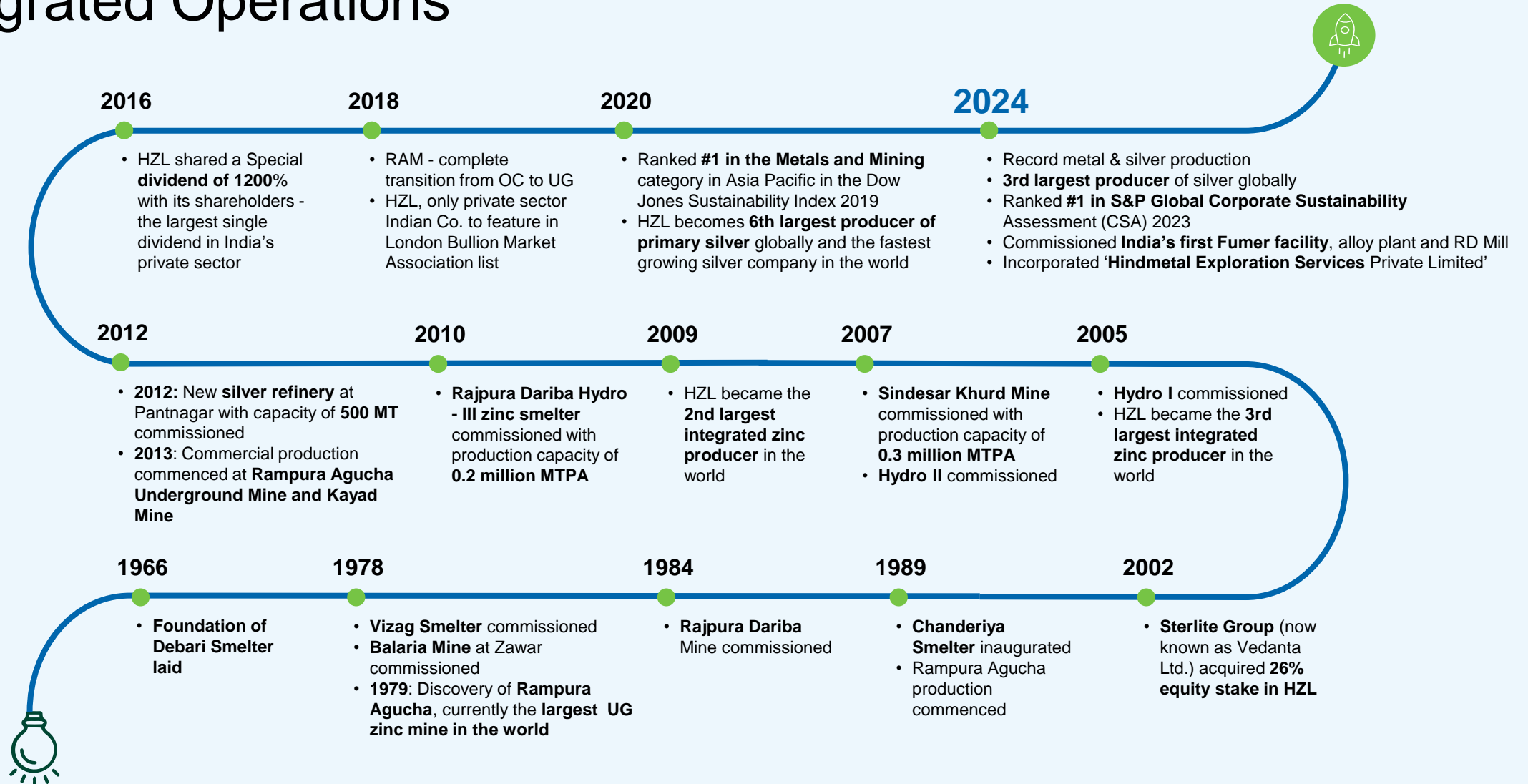
Hydrometallurgical Zinc Smelter: 88,000 tpa Zinc

### Pantnagar (100% RE grid power)

Processing & Refining of Zinc, Lead & Silver

▲ Wind Power Generation  
 Capacity of around 273.5 MW

# Over Five Decades of Expertise in Mining and Smelting Integrated Operations



# Hindustan Zinc's Vision, Mission & Growth Narrative

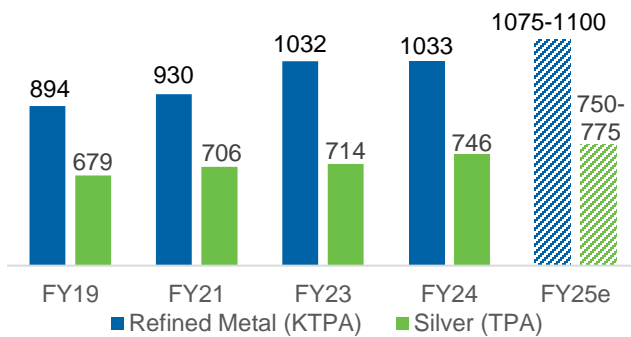
Vision to be the world's largest and most admired Zinc, Lead & Silver Company

## 01

### Capacity Expansion

- Roaster of 160 ktpa at Debari: FY25
- UG mine ramp up and debottleneck roasting, leaching & purification operations
- Techno-commercial study to double production to 2+ Mtpa
- Increment in Silver to 1,000 Tonne

#### Refined Metal Production

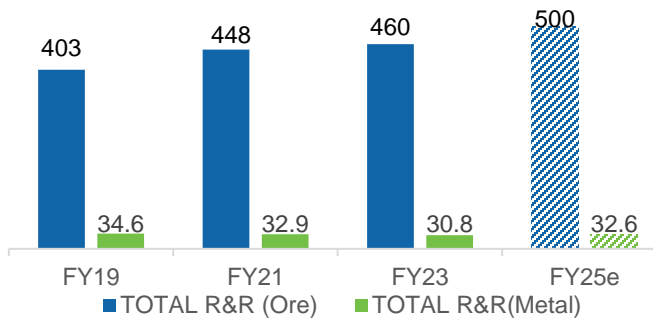


## 02

### Mine Portfolio with long life

- Innovative technology and advanced geophysics for exploration
- Retain existing mining leases and acquire new potential areas
- Upgrade Ore Reserves

#### Reserves and Resources (million tonnes)

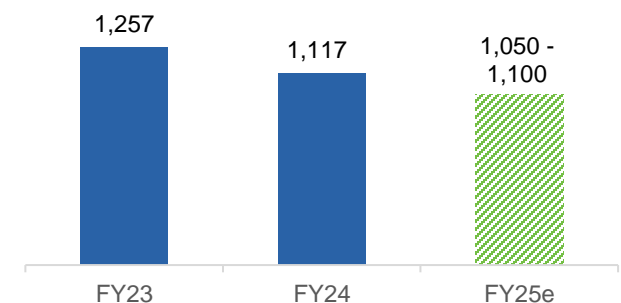


## 03

### Cost Optimization

- Efficient ore hauling, higher volume and grades besides higher productivity through ongoing efforts in automation and digitalization
- 530 MW RE power at a fixed rate for 25 years, providing better cost visibility and predictability

#### Cost of Production (\$/t)



# Hindustan Zinc's Vision, Mission & Growth Narrative

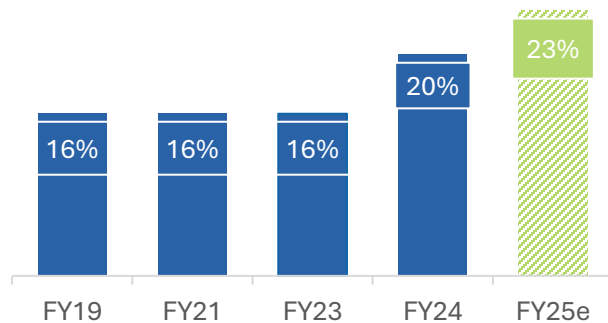
**Mission** to enhance stakeholder value, be the lowest cost producer & maintain market leadership

04

## Expanding VAP Portfolio

- Ramp up of 30 kt Alloy plant
- Forward integration through 510 ktpa Fertiliser plant at Chanderiya: FY26
- Focus on the innovation of new products in lead alloys
- Increased penetration of zinc alloys: Target increase of over 60% in next 3 yrs - Focus on HZDA, CGG, ZAM, zinc dust, EPG

### Value Added Product (%)



05

## Sustainable Future

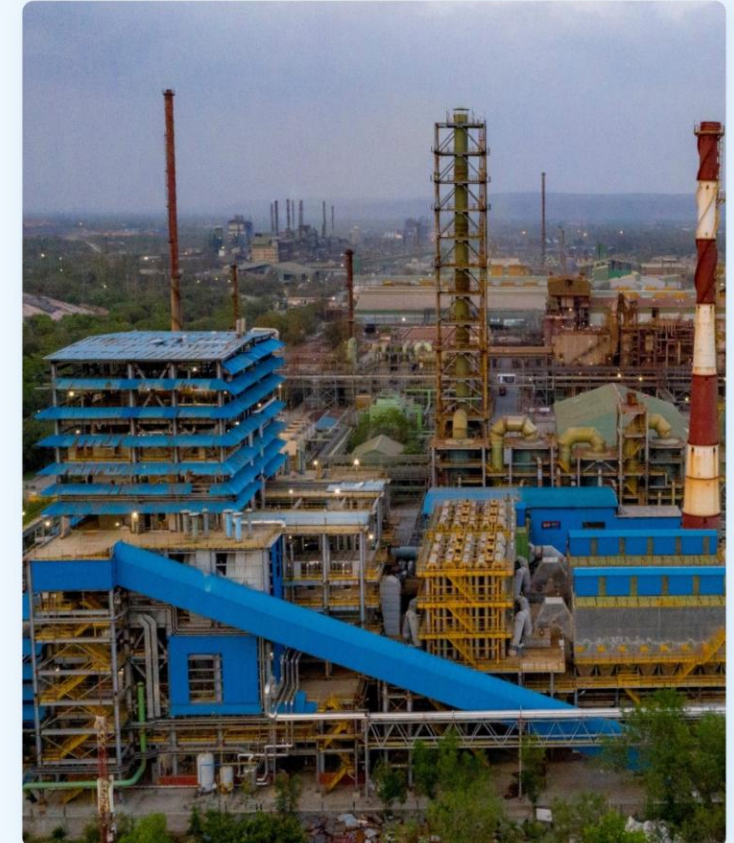
- RE power delivery agreement to cater 50% of HZL's power requirement reducing 2.7 Mt of carbon emissions: The first power flow commenced in May 2024. **Board approved the plan to increase it to 70%**
- Commissioned Fumer plant at Chanderiya focusing on waste to wealth
- ZLD plants at Agucha and Zawar

### Road Ahead

**530 MW** Green power additions

**USD 1 Bn** investment towards climate change initiatives

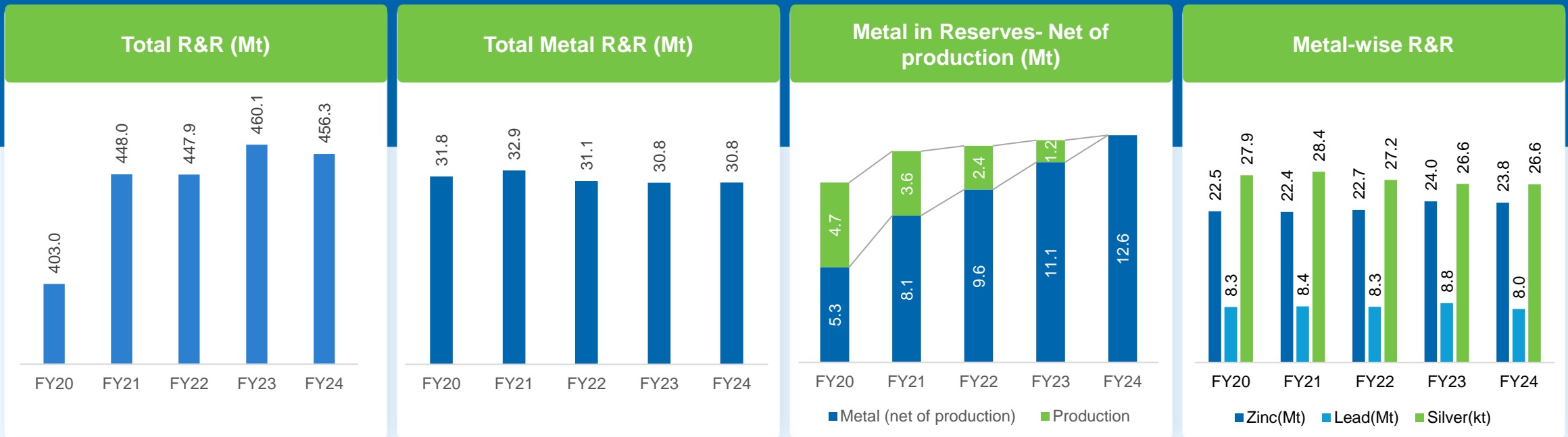
**100%** Mechanised charging at Zawar





# 2<sup>nd</sup> Highest Zinc R&R Base Globally with 25+ Years of Mine Life

Increasing the longevity of the mines for business continuity and sustainable value accruals has been a key strategic priority for Hindustan Zinc. With a total R&R of 456.3 Mt and a metal content of 30.8 Mt, the Company maintains an overall mine life of 25+ years.



## Key Highlights

With a focused approach towards exploration, we have **added ~2.5x metal reserves** as compared to FY20 end, on a net of production basis

**Total R&R is up by c.35% in last 5 years**, that is an incremental ore of 118 Mt, considering production of 65.1 Mt of ore in this period

**Total Ore Reserves:** 175.1 Mt (net of production of 16.5 Mt) in FY24, as against 173.5 Mt in FY23

# World's 3<sup>rd</sup> Largest Silver Producer & India's Only Silver Producer



## Growth

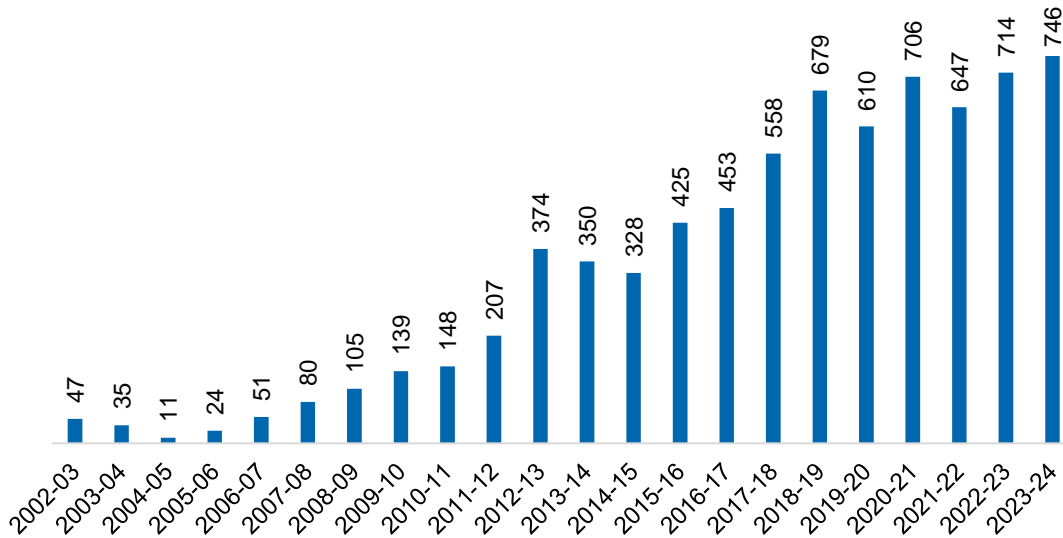
Silver production grew over 2x in last 10 years and 15x in last 2 decades. With FY 2023-24 production of 746 MT, the production increased by c.5% y-o-y



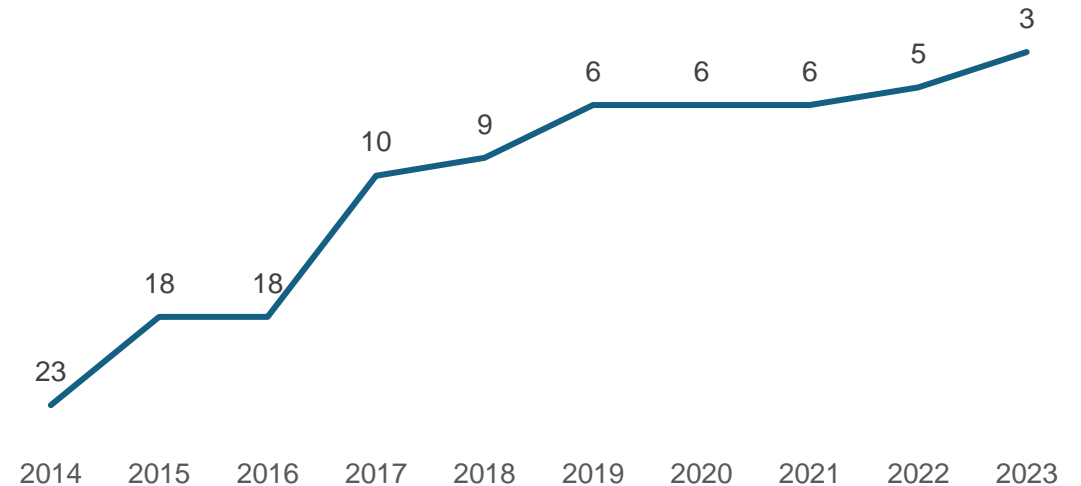
## Global Leadership

Hindustan Zinc is India's only silver producer and is now the 3rd largest silver producer globally as per the World Silver Survey 2024 by The Silver Institute

Silver Production (MT)



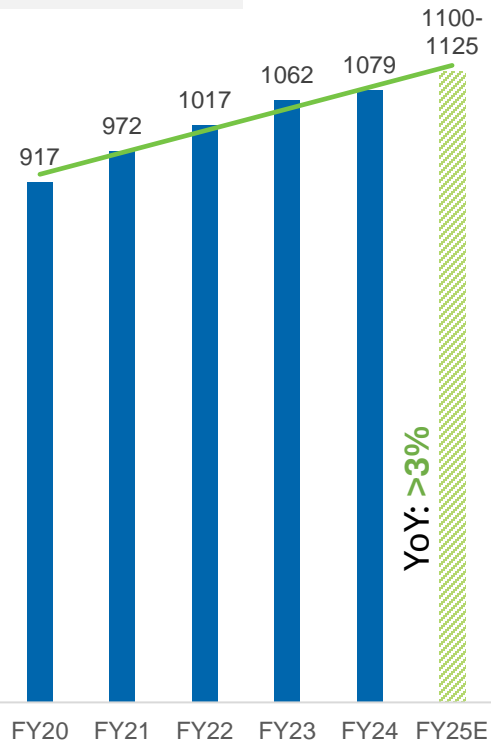
World Silver Survey - HZL's Ranking



# Showcasing Industry Leading Operational Performance

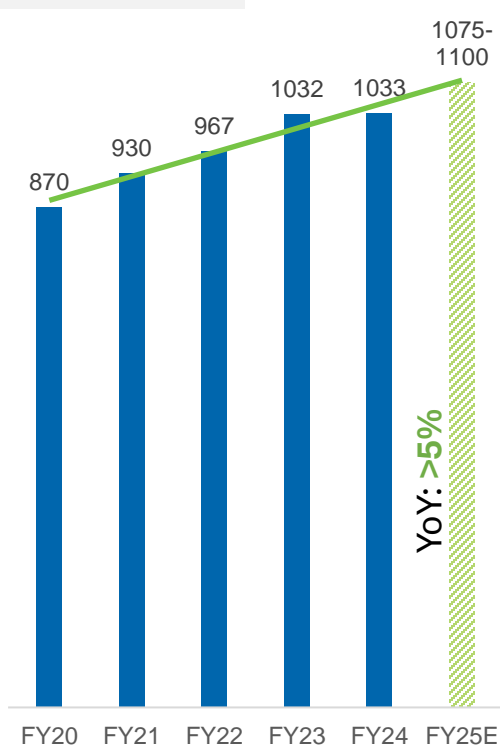
## Mined Metal (kt)

CAGR: 4.2%



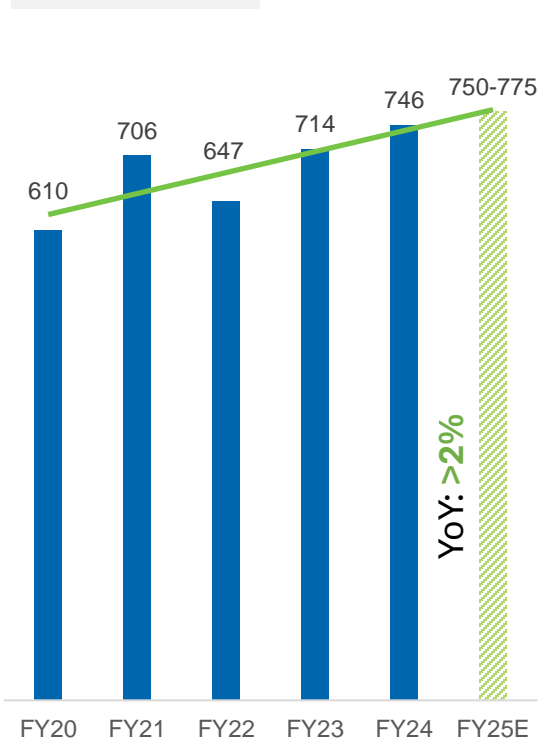
## Refined Metal (kt)

CAGR: 4.4%



## Silver (MT)

CAGR: 5.2%

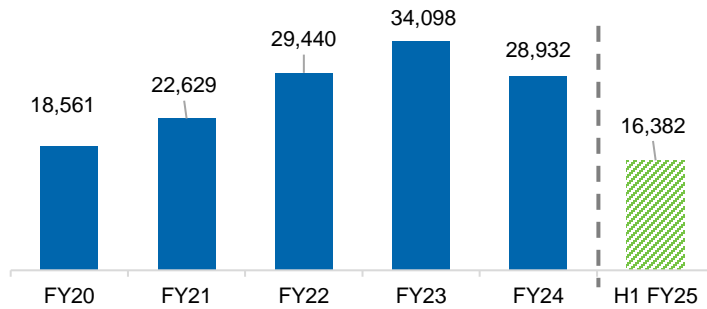


- Hindustan Zinc's production has grown at an industry leading **CAGR of over 4% in metal & 5% in silver in last 5 years** and is poised to ascend further in a similar trend.
- Strong growth is planned for FY25, building on the steady momentum achieved at the end of FY24.

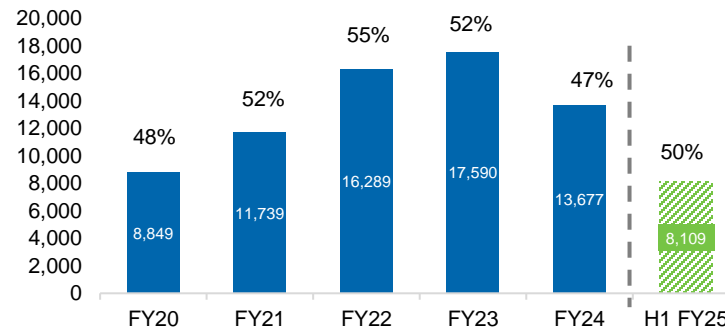
# Delivering Robust EBITDA Margin

Backed by Operational Excellence, Technological Advancements, Cost Optimization and Strong Resource Base

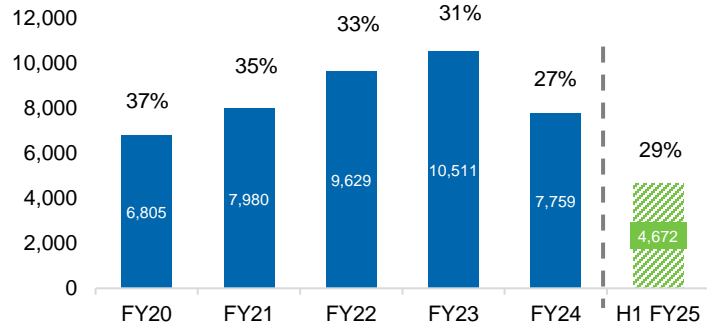
Revenue (incl. other operating income) (₹ Cr)



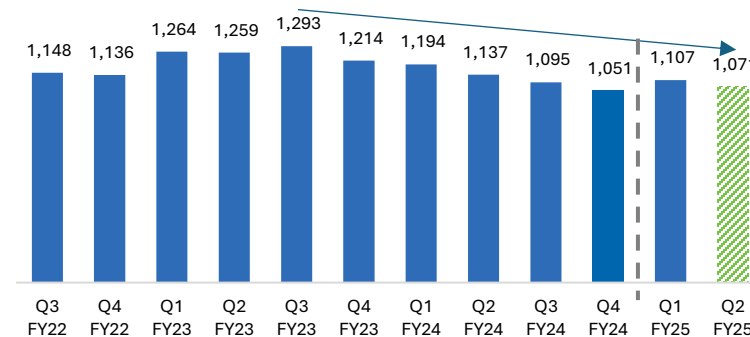
EBITDA (₹ Cr) | EBITDA margin %



PAT (₹ Cr) | PAT margin %



Zinc COP (\$/T)



## Key Highlights

- **First decile** of the global zinc mines cost curve
- **On track for 4-year lowest cost** with a COP of \$1,071/T in Q2 FY25
- **Enabling Factors:** Better grade, softened input commodity prices, better linkage coal availability, improved operational efficiency, key contract transformation strategy, and automation & digitalization
- **Healthy free cash flow from operations** of ₹7k Cr for H1 FY25 (pre capex of ₹2k Cr (incl. growth capex of ₹608 Cr) and RE power investment of ₹230 Cr)



# Shareholder's Value Creation during H1 FY25

Hindustan Zinc is among the top Indian companies with **highest total shareholder returns** during the half year

- **HZL's market cap surged to 1.8 times** by adding ₹97k Cr
- The Company touched its **ever-highest market cap** of ₹341k Cr
- Dividend Payout of **₹12k Cr** (1450% of face value)
- Total shareholder returns per share\*:

Capital  
Appreciation

**₹230.20**

Dividend  
per share

**₹29**

Total  
Returns

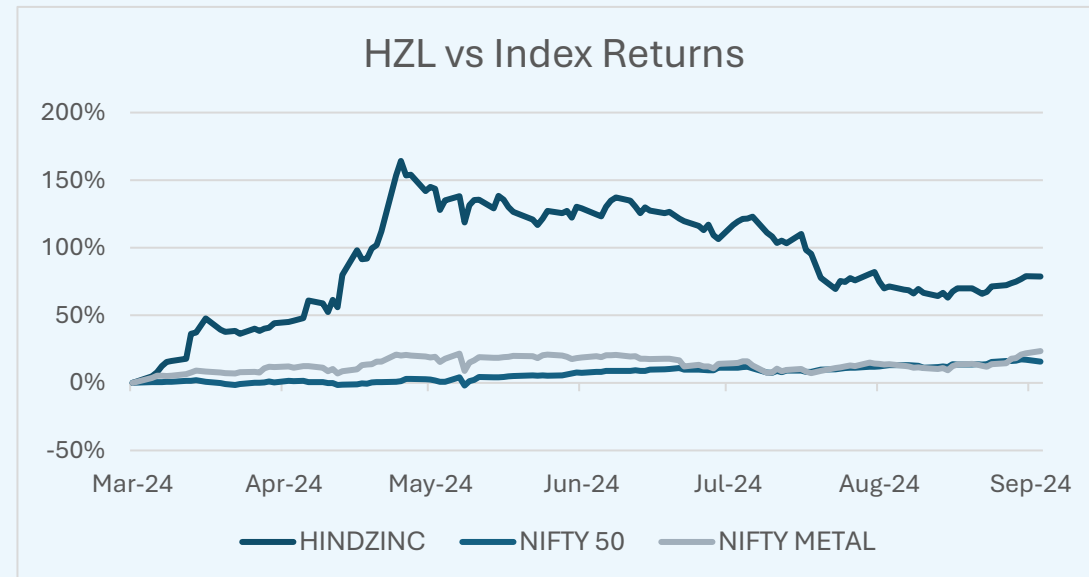
**₹259.20**

Total shareholder returns during the half year

**89%**

Amongst Industry Leading EV/EBITDA in the Metal & Mining sector\*\*

**c.13x**



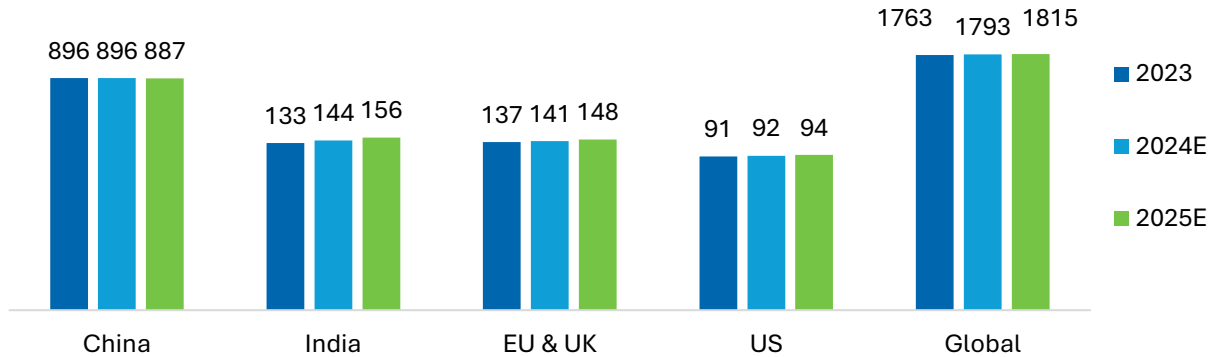
During the year till date, HZL's total shareholder returns is **6x** of **NIFTY 50** returns and **4x** of **NIFTY METAL** index returns

\* Returns are calculated on the closing prices of Sep'24 & FY24

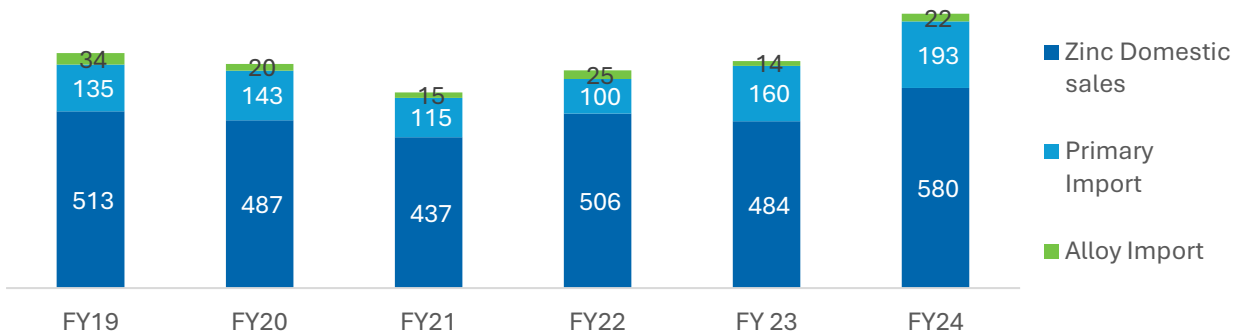
\*\* Considering annualized H1 FY25 EBITDA

# Capturing 75%+ market share in India's primary zinc market

## Steel Demand Forecasts (Mt)



## Zinc Consumption in India (kt)



## Zinc Demand Outlook

- Global zinc demand is expected to recover, and domestic zinc demand is expected to remain strong owing to the efforts to upgrade India's infrastructure and manufacturing output and impressive automobile sales
- The finished steel consumption is forecasted to grow across all major economies, except China, which is expected to see a marginal dip
- On a global level, steel demand is expected to be up by 1.2% in FY25. India is a major contributor for this growth with an expected growth of 8.2% in FY25

# Growth Project Update



## New Roaster at Debari

- Roasting is an essential part of the process of producing saleable zinc in hydrometallurgical smelters.
- The new roaster at Debari will enable Hindustan Zinc to attain long term sustainable operations making it future ready for 1.2+ million tonne refined metal.

Production Capacity  
**160 ktpa**

## Hindustan Zinc Fertilisers Private Limited:

- Hindustan Zinc's DAP/NPK Fertiliser Plant at Chanderiya aims to support farmers' needs through production and sale of DAP fertilisers currently being imported.
- Allows better utilization of sulphuric acid generated in operations through production of fertilisers, making the country future-ready.
- This will contribute to the environment circuitously, enabling us to fetch right margins.

Production Capacity  
**510 ktpa**

Product  
**DAP/NPK Fertiliser**

## Status Update

Project progress is on track with commissioning being targeted by Q4 FY25

## Status Update

Project progress is on track with the completion being targeted by Q2 FY26

## Update:

- Moving forward, Hindustan Zinc, along with technology partners, is evaluating & finalizing recycling projects - converting waste into wealth.
- Further, Hindustan Zinc has appointed strategic partners with proven capabilities for undertaking conceptual design for 2X growth plan. It is under progress and details of the same will be announced post completion.

# Strategic Growth via Focused Separate Companies

## HINDMETAL EXPLORATION SERVICES PRIVATE LIMITED

- Hindmetal Exploration Services Private Limited was formed with the **objective of developing an exploration strategy through a focused vertical.**
- The subsidiary's objective is to explore, discover, develop and tap mineral resources, including strategic minerals, deep seated minerals and offshore minerals, through systematic exploration of all types of mineral deposits.
- The subsidiary will collaborate with government bodies, private enterprises or any other organisations for joint ventures, partnerships, or research initiatives in the field of exploration

## HINDUSTAN ZINC ALLOYS PRIVATE LIMITED

- Given the foreseeable demand for alloys in the near future and its vision of growth, the Company has set up a new state-of-the-art facility for manufacturing of zinc alloys through melting and casting operations.
- The Company has now set up a **new melting and casting facility of 30 ktpa zinc alloy**, which will help in attaining sustainable operations, and in achieving benchmark performance.
- This new facility is equipped with technologically advanced machines and was commissioned in FY 2023-24.

## HINDUSTAN ZINC FERTILISERS PRIVATE LIMITED

- Through Hindustan Zinc Fertilisers Private Limited, the Company aims to set up a state-of-the-art phosphatic **fertiliser manufacturing facility with capacity of 510 ktpa at Chanderiya**, to boost performance and ensure sustainability in operation.
- The fertiliser plant aims to support farmers' needs through production and sale of DAP fertilisers, which are currently being imported, and to better utilise the sulphuric acid generated in operations through production of fertilisers, making the country future-ready.
- The project is targeted to be completed by FY 2025-26.



- Hindustan Zinc has strategically expanded its operations by establishing **5 distinct subsidiaries and RE power under group captive scheme.**
- This focused approach allows the Company to tailor its strategies and resources to meet the unique demands of each market segment effectively.



# Sustainability Goals 2025



## Climate Change

0.5 mn tCO<sub>2</sub>e GHG emission savings from base year 2017



## Water Stewardship

5x water positive company and 25% reduction in freshwater consumption



## Circular Economy

3x increase in gainful utilisation of smelting process waste



## Biodiversity Conservation

Protect and enhance biodiversity throughout the life cycle



## Diversity in Workforce

Inclusive and diverse workplace with 30% diversity



## Ensuring Zero Harm

Zero work-related fatalities and 50% reduction in TRIFR



## Responsible Sourcing

100% responsible sourcing in the supply chain



## Social Impact

Positively impact one million lives



# Sustainability Leader with First Rank in S&P Global Sustainability Assessment

## S&P Global

Ranked #1 in Metals and Mining sector at S&P Global Corporate Sustainability Assessment (CSA) 2023\*

Top 1% S&P Global CSA Score

Secured the **top 1% ranking** and featured for the 7<sup>th</sup> consecutive year



Recognized with **leadership band scores of A-** in Climate Change and Water Security by CDP (Carbon Disclosure Project)

## S&P Global

Platts

Recognized at the **S&P Global Platts Metal Award 2022** by 'Industry Leadership Award - Base, Precious & Specialty Metals' Award and 'Corporate Social Responsibility' Award



Received '**Leadership in HR Excellence**' prize from the Confederation of Indian Industry (CII) National HR Excellence Award

## Hindustan Zinc is amongst the top 10 CSR companies in the Country



### Education

Nand Ghar, Child Care Centres, Shiksha Sambal, Unchi Udaan, Jeevan Tarang



### Sustainable Livelihood

Samadhan, Sakhi, Microenterprises, Zinc Kaushal



### Women Empowerment

Sakhi



### Community Asset Creation

Rural, Education, Health & Water Infrastructure, Creating Model Villages



### Health, Water & Sanitation

Swasthya Sewa, Drinking Water through RO/ATMs/Tankers, Company-run Hospitals & Sanitation



### Sports & Culture

Zinc Football Academy (through Vedanta Zinc Football and Sports Foundation), Rural Sports & Culture Initiatives, Anil Agarwal International Cricket Stadium



### Environment & Safety

Sewage Treatment Plant (through Zinc India Foundation), Miyawaki, Plantation Drives, Community Safety

# ESG Focus (1)

## Renewable Power Update

- Hindustan Zinc entered into Power Delivery Agreements (PDA) with Serentica Renewable India Private Ltd (SRI4PL and SRI5PL) for Dariba (200 MW) and Chanderiya (250 MW) plant locations respectively
- SRI4PL & SRI5PL are part of Serentica group which is developing ~4GW of Renewable Energy across multiple states to provide round-the-clock power to industries
- **The Board also approved round-the-clock PDA III with Serentica, taking the RE capacity to 530 MW, with a carbon emission reduction of 69% from 5.5 MtCO<sub>2</sub>e to 1.7 MtCO<sub>2</sub>e per annum**

### Salient Features of the Project

- Solar project is being constructed in Rajasthan
- Wind Project is being developed in Maharashtra
- Power flow through ISTS network and delivery to HZL through the dedicated transmission lines
- Higher reliability flow of power from ISTS network



### Project Updates and Milestones

- Transmission connectivity secured
- OEM, EPC & vendor partners tied-up and construction activity at site under progress
- **Commenced of the first flow of RE power** from Serentica 180 MW solar project in May 2024
- Remaining activities are under progress with **phased completion being targeted by June 2025**



Modules installed at site



Equipment foundation



1st wind turbine installed

# ESG Focus (2)

## Recycling Business

- **Partnership with VEXL Environ Projects Ltd (VEXL)** for innovative solutions for utilization of jarosite and jarofix for productive applications
- **Plan to establish pilot plant** using exclusive technology for improving recovery of silver and other metals/chemicals as saleable products
- **Impact:** Leverage technology & expertise to revolutionized smelting process, thereby facilitating circular economy



VEXL Environ Project

## Energy Transition

- **Partnership with US-based AEsir Technologies** as a preferred supplier of zinc for zinc-based batteries manufacturing, which have potential to **revolutionize energy storage**, providing cost-effective & sustainable alternative to other prominent chemistries
- Signed an **MoU with a premier institute sponsored by the Department of Science & Technology, Govt. of India**, for R&D of next-gen zinc-based batteries
- **Onboarded India Energy Storage Alliance** for development of advanced energy storage & green hydrogen solutions



Nickel-Zinc Batteries

## Low Carbon Zinc

- **Launched Asia's first Low Carbon 'Green' Zinc , EcoZen**, produced using renewable energy
- Asia's First-Ever Low-Carbon Special High-Grade Zinc, with a carbon footprint of less than 1 tCO<sub>2</sub>e per tonne of zinc produced, about 75% lower than the global average
- Certified through a comprehensive Life Cycle Assessment (LCA), cradle to gate approach by a renowned global sustainability firm
- For customers looking to decarbonize their own and their customers' value chains



Low Carbon Zinc 'EcoZen'



# ESG Focus (3)

## Women in Mining

Hindustan Zinc boasts a gender diversity of 22% in FY24, significantly improved from 12% in FY19

India's First All Women Underground Mine Rescue Team



India's First Underground Woman Mine Manager

Vedanta's First All Women Underground First-Aid Team



Towards the Sustainability Goal of 30% Gender Diversity by FY 2025

- **Progressive Maternity Policies:** Flexible working hours for expecting mothers, sabbatical leave with an option for flexing working hours and career assurance protecting performance ratings
- **Winspire – she is the inspiration:** An empowering event focused on inspiration and growth of over 150 women in leadership roles
- **Building an inclusive workplace:** We create safe and welcoming workplace, ensure equal opportunities for advancement, combating discrimination and bias

600+ Women Employees

200+ Women Engineers

# Executive Leadership Team



**Arun Misra**

**Chief Executive Officer**

*Chairman of International Zinc Association (IZA) and Vice Chairman of Confederation of Indian industry (CII), Rajasthan*



**Sandeep Modi**

**Chief Financial Officer**

*Financial expert with vast experience in metals, mining and power industry*



**Munish Vasudeva**

**Chief Human Resource Officer**

*Subject matter expert with diversified experience in large multinationals*



**Jose Hernandez**

**Chief Metallurgist**

*Seasoned Metallurgist with over 29 years of rich global experience*



**Adelson Dias De Souza**

**Project Consultant - Smelters**

*Comes with 30+ years of expertise in technology & innovation within metallurgy and non-ferrous mining*



**David Finn**

**Technical Advisor - Geotech**

*Subject matter expert with 30+ yrs experience in Geotech*



**Kavita Bhardwaj**

**Deputy CEO – HESPL**

*Multicommodity Mineral industry experience in Greenfield, Brownfield exploration, overseas projects and fertilizer*



**Darin Cooper**

**Technical Director - Smelters**

*Subject matter expert with diverse experience in metals & mining industry spanning operations, project & restructuring*



**C Chandru**

**IBU CEO - Smelters**

*20+ years of industrial experience in operations, business & various leadership roles with a degree in metallurgy*



**Anupam Nidhi**

**Head - CSR**

*Subject matter expert with diverse experience in the CSR and sustainability*



## Composition of our leadership team

- Our top **60 leaders embody a remarkable blend of expertise**, featuring a harmonious mix of technical and functional experts and entrepreneurial business leaders
- Our leadership with an **average age below 50 years**, brings a wealth of experience
- Our team has an **average experience of 25 years** in their respective fields
- This leadership cohort reflects a strategic balance, **comprising 55% homegrown leaders** and a substantial representation of lateral leaders from diversified businesses

# Key takeaways



**1.2 Mtpa** metal at US\$ 1,000/t cost;  
Growth plan for **2 Mtpa metal**: under development



**Silver expansion**: Target of reaching **1,000 MT** intermediately (Fumer route) & **1,500 MT** with 2 Mtpa metal



**Exclusive focus on Recycling**: Potential of recovering 1 Mt metal & 3 kt silver



**2<sup>nd</sup> highest zinc R&R base** globally with average grade of c.7% and 25+ years of mine life



**75% + market share** in India's primary zinc market  
**Focus on VAP**: Alloy plant commissioned & Fertilizer plant project in progress - making India self-reliant



**50% + power sourcing** through renewable sources  
**Sustainability leader** with first rank in S&P Corporate Sustainability Assessment globally



## Profitability

- **Zinc Volume: 1.2 Mn MT**
- **Silver: 800 MT**
- **Zinc LME: 3000\$/T**
- **Cost: 1000\$/T**
- **EBITDA: \$2.7 Bn**

Irreplaceable resource and asset base delivering **consistent margin of c.50%**

Consistently **AAA rated** by leading credit rating agencies

India's most valued metal and mining company with **industry leading shareholder returns**



# Then & Now

Conventional drill rig



Electric locomotive operation



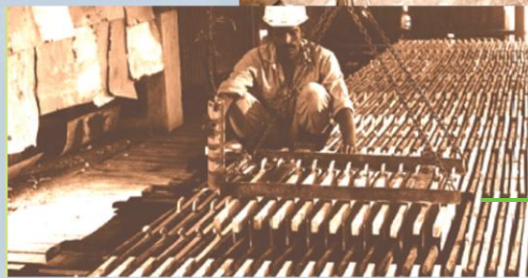
Drilling by hand-held hammer



Mucking by auto loader



Manual cell house



Modern drill rig, drilling machine, LPDT, hi-tech cell house, robotic operations