

**TATA STEEL**

#WeAlsoMakeTomorrow



# INVESTOR DAY 2021

July 6, 2021

Resilient | Resolute | Future-ready

# AGENDA

2:30pm- 6:30pm IST



- 1 Strategic Roadmap 2030
- 2 Financial Strategy
- 3 Q&A Session – I
- Break (4:00pm-4:15pm IST) -----
- 4 Market Leadership and Future-fit Strategy
- 5 Our Approach to ESG
- 6 Technology and Innovation-led Transformation
- 7 Q&A Session – II

**Statements in this presentation describing the Company's performance may be "forward looking statements" within the meaning of applicable securities laws and regulations. Actual results may differ materially from those directly or indirectly expressed, inferred or implied. Important factors that could make a difference to the Company's operations include, among others, economic conditions affecting demand/supply and price conditions in the domestic and overseas markets in which the Company operates, changes in or due to the environment, Government regulations, laws, statutes, judicial pronouncements and/or other incidental factors.**

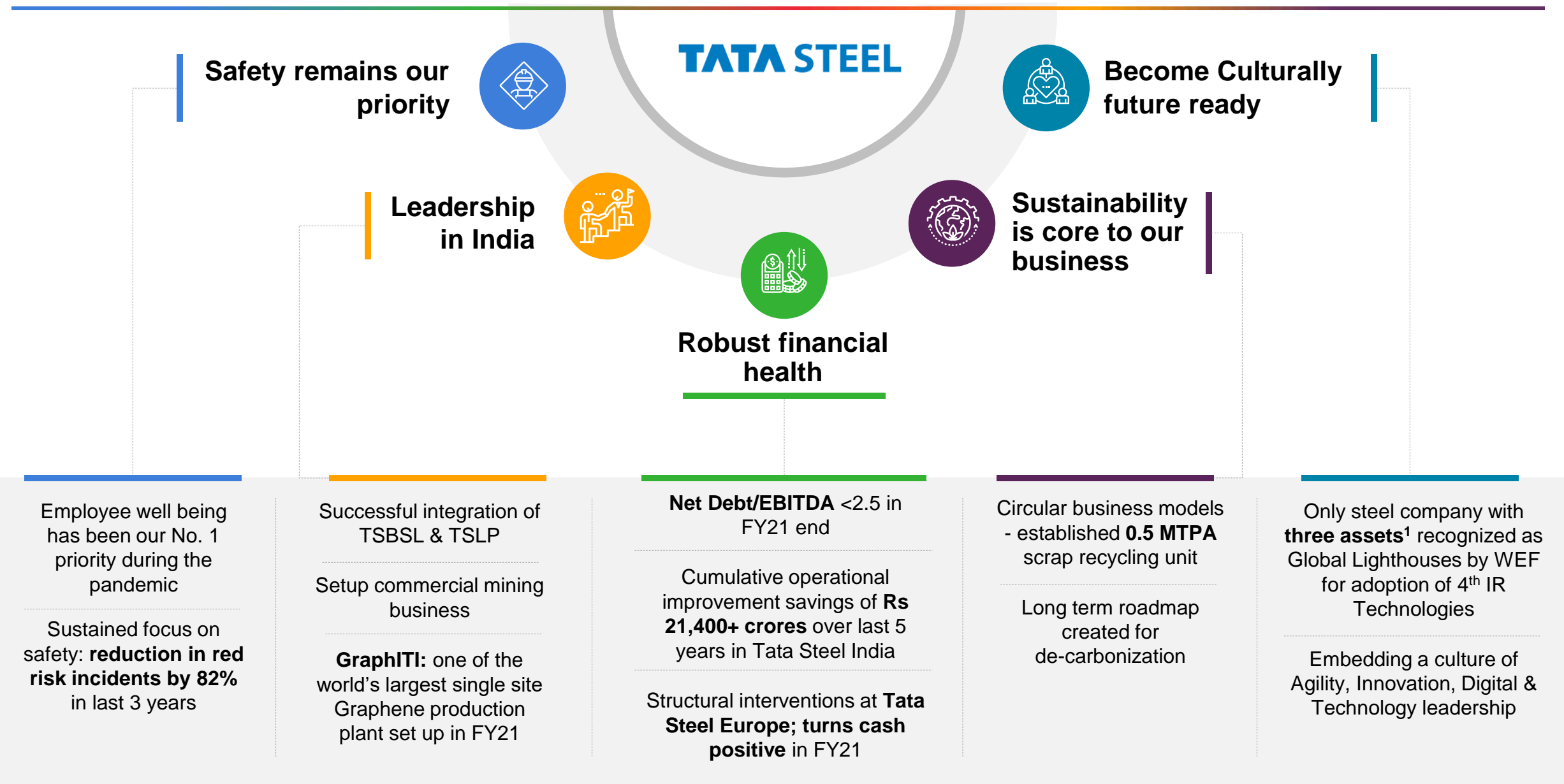
1	<b>Strategic Roadmap 2030</b>
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**Mr. T V Narendran**

**CEO & Managing Director  
Tata Steel**

# Tata Steel is focused on creating sustainable value

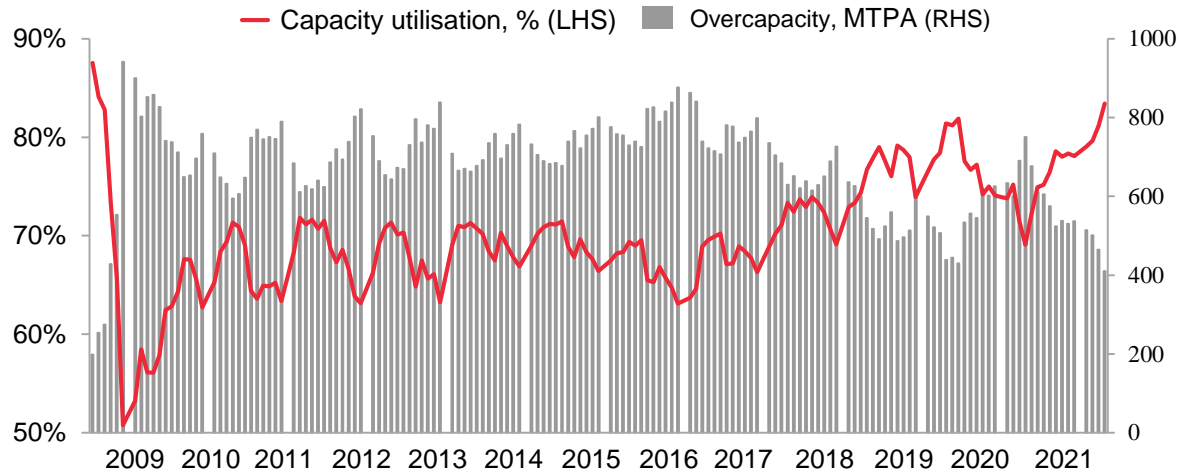


Red risks are incidents with fatality potential; Tata Steel India = Tata Steel Standalone + TSBSL + TSLP; TSBSL – Tata Steel BSL Limited; TSLP – Tata Steel Long Products Limited; TSE – Tata Steel Europe; ; MTPA – Million tons per annum; <sup>1</sup>3 assets – Ijmuiden, Kalinganagar, Jamshedpur; WEF – World Economic Forum; IR – Industrial revolution

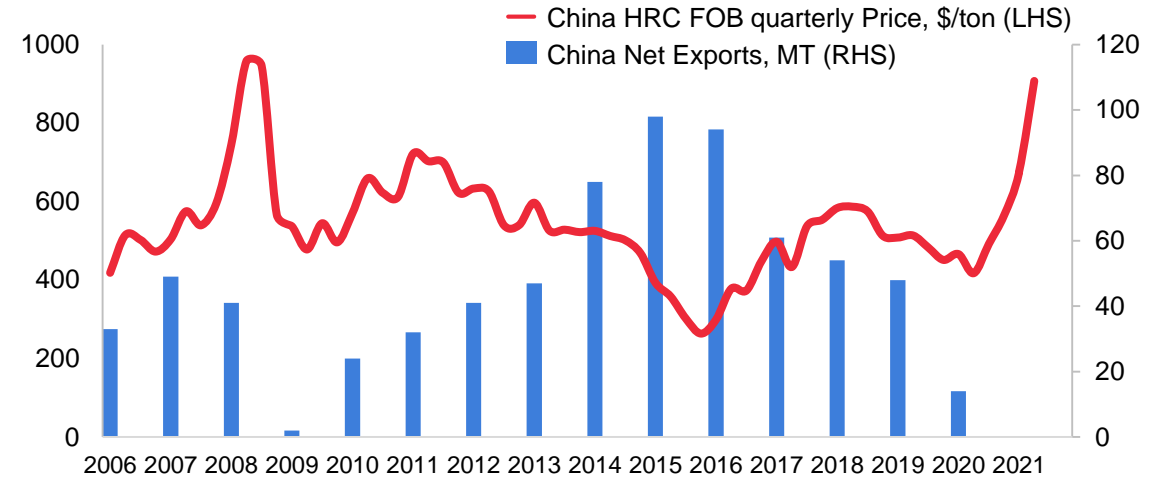
# Global Steel Industry witnessing structural changes: Steel prices to stabilize at higher levels than in the last decade



## Capacity utilization is improving with closure of inefficient and polluting assets



## China Net Exports and HRC Export Prices



Govt spending on infrastructure as response to slowdown, globally, will increase steel consumption



Growing de-carbonization focus, especially in Europe and China, will increase steel companies' cost of operations

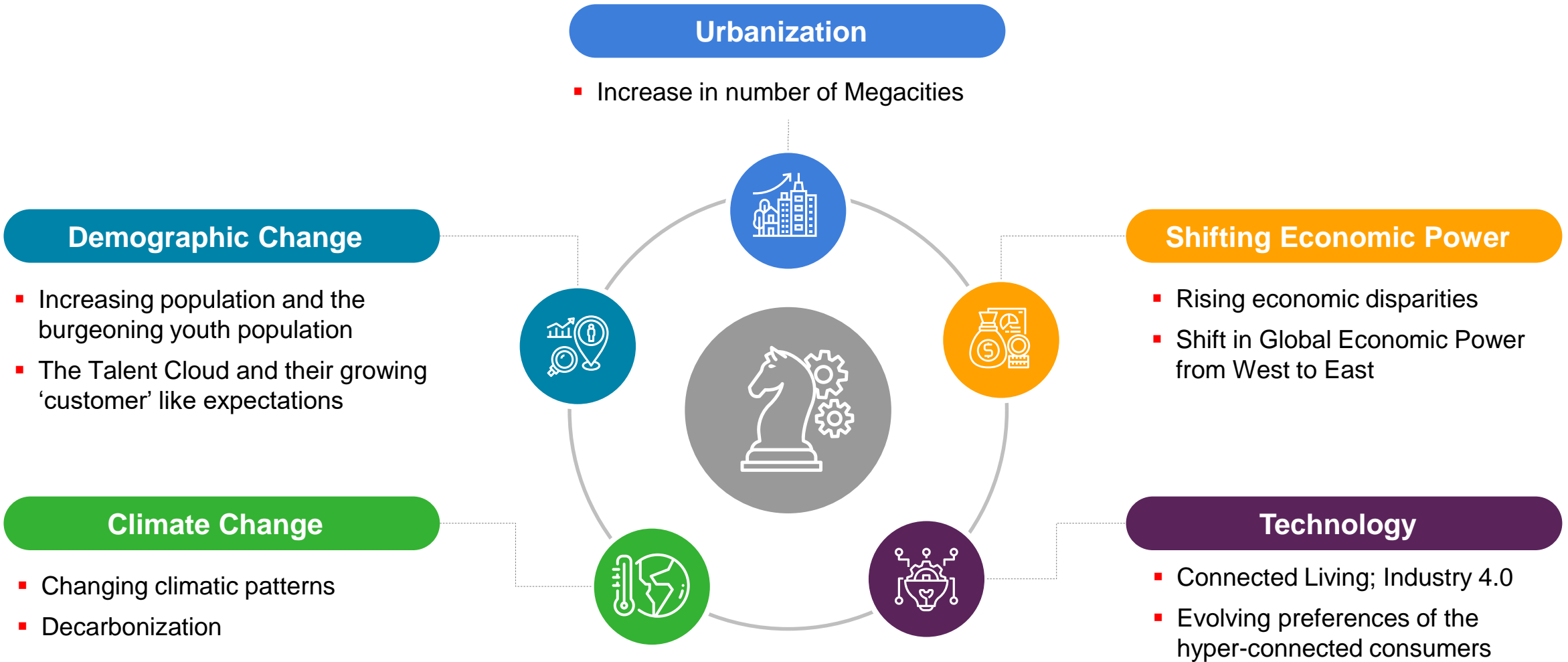


Geopolitical events will continue to impact international raw material prices



India steel demand continues to be buoyant (expected grow by ~20% in CY21); supported by economic recovery, government spending and improved liquidity

# Our strategies for success are informed by opportunities presented by megatrends



# Over this decade, Tata Steel aims to be the most respected and valuable steel company globally



## Leadership in India: Most respected and preferred by discerning customers

- Increase capacity of India operations through organic and inorganic growth
- Attain and retain Leadership in chosen segments



## Consolidate position as global cost leader

- Raw material self-sufficiency
- Cost improvement & value enhancement through structural interventions & continuous improvement



## Attain leadership position in adjacent businesses

- Services and Solutions
- New Materials Business
- Commercial mining



## Leadership in sustainability

- Benchmark in CO<sub>2</sub> emissions
- Benchmark in specific water consumption
- Value creation using Circular Economy business models



Best Place to work for in Manufacturing in India

Be the Digital Leader in steel industry globally

Top 5 in technology in steel industry globally

Fostering a future ready culture

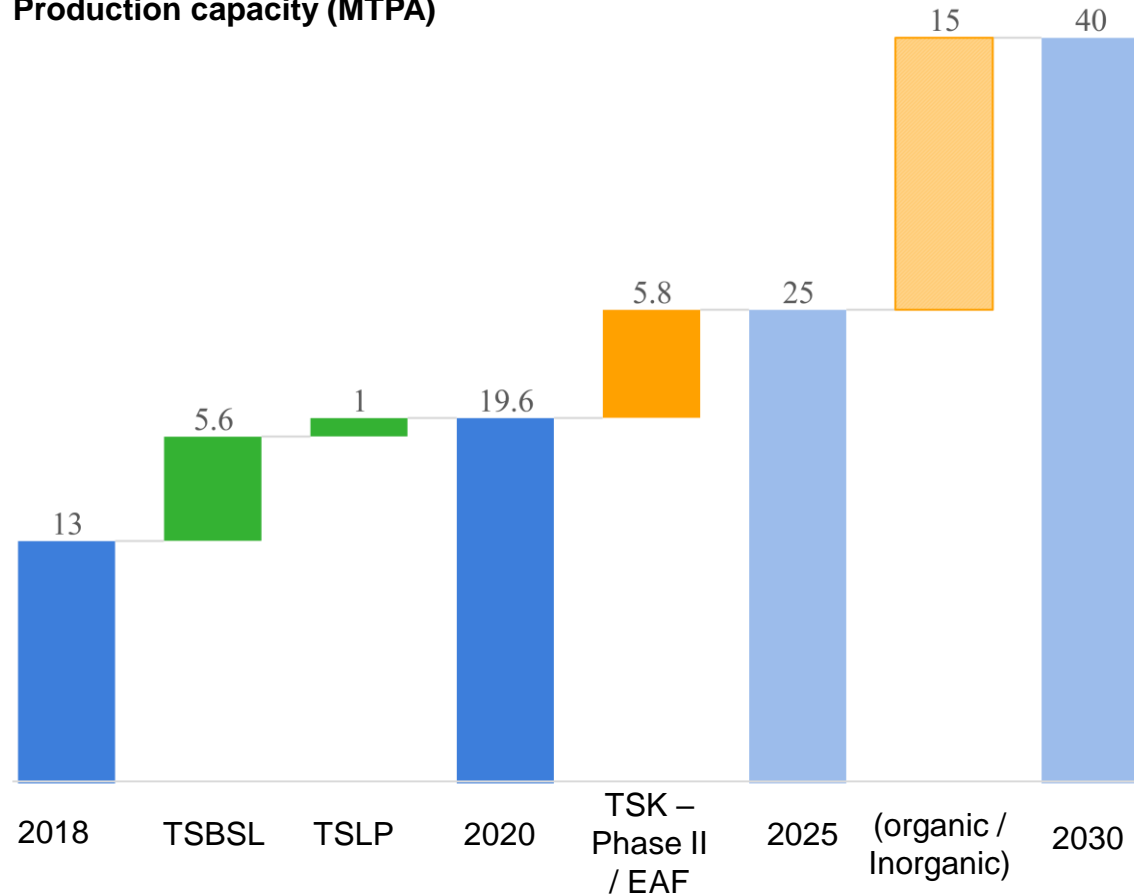


# Tata Steel's strategy is pivoted around capitalizing on India Growth Story...



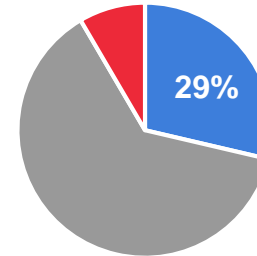
## Targeting value accretive growth in India

Production capacity (MTPA)

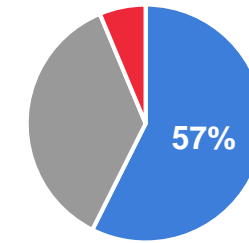


## India to be the dominant manufacturing base for Tata Steel going forward

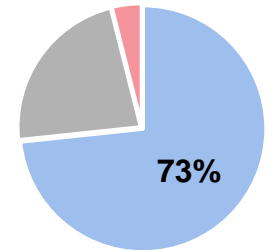
2010: 22 MTPA



2020: 34 MTPA



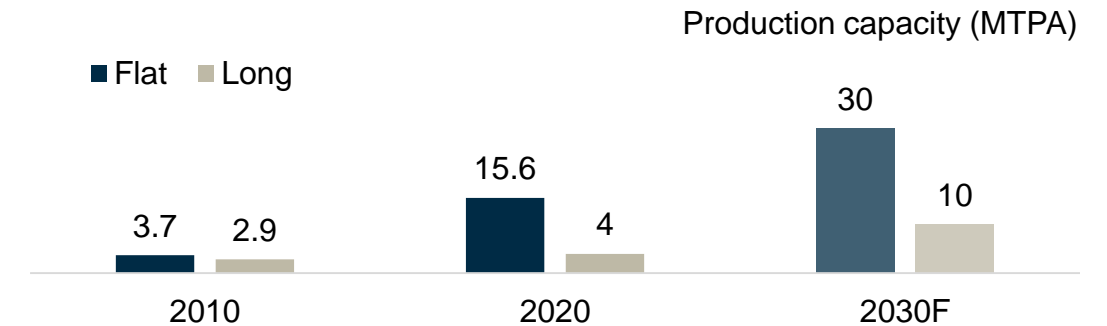
2030F: 55 MTPA

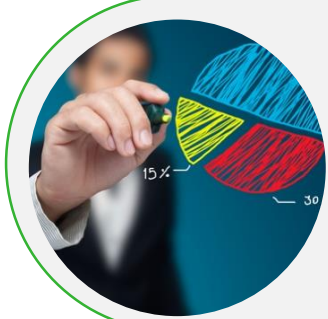


India Europe South-East Asia



## Optimizing product portfolio is a key target in India





### Attain and retain Leadership in chosen segments (current and new)

- Market share in 'Automotive' grew to 58% in FY21 from 50% in FY20
- High-end engineering segment grew by 46%YoY in FY21

### Reinventing the route to connect, transact and engage with customers

- Connected platforms: Aashiyana (130% YoY growth to reach sales of Rs. 726 crores in FY21), COMPASS, DigECA and Sampoorna
- Synergy across the Group: Basera and Nexarc (Digital B2B platform & one-stop solution for emerging businesses)



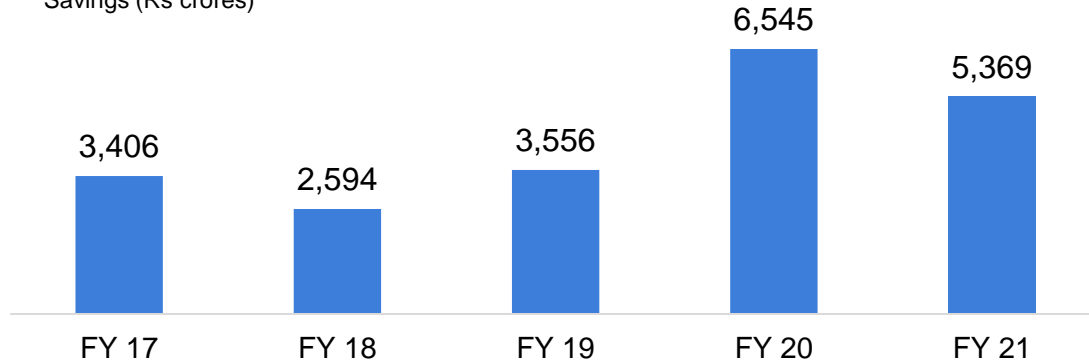
### Technology and knowledge intensive differentiation in marketplace

- Steel for future mobility and Ready-to-paint technology
- Graphene and Composites

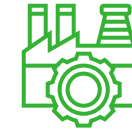


## Savings of Rs 21,400+ crores over last 5 years through operation efficiency improvement in Tata Steel India

Savings (Rs crores)



## Interventions planned over the next 5 years

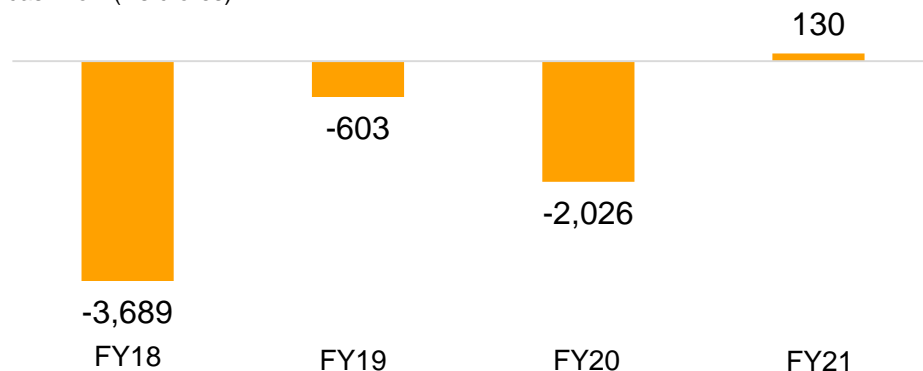


- Focus on augmenting raw material production capacity
- Strengthen logistics network and upstream of steel manufacturing
- Continue to focus on reducing fixed cost



## Structural interventions has resulted in TSE becoming cash positive

Free cash flow (Rs crores)



- Continue with the ongoing transformation program in TSE
- Complete separation of **UK & Netherlands operations** to focus profit & loss accountability at geography level

# We continue to focus and invest in capabilities to attain leadership position in Adjacent Businesses



## Services & Solutions



**Pravesh** – Doors and windows

**Nest-in** – solutions for society

## New Material Business



3 material verticals – **composites, graphene & advanced ceramics**

Focus on building an ecosystem of manufacturing and technology partners

## Commercial Mining



3 chromite mines in Odisha

450 KTPA of ferro chrome production

**Future growth engines** - a) Chrome business, b) MDO business, c) Strategic minerals play



## Sustainability is now deeply embedded in Tata Steel ecosystem ...

Long term decarbonization roadmap created

Pursuing low carbon technologies

Circular Economy integrated as part of business model

Deploying Responsible Supply Chain Policy across value chain

Improving transparency and disclosures

...intent to demonstrate leadership position in sustainability over this decade



### Goals for 2025

- TSI: Achieve <2 tCO<sub>2</sub> /tcs carbon emission

### Goals for 2030

- TSI: Achieve <1.8 tCO<sub>2</sub> /tcs carbon emission
- TSE: 30% reduction in specific emissions over 2020



- TSI: Achieve specific freshwater consumption of 2 m<sup>3</sup>/tcs

- TSI: Achieve specific freshwater consumption of <1.5 m<sup>3</sup>/tcs, aim for water neutrality
- TSE: EU benchmark for water intensity



- Achieve material efficiency of 99%

- Build 5 MTPA recycling business



- Develop and implement Biodiversity Management Plans for all operations sites

- Aspire for no net loss of biodiversity



## Infrastructure and enablers in place

- ✓ Identified 7 TLAs with 40+ projects
- ✓ Focussed on leveraging external eco-system through outcome driven collaborations
- ✓ Monetisation of in-house IPs
- ✓ Building organizational capability on innovation
- ✓ 45% of the patents have been granted in last 5 years

## Aspirations for this decade

- Deliver '**new to world**' products and solutions
- Deploy **new technologies at scale** addressing sustainability
- Build industry leading technology management processes and capabilities



Top 5 in  
technology in  
steel industry  
globally



Be the Digital  
Leader in steel  
industry  
globally

- ✓ Data maturity is now close to process maturity
- ✓ Enabled unlocking and creation of value
- ✓ Platformization – Connected assets, workforce and e-commerce platforms
- ✓ Adoption of 4<sup>th</sup> IR Technologies

- Enable **remote operations** for key processes and operations
- Drive 65-70% of value creation through digital transformation initiatives by FY30
- **Enterprise management through business platforms** – enhancing stakeholder experience and ensuring global optima

# Becoming culturally future ready will provide the platform for future value creation



## Strengthening enablers for Future of 'Work', 'Workforce' and 'Workplace'



### Aspirations for this decade

Culture of **safety** ingrained in the org - *Achieve Zero Harm*

Institutionalise culture of **Agility & Breakthrough innovation**

**Technology and knowledge-based differentiation** in whatever we do

Be **Great Place to Work #1** in Manufacturing, Top 10 among all companies in India

# We are on our way to build the Tata Steel of the Future



Most respected and  
valuable steel company  
in the world by 2030



▪ Strong, non-cyclical free cash flows driving **best-in-class valuations**



▪ Recognized as **technology & innovation** leader by customers, peers, employees, investors



▪ **Leadership in sustainable practices:** low carbon business model at scale



▪ **Customer obsessed** organization with world class operational performance



▪ **Culture and values** for the next generation



▪ Global benchmark in **corporate citizenship**



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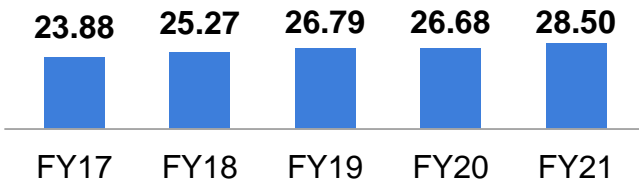


**Mr. Koushik Chatterjee**

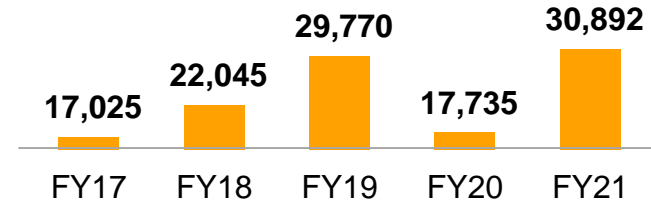
**Executive Director & Chief  
Financial Officer  
Tata Steel**

# Recap of financial year 2021

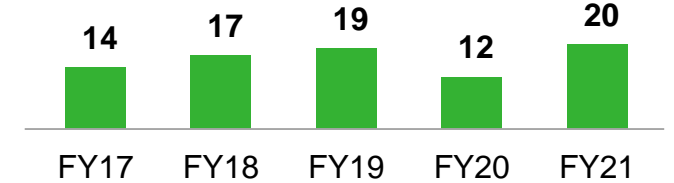
## Deliveries (mn tons)



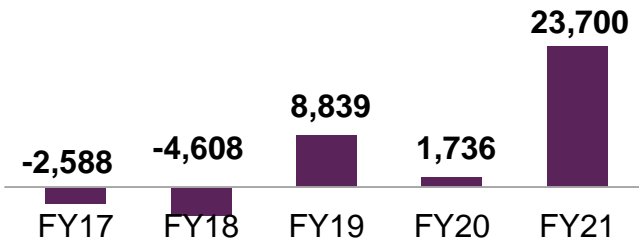
## EBITDA (Rs. crores)



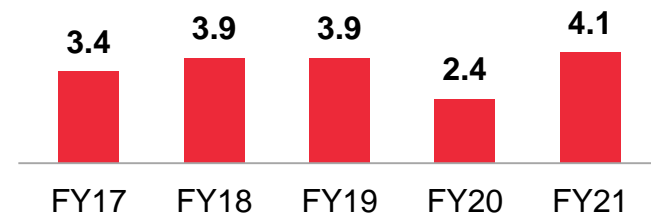
## EBITDA (%)



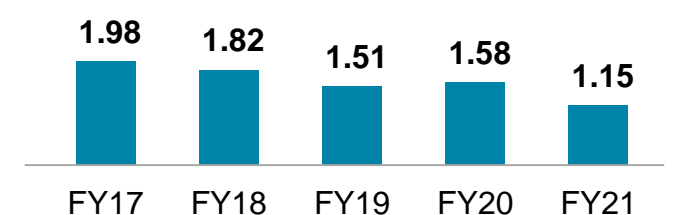
## Free cash flow (Rs. crores)



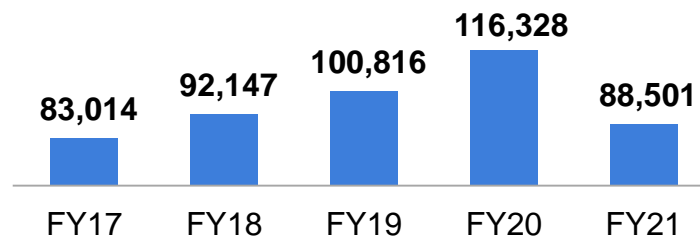
## Interest Coverage Ratio



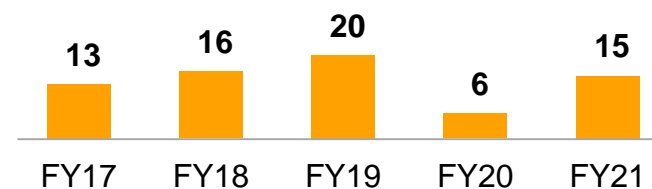
## Gross Debt /Equity (x)



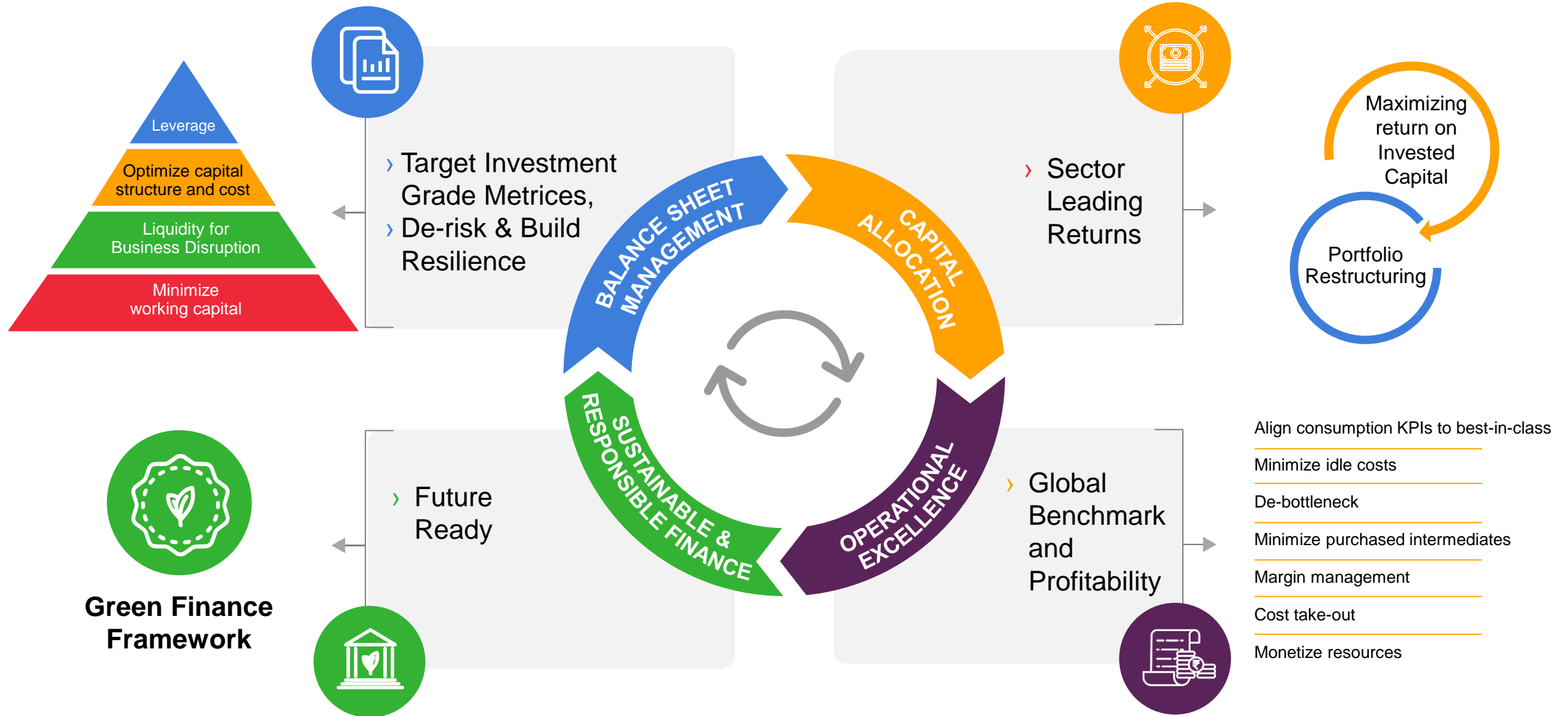
## Gross Debt (Rs. crores)



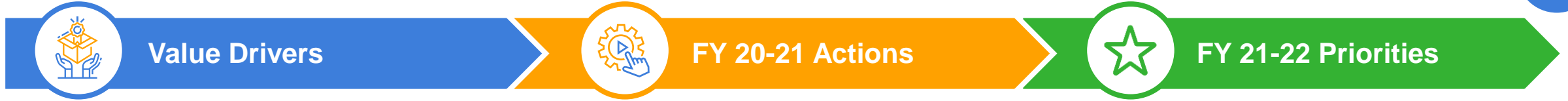
## ROIC (%)



# Pillars for Tata Steel's financial strategy



# Balance sheet management – de-risked and resilient



Value Drivers	FY 20-21 Actions	FY 21-22 Priorities
<p><b>Deleveraging</b></p>	<p>Net debt reduction by ~ US\$4 billion</p>	<p>&gt; US\$2 billion gross debt reduction; prioritize off-shore debt pre-payment</p>
<p><b>Raising Equity</b></p>	<p>Called residual Partly paid amount ~Rs.3,000 crores</p>	<p>Not envisaged</p>
<p><b>Working capital Management</b></p>	<p>Cash release of ~ Rs.9,400 crores</p>	<p>Drive working capital management in upcycle</p>
<p><b>Capex</b></p>	<p>~ Rs.7,000 crores</p>	<p>~ Rs.10,000 -12,000 crores</p>

# Capital allocation – focus on sector leading returns



**Rs. 80,000 crores  
Spend over Last 5 years**

Running the Business  
(Sustenance)

Working Responsibly  
(License to Operate)

25%

Enhance Market  
Competitiveness  
Through Growth

4%

Invest in New  
Business  
(Internal Start-ups)

70%

0.4%



**82%** of Investments  
in India is prioritised  
towards Growth

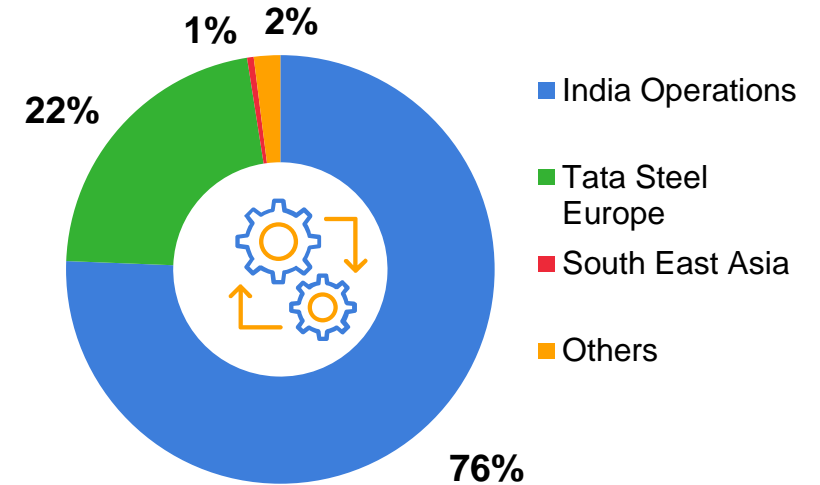


~ **65%**  
of Investments in  
Europe is towards  
Sustenance &  
Environment



**12%**  
Carbon adjusted  
Project IRR threshold  
for capital allocation

## Allocation



## Future Investments Focus

### India Steel Production

- › Complete Kalinganagar expansion @ Rs.48,000/ton of Capex
- › Invest in Raw Material Expansion @ Rs.2,600/ton to 50 MTPA of Iron Ore

### New & Allied Business

- › Electric arc furnace low carbon Steel
- › Composites
- › Graphene
- › Medical Materials
- › Services and Solutions
- › Ferro chrome business

### Downstream Portfolio in India

- › Cold Rolling Mill – From 4.3 MTPA to 6.5 MTPA
- › Ductile Iron Pipes - From 0.2 MTPA to 1 MTPA
- › Tinplate – From 0.4 MTPA to 1 MTPA
- › Tubes – From 1.3 MTPA to 2 MTPA
- › Wires – From 0.45 MTPA to 1 MTPA

Average India Capital Expenditure estimated @ Rs. 10,000- 12,000 crores per annum over next 5 years (excluding potential acquisitions)



## Clusterization of Indian Business

Optimisation of network and resources

Common customer face

Improved financial management



## Tata Steel BSL Merger

Integration

Cost Control

Synergies



## Investing in New Growth Engines

New Materials

Steel Recycling & Electric Arc Furnace

Infrastructure and Logistics

Port Project



## European Business

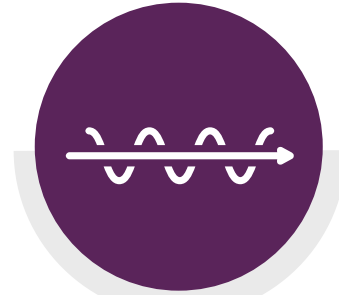
Separate UK & Netherlands

New organization and governance structures

Overhead and fixed costs reduction

Discussions with Governments on De-carbonization roadmap & Investment

Disciplined Capital allocation



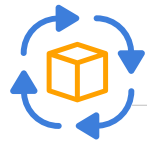
## Simplification

100 entities liquidated/merged over 2 year

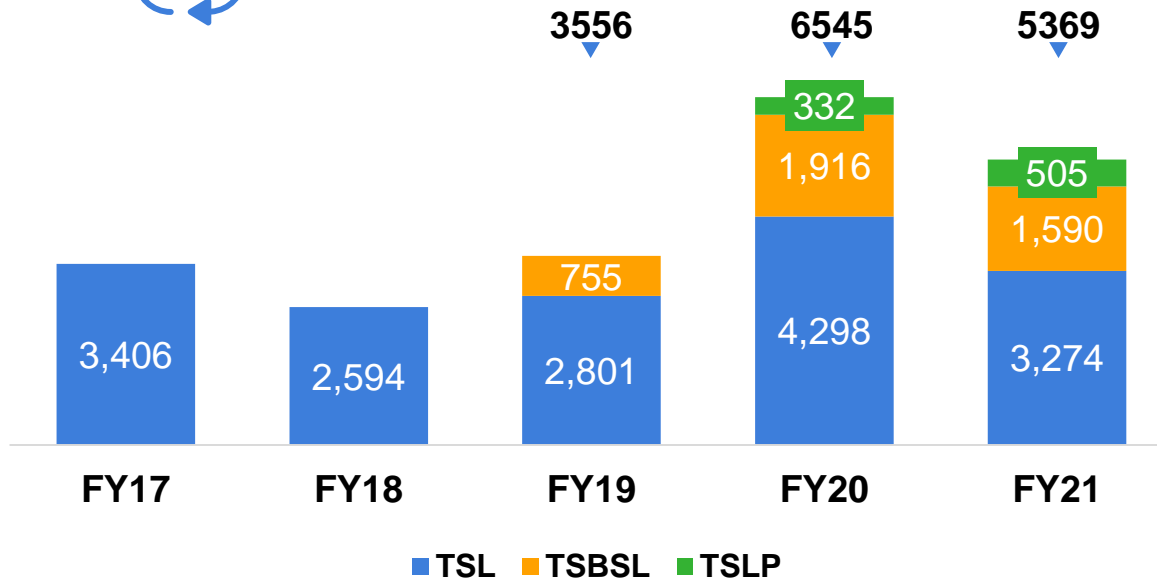
Continuous Journey



## 5 year cost savings at Tata Steel India operations



### Cost and Supply chain Optimisation



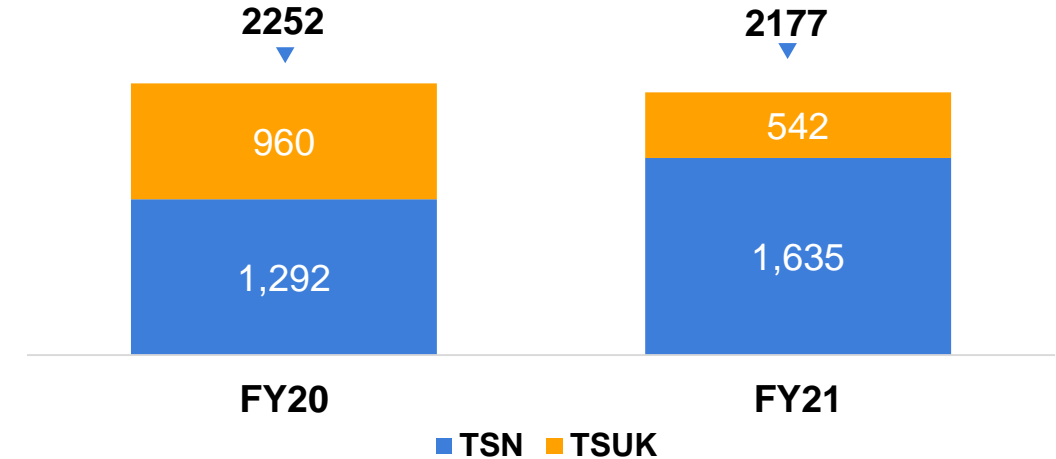
### FY2022 Target:

Fixed cost reduction of ~Rs.2,000 crores

## Transformation programme at Tata Steel Europe



### Overhead cost reduction



### FY2022 Target:

Fixed cost reduction of ~£200 mn

Target to reduce India operation fixed Cost by ~10 % over the medium term



## Strategic Alignment

- Transition to Low carbon business with pathway milestones



## Climate aligned Capital Allocation

- Carbon Pricing integral in decision making



## Assessment of Risk and Opportunities

- Reporting based on TCFD Framework



## Reporting of ESG Performance

- Integrated Reporting
- Dow Jones Sustainability Index
- CDP (Carbon Disclosure Project)



## Financing

- Align and Report Fund based Green Finance Framework



# Pathway for future financial strategy



## Short-term FY2022

- Strong earnings and cashflow performance expected
- Investment Grade Financial Metrics
- Significant reduction in Overseas debt
- Continued focus on Capital allocation and cashflow management

### Target Leverage

Net Debt/EBITDA at 2x  
Interest Cover at 4x



### Target RoIC

15%



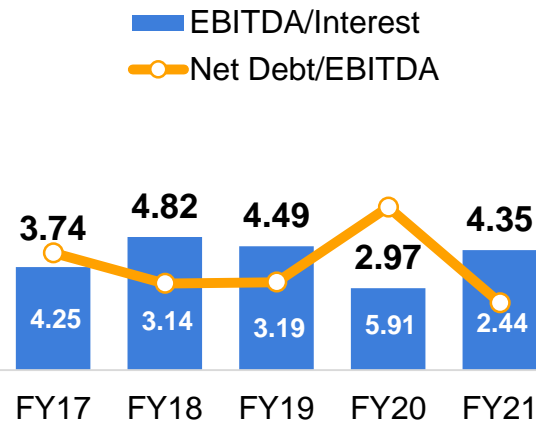
### Dividend Policy

Robust dividend  
pay-out

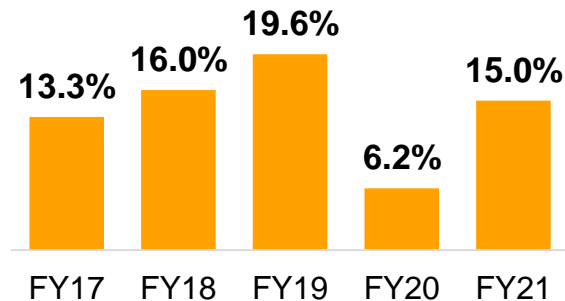


### Last 5 years performance

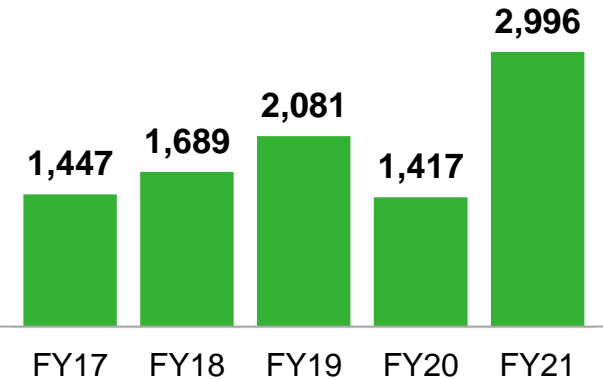
## Medium-term (Across cycle targets)

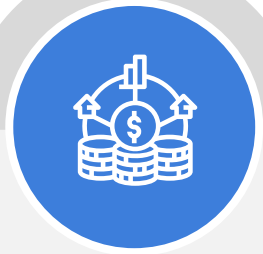


### RoIC (%)



### Dividend (Rs. crores)





Leverage Management remains an Enterprise Priority



Capital Allocation towards Growth and De-risking with additional capacity



Industry Benchmark Return Profile



Initiate gradual Greening of Balance Sheet



Target Financial Metrics in line with Investment Grade Rating

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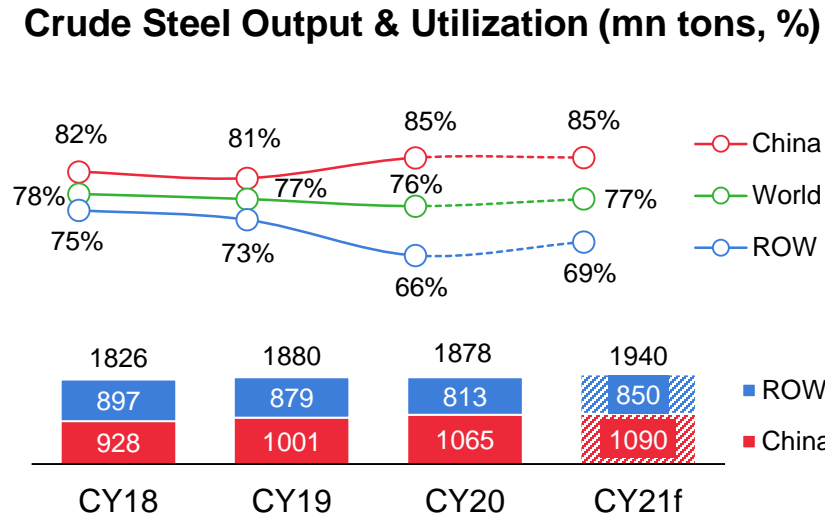
**Mr. Peeyush Gupta**

**Vice President  
Steel Marketing & Sales**

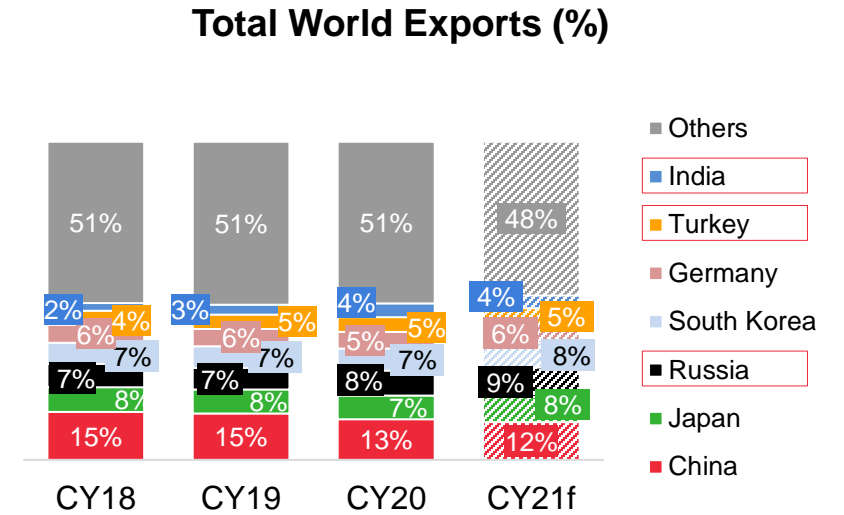
# Global Steel Industry has witnessed four key structural changes in 2020



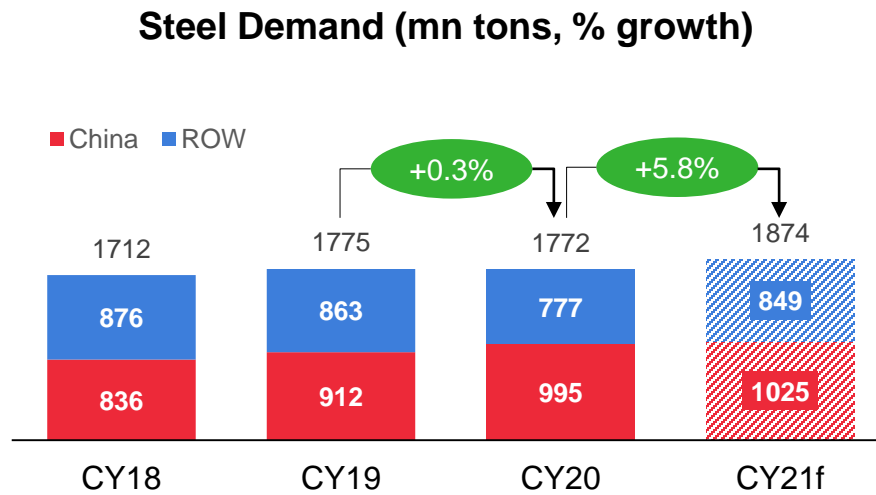
Rise in gap between China & ROW



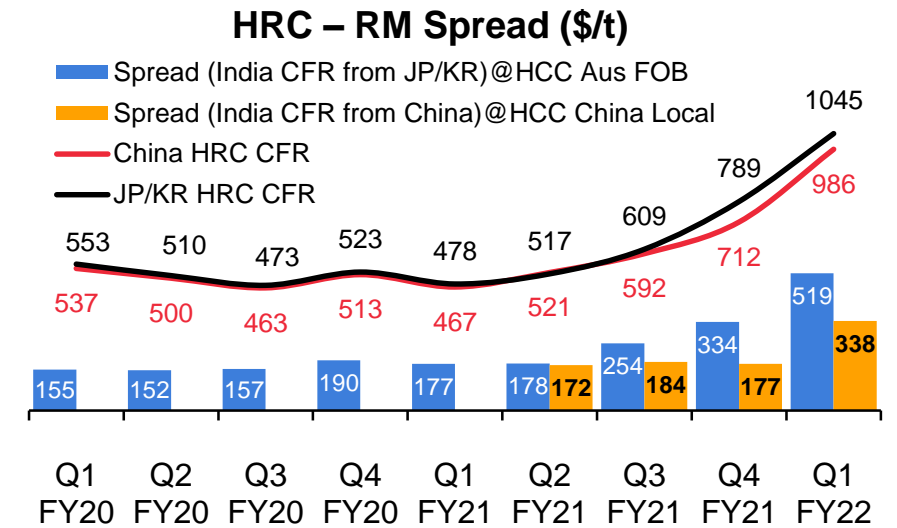
Fall in China's exports



ROW demand to remain below pre-pandemic



Varied Spread levels (China vs Rest)

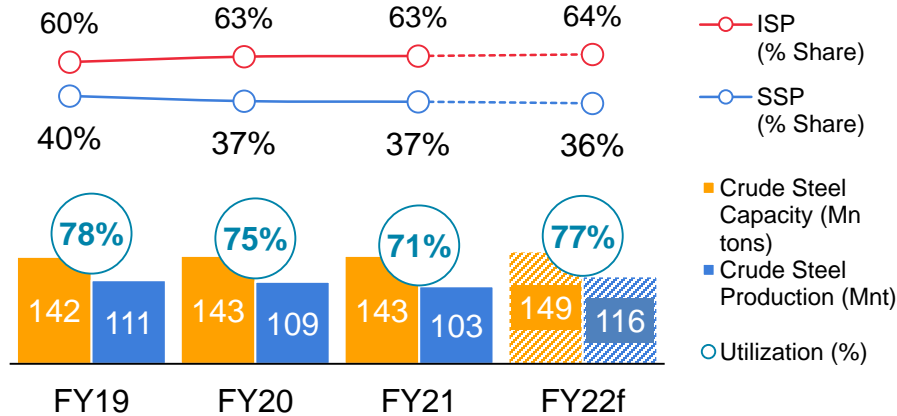


# Indian Steel Industry has also witnessed four significant developments in 2020



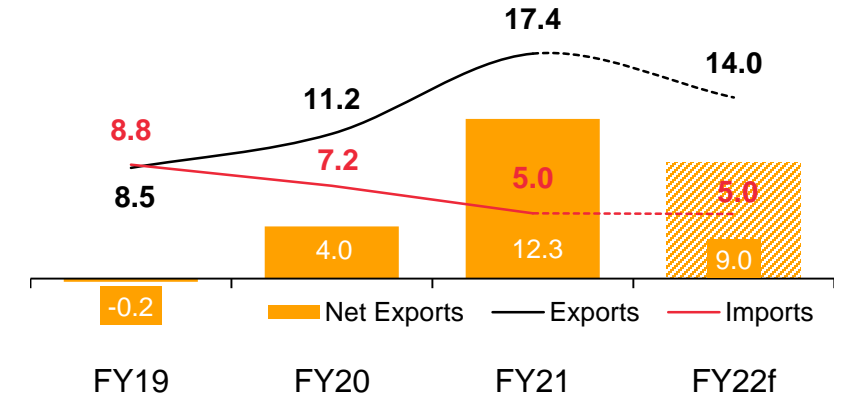
Utilization levels remained high

## Crude Steel Output & Utilization (mn tons, %)



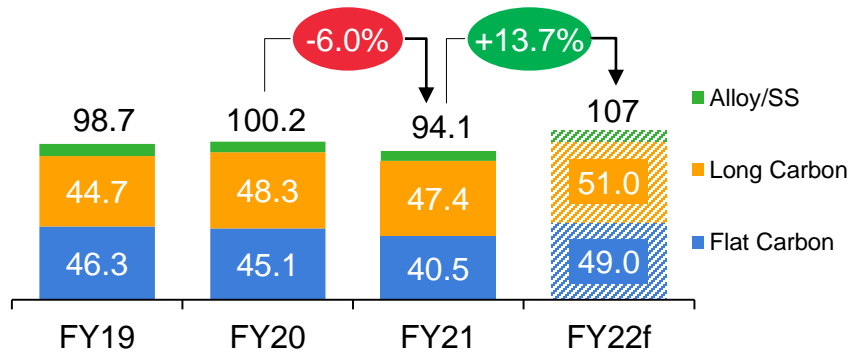
India net exporter

## Steel (Finished + Semis) Net Exports (mn tons)



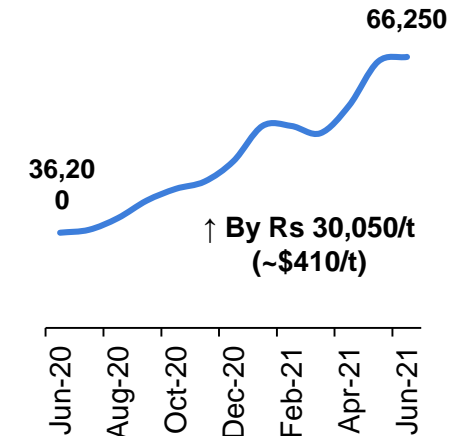
Steel demand to cross pre-pandemic levels

## Steel Consumption (mn tons)

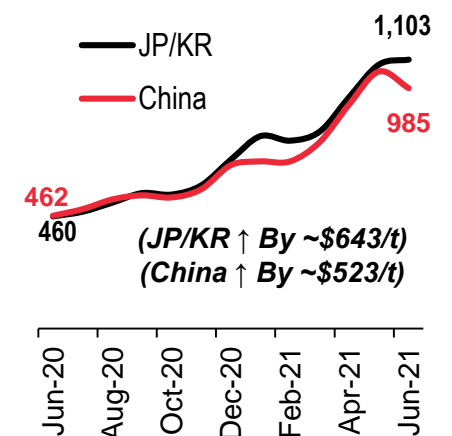


Domestic Price at a discount

## Domestic HRC Delhi (Rs./t)



## Imported HRC Mumbai (Rs./t)

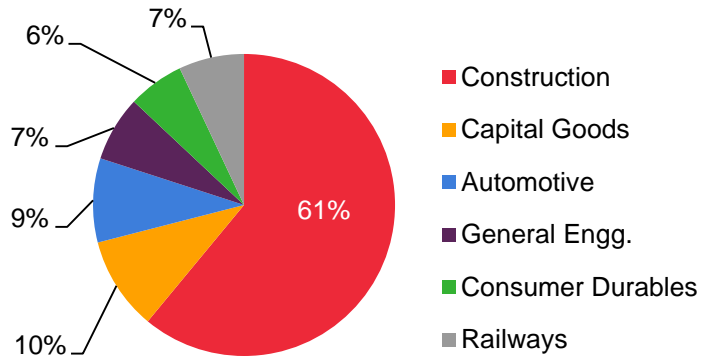


# Tata Steel caters to ~87% of domestic market and has a unique way of segmenting the market



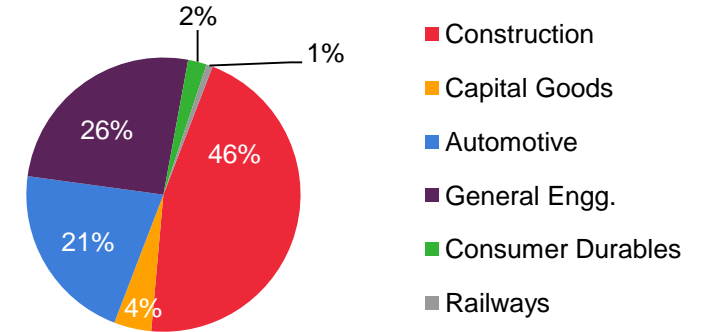
Construction consumes most of steel in India...

### Sector-wise India steel demand (FY21, 94.1 mn tons)



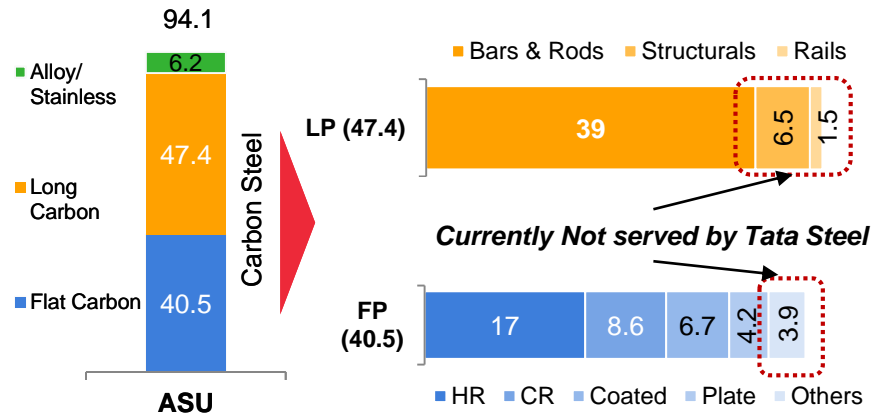
...However, Tata Steel has a significant play in automotive

### Tata Steel: Sector-wise domestic sales (FY21, 13.7 mn tons)

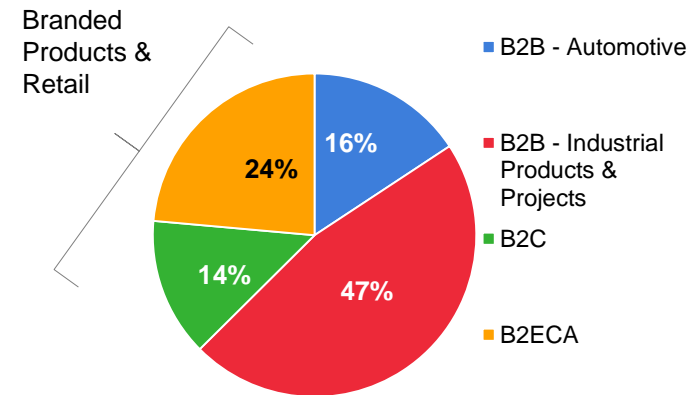


Present across multiple products

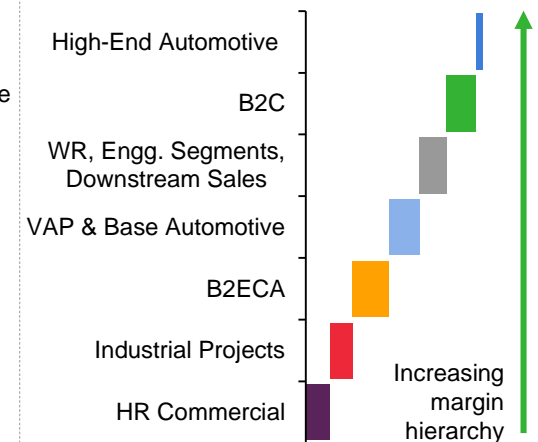
### Sector-wise India steel demand (FY21, 94.1 mn tons)



### Vertical-wise Tata Steel domestic sales (FY21, Steel only)

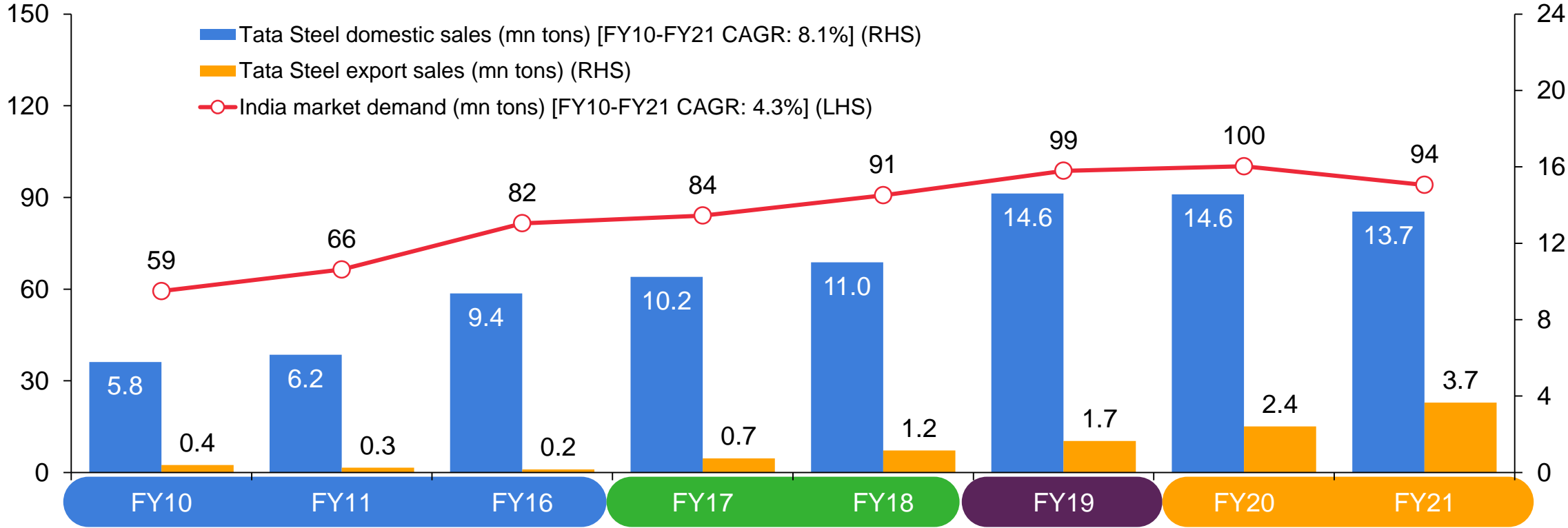


### Domestic Sale Mix\*



Others: Tinplate; Electrical Steel, Large Dia. Pipes. Tata Steel makes Tinplate through its subsidiary 'Tinplate company of India Ltd'. Tata Steel is not present in Electrical Steel, Structurals and stainless steel; Industrial Projects include TMT, Semis, CR-IP, Galv-IP & FHCR-IP; \*TSL Standalone domestic sales for FY21; WR: Wire Rods; VAP: Value Added Products (Hot Rolled); ASU: Apparent Steel Use HR: Hot Rolled; CR: Cold Rolled; ECA: Emerging Corporate Accounts

# Demonstrated track record of superior growth as compared to the market...with consistent and strategic exports since 1988



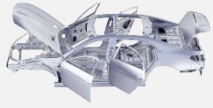
Jamshedpur expansion, Thin slab Caster, Continuous Galvanizing Line # 3, Continuous Annealing Line

Kalinganagar Phase I

Bhushan Steel acquisition

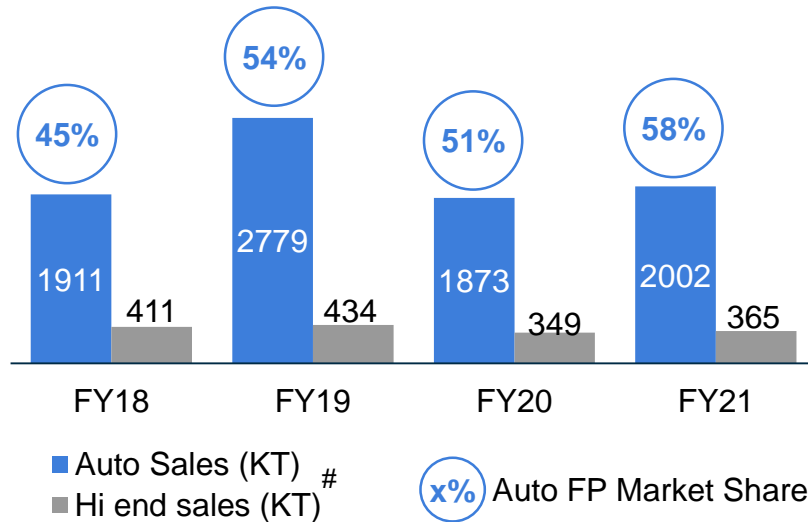
Usha Martin's steel business acquisition

# Market leadership enabled by capacity enhancement, brand rejuvenation and de-commoditization



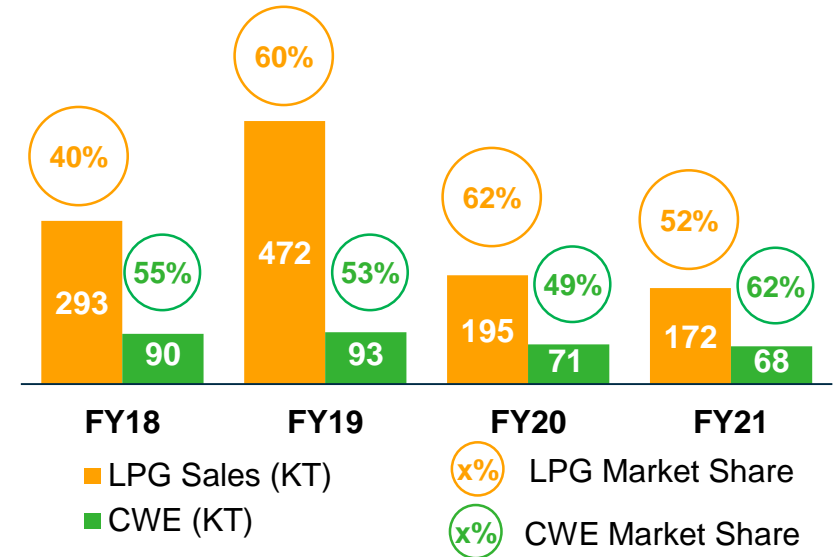
1 in every 3  
outer panels of  
cars

2 in every 3  
wheels



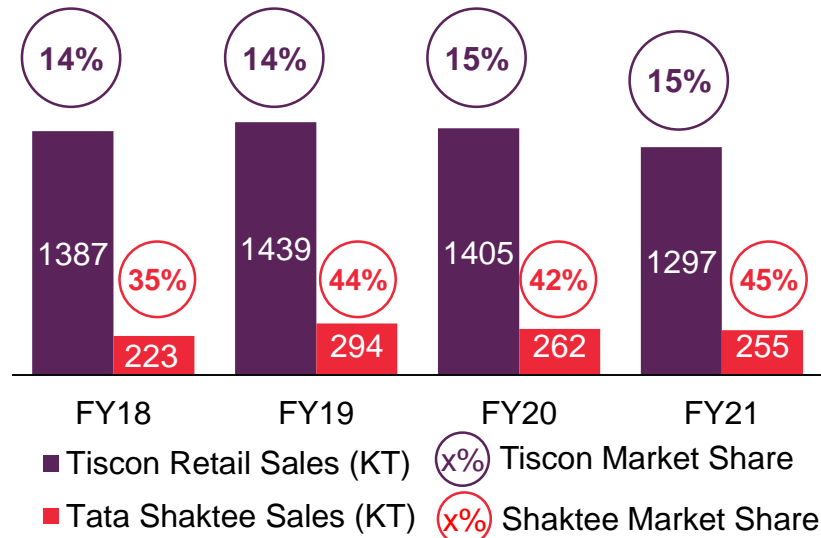
1 in every 2 LPG  
cylinders in India

2 in every 3  
continuous  
welding  
electrodes



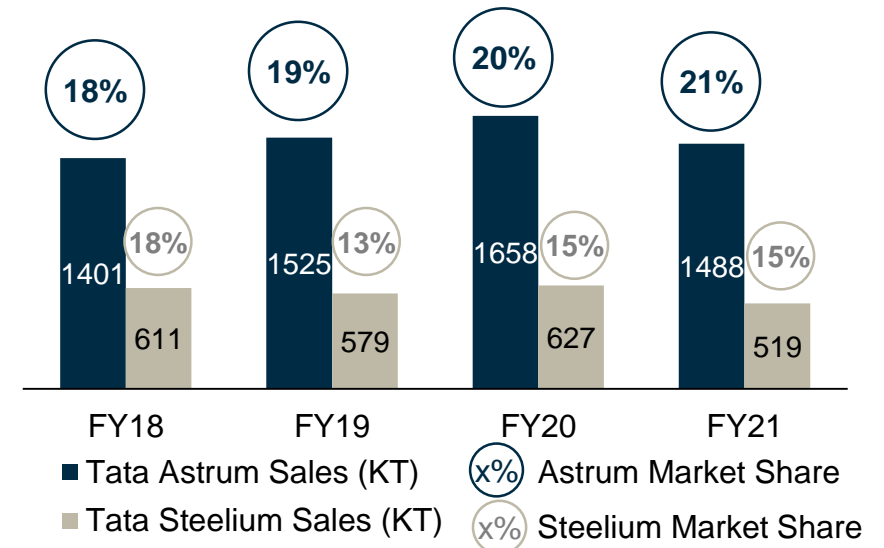
1 out of 2 GC  
roofs

Tata Tiscon - Rs.  
8,000 crores  
Brand



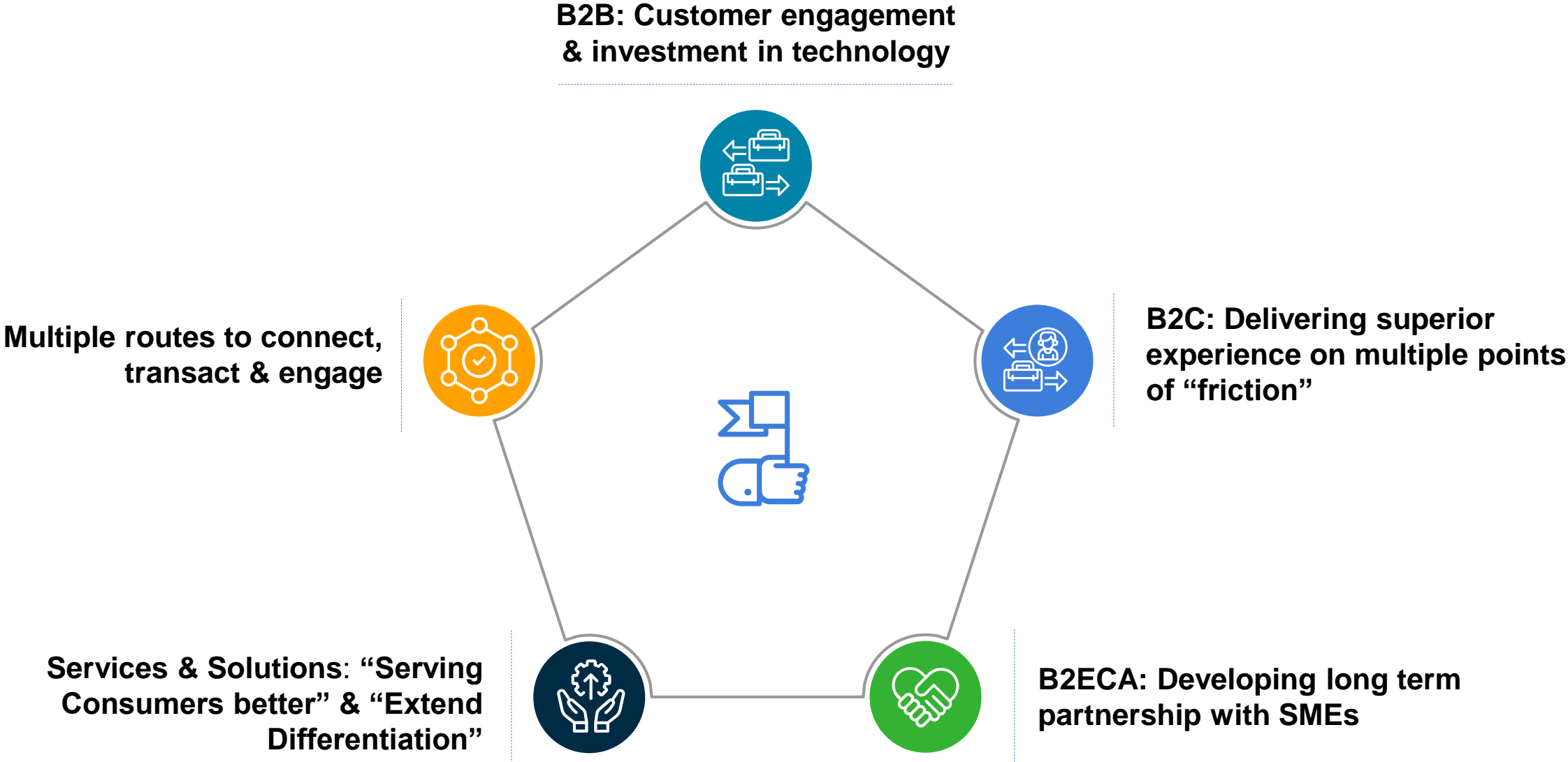
1st in the world  
laser marking on  
HR Coils (2019)

1st in branding  
CR (2003)

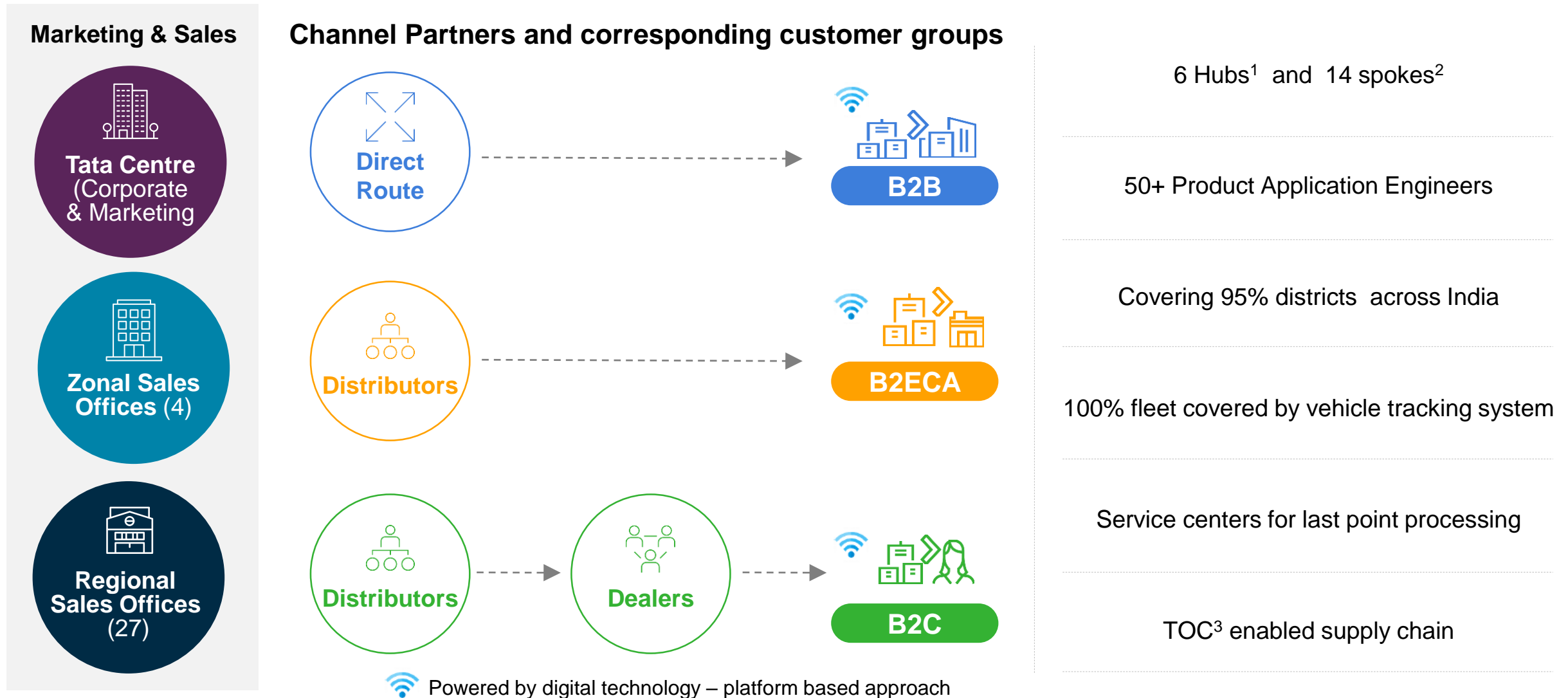




# Leadership initiatives across customer groups



# Leadership Enabler – 1: Tata Steel has designed multiple routes to market to connect, transact and engage with customer groups and enabled digitally



1. Hubs: large warehouses, 2. Spokes: Small warehouses ; 3. Theory of constraints; ECA: Emerging customer accounts (small & medium enterprises)

# B2B Leadership Enabler – 2: Customer engagement and investment in technology

## Advanced Technical Support



△ Value Analysis & Value Engineering

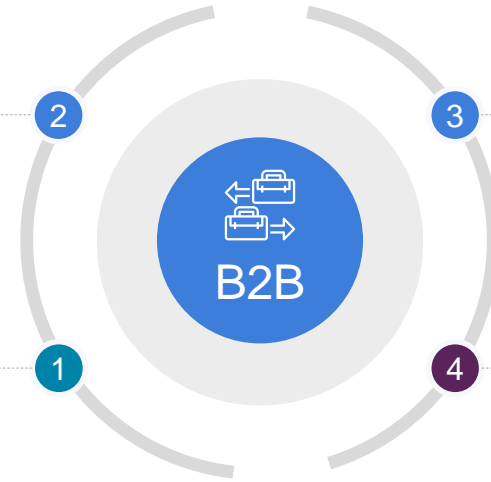
§ Early Vendor Involvement for new launches

## Customer Engagement



△ Cross-functional engagement through CSTs

△ Platforms for knowledge sharing:  
Driving Steel, Technology meets,  
Construction Conclave, Mat-e-Reality



△ Pioneering Practices

§ Unique in India



## Investment in Assets

§ Investments in new facilities: JCAPCPL, TSK CRM

§ Extensive network of steel processing centres



## Customer Obsession

§ Despatch efficiency

△ COMPASS : B2B Digital platform

# B2ECA Leadership Enabler – 3: Developing long term partnership through micro-segmentation and delivering delight to SMEs

## Customer Engagement



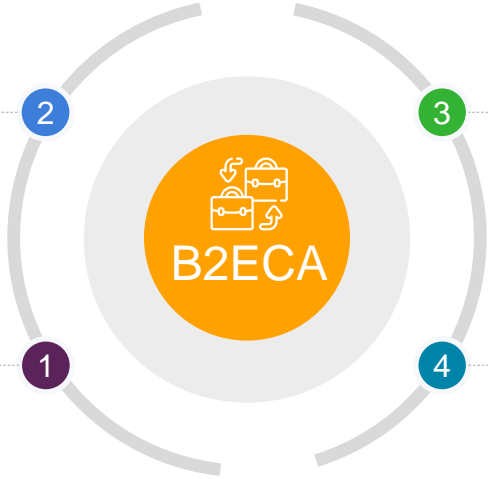
△ Ecafez initiatives

§ Forum of industry experts

## Micro-segmentation



△ Deep dive in 40+ micro Segment



△ Pioneering Practices

§ Unique in India



## Creating differentiation

§ Making customer smile

§ DIGECA: Enquiry management and analytics



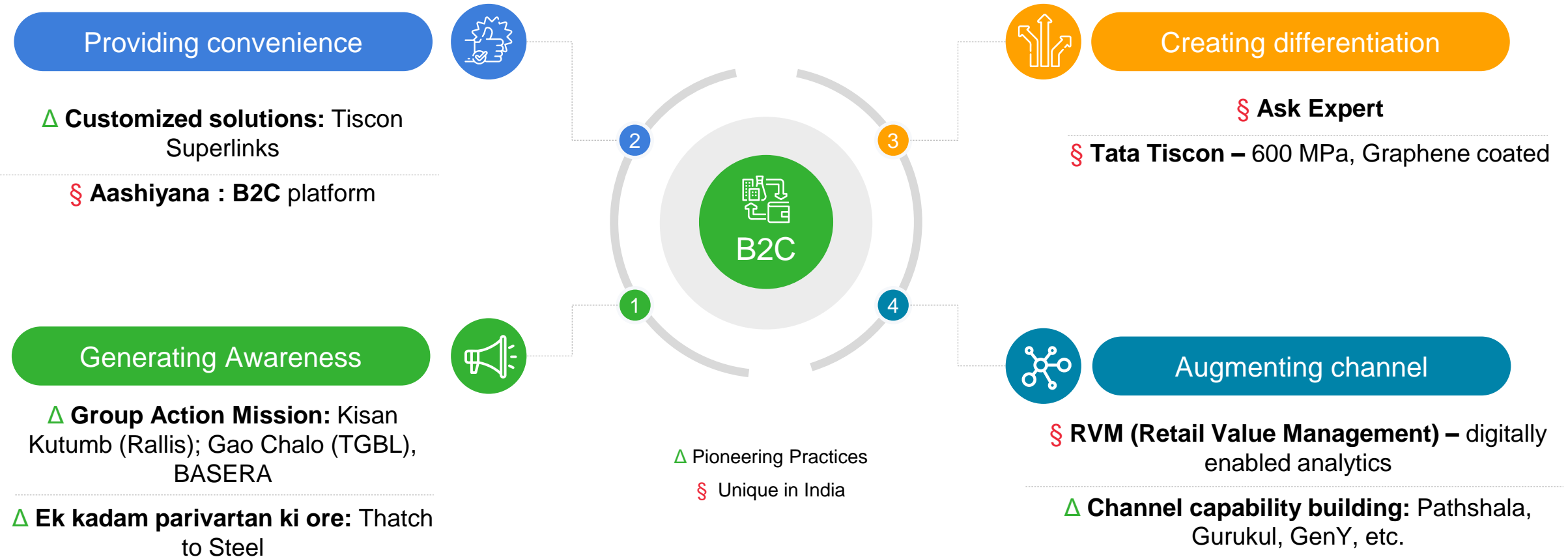
## Augmenting channel

§ ACE+ certified service centres

△ ECA financing initiative – Urja

SME: Small and Medium Enterprises; ECA: Emerging Corporate Accounts; VIU: Value in Use; ACE: Adequate, Competent, Excellent

# B2C Leadership Enabler – 4: Delivering superior consumer experience on multiple points of “friction”



# S&S Leadership Enabler – 5: “Serving Consumers better” and “Extend Differentiation”

## Business Context



Challenge of improving profitability



Narrowing Product Differentiation



Commoditisation of technology



Ease of market access & Competition



Higher premium on convenience & comfort



Steel based solutions for Society

Some of our S&S offerings



Tata Pravesh Doors



Tata Pravesh Windows



Raso-e – Modular kitchen



MobiNest-Portable cabins



AquaNest – Drinking-water-vending kiosk



EzyNest – Modular Toilet



AgroNest – Smart Onion Warehouse



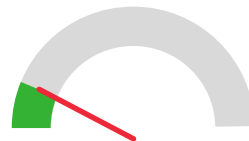
Anganwadi - Rural child care centre



Quarantine Cabins for Covid care

### Construction Solutions

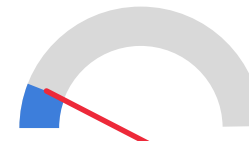
Rebar cost /Sq. Ft.: 150



**Construction cost/ sq.ft.:**  
1500-2000

### Pravesh

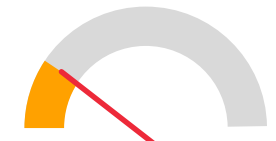
Galvano Price/KG: 80



**Doors Price/kg:**  
700

### Nest-In

Steel value/Sq. Ft.: 320



**Nest-In Solution Value/ Sq. Ft.**  
2000-2500

1	Strategic Roadmap 2030
2	Financial Strategy
3	Q&A Session – I
----- Break (4:00pm-4:15pm IST) -----	
4	Market Leadership and Future-fit Strategy
5	<b>Our Approach to ESG</b>
6	Technology and Innovation-led Transformation
7	Q&A Session – II



**Mr. Sanjiv Paul**

**Vice President  
Safety, Health & Sustainability**



# Sustainability at Tata Steel

## The Tata Ethos



**J. N. Tata**  
Founder of the Tata Group

In a free enterprise, the community is not just another stakeholder in the business but in fact the very purpose of its existence

We do not claim to be more unselfish, more generous or more philanthropic than other people. But we think we started on sound and straightforward business principles, considering the interests of the shareholders our own, and the health and welfare of the employees, the sure foundation of our success.

*Nagpur, 1895*



# Our sustainability framework provides guidance for developing and deploying sustainability initiatives across our value chain



## Our sustainability framework

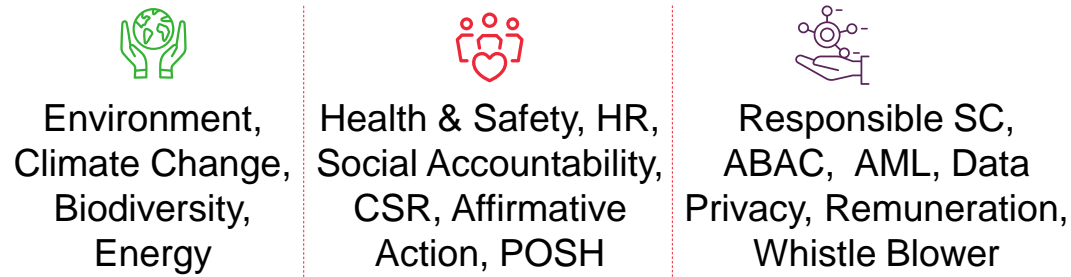
Vision

We aspire to be the global steel industry benchmark for **Value Creation** and **Corporate Citizenship**

Sustainability Pillars



Policies



## Our approach



**Sustainability Policy**

**Material Issues**

Environment

Social

Governance



**Strategy Development**

Strategic Objectives & Strategic Enablers

**Leadership in sustainability**



**Strategy Deployment**

Annual Business Plan and Long-Term Plan

# Our carbon footprint is best in class in the geographies we operate in, and our long term decarbonization roadmap is aligned with national commitments



## Key Enablers

Adoption of BAT

Maximizing scrap use

Raw material quality improvement

Greening of power mix

Scrap based growth (EAF) in India

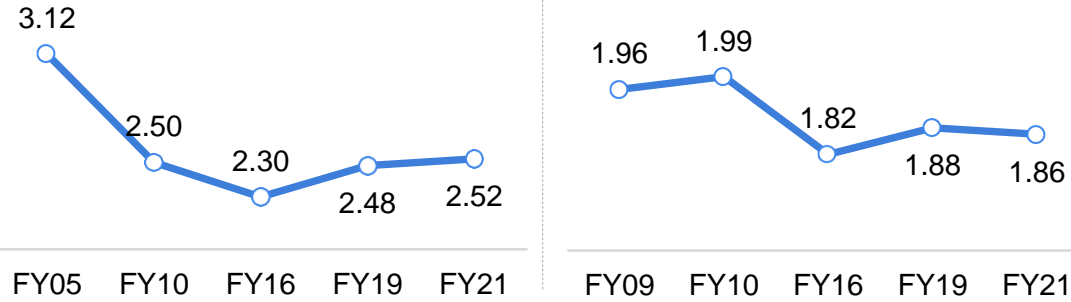
Collaborations with technology providers, startups and academia

## Performance Over the Years

TSI

Emission Intensity (tCO<sub>2</sub>/tcs) ↓

TSE



Worldsteel benchmark\*: 1.87 tCO<sub>2</sub>/tcs (Average of top 15% performers)

- **IJmuiden Steel Works** is amongst top 15% companies globally at 1.76 tCO<sub>2</sub>/tcs (FY20).
- **Jamshedpur Steel Works** is **Indian benchmark** at 2.29 tCO<sub>2</sub>/tcs (FY21).
- Our NatSteel plant at Singapore is **one of the more energy efficient EAF's** in the world at 0.5 tCO<sub>2</sub>/tcs

## Way Forward

TSI: Achieve <1.8 tCO<sub>2</sub>/tcs carbon emission by 2030

TSE: Strive for 30% reduction in specific emissions by 2030 over 2020 and carbon neutrality of steel making by 2050

# Water is a material issue for Tata Steel India, and we have reduced our specific water consumption by more than 50% in last 15 years



Water



## Key Enablers

Focus on 4-R principles (Reduce, Reuse, Recycle, Recovery) to minimize dependency on fresh water

Rainwater harvesting as additional source of fresh water

## Performance Over the Years

Reduction in Fresh Water consumption

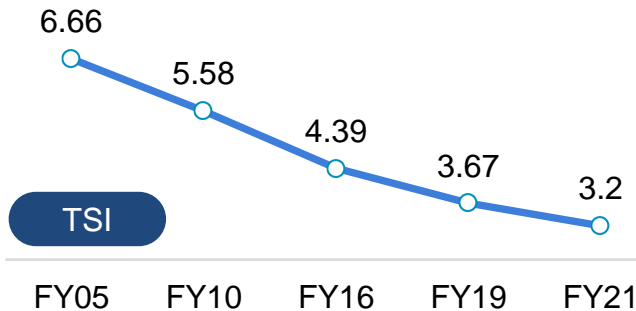
66%  
at TSJ  
since 2005

46%  
at TSK  
since 2017

52%  
at Tata  
Steel India  
since 2005

**Jamshedpur Steel Works freshwater intake @10 MTPA is less than that @5 MTPA**

Sp. Fresh Water Consumption (m<sup>3</sup>/tcs) ↓



Worldsteel range for best practice: 1.6 to 3.3 m<sup>3</sup>/tcs

## Way Forward

Achieve specific freshwater consumption of 1.5 m<sup>3</sup>/tcs by 2030

Progress towards water neutrality

# We have made significant improvement in air quality in the geographies we operate in



## Dust Emissions



### Key Enablers

Continuous upgradation of APC equipment across all sites

Adoption of BAT to achieve best in class performance

Real-time monitoring of emissions enabling better operating regime

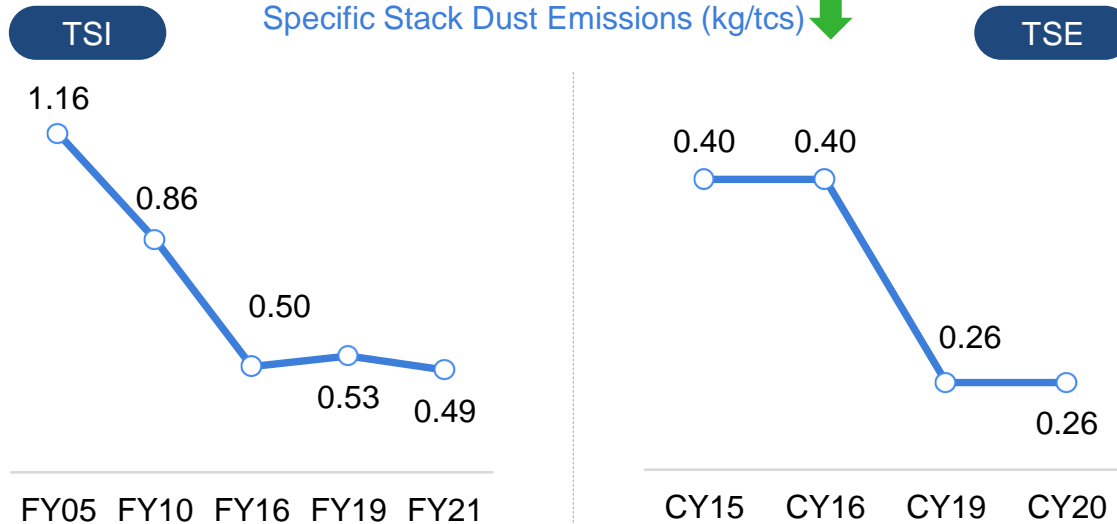
### Performance Over the Years

Reduction in Specific Stack Dust Emission

**75%**  
at TSJ  
since 2005

**62%**  
at TSK  
since 2017

**58%**  
at Tata  
Steel India  
since 2005



### Way Forward

Strive for benchmark status in specific stack dust emissions by 2030

# Adoption of circular economy principles for efficient use of resources



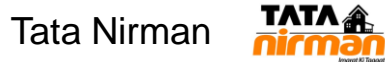
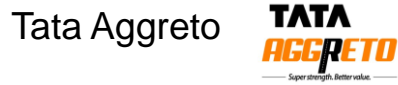
Circular Economy



## Key Enablers

Use of by products in value added applications

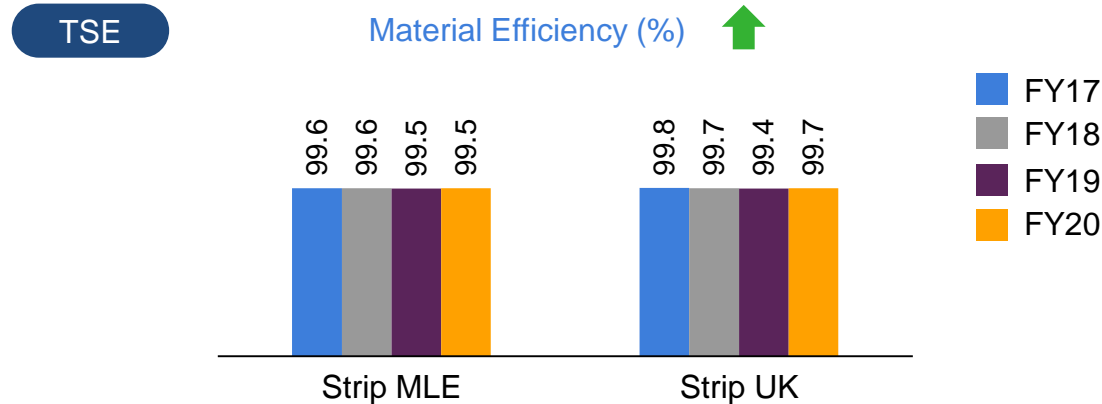
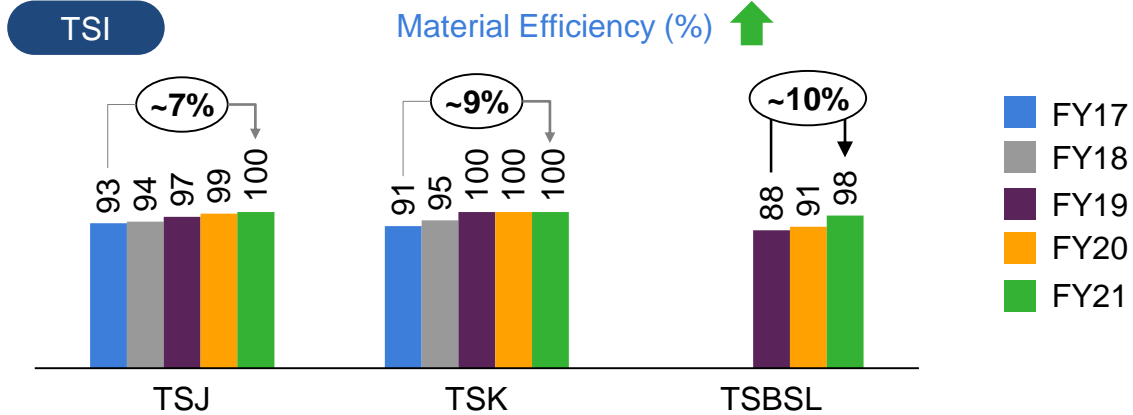
100% steel making slag utilization across sites (India) through introduction of new brands



Setting up of SRB to harness future recycling opportunities in India: 1st plant setup in Rohtak (FY21)



## Performance Over the Years



## Way Forward

Achieve 99 % material efficiency by 2025

Scale up scrap-based Steel Recycling Business in India

Increase EBITDA of our By-product business in India by more than 2 times by 2030

# Conservation and restoration of biodiversity is integral to our raw material operations



## Biodiversity



### Key Enablers

Collaboration with IUCN for developing Biodiversity Policy (2016) and development of BMPs

Focus on Biodiversity conservation & restoration projects

Thrust on use of native species for restoration plans

### Key Results

- One of the first companies in India to have a Biodiversity Policy
- All our Raw Material locations have Biodiversity Management Plan which is integrated with the Annual Business Plan
- **Key Biodiversity restoration projects:**
  - **Jugsalai Eco Park (25 Ha)** Land-Use Transformation from Muck to Eco-Park
  - **Sir Dorabji Tata Biodiversity Park (100 Ha)** created on mined out area at West Bokaro
  - **Ecological Park (12 Ha)** developed on MSW dumpsite at Jamshedpur
  - Rejuvenated **CRM Bara Pond (5.6 Ha)** at Jamshedpur
  - Facilitating **nesting and breeding of Common Terns in Wales, UK** (nationally acclaimed conservation project)

### Way Forward

Develop BMPs for all operating sites

Aspire to achieve no net loss of biodiversity

# Committed to reduction of environmental footprint of our products using Life Cycle Approach



## Product Sustainability



### Key Enablers

Increase in coverage of operating sites and products under LCA

Product disclosure through EPDs & Ecolabels (GreenPro in India)

All NPD decisions based on the sustainability assessment score in TSE

### Key Results

#### TSI

- Developed GreenPro framework for steel rebars in Collaboration with CII GBC (1st time in India)
- 1st GreenPro certified rebar brand in India**
- HabiNest** (Light gauge steel frame construction solutions) **LCA comparison with conventional structure** (Critically reviewed by 3<sup>rd</sup> party)
  - 53% reduction in CO<sub>2</sub> emissions
  - 40% reduction in water consumption



#### TSE

- One of the oldest **EPD programs** (~15 years)
- Only company in steel sector to operate a third party verified EPD program** aligned with EN 15804
- Developed 50 EPDs for its site & downstream products
- Recognized by WorldSteel Steelie Award for excellence in LCA category

### Way Forward

Disclose environment performance of 100% of products

Use LCA approach to differentiate our products & brands

Influence consumer behavior by creating awareness on ecofriendly products

# Committed to building a sustainable & resilient supply chain by proactively engaging with our supply chain partners



## Responsible Supply Chain



### Key Enablers

#### TSI:

Release of Responsible Supply Chain Policy (RSCP) to formalize our expectations on sustainability with our supply chain partners

Initiation of 3<sup>rd</sup> party assessment of ESG risks of critical supply chain partners

#### TSE:

Adhere to BES 6001

Zero Carbon Logistics Program

IRBC programme partner

### Key Highlights

- **>200 critical suppliers** assessed on RSCP in FY21. Another **400** to be covered in FY22 (covering 58% of total procurement spend)
- Tata Steel became member of ResponsibleSteel in 2020
- **All products** at UK and NL certified to BES 6001
- **98%** of 1029 suppliers adhere to Responsible Procurement Policy at TSE



#### 4 Principles of Responsible Supply Chain Policy

##### Principle 1

Fair Business Practices

##### Principle 2

Health & Safety

##### Principle 3

Human Rights

##### Principle 4

Environmental Protection

### Way Forward

Cover 100% critical supply chain partners for ESG risk assessment as per RSCP principles

Get site certification for all operating sites under ResponsibleSteel by 2025

Integrate ESG performance of supply chain partners in procurement decision making



# Zero harm is highest priority for Tata Steel Group



## Occupational Health & Safety



### Key Enablers

Build (safety) leadership capability

Risk based approach for hazard identification and risk mitigation

CSM & behavioural safety programs

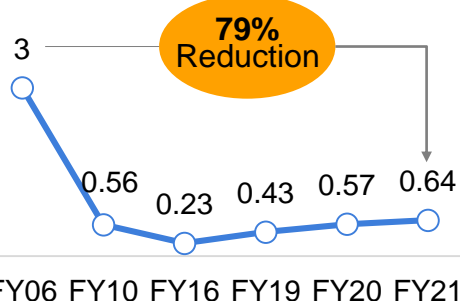
Excellence in Process Safety Management

Establish industrial hygiene and improve occupational health

### Performance Over the Years

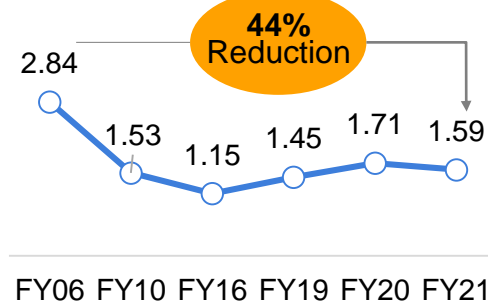
TSI

LTIFR



TSE

LTIFR



#### Safety highlights:

- **Eliminated fatality** on roads with infrastructure development, zero cyclist policy and digital interventions inside steel works.
- **Sustained Zero for last 8 years** in 4 fatality potential hazards under Confined space, Fire, Gas exposure & Drowning at TSI
- **96% reduction** in Tier-1 (Red Risk) process safety incidents at TSI through deployment of HSE Risk Management system & Centre of Excellence (CoE) concept since FY19
- Capability building **through state of art training facility (SLDC)**, simplification of safety standards and e-learning modules

#### Occupational Health:

- **21 basis points** improvement in TSI **Health Index** since FY19
- Health Champion Programme at TSE

#### COVID Measures:

- Deployed **4000+ PODs<sup>1</sup>** across TSI to tackle Covid-19 Pandemic

### Way Forward

#### Achieve Zero Harm Through

Reinforce positive safety culture and behavior

Enhance capability through technology enablement

Multi skill vendor employees

Reduce ergonomic risk factors by ergo risk assessment & implementing control measures.

LTIFR: Lost Time Injury Frequency Rate per million-man hours worked, SLDC: Safety Leadership Development Center, CSM: Contractor Safety Management  
TSE: Tata Steel Europe, TSI: Tata Steel India (TSL Standalone + TSBSL + TSLPL), HSE: Health, Safety & Environment

1. A 'POD' is a self-sufficient group, comprising both own employees and contractors, with self-contained skill-sets to perform the intended jobs

# Fostering a culture of people care



## People Care



### Key Enablers

Deliver best in class experience and build a unique employer brand

Drive Agility thru Behavior & Work practice changes

Focus on Diversity & Inclusion

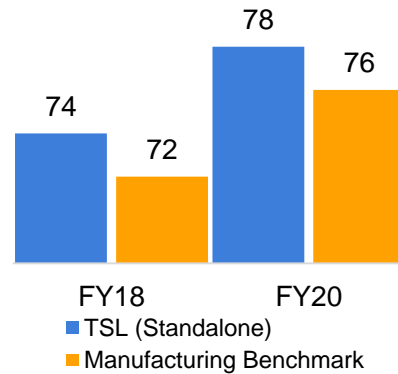
Flexible working methods

Focus on Health & well being

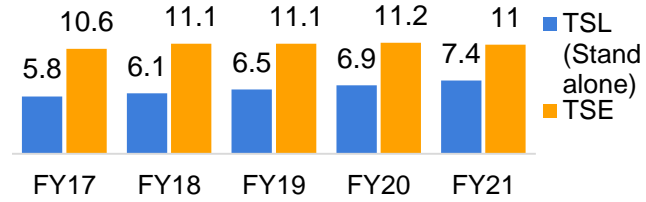
Upskill & democratize Learning

### Key Highlights

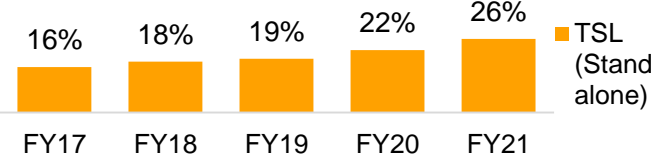
Employee Engagement Scores



Women in Workforce (%)



Women recruitment trend\*



#### Diversity & Inclusion

- **Launch of MOSAIC** – the organization wide Diversity Resource group
- **17.2%** Affirmative Action community in workforce
- Deployment of **women in mining and manufacturing** - change in law
- LGBTQ+ Employee Resource Group **WINGS**
- **Equal Opportunity Policy**, focus on **Persons with Disability**

**Agility With Care** – POD working, Proactive testing and vaccination, Digital tracks for contact tracing and Health monitoring, Agile working policy to facilitate remote working. Benchmark **COVID Social Security Schemes**

**Learning & Development** – **Skill certification** of 100% of contract workforce (75000+), launched award winning E-learning venture **Digi-e-shala**, Learning & development **investment of Rs. 151 crores** in FY21

### Way Forward

Sustain Best Workplace in Manufacturing Sector in India

Sustain benchmark status in employee engagement

Improve diversity in workforce : target of 25% gender diversity in Manufacturing & Mining locations

\* Managerial Workforce (Officers)

# Working with communities to address their most pressing development challenges



## Key Enablers

Large scale, replicable change models addressing core development gaps

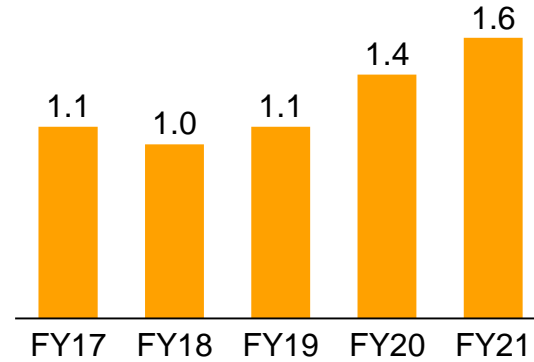
Cocreation of strategies, outcomes and institutions with and for those who are left behind

Allocation of best talent and resources for societal outcomes

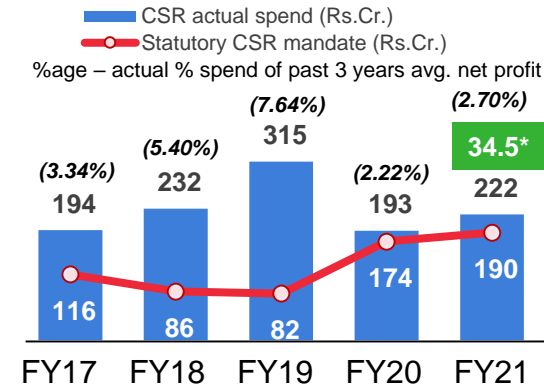
Collaborations which deepen SDG 2030 agenda amongst communities

## Performance over the years

1.6 Million lives reached through CSR initiatives (FY21)



CSR spend consistently beyond statutory mandate



## Way Forward

Facilitate transformative, efficient and lasting solutions to the development challenges of 10 million people per year by 2030

Foster an active community of changemakers

Establish Tata Steel Foundation as 'partner of choice' for deep societal impact in Eastern India

- Education: 1,200+ habitations made child labour free, while working on learning and governance of 3,300+ government schools in remote Jharkhand and Odisha.
- Maternal And Newborn Survival Initiative (MANSI), worked with ASHA cadres to reduce CMR by 28% in 3 years in 12 blocks of Jharkhand and Odisha.
- Samvaad, curates dialogue on indigenous identity which has reached 157 tribes from 25 Indian states and representatives from 15 countries.
- Livelihoods programmes have enhanced annual incomes of 35,000+ households by Rs 65,000 on average.

ASHA: Accredited Social Health Activist; CMR: Child Mortality Rate; FY19 CSR spend includes one-time upgradation of the Meherbai Tata Memorial Hospital, Jamshedpur cancer centre; In FY21, further to Rs 222 crores overall CSR spend, an additional Rs 34.5 crores was spent on Covid facilities benefiting communities but not counted as CSR spend – 2.70% is with Rs 222 crores and Rs 34.5 crores combined

# Standing with the nation during COVID-19 pandemic



**16.5 lakh**  
Lives Reached out

**15,000+**  
Hours of Volunteering



(Figures updated till May 2021)

## Liquid Medical Oxygen

- › 61,000 tonnes Liquid Medical Oxygen supplied



## Medical Support (COVID care facilities)\*

- › 1,187 beds at Jamshedpur
- › 150 beds at Kalinganagar
- › 500 beds at Jajpur
- › 230 beds at Angul
- › 639 beds across our operational areas in Jharia, West Bokaro, Noamundi, Joda and Gopalpur

## Supporting the community

### #ThoughtforFood:

27 lakh meals provided to Covid+ and economically distressed households.

### #StitchinTime:

1.01 lakh cloth masks made by 194 women headed households and distributed to frontline health workers.

### #CashforWork:

Short term income of Rs 950 enabled for 2,860 distressed households, including online vegetable retail system for marginal farmers.

### #DigitalBridges:

94,349 migrant workers across 24 states reached with aid and counselling.

### #LockdownLearning:

1.36 lakh children in remote Jharkhand and Odisha continued their learning journeys through a bridgital model.

### #ApnokiSuno:

Collaborative ecosystem to overcome vaccination and early diagnosis hesitation in rural communities.

\* Peak capacity during the pandemic & includes owned & managed, supported as well as subsidiary hospitals

# Governance: Demonstrating 'Leadership with Trust'



## Board Committees

Audit	CSR & Sustainability	Nomination and Remuneration
Risk Management	Safety, Health and Environment	Stakeholders' Relationship

50% Independent Directors

10% Woman Directors

~100% Attendance



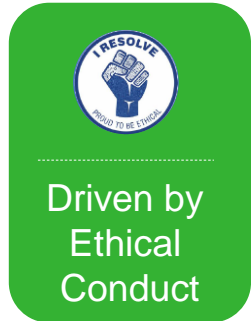
- ABAC
- Affirmative Action
- AML
- Biodiversity

- Climate Change
- CSR
- Data Privacy
- Energy

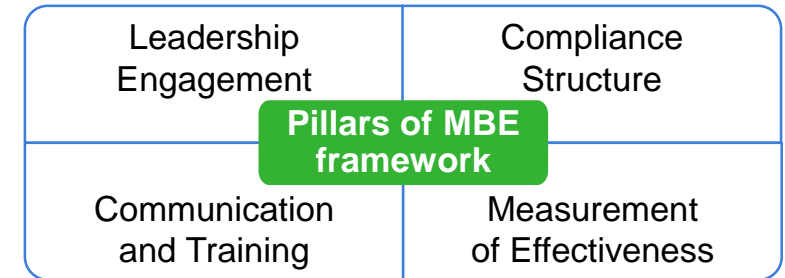
- Environmental
- Health & Safety
- Human Resource
- POSH

- Remuneration
- Responsible Supply Chain
- Social Accountability

- Whistle Blower



- Guided by the Tata Code of Conduct (TCoC)
- Compliance to all regulatory laws and corporate governance guidelines
- Deployed MBE framework that reflects our commitment to shared values and principles.



**GRI** One of the first companies in India to adopt GRI framework for Sustainability reporting in 2000

**IR** First company in India to publish Integrated Report in FY2015-16

Member of **Dow Jones Sustainability Indices**  
Powered by the S&P Global CSA

Disclosing since 2012

**CDP SUPPORTER 2020** Disclosing since 2006: Climate Change  
2014: Water

# Our efforts are recognised globally and nationally



TSL and TSE recognised as 'Sustainability Champions' by worldsteel (4<sup>th</sup> time in a row)



Safety & Health Excellence Recognition 2020 for Digitalisation of Process Safety Performance Indicators (PSPI)



Recognised as the world's most ethical companies for the 10<sup>th</sup> time by Ethisphere Institute



Rated 'A-' (Leadership band) for our Climate Change and Supply Chain disclosure



Certified as the Best Workplace in Manufacturing 2021



3 Assets recognized as Global Lighthouses by WEF (Jamshedpur, Kalinganagar and IJmuiden)

Member of **Dow Jones Sustainability Indices**  
Powered by the S&P Global CSA

Rated amongst top 5 Steel Companies globally.



Dun & Bradstreet Corporate Award 2019 in the category of Corporate Social Responsibility



Recipient of Prime Minister's Trophy for 11 times (out of 25) for the Best Performing Integrated Steel Plant

1	Strategic Roadmap 2030
2	Financial Strategy
3	Q&A Session – I
----- Break (4:00pm-4:15pm IST) -----	
4	Market Leadership and Future-fit Strategy
5	Our Approach to ESG
6	<b>Technology and Innovation-led Transformation</b>
7	Q&A Session – II



**Dr. Debashish Bhattacharjee**

**Vice President  
Technology & New  
Material Business**

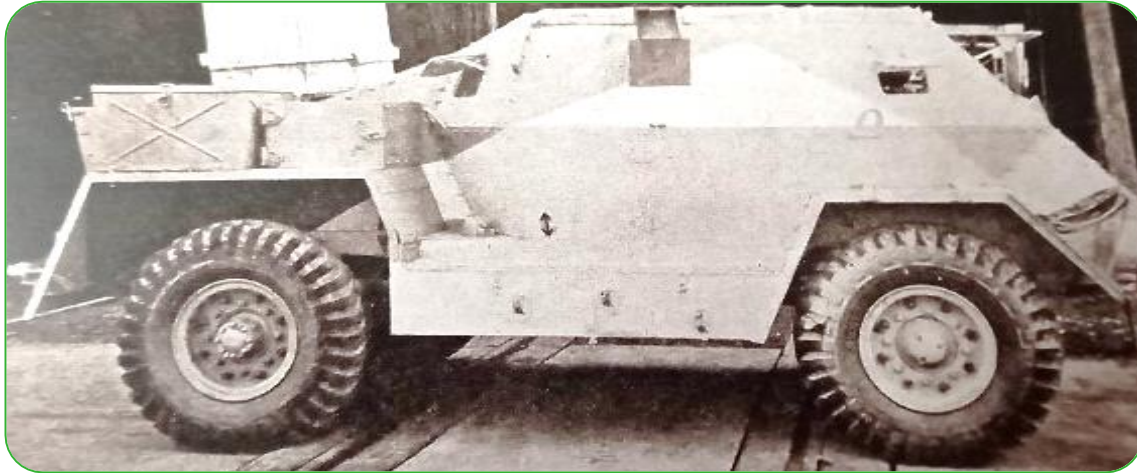
# Architecture for discussion



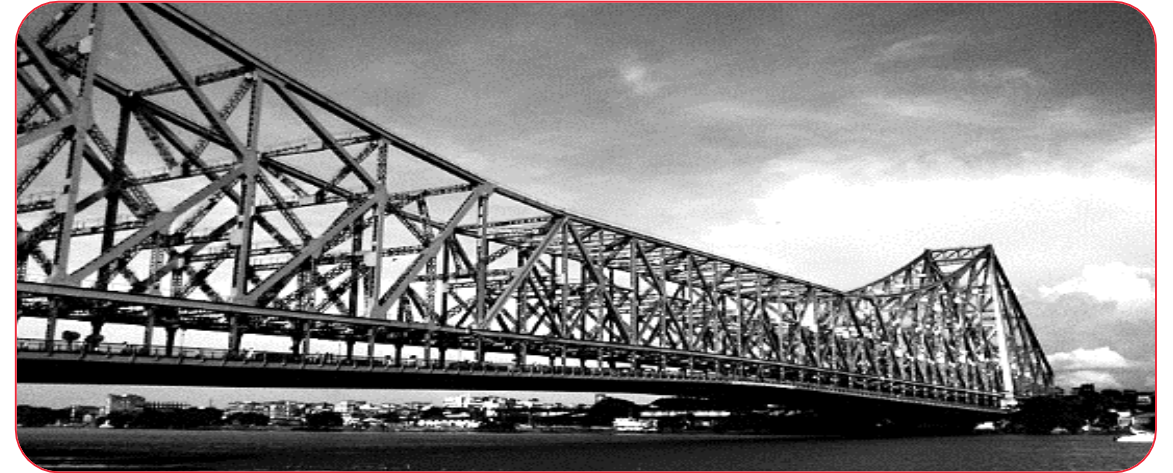


# Technology has always been at the heart of Tata Steel

Developed steel grades for light armour vehicles during second world war (1940)



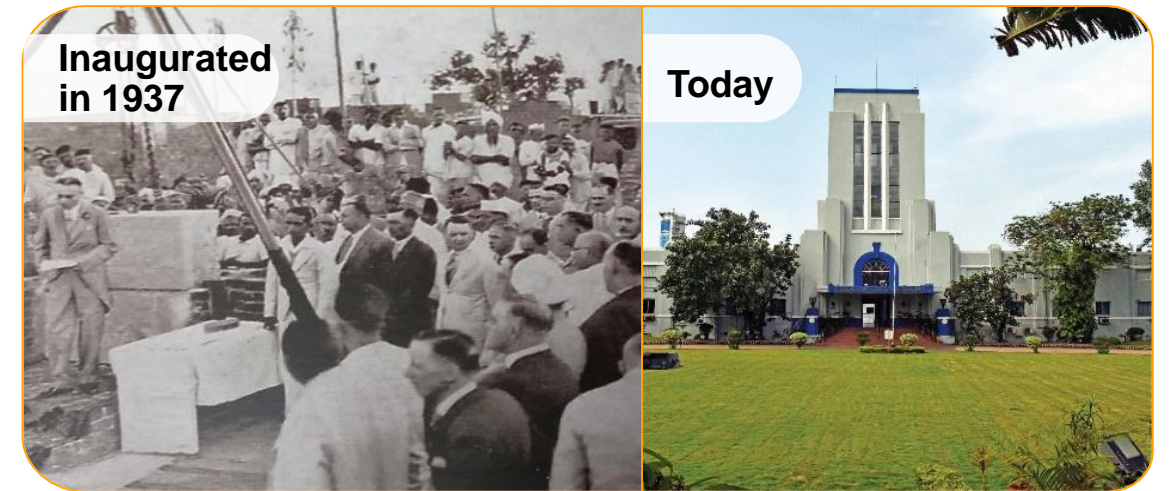
Supplied steel for Howrah bridge (1943)



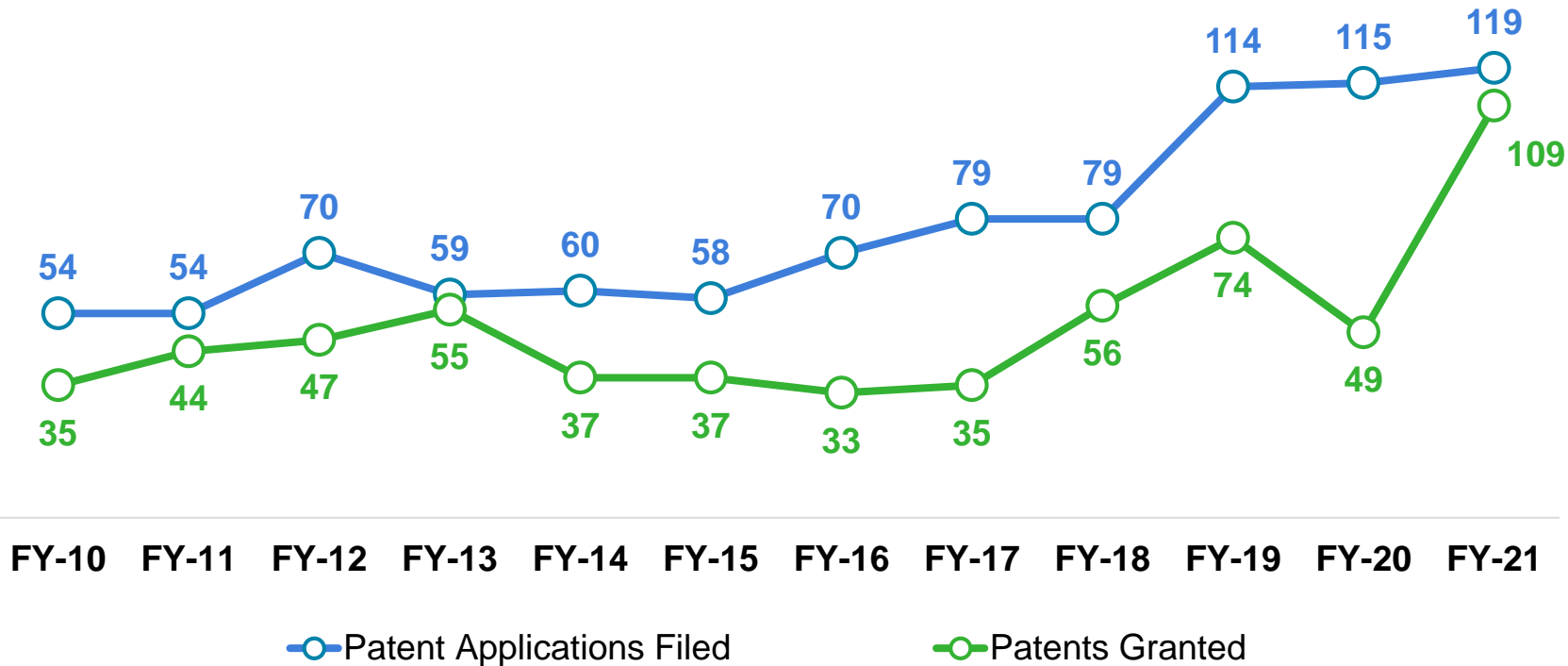
Tata Steel documented its first patent in 1938 – a first for the Indian steel industry



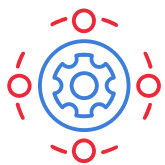
Tata Steel was the first in Asian steel sector to set up a corporate R&D centre



# Progressing towards a 'knowledge-intensive' organization



- **32%** of patents are in the domain of raw materials while **25%** are in the area of products.
- No. of patents filed with collaborators – **10%** of total patents filed



Over 100 New filings every year for last three years in line with organization's thrust towards innovation and technology development.

Cumulative patents filed till FY21 –

**1319**

Cumulative patents granted till FY21 –

**707**

# Consistently being recognized in the space of innovation

2020 | 2019 | 2018

## Innovista

- most number of awards every year for last 3 years



2020



## CII Industrial Intellectual Property Award

for the Best Patents Portfolio in the Large Enterprises (manufacturing/engineering) category

2019

## CII Industrial Innovation Award

- among the top 25 innovative companies



2015



## Thomson Reuters Innovation Award

# Unlocking and monetizing knowledge and intellectual property



## Incubating Intellectual Property

### Dhurvi Gold

- use of steelmaking slag as a soil conditioner



Utilizing waste Iron powder for value added use in cutting tools, food fortification and metal injection moulding



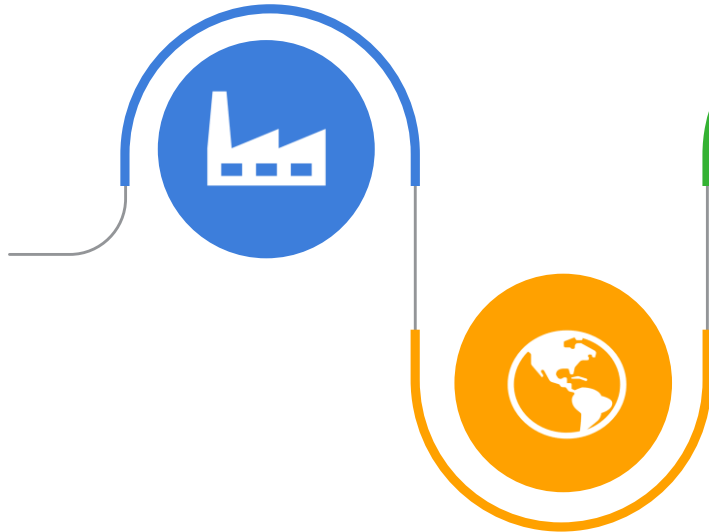
## Monetizing Internal Expertise and Knowledge



# Technology leadership areas (TLAs) – 7 identified

Use of low-quality Iron ore, coal, ferro alloy minerals with focus on (i) Mining (ii) Beneficiation & processing (iii) Recovery & recycling

## Utilizing Low Quality Raw Materials

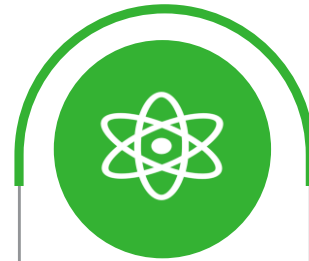


## Carbon Capture and Utilization

Technologies for CO2 capture, storage and utilization

Technologies for generation /usage of large scale & economical green/blue H2 in steel value chain

## Hydrogen



## Mobility

Material leadership through breakthrough technologies in mobility domain



Technologies for Water neutrality through Reduce, Reuse & Recycle

## Water



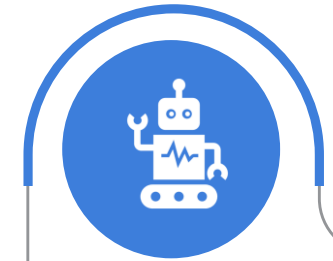
## Coatings

Breakthrough coating solutions serving latent needs / existing needs better than competition / cost saving for OEMs



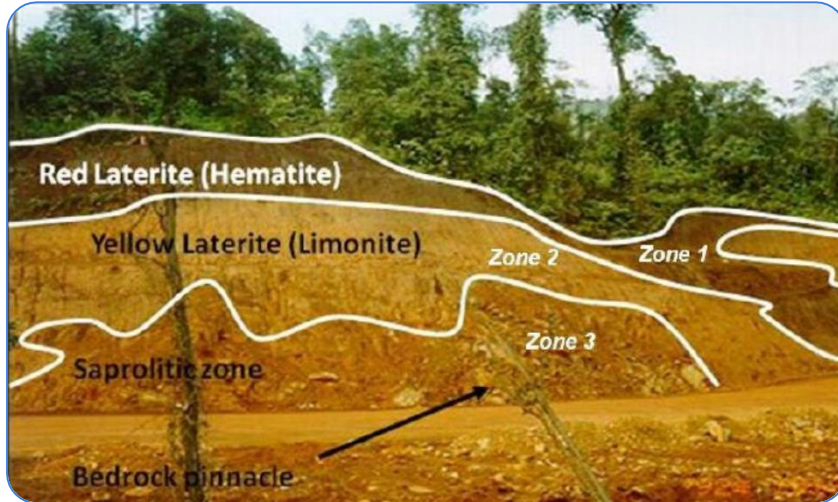
Use of AI to drive process excellence and 'first time right' in steel value chain

## Digital



# Utilizing low quality raw materials – early steps in the domain of ‘energy materials’ while working on traditional issues

## Exploring Chromite overburden to extract Nickel and Cobalt for use as a cathode material in Li-ion battery



Nickel Sulphate



Mixed Hydroxide Product



Cobalt Oxide



Cobalt Sulphate



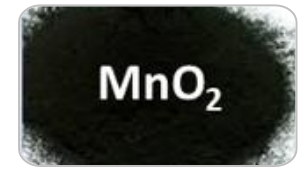
A polymer based fluidity enhancer that helps substitute hard coking coal for coke making. 10% of hard coking coal replaced by non-coking coal.

**Annual savings of around Rs.150-200 crores**

## Manganese group of mines



MnSO<sub>4</sub>



MnO<sub>2</sub>

Utilizing low and subgrade Manganese ore to produce Manganese compound for use as a cathode material in Li-ion battery

# CO<sub>2</sub> capture & utilization and generation of Hydrogen rich gas



## Carbon Capture and Utilization

5 ton per day CO<sub>2</sub> capture plant commissioned at Tata Steel Jamshedpur – a ‘first in India’. Captured CO<sub>2</sub> utilised in the steel melting shop.

Tata Steel in collaboration with a start-up company has developed a technology to produce Syngas (H<sub>2</sub>:CO=4:1) from biomass

## Hydrogen



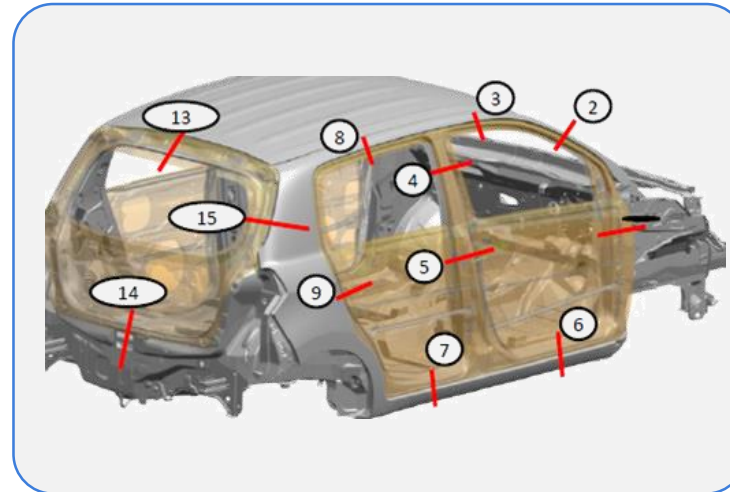
# Mobility – providing advanced technical support and solutions to customers



Services to a Japanese car manufacturer:  
Localized the tear down activities. 1st in India by an steel company.



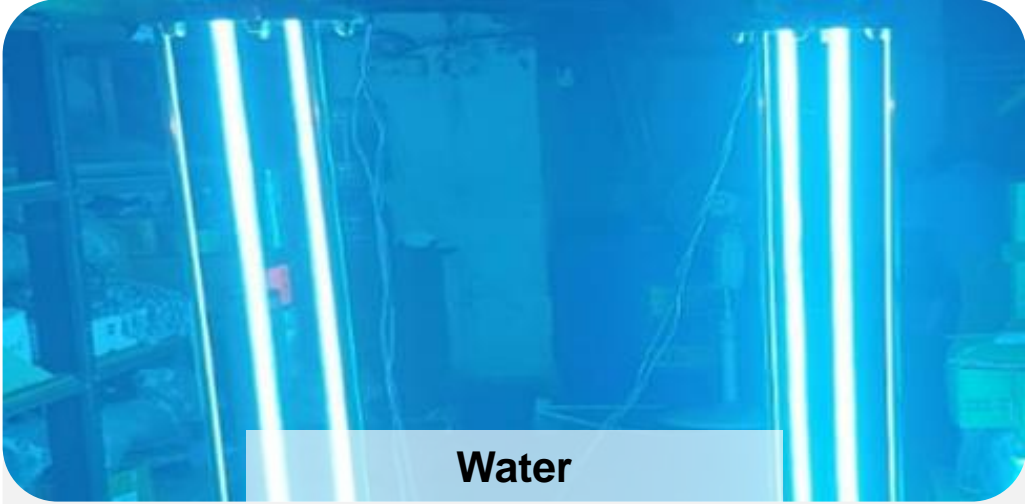
VAVE/EVI - 1<sup>st</sup> in India by any steel company.  
More than 75 models covered. Now on virtual platform



Participating in Hyperloop. Developing steel components



# World leading solutions for clean water and coatings



**Water**

A patented technology which uses Ultraviolet rays to permanently oxidize cyanide present in industrial waste water into carbonate and molecular Nitrogen



**Coatings**

'First in the World' Ready-To-Paint (RTP) coating developed for cold rolled and galvanised steel. It will help eliminate the pre-treatment process at the customer end.

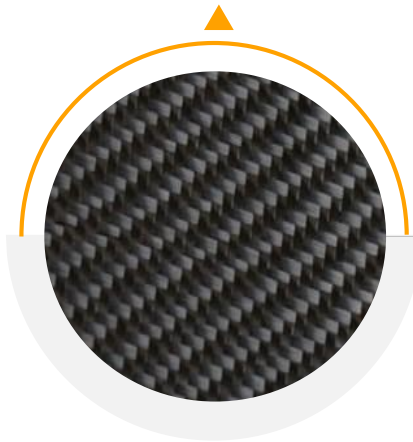
# New materials play to capitalize on future opportunities



## Drivers

- Emerging trends in the area of light weighting and environmental sustainability
- Emergence of multi-material play – meet future needs of existing segments while adding new ones
- Counter cyclical of steel business

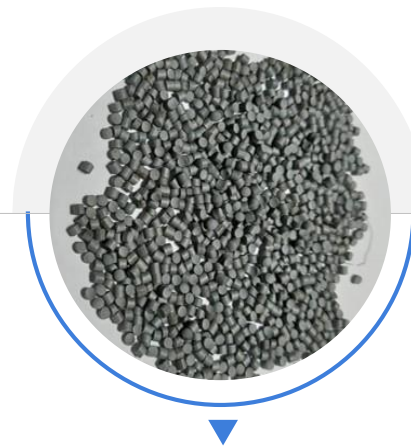
Composite



Medical Materials



Graphene



# Composites business – aiming for leadership in industry, infrastructure, railways and automotive applications

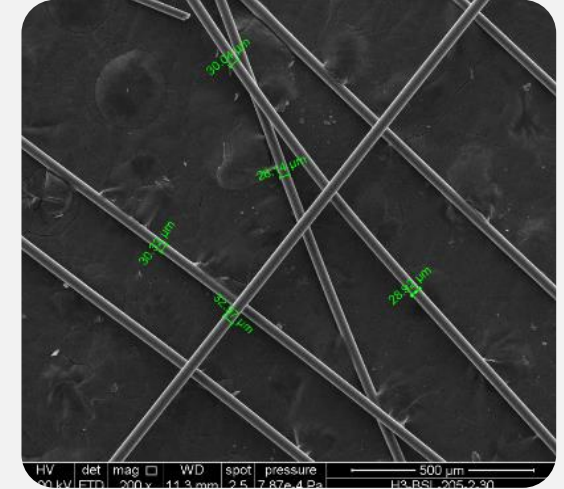


**Value proposition**

**Light weight**  
enabling fuel efficiency

**Corrosion resistance**  
enabling longer life

**Flexibility in forming**  
lowering manufacturing capex



Tata Steel in collaboration with a Spanish lab is trying to develop carbon fibre from coal tar.

## Composites business set quite a few milestones along the way

- leveraging group synergy to deliver a 500-bed hospital project in Kerala
- establishing itself as an integrated solutions provider to Indian railways and,
- Commissioning India's first FRP foot-over bridge in Jamshedpur

# Graphene business – one of the largest production plant in the world

## Medical materials – initiating with bone and skin replacement materials

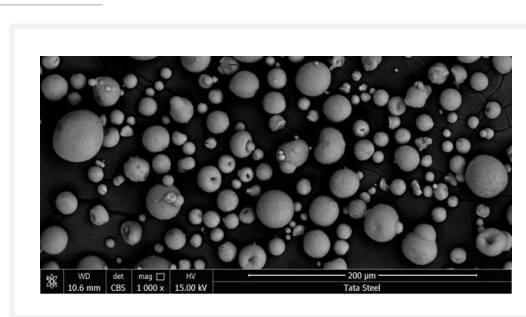


### Graphene business

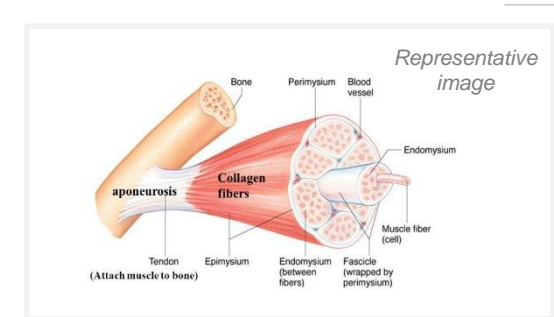
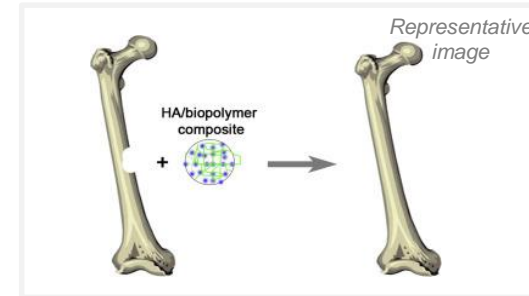
- 50 patents across 10 countries
- Patent protected manufacturing technology
- Graphene doped and coated products commercialized in three sectors: (a) material handling, (b) conveyance and, (c) coatings

100 ton per annum integrated Graphene manufacturing plant – one of the largest single unit Graphene production centre in the world.

### Medical materials



Hydroxyapatite



Collagen  
non-cow & non-pig source

# Leveraging internal and external ecosystem

## Internal ecosystem

115  
M.TECH



279



EMPLOYEES



68  
PHD

### Revenue expenditure



	(Rs. Crores)
FY21	220
FY22 Plan	275

### Planned expenditure for next 5 years



	(Rs. Crores)
Capital	1,200
Revenue	1,500

## External ecosystem



### Tata Steel Chair Professor

- University of Cambridge
- Indian Institute of Engineering Science and Technology, Shibpur
- Indian Institute of Technology, Kharagpur



### Umbrella Memorandum of Understanding (MoU)

with Council of Scientific & Industrial Research (CSIR) to collaborate in specific areas



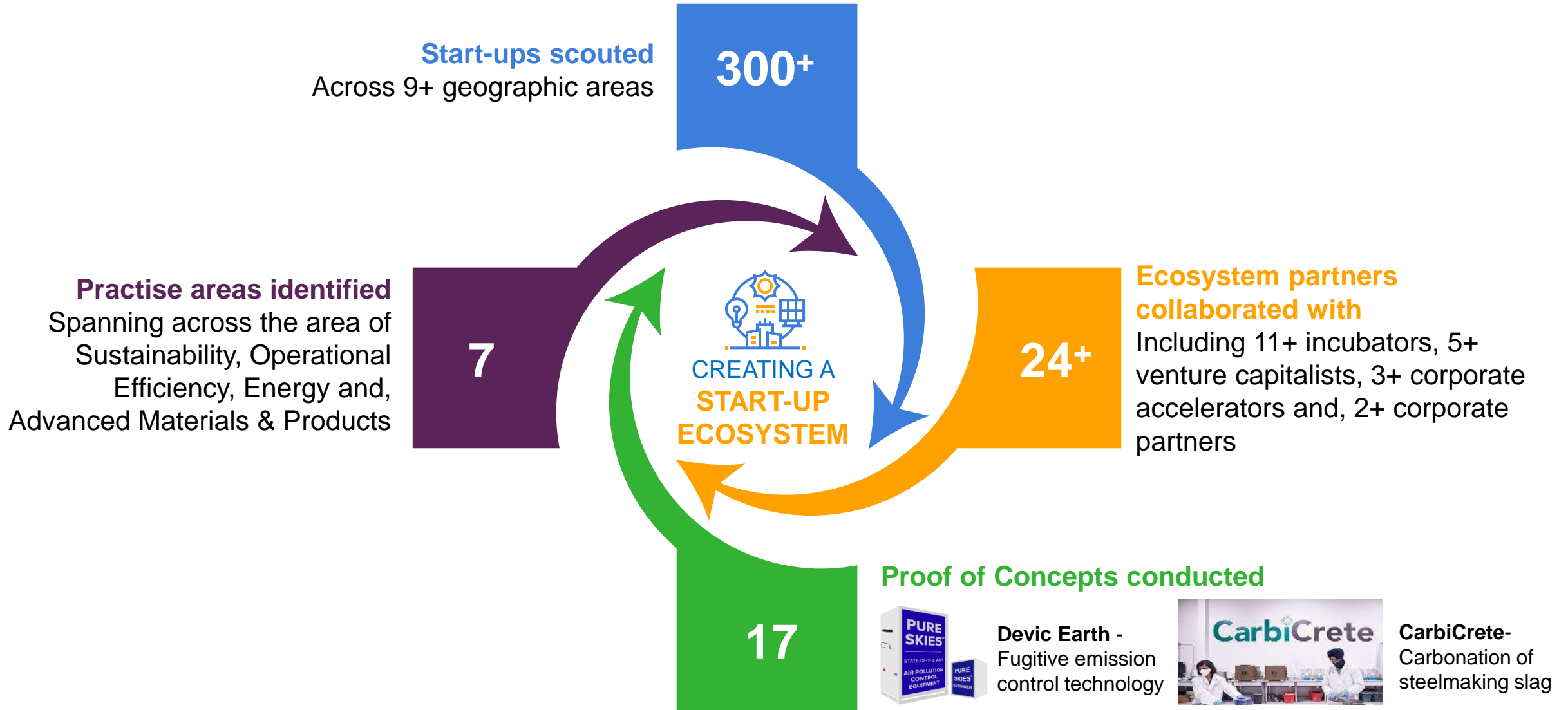
### Tata Steel Advanced Materials Research Centre

At IIT Madras – co-location with academic institutions, engagement with various CSIR labs, IITs and other leading research institutes

\*Number of employees mentioned corresponds to the workforce of Tata Steel India R&D; Spend mentioned is that for Tata Steel India R&D in INR Crores

\*Revenue expenditure includes Tata Steel India R&D employee cost, general and administrative expenses, project funding and cost related to patent filing and maintenance

# External ecosystem – plugging in the start-up community





Building on a strong technology legacy

And shaping the future through research, technology and knowledge



### **Institutional investor enquiries :**

Sandep Agrawal

Email: [Sandep.agrawal@tatasteel.com](mailto:Sandep.agrawal@tatasteel.com)