

# **JSW Steel**

*Sustainability Report 2016-17*



**OUR CAPITAL JOURNEY**

## Our Commitments



## Our Capital Journey

JSW Steel recognises the need to enhance its ability to continuously create value. This report delineates strategic initiatives and operations under the six commonly used "capitals", their availability, quality of JSW Steel and cost, impacts by headwinds, and how they affect the business model, as well as utilising smart and digital manufacturing technologies. The cover depicts the interrelation between the capitals.



View all our disclosures [here](#)

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GRI - Global Reporting Initiative  
WSA - World Steel Association  
UNGC - United Nations Global Compact

UNSDG - UN Sustainable Development Goals  
NVG - National Voluntary Guidelines, Govt. of India

## CHAIRMAN'S Message



Dear Stakeholders,

At JSW Steel Ltd. (JSW), we pursue excellence and improve continuously, which enables us to overcome barriers, face challenges, reinforce our strengths, and harness opportunities. I am delighted to share with you the strong performance of the company during the period 01-April-2016 to 31-March-2017 (FY17), recording its highest ever production, sales, consolidated EBITDA and profit after tax; while providing safe, healthy and empowering environment to the employees; building upon partnerships and innovation capacities; and delivering value to communities, environment and the nation.

We achieved many milestones during FY17 and reported best-ever results. At 15.8 million tonnes, our crude steel production was the highest ever, and so were the total sales of 14.7 million tonnes. We are now the largest steel maker in India. Our production volume grew 26%, vis-a-vis the domestic industry growth of 8.5% and global growth of 0.8%. Similarly, our sales grew by 20% and sales of value added steel by 17% and dividend payout by 225%. Such a performance, in the face of global headwinds, is testimony to the institutional culture of "Will to Win" at the Company.

JSW plans for tomorrow, today. We will continue its growth in production and sales and focus on increasing the share of the value-added products' basket in its overall top line. We will also scout for organic and inorganic growth opportunities to expand its footprint.

We conduct our operations with utmost care to ensure minimal negative impact on environment and through many initiatives we strive to enhance the natural capital. Our plants are among the most energy-efficient, water-efficient and least polluting. Our resource stewardship efforts led to significant outcomes - decrease in water intensity of our operations, increase in water recycling, utilisation of waste gas at nearly 99%, reduction in specific iron ore consumption, recycling of steel scrap and finally, re-charge of ground water.

Pursuing our goal of "zero harm" is manifested in the various interventions we implement to ensure safety in the work place. We continue to invest significant resources in imparting training on safety; this has paid us rich dividends by significantly reducing the Lost Time Injury Rate over the last three reporting periods. We foster a work culture that is innovation and growth-focused and performance-driven. We ensure an encouraging and bias-free workplace through our policies and practices encompassing human rights, ethics and transparency.

Our emphasis to drive innovation has continued to yield significant results. We are consistently improving the share of value added products and been agile and nimble-footed in addressing the ever increasing quality demands in niche markets. It is our firm belief that the ability to develop and deliver consistently is possible solely through partnerships along the value chain viz., with our suppliers, contractors and customers.

The efforts to empower our neighboring communities have gained more focus and drive, with greater commitment to deliver better results. We have become more impact-oriented and ensure that we achieve the desired outcomes.

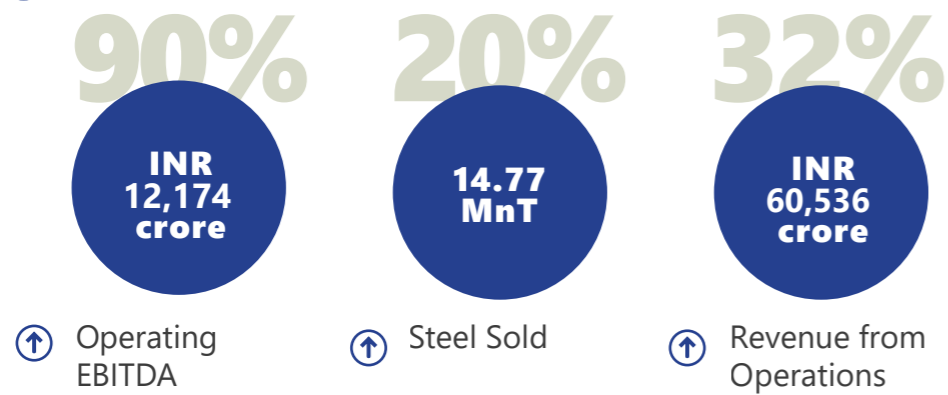
As we continue our journey consolidating and enhancing our value creating capabilities, I must acknowledge the immense contribution of the entire JSW family and our partners to our exceptional growth in the face of adverse economic conditions. I am also grateful to all our stakeholders - including shareholders, customers, suppliers, and contractors / vendors - for their trust, co-operation and support in building this value enhancing enterprise. I look forward to your continued support in our endeavor.

Sincerely,

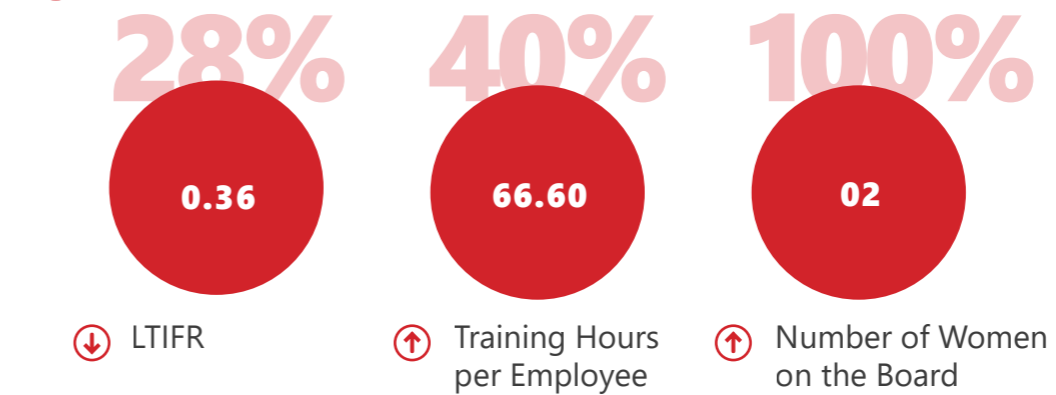
Sajjan Jindal  
Chairman and Managing Director  
JSW Steel Limited

# PERFORMANCE Highlights (Y-o-Y Change)

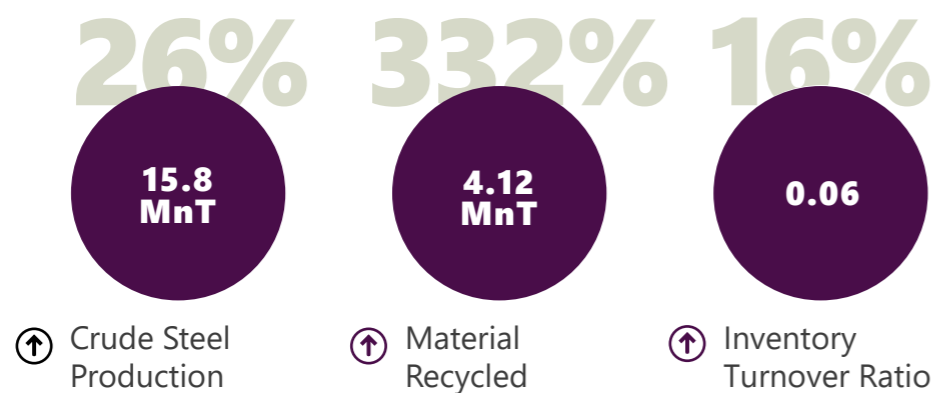
## Financial Capital



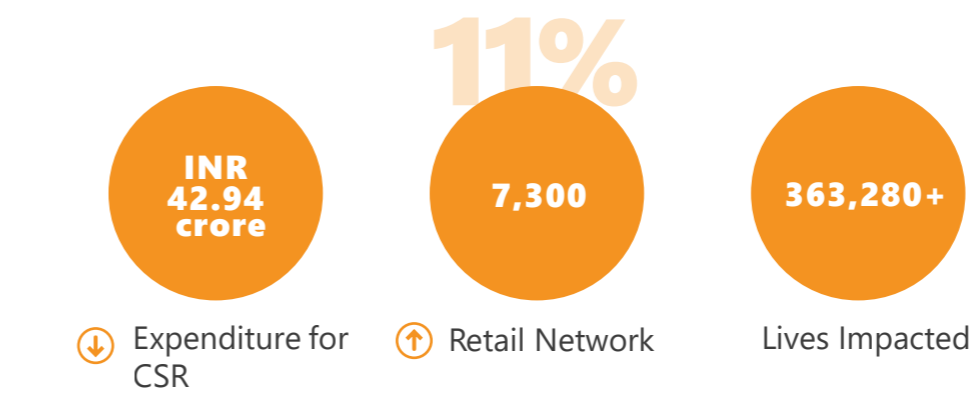
## Human Capital



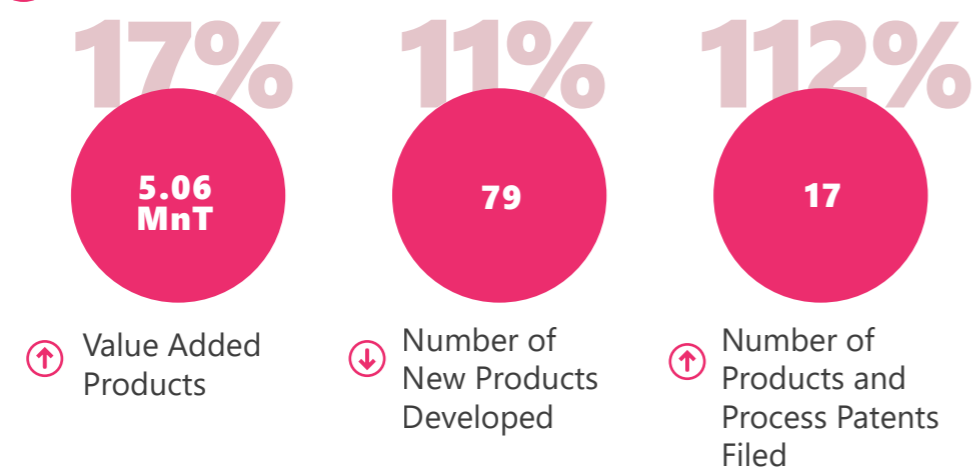
## Manufactured Capital



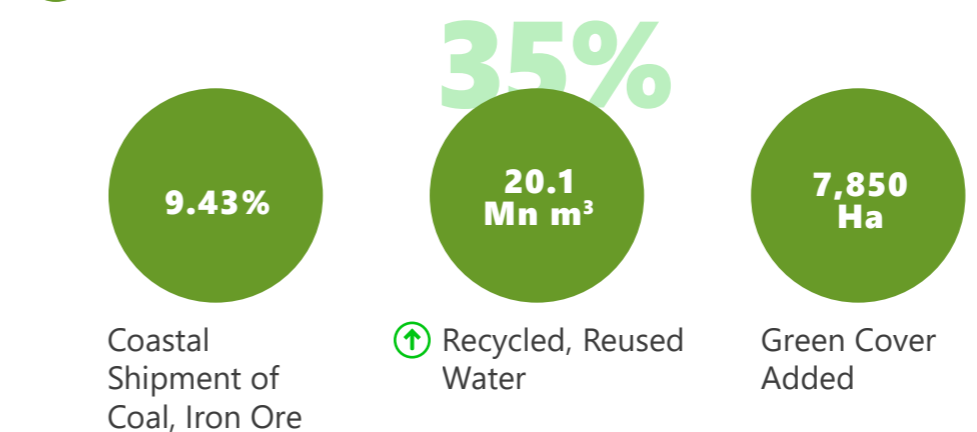
## Social and Responsibility Capital



## Intellectual Capital



## Natural Capital



# OVERVIEW AND Value Chain

The JSW Group's foray into steel manufacturing began in 1982 when it set up the Jindal Iron and Steel Company. The next two decades saw significant expansion and several acquisitions, following the merger of Jindal Iron and Steel Co (JISCO) and Jindal Vijayanagar Steel Ltd (JVSL) in 2005. Today, JSW Steel has integrated iron and steel plants in three locations in India - Vijayanagar in Karnataka, Salem in Tamil Nadu, and Dolvi in Maharashtra - with a combined capacity of 18 MTPA.

JSW Steel offers a gamut of steel products that include coils, bars, rebars, wire rods and special steel, as well as other value-added products. In order to stay on the leading edge of technology, JSW Steel has entered into collaboration with JFE Steel Corporation, Japan, for manufacturing high strength and advanced high strength steel for the automobile sector. JSW Steel also entered into a joint venture with Marubeni-Itochu Steel Inc., Tokyo, to set up state-of-the-art steel processing centres. To strengthen its global network, the Company had acquired a Pipe and Plate making steel mill in Baytown, Texas in USA. By 2025, JSW Steel aims to produce 40 million tons of steel annually.

JSW Steel exports to over 100 countries across five continents. JSW Steel current operation in India comprises 12.50 MTPA (around 70% of the capacity) of flat products and 5.50 MTPA (around 30% of the capacity) of long products. The Company is also one of India's largest producers and exporters of coated flat steel products.



KANNUR AIRPORT



ADANI PORT

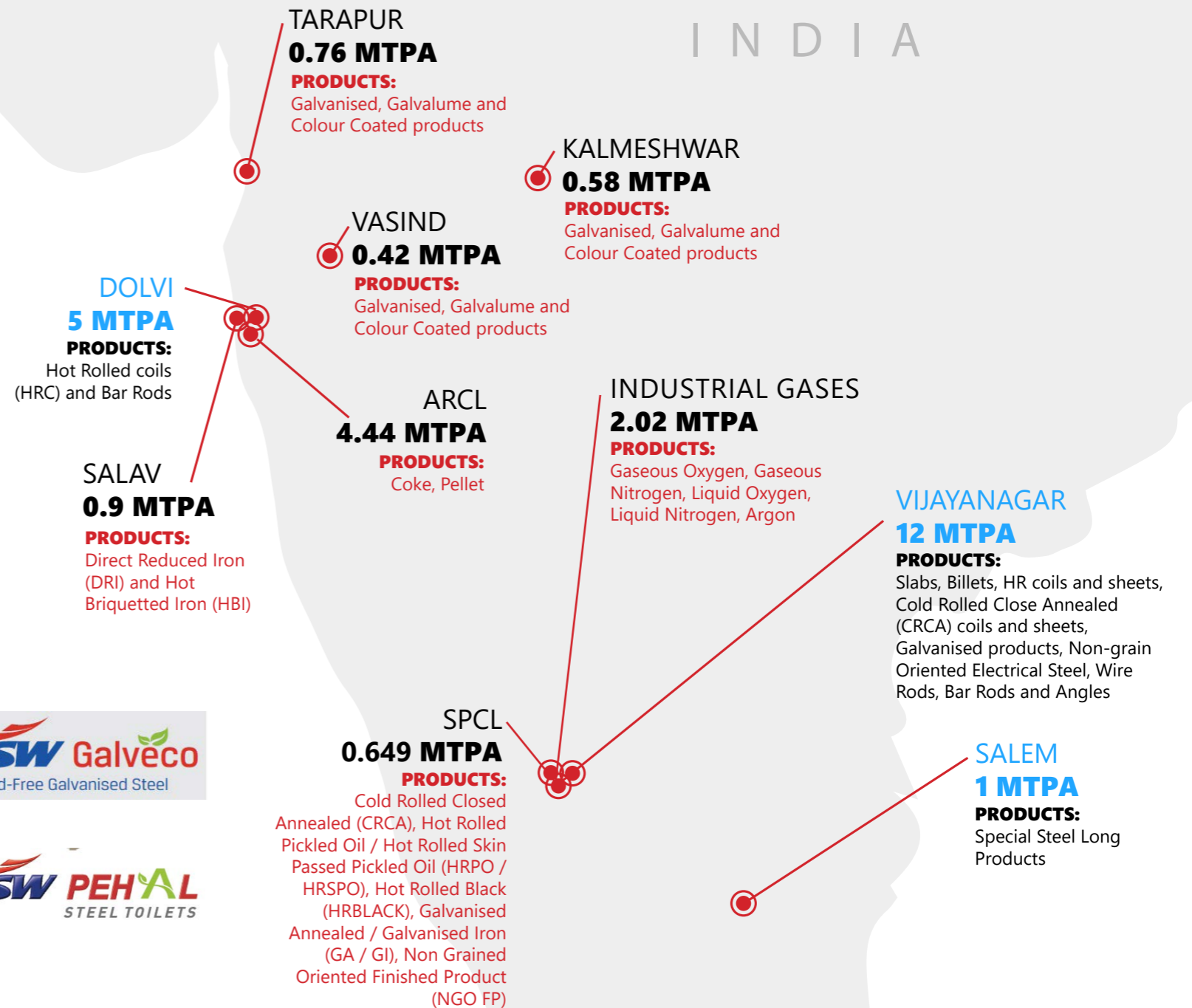


INFOSYS BUILDING



ITC GRAND

## Reporting Boundary



# Value Chain

## Export Market = 3.81 MnT

Major Regions Sold - Asia, Europe, Middle East, Africa, North America

## Domestic Market = 10.8 MnT

All 4 regions (East, West, North and South) serviced

● Exports -----

### ● Carbon Bearing (%)

Australia	73
Canada	9
USA	5
China	4
Mozambique	1
Russia	2
Japan	1
Latvia	1

Ukraine	0.39
Brazil	3

### ● Thermal Coal (%)

Indonesia	54
South Arica	36
Mozambique	9

### ● Iron Ore (%)

Imports (%)	
Brazil	30

### ● Domestic (%)

Odisha	50
Chattisgarh	20

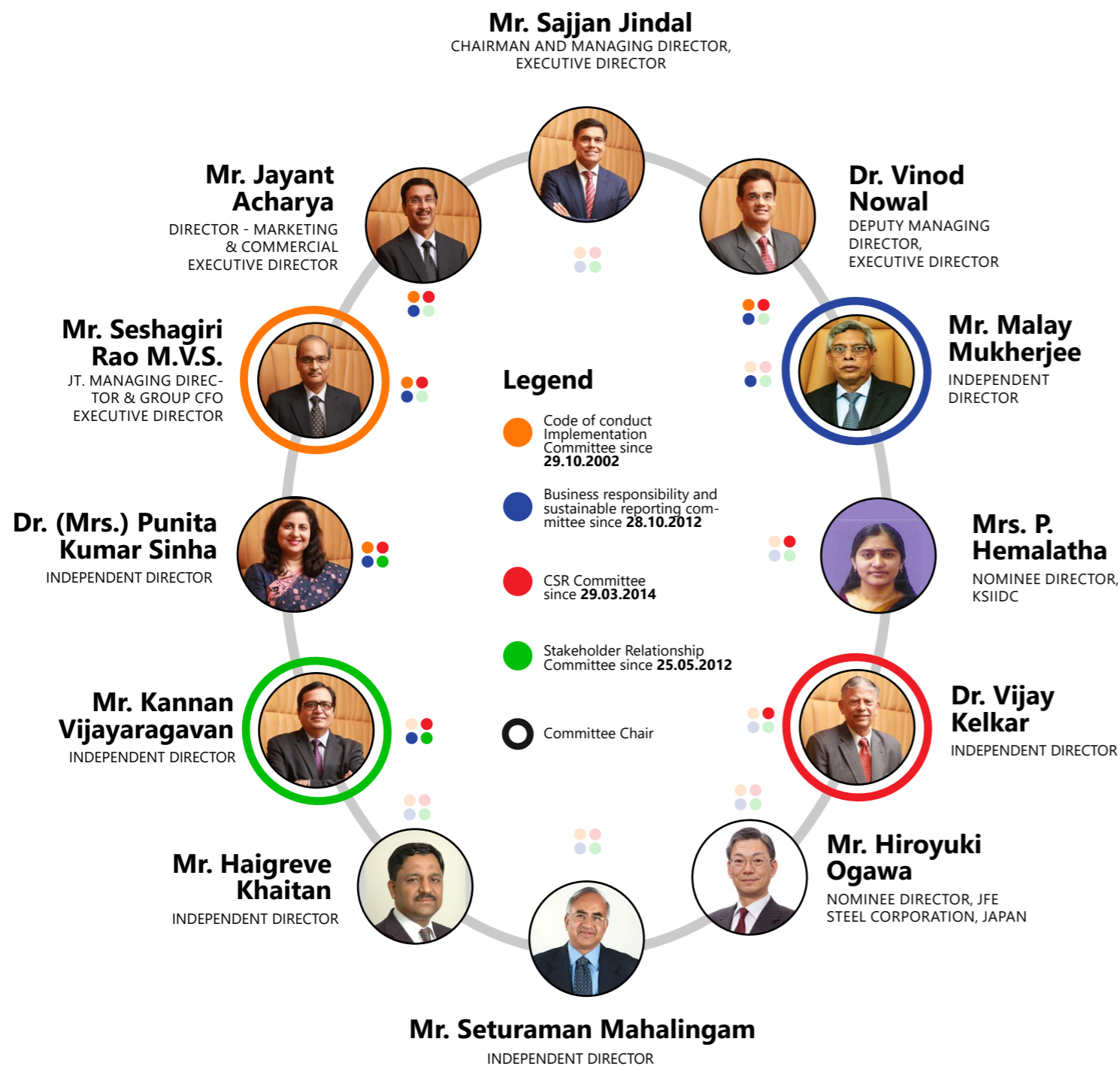
### ● Fluxes (%)

UAE	86
Thailand	7
Oman	6
Philippines	1

The following details can be viewed in the JSW Steel Annual Report FY 2016-17: List of all subsidiaries & joint ventures (pg 299); shareholding pattern (pg 58-66)

# GOVERNANCE AND Ethics

## Board Members



## Business Responsibility / Sustainability Reporting Committee

The Board of Directors in their meeting held on 28.10.2012 had constituted a sub-committee of the Board known as the "Committee for Business Responsibility Reporting" to assess the Framework for Business Responsibility Reporting and the performance of the Company.

### The Committee noted its scope as follows:

- Responsible for the overall Business Responsibility (sustainability) performance of JSW Steel.
- Responsible for the policies created for or linked to the 9 principles of the 'National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business'.
- Oversee the implementation of activities under the purview of policies mentioned above.
- Review business responsibility performance indicators on a pre-decided frequency (monthly, quarterly, bi-annually).
- Review the progress of business responsibility initiatives at JSW Steel.
- Approve CAPEX / OPEX requirements for new or for upkeep of existing business responsibility initiatives.
- Review the annual business responsibility report and present it to the Board for approval.

The Committee further noted that the Head of Sustainability Initiatives at the operating level has been made responsible for driving the committee meetings.

*Details of all other Committees of the Board are available in the annual report.*

## Vision, Mission, Values and Policies

### VISION

Global recognition for quality and efficiency, while nurturing nature and society

#### Sustainability Policy

JSW Steel Limited ("JSW") believes in creating sustainable growth while balancing utilization of natural resources and social development in its business decisions.

It also believes in pursuing its business objectives ethically, transparently and with accountability to its stakeholders across value chain. JSW is committed to promote integrated responsible behaviour and value for social and environmental being. JSW's commitment to do business responsibly is built into the core values of the Company to conduct every aspect of business responsibly and sustainably. It relies on:

- A dynamic leadership
- Adherence to core values
- A well-articulated Enterprise Resource Management framework
- Practices to seek to sustain and enhance the long term competitive advantage of JSW with care for society and environment

#### Policy on Business Conduct

- Upholding Company and stakeholder interest
- Ethical conduct and integrity in performing duties
- Protecting and preserving the natural resources and striving towards public good

### MISSION

Supporting India's growth in core economic sectors with speed and innovation

#### Policy on Sustainable Steel

- Resource-efficient and sustainable manufacturing
- Product stewardship (from design to disposal)
- Environment Management System (EMS) across all operations

#### Policy on Employee Welfare

- Work-life balance for all employees
- Employee wellbeing and competence development
- Safe, hygienic and humane workplace

#### Policy on Stakeholders Engagement

- Meeting stakeholder expectations through active leadership
- Minimizing negative impacts and creating long-term value for stakeholders
- Measuring, monitoring and reporting stakeholder engagement activities

#### Policy on Human Rights

- A discrimination free workplace
- Fair working hours and fair remuneration
- Safe and healthy working conditions

#### Policy on Conservation and Preservation of the Environment

- Promoting use of renewable energy, minimizing wastes, protecting biodiversity and reducing carbon footprint
- Regular and periodic evaluation of the environmental impact of the operations
- Supporting and promoting good environmental practices

### CORE VALUES

Transparency - Dynamism - Strive for excellence - Passion for learning

#### Public Regulatory Policy

- Developing democratic systems and platforms for policy interventions and grievance redressal
- Advancement of public goods, inclusive development policies and economic reforms
- Ensuring energy, food, water and other natural resource security

#### Policy on Social Development

- Poverty alleviation and implementation of sustainable models
- Participatory resettlement of displaced communities
- Impact assessment of operations on local agriculture, biodiversity and health

#### Policy on Engaging with and Providing Value to Customers and Consumers

- Offering innovative products
- Transparent and responsible marketing promotions
- Efficient customer feedback mechanism

## INTRODUCING the Capitals



Dear Stakeholders,

JSW Steel continues to excel in terms of achieving its best ever annual performance, challenges notwithstanding. Integrity and transparency constitute the foundation of JSW Steel, and the Company adheres to all applicable laws and regulations. This pursuit is reinforced by internal guidelines that include the Business Conduct and Supplier Code of Conduct, covering aspects of ethics, transparency and business accountability. Stakeholders expect accountability and responsibility from us. Taking cognizance of this, the Company constantly updates them with relevant information and provides a fair representation of its value creation.

Guided by the Integrated Reporting framework, this report "Our Capital Journey" depicts the value creation process that encompasses various aspects of governance, strategy, operations and performance.

Financial integrity at JSW Steel serves as the backbone of shareholder trust. Deploying investor funds and making investments prudently, transparently and responsibly to deliver consistently positive results have been at the core of JSW Steel's business. This is demonstrated by an increase in revenue by 32%, operating EBITDA by 90% and dividend payout by 225% during FY 17 as compared to the previous fiscal.

Striving for excellence in manufacturing characterise the Company's production activity. During the reporting period, crude steel production increased by 26% to 15.8 million tonnes and the company continues to be one among the steel majors with low conversion cost. In keeping with its strategic objective

"integrating backward and innovating forward", JSW Steel secured 5 mines in Karnataka and one in Jharkhand in the reporting period, with the capacity to produce 4.7 MTPA of iron ore.

Incubating innovation has catalysed growth, resulting in 34% revenue from value added products, apart from 79 new products and 17 patents. JSW Steel's digital transformation journey has yielded improvements in energy, raw materials, chemical balancing, logistics etc. Further, the Company embodies continual improvement through the deployment of management systems.

Giving shape to aspirations and encouraging the passion for learning has been fundamental to JSW's people strategy. By delivering 66.60 hours of training per person uniformly across the organization during 2016-17 and involving a significant number of employees in innovation or continuous improvement projects, JSW Steel enhanced human capital. A significant part of senior management has more than 20 years of relevant sector experience, and has been with JSW Steel for over 20 years on an average, while 0.46% of senior management is covered by succession plan.

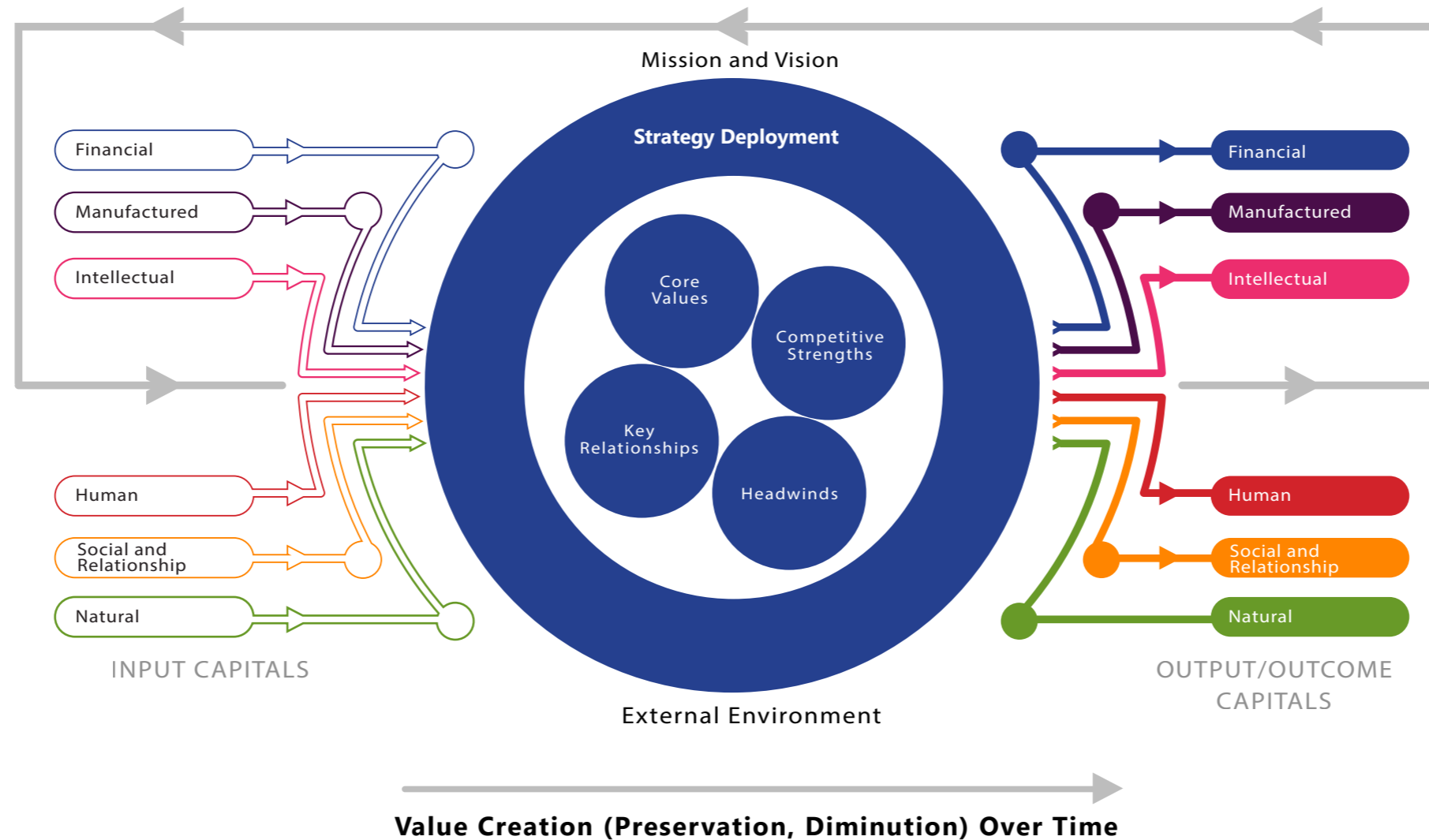
Enabling inclusive development forms the basis for a community investment of INR 42.94 crore channeled through the JSW Foundation, whose interventions are strategic to achieve the best outcomes. JSW reinforces relationships through periodic engagement and partnerships with its key stakeholders. During the reporting period, JSW Steel conducted 5 supplier meets. The Volvo Value Analysis Value Engineering is an example of a significant collaborative / co-creation project with a customer in the reporting period which yielded mutual benefits.

Caring for Nature is a constant practice across all JSW Steel operations. The Company uses only 1.56 tonnes of iron ore and 1.05 tonnes of coal to produce one tonne of steel; this efficiency is amongst the best in the world. Such an achievement has become possible through relentless pursuit of minimisation of waste. In addition, JSW steel utilizes nearly 99% of the waste gas to generate electricity and steam, and significantly reduced GHGs which otherwise would have potentially added to the global warming. Despite capacity expansion at many sites, JSW Steel ensures, through water conservation, ground water recharge and watershed development programmes, the stress on the regional water resources is not aggravated. Protecting and restoring biodiversity in regions of its operation is also a focus area of the company.

While JSW Steel continues to create value through strategic actions to enhance all six capitals, the success of this journey is contingent upon partnerships and engagement with stakeholders. Stakeholder feedback and suggestions on our endeavour to enhance all the six capitals is welcome and will be acted upon.

Sincerely,  
Seshagiri Rao M.V.S.  
JMD and Group CFO

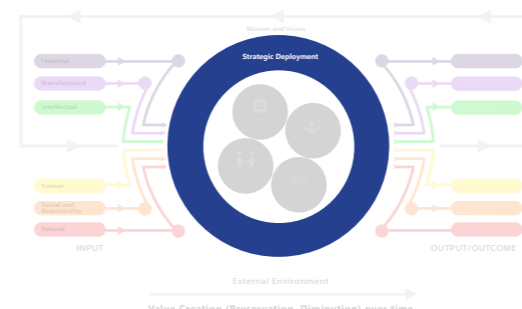
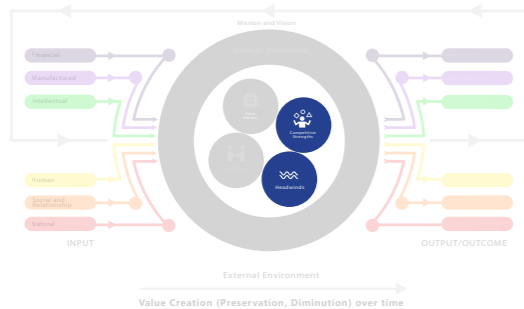
# VALUE CREATION Model



JSW engages with the Government in framing policies in the following areas :

- Governance and administration
- Advancement of public good
- Economic reforms
- Sustainable business principles
- Energy, water and other natural resources
- Promotion of human rights
- Social and community development
- Transparency through public disclosure
- Non-conventional energy

JSW Steel works with Associations / Organisations like World Steel Association, FICCI, CII, ASSOCHAM, Indian Steel Association, GRI, CDP, UN Global Compact, Bangalore Chamber of Industry & Commerce, Karnataka Iron & Steel Manufacturing Association, Indian Institute of Metals, American Society of Metals, Association of Iron & Steel Technology (USA), Iron and Steel Institute of Japan, PMS (Metal Society of USA), Indian Chamber of Commerce and the Bengal Chamber of Commerce & Industry.



**HEADWINDS**

**Economic**

- Low growth phase
- Interest rates and foreign currency volatility
- Wealth in Asia and growing demand in Africa
- Technological innovation

**Environmental**

- Water
- Energy and climate constraints

**Technological**

- Alternate resource use, raw material prices and steel scrap
- Advances in material science

**Social**

- Globalization curtailed
- Growing demand for transparency
- New work space and work force

**COMPETITIVE STRENGTHS**

- Strategic plant locations
- Project execution capabilities
- Technologically abled plants
- Low conversion cost
- Efficient sourcing
- Wide product mix
- Experienced & competent management team
- Agile organization culture

**STRATEGY**

**1. Backward and Forward Integration**

- Backward integration for self sufficiency of raw materials
- Forward integration for product and customer base diversification

**2. Diversification in Product portfolio and Customer base**

- Diversification in product portfolio to enhance forward integration, increase customer base

**3. Cost optimization**

- To remain one of the lowest-cost producers of steel in the world

**4. Profitable and Sustainable Growth**

- Selectively consider inorganic opportunities that are value accretive

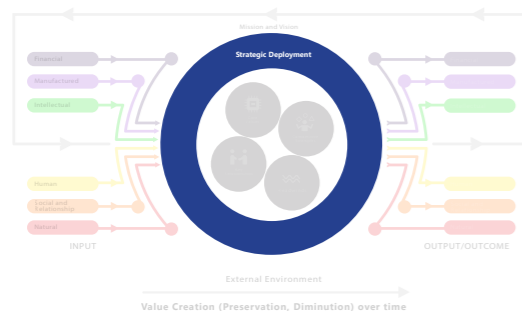
**APPROACH**

- Strategically located mines in home country and abroad
- Collaborating with government and Industry bodies on policies related to iron-ore mining
- Reducing logistic cost of importing raw materials
- Continuous focus on increasing value added products

- Increasing investment and focus on R&D and Innovation
- Selecting less competitive niche segments and provide better margins

- Promoting culture of innovation and R&D for cost efficiency
- Optimizing raw material input cost using mix of hedging and current price contracts
- Bringing continuous reduction in cost by alternative source of funding
- Optimizing procurement cost by centralized procurement for all locations

- Undertaking brownfield and greenfield across the globe
- Distributing majority of economic value generated in India



**STRATEGY**

**APPROACH**

**5. Building Organization Capabilities for Growth**

- Improving quality and efficiency

- Emphasizing on process automation to improve efficiency
- Initiating mass large-scale application of Six Sigma
- Focus on Lean Management
- Shared services to standardize work process, rationalize cost and increase efficiency
- Implementing long term IT strategy

**6. Stable Operations and Prudent Financial Practices**

- Establishing stable operations for risk mitigation
- Create superior long-term shareholder value

- Prioritizing future earnings growth and reduce volatility across all business segments
- Enhancing shareholder returns through dividends, share repurchases and building competitive advantages.
- Hedging strategy to counter commodity and currency volatility

**7. Attract and Retain**

- Attract and retain talented, motivated and productive employees who are committed to our long-term goals

- Offering competitive compensation and provide opportunities for employee development and advancement
- Providing equal, merit-based opportunity in hiring, promotions, wages, benefits, and terms and conditions of employment
- Communicating ethics and workplace related goals and expectations clearly
- Innovating processes that improve safety and efficiency and minimize water, waste and emissions

**STRATEGY**

**APPROACH**

**8. Community Engagement**

- Build strong relationships with and improve the socioeconomic well-being of our communities

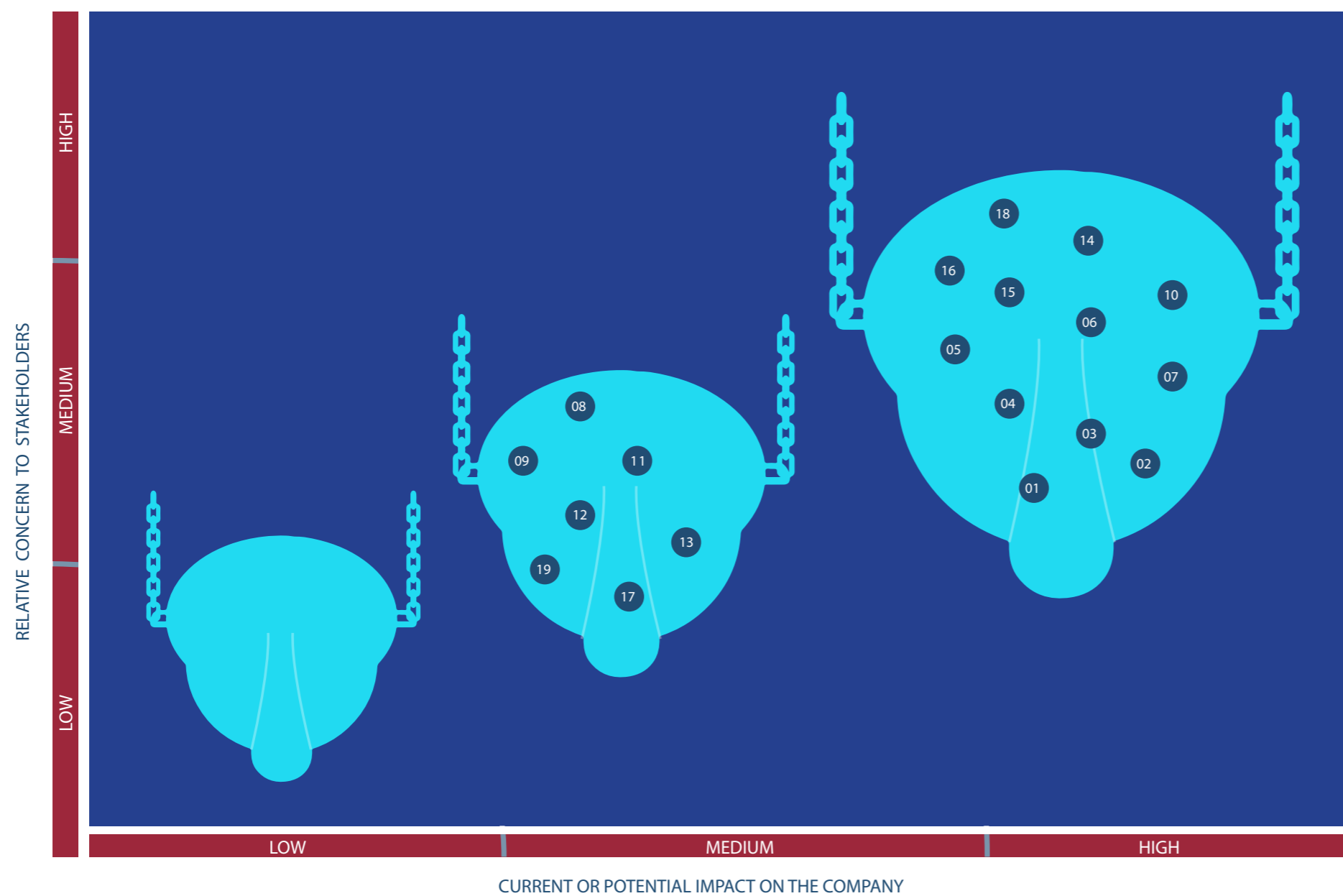
- Contributing to economic growth by creating direct and indirect jobs, purchasing locally, attracting investment and paying taxes
- Investing in organizations and projects that bring sustainable value in the communities where we operate, through corporate and site contributions and employee volunteerism

**9. Environmental Care**

- No net increase in environmental and resource impact due to growth and expansion
- Restore environmental resources around the sites of operations

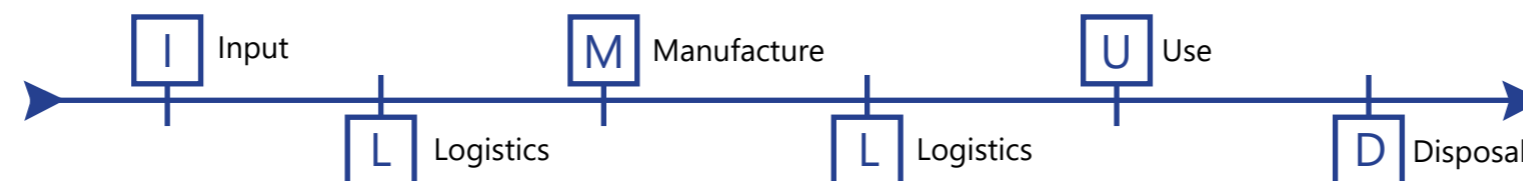
- Selecting location and technology in both green and brown expansions
- Emphasizing on process efficiencies to improve resource use and reduce environment impact intensities

# STAKEHOLDER Engagement and Materiality



- 01 I L M L U D Economic Performance
- 02 I L M L U D Indirect Economics Impacts
- 03 I L M L U D Procurement Practices
- 04 I L M L U D Anti-corruption
- 05 I L M L U D Products and Services
- 06 I L M L U D Local Communities
- 07 I L M L U D Compliance
- 08 I L M L U D Employment
- 09 I L M L U D Occupational Health and Safety
- 10 I L M L U D Training and Education
- 11 I L M L U D Diversity and Equal Opportunity
- 12 I L M L U D Supplier Assessment for Labor Practices
- 13 I L M L U D Grievance Mechanisms for Impacts on Society
- 14 I L M L U D Materials
- 15 I L M L U D Energy
- 16 I L M L U D Water
- 17 I L M L U D Emissions
- 18 I L M L U D Effluents and Waste
- 19 I L M L U D Supplier Environmental Assessment

## VALUE CHAIN



## Strategic stakeholder engagement:

Stakeholder engagement is a two way relationship with the stakeholders which helps JSW Steel to build trust with their stakeholders. Hence JSW has undertaken an extensive exercise to develop a framework for stakeholders engagement involving an internationally reputed third party expert. The consistent efforts of JSW Steel have enabled them to become the first steel company in India to get an Environmental Product Declaration for hot rolled steel coils manufactured at Vijayanagar, based on a LCA methodology.

### Steps undertaken:

JSW organized and conducted over 300 detailed interactions with internal stakeholders (top management persons and Heads of key functions / Departments at corporate office as well as at all the manufacturing sites) and external stakeholders.

Specific concerns, major risks as well as opportunities for the business were listed by the respondents, along with detailed justification for the consideration of the key issues and their potential impact on the business.

Information on all topics was segregated in broad themes relevant to the steel business. Ranked on the basis of the degree of current or potential impact on the business, and linked to other stakeholders relevant for the issue.

The methodology with its result was presented to the Board Committee for review of sustainability performance.

Based on the results of the framework that was developed, an action plan was prepared for each of the identified top issues.

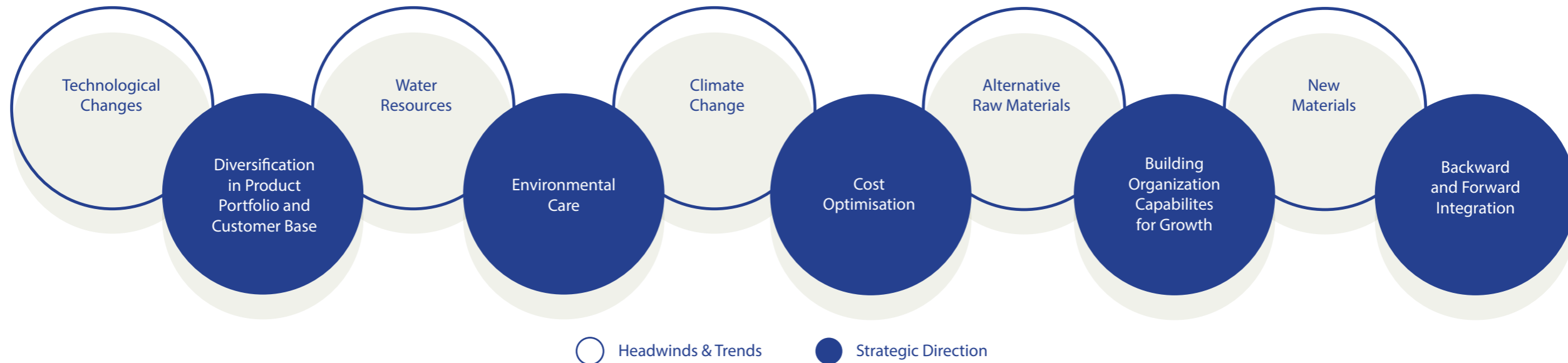
### Impacts and benefits:

The stakeholder engagement has fostered the strengthening of business strategy and is one of the key contributors in building the JSW Steel brand. The stakeholder engagement framework involves the identification of key stakeholders, material issues and methods / mode of engagement for the business.

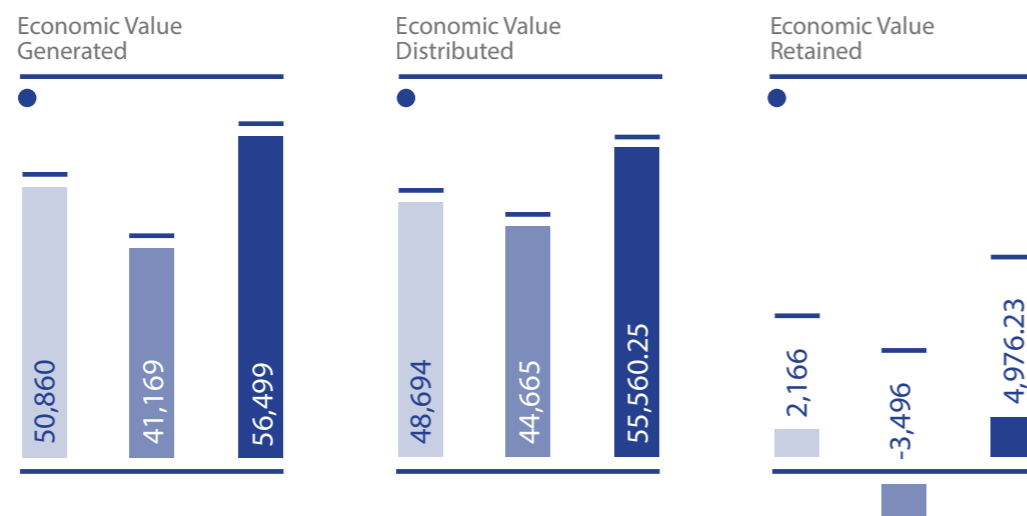
- Heightened awareness in the Board and top management on the "material" (= sustainability) issues
- Deeper review of business performance on environmental, social and governance topics by the Board Committee on Business Responsibility / Sustainability Reporting
- Better business decision-making
- Helped allocate appropriate resources to address the material issues for the business
- Ensures compliance in all domain areas, keeping in mind the business continuity in a healthy work environment.
- Improve reputation as an employer, supplier and customer
- Being part of the conversation allows business to be part of the solution, thereby converting risks into opportunity.
- Improved quality of information disclosed voluntarily to employees as well as externally via the annual report, business responsibility report, sustainability report, Global Reporting Initiative (GRI), CDP, WSA.

# TRACKING VALUE Creation

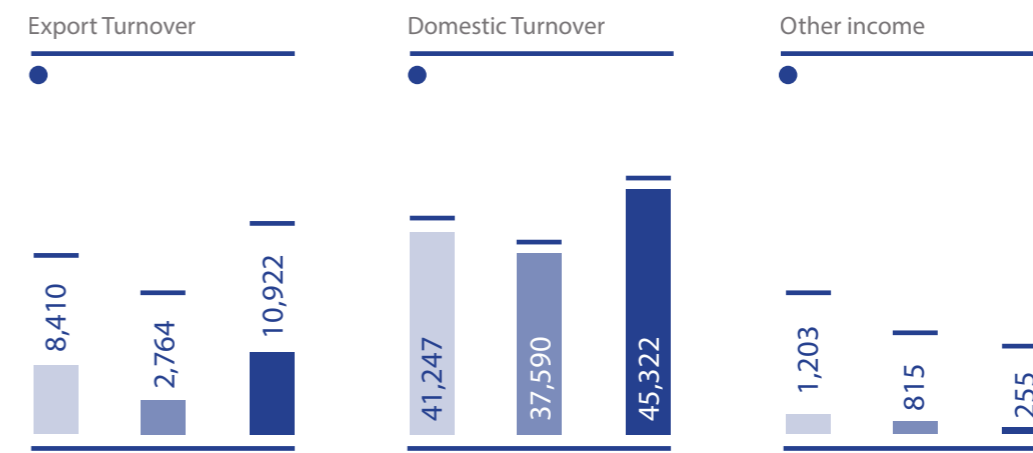
## FINANCIAL CAPITAL



Economic Performance (INR crore) :



Economic Value Generated (INR crore) :



Y-o-Y Change  
Input:

CAPEX  
26,815 crore

**53%** ↑  
Debt: Equity  
1.53

**36.26%** ↓  
Net Debt: EBITDA  
3.41

Y-o-Y Change  
Output:

**350%** ↑  
PBT: Turnover -  
0.09

**40%** ↑  
EBITDA: Turnover

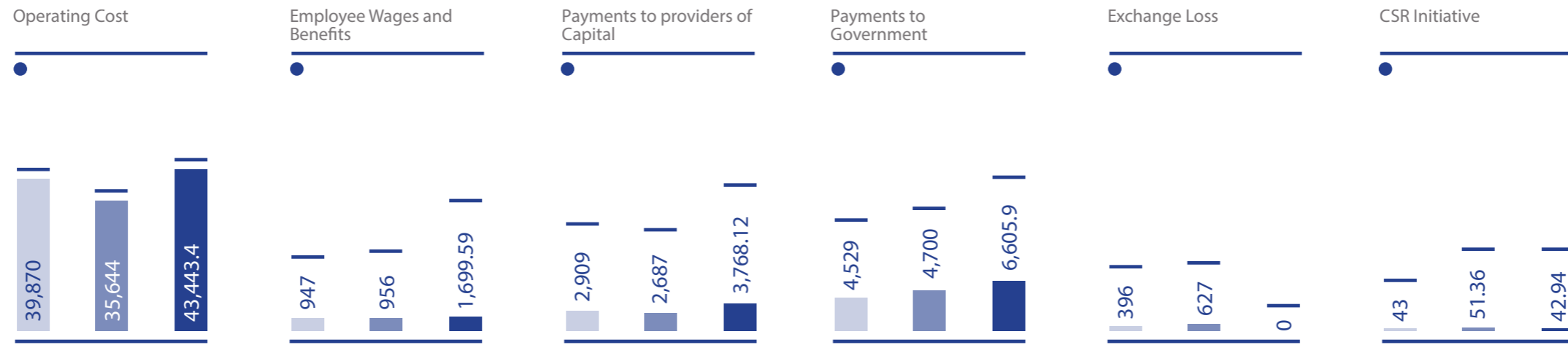
**136%** ↑  
Return On Capital Employed (ROCE)  
14.8%

Data for JSW Steel Ltd. ● 2014-15 ● 2015-16 ● 2016-17

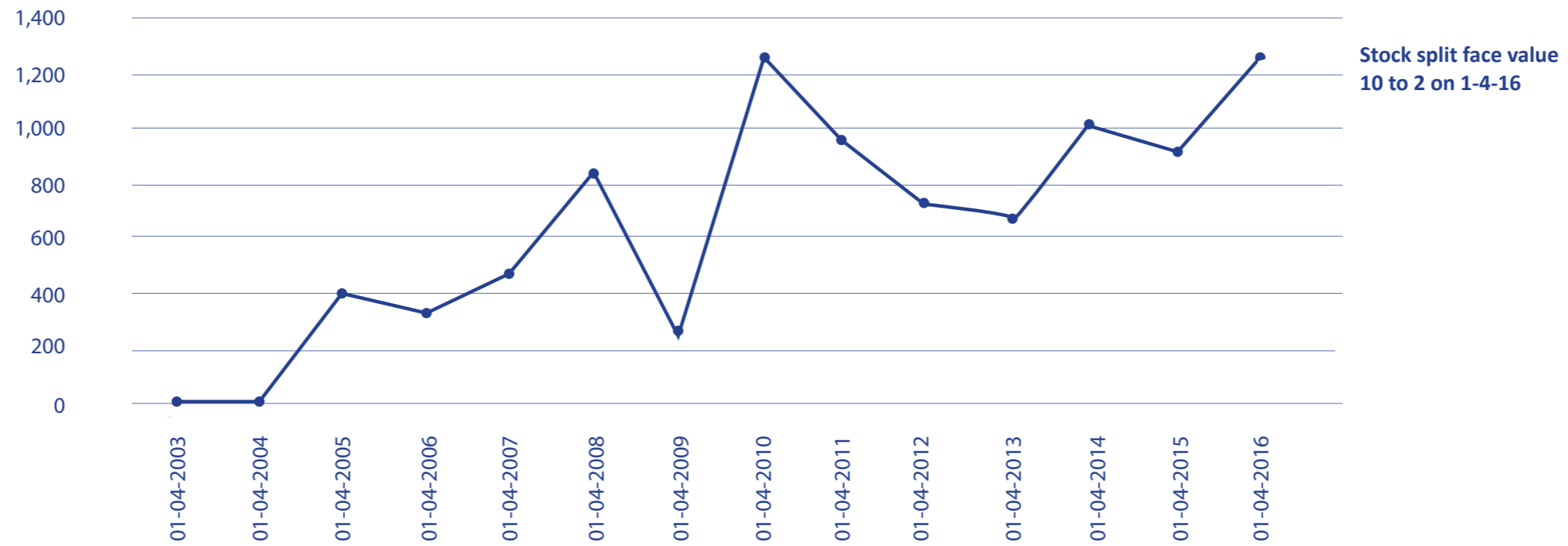


## FINANCIAL CAPITAL

Economic Value Distributed (INR crore):



Data for JSW Steel Ltd. ● 2014-15 ● 2015-16 ● 2016-17

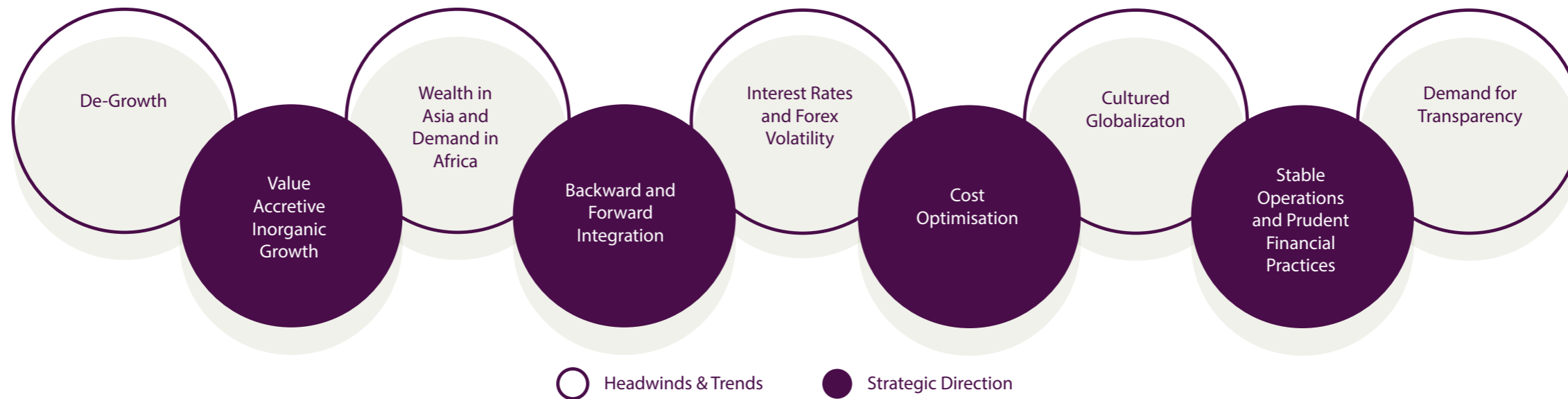


Trend in Share Price of JSW Steel Ltd. (Bombay Stock Exchange)

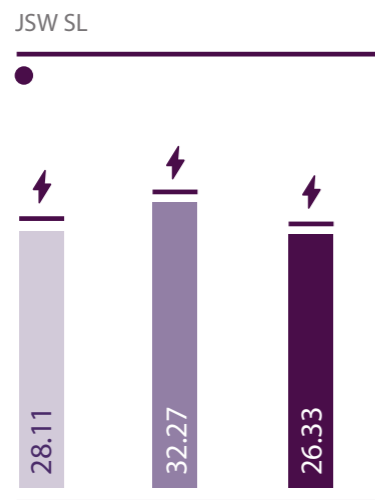
# TRACKING VALUE Creation



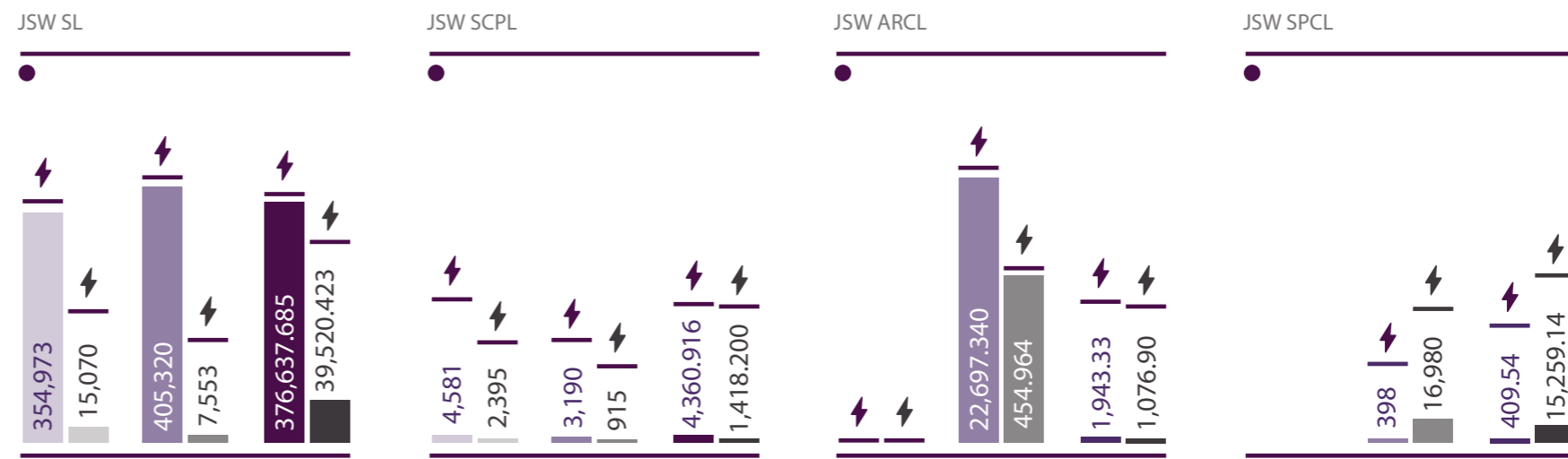
## MANUFACTURED CAPITAL



Specific Energy Consumption (Million GJ/t of Crude Steel):



Energy Consumption ('000GJ):



In 2016-17, JSW Industrial Gases consumed 102,526.84 GJ direct and 2,309,153.96 GJ indirect energy.  
 JSW Salav consumed 8,332,707.49 GJ direct and 520,471.70 GJ indirect energy.

**Y-o-Y Change Input:**

- Coverage of SoPs, and Technical Standards : 100%
- Crude steel production: 15.80 MnT
- 26%** ↑

Legend: ● 2014-15, ● 2015-16, ● 2016-17

**Y-o-Y Change Output:**

- Material Recycled : 4.12 MnT
- Inventory Turnover Ratio : 0.06
- Customer Rejects : 0.12%
- 77%** ↑
- 16%** ↑
- 33.33%** ↓

Legend: ● 2014-15, ● 2015-16, ● 2016-17

### Case Study : Development of low cost, accelerated weathering technology for Steel Slag

Steel slag disposal is one of the major areas of concern for steel industry mainly because of its toxicity and slow weathering characteristic. The development of a low-cost, accelerated weathering technology for steel slag (to produce superior quality aggregates for construction) is one of the areas of steel-making which has been overlooked, and needs to be addressed in order to maximise the waste utilisation and value addition to the steel making business.

Through this project, a unique and techno-economical process was developed for loosening the metal slag bond and stabilizing the slag component for being used as aggregates in civil construction.

Progress so far:

June 2016	Feb 2017	Nov 2016	Mar 2017	Six months of rural applications of processed slag.
Laboratory Trials Completed	Field trial starts with pilot projects	Laboratory testing of Aggregates completed	Development of self-weathering method indigenously	

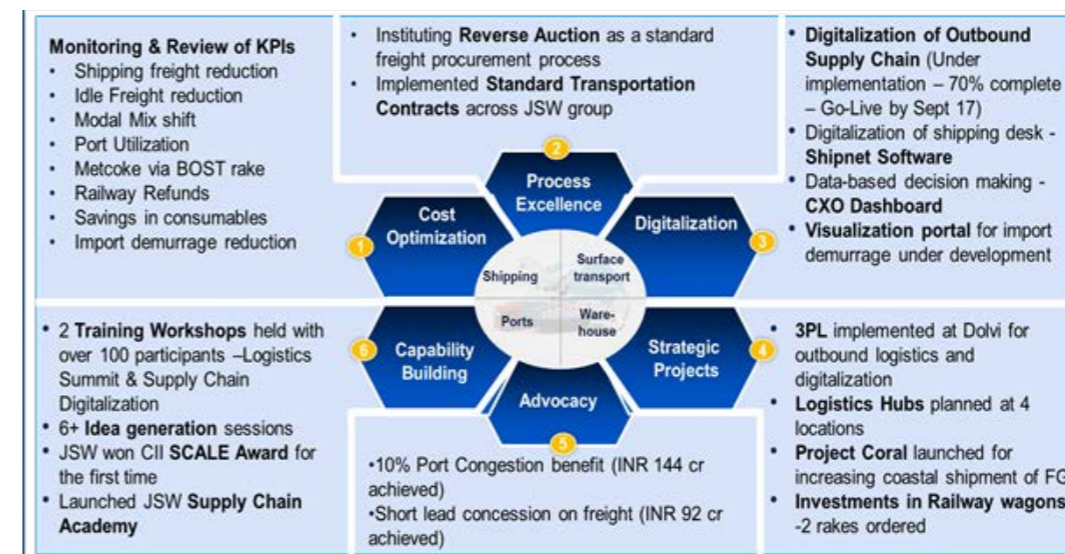
Through this project JSW Steel has been able to:

- Reduce weathering time for steel slag from over 1 year (natural weathering) to less than 10 days.
- Improve recovery of metallic wastes by 1%.
- Achieve a 10% net reduction in energy consumption for metallic separation and size reduction.
- Produce commercially viable product from waste. The potential of revenue generation is around INR 200 per ton of processed slag sold.
- Avoid dumping of large quantities of slag. The target is to reduce the slag dumped at landfilling site from 3,000 tons per day to zero in the near future.
- Limiting environmental degradation by reutilising slag.

### Logistics Excellence and Supply Chain Transformation

Logistics and supply chain plays a key role in supporting the complex operations in 6 manufacturing facilities spread across the southern and western regions of India.. In this view, JSW steel undertook a logistics supply chain transformation journey to support its ambition of becoming a 45 MTPA steel producer within the next decade.

The transformation journey centres on following 6 themes:



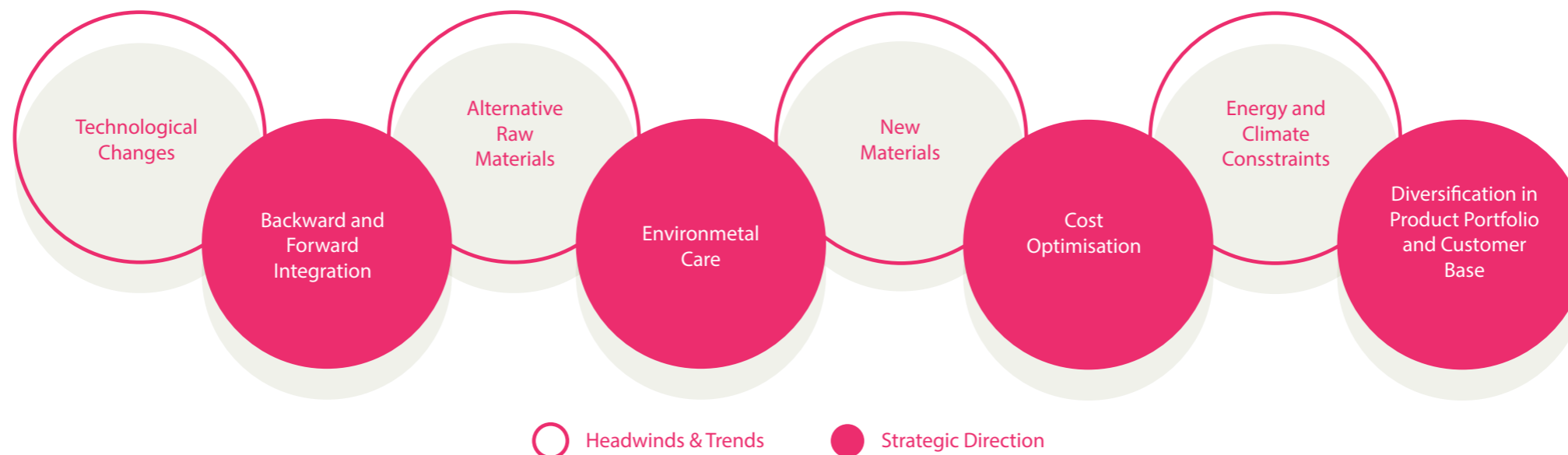
### Impacts and benefits:

- JSW Steel has a logistics spend base of ~Rs 11,000 crore and cost savings to the tune of 4% in FY 2016-17.
- By moving TMT Steel from Dharamtar Jetty to Cochin port, JSW Steel marked the first ever costal movement of TMT Steel in India.
- JSW inaugurated the owned Bogie Flat Steel Wagon rakes under the Liberalized Wagon Investment Scheme; this unlocked an annualised potential freight savings of 11%.
- JSW Steel has contributed in reducing the carbon footprint by taking initiatives of replacing wooden saddles by HDPE saddles, adopting reusable packing material, etc.
- Commissioning of In-house facility for TXR checking and BPC certification of rakes at JSW's facility in Vijayanagar has resulted in 35% reduction of CO2 emissions.
- JSW Steel has reduced specific diesel consumption and curbed CO2 emissions by phasing out old vehicles and monitoring vehicle idle time.
- Cost optimization strategies have yielded up to 40% benefits on major routes.

# TRACKING VALUE Creation



## INTELLECTUAL CAPITAL



**Y-o-Y Change Input:**

Expenditure on R&D  
INR 25.05 crore

**11%** ↓

Number of new products developed : 79

Number of Board room meetings with sustainability as main agenda :  
CSR Committee: 3 (17-May, 27-Oct and 22-Mar), BR Committee: 2 (17-May and 20-Dec)

**Y-o-Y Change Output:**

% of revenue from value added products : 34%

**112%** ↑

Number of product and process patents filed : 17

Number of Trade Marks : 3 nos.  
Trademarks registered in FY16-17 - JSW Pehal, JSW Colouren and JSW Colouren+

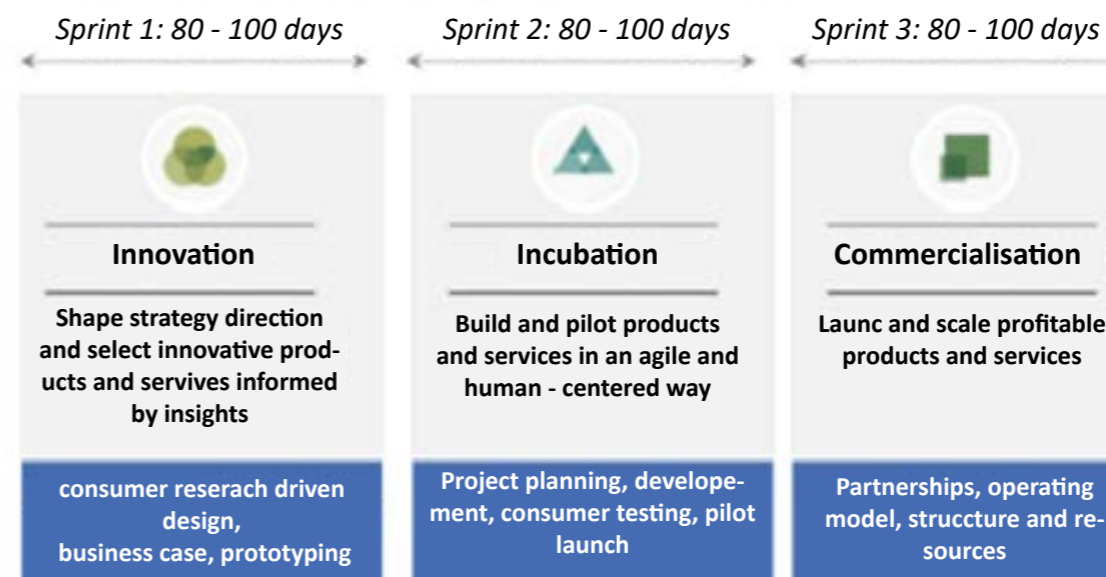
### Case Study: Digital Transformation Journey

Over the last 9 months JSW identified 200+ projects from where prioritization has been done for and implemented (benefits realized) or under implementation 30+ high impact initiatives across various functions and locations.

#### Areas of Intervention

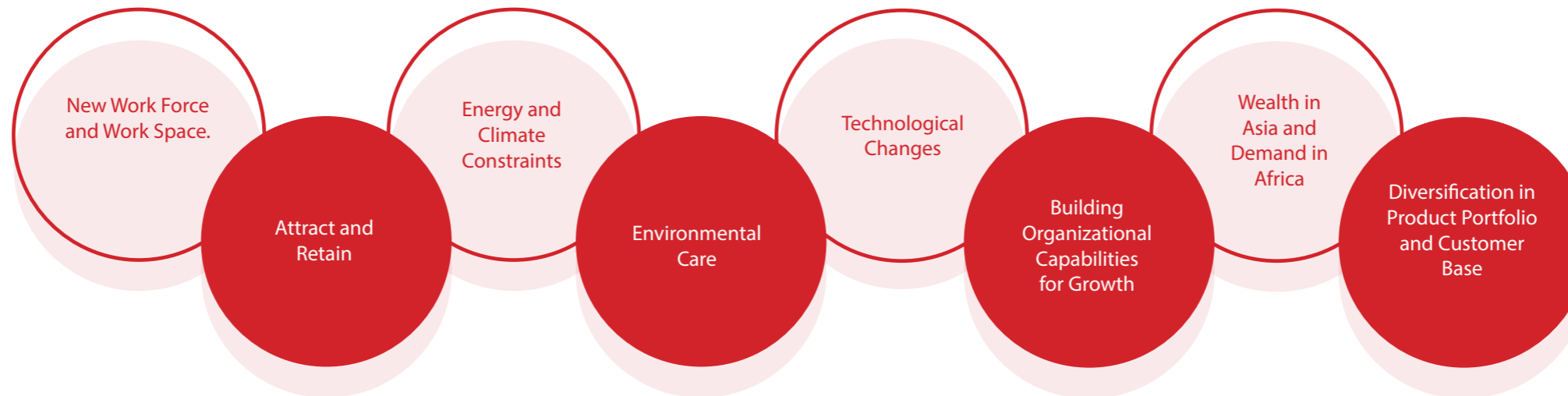
- Minimization of power requirement and elimination of power wastage
- Value-in-use based raw material optimization to reduce liquid metal cost
- Reduction in consumption of shipping fuel - analytics driven simulation and scheduling
- Reduction in power consumption and Enhancement of efficiency

### 3 step approach to digital transformation



# TRACKING VALUE Creation

## HUMAN CAPITAL



○ Headwinds & Trends    ● Strategic Direction

### Employment:



This is the second year of reporting employment data by JSW SPCL and JSW ARCL

M - Management NM - Non - Management C - Contractual

● 2014-15    ● 2015-16    ● 2016-17

This is the first year of reporting employment data by JSW Industrial Gases and JSW Salav

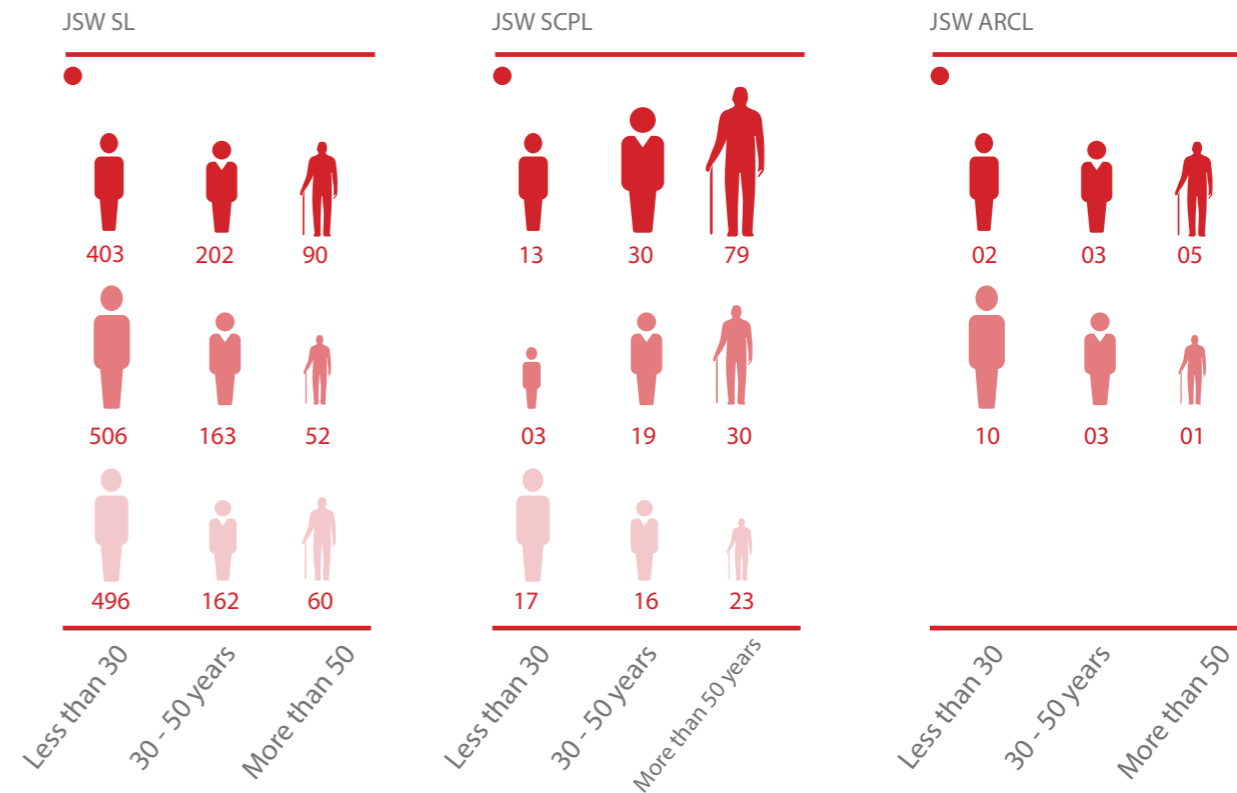
# HUMAN CAPITAL

## Workforce Turnover:



JSW Industrial Gases reported a workforce turnover of 9 and JSW Salav reported a workforce turnover of 18 for the reporting period 2016 - 17.

## Workforce Turnover by Age:



## Injuries:

JSW SL	77	83	50
JSW SPCL	0	0	0
JSW ARCL	2	0	7
JSW SCPL	0	0	9
	2014-15	2015-16	2016-17

## Injury Rate:

JSW SL	0.1	0.09	0.32
JSW SPCL	0	0	0.92
JSW ARCL	0.17	0	1.54
JSW SCPL	0.1	1.38	0.64
	2014-15	2015-16	2016-17

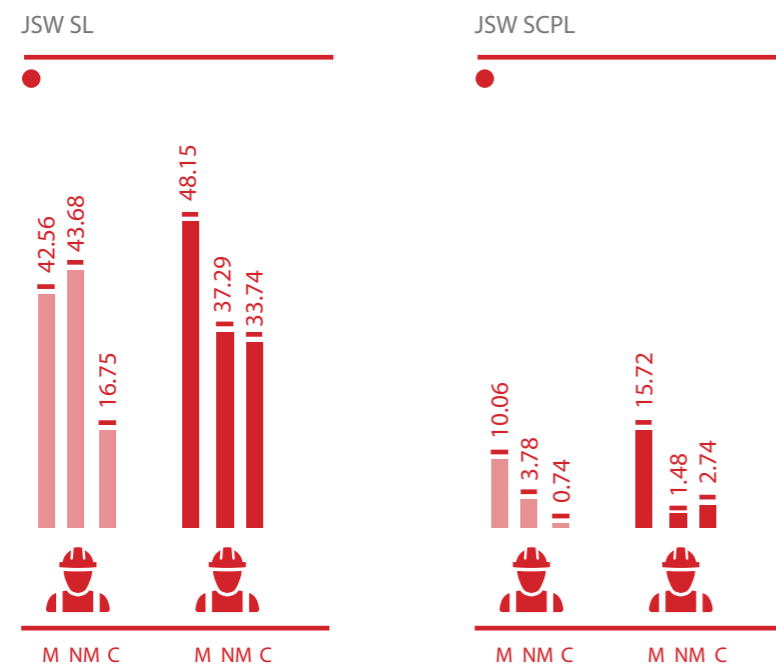
## Lost Day Rate:

JSW SL	6.2	30.8	0.06
JSW SPCL	0	0	0
JSW ARCL	22.7	0	0.30
JSW SCPL	4.8	5.3	0.12
	2014-15	2015-16	2016-17

● 2014-15 ● 2015-16 ● 2016-17

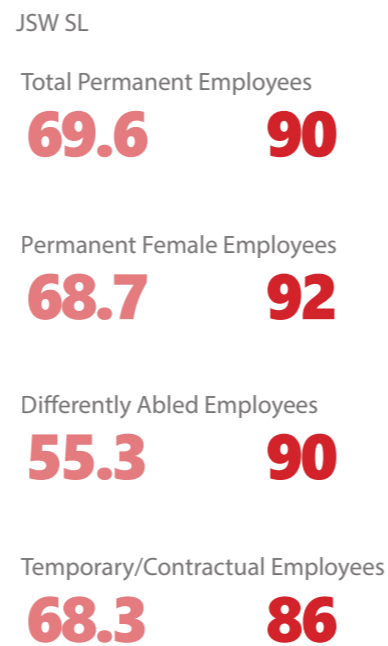
# HUMAN CAPITAL

## Training hours per capita:

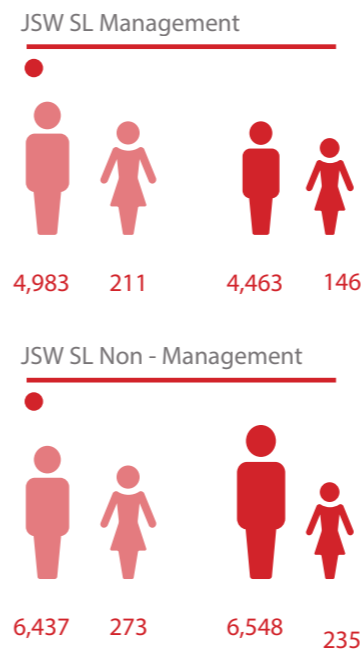


M - Management NM - Non - Management C - Contractual

## Training on safety (%) :



## Diversity:



## Total Number of Permanent Employees

**11,848**

## Total Number of Temporary Employees

**25,890**

## Total Number of Female Employees

**493**

## Lost Time Injury Rate

**0.55 0.5 0.36**

## Differently Abled Employees at

**25 24 28**

## Input: Per Capita Training (man hours)



## Y-o-Y Change Input:

Percentage of women in senior position: **4.10**

Average time employees are in the same job or function: **3.5 years**

## Y-o-Y Change Output:

Attrition rate: **61%**

Percentage of employees connected internally to intranet: **100**

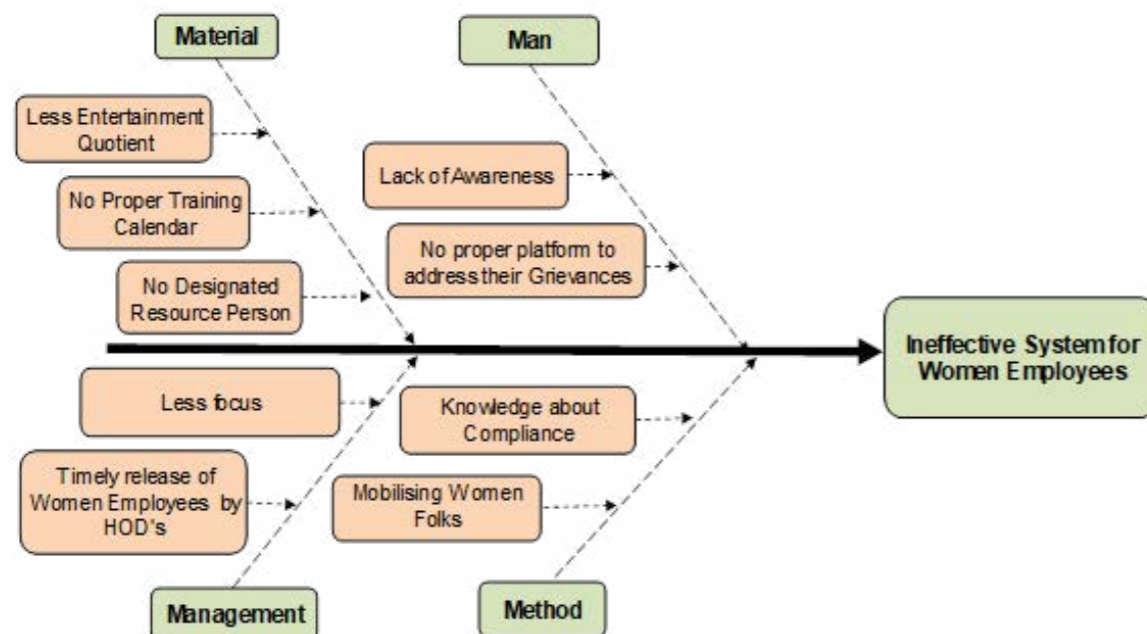
Percentage of women in supervisory and advisory boards (2 women directors out of 12 directors): **16.66**

### Case Study: Measures and Initiative for Women Empowerment

Women employees form a very important part of JSW Steel’s work-force and the Company resolutely aims to provide provision of opportunities and programs for female employees to be mentally and emotionally empowered so as to promote their growth as individuals in their own right.

In keeping with this resolution, the Human Resource Department of JSW Steel’s Vijaynagar plant undertook a bold step in identifying some of the commonly faced problems by women employees at workplace. The problems identified are as follows:

- No proper platform to address the grievances of women employees
- Balancing work and families roles has become a key issue. There are many facets in working Females life that is subject to stress. They deal with home and family issues as well as job stress on a daily basis
- Lack of engagement initiatives
- Limited focus on women employees

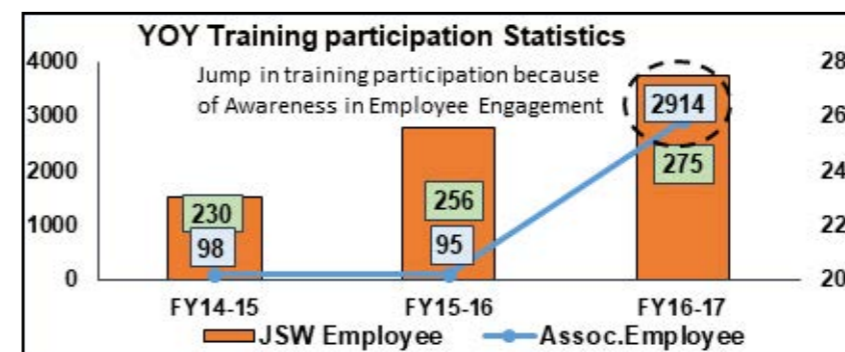


As a result of this problem definition activity, it was inferred that a system should be established to improve the morale as well as solve the

grievances related to women employees. With this idea as the central focus, the Human Resource team came up with programs under the following 6 broad categories for first phase of improvement training to be imparted to women employees:

1. Confident Women - Do it Yourself Kit
2. Wellness Program / Lifestyle Improvement
3. Stress Management
4. Work Life Balance
5. Awareness program on Prevention of Sexual Harassment at Workplace
6. Awareness Program on Human Rights

Some of these programs included trainings with special focus on parenting, family planning, POSH, work life balance, yoga for better health, stress management and industrial discipline; for all the female employees as well as house wives . All these initiatives are believed to bring improvement for women folk associated with JSW not only at workplace but also in solving their problems, dealing with change and benefitting from services that far exceed their expectations.



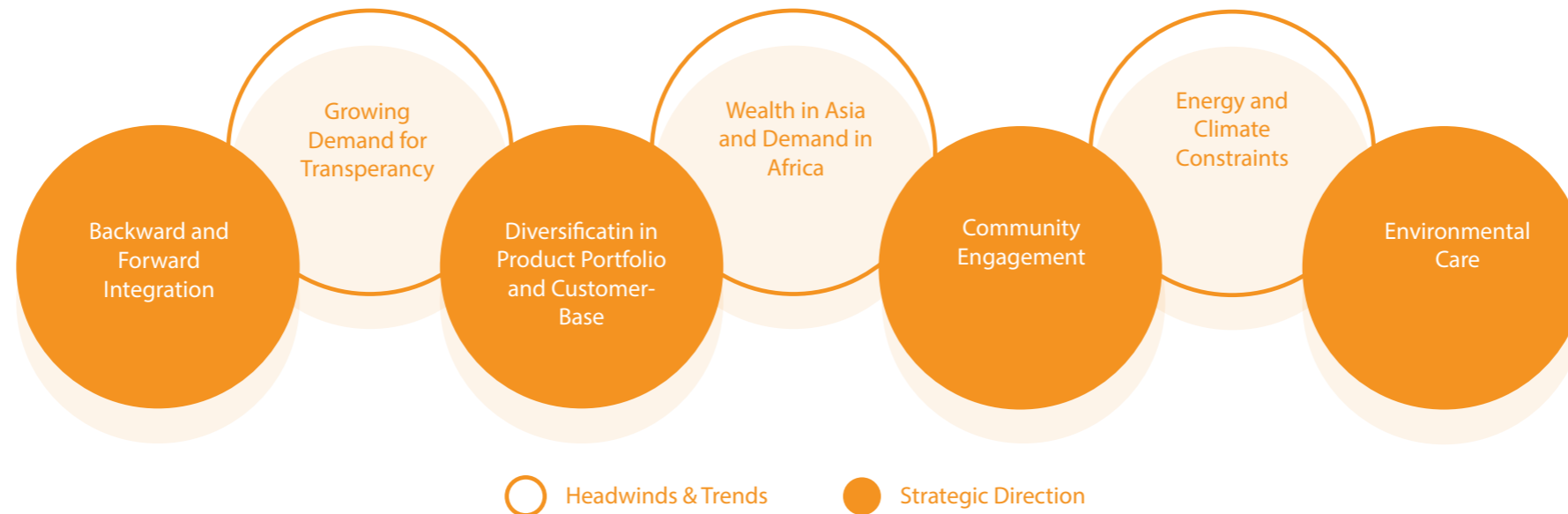
#### Impacts and Benefits:

- Year on year grievances related issue has come down and more participation has come in different employee engagement activities organised by the HR team.
- DMD dialogue with female Employees improved strength and belief of female employees
- Women Empowerment Cell has been set up for timely redressal of issues raised by female employees

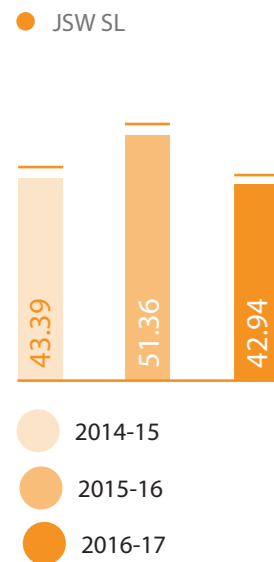
# TRACKING VALUE Creation



## SOCIAL AND RELATIONSHIP CAPITAL



Expenditure for Community Initiatives (INR Crore)



### Y-o-Y Change Input:

Value sourced from local suppliers: 30%

**18.36%** ↑  
Number of back-log orders: 12

**12%** ↑  
Number of distribution channels: 7300+

### Y-o-Y Change Output:

Percentage of female employees in organization (Gender Diversity): 4.16%

Projects with customers: 1 (Volvo VA VE)

**Customer Satisfaction Index (CSI)**

The below JSW scores have been arrived at using the simple mean scores of all product categories on all process areas and on select loyalty statements.

	2016		2014		2016		2014	
	JSW	CC	JSW	CC	Retail	OEM	Retail	OEM
Overall CSI	3.76	3.72	3.88	3.56	3.88	3.71	3.85	3.90
Loyalty Index	4.01	3.82	4.13	3.74	4.23	3.91	4.15	4.11
Experience Index	3.61	3.61	3.64	3.43	3.54	3.50	3.55	3.69
	581	458	355	389	176	405	126	229

Scores dropped slightly from previous round, however, no significant difference observed. Retail Loyalty significantly higher than OEM.

Legend: Scores significantly lower than JSW 2016 (Red), Scores significantly higher than JSW 2016 (Green)

### Case Study 1 : Mission Against Malnutrition

The statistics of the National Family Health Survey (NFHS-III) speak of an appalling state of children under 5 years of age in India in terms of nourishment and health. As per the survey, 20% of Indian children under 5 years of age were found to be "wasted" i.e. acutely malnourished and 48% were found to be stunted i.e. chronically malnourished. Also, studies suggest that more than one third of the world's acutely and chronically malnourished children live in India. Under-nutrition is more common in children born to mothers who are under-nourished i.e. having a body mass index below 18.5, than in children whose mothers are not under-nourished. India has the highest number of low birth-weight babies per year, estimated to be 7.4 million. (UNICEF 2014)

In order to address this situation, JSW in partnership with the Department of Women and Child Development, Government of Karnataka, launched a three year community-based pilot project "Mission Against Malnutrition" (MAM).

#### Target Area:

Sanduru block of Bellary district in Karnataka state was chosen as the target area for implementation of project. This is because the percentage of malnourished children was as high as 45.6% which is found to be worst among all the other adjoining blocks.

**Implementation:**

Project was implemented through Anganwadi centres (day care centres run by the government) in Sandur, Hospet and Kudligi blocks of Bellary district.

JSW Steel undertook its Mission against Malnutrition with Spirulina supplement in Bellary district. It is interesting to note here that various studies have found Spirulina to be an excellent supplement for countering malnutrition. However, no such Spirulina supplement based large scale project has ever been undertaken to counter malnutrition. JSW Steel is, thus, first in the world to undertake such a large scale project for addressing malnutrition through Spirulina supplement.

**Milestones Covered:**

Children covered (till 31 March 2017): 30,716, moderately and severely malnourished children (between 6 months to 6 years) were supplemented with Spirulina Fortified Sugar (SFS) for a period of 180 days. This helped in addressing their micro-nutrient deficiency.

**Impact:**

A dramatic 42% reduction in the number of malnourished children was documented which has also been validated by a third party.

A non-randomised study on the nutritional status of children in Bellary was undertaken by the Institute of Health Management and Research (IHMR), Bengaluru. The study found 46% reduction in malnutrition among children who received 5 grams of SFS and 67% reduction in those who received 10 grams of SFS, as compared to insignificant change in the control group. A significant cognitive improvement and alleviation of biochemical micronutrient deficiencies was observed among children who received Spirulina. This is the single largest 'mission' against malnutrition conducted globally with Spirulina supplement. Through this project, JSW Steel has been able to structure a workable, easily scalable and a cost effective model for addressing micronutrient deficiency to help bring down overall malnutrition among children.



**Case Study 2 :  
Improved Rural Livelihoods through Integrated Watershed Management**

Integrated watershed management is a long-term initiative to increase agricultural productivity and improve livelihoods of rural poor in vulnerable rain-fed areas. This approach helps to:  
Establish a model site of learning in a low rainfall zone in Karnataka (<700 mm annual rain) to demonstrate the potential in rain-deficit areas.

Enhance water availability and water use efficiency in the target villages.  
Build capacity of the farmers for diversifying and improving rural livelihood opportunities through knowledge sharing and information dissemination.

For the proposed study, Sandur taluk of Bellary district in Karnataka was considered by JSW. Bellary district being endowed with iron ore is known for mining and related industrial activities. Over the years, improper water management and crop management practices have eventually resulted in degradation of soil and water resources in the district. JSW has realised the need to retain and improve the water resources and hence the integrated watershed management, by optimizing the potential of rain-fed areas facilitating improved agricultural productivity leading to poverty alleviation, environmental protection and access  
As a result, during the reporting year JSW Steel has undertaken the construction of- Six farm ponds with the effective storage capacity to harvest about 1,500 m<sup>3</sup> of rainwater. Four check dams with about 900 m<sup>3</sup> net storage capacity. About 12152 m long field bunding to conserve rain water and reduce soil erosion. Desilting of old check dams to increase storage capacity (300 m<sup>3</sup>) of the structures. Diversion of runoff water into dry open wells to rejuvenate them and increase rain water use efficiency.

**Activities Undertaken by JSW Steel**

- Soil and water conservation measures
- Productivity enhancement
- Monitoring and evaluation
- Avenue plantation
- Income generating activities
- Livestock development
- Capacity building and dissemination

**Benefits:**

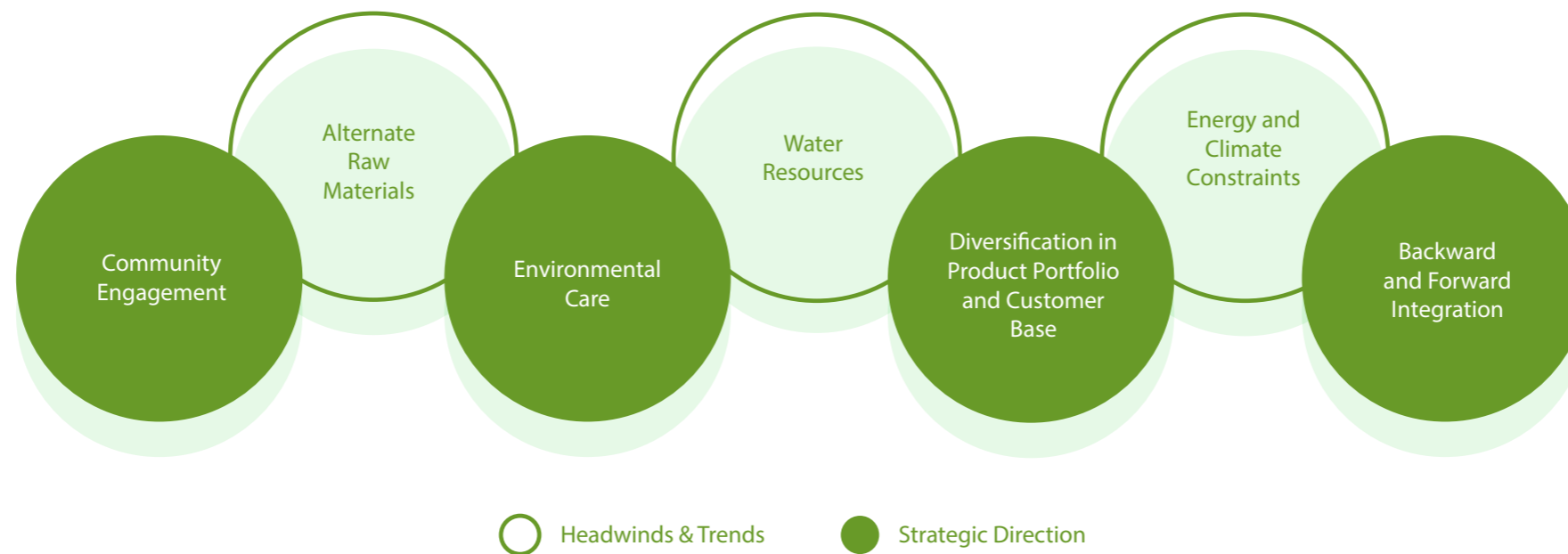
- Incremental water impounded
- Enhancement in agricultural productivity
- Establishment of automatic weather station
- Groundwater level
- Plantation / afforestation
- Income-generating activities
- Livestock development
- Capacity building programs to improve livelihoods



# TRACKING VALUE Creation



## NATURAL CAPITAL



### Specific Material Consumption (T/t of crude steel):

JSW SL

Coal	1.02	1.03	1.05
Iron Ore	1.97	1.64	1.56
Fluxes	0.60	0.57	0.50

### Specific Material Consumption (T/t of products):

JSW SCPL

Zinc/Alloy	0.04	0.03	0.04
HRC	0.76	0.80	0.93
CRC	0.36	0.36	0.38

### Specific Material Consumption (T/t of crude steel):

JSW SALAV

Iron Ore - Lumps	0.79
Iron Ore - Pellets	0.77
MGO	0.01

### Specific Material Consumption (T/t of crude steel):

JSW ARCL

Coal	0.24
Iron Ore	0.94

### Specific Material Consumption (T/t of crude steel):

JSW INDUSTRIAL GASES

Air Processed	3.85
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● 2014-15      ● 2015-16      ● 2016-17

## NATURAL CAPITAL

Total Water Consumed ('000 KL):



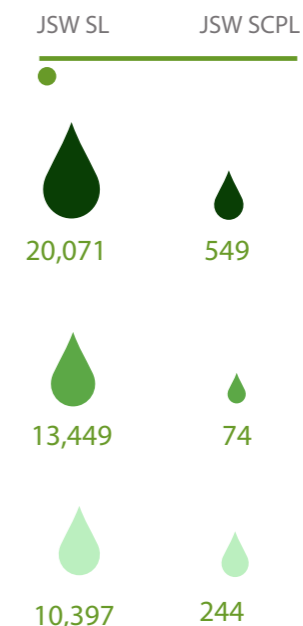
First year of reporting by JSW Salav and JSW Industrial Gases.

Specific Water Consumption (m<sup>3</sup>/t of Crude Steel):



First year of reporting by JSW Salav and JSW Industrial Gases.

Total Water Recycled ('000 KL):



Other Emissions (Kg/t of crude steel):

Entity	2014-15	2015-16	2016-17
JSW SL			
NOx	0.9	0.9	1.24
Sox	1.8	2.1	1.41
SPM	1.5	1.2	1.06

Other Emissions (µg/t of crude steel):

Entity	2014-15	2015-16	2016-17
JSW ARCL			
NOx			45.24
Sox			43.18
SPM			56.93

Other Emissions (µg/t of crude steel):

Entity	2014-15	2015-16	2016-17
JSW INDUSTRIAL GASES			
NOx			0.38
Sox			0.33
SPM			0.04

Other Emissions (µg/t of crude steel):

Entity	2014-15	2015-16	2016-17
JSW Salav			
NOx			42.86
Sox			25.37
SPM			42.86

Other Emissions (µg/t of crude steel):

Entity	2014-15	2015-16	2016-17
JSW SCPL			
NOx			46.05
Sox			210.05
SPM			85.92

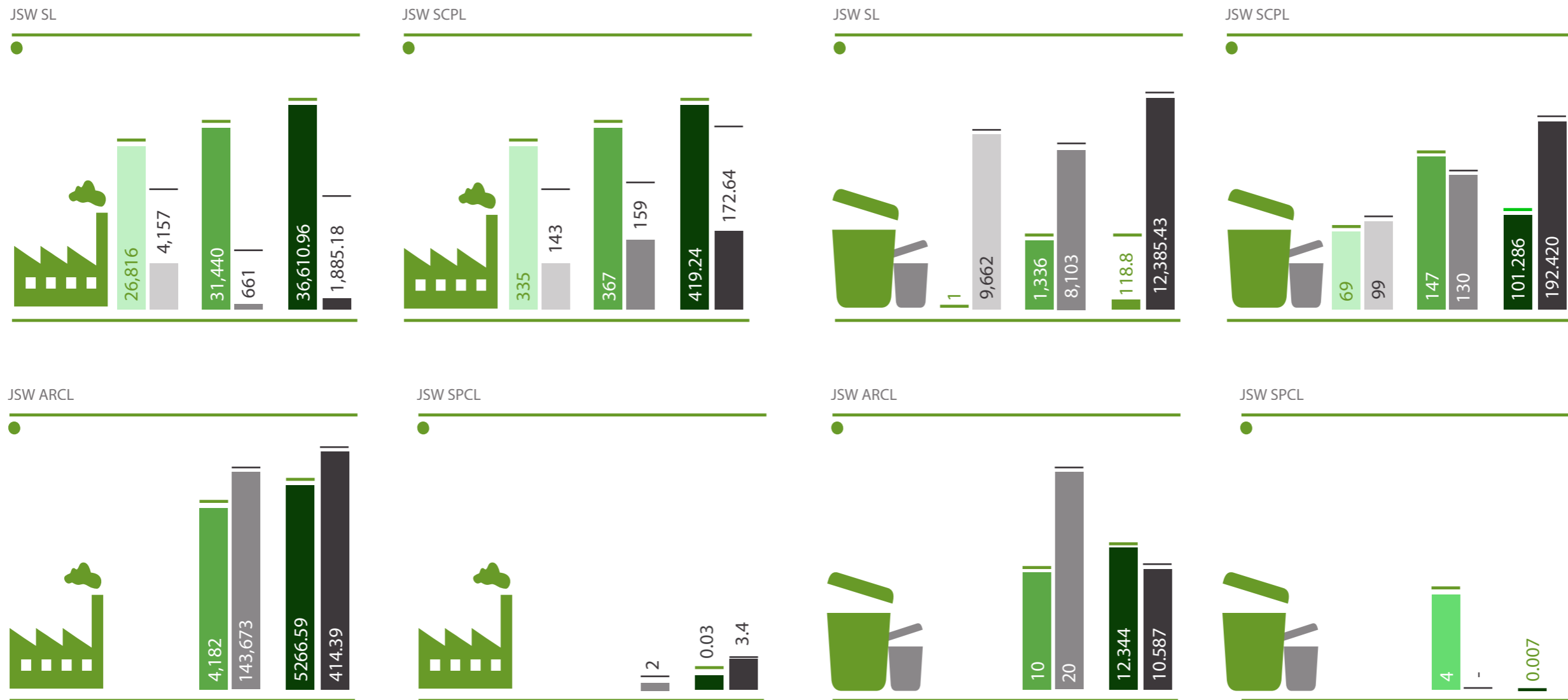
● 2014-15 ● 2015-16 ● 2016-17

G4-DMA: Emissions, G4-EN15, G4-EN16, G4-EN18, G4-EN21, G4-EN23, G4-SO1

# NATURAL CAPITAL

GHG Emission ('000tCO2e):

Total Waste Generated ('000 Tons):



GHG Emissions ('000tCO2e):

In 2016-17, JSW Salav emitted 118.55 thousand tCO2 GHG emissions. JSW Industrial Gases had negligible direct emissions and 343.86 thousand tCO2 indirect emissions.

Total Waste Generated ('000 Tons):

In 2016-17, JSW Salav generated 42.85 tons of hazardous and 96.26 tons of non-hazardous waste.

Y-o-Y Change Input:

Water Intensity : 3.61 m3 / ton

Inbound and Outbound Logistics by Train rail : 80%

Expenditure on Biodiversity Management : INR 257+ Lakhs

Y-o-Y Change Output:

Coastal Shipment Transport of Raw Material (Coal and Iron-ore) : 9.43%

Area developed under green cover : 7,850 Ha

% Effluent Recycled and Reused : 35.49%

G4-DMA: Emissions, G4-EN15, G4-EN16, G4-EN18, G4-EN21, G4-EN23, G4-SO1

Direct  
Indirect  
2014-15  
2015-16  
2016-17

Hazardous  
Non-Hazardous  
2014-15  
2015-16  
2016-17

G4-DMA: Emissions, G4-EN15, G4-EN16, G4-EN18, G4-EN21, G4-EN23, G4-SO2

## Case Study 1 : Mangrove Restoration Project

Various observations depict that the destruction of the mangroves along the embankment of the project site of Dolvi has led to the ineffectiveness of the embankment in resisting the upsurge and wave action of the sea. This has resulted in gushing of sea water into the farm lands during severe upsurge and high tide, leaving behind the salt deposition on the agricultural fields and rendering them unsuitable for cultivation.

Good evidence has been found over the years that the mangroves help to reduce vulnerability to climate-related coastal hazards. As a result, mangrove restoration has been used as an ecosystem-based disaster risk reduction and adaptation measure, particularly following the 2004 Asian Tsunami, when many affected countries embarked on ambitious replanting programs.

From 25<sup>th</sup> Oct 2016 to 28<sup>th</sup> Oct 2016, a monitoring visit to mangrove restoration site was carried out by the external expert (NEWS) team and the work gained high appreciation after the field and plant assessment. During the visit it was assessed that 50 acres of land was available for mangrove plantation.

Based on the observation and assessment, the mangrove tree plantation program was carried out at Thakurbedi, Tamsibunder, Masadbedi, Shirki Chal no.1 and 2 was done alongside the bund on 8-October-2016 in the presence of JSW team, Gram Panchayat (village council) team, Gram Samruddhi Sankalpa (village welfare council) team and members from 34 self help groups (SHGs). In this program about 1,05,435 mangrove plant saplings were planted.

### Action taken for bund repair:

Length of the embankment: 5,901 m,  
Amount spent for initial embankment strengthening: INR 133.70 lakhs  
Villages to be covered through embankment: 15  
Land Impacted 5,000 hectares

### Impacts and benefits:

The restoration of mangroves has fostered the strengthening of the embankment (bund) along 5,000 hectares of land, preventing the intrusion of the saline water dose into the farm lands and destruction of their cultivability.  
Mangrove area coverage - Jetty to Bhal - 18 Km area  
Mangroves working area - 5 Villages  
SHGs working on Mangroves - 34 (345 members)  
Meeting with Villagers - 26 meetings conducted  
Training for Mangroves Nursery - 7 sessions conducted for SHGs

## Mangroves Nursery

Mangrove saplings developed and planted:

Masadbedi (7 SHGs): 30,925

Shirkichal No.2 (9 SHGs): 7,510

Shirkichal No.1 (7 SHGs): 26,200

Thakurbedi and Tamshibandar (11 SHGs): 40,800

Total: 105,435

## Mangroves species found

Avicennia officinalis | Avicennia marina | Sonneratia apetala | Ceriops tagal

In order to augment this activity of mangrove restoration, JSW Steel also provided monetary support to SHGs for nursery development and plantation of mangrove saplings along Kharland bund site. These SHGs, with support from JSW Steel, have undertaken mangrove sapling plantation over a stretch of 20 hectares of land so far.



Tree Plantation: On the occasion of "Krushi Divas" (farmers day) on 1st July 2016, the CSR team with the help of SHGs, villagers and Gram Panchayat members organized tree plantation in Masad Gram Panchayat.

Basmati Rice Cultivation: The cultivation of Basmati rice cannot be carried out in Saline water. But a farmer, Sujit Singh from Haryana has prepared a set of basmati rice which can grow in saline land. This is a pilot project for cultivating Basmati rice in the field. The success of this project will help in increase of income for the farmers in the future. 43 farmers were given 5 kg Basmati rice seed for cultivation in 17 hectares of land.

A team from Under the Mango Tree (UTMT, an NGO) visited the Dolvi Mangrove site and organized interactive sessions to create awareness on bee-keeping technology and assessment of the location for beekeeping for honey culture. They also interacted with the SHG at Masad. This serves to be another scope for SHG for alternative livelihood.

The project became a grand success and created new livelihood opportunities for the farmers.

## Case Study 2 : Greening Barren Hillock

The Vijayanagar plant area of JSW Steel Limited is surrounded by a cluster of small hills on its eastern, southern, south-eastern and south-western sides. The area falls in the arid zone with scanty rainfall with natural vegetation consisting of draught resistant species of thorny bushes, shrubs and grasses. Also, the climatic conditions and rainfall make the area unsuitable for any large scale agricultural activity.

JSW Steel management has a vision to convert this dry land into a forest area. At the same time Vijayanagar plant generates around 1300 m<sup>3</sup>/ hr of surplus recycled waste water. JSW Steel management saw an opportunity in matching the two and decide to redirect the recycled water overflowing from the guard ponds for irrigation purpose in this water-starved region. Apart from an increase in the green cover in the area, a remarkable improvement in the micro climate of this region is being observed as a result of this project.

Since the area behind the sports institute and Vidyanagar township came under forest land, an agreement was entered with the Karnataka forest department for the plantation activity. JSW Steel agreed to transfer INR 10 lakhs to forest department annually for plantation activity in the hillocks.

A budget of INR 1 crore was allocated under a capex project for laying the required pipeline for transfer of water. The funding for the site development, including trenching and construction of water storage, came from the CSR budget of INR 13.32 lakhs. For undertaking this project, soil analysis, water availability study and identification of key plant species were done.



The following are the key impacts of this project:

- 30000 saplings of 26 key stone species planted across 210 acres
- Optimal use of JSW waste water
- Improvement in the biodiversity of the area
- Improvement in the positive brand image of JSW Steel

All activities for protecting the environment relate directly or indirectly to enhancing the natural capital, which in turn paves the way for delivering greater ecological services, and ultimately helps businesses to profitably operate with lesser negative footprint.

## RECOGNITION



JSW selected in vigeo Iris Emerging 70 ranking



1st iron & steel co. in indiato get an EDP label in line with ISO 14025



- Steelie Award 2016 in the Innovation category for development of advanced high strength automotive steels with speed and innovation at the 7th Steelie Awards instituted by World Steel Association
- National Award for supply chain and Logistics Excellence: JSW Steel won the award by Confederation of Indian Industry (CII) under steel category in its 3rd edition of the Supply Chain and Logistics Excellence (Scale) Awards.
- Accreditation with level 5 for Total Cost Management (TCM): JSW Steel was accredited with Level 5 (an exemplary rating - highest in the category) by TCM division of the CII for TCM Maturity Model Assessment.
- The National Energy Conservation Award 2016 by the "Bureau of Energy Efficiency" - a statutory body under the Ministry of Power: The Vijayanagar Works won the 2nd prize in the category of Integrated Steel Sector.
- Golden Peacock Innovative Product/Service Award - 2016 awarded at the Institute of Directors 26th World Congress on Leadership for business excellence and innovation.
- National Sustainability Award-2016: Second Prize amongst the Integrated Steel Plants Category by Indian Institute of Metals.
- Indian Institute of Mineral Engineers (IIME) Mineral/ Coal Beneficiation Award Industrial Practice: Award for outstanding professional contribution to Mineral Engineering -2016.
- Chapter Convention on Quality Circle (CCQC)
- International Convention on Quality Circle
- Of the twenty-four teams, twenty-one were conferred with Gold Awards, while three teams were rewarded with Silver Awards.
- Conferred with Greentech Environment Award - in Gold Category for 2015 and 2016

## EPILOGUE



Dear Stakeholders,

In the FY 2016-17, JSW Steel achieved its highest ever production levels since inception; profit after tax was positive, and the EBIDTA increased by 90%. This performance - in the face of multiple global challenges - epitomises JSW Steel's mettle in this report that has been prepared using the G4 Guidelines of the Global Reporting Initiative. We also brought in some elements of the new GRI Standards that will mark the journey in the coming years.

JSW Steel believes it needs to narrate its value creation story succinctly, capturing the essence of financial, manufacturing, intellectual, human, social and relationship, and natural capitals as inputs, resulting in valuable outputs and outcomes, thereby enhancing each capital in the process. Accordingly, additional indicators to depict "Our Capital Journey" better have also been reported. JSW Steel continues in its commitment by contributing to the UN SDGs, WSA and NVGs; these have also been mapped in this report.

As a responsible company, JSW Steel has proactively reviewed and updated sustainability targets for the next 3 years for its material issues. Sustainability performance targets are determined in keeping with the context - global, regional, and sectoral, as well as business goals. The Company has operations that are diverse in terms of location, technology and maturity. Therefore, the performance targets for the different parts of the business are determined accordingly. As the external environment continues to evolve, at times turbulent; we continue to rely on elements of our business strategy to

preserve and enhance our value creating ability. Additional indicators that monitor deployment of strategy and value creation factors have also been developed.

There is significant improvement in our performance, especially in terms of safety in the operations (28% decrease in lost time injury frequency rate), energy (18% reduction in intensity), logistics (80% by rail and coastal shipment of 3.89 million tonnes of iron ore), and recycling (water up to 35%, and material 4.12 million tonnes).

A distinguishing feature of our business during the last few years is the increase in value added products; this year it constituted 34% of total business, exceeding 5 million tonnes. This transformation hinges on a continued passion for excellence and a spirit of innovation. Sustainability strategy and processes would necessarily support and reinforce this transformation.

We have been and continue to have external assurance of our sustainability performance. We believe that this approach helps us focus on sustainability, despite the multiple operational pressures. Our Capitals-based approach would be a key instrument integrating sustainability even more in business decision making. We will continue to have strong focus on the stakeholder engagement along the value chain to deliver long term stakeholder value.

I gratefully acknowledge your feedback on the last report; it has been very helpful as we look for opportunities for improvement. Please feel free to contact us for additional information, and to provide feedback on this Sustainability Report at: [suman.majumdar@jsw.in](mailto:suman.majumdar@jsw.in).

Dr. S. Majumdar  
Chief Sustainability Officer  
JSW Steel Limited



**KOCHI METRO**



**LUCKNOW-AGRA EXPRESSWAY**



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# CONTRIBUTING TO UN Sustainable Development Goals



# ASSURANCE

## **Independent Assurance Statement By Deloitte Haskins and Sells Llp ('Dhs') On Jsw Steel Sustainability Report For Fy 2016-17 ('Report') Covering - Jsw Steel Ltd., Jsw Steel Coated Products Ltd., Jsw Steel Processing Centres Ltd., Amba River Coke Ltd., Jsw Steel (Salav) Ltd., and JSW Industrial Gases Pvt. Ltd. (The Company)**

The Board of Directors  
JSW Steel Limited,  
Mumbai, Maharashtra, India

### **The Assurance Engagement**

We have been requested by the Management of JSW Steel, to provide Independent Assurance Statement by reviewing the Sustainability related Performance Indicators (herein the "SPIs") reported as per the "GRI G4 Sustainability Reporting Guidelines ('In accordance' - Core)" issued by the Global Reporting Initiative ("the GRI"), as set out in the Sustainability Report, prepared by the company for FY 2016-17.

### **Responsibility of the Company**

The company is responsible for the identification and presentation of information including the responsibility for establishing and maintaining relevant and appropriate performance management systems and internal control framework to facilitate collection, calculation, aggregation and validation of the data with respect to the GRI G4 Guidelines based SPIs, included in the report and reported to us for obtaining assurance on the same.

### **Our Responsibility**

Our responsibility is to express a limited assurance conclusion in accordance with ISAE3000 (Revised) and to provide this in a statement to the Company. In providing this limited assurance statement, it is important to note that the procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

### **The Scope of Work**

Our Scope of Work, as agreed with the Company, was to review the SPIs reported in numerical figures, specific to the FY 2016-17 followed by submission of an Assurance Statement in accordance with the following standards:

- Limited Assurance as per the International Standard on Assurance Engagement 3000 (Revised) (herein referred as "ISAE 3000"), issued by the International Federation of Accountants (herein referred as "the IFAC")

### **Project Boundary**

Sustainability Report boundary covers following operations of the company:

- JSW Steel Ltd. operations specific to Vijayanagar, Salem and Dolvi locations;
- JSW Steel Coated Products Ltd.;
- JSW Steel Processing Centres Ltd.;
- Amba River Coke Ltd.;
- JSW Steel (Salav) Ltd. and
- JSW Industrial Gases Pvt. Ltd.

### **Our Approach and Methodology**

Our work was carried out by a multi-disciplinary team of professionals and risk advisory assurance specialists in accordance with the International Standard on Assurance Engagements 3000 (ISAE 3000) (Revised). To achieve limited assurance the ISAE 3000 (Revised) requires that we review the processes, systems and competencies used to compile the areas on which we provide assurance. This is designed to give a similar level of assurance to that obtained in the review of interim financial information. It does not include the detailed testing of source data or the operating effectiveness of processes or internal controls.

The procedures we performed were based on our professional judgment.

We:

- Carried out interviews with key personnel to understand the governance, systems and controls in place during the reporting period
- Carried out site visits at the respective locations as specified in the project boundary in order to:
- Test data, analytical procedures, review of records and review of relevant documentations submitted by the Company, to arrive at the data presented in their sustainability reports for FY 2016-17
- Analysis and review of key structures, systems, processes, procedures relating to collation, aggregation, validation and reporting of the selected SPI(s)

We have relied on the information, documents, records and explanations provided by the Company for the purpose of our review. The company's description or reporting of data pertaining to market share assessment;

opinion; beliefs; future intentions; any comparison in any form of performance related to any of the SPIs of FY 2016-17 with the SPIs of other Financial Years; design standards or features or technical assessment of the capacity, efficiency and efficacy of the technologies or utilities of the company are beyond the scope of our review.

#### **Our Observations:**

We believe our work provides an appropriate basis for our observation, which are mentioned below:

- The company can improve on bringing uniformity in reporting of SPIs across locations. (Ex: Need for uniformity in recording of training hours)
- Make provision to include human rights discrimination and environmental issues as areas of concern under grievances handling mechanism across all locations.
- Provision of more focused training on human rights policies to employees and vendor staff.
- Make provision to undertake vendor assessments for reporting Indicators on supply chain.
- Use standard SPIs reporting practices across all locations.

#### **Our Conclusion**

Based on our discussions with relevant stakeholders of the Company; the documents and records that were made available to us for our review and according to the information and explanations provided to us by the Company in connection to the review of the SPIs for the FY 2016-17, we believe our work for the aforesaid scope of work, provides an appropriate basis for our conclusion for the report. As per ISAE 3000, Limited Assurance:

Nothing has come to our attention that causes us to believe that the performances presented are materially misstated.

#### **Our Independence and Competencies in Providing Assurance**

Our team included professionals having required experience in providing assurance in corporate social responsibility and sustainability related performance indicators. We have complied with independence policies of Deloitte Haskins and Sells LLP, which address the requirements of the IFAC Code of Ethics for Professional Accountants in the role as independent auditors. We also confirm that we have maintained our independence in the Report and there were no events or prohibited services related to the Assurance Engagement which could impair our independence.

**Deloitte Haskins and Sells LLP**

**26 May 2017**

## ACRONYMS

**ASSOCHAM:** The Associated Chambers of Commerce of India

**BF:** Blast Furnace

**CCQC:** Chapter Convention Quality Circle

**CII:** Confederation of Indian Industry

**CRC:** Cold Rolled Coils

**CSR:** Corporate Social Responsibility

**EHS:** Environment, Health and Safety

**GHGs:** Greenhouse Gases

**GI:** Galvanised Iron

**GJ:** Giga Joules

**GL:** GalvaLume

**GRI:** Global Reporting Initiative

**HRC:** Hot Rolled Coils

**ICQCC:** International Convention on Quality Circle Chapter

**IFAC:** International Federation of Accountants

**JSW ARCL:** JSW Amba River Coke Limited

**JSW SCPL:** JSW Steel Coated Products Limited

**JSW SL:** JSW Steel Limited

**JSW SPCL:** JSW Steel Processing Centres Limited

**KPIs:** Key Performance Indicators

**MLD:** Million litres per Day

**MTPA:** Million tonnes per annum

**NCQC:** National Convention on Quality Circle

**NGOs:** Non-Governmental Organisation

**NVG:** National Voluntary Guidelines

**PHC:** Primary Health Centre

**UNSDGs:** Sustainable Development Goals

**SEBI:** Securities and Exchange Board of India

**SHG:** Self-help Group

**tCO<sub>2</sub>e:** Tons of Carbon Dioxide Equivalent

**TMT:** Thermo-Mechanically Treated

**TPM:** Total Productive Maintenance

**TQM:** Total Quality Management

**UNGC:** United Nations Global Compact

**WSA:** World Steel Association



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