

# SHAPING INDIA'S FUTURE

## Sustainable Mobility, Smart Cities



**Sustainability Report**  
**2017-18**

# Business Philosophy



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

**Founder, Jamsetji Tata**

# Contents



- About the Report . . . . . 1
- Message from CEO & MD . . . . . 2
- Message from COO & ED . . . . . 4
- About Tata Motors Limited . . . . . 5

- Governance . . . . . 9
- Message from Head (SHE & Sustainability) . . . . 20
- Sustainability Highlights & Awards . . . . . 22



- Sustainable Mobility Solutions . . . . . 26
- Role of TML in Shaping
- The Future of Mobility in India . . . . . 28
- Product Stewardship . . . . . 31
- Sustainability Priorities . . . . . 39

- Business with Responsibility [3Ps]. . . . . 51
- Economic Performance . . . . . 52
- Energy & Environment . . . . . 56
- Workforce . . . . . 88
- Workplace Safety . . . . . 98
- Value Chain Sustainability . . . . . 107
- CSR . . . . . 116



- Independent Assurance Statement . . . . . 132
- GRI Content Index . . . . . 135
- NVG Mapping . . . . . 150
- UNGC-COP Mapping . . . . . 150
- SDG mapping . . . . . 152
- Abbreviations . . . . . 153



# About The Report

## Our Approach to Sustainability Reporting

Tata Motors Limited publishes sustainability report annually, disclosing its economic, environmental and social performance and initiatives. This is the fourteenth Sustainability Report of Tata Motors Limited (TML) and it has been prepared as per the latest Global Reporting Initiative (GRI) Standards “in accordance – comprehensive” criteria and is compliant with the ‘Business Responsibility Report’ Clause 55 of the equity listing agreement with stock exchanges in India. In addition, the report is aligned to ‘Ten Principles of United Nations Global Compact’ (UNGC), ‘Sustainable Development Goals’ (SDGs) and the National Voluntary Guidelines on Social, Environmental and Economic (NVG-SEE) Responsibilities of Businesses in India issued by the Ministry of Corporate Affairs, Government of India.

This report highlights our approach towards sustainability, long-term strategy, objectives and performance.

## Our Principle for Defining Report Content and Context

The report content has been defined by applying the Reporting Principles of GRI to identify our material economic, environmental and social topics. Inputs from stakeholder engagement process, Global & Sectoral Sustainability trends are the basis for the identification of material topics. The elaborate materiality assessment that we conduct every 3 year provides sustainability context and help us prioritize strategies, policies and action plans related to economic, environmental and social impacts.

Sustainability Committee completed a materiality review in FY18. The material topics have not changed substantially since our previous report. In this sustainability report, we have disclosed all the material topics, including issues that are identified as low, medium and high in the materiality matrix.

## Scope & Boundary

Our 2017-18 report highlights the performance of Tata Motors Limited, India operations at Pune, Jamshedpur, Lucknow, Sanand, Dharwad and Pantnagar. We have also included the sustainability performance of three of our subsidiaries and one joint venture (JV) namely ,

- Tata Technologies Ltd., Pune;
- TAL Manufacturing Ltd., Nagpur
- TAL Manufacturing Solutions Ltd., Pune;
- TML Drivelines Ltd., Jamshedpur
- Tata Marcopolo Motors Ltd., Dharwad
- Tata Marcopolo Motors Ltd., Lucknow.

## Key Exclusions

In sustainability report of 2017-18, the main exclusions are mentioned as below:

- The economic performance of subsidiaries.
- Product innovations and customer service of the subsidiaries.
- Information on the local community engagement and CSR activities of the subsidiaries.

Other exclusions related to the specific disclosure has been mentioned in the materiality mapping table and GRI index section.

## External Assurance

The content and data disclosed in this report has been independently verified and externally assured by TUV India Private Limited, an independent third-party assurance provider. TUVI conducted the independent assurance of TML’s sustainability report, which includes “reasonable assurance” of TML’s sustainability information for the applied reporting period. Sustainability assurance engagement was conducted against the Global Reporting Initiative Standards and AA1000AS (2008) Protocol (Type 2, Moderate Level).

Furthermore, TUVI conducted the independent assurance of TML’s GHG (Green House Gas) emissions, which includes “Type 2 moderate level assurance” of TML’s direct, energy indirect and other indirect (Scope 1, 2 and 3) GHG emissions for the applied reporting period. CFP assurance engagement has been conducted against the TNCC 20 Standard, ISO 14064-1 and AA1000AS (2008) (Type 2, moderate level) for verification of TML’s GHG emissions. The overall responsibility of sustainability report assurance is with SH & S committee supported by Safety, Health & Environment councils and plant level apex committees.

*The Sustainability Report 2004-05 and 2005-06 were limited to internal circulation.*

*For a complete list of our subsidiaries and joint ventures, please refer to annual report 2017-18: <https://www.tatamotors.com/wp-content/uploads/2018/07/12115930/Annual-Report-2017-2018.pdf>*

**Cautionary Statement:** This report contains “forward-looking statements” describing the Company’s objective, projections, estimates and expectations. Actual results could differ materially from those expressed 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 the Government regulations, laws and other statutes and incidental factors.

# Message From CEO & MD



**“ Tata Motors has been leading the technology changes in the industry while at the same time striving hard to institutionalize sustainable practices in every aspect of business. ”**

Dear Colleagues,

I am pleased to present to you our fourteenth annual sustainability report titled ‘Sustainable Mobility, Smart Cities’. The report is prepared as per the GRI Standards “in accordance – comprehensive” criteria and aligned to the ‘Ten Principles of United Nations Global Compact’, ‘Sustainable Development Goals’ and ‘National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business’ of the Ministry of Corporate Affairs, Government of India. Most importantly, it reinforces our commitment towards ‘Triple Bottom Line’.

The Tata Group celebrates 150th anniversary of nation building this year. With rapid technological advancements in the field of autonomous, connected, electric and shared vehicles, a comprehensive approach to sustainable development of the entire ecosystem is crucial. Tata Motors has been leading the technology changes in the industry while at the same time striving hard to institutionalize sustainable practices in every aspect of business. Our approach to sustainability is not a mere compliance one but a continuous improvement one with inclusiveness at its core. With this objective, we have launched the Sustainability Policy for Tata Motors.

Our endeavour has been to understand the direct and indirect impact of our activities and focus our efforts to streamline our operations in the most efficient manner. Climate Change is one of the material issues as we continue to work towards building awareness amongst stakeholders, developing cleaner and more efficient vehicles, and reducing environmental impact from manufacturing operations. We are constantly striving to increase the share of renewable energy, improve our operational energy efficiency through ENCON, producing energy efficient products and diligently monitoring carbon emissions out of our supply chain.

We are committed to the Government’s vision for electric vehicles by 2030 and are working in a collaborative manner to facilitate faster adoption of electric vehicles - to build a sustainable future for India. In December 2017, we delivered the first set of Tigor Electric Vehicles (EVs) to state-run Energy Efficiency Services Limited (EESL), out of the full order of 10000 electric vehicles. This initiative of the Government of India is a bold step in terms of promoting green & sustainable transport solutions. We, at Tata Motors are extremely proud to be part of this project and are supportive of the

Government’s transformational vision of auto electrification in India. We are the first Indian manufacturer to be able to commercially introduce and handover ‘first of its kind’ series hybrid technology in India in the form of Tata Starbus Hybrid Electric Bus, to Mumbai Metropolitan Region Development Authority (MMRDA), an event that got graced by Shri Devendra Fadnavis, Chief Minister, Maharashtra.

We have taken-up several initiatives to promote the use of green materials; i.e. Green Plasticizer, Primer-less Windshield Glass Sealant, Composite Brake Drum and Leaf Spring. We have also successfully completed a pilot on closed-loop plastic recycling by making a new plastic component out of scrap. Our integrated life cycle thinking and circular economy strategy hinges on addressing the current need of resource optimization. Through our partners, Tata Prolife, Tata Assured and Tata OK, we continuously endeavour to increase the usable life of our vehicles.

As part of RE100 initiative, a drive led by the Climate Group, we aspire to source 100% of the electricity demand from renewable sources, which is currently 20.76% of our total annual electricity demand.

We also own the sustainability performance of our supply chain by constantly engaging with suppliers on Environmental, Social and Governance (ESG) aspects of our diverse and multi-tiered supply chain. We have covered 66 suppliers under the on-site sustainability assessment during Phase-II implementation of sustainable supply chain initiative, completing 118 suppliers in the last two years, with an aggressive plan to cover many more in this year.

Safety & Health is of paramount importance to us and we are committed to provide our employees with safe and healthy working environment. We have taken challenging targets on safety to reduce the total recordable cases by 65% by 2020 over 2016-17. All our manufacturing plants are OSHAS 180001 certified and we have implemented robust second party safety audit. Unfortunately, we had one fatality at our Lucknow works during last year. We have conducted the detailed incident investigation and implemented corrective actions to prevent the recurrence.

We will keep nurturing the Tata’s philosophy of improving the quality of life of the communities we serve and enhancing long-term value for our stakeholders. Health (Arogya), Education (Vidhyadhanam), Employability (Kaushalya), and Environment (Vasundhara) continue to be the four pillars of our community development agenda. We have also

introduced a mechanism for capturing the value creation from our community development programs by assessing the Social Return on Investment (SROI) for all our long duration (5 years or more) programs. We continue to relentlessly strive in our endeavour of nation-building, sustainable development, accelerated inclusive growth and social equity. We are working on 15 out of 17 Sustainable Development Goals well aligned with the Group philosophy as well as our business priorities.

To conclude, I would like to reiterate our commitment towards sustainable development and corporate citizenship. I would like to take this opportunity to express my gratitude to all our stakeholders for contributing and collaborating with us on our sustainability journey. Your views and suggestions are important to us and we welcome your feedback.

**Guenter Butschek**  
CEO & Managing Director  
Tata Motors Limited



# Message From COO & ED



“ Sustainability is at the core of Tata businesses and we are committed to enhance the quality of life of communities by delivering the sustainable mobility solutions, in line with our Sustainability Policy. ”

Dear Colleagues,

I am pleased to present our fourteenth sustainability report and hope that this report provides an insight on sustainability performance of Tata Motors.

Sustainability is at the core of Tata businesses and we are committed to enhance the quality of life of communities by delivering the sustainable mobility solutions, in line with our Sustainability Policy.

In the milieu of regulatory and institutional changes, keeping abreast with the needs of our valuable customers, we have manufactured a total number of 5,72,300 vehicles in FY 2017-18, an increase of 9.64% over the FY 2016-17. The changing business environment with its set of challenges and opportunities have helped us to innovate. We were granted 80 patents and have spent INR 23.97 Billion approximately on Research and Development (R&D) during the FY 2017-18. To fulfil our commitment towards sustainable mobility solutions, we continued our work on design & development of advance vehicles. The government has recognized our efforts and we are delighted to have won the bid for supplying the electric version of the TATA Tigor to the Energy Efficiency Services Limited (EESL) of the Government of India. We have also delivered 25 Diesel Hybrid Buses to Mumbai Metropolitan Region Development Authority (MMRDA) during FY 2017-18.

It is our continuous endeavor to reduce the carbon footprint of our manufacturing plants by focusing on energy efficiency improvements and sourcing of renewable energy. We have

increased the share of renewable energy from 16.34% in 2016-17 to 20.76% in 2017-18 of the total electricity consumption.

We are strengthening our waste management and working on a theme of "Value from Waste" across Indian manufacturing plants. While our manufacturing plant teams are extensively working on 3Rs i.e. Recycling, Reuse and Recovery, we are also exploring the innovative solutions for elimination and minimization of generation of waste at source itself.

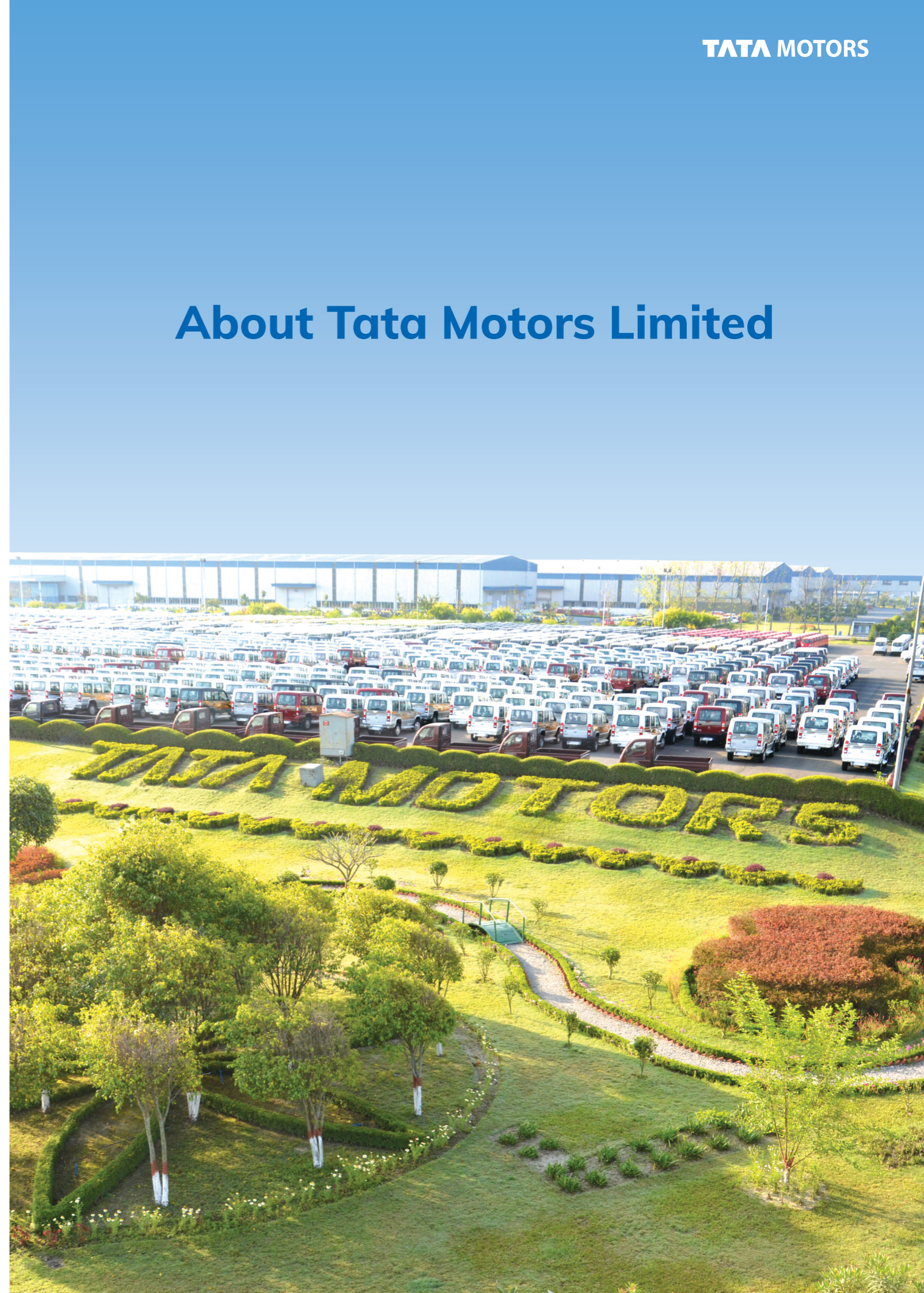
Employees constitute one of the most important elements of TML and their safety is always a top priority. This year we have achieved 38% reduction in 'Lost Time Injury Frequency Rate' and 29% reduction in 'Total Recordable Cases Frequency Rate' as compared to FY 2016-17.

Going beyond fences, we are working closely with our supply-chain partners and implemented 2<sup>nd</sup> phase of the Sustainable Supply Chain Initiative. We have received positive response and active participation of suppliers in this initiative. We have covered 118 suppliers so far under this initiative and planned to cover all critical suppliers during current financial year. We are encouraging our suppliers to implement best practices and improve their sustainability performance. This demonstrates our efforts towards building the socially responsible value chain.

To conclude, I would like to express my sincerest gratitude to our stakeholders and their confidence in us. This is one of the factors, which encourages us to push the limits, innovate, and remain at the edge of the competitive business scenario.

**Satish Borwankar**  
COO & Executive Director  
Tata Motors Limited

## About Tata Motors Limited





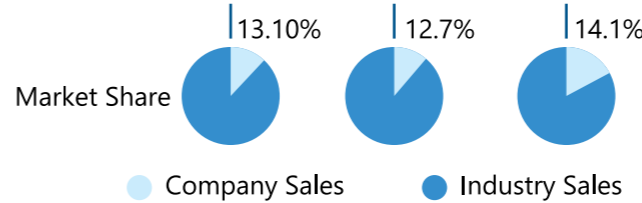
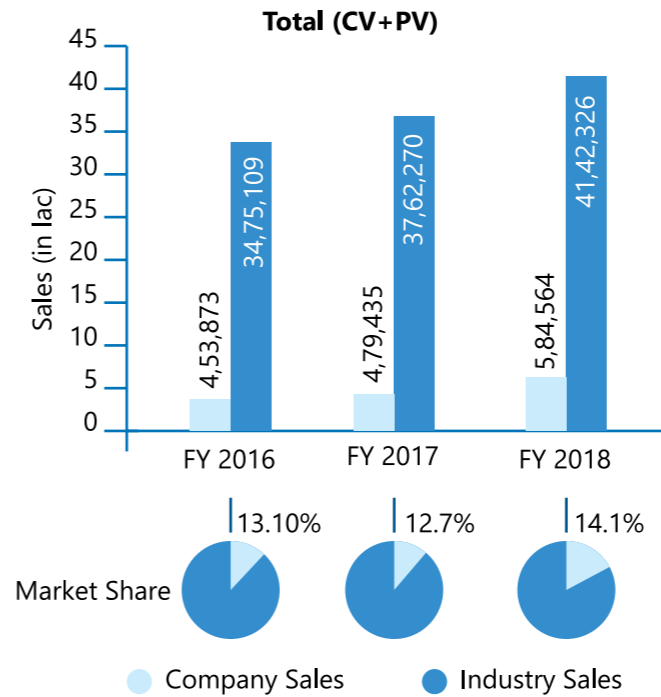
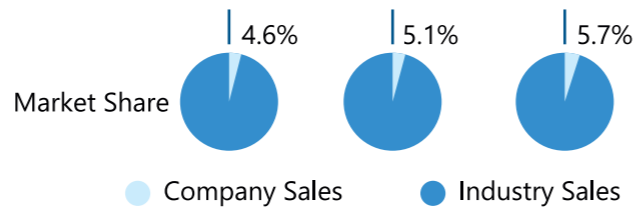
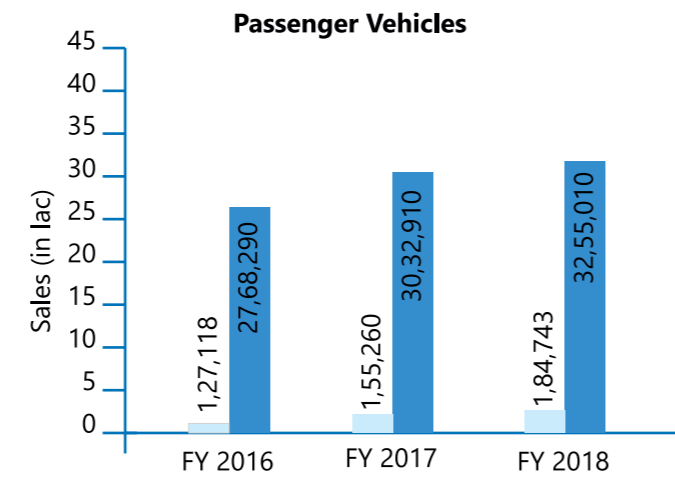
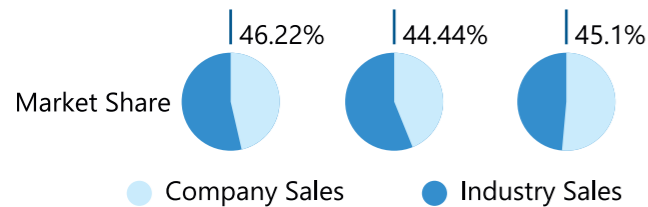
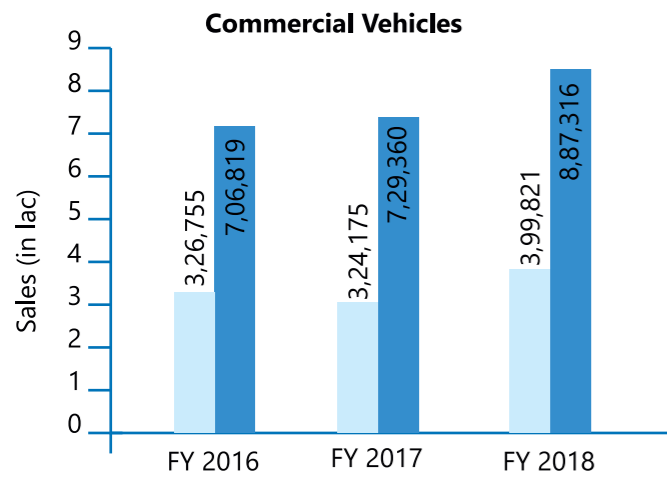
# Our History, Business & Key Statistics

Tata Motors Limited (TML) is a part of Tata Group founded by Jamshetji Tata in 1868. TML is the largest manufacturer in Indian automotive industry, with a wide range of portfolio covering cars, sports vehicles, buses, trucks and also vehicles for the defence sector. We continue to take the lead in shaping the Indian automobile industry landscape, with the introduction of leading-edge powertrains and electric solutions packaged for power performances and user comfort at the lowest life-cycle costs. Our new passenger cars and utility vehicles are based on Impact Design and offer a superior blend of performance, drivability and connectivity.

Established in 1945, today TML operates from 163 countries, employing above 50,000 personnel and having more than

6600 service points. Spanning market presence across several countries in Europe, Africa, the Middle-east, Southeast Asia, South America, Australia, CIS and Russia, TML today is an international brand. Subsidiaries and associate companies have helped the company to expand its operations to UK, South Korea, Thailand, South Africa and Indonesia.

In India, we have manufacturing facilities located at Jamshedpur, Pune, Lucknow, Pantnagar, Sanand and Dharwad. We have 18 subsidiaries of which the performance of 3 subsidiaries and 1 JV namely, TAL Manufacturing Solutions Ltd. (TAL), TML Drivelines Limited, Tata Marcopolo Motors Ltd. (TMML) and Tata Technologies Ltd. (TTL), is included in this report.



We believe in 'Connecting aspirations', by offering innovative sustainability mobility solutions that are in line with customers' aspirations. Our focus on connecting aspirations and our pipeline of tech-enabled products keeps us at the forefront of the market. We have identified six key mobility drivers that will lead us into the future – modular architecture, complexity reduction in manufacturing, connected & autonomous vehicles, clean drivelines, shared mobility, and low total cost of ownership. Our sub-brand TAMO is an incubating centre of innovation that will spark new mobility solutions through new technologies, business models and partnerships.

## Mission, Vision, & Values

We are a company that constantly innovates across passenger & commercial vehicles to provide sustainable mobility solutions for people and goods. With a deep urge to address customer needs, we offer the widest portfolio of products. In our efforts to make a substantial contribution to the uptake of innovative and sustainable urban mobility solutions, we bring in the most advanced technologies to offer relevant solutions. As a part of the Tata group, we believe in making a difference for our employees, for the communities we are part of and for the country. Our Mission statement clearly defines our purpose of existence and our passionate commitment to bring sustainable innovation into everything we do to enhance the quality of life of communities.

We aspire to be among Top 3 in global commercial vehicle markets and domestic passenger vehicle markets while achieving sustainable performance and delivering exciting innovations as per our vision statement. Faster time-to-market new technologies will be our key goal to find new and agile ways of innovating and experimenting. To compete in the market, our approach will be targeted to reduce complexity, provide for future technologies and ensure global sustainability relevance. We aim not only to comply with the emerging regulations but to be ahead of the curve to manage ESG risks. We are constantly looking at proactively converting these risks into opportunities by developing and delivering sustainable mobility solutions.





# Governance

**MISSION**

We innovate mobility solutions with passion to enhance quality of life

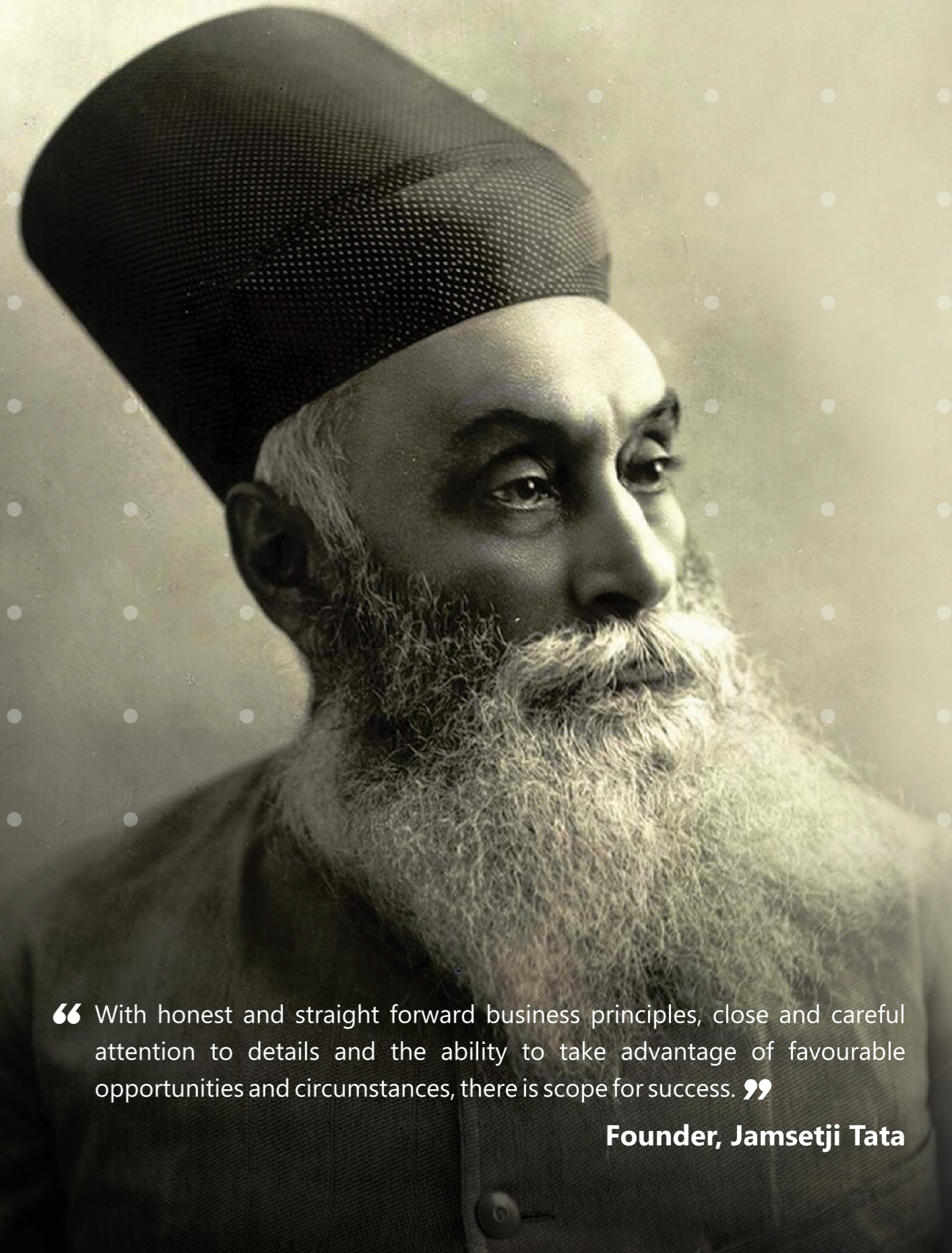
**VALUES**

- Integrity
- Teamwork
- Accountability
- Customer Focus
- Excellence
- Speed

**VISION**

As a High Performance Organization, we are, by FY2019

- Amongst Top 3 in Global CV and Domestic PV
- Achieving Sustainable Financial Performance
- Delivering Exciting Innovations



“ With honest and straight forward business principles, close and careful attention to details and the ability to take advantage of favourable opportunities and circumstances, there is scope for success. ”

**Founder, Jamsetji Tata**

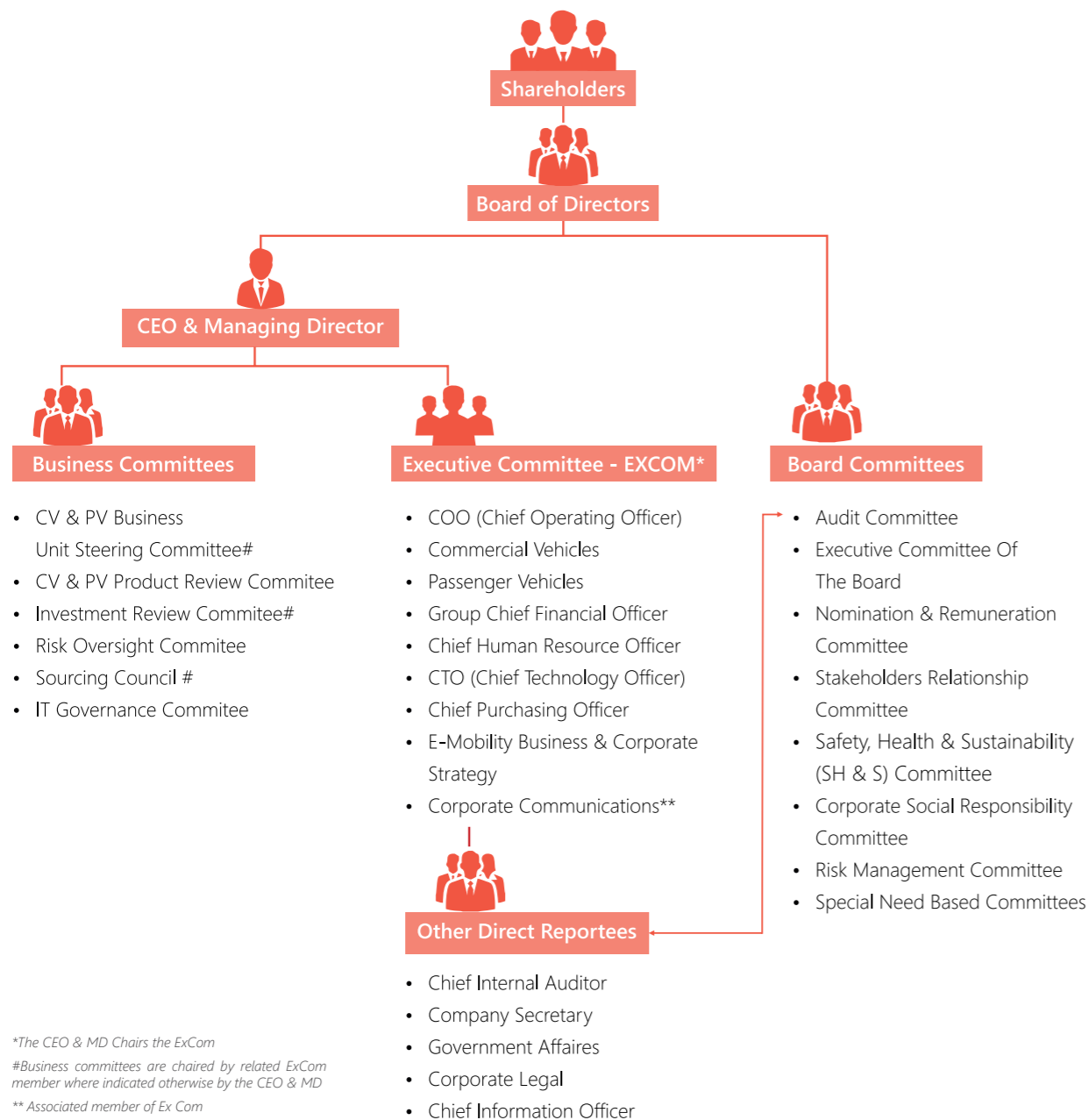
# Governance

Good corporate governance is one of the fundamentals which remain at the core of TML values. The TATA Group has been practicing the principles of good corporate governance since its inception and have laid strong emphasis on independence, responsibility, transparency, professionalism, accountability and code of ethics to ensure adherence to the Tata Code of Conduct (TCoC) and value system. TML strongly believes that success and sustainable growth of any organisation depends on good corporate governance. Our philosophy of corporate governance synchronises with the

philosophy of TATA Group and is further invigorated with the adherence to the Tata Business Excellence Model as a means to drive excellence. Good corporate governance has allowed us to effectuate decision making and also support the formation of robust operation systems.

Our current Organization Chart depicting the relationship between the Board of Directors, Committees and the Senior Management functions as on March 31, 2018, is illustrated below:

### Corporate Governance Structure



The Board of Directors, comprises of nine Directors of which seven are Non-Executive, including two Woman Independent Directors. The organizational policies, procedures, and performance are periodically reviewed by the Board, guided by Mr. Guenter Butschek, MD & CEO. For details regarding the Board composition, Roles Responsibility, Board Evaluation and Board Credentials, please refer to our 73<sup>rd</sup> Annual Report pg No. 54-55, 72-78, 157-159, 225-250.

### Managing Business Risk

Risk Management at TML is a coordinated process and integrated mechanism. The Board is responsible for the overall process of risk management, which is supported by Enterprise Risk Management program. The program helps Company's business units, and corporate functions address opportunities and attend the risks through an institutionalized approach. In order to provide a foolproof mechanism, the

risk management process is also facilitated by internal audit.

The approach to manage business risk is through cross-functional involvement and communication across businesses. After the process of risks assessment is complete, the results along with the residual risks are presented to the senior management to facilitate better decision making. The Audit Committee reviews business risk areas covering operational, financial, strategic and regulatory risks.

A set of Committees with specific terms of reference/scope have been constituted to focus effectively on the issues and expedite resolution of diverse matters. The Committees operate as empowered agents of the Board as per their Charter/terms of reference. Targets set by these committees as agreed with the management are reviewed periodically and midcourse corrections are also carried out. The Board of Directors and the Committees also take decisions by circular resolutions which are noted during meeting.





**Board Committees and Their Functions**

Board Committees	Functions
<b>Audit Committee</b>	The objective of the Audit Committee is to review the quarterly/annual financial statements before submission to the Board. The committee also reviews the adequacy of internal control systems with the management, external auditor and internal auditor and recommends improvements to the management. For further details, please refer to page no. 152-154 of Annual Report 2017-18.
<b>Stakeholders' Relationship</b>	The Committee oversees and reviews statutory compliance relating to all security holders. It further considers and resolves the grievances of security holders of the company including complaints related to transfer of securities, non-receipt of annual report/declared dividends/notices/balance sheets. The Company has a designated email id: invrel@tatamotors.com for contacting the Compliance Officer. For further details, refer to page no.157-158 of Annual Report 2017-18.
<b>Nomination and Remuneration</b>	The Committee recommends to the Board the setup and composition of the Board and its Committees including the "formulation of the criteria for determining qualifications, positive attributes and independence of a director". For details of the remuneration of Directors, Key Personnel and Employees, please refer to page no. 99 of Tata Motors Ltd. Annual Report 2017-18. For further details, refer to page no. 154-157 of Annual Report 2017-18.
<b>The Safety, Health &amp; Sustainability</b>	The SHE Committee of the BoD has been renamed as Safety, Health & Sustainability Committee with the objective of reviewing Safety, Health, Environment and Sustainability practices and performance. The Committee comprises of Managing Director, one Independent Director and one Executive Director. For further details, refer page to no. 158-159 of Annual Report 2017-18.
<b>Corporate Social Responsibility</b>	The Committee formulates and recommends to the Board, a CSR Policy which shall indicate the activities to be undertaken by the Company as specified in Schedule VII. The Committee also recommends the amount of expenditure to be incurred on the activities referred to in clause (a) of the CSR rules. It also monitors the CSR Policy of the Company from time to time. For further details, refer to page no. 159 of Annual Report 2017-18.
<b>Risk Management Committee</b>	The committee assists the Board in overseeing the Company's risk management process and controls, risk tolerance, capital liquidity and funding etc. and its periodic update thereof to the Board. It is also responsible for reviewing the Company's risk governance structure, assessment, practice, guidelines etc. The Committee comprises of 4 Independent Directors. For further details, refer to page no. 159 of Annual Report 2017-18.
<b>Executive Committee of the Board</b>	The Executive Committee of the Board reviews capital and revenue budgets, long-term business strategies and plans, the organizational structure of the Company, real estate and investment transactions, allotment of shares and/or debentures, borrowing and other routine matters. The Executive Committee of Board presently comprises of 1 Independent Director, 1 Non-Executive Director and 3 Whole-time Directors. For further details, refer to page no. 158 of Annual Report 2017-18.

**Ethics And Integrity**

TML has an Ethics Framework in place in line with Tata Group values to ensure ethical standards by its vendors and contractors through appropriate clauses in its work contracts. We recognize the importance of the ethics and integrity and therefore the framework includes Board oversight. The company has a whistle-blower policy and mechanism in place that ensures confidentiality and protection of whistle-blower from victimisation. The ambit of protection from victimisation is broad in order to protect the interests of stakeholders concerned.

A Chief Ethics Counsellor is nominated who is responsible for management of overall business ethics. The Company has an ethics helpline where employees can place complaints against ethics violations.

A Whistleblower can report his/her ethical concerns by using the "Speak Up" service by either calling on 1800 103 2931 or log on to the website [www.speak-up.info/tatamotors](http://www.speak-up.info/tatamotors) and share his/her concerns.

**TATA Code of Conduct**

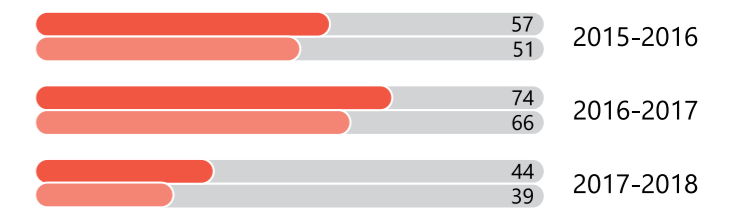
The core values and principles of Tata Group are encapsulated in the Tata Code of Conduct (TCoC). The Code guides and accounts for all our stakeholders including but not limited to employees, customers, communities in which we operate, value chain partners, joint venture partners, financial stakeholders, the government of countries in which we operate and other group companies, and guides towards highest moral and ethical standards. The TCoC is a comprehensive and exhaustive document encompassing aspects including anti-bribery, corruption, equal opportunities and human rights. The TCoC strikes the right balance between interests of stakeholders and providing them avenues to raise concerns or queries in good faith, or report instances of actual or perceived violations of our Code. One of the most important aspects the Code aims at ensuring the effective implementation of and adherence to the group's mission on environmental and labour practices as well as social aspects. The Code also provides for addressing and resolving issues related to conflicts of interest.

The TATA Group is committed to keeping abreast with developments in multifarious aspects which affect its operations. Therefore, the Code is not static, but flexible and is in alignment with the global business environment. Periodic reviews are undertaken with the primary objective to remain contemporary and contextual to the changes in law and regulations. However, it remains unaltered at its core. A defined Tata Code of Conduct is available and

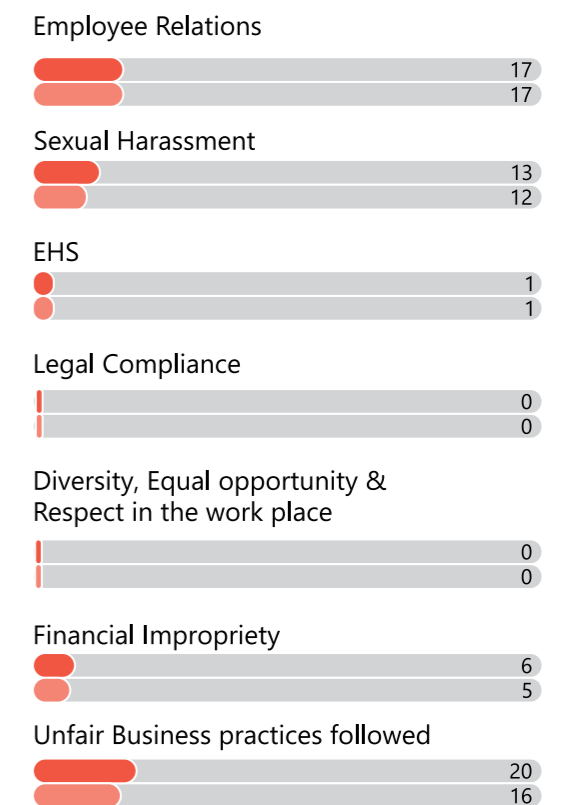
applicable for independent directors of the company under the responsibility of Company Secretary. With a view to strengthen the adoption of the Code, training sessions are conducted periodically for the employees and relevant stakeholders.

**Ethical Concerns**

Effective implementation of the Tata Code of Conduct is a vital reflection of the commitment of the organisation towards ethical business. TML has a robust mechanism to receive and resolve all ethical concerns. Our TCoC provides overall guidance for operating our business. Various issues and concerns raised are reviewed by the Audit Committee and the Risk Oversight Committee quarterly. During the year 2017-18, following are the concerns received and resolved by TML:

**Trend in Concerns Received/Resolved by TML**


● Cases Received ● Cases Resolved

**Trend in Concerns Received/Resolved by TML**


● Cases Received ● Cases Resolved

The grievance redressal mechanism at TML covers key aspects such as environment, health and safety, compliance, human resource, product responsibility and social responsibility. All the stakeholders are provided access to the grievance redressal mechanism so that the concerns are addressed duly, and where necessary is also brought to the attention of TML's management. Our grievance handling mechanism captures concern covering all the key areas of:

- **Environment:** covers aspects namely biodiversity, energy, emission, water, waste and environmental compliances. The Head (SHE & Sustainability) is responsible for addressing the grievance related to the environment, supported by SHE team at the plant level. For effective and exhaustive out reach, every plant is equipped with a mechanism to receive and deal with grievances from the stakeholders.
- **Purchase and Supply Chain:** A dedicated Suppliers Code of Conduct provides guidance on the ethical operation of purchase & supply chain and for reporting violations. Corporate Ethics team and Purchase & Supply Chain teams are equipped with mechanisms to receive and deal with grievances from interested parties at plant as well as corporate level.
- **Human Resource:** As per hierarchy, the Human Resource department is the first point of contact for receiving and handling employee grievances. In case of an escalation, the Ethics Counsellor addresses the concerns. To prevent and address Sexual Harassment at the workplace we have Sexual Harassment Avoidance

and Redressal (SHAR) Policy in-line with Tata Code of Conduct, meeting the legal requirements. The Sexual Harassment Avoidance and Redressal System includes various location based SHAR committees and in addition, an APEX Corporate SHAR committee housed in Mumbai. This acts as an Appellate Body and is responsible for disseminating SHAR policy and taking effective steps for its propagation amongst employees and for fostering a free and fair reporting of all the issues. Any complaints of sexual harassment can be reported at SHAR@tatamotors.com.

- **Occupational Health and Safety:** An online portal to facilitates reporting grievances related to health and safety and it is a part of a regular review. In addition to the committees at the apex and regional levels, there are divisional committees which represent all the operational levels and meet at regular intervals to address the grievances.
- **Product:** We have dedicated TCoC for dealers, which provides guidance for handling grievances related to customers and marketing of products. A dedicated helpline receives complaints from the customers and it is tracked on a daily basis for quality improvement. The complaints can be escalated to the President, Managing Director and Chairman's offices till the closure of the complaint.
- **Corporate Social Responsibility:** CSR Committee at the BoD level is responsible for CSR activities, supported by corporate CSR team. The CSR Committee at the plant level deals with grievances received from stakeholders.

### Trends in Ethical Concerns Received/Resolved by Subsidiaries

TCoC Concerns	TTL		TAL		TMLDL		TMML	
	Received	Resolved	Received	Resolved	Received	Resolved	Received	Resolved
2015-16	5	5	2	2	4	4	1	1
2016-17	0	0	0	0	6	6	10	8
2017-18	17	9	1	1	0	0	7	7

### Anti-Corruption

TML is committed to the overall goal of TATA Group which focuses not only on development of the TATA Group, but develop in a manner to foster economic growth of the regions of operation. Hence prevention of corruption and promotion of fair competition is another important dimension of the compliance efforts. The National Fair Trade Regulator – Competition Commission of India (CCI) has initiated legal actions for alleged anti-competitive behaviour against 17 car manufacturers including Tata Motors. The matter is currently sub-judice before the Delhi High Court which has stayed the penalty imposed by the CCI.

Efforts to promote competitive and liberal business environment also includes conformity with the Advertising Standards Council of India (ASCI) Code for Self-Regulation in Advertising and Marketing Communications. This ensures that our advertising media do not mislead in terms of claims and representations, and do not communicate offensive or anti-social content in any form.

There have not been any incidents of corruption and anti-competitive behaviour in FY 2017-18. There is a process in place to take appropriate disciplinary action proportionate to the gravity of misconduct in line with the principles of natural justice which is taken against the erring employees. We provide regular training to all our employees on anti-corruption and anti-competitive as per the TCoC for TML.

### Regulatory Compliance

For timely, effective and robust compliance, 'Legatrix' has been implemented. It is an online compliance tool that helps us track and manage compliance of various regulatory and legal requirements. Our systems ensure compliance with the new and existing laws, regulations and policies regarding increased fuel economy, reduced greenhouse gas and other emissions, vehicle safety, taxes and pricing policies. TML ensures strict adherence to the regulations pertaining to emissions, safety, product labelling and other applicable clauses of the Central Motor Vehicle Rules of India and relevant Bureau of Indian Standards.

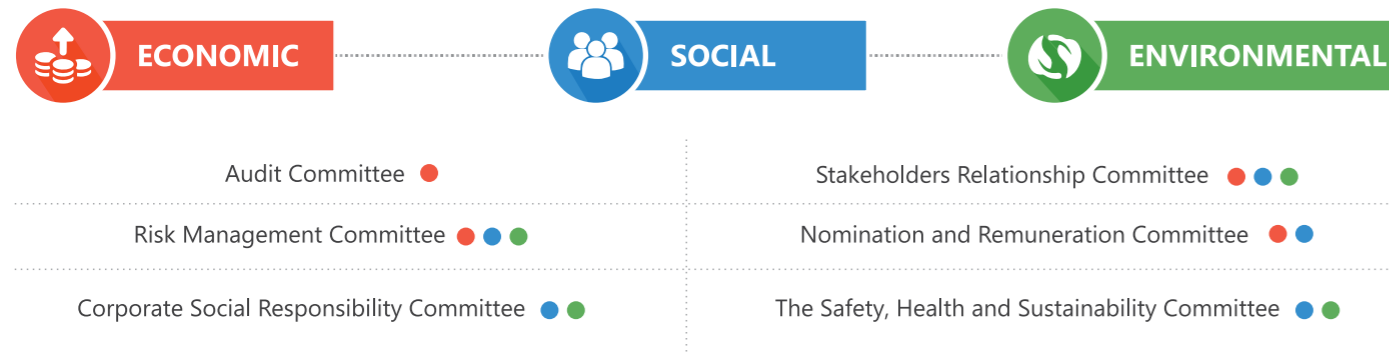


# Sustainability Management & Initiatives

At TML, we believe that sustainability is an integral part of strategic management and corporate planning, therefore we incorporate environmental and social factors into the identification of material topics and prioritization of KPIs.

To integrate and strategically align sustainability into our core business, our Board has constituted a set of committees to specifically work on this agenda. Our leadership is committed towards making TML an industry benchmark with our sustainability performance.

## Board of Director Committees Aligned with Sustainability



## Sustainability Policy

In line with Tata Group Sustainability policy, TML has developed and launched the Sustainability Policy in November 2017 which integrates environmental, social and ethical principles into its business. The policy guides us in establishing sustainability governance, Identification of material sustainability issues and development of sustainability strategies aligned with global and national sustainability commitments, with the aim of creating value and contributing to sustainable development. As per the Mission and Sustainability Policy of TML, we are committed to innovate sustainable mobility solutions with passion to enhance the quality of life of communities.

The key elements of our Sustainability Policy are: Product Stewardship, Life Cycle Approach, Protection of human rights in value chain, equitable and inclusive development, corporate citizenship, highest standards of transparency and governance. The policy stimulates our aspirations to become the global sustainability leader in the transport sector considering futuristic mobility solutions.

In addition to Sustainability Policy, we consider Tata Code of Conduct as an overall guiding principle. We are aligned to sustainability in all the twelve policies.



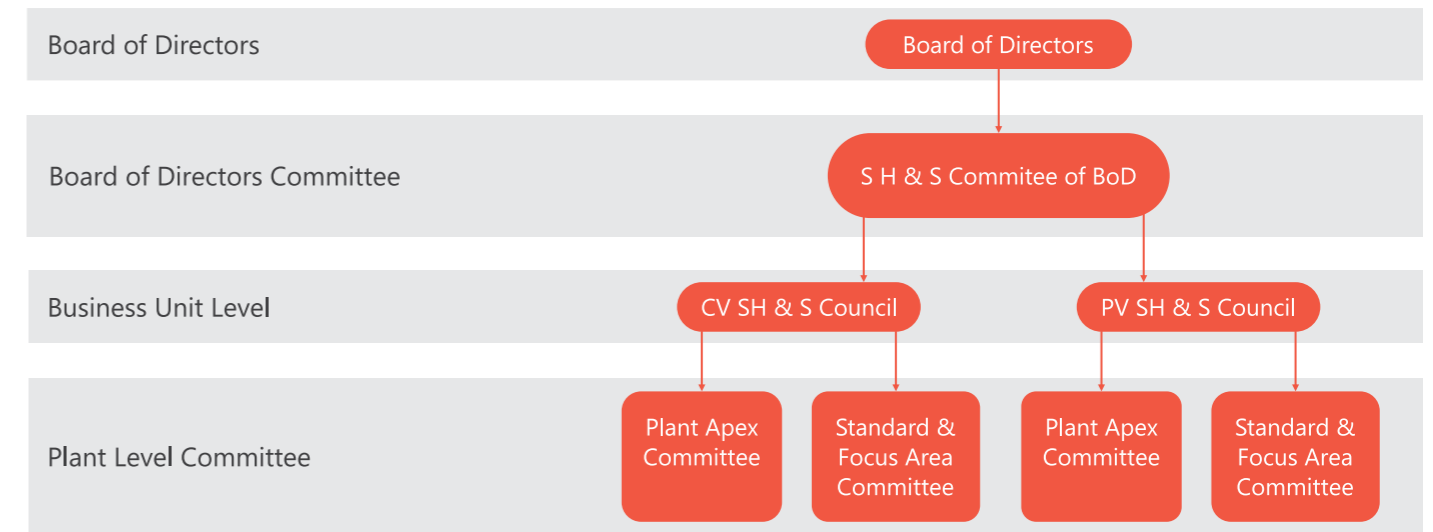
<https://www.tatamotors.com/about-us/corporate-governance/policies/>

## Our Sustainability Governance

Our sustainability governance comprises of the Safety, Health and Sustainability Committee, known as the SH & S Committee, at the board level which in turn is supported by

the SH & S Council at the business unit level. The SH & S Apex Committee at our plants is supported by various focused departments such as safety, energy and environment.

## Sustainability Management Structure



The Safety, Health and Sustainability (SH & S) Committee has been constituted with the objective of reviewing Sustainability practices and performance. The overall sustainability performance of Tata Motors Limited is reviewed by the SH & S Committee and SH & S council on quarterly and monthly basis respectively. The terms of reference of the Committee include:

- ▶ to take a holistic approach to sustainability matters in decision making;
- ▶ to provide direction to TML in driving the sustainability agenda;
- ▶ to frame guidelines, strategies, goals & Objectives, initiatives with regard to sustainability;
- ▶ to oversee the implementation of these guidelines/policies; and
- ▶ to review the policies, processes and systems periodically and recommend measures for continuous improvement in sustainability performance

The Committee comprises of Managing Director, one Independent Director and one Executive Director. During the year 2017-18, three meetings of the Committee were held wherein all the members were present at the said meeting.

Upholding the values of the TATA Group, Tata Motors Limited has always strived to grow while being socially and

environmentally responsible. In this context, we have the Sustainability Policy to explore and assess the Natural and Social capital valuation for our business. Over the years, we have established robust sustainability governance mechanism and have developed policies for all the relevant material topics.

We have also developed and published policies related to most of our material issues and have set goals and targets for the future. The details on the same are provided in the relevant sections.

Furthermore, we constantly engage with our employees and Board members to develop and enhance knowledge in economic, environmental and social sustainability.



## Management Systems

Our corporate governance philosophy is further strengthened with adherence to the Tata Business Excellence Model (TBEM) to improve our overall performance with higher levels of efficiency in our businesses and contribution towards sustainability initiatives.

Our state-of-the-art Enterprise Resource Planning system, Supplier Relations Management and Customer Relations Management connect the company's different locations, dealers and vendors for reliable, consistent and accurate data exchange.

**CRM-DMS (Customer Relationship Management Dealer Management System):** Our CRM-DMS is a unique initiative, implemented through a centralized online system and deployed at all our dealerships and offices across the country. This helps us integrating our systems across the value chain to deliver better service quality.

**Enterprise Risk Management Program:** Through the enterprise risk management program, business units and corporate functions address opportunities and risks through an institutionalized approach aligned to the Company's objectives. This is facilitated by internal audit. The business risk is managed through cross functional involvement and communication across businesses.

**Management Systems Certifications:** Two of our manufacturing Plants are upgraded and certified for ISO 14001:2015 – Environmental Management System Standard and Remaining Plants are in the process of upgradation. Similarly, all our manufacturing plants are certified to OHSAS 18001:2007 - Safety and Occupational Health Management System Standard. All of our CV manufacturing plants are also certified for ISO 50001:2011 Energy Management System namely, Pune CVBU, Jamshedpur, Lucknow, Pantnagar and Dharwad. We also encourage our suppliers and dealers to adopt environmental and occupational health & safety management systems.

## Policy Advocacy

With a view to integrate and align existing sustainability issues with the public policy, we are actively involved in advocating for a better policy framework. We partner with policy makers/ industry associations and regulators on these issues through our representations in several industry and trade associations.

Adhering to Tata Code of Conduct, we do not offer or give any company funds or property or other resources

as donations to any specific political party, candidate or campaign and preclude any activity that could be interpreted as mutual dependence/favour with any political body or person. Any financial contributions considered by our Board of Directors in order to strengthen democratic forces through a clean electoral process shall be extended only through the Progressive Electoral Trust in India, or by a similar transparent, duly-authorised, non-discriminatory and non-discretionary vehicle outside India.

## List of Membership Association

We actively participate in National Committees, listed below, which are working on formulating policies and regulations for improvement of environment throughout the country.

**Engagements:** We continually work with the steering committee of National Hydrogen Energy Board to find ways to harness hydrogen - potential energy of future.

Our experts actively participate in World forum of United Nations Economic Commission for Europe (UNECE) for harmonization of Vehicle Global Technical Regulations related to pollution control and safety.

We at TML, actively take part in all WP29 UNECE group activities and prepare in advance for emerging opportunities.

**Representations:** TML has representations in significant number of National Committees as members who are working on formulating policies and regulations for improvement of environment including GHG reduction throughout the country;

1. TML actively participates in all WP29 UNECE group activities.
2. TML also participates in the following National Committees which work on formulating policies and regulations for improvement of environment including GHG reduction throughout the country:
  - Standing Committee on Emissions (SCOE)
  - Sub-committee on Idle (CO & HC) emission norms of Union Ministry of Shipping, Road Transport and Highways of India, along with Automotive Research Association of India (ARAI).
  - Expert committee to define "Heavy Duty Vehicle Fuel Economy Norms for India" under Ministry of Shipping, Road Transport and Highways of Government of India (GoI) & Petroleum Conservation Research Association (PCRA).
  - Expert Committee to define "Light & Medium Duty Vehicle Fuel Economy Norms for India" under Ministry

of Road Transport & Highways of Government of India, Ministry of Petroleum & Natural Gas (MoPNG) & Petroleum Conservation Research Association (PCRA)

- Expert committee on Fuel Economy and Labeling of Passenger Cars under Bureau of Energy Efficiency under Ministry of Power & Ministry of Road Transport & Highways.
- Interministerial committee for upcoming emission norms (BSVI) including Real World Driving Emissions (RDE) & Portable Emission Measurement System (PEMS) for Motor Vehicles of Ministry of Shipping, Road Transport and Highways, Ministry of Heavy Industries, Ministry of Petroleum & Natural Gas.
- Working group on Quadricycle Emission Norms for India.
- Ministry of New & Renewable Energy, GoI, is promoting and assisting technology development for GHG reduction

by way of increased usage of Biodiesel. We are engaged in this initiative of GoI and currently running number of engine and vehicle programs to commercialize usage of Biodiesel as soon as it is made available to the general public by oil marketing companies.

- Working Group on Energy for Sub-Group on DST's XIIIth plan on Technology Development Program (TDP).
- National Electric Mobility Mission Plan - We have been actively participating in forming hybrid performance criteria along with SIAM-FTG group and helped government to launch FAME scheme. Now we are building two types of hybrid and electric vehicles under Technical Advisor Group under R&D scheme.

We participate in all the panel meetings pertaining to emissions, fuel economy, conventional & non-conventional fuels for rules and standards formulation.



## Message from Head (SHE & Sustainability)



“ By aligning our work with the Sustainable Development Goals, we have begun to use our creative and innovative minds to bring about transformational changes not just within our business but also drive change within our societies that we serve globally. ”

At TATA Motors Ltd, sustainability is at the core of our decision-making and has become a way of doing business. By aligning our work with the Sustainable Development Goals, we have begun to use our creative and innovative minds to bring about transformational changes not just within our business but also drive change within our societies that we serve globally.

We are committed to continue our journey of sustainability by improving efficiency and effective utilization of resources and capitals. We have aligned our sustainability strategy to our business vision of 2019 and shall continue to approach sustainability in an all-inclusive way. We have set performance parameters for all the material issues and have developed action plans for achieving the same. Details have been provided in relevant sections of this report.

TML acknowledges the threat of Climate Change; we are committed to contribute positively towards climate change mitigation and reducing our carbon footprint as well as overall environmental footprint. In order to demonstrate our leadership in this area, we have joined the RE100 campaign and aspire to move our operations on renewable energy in near future. In addition to that, we shall continue our efforts towards sustainable transportation system and improvement in energy efficiency. We seek to continue our practices and make interventions to achieve Zero Liquid Discharge and Zero Waste to Landfill Status.

Safety and Employee health is of immense importance to us and we shall continue to enhance our employees' safety and overall health index. We have taken up specific targets on safety and employee health index. In the last financial year, we improved our safety record by 38% and employee health index by 0.5%. For the current year also we have taken stretched targets on employee health and safety and have identified the critical focus areas for achieving them.

Employee development is of paramount importance to us and we ensure continuous learning and development of our employees governed by Learning Advisory Council. We continue to channel our focused effort towards improving the gender diversity.

Acknowledging the criticality of our diverse supply chain, we continued implementation of sustainable supply chain initiative by engaging with 66 suppliers in 2017-18 and we are going to engage with remaining critical Tier 1 suppliers in the next financial year.

Under the core guiding principle of the Tata Group, we shall continue to engage with local community through our community engagement programs addressing our focus areas like environment protection, Health, education, Road Safety and skill development.

Embedded with Tata's core principle of enhancing quality of life, we endeavour to manage our operations and run our business responsibly, minimize environmental impact and have a positive effect on society.

**Arvind Bodhankar**  
Head (SHE & Sustainability)



# Sustainability Highlights & Awards

## Sustainability Highlights



**₹317.5 Million**  
invested towards environmental protection.



**₹214.3 Million**  
spent on CSR



**₹23.97 Billion**  
invested in Research & Development  
80 patents granted in 2017-18



**57.88%**  
procurement from local sources.



**20.76%**  
of total electricity sourced from renewable energy



**38%**  
reduction in Loss Time Injury Frequency Rate (LTIFR) compared to previous year



On-site Sustainability assessment of 66 suppliers



**Ranked no. 8**  
in CDPs global auto report titled "Driving Disruption".

MEMBER OF  
**Dow Jones Sustainability Indices**  
In Collaboration with RobecoSAM

Among 11 Indian companies selected on Dow Jones Emerging Markets Index 2017

## Awards



Tata Motors Limited, Jamshedpur plant won the National Energy Conservation Award. The award was given by The Hon'ble President of India Shri. Ramnath Kovind, and was received by Mr. Ajoy Lall, Head Manufacturing, CVBU, Tata Motors Limited on the occasion of National Energy Conservation day, 14<sup>th</sup> December, 2017 at Vigyan Bhawan, New Delhi.

<sup>7</sup> <http://www.tata.com/aboutus/articlesinside/leading-sustainably>



Pantnagar plant achieved platinum rating under CII GreenCo 2018



Sanand plant achieved platinum rating under CII GreenCo 2018



Pantnagar plant won the Golden Peacock Award for Energy Efficiency



Tata Motors won Business Today's 'Best Companies to Work for Award'



Pune CV plant won CII National Award for Excellence in Energy Management 2017



Sanand Safety Team won Excellence Award in Case Study Competition at 19th National Creativity Summit INSSAN at New Delhi



# Sustainable Mobility Solutions



## Sustainable Mobility Solutions

We are committed to developing low-emission vehicles that make substantial contribution towards sustainable urban transport. With sustainability at the heart of our innovation programme, we at Tata Motors, have led technology changes in the Indian commercial vehicle industry. In this section, we introduce our stakeholders to our management approach, innovations and initiatives towards mass and personnel transportation products which will strengthen the future of Green Mobility in India.



### Dashboard of TML for 2017-18: Sustainable Mobility Solution



**2<sup>nd</sup> rank** in the industry in the **JD Power Customer Satisfaction Index in India.**

R&D expenditure  
**₹ 23.97 Billion**



**80** Patents  
**23** Designs granted

Delivered **25 Diesel** Series Hybrid buses to MMRDA



Designed & Developed electric version of **Tigor** & is supplying to EESL

Unveiled electric concept sedan – **Tata EVision**





# Sustainable Mobility Solutions

## Role of TML in Shaping The Future of Mobility in India

The transport sector in India today faces an onerous task of meeting the mobility demands of a population of more than 1.2 billion people spread over an area of 3.3 million square kilometres (Census 2011). This is projected to increase to 1.39 billion in 2025. As per a World Bank Study, over 600 million people are expected to live in Indian cities by 2031. The urban transport system is forecasted to rapidly develop with the cities and problems such as increased traffic congestion, environmental pollution, threatening safety are going to pose severe challenges to the development agenda of our nation. Realising the need for smart and sustainable transport solutions, Government of India is on a mission of building 100 smart cities and has unveiled investment plans totalling 150 billion USD in highways and shipping sector all over India by 2019. As a company that has gained a reputation of contributing to nation-building we are committed to providing Smart, Safe and Sustainable transportation that would shape the future of mobility in India.

At TML, we are focusing on both on-road transport subsectors- Commercial and Passenger Vehicles covering; freight trucks, light goods vehicles, cars and public transportation buses. The remarkable growth of this sector poses both challenges as well as tremendous opportunity for the automotive sector. Rapid urbanization and an expanding upper middle class offers a great market, but challenges like increasing congestion and pollution due to dramatic increase in personal vehicles makes urban cities a virtual gridlock.

Private sector has been increasingly providing leadership regarding the problem of green logistics and urban mobility. Key trends that will impact the roadmap of automotive sector are:

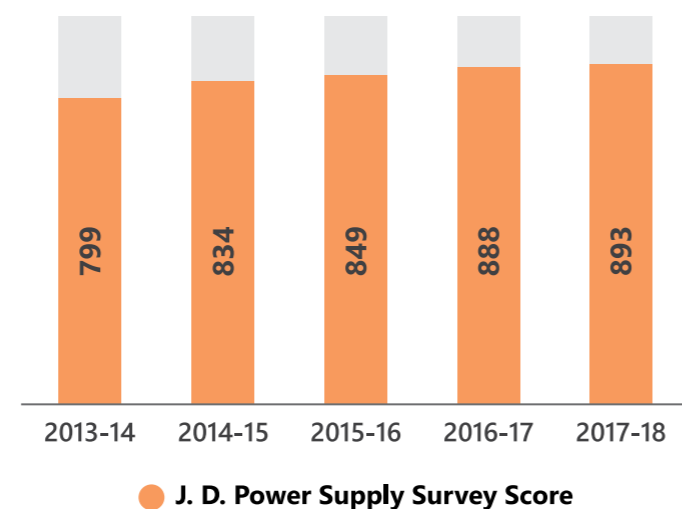
- **Electric Vehicles:** Poised for tremendous growth in India backed with pro-electric government policies.
- **Artificial Intelligence:** Still nascent in India but on top of minds of automotive companies globally, to explore the possibility of driver-less mobility.
- **Shared Mobility:** With arrival of technology to enable this, car ownership is a thing bygone. This creates an

opportunity in the market for vehicles that can be used as shared resources.

- **Big-data Driven Freight Optimisation:** Open source platforms will make data analytics flexible, reliable and relatively affordable for companies. This will lead to route and capacity optimisations, and collaborations between various third-party transport providers.
- **Light Weighting:** ultra-light, ultra-efficient vehicle is an efficiency measure which has major positive impact on bottom line as well as reduction in on-road carbon emissions.

### Customer Centricity

With a vision to be a global leader in the transport sector, we aim to provide the best experience to our customers with our wide range of products. Customer centricity is intrinsic to our culture – develop, deliver, delight. Customer service quality is met through integration of our Customer Relationship management and Dealer Management System (CRM – DMS). We continuously strive to provide best services to enhance our customer engagement. We have continuously demonstrated our commitment towards providing the best customer service by constantly delivering value to our customers. Our performance in the customer service survey conducted by J.D. Power over the last few years reflects on our priority.



“ We aim to delight our customers by providing them a complete package with best in style, unique features and service value. Our primary objective is to keep in mind customer aspirations and deliver best vehicle experience by out performing industry day-after-day. ”

**Mayank Pareek**  
President, PVBU

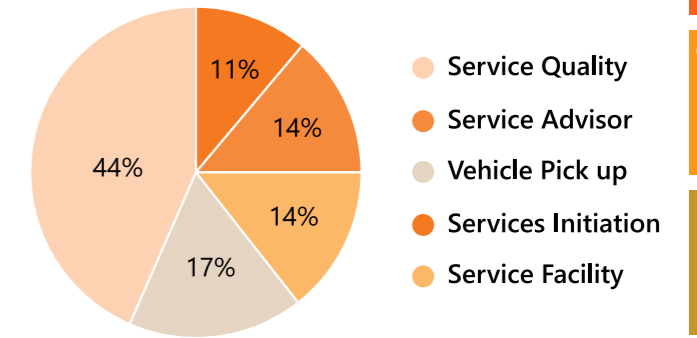
### Approach and Performance in Customer Engagement

Customer service quality is met through assimilation of our Customer Relationship Management and Dealer Management System (CRM – DMS). Our TCoC for dealers and overall quality policy provides the guiding approach towards customer service.

It is important to understand customers’ expectations and thus an ongoing dialogue with them is maintained through feedback surveys. It helps us to make advances in the quality of products we develop. In view of providing consistent service, we have integrated feedback systems across the life cycle stages of customer satisfaction. We have benchmarked our performance with the industry peers by using J.D. Power Survey. The survey is a street recruitment and face-to-face interview done from May to August every year over a spread of 40 cities. The survey sample are owners with 12-24 months of ownership of products and who have serviced their vehicle at least once in the last 6 months. We have improved our J.D. Power Survey score for Passenger Vehicles over the years, which are indicated in the graph above. J.D. Power Survey – Syndicated CSI Survey criteria are undergoing a change from 2018 onwards. Testimony to our concerted efforts, we have moved up to 2<sup>nd</sup> rank in 2017 in the industry in the JD Power Customer Satisfaction Index in India.

There have been no cases of non-compliance or violations in regards to customer privacy during the reporting year.

### J. D. Power 2015 India Customer Service Index (CSI) Study Factors Comprising Overall Satisfaction (%)



### J. D. Power 2017 India Customer Service Index (CSI) Study Factors Comprising Overall Satisfaction



The data security of our customers is ensured through a robust consumer privacy policy which tracks and measures key aspects of customer dissatisfaction. All the complaints are assessed for root cause analysis through the Complaint Management Process. The complaints received through various modes like letters, e mail, Toll free no., feedback calling, social media forums, Customer App etc are responded and acted upon for resolution. We have a daily dashboard shared with the regional teams where Turn-around-Time (TAT) adherence is measured along with closure percentage and ageing of open complaints. There is a mechanism in place to internally escalate complaints to various members of the process chain if a complaint remains open beyond TAT. We drive closure of complaints from dealers to end on the same day or the very next day with customer and this number is also monitored daily. Daily tracking of complaints that are escalated to the Chairman, President and Managing Director offices happens till closure of the complaint. If there are any complaints open for a long duration it is investigated by the CC team and resolution intervention offered wherever required/possible. Monitoring of key performance metrics (CPTV, TAT adherence and Same Day Closure) is done by customer Care/ Experience teams.





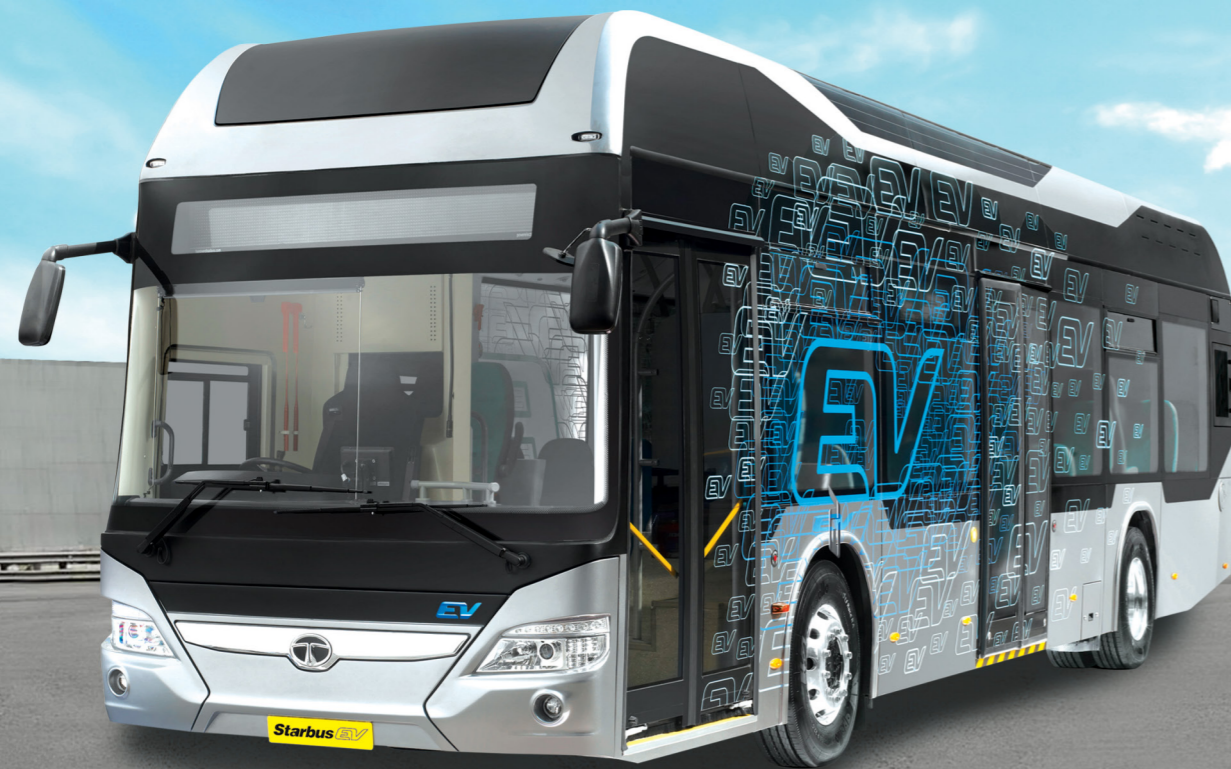
Details of resolution, root-cause analysis and service load based analysis and performance is tracked by the customer support team. We provide feedback to the customers on the resolution of the complaint. The philosophy in managing customer complaints is Respond, Resolve & Reassure.

### Product Recall

TML has a well-defined Recall Process and Head of Engineering Research Centre is overall responsible for

managing the product recall. The process has been framed based on recall related regulatory aspects of various countries and global benchmark practices.

The Recall Process is aimed at providing the framework to address the vehicle recall in case of safety defect in the vehicle due to design, manufacturing or assembly problem posing undue risk to the safety of vehicle or user and incorrect product labelling.



# Product Stewardship



“ Our sustainability strategy is aligned with global and national policies of future mobility solutions. Accordingly, we are extensively working on low carbon product development across our commercial and passenger vehicles segments. We have already launched a range of advanced technology vehicles which would not only help mitigation of climate change risk, but also curb rising urban air pollution. ”

**Rajendra Petkar**  
Chief Technology Officer

### Approach and Performance

The future has already arrived and our market and environment are more competitive than ever before. Globalization and competition in the automotive sector have increased the need to innovate products that are more efficient, provide comfort to customers and are economical. To strategically stay ahead of the curve during the time of ever-changing global dynamics, we give prime importance to innovation and are continuously innovating new products keeping in mind the customer preference and regulations. TML is prepared for the future with its 'Future-Ready' portfolio, addressing various product and technology drivers. These drivers range from changing standards on - emissions (BSVI), safety norms, fuel economy, rated loads, megatrends like ACES and other strategic product offerings.

TML's range of electric vehicles include IRIS EV, Magic EV, 12m Urban Electric Bus, Tiago EV, Tigor EV, RaceMo EV, along with E-Vision concept Electric Vehicle showcased at Geneva International Motor show during March 2018.

Moving into the 150<sup>th</sup> year of Tata group, TML is geared up with a fresh perspective to drive India's vision of sustainable transportation by developing viable, cost-effective, safe and environment-friendly solutions including alternate fuel powertrains and supplying and maintaining largest CNG fleet of the world for Delhi since 2009. As the only OEM with an end-to-end extensive product portfolio across its Passenger and Commercial Vehicles businesses, TML is in a unique position to play a complimentary role in the smart cities of the future. From public transport to personal cars, from last mile connectivity to BRTS, from emergency response vehicles to commercial utility vehicles, from green and sustainable solutions to vehicles designed to amplify the thrill of the drive - we have a product portfolio to connect the aspirations and needs of its discerning customers. This is a clear example of our commitment towards development of sustainable transportation. Our vision to mark our place in the domestic passenger vehicle and global commercial vehicle reiterates our intention towards product stewardship.

Information on Innovation

	Total Patent Application -	50
	Total Patent Granted -	80
	Number of Design Application -	25
	Number of Design Granted -	23

With the growing need for fuel efficiency and reducing on road emission for vehicles, innovative technologies are needed to support the changing scenario and achieving targets. We are evaluating several xEV options through different technologies as part of long-term strategy. The Tata E-Vision electric sedan concept which was first showcased at the 2018 Geneva Motor Show is based on the brand's new OMEGA platform that will be the base for all future electric Tata models that are more than 4.3 metres in length.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION





The technologies vary from mild hybrids in one segment to a fuel cell in others, which we have demonstrated in Auto Expo from time to time. We continue our R&D efforts in developing vehicles which are powered by alternate fuels like CNG, LPG, Biodiesel, electric and Hydrogen. We are also working on LNG and Dual fuel technologies which provide an alternative to pure diesel technologies.

Our R&D expenditure for the year 2017-18 was ₹23.97 Billion, an increase of 14.14% from the expenditure of year 2016-17.

We also engage with various prestigious scientific and educational institutions, like Indian Institute of Technology, Mumbai, Indian Institute of Technology, Kharagpur and Indian Institute of Science, Bangalore to support our cause of developing technologies suitable for Indian context and thereby, creating value to our customers. At an organization level, TML's Engineering Research Centre is overall responsible for product development and innovations.

Our new design philosophy means that the front end of the car gets a humanity line seen on all the new generation Tata cars. A new sub-brand named TAMO acts as an incubation centre of innovation towards new technologies, business models and partnerships in order to define future mobility solutions by providing a digital eco-system granting access to new trends, innovations and ideas for designing new products and solutions. In March 2017, Tata Motors showcased a concept sports car under our sub-brand TAMO – RaceMo at the Geneva International Motor Show, where 3D printing technology has been used to create replicas of the concept car and distributed to the visitors at the show.

### Key Initiatives and Outcomes in Alternate Fuel

At TML there are several initiatives to develop alternate fuel vehicles which reduce the impact of vehicles on air pollution as well as climate change. A list of the major initiatives is given below:

### Mass Transportation & Last Mile Connectivity

With approximately 68.4% of the sales volume from commercial vehicles, we have always prioritized our efforts towards enhancing the effectiveness and efficiency of mass transportation vehicles.

- After the successful launch of the STARBUS ELECTRIC 9m, the STARBUS ELECTRIC 12m and the STARBUS HYBRID 12m buses, designed, developed and powered by alternate fuels, TML is manufacturing them for supplying to various State Transport corporations.

- The pioneer of the country's first Fuel cell bus (12m), LNG Powered bus (12m), and 18m Articulated bus.
- Delivered 25 Diesel Series Hybrid buses to the city of Mumbai, India to be operated in the city center of Bandra-Kurla Complex as well as for connecting BKC to the Airport.
- Developed a 12m electric bus based on low floor bus platforms for urban deployment which will result in zero tailpipe emissions. This was displayed in AutoExpo 2018, Delhi.
- Developing an electric trolley bus based on the series hybrid platform targeted for BRTS routes for zero emission mass mobility application.
- Developing a fleet of fuel cell buses, again based on the series hybrid platform which can provide clean public transportation in cities where hydrogen infrastructure will be available. Several prototypes of the fuel cell buses are under testing within TML premises.
- Developing electric vehicles based on small commercial vehicles like Tata Iris and Tata Magic, which are intended for last-mile public transportation applications.

### Personal Mobility

TML recognizes the importance of alternate fuel vehicle in personal transportation and significance of the same in combating climate change and air pollution. At the company level, approximately 31.6% of our sales volume is from passenger vehicle (PV) which significantly contributes to the overall on-road emissions. In this context, we have started to channel our effort towards improved tail-pipe emission, energy efficiency and technological intervention to introduce alternate fuel vehicles.

- TML has designed and developed electric version of Tigor and is supplying to EESL, Govt of India.
- Developing various electric cars for catering to the customers aspiring for zero emission vehicle.
- Displayed concept high performance and longer range EV car EVision in Geneva Motor Show which will be catering to the needs of customers aspiring high performing EV Cars.
- TML is developing hybrid versions of its passenger car products like Hexa, Tiago and Nano for application in personal mobility.

### Reducing Climate Change Impact of Refrigerants

UNEP Program: The European Union has phased out High Global Warming Potential (GWP) refrigerant HFC-134a from

mobile air conditioning systems from January 2017. This is applicable to all new M1 vehicle category models. In 2016, India as a signatory of the Montreal Protocol Amendment had agreed to phase down production and consumption of HFC's with 2028 as freeze year and 85% reduction by 2047. In this regard, TML is proactively exploring the use of alternate low GWP refrigerants like HFO 1234yf, HFC-152a in mobile air conditioning systems.

TML has been granted funds from United Nations Environment Program to work with a vendor and demonstrate the commercial and technical viability of alternate low GWP, mildly flammable HFC-152a and HFO-1234yf refrigerants in secondary-loop mobile air conditioning systems. The project started in May 2016 and will be completed by December 2018.

### Developing Safe Mobility Solutions

Product safety is always a priority to TML. All the products are developed using latest technologies to ensure overall occupant and pedestrian safety.

TML's product safety development team ensures that product design meets latest regulatory norms, consumer group norms and due care norms in the area of safety. Our Integrated Safety Centre is fully equipped to carry out different types of tests like, full vehicle crash tests, sled tests, Pedestrian protection tests, BIW (body in white) strength and anchorage tests, interiors evaluation tests, material characterization tests, commercial vehicle tests, security systems evaluation tests, Advanced Driver Assist System (ADAS) evaluation tests. Head of Engineering Research Centre (ERC) is responsible for reviewing and implementing safety initiatives in the products.

We also have dedicated CAE group who is responsible for developing vehicle structures and occupant restraint systems (airbags, seatbelts) meeting target crash safety performance requirements. All projects under development are routed through a physical and digital validation process. Our facility is accredited by Vehicle Certification Agency (VCA), UK as well as ARAI wherein both agencies witnesses the tests at the facility and provide compliance certificate.

### Meeting Homologation Requirements

Adherence with the applicable regulation is recognized as one of most critical requirements to ensure business continuity. Our Passenger and Commercial Vehicles fulfil all the applicable regulatory requirements in the

domestic market as per CMVR Certification and of the export markets.

### Emission and Safety in India

The Government of India, starting April 2017, mandated Bharat Stage IV norms, which are equivalent to Euro IV norms, for all vehicles across India. All categories of our vehicles currently manufactured are compliant with Bharat Stage IV norms. Bharat Stage VI norms will be applicable across the country starting April 1, 2020.

Ministry of Road Transport and Highways (MoRTH) has also imposed restriction on the registration of Bharat Stage IV vehicles sold after 1<sup>st</sup> April 2020. The Fully Built BS IV vehicles manufactured before 1<sup>st</sup> April 2020 shall not be registered after 30<sup>th</sup> June 2020 and BS IV vehicles sold in the form of drive away chassis manufactured before 1<sup>st</sup> April 2020 shall not be registered after 30<sup>th</sup> September 2020. Hence TML product plan, migration and manufacturing has been synchronized to fulfil these requirements.

### CAFE Norms for M1 Category Vehicles

The Corporate Average Fuel Economy (CAFE) norms are applicable to M1 category vehicles from April 1, 2017. As a result, we are required to demonstrate CAFE compliance for our PV and CV M1 models. Through the use of the CAFE Calculator, we will monitor production volumes and process to ensure that organizational level CAFE compliance (which will require us to produce enough fuel efficient models to compensate for those models having higher CO<sub>2</sub> emissions in g/km) is established at all times during the year. To ensure compliance with CAFE norms, we are taking measures to incorporate electric and hybrid vehicles and include environmentally friendly technology in our product range.

### Heavy Duty Fuel Efficiency Norms

With the notification for Heavy Duty Fuel Efficiency Norms for Diesel vehicles of category M3 and N3 with GVW of 12T & above coming from the Ministry of Power, TML is working on every vehicle of specified category to meet the fuel efficiency targets mentioned in the notification based on constant speed fuel consumption tests conducted at 40 km/h and 60 km/h. Accordingly, Phase 1 will be implemented on & after 1<sup>st</sup> April 2018 for vehicles complying with BS-IV emission norms and Phase 2 will be implemented on & after 1<sup>st</sup> April 2021 for vehicles complying with BS-VI emission norms.



## Crash & Other Safety Requirements for Motor Vehicles

India has a well-established regulatory framework administered by the Ministry of Road Transport and Highways. Recently, the Government of India has embarked on a wide ranging program to institute standardized safety features for a variety of motor vehicles. Crash safety requirements, such as full frontal, offset frontal and lateral impact, have been made mandatory for all new models starting October 1, 2017 and from October 1, 2019 for all existing models of vehicle categories as specified in the individual standards. A pedestrian compliance program will be instituted for all new models from October 1, 2018 and for all existing models from October 1, 2020. Passenger vehicles will require safety features such as safety belt reminders, reverse parking alert system, speed alert system, manual override for central locking system and air bags from 1st July 2019 onwards. Anti-lock braking system (ABS) will be required for all M1 and M2 category passenger vehicles starting April 1, 2018 and April 1, 2019, for new models and existing models respectively. To facilitate informed consumer decision-making, the government is formulating the Bharat New Vehicle Safety Assessment Programme (BNVSAP), a star-rating based system of safety assessment for passenger vehicles. Additionally, starting April 1, 2018, all public service vehicles need to be outfitted with a vehicle location tracking device and an emergency buttons. This would enhance overall safety of women and children while availing public transportation across India.

In order to operationalize Electronic Toll Collection and ease congestion at toll collection centres, MoRTH had mandated the fitment of FASTags by the OEMs and their authorized dealers in two Phases. Phase 1 involved the fitment of issuer bank specific tags from 1st December 2017. According to the latest direction from NHAI (National Highways Authority of India), Phase 2 involving the fitment of Bank neutral FASTag would be applicable from 1st Jan 2019. The bus body code regulations in two phases have become applicable for buses from 1st Oct'2017 and 1st Jan 2018 respectively. Also Ambulance code and motor caravan codes became applicable from 1st April'2018.

Government of India had mandated the fitment of air-conditioning system or truck cabin ventilation system in all N2 & N3 category of vehicles with effect from 1st January 2018. Additionally, MoRTH has also mandated the compliance with Truck Body Code for all such vehicles in two phases (Phase I & Phase II) from 1st October 2018 and 1st October 2019 respectively. MoRTH has issued a draft notification incorporating compliance with revised requirements in line with Europe for Fully Built Buses manufactured on and after

1st April, 2019 by Original Equipment Manufacturers.

## Staying Prepared with Forecasting

We have developed Domestic Regulation Forecast Matrix (DRFM) and Export Regulation Forecast Matrix (ERFM) which provide updates on various forthcoming regulations and their applicability, implementation etc., pertaining to Emissions and Safety for the PV and CV products manufactured by TML.

DRFM is prepared and uploaded at a designated portal by Regulations Team every month and the regulatory updates are also sent through departmental communication across the organization on monthly basis. The Export Regulation Forecast Matrix is prepared and uploaded by homologation team for the applicable PV and CV markets indicated by International Business on a periodic basis. In addition, periodic communication also being sent by Regulations team to provide updates on various developments on the domestic regulatory front to TML stakeholders. This system acts as forecasting trigger for Marketing, International Business, CoCs, PATs, developmental agencies to initiate various design and developmental actions upfront for the existing and new PV & CV models targeted for launch, sales and registration in India and abroad.

## Addressing Regulatory Changes

**Shift to BS IV:** In April 2017, we announced our readiness to address the challenge of shifting from BS III to BS IV. Our two new engines with SCR (Selective Catalytic Reduction) and EGR (Exhaust Gas Recirculation) technologies for BS IV compliant engines would be powering its range of Commercial Vehicles.

## Materials Engineering

To make TML products environment-friendly, we envision inclusion of green and light weighting technologies in products over and above the basic Environmental regulatory compliance.

To meet various environmental initiatives TML has released "Regulatory Compliance Bulletins" for creating awareness among suppliers about End of life vehicles, use of certain Persistent Organic Pollutants (POPs). We are proactively sensitizing our supply chain on all the upcoming regulations and internal policies.

In order to ensure TML products do not have any hazardous material content,

- There is continuous upgradation of specifications / standards.
- Use of International Material Database System (IMDS) for tracking and monitoring the material content of product.
- Strategy of linking product level environmental initiatives to new product launches.

## Engine Product Development

### Fuel Efficiency Improvement Initiatives

- 2%-3% fuel efficiency demonstrated through advanced formulation used in engine oil.
- Similar initiative is being taken for axle and transmission oil leading to fuel efficiency cumulative gain of 5% when used in conjunction with aforementioned oil.

### Engine Product Development



- On Nexon diesel vehicles, following carbon foot print reduction were implemented:
  - Combining 2 fuel filters into 1 fuel filter with improved filtration technology requiring no fuel filter change till life of vehicle or dashboard indication to driver; whichever is earlier.
  - Reducing weight of engine through use of alternate material for cylinder head cover with integrated oil separator.
  - Increasing life of timing belt till life of the vehicle.

Harnessing potential of Automated Manual Transmission (AMT) driveline for fuel economy improvement on various engine/vehicle platforms

### Enhancement in Oil Drain Interval

- For commercial vehicles, the engine oil quantity is substantial, ranging from 7 to 21 ltrs of oil and if the oil drain interval is enhanced, it reduces overall disposal of oil and contributes in reducing the overall carbon footprint. To achieve this, TML along with an oil additive supplier developed a Semi Synthetic engine oil with a novel chemistry with boosted oxidation control properties that led to an increase in oil drain intervals by 50% to 80% Kms in most of the engines.
- Apart from the benefit of enhanced oil drain intervals due to enhanced chemistry and synthetic base oil,

- With requirement to comply with Heavy Duty FE norms, improvement in fuel efficiency at engine level through various proprietary technologies, which result in reduction of parasitic losses, friction reduction and combustion optimization. This has resulted in 4 – 5% fuel efficiency benefit for 12T and above vehicles.

the formulation was developed in such a way that it gives fuel economy benefits due to reduced friction by virtue of lower viscosity of the oil. This oil is SAE 10W40 which gives around 1-3 % fuel economy improvement over the existing SAE 15W40 engine oil.

- This new development gives dual benefit to the customer and also helps reducing carbon footprint by increasing the oil drain interval and providing better fuel economy.

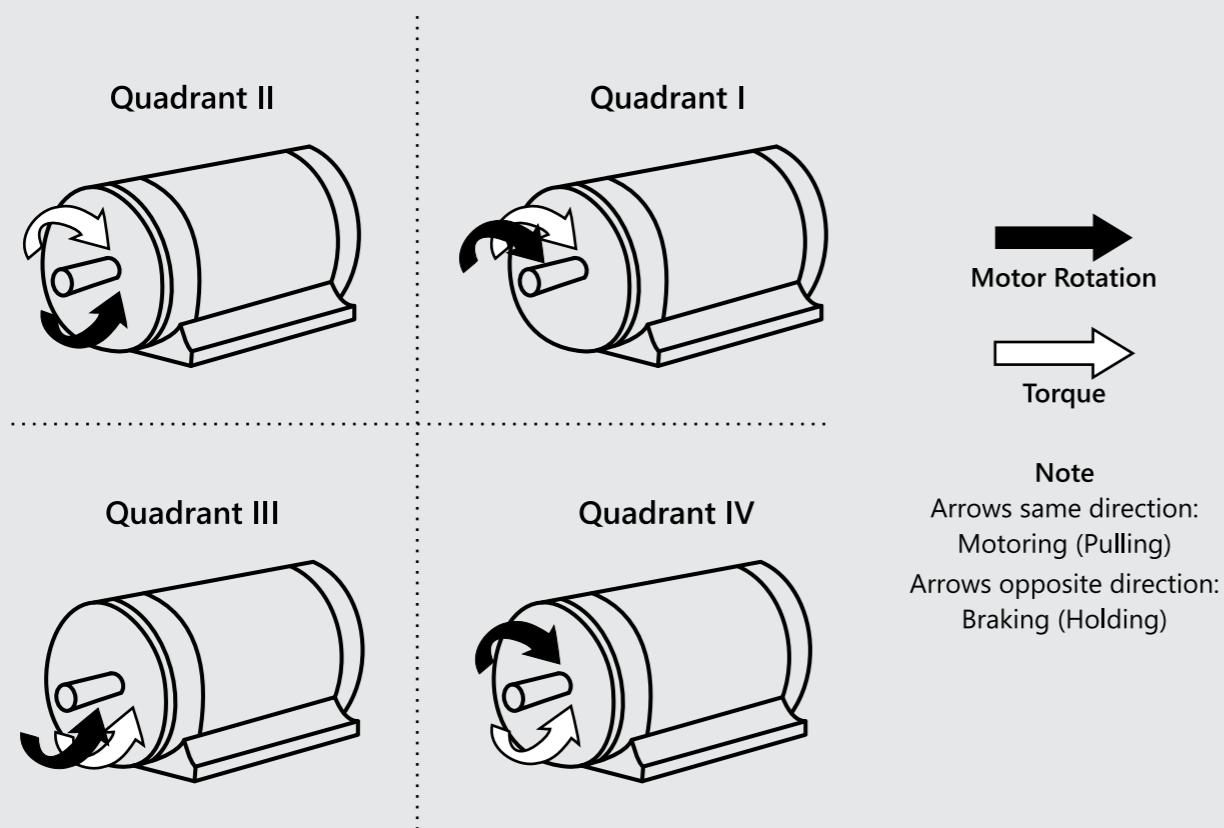
### Thrust on Reducing Energy Consumption for Test Facility

- Improved test cell ventilation through high efficiency evaporative cooling instead of pure air conditioning which was the more energy consuming option.



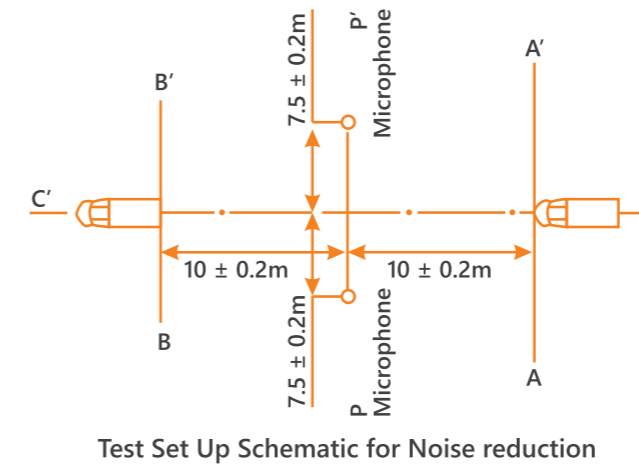
## Energy Conservation in Indoor Testing

As a part of product verification and validation process, different vehicle proto components, aggregates, systems and vehicles are tested for its performance and reliability using in-lab test facilities. All such in-lab test facilities are equipped with electric motors and drives as prime mover. As a sustainability initiative, our emphasis was to go in for regenerative type test dynamometers and test systems though they are technically complex and costly. Regenerative test systems use motors cum generator along with a suitable drive system. In normal operation, electric motor provides mechanical load to load / drive the test component / vehicle and other way round the electric motor acts as generator and absorbs the mechanical load / power exerted by the test component / vehicle. During generator mode, it generates electricity, which is fed back to the grid. Regenerative test system helps in reducing 60 - 80% of electricity consumption over non-regenerative type test systems.



## Nexon Pass By Noise Reduction

Nexon Petrol vehicle engine calibration was changed to meet drivability requirement at Beta Stage. This change resulted in higher exterior noise and the vehicle failed to meet Pass by noise Legal requirement. Engine calibration and exhaust system were tuned to meet pass by noise requirement. Pass by noise value was reduced by 2 dBA (76 to 74) with above changes and regulatory requirements were met. It resulted in reduced noise pollution during driving.



## Life Cycle Assessment:

One of our key initiatives towards holistic improvement in sustainability performance of our products is the introduction of Life Cycle Assessment approach for our product development. In this approach, we give specific importance to various components that are used in the production process to understand their impact. With the findings we are able to get better insights to improve the efficiency and sustainability of our products. Some of the highlights of our studies:

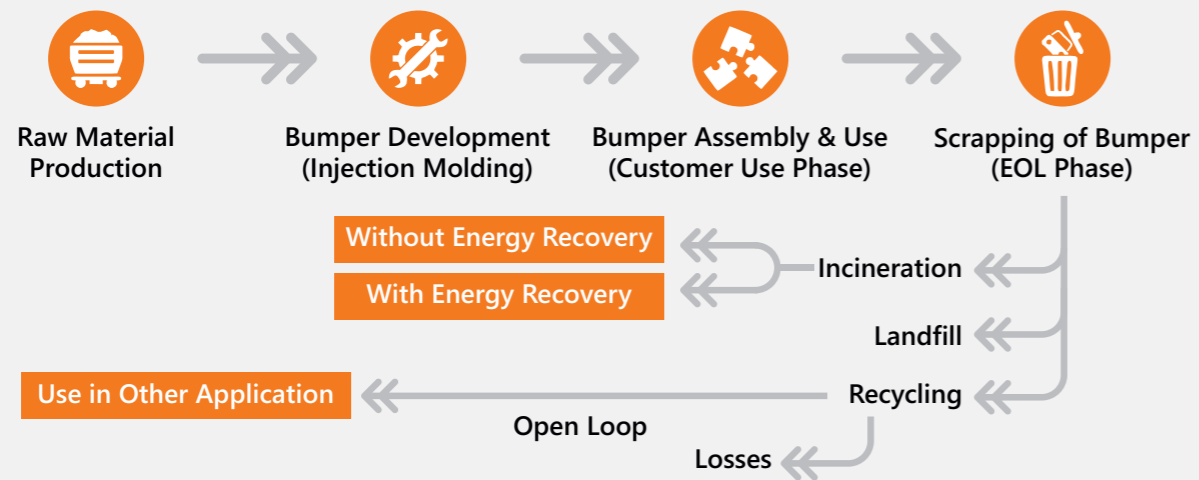
- A detailed LCA Study was performed to quantify the environmental impacts of our HEXA Vehicle which is manufactured at our Pune plant. ISO 14040/44 standard's cradle to grave system boundary was used. With the assistance of Tata Steel, actual steel datasets were collected from them to know the actual impact of steel on vehicle production.
- Through the aggregate level LCA study of the air conditioning unit present in TATA ARIA we found that the refrigerant leakage during the use phase has the maximum impact for existing air-conditioning system.

- To assist the designers & strategic sourcing team to determine the sustainability level of the parts manufacturer in supply chain, we developed two novel tools for life cycle multi-criteria sustainability assessment & product footprint calculator. Both tools will help in capability development & decision making.
- Evaluated impact of recycling materials & associated trade-offs to make informed decisions from environmental perspective.

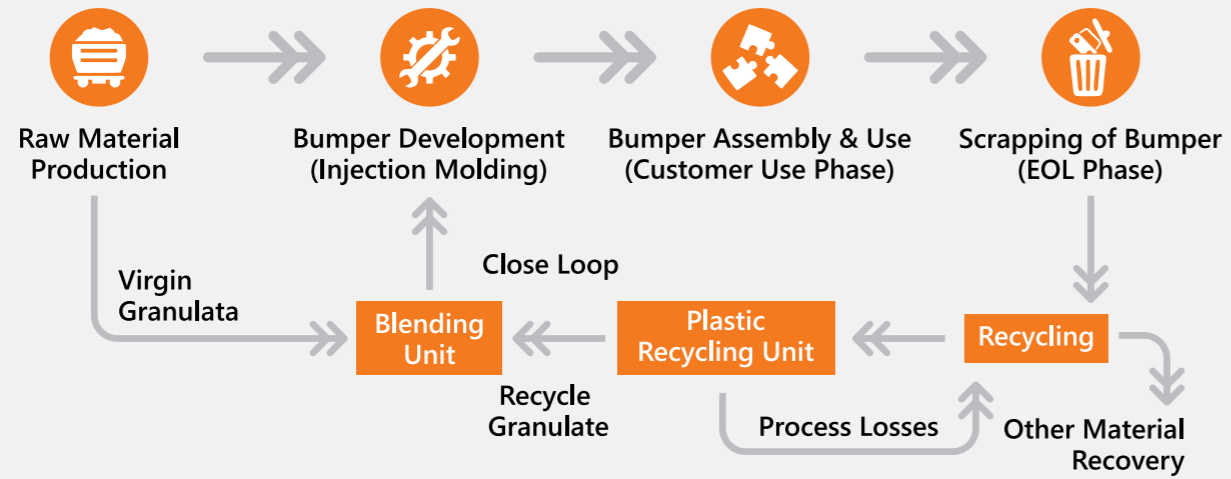
In this study, material depletion, energy consumption, and environmental emissions of front bumper application in the vehicle were analyzed using the life cycle method to determine the effect of passenger vehicle plastic bumper recycling on the environment. This project emphasizes on circular economy principles for treating scrap in an organized manner without compromising on quality. TML in collaboration with other stakeholders developed the methodology to treat the plastic waste, which reduces the environmental burden by minimizing use of virgin plastic material & promoting close loop plastic recycling. The study was completed into two parts; Benchmarking impact of Virgin Material part and evaluating impact of recycled material against benchmark study with sub tasks. Different scenarios were analyzed based upon material end of life practices (landfill, Incineration with or without energy recovery) for first generation products & recycle material percentage (50 %, 70% & 100% recycled material use) in second-generation products.



Conventional Life Cycle Model For Automotive Product



Proposed Close Loop Life Cycle Model For Automotive Product



# Sustainability Priorities



# Key Challenges: Faced & Emerging

TML has operations across several geographies, and is impacted by global as well as regional trends in the automotive industry, changing policy scenarios, stricter environment and tax regulations, fluctuating fuel rates and commodity prices. In India, consumer preferences are largely determined by availability of credit, economic well-being of the people and the general growth of the economy.

Considering the gamut of factors, we have prioritized risks and opportunities to the business based on the frequency of occurrence and potential of reoccurrence based on historical trends. Risks & opportunities have been analysed for potential impact on the company and external influence. For the ease of understanding, risks are categorized under economic, environmental and social.

RISKS		
Risk Area	Identified Risks	Potential Impact
<p><b>Economic</b></p>	<ul style="list-style-type: none"> <li>Rising inflation and interest rates coupled with muted industrial growth;</li> <li>Intensifying competition in the premium automotive categories;</li> <li>Underperformance of the Company's distribution channels and supply chain;</li> <li>Increase in input prices of raw materials and shortage;</li> <li>Deterioration in the performance of any of the subsidiaries, joint ventures may have a substantial adverse effect on the Company's sales and financial condition.</li> </ul>	<ul style="list-style-type: none"> <li>Increase in capital cost;</li> <li>Decline in business growth;</li> <li>Business continuity risk.</li> </ul>
<p><b>Environmental</b></p>	<ul style="list-style-type: none"> <li>Increasing awareness among customers and social vigilance for environment friendly vehicles and increase in demand for more fuel-efficient and environment-friendly vehicles;</li> <li>Increased government regulations (Corporate Average Fuel Economy norms, shift to BS IV), rising fuel prices, and evolving environmental preferences of consumers;</li> <li>Compliance with new and current laws, rules, regulations and government policies regarding increased fuel economy, reduced GHG and other emissions and vehicle safety;</li> <li>Climate change                             <ul style="list-style-type: none"> <li>Regulatory risk includes air pollution limits, product efficiency, changing taxation on fuel, product labelling and emission reporting obligations;</li> <li>Change in physical climate - such as change in precipitation and resulting drought, or floods.</li> <li>Transition risk based on 2 degree climate scenario of low carbon economy.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Increase in the cost of operation;</li> <li>Operate and maintain its facilities as per regulations and standards, (ii) install new emissions controls technologies, (iii) obtain allowances to emit greenhouse gases, (iv) manage the Company's emissions programme, and (v) invest in research and development to upgrade products and manufacturing facilities;</li> <li>Unable to continue business due to violation of regulations/ norms;</li> <li>Decline in business due to inability in meeting environmentally conscious customer expectations.</li> </ul>
<p><b>Social</b></p>	<ul style="list-style-type: none"> <li>Change in Mobility preferences                             <ul style="list-style-type: none"> <li>Increased use public transport;</li> <li>Shift from ownership model to dependency on cabs;</li> <li>Increase in car-sharing economy with cab aggregators like OLA, UBER;</li> </ul> </li> <li>Obligations under the World Trade Organization agreement could reduce the present level of tariffs on imports of components and vehicles which could result in increased competition;</li> <li>Traffic congestion in major cities and environmental awareness;</li> <li>Social unrest such as Labour strikes, civil disturbances, regional conflicts and other acts of violence may disrupt or otherwise adversely affect the markets in which the Company operates its business and profitability.</li> </ul>	<ul style="list-style-type: none"> <li>Decline in sale of passenger vehicles;</li> <li>Increase in competition in the business;</li> <li>Closure/ loss of business due to labour unrest.</li> </ul>

OPPORTUNITIES		
Opportunity Areas	Identified Opportunities	Potential Impact
<p><b>Economic</b></p>	<ul style="list-style-type: none"> <li>Initiatives to make Tata Motors Limited a more agile and lean enterprise to address the changing global business scenario;</li> <li>Various initiatives in energy and resource optimization such as recycling and reuse and implementation of ENCON projects to ensure effective cost management and cost competitiveness;</li> <li>Engagement with Company's distribution channels and supply chains for sustainable performance and business continuity;</li> <li>Increased emphasis on Research &amp; Development (R&amp;D) for new safer, environment &amp; customer friendly products resulting to launch of new products;</li> <li>Initiation of end of life treatment of various parts of Tata vehicle to avoid high cost of virgin material;</li> <li>Entry into new business streams such as in defence sector - from providing only pure logistics solutions to tactical and combat solutions.</li> </ul>	<ul style="list-style-type: none"> <li>Increase in product portfolio                             <ul style="list-style-type: none"> <li>Alignment to changing customer preferences;</li> <li>Increased business growth;</li> <li>Reduced cost of operation and capital cost.</li> </ul> </li> </ul>
<p><b>Environmental</b></p>	<ul style="list-style-type: none"> <li>Launch of hybrid buses for mass transportation and development of fuel efficient vehicles to reduce on-road fuel consumption and overall fleet emission;</li> <li>Introduction of cleaner fuel CNG variants of the vehicles also help reduce environmental load on ambient air quality and meet the product emission related regulations;</li> <li>Introduction of emission control technologies across the Commercial Vehicle range that aid in superior performance, reliability, commercial affordability, environmental sustainability and future readiness of our vehicles. Use of Selective Catalytic Reduction (SCR) technology, will enable TML meet the increasingly stringent emission norms;</li> <li>Enhanced clean vehicles portfolio- TML has introduced more than 50 products with more than 200 variants including Ultra 1518, SIGNA 3718, Ace Gold and Starbus Hybrid. In addition to this, TML is gearing up with BS IV product/technology superiority. Our products represent the Horizonext philosophy with best-in-class offerings;</li> <li>Our futuristic electric vehicle, Magic Iris Electric, a clean, eco-friendly passenger commercial vehicle comes with a segment first solar charger;</li> <li>Implementation of ENCON projects helped reduce energy consumption and thereby, reduce GHG emissions;</li> <li>Increased investments in RE, also, significantly contributed towards reduction of GHG emission in our operations;</li> <li>Establishment of rain water harvesting and reverse osmosis system for sustainable water supply;</li> <li>Implementation of integrated circular economy strategy has resulted to reduced consumption of virgin material and increased the useful life of the products.</li> </ul>	<ul style="list-style-type: none"> <li>Increase demand and wider acceptance of vehicle;                             <ul style="list-style-type: none"> <li>Greener operations - Reduced cost of operation and optimized material usage;</li> <li>Increased social acceptance of the company due to greener vehicle portfolio for mass transportation and commercial vehicles.</li> </ul> </li> </ul>
<p><b>Social</b></p>	<ul style="list-style-type: none"> <li>TML received order for hybrid buses for mass transportation. The launch of Small Commercial Vehicles (SCV) and Pickup range - The SCV range of Ace, Ace Zip and Pickup range Super Ace have been game changers in enabling the customers to deliver last mile goods and services. The unique quality and price proposition of these vehicles have inspired and enabled many to become entrepreneurs;</li> <li>As customers are looking for new ways to access vehicles beyond the traditional ownership models, the Company is exploring possibilities of premium mobility that will offer them the choice and flexibility to match their lifestyles;</li> <li>Engagement with suppliers for sustainable supply chain enhances the ESG performance of suppliers, thereby reducing the risk of labour unrest in supply chain and ensures continued goods and service supplies from our local suppliers;</li> <li>Continuous engagement with our employees &amp; stakeholders provides upcoming issues and concerns of our business and helps maintain our social license to operate.</li> </ul>	<ul style="list-style-type: none"> <li>Wider acceptance and increased business;</li> <li>Avoidance of loss of business due to social issues;</li> <li>Enhanced ESG performance in supply chain and avoidance of disruption in business.</li> </ul>

# Stakeholder Engagement

## Accelerating with our Stakeholders - Shaping Our Aspirations

For TML, engagement with stakeholders has always been of utmost priority, driving business to a level where it is today. Stakeholders' views and suggestions are incorporated into our business strategies while the concerns raised by them are worked upon to strengthen our internal systems. On a regular basis, our teams engage with multitude of people, who impact or are impacted by our business decisions, to discuss matters most important to them.

A formal stakeholder engagement process involves direct & detailed consultation with different stakeholder groups, helping us in identifying the critical issues that needs our immediate attention. In FY 2018, we conducted a detailed stakeholder engagement to understand key material topics. A variety of sources are evaluated to obtain a precise picture of the concerns raised by our stakeholders including reader feedback, customer & employee surveys, & discussions outputs of workshops conducted with individual stakeholder groups.



“Tata Motors has always valued its stakeholders whether shareholders, investors, customers, communities, or our suppliers & dealers and their interests without compromising on ethics and values. We take pride in our rich legacy and work timelessly towards building stakeholder value and helping the company and our nation to flourish.”

**P B Balaji**  
Group Chief Financial Officer



## Stakeholder Engagement at TML

Stakeholder Groups	Engagement Mechanisms	Frequency of Engagement	Mode of Feedback Assessment
<b>Employees</b>	Sunrise and Sunset meetings, Weekly/Monthly Reviews improvements displays; HR Forum; Skip Level Meets; Town Halls; Focused Group Discussions	Annual, Quarterly, Monthly, Weekly, Daily	Employee Satisfaction Survey; Appraisals; Internal Surveys; Questionnaire
<b>Communities</b>	Meetings with local community; Public hearing	Annual, Quarterly, Monthly, Weekly, Daily	Minutes of Meetings, Feedback letters, Questionnaire
<b>Suppliers/ Service Providers</b>	Sustainable Supply Chain Initiative, Technology Days, Supplier Meets, Vendor Council, Audits	Annual, Quarterly, Monthly, Weekly, Daily	Vendor Rating, Satisfaction Surveys , Questionnaire
<b>Opinion Leaders/ Experts/ Academic Institutions</b>	One-to-one meetings	Need-Based	Minutes of Meeting, Action Plans, Questionnaire
<b>Media</b>	Regular Interactions	Ongoing	Minutes of Meeting, Action Plans, Questionnaire
<b>Dealers &amp; Service Centers</b>	Dealer Meets, Joint Programmes, Special Training Programmes, Dealers Council; Dealer Visits; Audits	Annual, Quarterly, Monthly, Weekly, Daily	Dealer Satisfaction survey; Questionnaire
<b>Customers</b>	Customer Meets, Key Account Process, Surveys; Feedback calls; Training Forums; Direct Visits	Need-Based	Customer satisfaction index; JD Power Survey; Questionnaire
<b>Investors &amp; Shareholders</b>	Investor Meets, Investor Calls, Shareholder/Investors Grievance Forum; Ethics Committee	Annual, Quarterly, Need-Based	Minutes of Meeting; Action Plans; Questionnaire
<b>Regulators/ Government Authorities</b>	One-to-one meetings; Meetings in Industry Forum	Need-Based	Minutes of Meeting





# Materiality Assessment

We use materiality assessment for identification of key issues relevant to our business. The expectations and concerns of our identified stakeholders help us in prioritization of strategy, policies and action plans in the area of economy, environment and society.

We revisited the materiality assessment done during FY 2014-15 and once again conducted the stakeholder engagement and materiality assessment process in FY

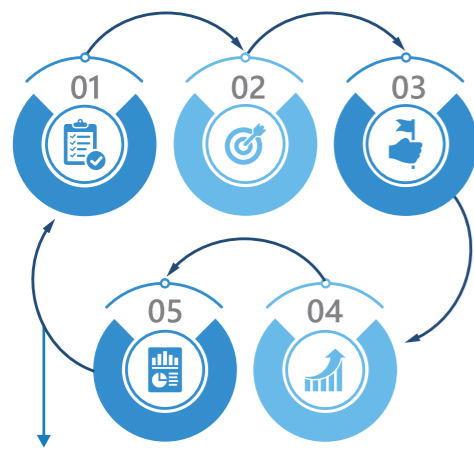
2017-18 to identify and prioritize topics based on GRI standards. We redesigned the stakeholder engagement questionnaire to cover wider material topics, consulted relevant stakeholders including investors and sought their inputs from the sustainability perspective. These inputs were mapped on materiality matrix based on importance to stakeholders as well as to TML in order to prioritize material aspects.

### Materiality Assessment Process Adopted by TML is as Follows:

- 1** Identification of topics relevant to the company through various channels.
- 2** The assessment was against six materiality filters of financial impacts & risks, legal drivers, internal policy drivers, peer performance, stakeholder concerns & opportunity for innovation with inputs from the senior management.
- 3** The assessment process gathered inputs from all the stakeholders through focused discussion & questionnaires.
- 4** Topics relevant to TML were categorized based on 2 import criteria.
  - a. How impactful is a topic to the business & sustainability of TML-i.e. impact on business.
  - b. How important is a topic to stakeholder in assessing of TML performance : based on feedback from stakeholders.
- 5** These criteria were then measured on a criticality scale (Low-Medium-High : as shown in the materiality matrix below) which helps in isolating & prioritizing the key material topics.
- 6** Following prioritisation, the material topics are reviewed by TML senior management & the process of embedding the material topics while making strategic business decisions is as represented in the visual below.

### Process Of Embedding Material Topics At TML

Embedded Sustainability is strategic, goal oriented & holistic along Economic, Social & Environmental dimension

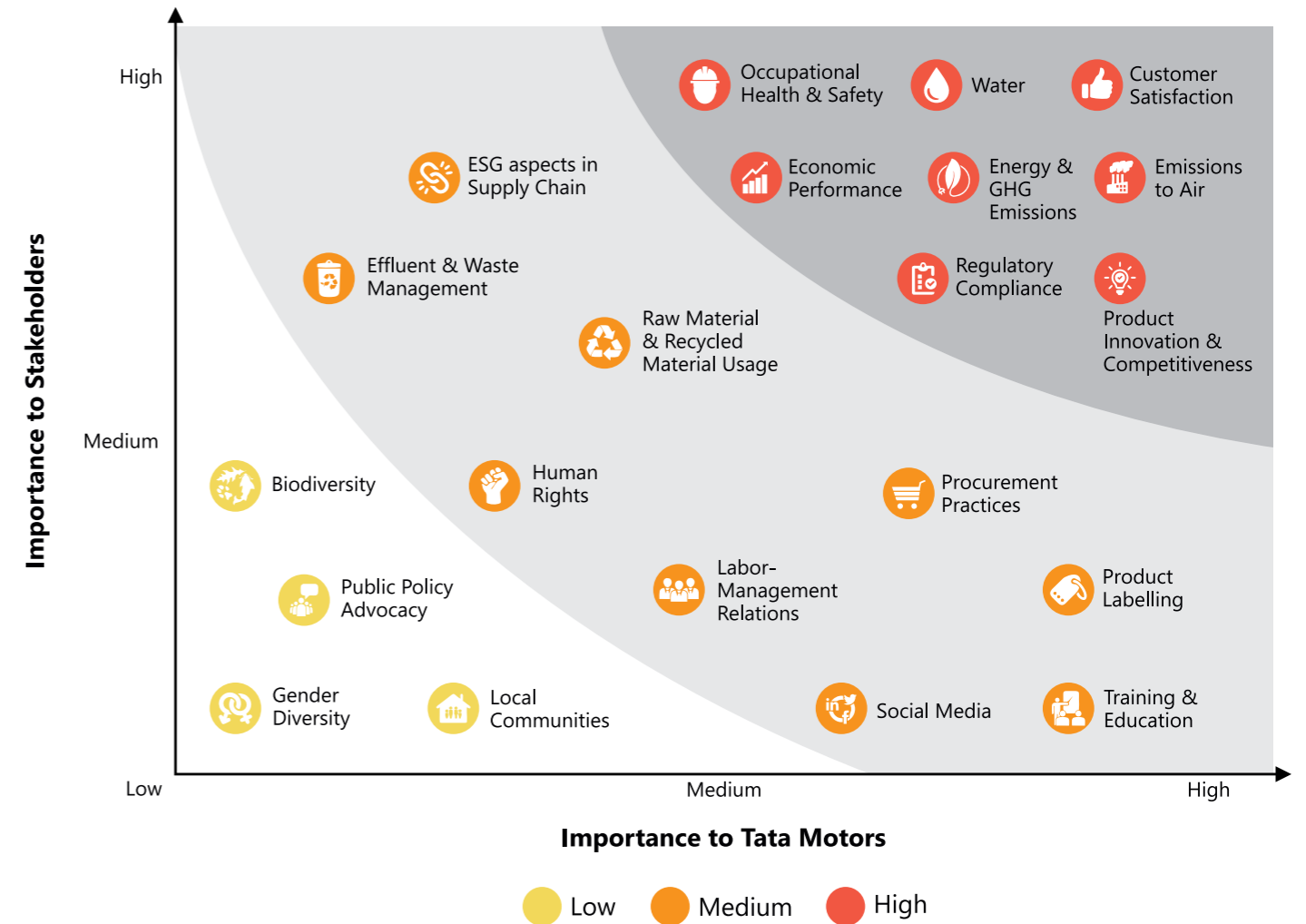


- Stakeholder Engagement
- Identify risk & opportunities along value chain

- 1. Materiality Assessment**
  - Gap Assessment
  - Prioritize actions based on business values
  - Define key issues & metrics along 3 dimension
- 2. Sustainability Strategy & Roadmap Development**
  - Policies
  - Smart Goals
  - Governance
  - Budget & Action Plan
- 3. Implementation**
  - Process change through new policies
  - Initiative implementation & project management
- 4. Organizational Performance Assessment**
  - Manage organizational data
  - Monitor Progress
- 5. Sustainability Reporting**
  - Report and Manage disclosures
  - Third party Audits

## Materiality Matrix

The matrix below is a representation of the outcome of our materiality assessment. Topics have been rated on a scale of low, medium and high for the impact on business and importance as perceived by the stakeholders.



In the materiality matrix of FY 2017-18, there are 21 material aspects, wherein some new material aspects have emerged such as; economic performance, water, human rights, social media, labour-management relations, public policy advocacy and local communities. While customer satisfaction, regulatory compliance and Energy & GHG are still at "Critical" priority level, it was also observed that some of the material aspects such as product innovation & competitiveness, economic performance and occupational health & safety have moved from "High" to "Critical" priority level with respect to earlier materiality assessment of FY 2014-15.

## Material Topics

For each material topic identified in the materiality matrix, the mapping to GRI topic along with reporting boundary for TML as well as the subsidiaries has been presented. For each material issue, key material topics, as per GRI standard, along with its GRI indicators have been identified. The reporting boundary for each material topic has been defined from the materiality assessment as well as the decision by the management.

Materiality Topics Mapping Table							
GRI Dimension	Material Issues	Material Topic (As per GRI Standard)	GRI Indicators	Boundary of Impact for TML	Organisation's Involvement in Impact	Relevant Stakeholder	Coverage of the Topic
<b>Economic</b> 	Economic Performance	Economic Performance	201-1 201-2 201-3 201-4	Within TML	Direct impact	Investors, Shareholders, Employees	TML, India
	Procurement Practices	Procurement Practices	204-1	Within & outside TML	Direct Impact	TML, Suppliers	TML, India
<b>Environmental</b> 	Biodiversity	Biodiversity	304-1	Within TML	Direct Impact	TML, Communities, Media	TML, India
			304-2				
			304-3				
			304-4				
	Effluent & Waste Management	Effluent & Waste Management	306-1	Within and Outside TML	Direct Impact	TML & Employees, Community, Government Authorities, Media	TML, India Partial coverage for TAL, TTL, TMLDL, TMML (Details provided in GRI index)
			306-2				
			306-3				
			306-4				
			306-5				
	Water	Water	303-1	Within and Outside TML	Direct Impact	TML and employees, community, Government Authorities, Media	TML, India Partial coverage for TAL, TTL, TMLDL, TMML (Details provided in GRI index)
			303-2				
			303-3				
	Regulatory Compliance	Environmental Compliance	307	Within TML	Direct Impact	TML, Government Authorities, Media	TML, India, TTL, TMLDL, TAL, TMML
Energy & GHG Emissions	Energy	Energy	302-1	Within and Outside TML	Direct Impact	TML, Employees, Customers, Investors, Opinion Leaders, Media, Government Authorities	TML, India Partial coverage for TAL, TTL, TMLDL, TMML (Details provided in GRI index)
			302-2				
			302-3				
			302-4				
			302-5				
	Emission	Emission	305-1	Within and Outside TML	Direct Impact	TML, Employees, Customers, Investors, Opinion Leaders, Media, Government Authorities	TML, India Partial coverage for TAL, TTL, TMLDL, TMML (Details provided in GRI index)
			305-2				
			305-3				
			305-4				
Emissions to air	Emission	305-6	Within & outside TML	Direct Impact	TML, Employees, Customers, Investors, Opinion Leaders, Media, Government Authorities	TML, India Partial coverage for TAL, TTL, TMLDL, TMML (Details provided in GRI index)	
		305-7					
Raw material & Recycled material usage	Material	Material	301-1	Within TML	Direct Impact	TML, Suppliers	TML, India. The disclosure is not applicable for TTL. Partial Coverage of TAL, TMLDL, TMML (Details provided in GRI index)
			301-2				
			301-3				

Dimension	Material Issues	Material Topic (As per GRI Standard)	GRI Indicators	Boundary of Impact for TML	Organisation's Involvement in Impact	Relevant Stakeholder	Coverage of the Topic
<b>Environmental (Continued)</b> 	ESG aspects in Supply Chain	Supplier Environmental Assessment	308-1 308-2	Outside TML	Indirect Impact	TML, Suppliers	TML, India
		Child Labour	408				
<b>Social</b> 	Human Rights	Forced or Compulsory Labour	409	Within TML	Direct Impact	TML, Employees	TML, India
		Freedom of Association and Collective Bargaining	407				
		Forced or Compulsory Labour	408				
		Child Labour	409				
	Labor Management Relations	Freedom of Association and Collective Bargaining	407	Within TML	Direct Impact	TML, Employees	TML, India
	Occupational Health and Safety	Occupational Health and Safety	403-1	Within TML	Direct Impact	TML, Employees	TML, India Partial Coverage for TAL, TTL, TMLDL, TMML (Details provided in GRI Index)
			403-2				
			403-3				
			403-4				
	Gender Diversity	Diversity and Equal Opportunity	405-1 405-2	Within TML	Direct Impact	TML, Employees	TML, India
	Local Communities	Local Communities	413	Outside TML	Indirect Impact	TML, Communities, Government Authorities, Opinion Leaders, Media	TML, India.
Product Innovation & Competitiveness	Customer Health & Safety	416-1, 416-2	Outside TML	Direct Impact	TML, Customers	TML, India	
Customer Satisfaction	Marketing & Labelling	102-43, 102-44, 417-3, 417-1	Within & Outside TML	Direct Impact	TML, Customers, Dealers & Service Stations, Investors, Government Authorities	TML, India	
		Product Labelling					
		Social Media					
Public Policy Advocacy	Public Policy	415-1	Within & Outside TML	Direct Impact	TML, Government Authorities	TML, India	
Training & Education	Training & Education	404-1	Within TML	Direct Impact	TML, Employees	TML, India	
		404-2					
		404-3					

# Sustainability Strategy

Our extensive materiality assessment helps us identify key issues, while continuous internal performance management and monitoring mechanism helps us to strategize our actions on identified material issues for integrated sustainable development and adhere to our ethical principles. In line with our material issues and continuous self-assessment of

our performance, we have established short-term and long-term goals for environmental and social material topics. Monitoring the progress of our performance with respect to established goals facilitates us to calibrate our course of action and achieve our target.

Sustainability Goals and Targets			
Topic	Goals	Time frame	Status
Effluent and Waste	100% disposal of biodegradable waste through composting/biogas	Target year 2018-19	On Track
	5% increase in treated effluent recycling		
Environmental Compliance	Zero non-compliance	Continuous	On Track
Water	Year on Year 5% reduction in water consumption	Target year 2018-19	On Track
Energy	5% reduction over previous year	Target year 2018-19	On Track
	Aspires to meet 100% of energy demand from renewable energy	Aspirational Target year - 2030	
Emissions	5% reduction in GHG emission over the previous year	Target year 2018-19	On Track
Material	Continue to manufacture 85% recyclable passenger cars as per R-R-R European Regulation	Continuous	On Track
Sustainable Supply Chain	Conduct site assessment of 82 numbers of suppliers	Target year 2018-19	On Track
Occupational Health and Safety	Reduction of Total Recordable cases by 10% over previous year	Target year 2018-19	On Track
Employment and Diversity	Increase of women employees at shop-floor to 20% over next 2 years	By 2018-19	On Track
Customer Health and Safety	To adhere to all the customer health, safety and sustainability compliance.	Continuous	On track
Marketing and Labelling	To be among top 3 in customer satisfaction.	Continuous	Achieved in 2017-18.

# Integration of Sustainable Development Goals [SDGs]

To combat the massive economic, environmental and social challenge, UN Conference on Sustainable Development, in June 2012, laid down the foundation for Sustainable Development Goals for 2030. To achieve the ambitious target by 2030, a meaningful partnership between different

stakeholders is essential and business plays an integral part in this journey. Tata Motors Limited is working on 15 out of 17 Sustainable Development Goals which are strategically aligned with the Tata Group philosophy as well as our business priorities.

## Our Alignment and Programs Supporting SDGs



Our skill development program, "Kaushalya" helps the youth in earning their livelihood, increase employability and increase earning capability through vocational training in automotive and other industrial trades. We continuously attempt to eradicate poverty in the society through CSR and employee welfare practices. For further details, please visit: <http://www.tatamotors.com/programs/employability-skill-development/>. Further details in "CSR", "Value Chain Sustainability" and "Workforce" sections.



"Aarogya", our CSR program for health, focuses on maternal and child health by adopting a holistic approach and striking a balance between 'preventive healthcare' and 'curative healthcare' interventions. For details on the program, please visit: <http://www.tatamotors.com/programs/health/>. We enhance work-related safety of employees and other stakeholders through various initiatives. For more information, please refer to "Workplace Safety" section.



At TML, we encourage 'holistic engagement' with the entire spectrum of formal education for needy, deserving and marginalized students, under our Education program "Vidyadhanam". For more details, please refer to our website: <http://www.tatamotors.com/programs/education/> At the organization level, we have dedicated structure to continuously enhance our employees' skill sets. Further details in "CSR" section.



Our commitment towards gender diversity is reflected in Tata Code of Conduct. We have developed a holistic charter for inclusive programs which is centered on gender diversity and equality. For further details, please refer to "Gender Diversity" in "Workforce" section of this report.



To address the water issue, we have initiated program "Amrutdhara", focused on addressing the 'drinking-water' needs of needy and deserving communities. For details, please refer to our website: <http://www.tatamotors.com/programs/amrutdhara/>. We contribute to sanitation through our product usage for the cause of "Swachh Bharat Abhiyan". Please refer to "Waste Management", "Water and Effluent Management" and "CSR" section for more details.



Tata Motors Ltd is committed to RE100 and aspire to achieve 100% renewable energy for our Indian operations by 2030. We have invested in wind power and solar roof top for developing renewable energy generation capacity. Please refer to "Energy & Environment" section for further details.



We contribute towards Indian economic growth through our operations and engagement with our stakeholders. We are committed to provide decent work environment to all our employees and this commitment is reflected in our Tata Code of Conduct. Please refer to “Economic Performance”, “Workforce”, “Workplace Safety”, “Value Chain Sustainability” and overall environment section for further details.



Delivering exciting innovations is one of our visions for 2019 and we have established procedure and governance mechanism for research and development. Our new sub-brand TAMO acts as a center of innovation towards new technologies, business models and partnerships in order to define future Sustainable Mobility Solutions. Please refer to “Sustainable Mobility Solutions” section for further details.



Our dedicated programs under Affirmative Action strive to reduce inequalities in the community. Our program, Aadhaar, is aimed at serving the socio-economically backward and disadvantaged Scheduled Caste (SC) and Schedule Tribe (ST) communities. For further details, please visit: <http://www.tatamotors.com/programs/aadhaar/> and “CSR” section of this report. At organizational level, we maintain non-discrimination as detailed in “Workforce” section.



Our core philosophy of enhancing the quality of life acts as our guiding principle in the ways we do business. Through our innovative electric and hybrid buses we provide a safe, economic and sustainable solution to mass transportation. Please refer to “Sustainable Mobility Solutions” section for further details.



We adhere to the European regulation of R-R-R and all our passenger cars are 85% recyclable. To assess the environmental impacts of our products we undertake life cycle assessment of our vehicles. We are gradually shifting towards co-processing for hazardous waste disposal. Please refer to “Raw Material” and “Waste Management” section of this report for further details.



Our approach to climate change is three-fold comprising of building awareness among stakeholders, reducing the environmental impact of manufacturing and developing cleaner vehicles. For details on our environment program “Vasundhara” please visit <http://www.tatamotors.com/programs/vasundhara/>. For further details refer to “CSR”, “Economic Performance”, “Value Chain Sustainability” and “Environmental Expenditure” sections of this report.



We continuously attempt to avoid and mitigate negative impacts and enhance positive impacts on biodiversity. At all our manufacturing plants there are significant areas under Green Belt and there is a focused approach to biodiversity conservation. For more details, please refer to “Biodiversity”, “Energy and Environment” and “CSR” section of this report.



Tata Code of Conduct, representing our values and principles, guides our every business. Our core principles address our commitment towards conforming to highest moral and ethical standards. Please refer to “Tata Code of Conduct” and “Value Chain Sustainability” section for details. For more details on TCoC, please refer to: <http://corp-content.tatamotors.com.s3-ap-southeast-1.amazonaws.com/wp-content/uploads/2015/10/tata-code-of-conduct.pdf>



At Tata Motors Limited, we engage with communities through NGOs and civil societies and bring in the required change in the life of deprived sections of our society. Please refer to “CSR” section for details.

# Business with Responsibility [3Ps]





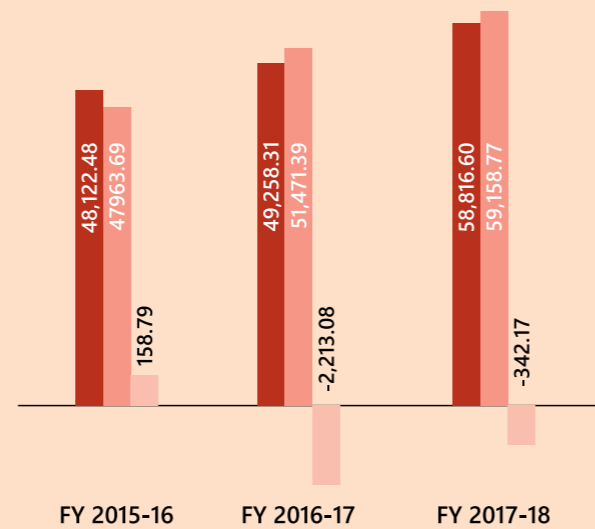
# Economic Performance

At Tata Motors Limited, we aim to create inclusive and sustainable economic growth through contributing in nation building beyond the profits generated for our shareholders. In this section, we address our management approach and key economic performance data for the year 2017-18.



## Dashboard of TML for 2017-18: Economic Performance

Economic Performance (in INR Cr)



- Economic Value Generated
- Economic Value Distributed
- Economic Value Retained

### Our Climate Change Risk & Mitigation Action:

Regulatory Risks Mitigation Through R&D and Product Innovation

Mitigation Measures for Physical Climate Change Risks – Energy Efficiency, Rain Water Harvesting

Mitigation Measure for Changing Socio-Economic Condition – Investment in Clean & Sustainable Mass Transportation

# Economic Performance

In keeping with the core values of the Tata Group, we believe that the role of corporates well & truly goes beyond their performance in the arena of business, which is exclusively oriented towards generation of profit for the shareholders. While we generate direct economic value through our operations, products & services, we also work towards nation building by contributing to significant indirect economic impacts which culminate in increased economic activity, reduced social disparity & enhancement in the quality of life. We provide mobility solutions thereby enabling people, enterprises & institutions to realize new possibilities. We support job creation through the vast value chain of automobile companies. Communities chart a course for economic & societal wellbeing, enabled & empowered by our community development agenda. We have addressed the management approach & grievance mechanism for economic performance in our Annual Report 2017-18.

### Our Management for Economic Performance

Financial management of the organization is the responsibility of the finance department in compliance with the financial rules & the financial guidelines acting in this company. While the accountability for the oversight of the overall governance process rests with the Board of Directors, TML's financial management & implementation of the financial policies & procedures within the organization is the responsibility of the Group Chief Financial Officer. Under the committed & able leadership of the group CFO, the finance department comprising of managers & executives drive efforts towards fulfilling TML's financial commitments by enhancing shareholder value. We ensure compliance with all the applicable financial laws & regulations that govern shareholder rights. Accurate records of our activities are maintained & disclosed in accordance with applicable law & industry standards. Keeping our shareholders informed about all relevant aspects is of paramount importance to us.

Financial health of the company is secured by the finance department who work in collaboration with & assist staff, managers, Board of Directors & various stakeholders. The department ensures that the corporate financial records comply with internal & external audits. The team maintains the smooth movement of finance, ensuring

that the company operates within financial regulations & fulfils various external financial requirements.

TML has transitioned its financial accounting in compliance with IND AS during the financial year 2016-17. The financial statements for FY 2017-18 have been prepared in accordance with the IND AS. We have identified climate change as one of the risks, in accordance with our risk identification & prioritization process. Driven by regulatory, physical parameter change & other climate related developments, we have identified climate change risks & opportunities.

A) Regulations: increase in expense & risk of business continuity could be a consequence of product efficiency standards, increasingly stringent air pollution norms & energy regulations. Investments have been made in R&D for innovation & development of our product portfolio to generate opportunities & address these risks to stay ahead of the curve. We have spent INR 23.98 billion in R&D for development of clean technology vehicles, for shifting from BS III to BS IV and implementing mandatory safety features.

B) Physical parameter change: water scarcity & increase in cost of electricity could be a direct fall out of a potential change in precipitation & drought due to extreme weather change.

We have made substantial investments in the development of clean & sustainable means of mass transportation such as hybrid buses & Small Commercial Vehicle (SCV) for last mile connectivity, taking into consideration, low climate related development increasing environmental consciousness & changing socio-economic conditions.





Economic Performance (in Rs. Cr.)	FY 2015-16	FY 2016-2017	FY 2017-18
Economic Value Generated	48,122.48	49,258.31	58,816.60
Gross Revenue	48,122.48	49,258.31	58,816.60
Economic Value Distributed	47,963.69	51,471.39	59,158.77
Operating Costs	38,975.39	41,738.16	52,845.51
Employee Benefits and Wages	3,048.71	3,607.16	3,767.86
Payments to providers of capital	1,541.54	1,608.76	1,686.59
Payments to government	4,398.05	4,517.31	3,965.23
Economic Value Retained	158.79	-2213.08	-342.17

- 8 DECENT WORK AND ECONOMIC GROWTH
- 11 SUSTAINABLE CITIES AND COMMUNITIES
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION



# Energy & Environment



“Clean, cheap and abundant power is one of the basic ingredients for the economic progress of a city, state or a country.”

**Founder, Jamsetji Tata**

## Energy & Environment

Our initiatives for protecting and improving our Energy and Environmental performance particularly deals with emission of greenhouse gases, consumption of water and energy, material conservation and the management of waste and hazardous materials. This section covers how we continuously strive to offset the effect of climate change in our activities, and mitigate and minimize environmental impacts due to our manufacturing activities.



### Dashboard of TML for 2017-18: Energy & Environment

**20.76%** of Total Electricity from Renewable Energy

Total Energy Consumption: **28,15,505 GJ**

Total GHG Emission (Scope 1 & Scope 2): **4,08,221 tCO<sub>2</sub>**

Energy Intensity: **4.91 GJ / Vehicle Produced**

GHG Emission Intensity: **0.71 tCO<sub>2</sub> / Vehicle Produced**

**15%** Reduction in Hazardous Waste Disposed to CHWTSDF

**7.88%** Decrease In Total Water Abstraction

Specific Water Consumption: **9.51 m<sup>3</sup> / Vehicle Produced**

**10.49%** of Total Water Recycled

# Energy & Environment

Safeguarding the environment is our priority given that our operations and those in our supply chain have impacts on the environment that may affect the sustainability of our business. The Tata Code of Conduct guides us in operationalizing our environmental stewardship approach of Reduce, Recycle, Recover and Refurbish.

## Key Impacts and its Management

Environment and climate related risks and impacts are key priorities to the business and we have comprehensive strategies in place for increasing Energy efficiencies; cutting GHG emissions; reducing waste; enhancing biodiversity and managing water usage.

At the Board of Director level, Safety, Health and Sustainability (SH & S) Committee oversees the performance of the company on environmental aspects. SH & S committee

monitors and reviews the performance on a quarterly basis. SH & S Councils at the business level, supported by SH & S Apex Committee at plant level, are responsible for reviewing the performance on a monthly basis. All plants have a separate Environment department whose overall responsibility is to implement Environment Management Programmes.

## Energy

The recent escalation of climate change as a key sustainability challenge for corporations has prompted TML to set ambitious energy conservation and emission reduction targets.

Following Life Cycle Assessment of our vehicles, it is evident that our maximum impacts are at two levels - Operational and Product Usage level.



### Investing in Renewable Energy

We are committed to reducing our dependence on non-renewable energy sources by installing solar and wind infrastructure, collaborating with power utilities for renewable energy requirements and increasing the inclusion of renewable energy through grid.



### Meeting Compliance

We adhere to all the applicable legal and other requirements and are committed to the purchase and use of energy efficient equipment, services and eco-friendly technologies.



### Ensuring Systems & Processes

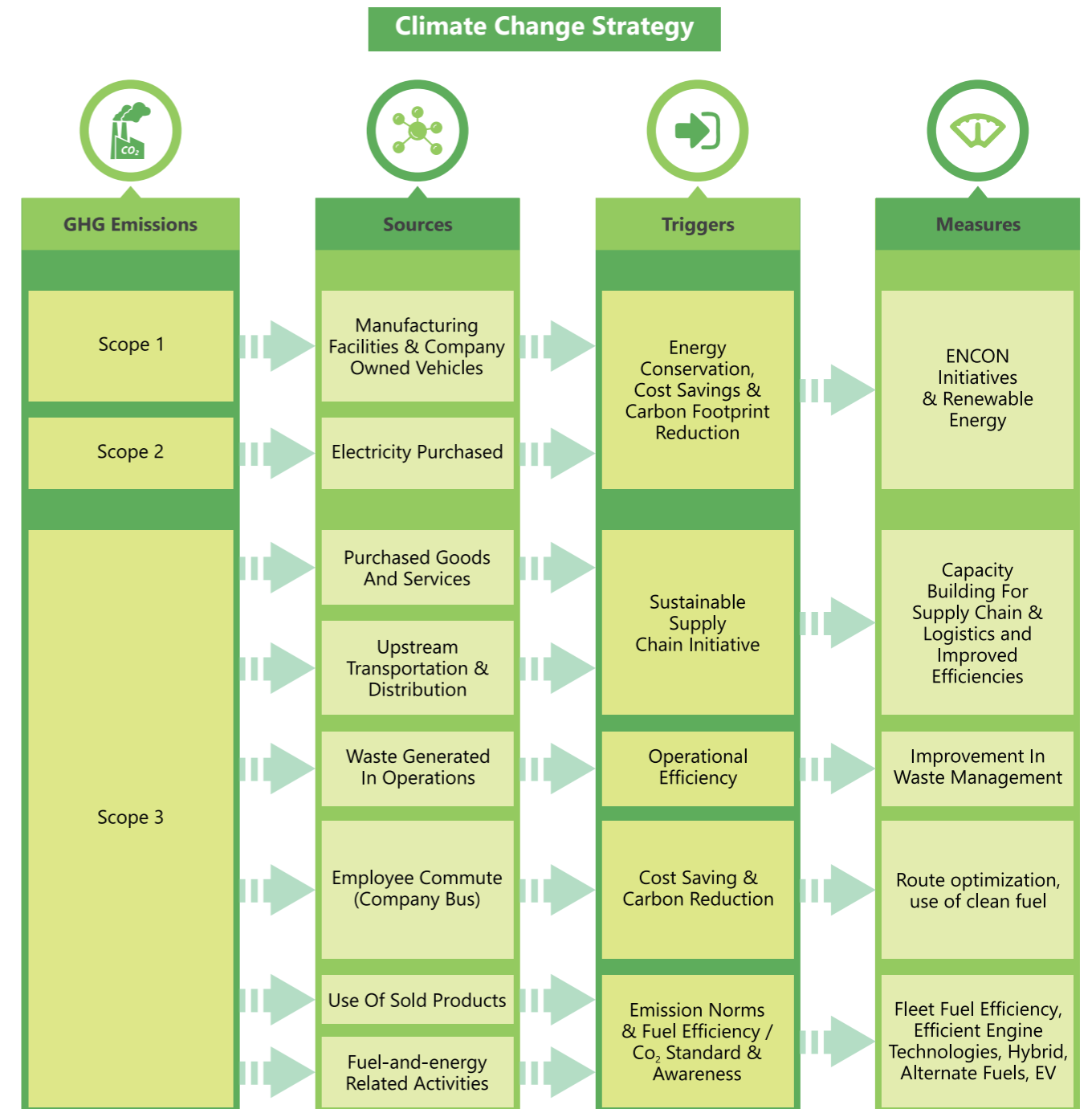
All CV Manufacturing Plants in India are certified to ISO 50001 - Energy Management System (EMS) and through our ENCON programs; we continuously attempt to enhance our operational energy efficiency



### Efficient Product Design and Infrastructure

Our commitment towards product energy efficiency is centrally managed through TML's R&D Establishment - Engineering Research Centre at Pune. Our Engineering Research Centre has the sole responsibility for performing the environmental impact assessment of our products and ensuring energy efficient design during the product development. We are in the process of implementation of Internal Carbon Pricing for driving investment in clean Technologies in products and operations.

Three-fold Approach Towards Climate Change Action



## Our Drivers to Climate Change

Climate change is one of our key sustainability challenges. Tata Motors is working on mitigation of transition risk with climate scenario below 2 degree centigrade. We have identified and tracking GHG emission sources covering products operations and supply chain.

### Operations:

We reduce our direct emissions through enhanced energy efficiency of our operations, increased usage of renewable energy and offset mechanisms. A team of climate change champions across the operations steer

the climate agenda with the support of cross-functional teams that implement these action plans.

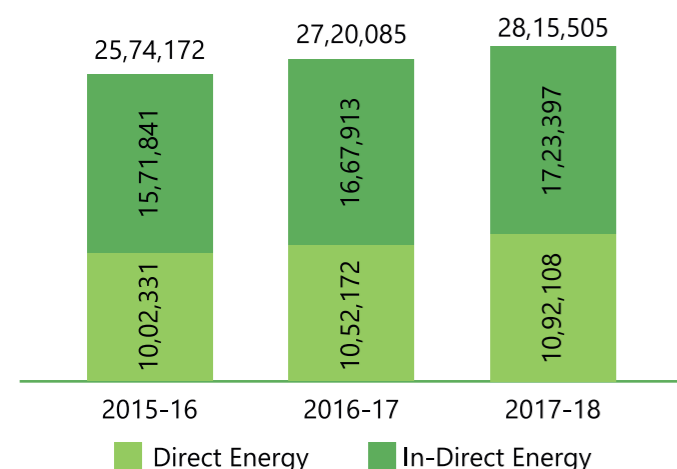
### Products:

More than 70% of the emissions are accounted for by the customer during the usage of the sold product. We meet the current regulations of Bharat IV in all our vehicles, while being abreast with the latest technologies to meet the future regulatory changes. The introduction of Hybrid buses and Fuel cell buses have helped us reduce our GHG emissions tremendously. Further details can be referred in "Product Stewardship" section.



**Supply Chain :**

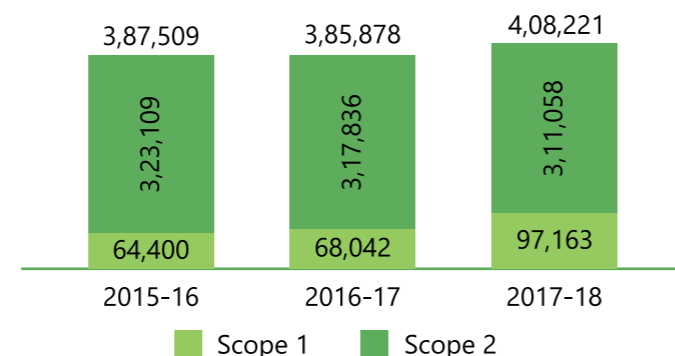
Our supply chain significantly contributes to GHG emissions. We engage with our suppliers actively through sustainable supply chain initiative, sharing best practices in energy conservation, efficiency and renewable energy. We have initiated the monitoring of GHG emissions at the operations level of these suppliers which would help us in minimizing the carbon footprint of our supply chain.


**Energy Consumption in GJ within TML**

While our electricity consumption increased by 3.33% in 2017-18, scope 2 emission decreased by 2.13% from that of 2016-17. This is due to the increase in share of renewable energy from 16.34% of total electricity consumption in 2016-17 to 20.76% in 2017-18. We have a target of year-on-year reduction of GHG emission from scope 1 & scope 2 by 5%.

**Energy and GHG Performance of TML 2017-18**

Our total energy consumption from fuel and electricity has increased by 3.5% in 2017-18 and our overall scope 1 & scope 2 GHG emissions increased by 5.7%. The increase in total energy consumption and commensurate emissions are attributed to increase in the production volumes by 9.64%.

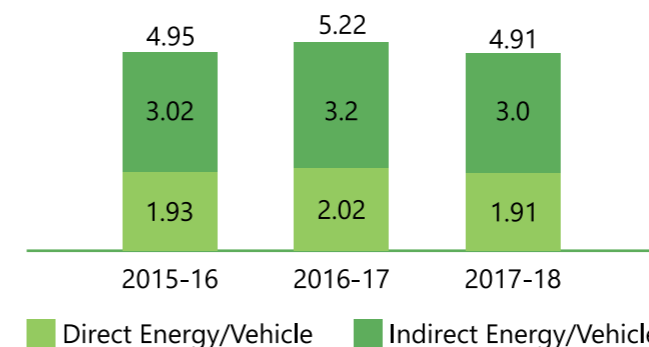

**Scope 1 & Scope 2 Emission (tCO<sub>2</sub>e)**

In addition to the GHG emissions produced because of our energy and fuel usage, our manufacturing operations generate process emissions during welding and metal cutting. We quantify them separately as their quantum is directly proportional to the scale of manufacturing and does not offer any scope for mitigation.

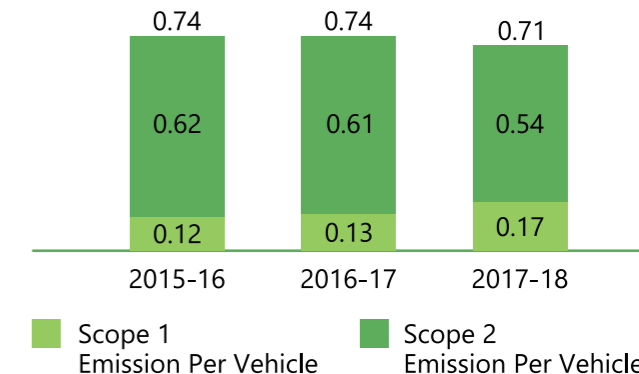
Other Gas Consumption by TML						
Material Description	2015-16		2016-17		2017-18	
	Energy (GJ)	GHG Emission (tCO <sub>2</sub> e)	Energy (GJ)	GHG Emission (tCO <sub>2</sub> e)	Energy (GJ)	GHG Emission (tCO <sub>2</sub> e)
Dissolved Acetylene	2,954	206.9	4,241.35	292.72	3,772.26	264.06
Carbon-dioxide		761.5		451.75		565.08

Energy and GHG emission intensity have been calculated based on the number of vehicles produced in 2017-18 and energy and emission from fuel and electricity consumption. Energy consumption per vehicle has decreased by 5.94% from last fiscal year whereas specific GHG emission per vehicle

has reduced by 4.05% in this fiscal year as compared to last reporting period due to increase in renewable energy. During the reporting period, the energy and GHG emission intensity, has been 4.91 GJ / vehicle and 0.71 tCO<sub>2</sub>e / vehicle respectively.


**Energy Consumption Per Vehicle Produced (GJ / Vehicle)**
**Energy Consumption Outside TML and Scope 3 Emissions**

We report our Scope 3 emission across 6 categories. GHG emission in the category "Purchase goods and services" and "Upstream transportation and distribution" have been calculated using collected data from 66 suppliers


**GHG Emission Per Vehicle Produced (tCO<sub>2</sub>e / Vehicle)**

assessed under our initiative in sustainable supply chain. These suppliers contributed to GHG emissions of 93,794 tCO<sub>2</sub>e outside TML's operational boundary.

Scope 3 Emissions Accounted at TML		
Scope 3 Category Number	Description of Scope 3 Categories	GHG Emission (tCO <sub>2</sub> )
1	Purchased goods & services	89,986
3	Fuel-and-energy related activities (not included in Scope 1 or Scope 2)	96,197
4	Upstream transportation & distribution	3,808
5	Waste generated in operations	3,675
7	Employee commute (company bus)	74,848
11	Use of sold products	38,83,897

The calculation of emissions from use of sold PV products has been done based on the number of passenger vehicles sold, useful life and efficiency or mileage of the vehicle. "Use of sold products" contributes to approximately 93.53% of the total Scope 3 emissions. This shows the need for efforts required towards improving vehicle

efficiency as well as implementation of advanced vehicle technologies through innovations. As aforementioned, Tata Motors Limited has introduced alternate and hybrid buses for mass transportation and has accelerated development of alternate fuel vehicles in both passenger and commercial vehicle segments.

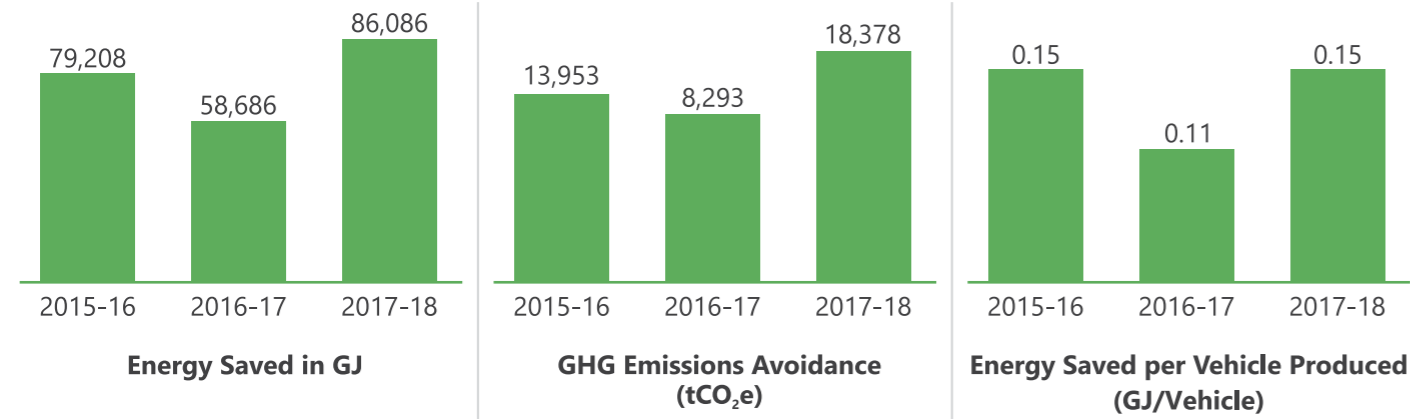


### Key Energy and GHG Emission Reduction Initiatives

Increase in the share of renewable energy consumption and energy conservation is vital to reducing our energy demand and reduction in emissions. During the financial year 2017-18,

ENCON initiatives have resulted in 86,086 GJ of energy saving and 18,378 tCO<sub>2</sub>e emission reduction through various means of fuel use optimization and electrical energy-saving measures.

**Trends in Energy Saved & Emission Avoided**



### Energy and GHG Performance of Subsidiaries 2017-18

TAL						
Direct Fuel Consumption and Scope 1 GHG Emission						
Energy Sources (Fuel types)	2015-16		2016-17		2017-18	
	Energy (GJ)	GHG Emission (tCO <sub>2</sub> e)	Energy (GJ)	GHG Emission (tCO <sub>2</sub> e)	Energy (GJ)	GHG Emission (tCO <sub>2</sub> e)
HSD			5,212.12	386.22	444.276	32.920
Diesel	2,895	214.5	61.12	4.53	120.315	8.915
<b>Total</b>			5,273.24	390.75	564.591	41.835
Electricity Consumption and Scope 2 GHG Emission						
Electricity Purchased (Grid)	26,968	6,143	37,065.2	8,442.63	50,095.92	11,410.74
TMLDL						
Direct Fuel Consumption and Scope 1 GHG Emission						
LDO			2,547.9	188.8	0	0
Propane	2,28,906	15,226	1,83,825.3	11,599.5	1,04,127.64	6,570.45
LPG			0	0	4,254.64	268.47
<b>Total</b>			1,86,373.2	11,788.3	1,08,382.27	6,838.92
Electricity Consumption and Scope 2 GHG Emission						
Electricity Purchased (Grid)	3,43,713	78,290	2,76,904.8	63,072.76	2,67,659.6	60,966.92



- 6 CLEAN WATER AND SANITATION
- 7 AFFORDABLE AND CLEAN ENERGY
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 15 LIFE ON LAND
- 17 PARTNERSHIPS FOR THE GOALS

**Energy and GHG Performance of Subsidiaries 2017-18**
**TMML**
**Direct Fuel Consumption and Scope 1 GHG emission**

Energy Sources (Fuel types)	2015-16		2016-17		2017-18	
	Energy (GJ)	GHG Emission (tCO <sub>2</sub> e)	Energy (GJ)	GHG Emission (tCO <sub>2</sub> e)	Energy (GJ)	GHG Emission (tCO <sub>2</sub> e)
Propane	9,418	648.73	5,505.25	347.38	5,989.60	377.94
LPG	0	0	0	0	1,094.52	69.06
Diesel	0	0	0	0	574.63	42.58
<b>Total</b>	9,418	648.73	5,505.25	347.38	7,658.75	489.59

**Electricity Consumption and Scope 2 GHG Emission**

Electricity Purchased (Grid)	29,743	6,774.80	2,457.36	559.73	8597.3 GJ	1958.24
Electricity from RE sources			24,480	0	21744	0

**TTL**
**Direct Fuel Consumption and Scope 1 GHG emission**

HSD	101	7.52	220.58	16.35	145.71	10.80
<b>Electricity Consumption and Scope 2 GHG Emission</b>						
Electricity Purchased (Grid)	12,364	2,816	11,333.27	2,581.47	11,261.73	2,565.17



TAL, TMLDL and TTL have no renewable energy power consumption during the reporting year. Dissolved acetylene and CO<sub>2</sub> is used by our subsidiaries for welding

and metal cutting purposes. Carbon-dioxide does not react with oxygen and thus, energy generated from CO<sub>2</sub> has not been considered.

**Other Gas Consumption by Subsidiaries**

Material Description	Unit	TAL	TMLDL	TMML
Dissolved Acetylene	Energy (GJ)	0	76.86	13.40
	GHG Emission (tCO <sub>2</sub> )	0	5.38	0.94
Carbon-dioxide	GHG Emission (tCO <sub>2</sub> )	0	0	364.66

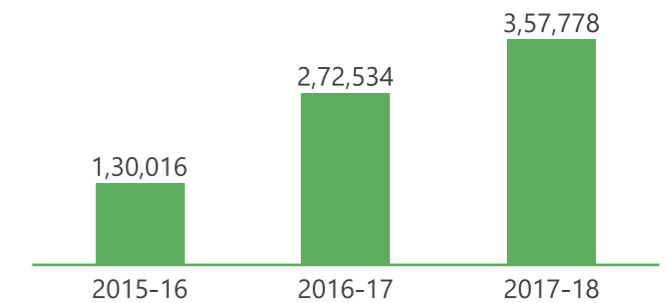
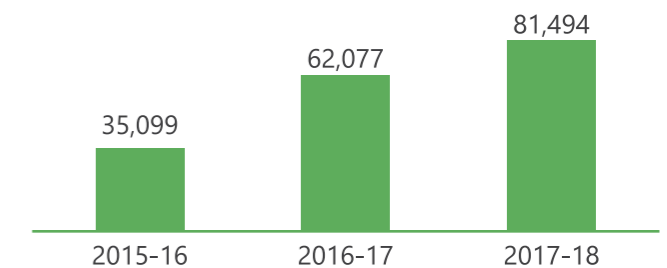
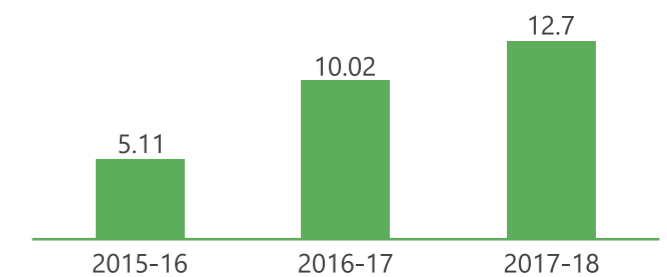
**Renewable Energy**

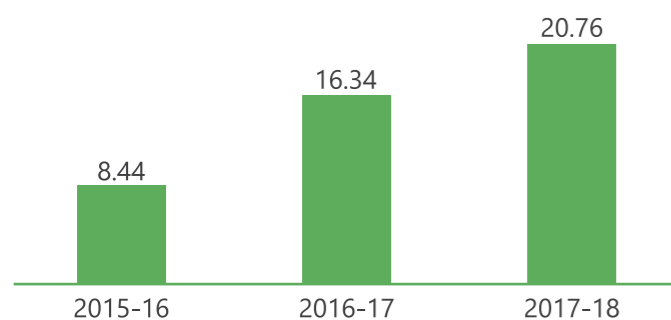

Tata Motors Ltd. is signatory to RE100, aspiring to source 100% renewable electricity for its manufacturing operations by 2030.

The Company has set up in-house Renewable Energy generation capacity (solar and wind) which includes:

- 21.95 MW Captive Wind Farm at Supa and Satara in Maharashtra.
- 2 MW Roof-top Solar PV installation at Sanand
- 2.1 MW Roof-top Solar PV installation at Pune and additional 2 MW installation in progress.
- 2 MW Solar PV installation at Lucknow.
- 18.5 kWp Solar PV installation at Pantnagar.
- 7.2 kW hybrid-wind and solar installation at Dharwad

During the year 2017-18, we have generated 13,332 RECs which resulted in revenue of 121 lakhs to the Company. In line with our commitment to RE 100, we are continuously seeking to increase the contribution of renewable energy in our energy demand. During the reporting year, we have significantly increased the use of renewable energy.


**Renewable Energy Consumption in GJ**

**Emission Avoided by RE (tCO<sub>2</sub>e)**

**% Share of RE in Total Energy Consumption**



**% Share of RE in total Electricity Consumption**

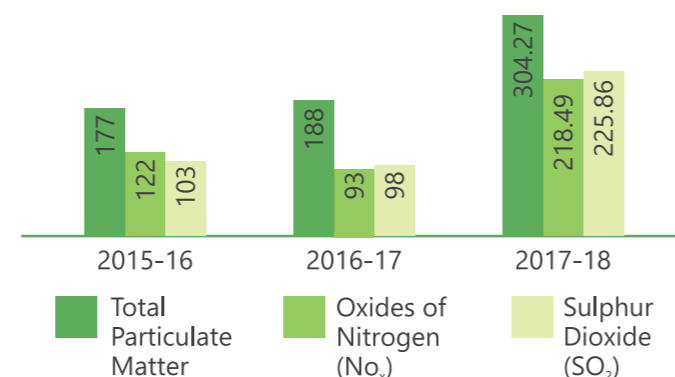
Cumulatively we have a total renewable energy installed capacity of 6.11 MW of solar power at five of our manufacturing sites and 21.95 MW of wind power at Pune.

**Other Air Emissions**

Our manufacturing processes contribute to air emissions namely Oxides of Nitrogen( $\text{NO}_x$ ), Sulphur Dioxide( $\text{SO}_2$ ) and Particulate Matter. Through effective implementation of monitoring tools, efficient manufacturing processes and use of cleaner fuels, we have successfully maintained our

emission rates below the regulatory norms. Our paint shops are one of the major air emissions sources as we use solvent based paints but are equipped with appropriate emission control equipment to arrest emissions during painting and baking operations.

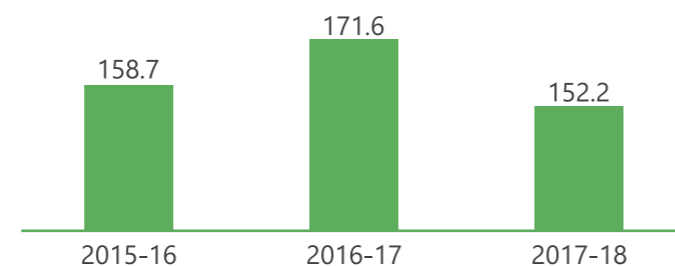
There has been increase of 61.84 % in Total Particulate Matter (TPM), 134.93% in  $\text{NO}_x$  and 130.46% in  $\text{SO}_2$  in 2017-18 as compared to 2016-17 because of the increase in production volumes by 9.64% during FY 2017-18.


**Air Emissions at TML (MT)**

Air Emissions by Subsidiaries (in MT)								
Parameters	TAL		TMLDL		TMML		TTL	
	2016-17	2017-18	2016-17	2017-18	2016-17	2017-18	2016-17	2017-18
<b>Total Particulate Matter (TPM)</b>	0.14	1.16	38.06	36.02	71.076	73.84	.00865	0.0086
<b>Oxides of Nitrogen (<math>\text{NO}_x</math>)</b>	0.000000864	0.00000284	0.81	0.76	0.0007	0.0008201	0.05685	0.03086
<b>Oxides of Sulphur (<math>\text{SO}_2</math>)</b>	0.0054	0.0000279	4.69	5.02	0.00014	0.0001309	0.02275	0.01733

**Ozone Depleting Substance**

During the year, TML, TMLDL, TTL and TAL have used 110.57kgs, 14.3kgs, 0.83kgs and 26.5kgs of CFC-11 equivalent of ODS respectively. No other subsidiaries of TML have used ODS in 2017-18. R22 is used by TML, TMLDL, TTL and TAL for refrigeration.


**ODS Consumption TML & Subsidiaries (kg of CFC-11 Eq)**
**Solar Installations at Lucknow & Pune Manufacturing Plants**

Our Pune CV and Lucknow plants have installed rooftop solar PV plants as a part of TML's commitment to enhance the use of Renewable Energy across our plants. A rooftop solar PV plant one of 310 kWp capacity and the other of 2 MW capacity were inaugurated at our Pune CVBU and Lucknow manufacturing facilities respectively during FY 2017-18.

**Salient features of Solar installations at Lucknow are :**

- Safety Lifeline on the roof-top sheds
- Walkways between solar panels on the roof-top sheds
- CCTV camera-based project monitoring during installation
- The solar panels will reduce the shop's internal temperature by 5°C



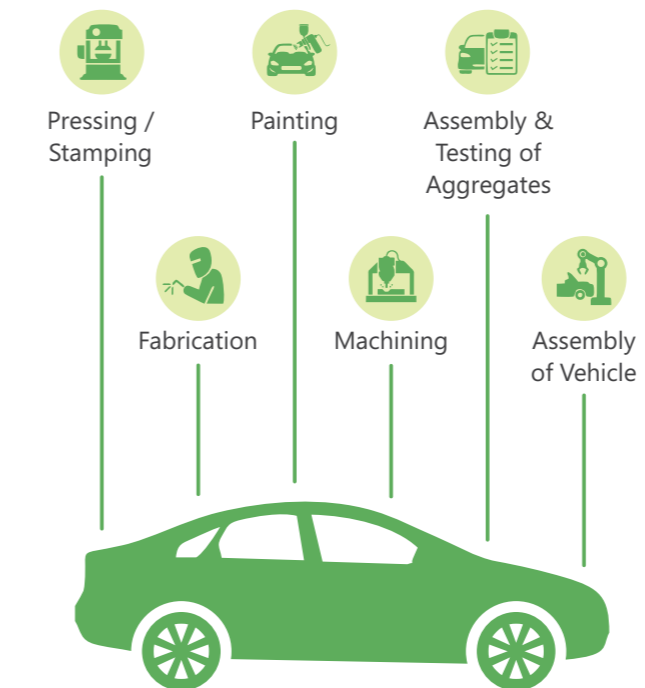


### Waste Management

We are committed to continually improve our Waste management practices at our manufacturing facilities. Our Plants are vertically integrated and carry out a wide range of manufacturing activities inside the Plant. We follow a three-pronged approach to manage waste:

-  Waste Minimization
-  Recovery And Recycle
-  Development and Adoption of Eco-friendly Waste Disposal Method

We dispose off waste as per the regulatory requirements. Tata Motors Limited is a vertically integrated manufacturing plant, comprising of



Our in-house facility at Pune and Jamshedpur manufacture quality castings (iron and Aluminum) required to meet our internal requirements. TML is cognizant that these operations result into producing hazardous wastes which need to be appropriately disposed. Making this as an opportunity to reduce our environmental impact and pursue commitment towards zero waste to common

waste disposal facilities, several recycling initiatives have been implemented.

#### Key Initiatives in Waste Management:

All Plants dispose waste in compliance with operating permits and hazardous waste authorizations. We engage with waste disposal facilities/waste recyclers/cement companies after due validation. As per our strategic drive to divert hazardous wastes away from landfill and incineration, a number of recycling options have been explored and implemented including Value-from-Hazardous-Waste (VfHW) initiative. In 2017-18, we reduced the quantum of Haz. waste disposed to CHWTSDF by 15% over 2016-17. This was achieved through co-processing of high calorific value hazardous waste at cement plants, recycling of paint sludge into paint/primer and recycling of contaminated flushing thinner. Likewise we achieved success with non-hazardous scrap/waste also; example – conversion of low value scrap plastic packaging into fuel (agricultural application), bio-methanation and composting of bio-degradable canteen waste and composting of leaf-litter.

**Employee Involvement:** Our employees have driven a “Value from Waste” approach which has yielded many innovative ideas for waste avoidance, waste minimization at source, extending useful life of indirect raw-material, waste reuse within the process and off-site recycling of waste. These improvements in waste management were achieved by capacity building of service providers and conservancy contractors who are key to the collection, segregation and transportation of waste within the Plant.



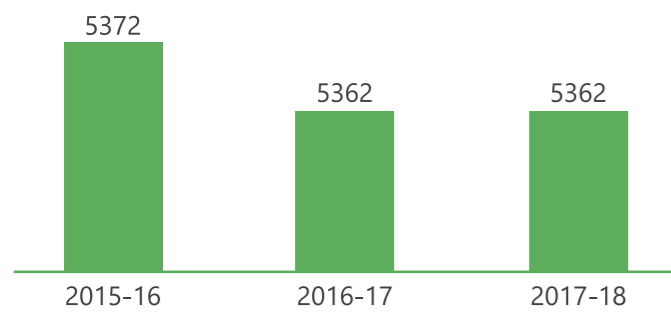
- 6** CLEAN WATER AND SANITATION 
- 7** AFFORDABLE AND CLEAN ENERGY 
- 12** RESPONSIBLE CONSUMPTION AND PRODUCTION 
- 13** CLIMATE ACTION 
- 15** LIFE ON LAND 
- 17** PARTNERSHIPS FOR THE GOALS 

During the reporting period 2017-18, four of our plants at Dharwad, Sanand, Pantnagar and Jamshedpur disposed zero hazardous waste to Landfill.

### TML Hazardous Waste Generation Data

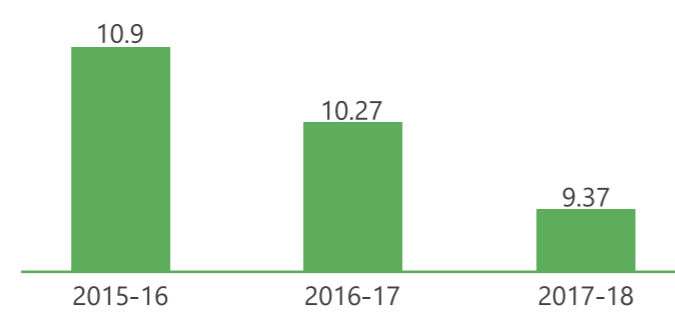
Waste Category	Waste Description	2015-16 Quantity (Ton)	2016-17 Quantity (Ton)	2017-18 Quantity (Ton)
5.1	Used/Spent oil	202.17	181.85	226.601
5.2	Oily wastes and Residues	380.77	668.866	689.25
12.5	Phosphate sludge	200.99	237.61	286.81
15.1,15.2	Asbestos containing scrap	2.21	0.55	0.107
20.1,20.2	Contaminated/Spent thinners and solvents	162.96	190.09	180.025
21.1,23.1	Paint sludge and Residues, Sealant residues, Pattern waste from R&D activity	2,825.54	2,410.095	1,688.42
33.1	Discarded containers of Hazardous Chemicals	98.91	162.9	408.52
35.1	Chimney soot	0.76	0.3	4.58
35.2	Spent DM plant resins	18.82	1.63	1.68
35.3	ETP sludge	955.43	827.115	930.519
35.4	Oil and grease skimming residues from wastewater treatment	21.3	44.43	136.71
38.1	Spent catalyst from heat treatment shop	0.1	0	0.1
37.2	Incineration ash	38.59	57.44	170.66
As per schedule II	Shot-blasting dust	20.45	15.41	132.76
As per Schedule IV	Non-ferrous metal scrap	144.73	220.9	220.943
As per schedule IV (Cat 5.1)	Used oil for recycling	8.32	88.66	0
-	Scrap lead acid batteries	141.47	183.07	188.73
-	E-waste	148.89	69.77	96.07
<b>Total</b>		<b>5372</b>	<b>5362</b>	<b>5362</b>

**Total Hazardous waste at TML**



**Quantity of Hazardous Waste Generated (MT)**

We have maintained the total quantity of hazardous waste generation as last year though our production number has increased by 9.64% in 2017-18 indicating 8.76% reduction in



**Specific Hazardous Waste Generated (Kg/Vehicle)**

hazardous waste generated per vehicle as compared to the previous year.

TML - Non-Hazardous Waste Generation Data				
Waste Description	Quantity in 2016-17 (Ton)	Specific Non-Hazardous Waste Generation (Ton/Vehicle)	Quantity in 2017-18 (Ton)	Specific Non-Hazardous Waste Generation (Ton/Vehicle)
Biodegradable Waste (Canteen Waste + Gardening Waste)	3,597.81	0.18	3,062.654	0.23
Waste Foundry Sand	60,973.05		63,505.43	
Scrap (all types)	29,004.77		66,407.774	
<b>Total</b>	<b>93,575.63</b>		<b>1,32,975.858</b>	

During the reporting year, 2017-18, we generated 132,976 MT of non-hazardous waste. There has been an increase in 42% over the previous reporting period owing to the increase in production volumes by 9.64%.



- 6** CLEAN WATER AND SANITATION
- 7** AFFORDABLE AND CLEAN ENERGY
- 12** RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13** CLIMATE ACTION
- 15** LIFE ON LAND
- 17** PARTNERSHIPS FOR THE GOALS

Total Waste Disposed by End Disposal Method at TML									
Hazardous Waste									
Types of Waste (Combination of Waste Categories)	Disposal Method	Quantity in Tons			Total Waste Disposed Through End Disposal Method			Performance with Respect to Disposal Method in 2017-18 as Compared to 2016-17	
		2015-16	2016-17	2017-18	2015-16	2016-17	2017-18	Direction of Change	Status
Grinding Sludge, Phosphate Sludge, ETP Sludge, Shot Blasting Dust	CHWTSDF - Landfill	1,291.06	919.75	799.118	23.79%	17.02%	14.90%	Decrease in Landfill	Good
Paint Sludge, Hazardous Garbage, Scrap Sealants, DM Resins, Prototyping Waste	CHWTSDF - Incineration	2,566.18	1,712.118	1,438.237	47.29%	31.68%	26.7%	Decrease in Incineration	Good
Paint Sludge, Hazardous Garbage	In-house Incineration	271.28	290.6	152	5.00%	5.38%	2.83%	Decrease in In-house Incineration	Good
Conversion of Paint Sludge to Primer, Reclamation of Dirty flushing thinner, Re-use of ETP Sludge / Incineration ash in pavers/building products	Recycle for Material Recovery	129.33	217.57	211.09	2.38%	4.03%	3.94%	Decrease in Metal Recovery Through Recycling	Needs Improvement
Paint Sludge, Hazardous Garbage	Co-processing (Energy Recovery)	261.07	12,98.88	1,188.08	4.81%	24.06%	22.16%	Decrease in energy recovery through Co-processing	Needs Improvement
Phosphating Sludge	Co-processing (Material Recovery)	38.59	81.87	349.79	0.71%	1.52%	6.52%	Increase in Material recovery through Co-processing	Good
Scrap Lead Acid Batteries, Scrap Lead Tire Balancing weights, All types of non-ferrous scrap LOTS, All types of Used / Waste Oil LOTS, e-waste, empty containers	Sale to Authorized Re-cyclers	869.14	883.04	1,239.405	16.02%	16.34%	23.0%	Increase in sale to Authorized Re-cyclers	Good

Non-Hazardous Waste									
Types of Waste (Combination of Waste Categories)	Disposal Method	Quantity in Tons			Percentage of Total Waste Disposed Through End Disposal Method (%)			Performance with respect to Disposal Method in 2017-18 as Compared to 2016-17	
		2015-16	2016-17	2017-18	2015-16	2016-17	2017-18	Direction of Change	Status
Canteen Waste	Composting	285.95	344.56	290.15	0.26%	0.37%	0.22%	Decrease	Good
	Biomethanation	1257.8	1,136.47	851.14	1.15%	1.21%	0.64%		
	Municipal landfill/piggery	2,900.08	2,116.78	1,881.38	2.66%	2.26%	1.42%		
All Scrap LOTS Sold to Scrap Dealers	Sold to Scarp Dealers	37,874.94	29,004.77	66,357.1	34.73%	31%	49.92%	Increase	Good
	TSDf	0	0	50.7	0%	0%	0.04%		
Waste Burnt Foundry Sand	Landfill to Stone Quarry	66,725.8	60,973.05	63,505.43	61.19%	65.16%	47.77%	Decrease in Landfill	Good

During reporting year we have significantly increased hazardous waste co-processing for material recovery at various manufacturing sites.



**Subsidiaries Performance in 2017-18**

Non-Hazardous Waste Generation and Disposal at Subsidiaries				
Waste Types	Unit	2016-17	2017-18	Disposal Method
<b>TAL</b>				
Canteen waste	MT	3	7.44	Municipal Landfill/Piggery
Empty Drums	No	0	150	Sold to Scrap Dealers for Recycling
Garbage	MT	84	10.27	
Aluminum Scrap	MT	162	84.97	
Titanium Scrap	MT	62.157	7.06	
Wood waste	MT	69.5	9.73	
Plastic waste	MT	0.4	0.23	
Metallic scrap	MT	910.44	672.44	
Electrical Scrap	Lot	4.86	3.00	
Paper, Corrugated box etc.	MT	6.2	2.7	
Scrap sold to scrap dealers	Lot	0	3	
<b>TMLDL</b>				
Plastic Waste	MT	9.73	7.19	Recycle
Metallic Scrap	MT	8308.6	727.87	
Other Waste (Paper, Corrugated Box etc.)	MT	1398.42	1,372.41	
Wood Waste	MT	1827.6	1,319.85	
Scrap Rubber, PVC Items	MT	12.27	8.08	
Misc. Electrical Scrap	MT	12.48	6.98	
Scrap Electrical Cables	MT	9.54	15.17	
<b>TMML</b>				
Plastic Waste	MT	53.92	45.95	Recycle
Metallic Scrap	MT	1414.02	1492.41	
Wood Waste	MT	391.15	1492.41	Reuse
Scrap Rubber	MT	52.055	57.27	Recycle
Scrap Fibre	MT	2.055	2.2	
Other Waste (Paper, Corrugated Box etc.)	MT	2	4.7	
<b>TTL</b>				
Canteen Waste (Food)	MT	23.464	22.5	Composting

Hazardous Waste Generation and Disposal at Subsidiaries				
Waste Types	Unit	2016-17	2017-18	Disposal Method
<b>TAL</b>				
Used/spent oil	MT	0	4.2	Incineration by MEPL
Oily waste and residues	MT	0	0.08	
Paint Sludge (Oily cotton waste)	MT	3.2	2.07	
Grinding Sludge	MT	1.68	0.25	Landfill by MEPL
Sludge	MT	68.34	94.4	
Process Residue	MT	79	114.76	
E-Waste	MT	58	246	Sale to Authorized Recyclers
Empty Paint Thinner Tins	Lot	1	0	
<b>TMLDL</b>				
Used/Spent Oil	KL	62.6	109.6	Sale to Authorized Recyclers
Grinding Sludge	MT	243.23	255.02	Co-processing
Paint Sludge & residues	MT	224.19	283.20	
Oil Soaked Cotton Waste	MT	163.46	159.25	
Lead Acid Batteries	MT	0.35	1.50	Sale to Authorized Recyclers
E-Waste	MT	0.52	2.37	
<b>TMML</b>				
Waste Thinner	MT	7.98	8.22	Sale to Authorized Recyclers
Paint Sludge (Semi Solid)	MT	197.51	306.48	Incineration
Paint Filter, Painted Paper & Painting Cloth (Solid)	MT	1.8	1.455	
Empty Paint Containers	Nos	24,088	22,229	Sale to Authorized recyclers
E.T.P. Sludge (Semi Solid)	MT	44.98	100.075	Landfill
Used/Spent Oil	MT	0.18	1.07	Incineration
<b>TTL</b>				
Used/Spent Oil	MT	0.2	0.2	Sale to Authorized Recyclers
E-waste	Nos.	117	234	





## Water & Effluent Management

Manufacturing plants and other ancillary units especially the paint shops require water to carry out their operations. Guided by our Environment Policy, we aim to reduce our impact on water and continuously attempt to improve our efficiencies.

We carry out a specific water management improvement by following a three-pronged approach – Adoption of technology for effluent management; implementation of conservation initiatives; benchmarking & learning from peers.

While adopting a new technology, we evaluate its feasibility taking water efficiency as one of the critical deciding factors. We work closely with our stakeholders including our employees to reduce their individual impacts on environment. This we do by conducting various workshops and awareness programs on water conservation. Attractive posters and banners were displayed at key locations, to communicate the need to conserve water and steps to achieve the same. Employees at our manufacturing facilities are encouraged to report any observed leakage through a formal complaint management system which is attended on priority.

### Key Initiatives in Water Management:

Initiatives in Water Conservation and their Impact

Location	Initiative	Impact
Pune	Arresting Underground water pipeline leakages and replacement of old leaking water pipelines	Reduction in un-metered water loss
Pune, Lucknow and Pantnagar	Improvement in recycling of treated effluent	Reduction in fresh water abstraction
Pune, Dharwad	Rainwater capture for use in process	Reduction in fresh water abstraction
Sanand, Pantnagar, Lucknow & Jamshedpur	Ground water recharge through rainwater harvesting	Increased water security
All Plants	Audits of water intensive processes and equipment	Increased water use efficiency

### TML's Performance in 2017-18

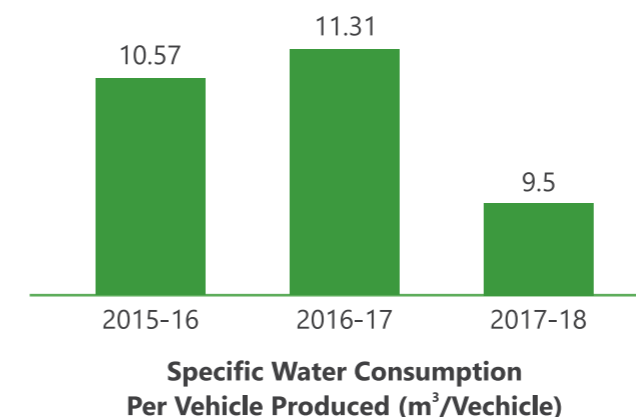
#### Water Sourcing

We rely on water from surface water and ground water sources at our manufacturing locations. While water at Pune plant is used from municipality, at Sanand and Jamshedpur plants, we depend largely on freshwater resources (rivers, basins). At Pantnagar and Lucknow, we are dependent on groundwater for our water requirements.

We place emphasis on reducing our usage of freshwater (from rivers and lakes, rainwater, groundwater and municipal sources) because it is the main source of drinking water. We're doing this by establishing rainwater harvesting facilities at our Pantnagar, Lucknow and Jamshedpur plants and using combination of water sources at Dharwad.

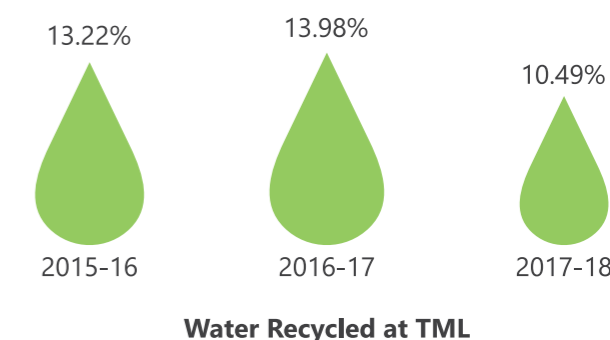
Total Water Abstraction at TML			
Source	2015-16 (m <sup>3</sup> )	2016-17 (m <sup>3</sup> )	2017-18 (m <sup>3</sup> )
Municipal			33,26,811
Surface Water			8,42,809
Ground Water	52,11,337	59,06,427	7,01,965
Rain Water			5,69,191
<b>Total</b>			<b>54,40,776</b>

In 2017-18, our total water abstraction decreased by 7.88% from previous year largely due to dedicated actions on underground water leakages in our plants, increase in rain water harvesting facilities and, effluent re-cycling. Also, in 2017-18 we used 9.5 m<sup>3</sup> of water / vehicle, down from 11.31 m<sup>3</sup> water / vehicle in 2016-17.



## Water Recycling and Effluent Management

Our goal to increase the percentage of recycled treated effluent is in line with our commitment to minimizing the negative environmental impact through our operations and conservation of natural resources as far as possible. While we constantly strive to reduce our consumption of fresh water, our approach is also to enhance our abilities to recycle and reuse effluent generated from our commercial and domestic processes.



### Root Zone Technology - Jamshedpur



Root zone treatment is implemented for treating the wastewater using "Vetiver" as a natural way for effluent treatment at our Jamshedpur manufacturing plant. Vetiver (*Chrysopogon zizanioides*) of the Poaceae family, native to India, popularly known as Khus is a tough, natural, non-invasive plant with a deep penetrating fibrous root structure that grows up to 5 meters deep. The fibrous mat of vetiver roots, has the unique characteristics to control pollution.

- 6 CLEAN WATER AND SANITATION
- 7 AFFORDABLE AND CLEAN ENERGY
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 15 LIFE ON LAND
- 17 PARTNERSHIPS FOR THE GOALS

Water Consumption at TML Subsidiaries					
Subsidiary Name	Source	Unit	2015-16	2016-17	2017-18
TAL	Municipal Water	M3	1,20,719	1,37,789	1,38,550
TMLDL	Surface Water	M3	5,15,254	5,55,612.1	4,89,211.25
TMML	Ground Water	M3	1,25,376	1,05,046	93,915
	KIADB water	M3	16,890	Not applicable	9,000
TTL	Municipal water	M3	1,49,767	1,09,011	89,863

Percentage and Volume of Water Recycled and Reuse		
Subsidiary Name	Total Volume of Recycled and Reused Water in m <sup>3</sup>	Total Volume of Recycled and Reused Water as a % of Total Withdrawal
TAL	29,256.4	21.11
TMLDL	921.1	0.188
TMML	18,107	17.59
TTL	18,000	20.03



### Biodiversity

TML's Sustainability Policy articulates commitment to undertake natural capital valuation for all its locations to understand the impact of our business on Biodiversity. We are committed to avoid and mitigate the negative impacts and enhance positive impacts on biodiversity through TML's Biodiversity Management Plan and social responsibility initiatives.

#### Key Initiatives and Performance in 2017-18:

Our manufacturing locations in India although not located within the vicinity of any identified/notified biodiversity hotspots or protected water bodies, we have been proactive towards biodiversity conservation. During the reporting year 2017-18, we undertook the following initiatives at and around our manufacturing locations:

- Interventions at Pune plants have helped in nurturing biodiversity and conserving the ecosystem. Two large water-bodies in Pimpri, Pune are home to water birds such as small waterhens to storks for approximately 30 years. We developed a small hide structure for bird watching at Sumant Sarovar, near our plant location. The intervention played a positive role in supporting faunal diversity.



- Lucknow unit took up an initiative to recharge the two artificial lakes in the complex, by offloading treated effluent and ground water, thereby creating an ecosystem for fishes to thrive. Later, fishes were introduced into the lakes which attracted small water birds such as Black-crowned Night Heron, White-breasted Waterhen and Common Moorhen. These birds can often be spotted roosting in the trees surrounding the lakes.
- Jamshedpur unit being the oldest and largest, the unit has taken up many initiatives on biodiversity like establishment of large nurseries having herbs, shrubs as well as trees and a tissue culture lab.

The presence of this fauna within and adjacent to our plant premises is an indicator of the protected and undisturbed conditions within the plant area.

Going forward, some selected Biodiversity Management Plans, will be taken up for implementation as we believe in enhancing the biodiversity in areas of operation. These projects would be aimed at enriching the diversity of species and conservation of habitat of the endemic species.



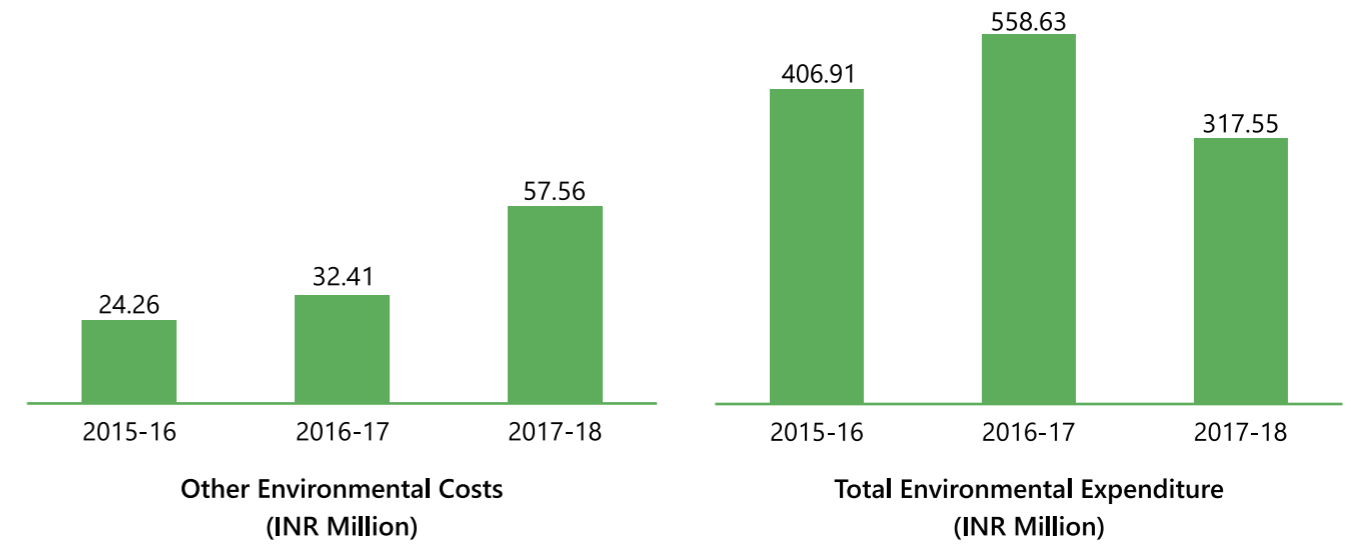
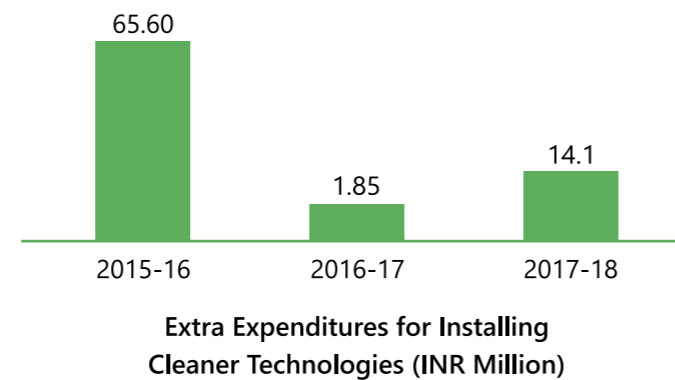
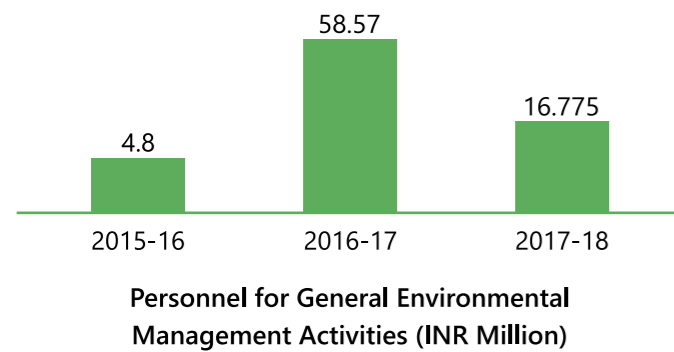
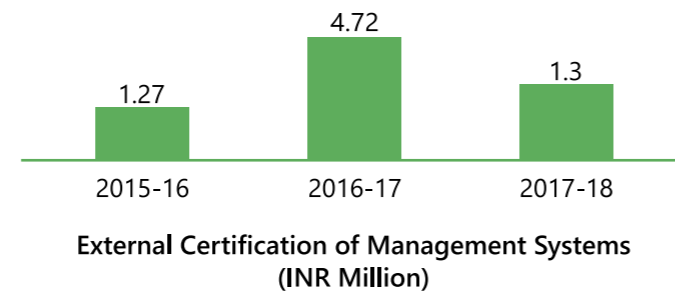
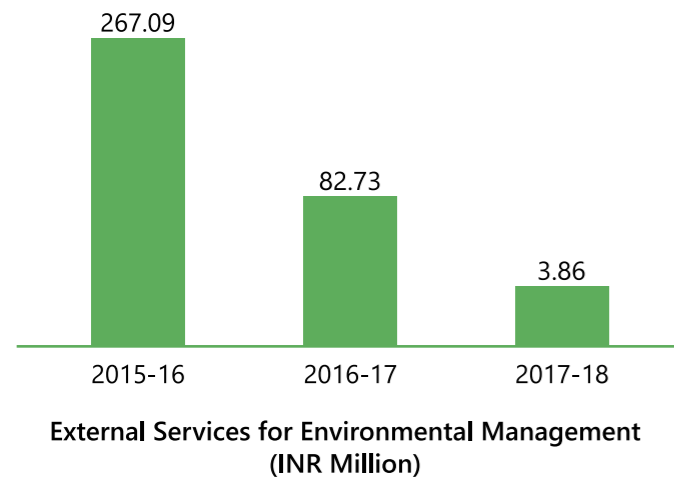
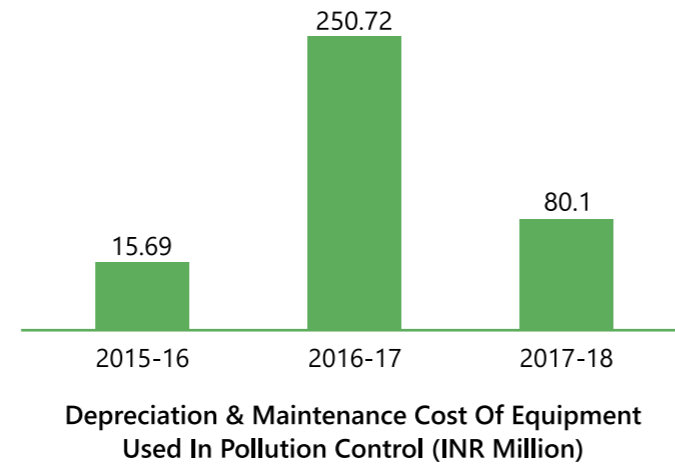
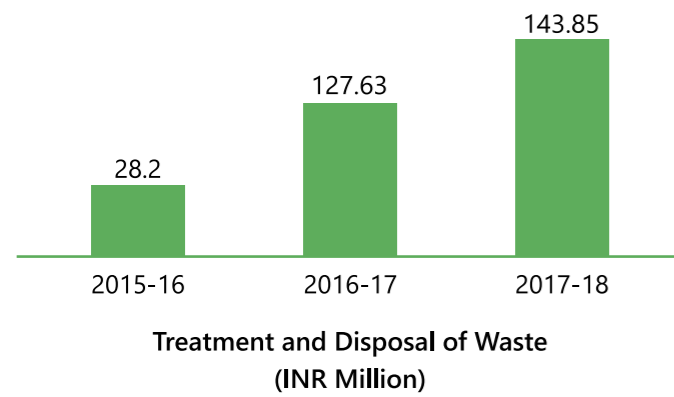
- 6 CLEAN WATER AND SANITATION
- 7 AFFORDABLE AND CLEAN ENERGY
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 15 LIFE ON LAND
- 17 PARTNERSHIPS FOR THE GOALS

## Environmental Expenditure

We understand the impacts our business has on the Environment. We make concerted efforts to minimize the impacts by undertaking numerous Environmental conservation measures. We developed our Environment Policy in line with our commitments towards meeting legal, regulatory and other environmental requirements. All Manufacturing Plants in India are certified to ISO 14001 -

Environment Management Systems and we have transitioned to the new 2015 version of ISO-14001 at our Panthagar and Sanand plants.

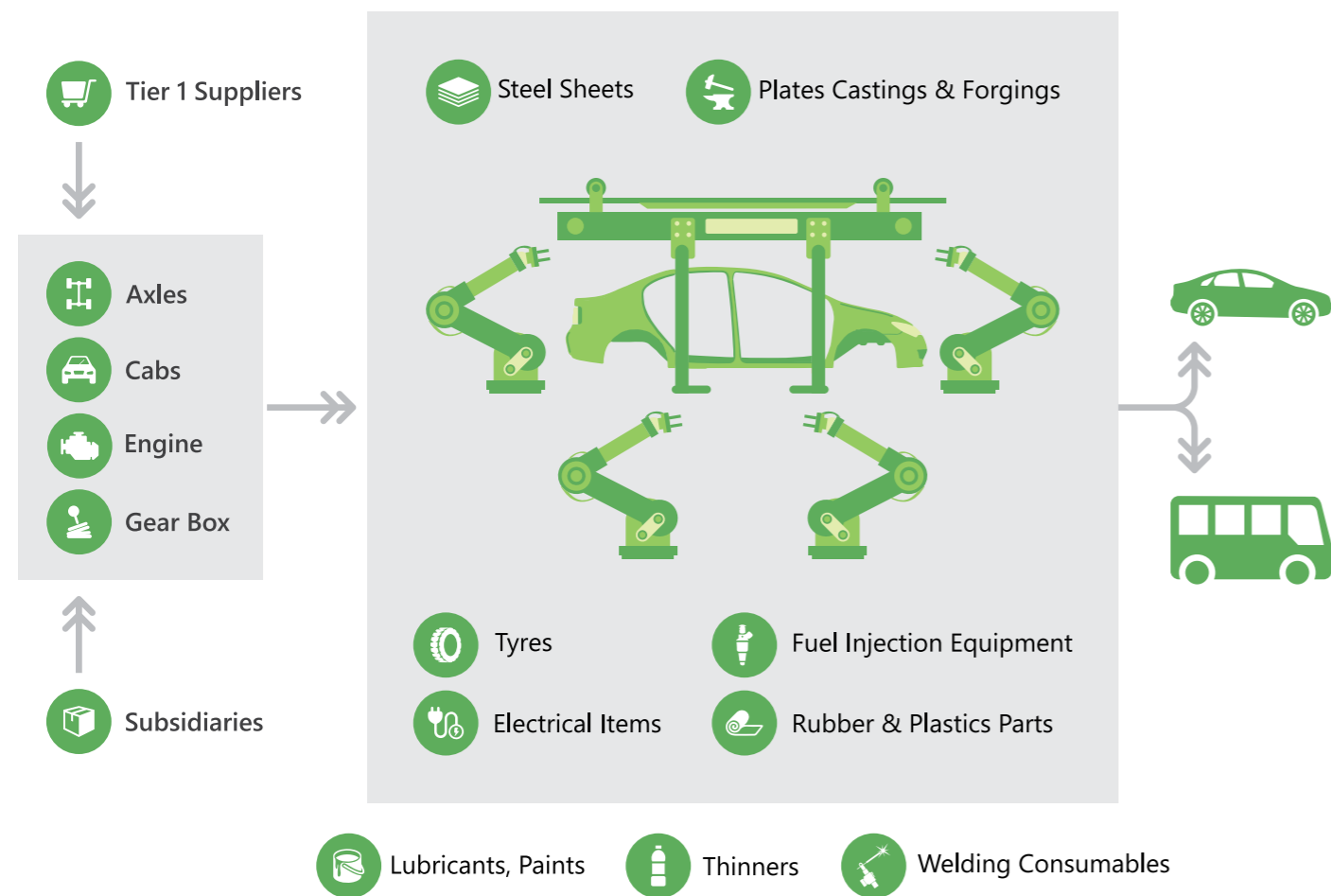
Our expenditure towards environmental protection amounted to INR 317.555 million in FY 2017-18. Though there has been decrease in expenditure related to external services, the cost of treatment and disposal of waste has increased significantly.



## Raw Material

In the long term the cost of material resources can be expected to rise as resources deplete and consumption increases. Growing urbanization may force communities to prioritize access to natural resources. This creates opportunities for us to relook at our manufacturing processes and come up with solutions.

Tata Motors Ltd. is committed to conserving natural resources by reducing the consumption of virgin materials and optimizing its use to reduce the wastage as much as possible, guided by its Environment policy and Tata Code of Conduct.



### Management Approach for Raw Materials Management & Conservation:

In addition, we seek to reduce the weight of vehicles which leads to significant improvement in fuel efficiency which in return results in reduction in GHG emissions.

We adopted the principles of Reduce-Reuse-Recover that enable us to manufacture products with materials, 85% of which can be recycled thus minimizing the pressure on

natural resources. The recyclability quotient of our products is continuously monitored by our Research and Development team and verified by European VDA agency. Our teams overlooking supply chain and purchase work in tandem with our R&D team to identify and source materials that are more sustainable from total life cycle perspective, i.e. recyclable and renewable.

Material Consumption at TML				
Material Name Consumed	Units	Quantity in 2015-16	Quantity in 2016-17	Quantity in 2017-18
Steel	Tons	1,04,432	75,707	82,692
Steel Tubes	Tons	6	5	7
Non-Ferrous Alloys	Tons	3,237	3,679	3,982
Ferrous Alloys	Tons	3,449	2,802	2,391
Steel Melting Scrap (recycled)	Tons	63,436	62,256	62,551
Metal Scrap and Forging (Recycled)	MT	22,333	23,644.19	10,099.32
Paints, Oils and Lubricants	Tons	2,353	2,409	2,527
	Kilo Liters	8,475	12,729	23,747
Tires, Tubes and Flaps	Numbers	36,27,759	38,98,472	48,73,022
Engines	Numbers	1,18,911	1,26,972	1,47,103
Sand	Tons	66,726	50,451	48,923

### Alignment with Circular Economy

We have embedded the principles of Circular Economy in our operations through Reduce-Reuse-Recover initiatives. Our integrated approach to circularity addresses

- Risks associated with shortfalls of raw material supply by minimizing dependence on virgin materials
- Adverse environmental impacts during production and disposal by manufacturing quality products and increasing the useful life of product
- Environmental impacts during the use of vehicles by ensuring that our vehicles adhere to applicable emission norms.
- Sustainability (particularly socio-economic) aspects by generating employment opportunities at our dedicated refurbishment and reconditioning units.

Tata Prolife, Tata OK and Tata Assured, branches of the company help reduce our dependence on natural resources by refurbishing and reconditioning the vehicles manufactured by us.

### Tata Prolife



**rebuilt to last**

Tata Prolife business division remanufactures auto components which have reached the end of their useful life. Aimed at commercial vehicle (CV) owners, Tata Prolife extends the life of vehicles and aggregates through systematic overhaul that leads to optimum performance while also adding to the life of the products.

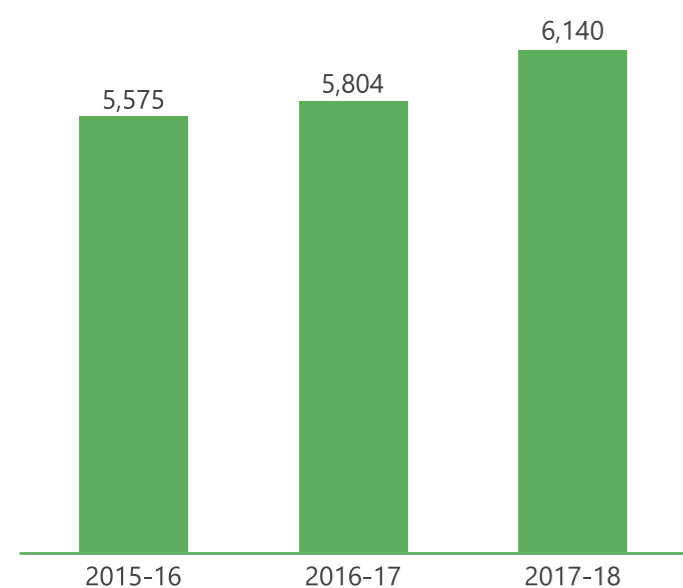
Salvaging department, carries out remanufacturing of vehicular aggregates that have expended one useful life. Remanufacturing restores factory-like settings for

- 6 CLEAN WATER AND SANITATION
- 7 AFFORDABLE AND CLEAN ENERGY
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 15 LIFE ON LAND
- 17 PARTNERSHIPS FOR THE GOALS

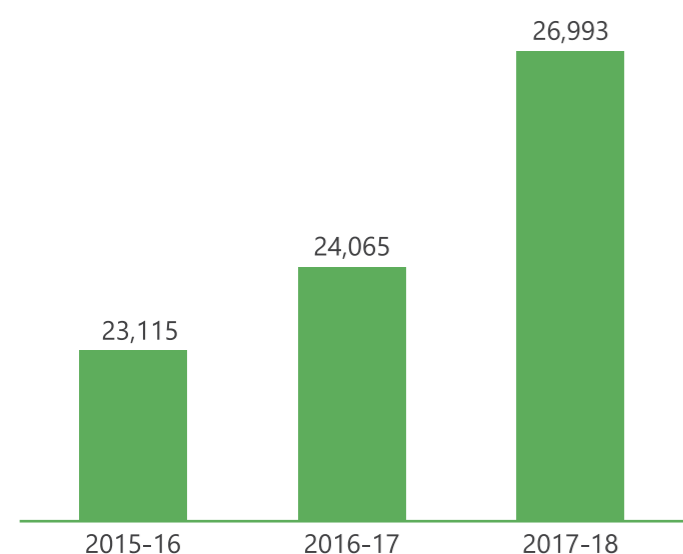


aggregates to run again with designed efficiency levels. Engines, gearboxes, clutch pressure plates, truck cabins etc. are remanufactured.

In 2017-18, an equivalent of 26,993 vehicles have been reused or recycled under our take-back program resulting in revenue generation of INR 215 cr. In terms of energy consumption, prolife business has utilized 50 kWh electrical energy per equivalent engine for remanufacturing, a reduction of 33% over 2011 levels.



Recycled Metal Scrap & Forgings (MT)



Equivalent Engines Remanufactured (No.)

Tata Motors Assured



Tata Motors Assured is a one-stop solution for customers to:

- Buy and sell preowned cars with requisite documents at right value
- Exchange pre-owned car of any brand with new or used Tata vehicle
- Get price evaluation and assessment of road readiness of pre-owned car

Through Tata Assured, we facilitate reuse of the pre-owned cars by ensuring that used cars pass stringent certification norms. Our robust 100 check point certificates on make, age, mileage, previous ownership, efficiency, etc. ensure that refurbished/retrofitted cars meet necessary environment norms and operate efficiently while providing best value for money for its prospective customers. A thorough approach of refurbishment extends the useful life of the vehicle by 3 to 4 years.

In the year 2017-18, we have taken numbers of initiatives to promote usage of old cars and attract customers:

- We have conducted specific campaigns for upgrading existing customers by exchanging old vehicle with new model of the cars.
- Best price challenge
- Mobile campaigns to reach out to larger mass for exchanging cars.

Tata OK



TATA OK provides a single window solution to exchange, sell or buy pre-owned commercial vehicles at a right price. Refurbishment and other services are done scientifically to enhance safety, efficiency of the vehicle, thereby creating an ecosystem for reuse of the vehicle. This can bring

value to environment and society by reducing the need to manufacture additional units in conditions when a pre-owned vehicle can be refurbished to perform optimally. Tata OK operates through its channel partners spread across India while ensuring that the quality of service is maintained

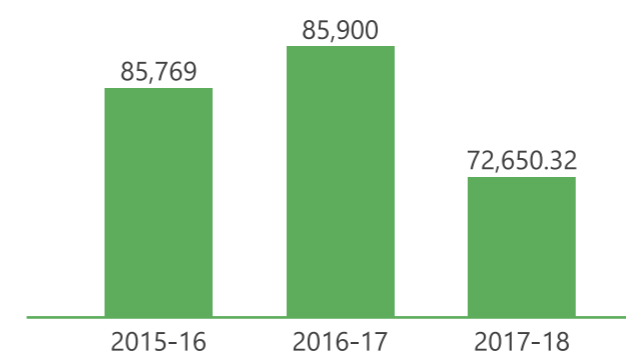
Refurbished Vehicles Sold			
Types of Vehicles	Number of Vehicles sold till FY 2016-17	Number of Vehicles sold in FY 2017-18	Number of Vehicles sold till FY 2017-18
SCV	51,887	4,623	56,510
LICV	6,980	331	7,311
HCV	3,353	154	3,507
Non Tata Vehicles	0	1147	1,147
<b>Total</b>	<b>62,220</b>	<b>6,255</b>	<b>68,475</b>
<b>Exchange Volume</b>	<b>1,712</b>	<b>51,87</b>	<b>6,899</b>

Consumption of raw material such as steel sheets and plates, castings, forgings etc. are calculated based on the volume and number of material conversion operations. In 2017-18, we reduced our consumption of ferrous alloys by 14.66 %. Although our consumption of steel has increased by a notch in the reported year as against the previous reporting period, this is largely due to increase in production. We strive to reduce our dependence on non-renewable virgin materials by optimizing our material usage and enhancing our recycling capabilities. The use of high strength steel and engineering plastic not only reduces the weight of our vehicles but also reduces our impact on the environment.

Material Packaging

We are aware that the packaging materials used for our products have an environmental impact. Therefore, we aim to reduce our packaging requirements while also looking out to establishing processes to reclaim the same. We have replaced all our wood packaging with plastic and metal cases that can be reused multiple times before being dumped. Attempts have also been made to reduce our usage of corrugated boxes which can be used only once and substitute them with alternatives that are reusable and offer same level of durability. We could cut down packaging waste generated at our manufacturing locations by using only reusable cases for internal movement of the components and parts to the assembly area.

Together with our suppliers, logistics partners and packaging companies, we have launched an initiative to use returnable FLC packaging instead of expendable material. This has resulted into reduced waste, lower lifetime costs and faster turnaround time.



Recycled Materials Used in Manufacturing at TML



**Subsidiaries' Performance in 2017-18**

TTL, being a design firm, does not procure or consume raw material.

TAL					
Material Consumed	Type of Material-Renewable/Non-Renewable Material	Units	Quantity in 2015-16	Quantity in 2016-17	Quantity in 2017-18
Steel including Forgings	Renewable	MT	62.85	65	2.92
Casting	Renewable	MT	332	50	NA
Paints and Thinner	Non-renewable	KL	16.95	13	39.34
Oil and Lubricants	Non-renewable	KL	15	31	52.68
Wood	Renewable	MT	32,452	30,806.56	147.988
Composite Material	Non-renewable	MT	59.223	85.737	90.596
Titanium	Renewable	MT	33.78	84.042	79.173
Aluminum	Renewable	MT	24.8	34.788	1,038.20

TMML					
Material Consumed	Type of Material-Renewable/Non-Renewable Material	Quantity in 2015-16	Quantity in 2016-17	Quantity in 2017-18	
				TMML Dharwad	TMML Lucknow
Galvanized Steel	Renewable	10,724 MT	15,215 MT	5,077 MT	2,800 MT
FRP (Fibre Reinforced Plastic)	Non renewable	248 MT	1,336 MT	64.53 MT	110 MT
Plywood	Renewable	1,88,886 m <sup>2</sup>	2,59,848 m <sup>2</sup>	1,58,692 No.s	41,332 m <sup>2</sup>
Glass	Renewable	59,037 MT	2,446 MT	89,326 No.s	342 MT
Plastic	Renewable	27,49,644 MT	5,40,145 MT	29,86,404 No.s	157 MT
Aluminium	Renewable	225 MT	453 MT	3,259.31 MT	141 MT
Thinner	Non renewable	73,529 L	1,91,153 L	72,425 L	0
Paint	Non renewable	2,13,888 L	1,19,806 L	1,76,355 L	67,132 L

TMLDL					
Material Consumed	Type of Material-Renewable/Non-Renewable Material	Units	Quantity in 2015-16	Quantity in 2016-17	Quantity in 2017-18
Steel	Renewable	MT	342.92	261.68	68.25
Paints	Non-renewable	KL	29.65	36.26	5.40
Oil	Non-renewable	KL	587.67	405.65	152.76
Lubricants	Non-renewable	MT	576.21	139.1	50.2
Steel Shot	Renewable	MT	131.38	158.96	133.105

All the materials are externally sourced. Material usage optimization is a key concern for all our subsidiaries.



- 6** CLEAN WATER AND SANITATION
- 7** AFFORDABLE AND CLEAN ENERGY
- 12** RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13** CLIMATE ACTION
- 15** LIFE ON LAND
- 17** PARTNERSHIPS FOR THE GOALS

# Workforce



“ Add value to your men and value-addition to your product will take care of itself. ”

Sumant Moolgaokar

# Workforce

Our workforce is our biggest asset. We put our best efforts to attract and retain the best people. We have a career management strategy in place and we always encourage our employees to excel in their fields. This sections covers details about our workforce and welfare activities.

## Dashboard of TML for 2017-18: Workforce



**52%** of Total Permanent Workforce Unionized

**3,250** Employees Trained on Human Rights Policies



**12%** Increase In The Total Number of Female Employees

Women Hiring Through Campuses Increased to **19%** in 2017 From **13%** in 2016



# Workforce



“ In line with the Governments ambitious plans under the Skill India Mission, we at Tata Motors are constantly intensifying our efforts on skill developments programs, for an agile and future-ready workforce for a larger cause of the industry. ”

**Gajendra Chandel**  
Chief Human Resource Officer (CHRO)

It is a well-known fact that a committed and technically sound workforce forms the bedrock of any successful business. At the core of our success lies a hardworking pool of dedicated employees and associates. It is our constant endeavour to attract and retain the best talent through comprehensive training and development opportunities and good long-term career prospects. We seek to enhance professional development of high potential and managerial staff through our systematic career management. This enables us to fill key positions at all our locations with qualified specialists.

## Approach Towards Employees

As part of our human resources (HR) planning, on a yearly basis we assess and determine skill sets needed basis our corporate and locational strategies. We then align our young talent, training programs and hiring plans accordingly. Providing a favourable environment for our workforce to realise their full potential and grow in their career paths is of paramount importance for us. In line with our Affirmative Action Policy, we adhere to our commitment to non-discrimination and recruit solely based on merit. Opportunities for career growth are based purely on individual excellence.

**Benefits:** Remuneration for any employee is strictly based

on merit and is governed by the pay scale of that particular grade. All statutory benefits are extended to our employees such as pension, gratuity, insurance as well as health benefits. TML personnel can avail accommodation in plants where we maintain our own townships. At Jamshedpur, for example, we operate schools, hospitals and other public amenities which can be accessed either for free or at a nominal cost by TML employees and their family members. Additionally, we ensure that the entire contract workforce is entitled to benefits such as provident fund and insurance.

**Dignity & Collective Bargaining:** The right to freedom of association is proclaimed in the Universal Declaration of Human Rights. We fully recognize this as well as the right to organize and to collective bargaining. Our company's policy to deal fairly and honestly with our associates is embodied in Tata Code of Conduct and Human Rights Policy. As per the collective agreement/relevant legislation, we communicate major changes in our management to the labour union. We organize a management-labour council meeting, where union and management discuss key issues to find solutions. We also hold management briefings on a regular basis to keep the labour union up to date on the market situation and business practices.

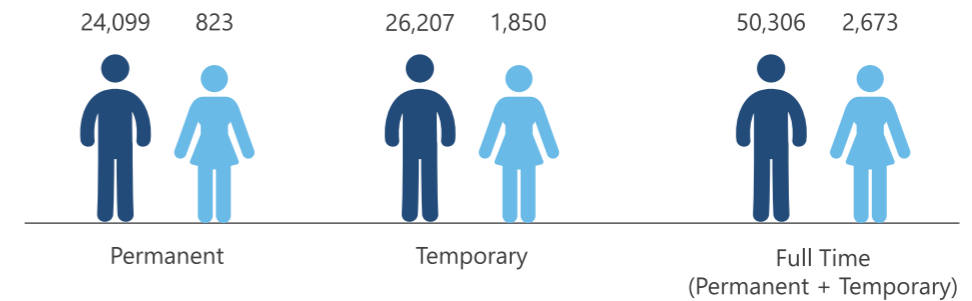
**52% of TML's total permanent workforce is unionized**

**Human Rights:** We strictly adhere to our policy of having no child labour and forced labour. All the security personnel have been trained to ensure no underage workers enter the plant premises and even our contractors are given strict instructions which prohibit them from employing underage workers. For any operation, the only exceptions to the 18 years age bar are those who are part of the government approved apprenticeship schemes and internships. We conduct training on human rights periodically for all employees and security personnel.

**3,250 employees trained for 15,178 hours on Human Rights Policies.**

## Workforce Breakup at TML (FY 2017-18)

Total Employees by Gender and Category



Permanent Employee Breakup by Category, Age and Gender (FY 2017-18)					
Employee Category	<30 years	30-50 years	>50 years	Total Male	Total Female
Senior Management	0	62	65	125	2
Middle Management	14	1,992	313	2,241	78
Junior Management	2,614	5,310	770	8,092	602
Non-Management (Permanent Blue Collar)	1,448	9,541	2,793	13,641	141
<b>Total</b>	<b>4,076</b>	<b>16,905</b>	<b>3,941</b>	<b>24,099</b>	<b>823</b>

Workforce Breakup at Subsidiaries (FY 2017-18)								
Employee by Categories	TAL		TMLDL		TMML		TTL	
	Male	Female	Male	Female	Male	Female	Male	Female
Permanent	896	81	2059	34	1710	16	4065	669
Temporary	393	23	1116	75	40	-	251	67
Full time	NA	NA	NA	NA	554	22	NA	NA
Part time	NA	NA	NA	NA	300	-	NA	NA

## New Hires & Attrition at TML (FY 2017-18)

Employee Category	New Hires					
	Male			Female		
	<30 years	30-50 years	>50 years	<30 years	30-50 years	>50 years
Senior Management	0	5	1	0	0	1
Middle Management	1	36	2	0	5	0
Junior Management	584	111	0	106	9	0
Non-Management	9	222	0	2	28	0
<b>Total</b>	<b>594</b>	<b>374</b>	<b>3</b>	<b>108</b>	<b>42</b>	<b>1</b>

5 GENDER EQUALITY

8 DECENT WORK AND ECONOMIC GROWTH

10 REDUCED INEQUALITIES



Attrition						
Employee Category	Male			Female		
	<30 years	30-50 years	>50 years	<30 years	30-50 years	>50 years
	Senior Management	0	8	39	0	0
Middle Management	3	159	95	1	7	3
Junior Management	531	484	253	77	37	3
Non-Management	7	96	417	1	0	5
<b>Total</b>	<b>541</b>	<b>747</b>	<b>804</b>	<b>79</b>	<b>44</b>	<b>11</b>

**New Hires & Attrition at Subsidiaries (FY 2017-18)**

Employee Category	New Hires at TAL				
	<30 years	30-50 years	>50 years	Male	Female
Senior Management	0	3	4	7	0
Middle Management	1	20	6	25	2
Junior Management	43	8	6	48	9
Non-Management	148	2	0	130	20
<b>Total</b>	<b>192</b>	<b>33</b>	<b>16</b>	<b>210</b>	<b>31</b>

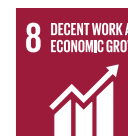
Employee Category	Attrition at TAL				
	<30 years	30-50 years	>50 years	Male	Female
Senior Management	0	3	4	6	1
Middle Management	1	5	6	12	0
Junior Management	23	5	5	32	1
Non-management	25	2	8	35	0
<b>Total</b>	<b>49</b>	<b>15</b>	<b>23</b>	<b>85</b>	<b>2</b>

Employee Category	New Hires at TMLDL				
	<30 years	30-50 years	>50 years	Male	Female
Senior Management	0	0	0	0	0
Middle Management	22	1	0	21	2
Junior Management	0	0	0	0	0
Non management	0	44	0	39	5
<b>Total</b>	<b>22</b>	<b>45</b>	<b>0</b>	<b>60</b>	<b>7</b>

Employee Category	Attrition at TMLDL				
	<30 years	30-50 years	>50 years	Male	Female
Senior Management	0	0	0	0	0
Middle Management	8	7	3	16	2
Junior Management	7	7	17	31	0
Non-management	0	2	45	47	0
<b>Total</b>	<b>15</b>	<b>16</b>	<b>65</b>	<b>94</b>	<b>2</b>

Employee Category	New Hires at TTL				
	<30 years	30-50 years	>50 years	Male	Female
Senior Management	0	7	0	7	0
Middle Management	3	40	0	42	1
Junior Management	772	61	0	629	204
Non-Management	95	11	6	80	32
<b>Total</b>	<b>870</b>	<b>119</b>	<b>6</b>	<b>758</b>	<b>237</b>

Employee Category	Attrition at TTL				
	<30 years	30-50 years	>50 years	Male	Female
Senior Management	0	9	3	10	2
Middle Management	0	102	2	95	9
Junior Management	370	92	2	375	89
Non-management	227	59	5	223	68
<b>Total</b>	<b>597</b>	<b>262</b>	<b>12</b>	<b>703</b>	<b>168</b>



Employee Category	New Hires at TMML				
	<30 years	30-50 years	>50 years	Male	Female
Senior Management	0	4	0	4	0
Middle Management	6	2	0	7	1
Junior Management	6	0	0	5	1
Non management	461	6	0	464	3
Temp/Trainees/FTC	93	0	0	93	0
<b>Total</b>	<b>566</b>	<b>12</b>	<b>0</b>	<b>573</b>	<b>5</b>

Employee Category	Attrition at TMML				
	<30 years	30-50 years	>50 years	Male	Female
Senior Management	0	3	0	3	0
Middle Management	4	15	0	17	2
Junior Management	15	8	0	20	3
Non-management	509	8	0	483	34
Temp/Trainees/FTC	141	0	0	141	0
<b>Total</b>	<b>669</b>	<b>34</b>	<b>0</b>	<b>664</b>	<b>39</b>

### GENDER DIVERSITY @ TML

Diversity & Inclusion (D&I) has been on the radar of Tata Group for a few years now & in recent months the impetus has grown significantly to work on various initiatives in this space across group companies.

While TML has already embarked on its journey to focus on initiatives on Gender Diversity, "GEAR UP" is first of its kind, which is a women focused development program designed for mid-management level women. As part of "GEAR UP", the participants undergo a management development program (MDP), receive inputs through mentoring from seasoned seniors who help young women build on their individual development plan (IDP) as they get ready to take charge.

The pilot batch which was launched last year reported 14 women who were nominated by their managers, out of which 12 continue to undergo this program which is targeted to end in July 2018.

There is a planned closure to be conducted for GEAR UP so that we receive appropriate feedback in order to improvise the overall process & proceed with scheduling the next GEAR UP Batch in FY 18-19.



We have increased focus on women hiring through campuses from 13% in 2016 to 19% in 2017 and a target of 25% for 2018 batches. We are also on the outlook to hire more women through the lateral route across levels, for which we plan to run sensitization and culture building communication campaigns.

The women agenda focuses on three pillars:

- Becoming an employer of choice for women
- Transformation of culture and mindset to create a positive cultural momentum
- Development and retention

While we are bringing in more number of women, 50 % of whom are primarily from rural/small towns, to work in our plants, blue collared women workforce increased by 16%

through focused hiring from smaller towns and villages and world-class training under the NEEM program.

TML is not only recruiting women on the shop-floor, but is highly focused on skilling them through structured technical education programs run in collaboration with the Automotive Skill Development Council (ASDC). 70% of those trained in the pilot batch of TML – ASDC that graduated in August 2017, were women.

We also emphasize on providing a culture and environment that is conducive to striking a work life balance, with progressive policies such as: six months' maternity leave, sabbatical, work from home (corporate employees) and half-day work. In alignment to this, dedicated initiatives are planned for expecting and returning mothers and facilities like Crèche tie-ups across locations near our corporate, commercial and area offices are to be made available.

We are currently utilizing the Tata Group's The Second Career Inspiring Possibilities (SCIP) channel for women who wish to come back after a career break exemplifies the company's commitment to gender diversity. TML also encourages women who have had a career break to come back and explore second career options with the flexibility of working part-time or full time.

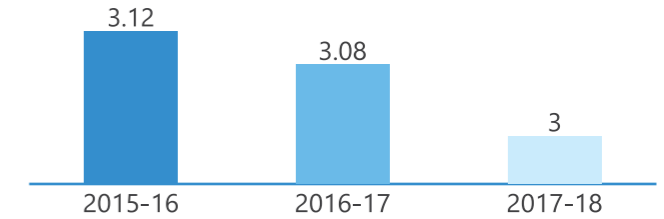
### Maternity Leave 2017-18

Return to Work Rate - 82.75%      Retention Rate - 15.87%



In the coming year, we desire to formalize launch of initiatives, forming Diversity Councils with measurable and sustainable targets under the umbrella of "Women@Work" with MD's sponsorship, and thereby TML will continue to remain focused on this agenda that encompasses all facets including support systems, policies, infrastructure, cultural & mindset change as well as getting statutory clearances wherever required.

### Percentage of Female Employee to Total Employees



### Training and Skill Development

Business needs and strategic decisions drive our training and skill development. Meeting the changing demands of business and skill development of our workforce are critical to business continuity.

### Management of Training and Skill Development

At TML we have a learning governance body called as **Learning Advisory Council (LAC)**. As a means of ensuring business relevance and value of learning offered, efforts are taken to closely align learning & development with business needs and priorities through this learning governance body. LACs play a threefold role namely – designing, implementing and reviewing the learning agenda and is responsible for overall skill development. LAC meets regularly to set direction and review progress.

Training requirements, driven by various business needs and relevance are assessed through the **6Ds** (Define, Design, Deliver, Drive, Deploy and Document) program, which provides disciplines of learning. While selecting the employees to undergo training and skill development, there is strict adherence to our policy of non-discrimination.

**Blue Collar:** We have established Functional Skill Training at each plant to enhance the skill set of our blue-collar employees. We have also deputed a National Employability Enhancement Mission (NEEM) agent to initiate training and enhance the knowledge of employees. We assess the effectiveness of the training and skill development exercise through improvement in performance index and knowledge index. We conduct programs on vehicle integration which are approved by Govt. (DGTT) for our blue-collar employees.

**White Collar:** A dedicated Chief Learning Officer is responsible for managing the skill development and training needs of our white-collar employees by way of an academy concept. The specific training needs are assessed through inputs from People Managers on

**5** GENDER EQUALITY

**8** DECENT WORK AND ECONOMIC GROWTH

**10** REDUCED INEQUALITIES

leadership behaviour and various sessions with managers on strategy and technology. Learning is conducted in four major functional areas: Operational Excellence, Product Leadership, Customer excellence and Management Education.

We assess effectiveness of the learning and skill development programs through feedback on the trainings from participants, instructors, superiors and the program evaluation process. The Learning Management System (LMS) platform manages the overall training and skill development.

We have conducted three noteworthy programs for our white-collar employees:

- a) **Leadership+**, a focused program for techno-functional skill development of leaders.
- b) **"i Teach"** is a train the trainer program to provide

**support to convert trainers' knowledge in training material.**  
**c) "B-HR" and "HR-VP" programs, related to Human Resource, focused on conceptual learning on workforce management and TML's way of working.**

To make the learning process more inclusive and efficient, and inculcate a culture of self-learning, Tata Motors Academy has launched E-learning programmes for managerial staff and dealer personnel. Formal performance management and development reviews are done on an annual basis for our workforce. Remaining employees have access to a range of opportunities aimed at developing a workforce with the right skills, experience and training. Performance management among this segment is largely team-based. Superannuating employees get adequate support to help them manage the end of their careers better.

Average training man-hours at TML (FY 2017-18)			
	Employee Category	Permanent Employees	Contractual Employees
TML	Training Man Hours (Male)	432961.59	48615
	Training Man Hours (Female)	24414.51	1972
	Total Training Man Hours	457376.1	49053
	Avg. Training Man Hours / Employee	11.54	3.67

Average training man-hours at TML subsidiaries (FY 2017-18)			
Subsidiaries	Category of Employment	Permanent Employees	Contractual Employees
TAL	Training Man Hours (Male)	28279.56	5079.23
	Training Man Hours (Female)	2065.75	222.78
	Total Training Man Hours	30623.30	5302
	Avg. Training Man Hours / Employee	24.98	13.09
TMML	Training Man Hours (Male)	9936.5	11004.5
	Training Man Hours (Female)	395.5	0
	Total Training Man Hours	10332	11004.5
	Avg. Training Man Hours / Employee	5.88	11.18
TTL	Training Man Hours (Male)	56184	4298.00
	Training Man Hours (Female)	10520	1078.00
	Total Training Man Hours	66704	5376.00
	Avg. Training Man Hours / Employee	14.15	17.01

Location	Employee Category	Average Training Man-hours (FY 2017-18)
TMLDL	Permanent Employees	23.23
	Contract Labour	193.8
	Temporary / Fixed Term Contract	10.72
	Trainees / Apprentices	1.46

### Tata Motors & ASDC Certifies First Batch of Trainees for Skills in Automotive Assembly

As part of a unique initiative to promote "Skill India Mission", Tata Motors and Automotive Skills Development Council (ASDC) certified the first batch of trainees under their collaborative skills development and certification program. Introduced in 2016, the program is currently training around 4000 apprentices, out of which 166 trainees (94 boys and 72 girls) at Pune Plant of Tata Motors Ltd have been awarded the ASDC Certification in automotive assembly skills. The trainees, after completion of their first-year training at Tata Motors' skill development center were assessed through an online test, a practical examination and a viva conducted by the external ASDC nominated assessor. Trainees that successfully passed these examinations were felicitated at a special function in the presence of top officials from TML and ASDC.

The first batch of trainees were awarded the ASDC certification in presence of Mr. Gajendra Chandel, Chief Human Resource Officer, Tata Motors, Mr. Satish Borwankar, Chief Operating Officer, Tata Motors Ltd and Mr. Sunil Chaturvedi, Chief Executive Officer, ASDC.

#### Key Highlights:

- TML has partnered with ASDC (Automotive Skills Development Council), NSDC

(National Skills Development Corporation) and NAPS (National Apprenticeship Promotion Scheme), for various skill development programs in the automotive sectors

- 166 trainees (94 boys and 72 girls) as a pilot batch at Pune plants of Tata Motors have been awarded the ASDC Certification in automotive assembly skills & similar assessments are being conducted in Tata Motors Sanand Plant. We would be certifying around 500 trainees by March 2018.
- TML plans to skill 40,000 people in next 3 to 4 years across all plants, subsidiaries and dealer network.



**5** GENDER EQUALITY

**8** DECENT WORK AND ECONOMIC GROWTH

**10** REDUCED INEQUALITIES



# Workplace Safety

## Workplace Safety

Dashboard of TML for 2017-18:  
Workplace Safety

Workplace safety is of utmost priority to our company. We remain committed to provide a safe and healthy working environment for all our employees. This section gives an overview of the management approach and our workplace safety initiatives and performance.



LTIFR Improved by:  
**38%**

Lost Time Injuries (no.)  
for Employees:  
Male: **20**; Female: **0**



All Plants **OHSAS**  
**18001** Certified

**1800+** Women Trained  
as Part of SenSHEtise



**1000+** Employees Engaged  
in Safe 20 Road Safety Sessions

**1** Fatality in FY 2017-18



“No Business objective can be deemed more important than the physical safety of all our employees and associates. Each one of us should try and make it our personal mission to translate this belief into reality. Only if ensuring the safety of our people becomes a mission, it will be possible for us to raise the bar on safety and reach standards that will be on par with the best companies in the world.”

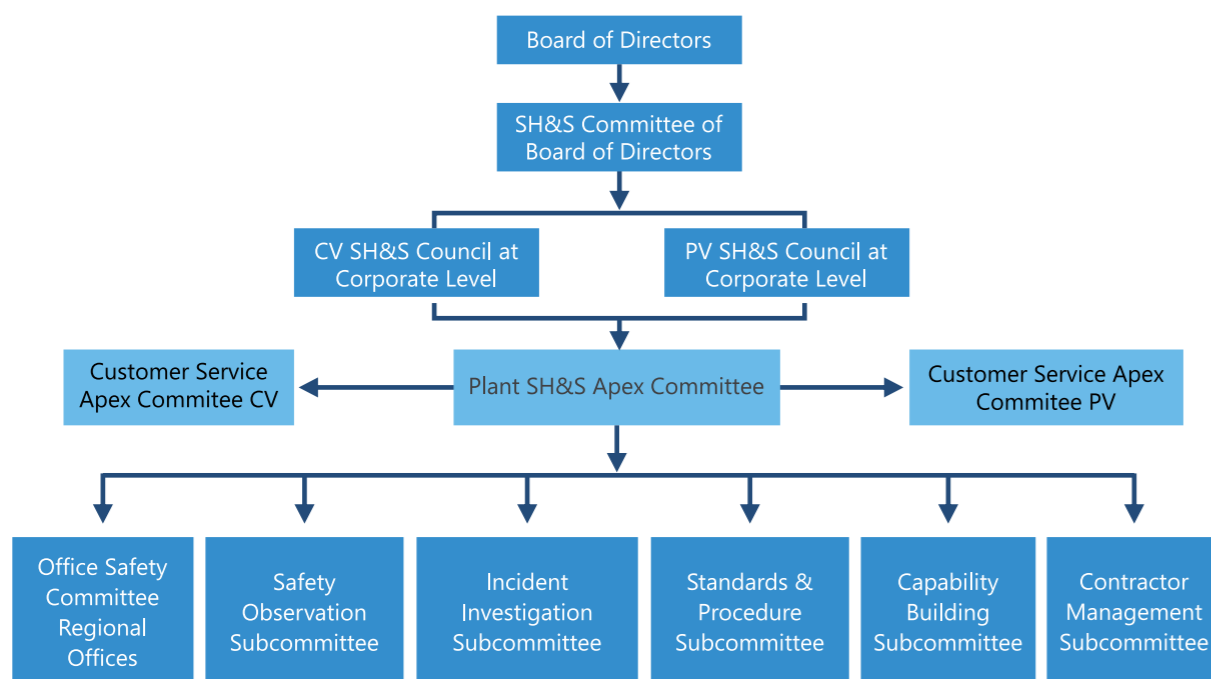
**Ratan Tata**

# Workplace Safety

We are committed to provide a safe and healthy working environment for our employees and associates. We ensure that none of our employees or workers are subjected to high incident or high risk disease related to their individual occupation. A company-wide occupational health and safety policy exists in order to ensure increased vigilance and awareness on health and safety. We recognise that to achieve our target in safety, it is crucial to internalise safety and engage with our employees.

## Management Approach Towards Safety

Encouraging safe & healthy workplace is paramount to our business. A dedicated Safety, Health & Sustainability (SH&S) Committee at the board level oversees the overall implementation of our safety policies & reviews its performance quarterly. We follow a three-tier approach to review our SH&S performance - First review by the Factory Implementation committee followed by plant level Apex Committee/sub-committee; then by SH&S council & finally by SH&S committee.



At the plant level, safety is ensured by the plant-level subcommittees that functionally report to corporate level sub-committee, headed by CVBU plant head. Every month, 100 safety Factory Implementation Committees across CV plants meet to review and improve the safety management system and similarly 27 such committees across PVBU meet to take on safety culture transformation agenda. At each plant, about 50% of the workforce is represented in the safety committee.

system, that ensures detection of any major safety incident. Internal Safety Audits are conducted periodically by the safety coordinators against these safety standards followed with a Second Party, Third Party external audits. The results of the audits are monitored by Corporate Standards & Procedures Sub-committee and SHE Council.

We affirm our commitment to safety by including aspects such as Performance Based Payment Scheme (PBPS), Discipline - Use of Personal Protective Equipment (PPEs), medical facilities - Coverage under Employees State Insurance (ESI) Act, Training, Development and Morale of Workmen, Workmen Compensation, Safety and Environment, and Joint Committees & Grievance Procedure under local agreements with Trade Unions.



## Our Safety and Principles

- All injuries and occupational illness are preventable, not inevitable
- Everyone is accountable for safety of oneself and of others
- Employee engagement and training in safety is essential.
- Management is responsible to enable resources for safety.
- Assessing exposure risks is vital pro-active component to work safely.
- Safety observation and interactions help improve safety performance.
- All deficiencies must be reported and corrected as soon as possible.
- Actively partnering with contractors improves safety performance.
- Working safety is condition of employment.
- Excellence in safety and health supports excellent business results.

## Key Initiatives in 2017-18

Our key initiatives in 2017-18 have been centered on enhanced governance, awareness and further internalizing safety. The initiatives are as follows:

- **Top 10 critical risks** are identified across all the manufacturing locations. Each plant has laid down action plan to mitigate these risks.
- Through our campaign '**i-drive safe**' - an initiative on building a safe driving culture - we have trained 1800 employees and associates on defensive driving in 81 Defensive Driving Training (DDT) sessions.



- '**My Road My Discipline**' Road Safety Week campaign organized on April 23 to 29 at all locations including all Plants, Offices, Dealerships, Warehouses, Vendors.
- Through our '**senSHEtize**' initiative on Women's Safety Awareness, more than 1800 women employees were trained on Women Safety and Self-Defence topics in 60 sessions across Offices & Plants.



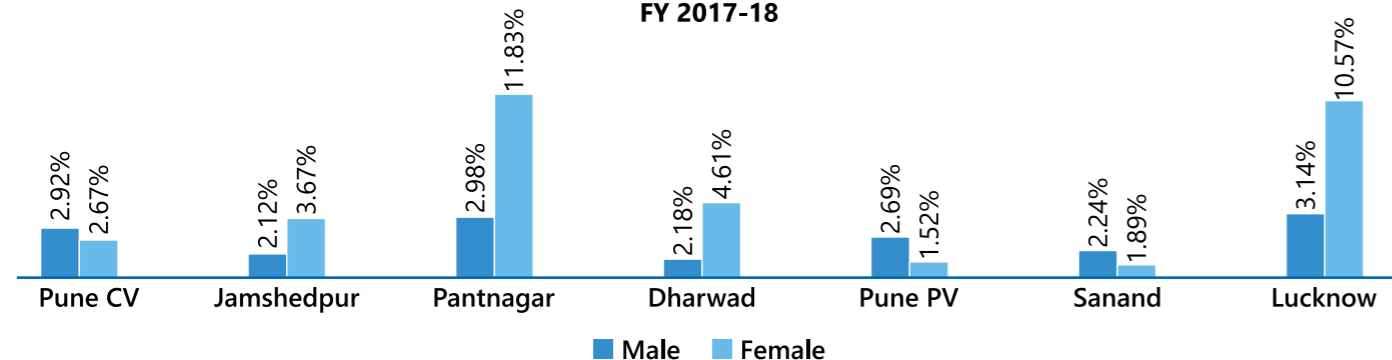
- Initiated a process of second party audits, involving auditors from other TML plants, for enhancing governance mechanisms in monitoring safety parameters.
- Launched **Safe20**, a 20 minutes safety engagement program, to make safety at work place a culture. Sessions on Road Safety were conducted at 9 offices across India engaging 1,000+ employees. Flexi Work Force were mentored by Permanent Blue-Collar Work force / Group leaders under **MY BUDDY** program.



- Celebrated National Safety month in March 2018, targeting workers and local communities around our plants. Posters and banners on safety, containing social message for people on safety, were published for creating awareness.

**Safety Performance of TML**

Safety Performance of all Employees (FY 2017-18)																
Location/Region name	Lost time injuries (Nos.)		Lost time injury rate (per million manhours)		Total recordable cases (Nos.)		Total recordable cases frequency rate (per million manhours)		Fatalities		Man-days lost		Occupational disease rate		Lost day rate	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	Pune	6	0	0.13	0	45	1	1.01	1.04	0	0	192	0	0	0	0.86
Jamshedpur	11	0	0.29	0	43	0	1.13	0	0	0	476	0	0	0	2.50	0
Lucknow	2	0	0.15	0	21	0	1.56	0	1	0	6187	0	0	0	91.92	0
Pantnagar	1	0	0.08	0	19	0	1.48	0.00	0	0	52	0	0	0	0.81	0
Dharwad	0	0	0.00	0	2.00	0	0.84	0.00	0	0	0	0	0	0	0	0
Pune PV	0	0	0	0	15	0	2.41	0	0	0	0	0	0	0	0	0
Sanand	0	0	0.00	0.00	21	0	2.35	0.00	0	0	0	0	0	0	0	0

**Absentee Rate (%) - TML  
FY 2017-18**


\*Absentee Rate of Female Includes Maternity Leave

Safety Performance of all Contractors (FY 2017-18)																
Region	Lost time injuries (Nos.)		Lost time injury rate (per million manhours)		Total recordable cases (Nos.)		Total recordable cases frequency rate (per million manhours)		Fatalities		Man-days lost		Occupational disease rate			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
	Pune	0	0	0.00	0.00	2	0	0.15	0.00	0	0	0	0	0	0	
Jamshedpur	0	0	0.00	0.00	6	0	0.41	0.00	0	0	0	0	0	0		
Lucknow	0	0	0.00	0.00	2	0	0.36	0.00	0	0	0	0	0	0		
Pantnagar	0	0	0.00	0.00	2	0	0.36	0.00	0	0	0	0	0	0		
Dharwad	0	0	0	0	2	0	0.73	0.00	0	0	0	0	0	0		
Pune PV	0	0	0.00	0.00	2	2	0.61	4.13	0	0	0	0	0	0		
Sanand	1	0	0.15	0.00	8	0	1.21	0.00	0	0	246	0	0	0		

**Safety Performance of TML Subsidiaries**

Safety performance for Employees (2017-18 & 2016-17)																
	TMML				TAL				TTL				TMLDL			
	FY 2017		FY 2018		FY 2017		FY 2018		FY 2017		FY 2018		FY 2017		FY 2018	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Lost Time Injuries (Nos.)	11	0	3	0	0	0	0	0	3	0	0	0	3	0	7	0
Lost Time Injury Frequency Rate Including Fatalities (per million man-hours)	2.27	0	0.42	0	0	0	0	0	0.15	0	0	0	0.2	0	0.61	0
Total Recordable Cases (Nos.)	39	0	14	0	7	0	1	0	9	3	9	3	21	0	24	0
Total Recordable Cases Frequency Rate (per million man-hours)	4.41	0	3.18	0	2.28	0	0.66	0	0.61	0.57	1.18	1.38	0	2.1	0	
Man Day Lost	51	0	13	0	0	0	0	0	19	0	0	0	201	0	341	0
Absentee Rate	0.03	0	4.31	0	0	0	0	0	0	0	0	0	0	0	-	-
Occupational Disease Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatalities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Safety performance for all Workers (Excluding Employees) (2017-18 & 2016-17)																
	TMML				TAL				TTL				TMLDL			
	2016-17		2017-18		2016-17		2017-18		2016-17		2017-18		2016-17		2017-18	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Lost Time Injuries (Nos.)	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lost Time Injury Frequency Rate Including Fatalities (per million man-hours)	2.51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Recordable Cases (Nos.)	15	0	4	0	3	0	1	0	0	0	5	2	1	0	0	0
Total Recordable Cases Frequency Rate (per million man-hours)	9.75	0	1.47	0	22.35	0	1.09	0	0	0	0	0	0.43	0	0.39	0
Fatalities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



### Safety Trainings

Training and awareness across the organisation is considered as a key element of Safety Strategy. Key leaders trained on safety management aspects such as Safety Management Fundamentals, Incident Investigations, Contractor Safety Management, Actions Employees Can Take (AECT) etc. To sustain this drive, 500+ internal trainers from different functions are certified to deliver Safety trainings apart from the safety professionals. Videos are developed for 10 standards & showcased to enhance impact of the trainings and create more awareness. Video films have been made in Hindi for blue collar employees to have better understanding. Training e-modules to complement training efforts are developed. Safety is a part of induction programme for all employees working in operations. AECT (Actions Employees Can Take), SAM (Safety Action Meetings), TTT (Train the Trainer) for Incident Investigation Trainings and Safety Observations, etc. are few methods to develop people to impart training. As part of statutory requirement, personnel operating on hazardous operations are sent to Regional Labour Institute (RLI) for training. On the Health & Safety management system OHSAS 18001, identified employees are trained as Lead auditors and internal auditors.



To keep pace with the new technologies and stay updated on latest improvements in safety, a refresher training is organised by divisional safety coordinators/shop heads to impart training to employees. Refresher training boosts self-confidence and morale of employees. All the standards developed in the 1<sup>st</sup> & 2<sup>nd</sup> phase have been capsuled in e-learning modules for refreshing the concerned employees. Training & Capability Building sub-committee monitors the deployment of the safety training process across the company.

### Communication, Consultation and Participation

Workers participation and consultation are ensured through various forums such as shop level safety committees, Safety Action Meetings (SAM), AECT forum and HIRA committee. Safety performance is reviewed by all levels of management. (e.g. Senior leaders review the safety performance of the line).

The strategic push to Occupational Health (OH) is guided by the Corporate Safety & Health Policy which is governed by the established matrix SH&S structure at Corporate Office. The 'Health Vertical' has a Single Point of Contact on Occupational Health for ensuring uniform deployment of company's health strategy across all manufacturing & non-manufacturing sites.



Enabling Immunization, imparting First-aid training and creating general health awareness amongst employees is an ongoing activity across plants. All the offices are enabled with AED (Automated Electronic Defibrillators) to attend any cardiac related situations with trained people. Health index is monitored across plants .

Lectures and Health talks by experts and specialists are organized on chronic and lifestyle diseases, example Know your Heart, Diabetes & Women, Hypertension etc., for the benefit of employees, especially women employees and their families.

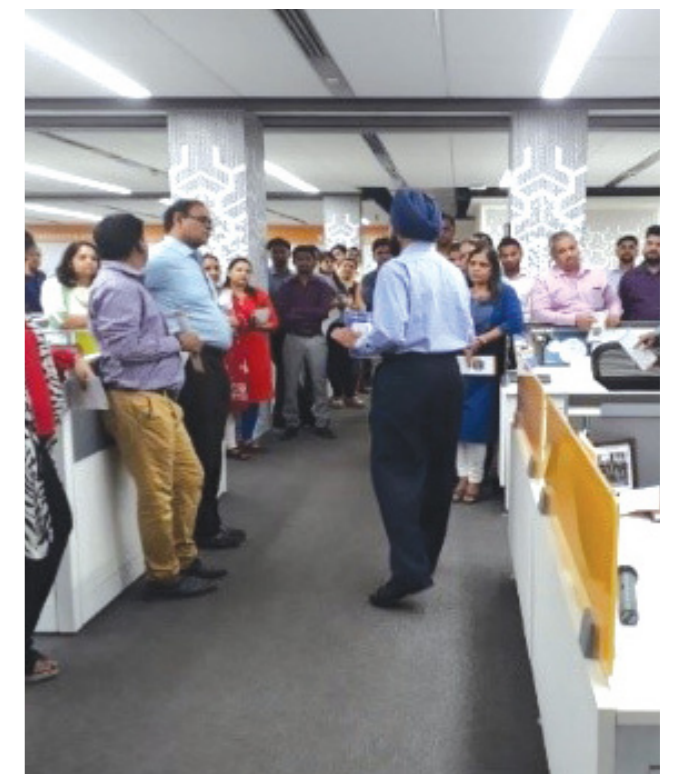


### Emergency Preparedness, Response and Crisis Management

On site emergency response procedures have all possible emergency scenarios viz. Fire, Explosions, Spills, Natural calamities etc. and important telephone contacts along with list of emergency response team members. Roles and responsibilities are communicated to respective employees; mock drills are conducted periodically to ascertain preparedness of the workplace.

It helps in conditioning employees for faster response to curtail losses in terms of human life and asset losses. This facilitates faster recovery. The de-briefing after the mock-drills helps in identifying opportunities for improvement and closures. All Plants are OHSAS 18001/IMS certified. Emergency preparedness plans have been put in place and employees have been trained.

In Offices/Warehouses, Emergency Preparedness Drills are conducted at regular intervals in compliance with internal/regulatory requirements.





## 'i-care' Programme

As part of TATA Motors "Safety Excellence Journey – Level NeXT", we have initiated a Holistic programme, i-Care covering Blue collars – the vulnerable group for injury.

i-Care Programme includes detail workshops for Specific workgroup on Care Culture, Personal Safety, Safety Rules at workplace, and various group activities to sensitize and improve employee hazard recognition and improve Risk perception.

Overall intention is to improve awareness on Safety at personal front, improve Care culture, raise up Risk perception, and bring more ownership of Safety amongst the workforce.

### Following are the component of i-Care Programme:

- Capability Building: Focus Training by Safety Team/Best Trainers on following subjects:

on JSA/HIRA, Lesson Learnt, AECT (Actions Employee Can Take)/SAM (Safety Action Meeting), Incident Investigations.

- Setting up of AECT & SAM Register and Reporting Process: Improvement in the robustness of AECT & SAM Process.
- Structured Coaching/Interactions.
- Recognition of Performance on Safety.
- Review and Monitoring on Regular basis.



# Value Chain Sustainability







# Value Chain Sustainability

Due to our scale of operations, we have a diverse set of vendors and suppliers pan India. With a view to ensure business continuity, we monitor their performance frequently. This section covers our strategies regarding the entirety of our value chain starting from sourcing raw materials to dealers who manage our end products.



## Dashboard of TML for 2017-18: Value Chain Sustainability



**57.88%** Procurement from Local Sources

Implementation of Phase II of Sustainable Supply Chain Initiative



Conducted On-site Sustainability Assessment of **66** suppliers in Phase II (Total **118** in last two years)

**14** Suppliers Reduced Energy Consumption and GHG Emissions.



Shared Sustainability Guidelines with **120** Tier II Suppliers

# Value Chain Sustainability



“ At Tata Motors, our greatest asset is our people, including those in our extended family of dealers and suppliers. All of the operational improvements underway within TML are designed to better serve our dealers and suppliers. While we already see the positive impact of our efforts, we will continue to improve our relationships which will be the bedrock of our sustainable future. ”

**Thomas Flack**  
Chief Purchasing Officer

As a leading automobile company with a wide range of products, we interact with a large base of suppliers in the entire length of our value chain. We take care to monitor our relations based on supplier performance & market demand. This section covers our strategies regarding the entirety of our value chain starting from sourcing raw materials to dealers who manage our end products.

Value chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation & the input of various producer services), delivery to our consumers, & final disposal after use.

### Tata Motors Value Chain

Our wide network of supplier base is periodically rationalized on the basis of performance & market requirements. We engage with our supply chain on a range of issues through our Engineering Research Centre

(ERC), Strategic Sourcing (SS) & Purchase & Supply Chain (P&SC). Our communication & business transactions with the suppliers are managed through a dedicated internet portal called Supplier Relationship Management. TML engages with dealers through an integrated CRM-DMS, which enables us to monitor finances & inventory at dealer level, & services, spares & complaints at the customer end.

Our supply chains are characterized by technology driven suppliers of proprietary components (fuel pumps, tires, adhesives, sealants, electronic controls etc.) & well-established tier structure inherent to manufacturing sector & large number of Small & Medium Enterprises (SME's).

At TML we are committed towards making our products more sustainable than ever. To produce high quality vehicles while minimising the environmental impact during our production cycle, TML has taken steps towards adopting a comprehensive environmental management system. A significant part of the supply chain is manufacturing companies that are technology driven & energy intensive. Continuous efforts are undertaken to increase the energy efficiency & develop innovative mobility solutions to reduce the GHG emissions. To further reduce the indirect emissions, TML has taken a strategic decision to source most of its components, constituting about 92% from India. Dealers are supported to the fullest extent to build their knowledge & capacity to perform sales & also communicate to customers efficiently about our product & brand. TML places strong focus to improvise its logistics system which leads to reduced cost & improved efficiency.

### Conflicts Mineral Management

The United States Dodd-Frank Act, Section 1502, is a landmark legislation that requires manufacturing companies to identify & disclose to the U.S. Securities & Exchange Commission (SEC) the source of 3TG minerals (Tin, Tantalum, Tungsten & Gold) used in their products when those minerals originate from or around the war-torn region of the Democratic Republic of the Congo (DRC).

As a Securities Exchange Commission (SEC) registrant, we need to be in compliance with the requirement of the



aforesaid section. In this regard, we have developed company-wide Conflict Minerals Policy & have a Conflict Minerals Compliance Program in place to implement our Conflict Minerals Policy. This is necessary for auto components/sub-systems sourced by TML may have 3TG minerals.

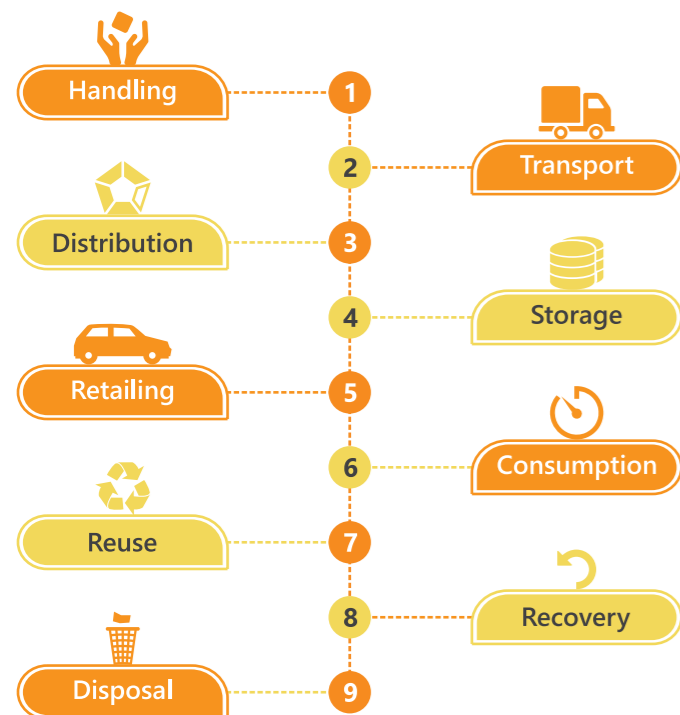
### Packaging & Logistics Management

Integrated packaging has a significant effect on the efficiency & effectiveness of the supply chain. This is fairly a new concept also known as packaging logistics which could contribute in increasing the sustainability of the supply chains.

Integrated packaging includes:

1. Process of planning
2. Implementing & controlling the coordinated packaging system of preparing goods

Objective of this function is to maximise consumer value & sales by ensuring secure, safe, efficient & effective process for the following:



P&SC has initiated global actions centrally for optimizing logistics, packaging, cost & reducing damages to auto components. Several factors such as labour, material flow, pull systems, layout, cost, safety, ergonomics etc. are considered before finalising the design of packaging & labelling. Returnable type of packaging such as polypropylene boxes is gaining more importance over single use type of packaging. This is done to achieve reduction of expendable packaging dunnage for components such as fender, rear wall, dashboard, fuel tanks etc. For heavier components, returnable & foldable

steel bins, pallets, trolleys, plastic bags are used. Also, wood packing is replaced by steel rack packing design.

Another step in this direction includes setting up of consolidation centres at key geographical locations across the country to streamline material receipt inline with production plans. 'Milk Runs' for local runs transportation were established (Kolhapur region for Pune CV, Pune PV, TML Dharwad from Pune etc.), in which transport vehicles collect components from suppliers as per requirement & transport to our manufacturing plant, which avoids use of multiple vehicles & material handling. To optimize number of trucks entering the manufacturing plants, special containerized vehicles (32' & 52') were introduced for optimum payload utilization.

### Local Sourcing

Procurement is a strategic function to help improve profitability. Our seven manufacturing plants across India source material from hubs located in north, west and south of the country and hence promote the local industry and community. To establish the supply chain base at green-field locations, vendor parks were set up at Sanand and Pantnagar. All these steps have resulted in the growth of the local economy, promoted local procurement, reduced logistics complexities and have minimized packaging and transportation. In FY 2017-18, our manufacturing plants sourced 57.88% of materials and services by suppliers based within the state where our plants are located. In addition to all the above mentioned principles, Dealer code of Conduct includes the aspect of Fair competition as well. TCoC has been communicated to dealers and suppliers and are expected to ensure compliance. Dealers and suppliers can notify TML about their ethical concerns and grievances to [ethicsoffice@tatamotors.com](mailto:ethicsoffice@tatamotors.com)

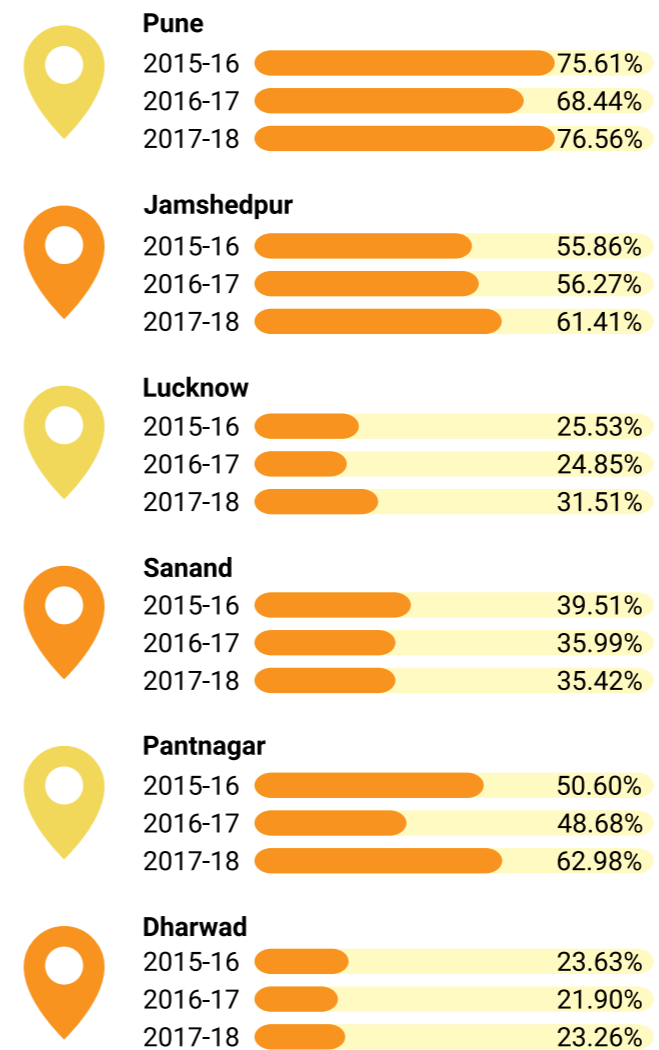
### Value Chain Engagement

To strengthen the quality of the components supplied by our value chain, we launched the Tata Motors Integrated Supplier Quality Manual. The manual provides a common 16 step process to ensure that TML requirements are complied with by all the partners to achieve the highest quality standards. Vendor councils have been established in the -North, South, East and Western regions of India to provide a platform for the top-level management and suppliers to interact. Periodic vendor meets are held at every location to communicate on key issues like- supply schedules, quality and vendor ratings.

TML has a dedicated code of conduct for suppliers as well as dealers. All the suppliers are expected to adhere to the Principles of TCoC such as:

- Products & Services**
- Bribery & Corruption**
- Regulatory Compliance**
- Gifts & Hospitality**
- Human Rights**
- Environment**
- Health & Safety**
- Third Party Representation**
- Conflict of Interest**
- Reporting Violations Mentioned**
- Protecting Company Assets**

Engagement with dealers is done through periodic National Dealer Council, Regional Dealer Councils and Annual Dealer Conference and these interactions serve as a platform for discussing strategic and tactical plans for business growth.



### Sustainable Supply Chain Initiative

As we are a global automotive company, we have a diverse and complex multi-tiered supply chain. Environmental, Social and Governance (ESG) performance of supply chain is one of the key sustainability issues for us. In order to ensure compliance with ESG and avoid business continuity and reputation risks we have taken up this sustainable supply chain initiative to track and improve ESG performance of the supply chain.

### Management Approach Towards Sustainable Supply Chain

In line with our Sustainability Policy and Environmental Procurement policy, we are committed to adopt a procurement process integrating Ethical, Environmental and Social principles. We are engaging with our suppliers to sensitize them on issues of environmental impact, social impact and ethical conduct of the business which can pose a threat to their business continuity and brand dilution.

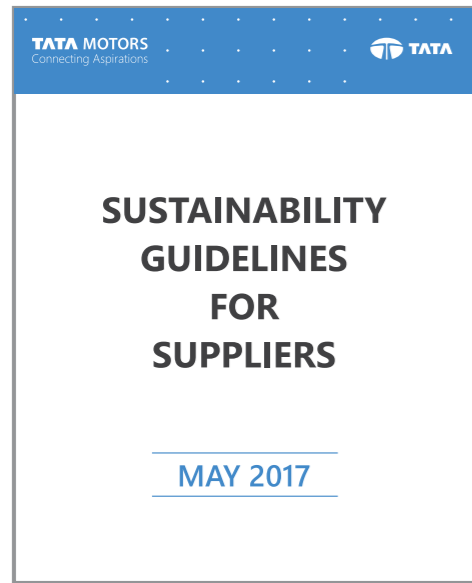
To make the upstream supply chain more sustainable and increase awareness among suppliers on Environmental, Social and Governance (ESG) issues, a focused initiative has been taken up by our corporate SHE to SH & Sustainability team, with support from plant level Purchase and Supply Chain teams.

Our Sustainable Supply Chain Initiative is being implemented in phases. In Phase I, during FY 2016-17, we had built the foundation for engaging and sensitizing our supply chain on ESG issues through formulation of Guidelines, preparation of data template, conducting workshops for suppliers and training sessions for local TML's purchase & supply chain team, data collection from suppliers and on-site sustainability assessment of suppliers. During FY 2017-18 we have expanded our supplier outreach from 52 suppliers in FY 2016-17 to 66 suppliers in FY 2017-18 under on-site Sustainability Assessment. We have modified our systematic approach based on the feedback received from different stakeholders during implementation of Phase I of this initiative.

The details of Phase II are given as follows:

- We have modified the "Sustainability Guidelines for Suppliers", covering key topics like governance, legal compliance, TCoC, management system certification, transparency & reporting, Occupational Health and Safety, labour and human rights. Furthermore, TML's policies related to Sustainability, Environment, Safety & Health, Climate Change and Environmental Procurement are also shared with suppliers as a part of this guideline.





safety, packaging & logistics and social obligations of suppliers are also collected.

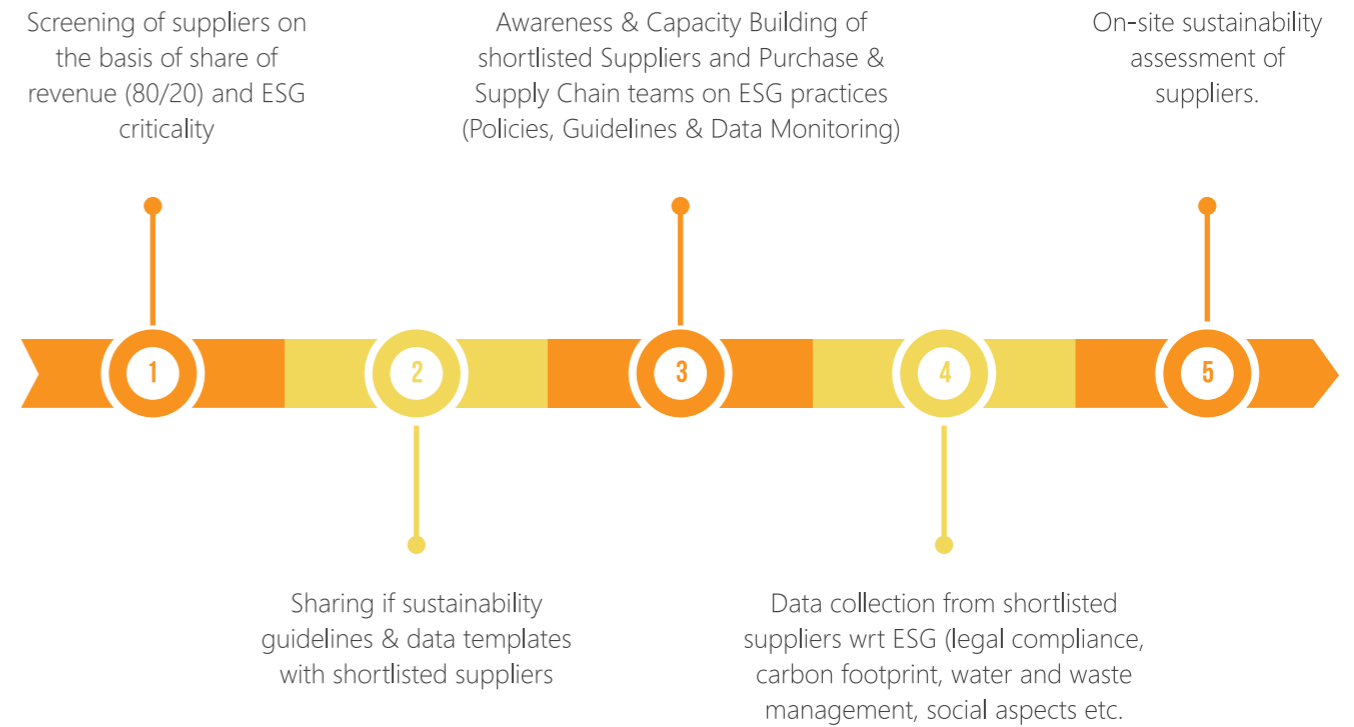
- Workshops were conducted to sensitize our suppliers on the importance of sustainability and threat posed by ESG factors on business continuity and brand reputation. Through these workshops, we felicitate our suppliers and provide them a platform to share their success stories and exchange best practices. In order to expand our supplier outreach, Tier II suppliers were also invited to attend these workshops. This year, we had organized workshops at Sanand, Pantnagar, Jamshedpur, Dharwad, Tata Marcopolo Dharwad and Lucknow plant wherein more than 90 suppliers participated actively.



- After participating in the workshops, suppliers shared the sustainability data which was reviewed and on-site sustainability assessment of 66 suppliers was conducted across different locations of TML. During on-site assessment, we not only verify the data shared by them but also sensitize them on sustainability and provide opportunities for improvement in their sustainability performance.



**Sustainable Supply Chain Initiative - Approach**

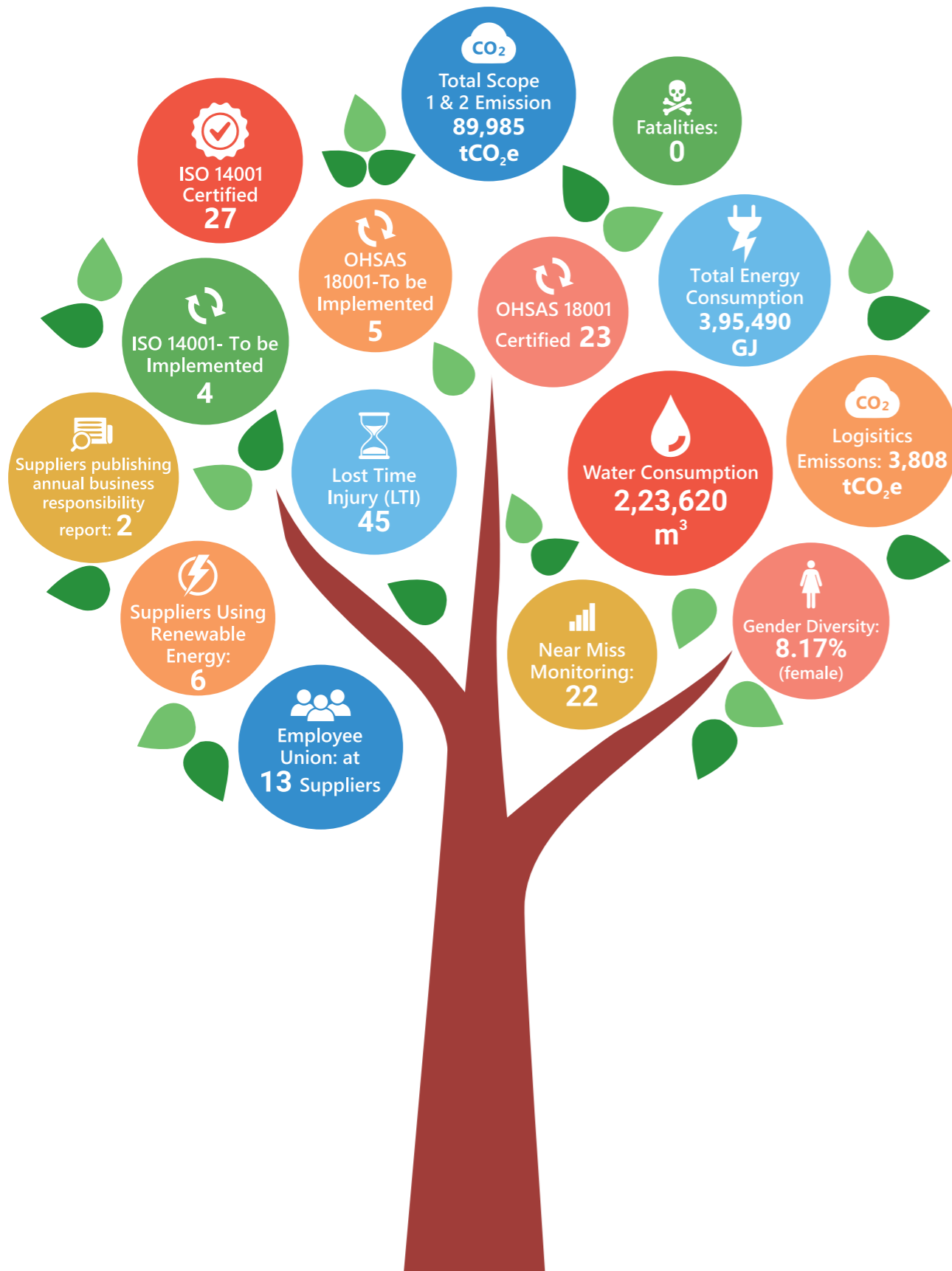


Mahle Behr India Pvt Ltd. was felicitated by Mr. Satish Borwankar, COO & ED, for active participation in Sustainable Supply Chain Initiative of Tata Motors.

- 7 AFFORDABLE AND CLEAN ENERGY
- 8 DECENT WORK AND ECONOMIC GROWTH
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

### Our Supply Chain Performance in 2017-18

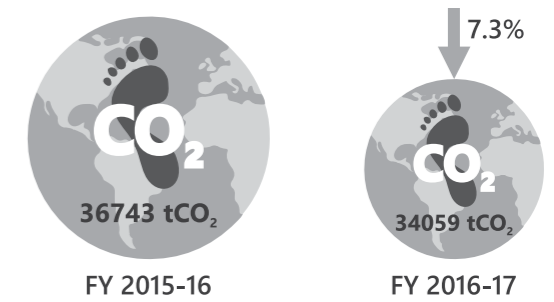
As aforementioned, we have conducted site assessment of 66 suppliers and the combined performance is as below:



Phase-II performance of Sustainable Supply Chain Initiative, reflects our success in creating awareness among our Tier I suppliers on Environmental, Social & Governance issues. Five of our suppliers have already made the transition to ISO 14001:2015. Fourteen suppliers achieved 7.3% reduction in their annual carbon footprint i.e. approximately 2,684 tonnes of CO<sub>2</sub> saved. There were no incidents of labour and human rights violations and non-compliance with environmental and social regulations. The adherence with TCoC – Supplier code of conduct and legal compliance with economic, environmental and social norms and regulations has been assessed by TML. Moreover, 12 suppliers participated in Phase I of this initiative were felicitated for their noteworthy sustainability performance.

The above 66 suppliers have even shared TML's "Sustainability Guidelines for suppliers" with 120 Tier II suppliers and assessed them through questionnaire on management system certifications, namely ISO 14001, OHSAS 18001, ISO 50001 and TCoC.

### Overall Reduction in Carbon Footprint for FY 2016-17 Achieved by 14 Suppliers.



### Way Forward With Our Supply Chain

By the end of FY 2017-18, we have completed site assessments of 118 Tier I suppliers. In FY 2018-19, we aim to target an additional 82 of our total 200 critical Tier I suppliers. We shall continue to conduct workshops & provide platform to suppliers to share their best practices based on our current study of critical suppliers. Through this initiative we are ensuring consistent legal compliance & reducing energy consumption and carbon footprint of our supply chain.

### Sustainability at Gabriel India Limited

Gabriel India Ltd., one of our critical Tier I suppliers, who has been evaluated as part of our on-site sustainable supply chain assessment, is making commendable progress towards environmental sustainability. As a step towards reducing their carbon footprint, Gabriel has incorporated the usage of Renewable Energy (RE) to meet part of their total energy demand. In addition to RE procured through Power Purchase Agreement (PPA), roof top solar panel installations have also been made for in house RE generation. They have also been focussing on elimination of other air emissions and waste generation through the installation of green technologies like Autophoretic painting (which has eliminated phosphate sludge & VOC's) and Dynamo Chrome Plating Facility (zero chrome discharge).



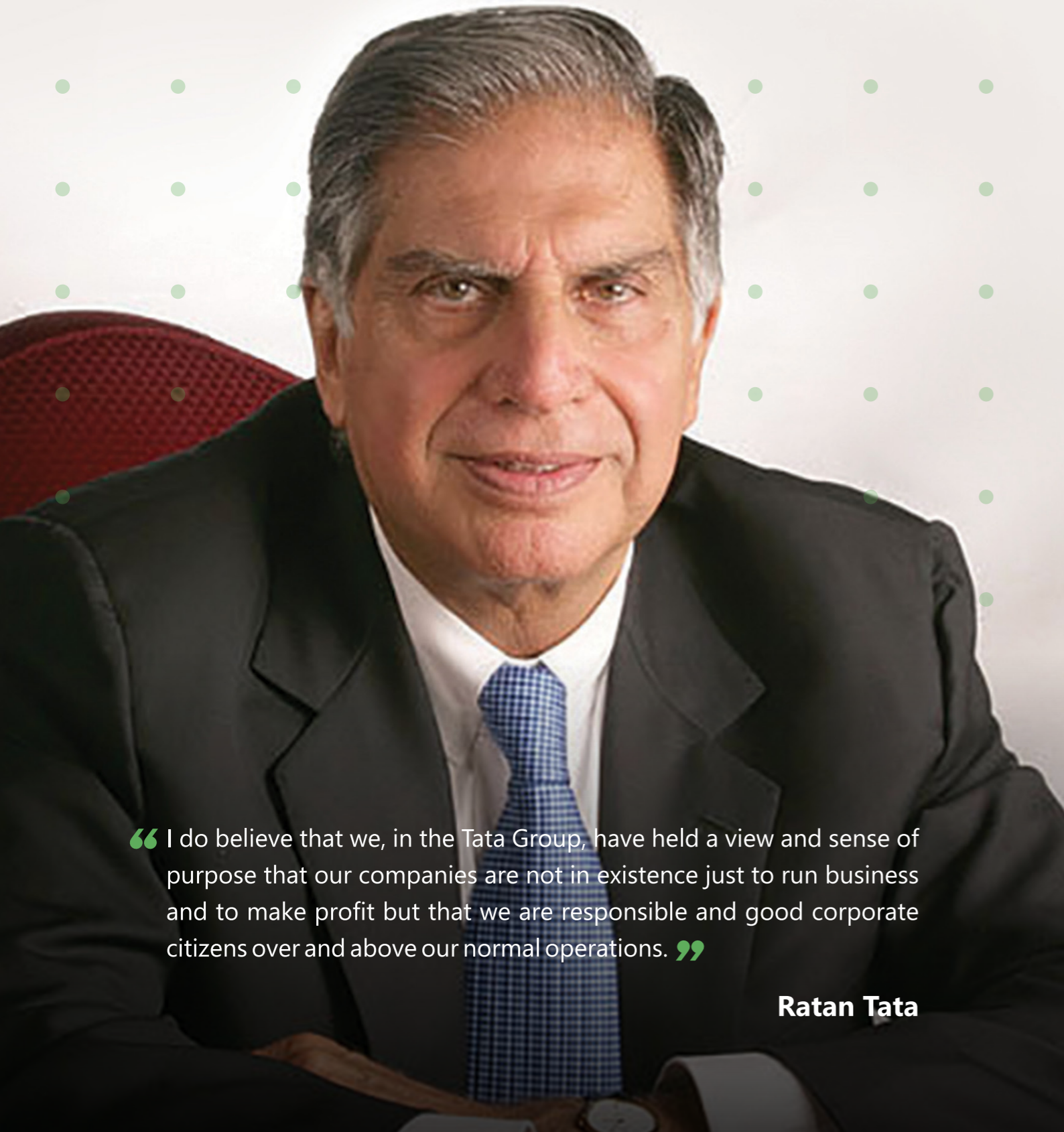
Solar Installations

AutoPhoratic Plant

Plating Plant



# CSR



“ I do believe that we, in the Tata Group, have held a view and sense of purpose that our companies are not in existence just to run business and to make profit but that we are responsible and good corporate citizens over and above our normal operations. ”

**Ratan Tata**

# CSR

Social responsibility and the spirit of 'giving back to society' is a core philosophy and good corporate citizenship is strongly embedded in our DNA. We are involved in a wide variety of community development and environment preservation projects to help solve social issues through our business. Our social activities focus on health, primary education, skills training and entrepreneurship, livelihoods, women empowerment and strengthening services for the differently-abled.



## Dashboard of TML for 2017-18: CSR

**9706** Employees Participated In Volunteering

**45,000** Volunteering Hours

**₹ 214.3 Million** Spent for CSR in FY 2017-18

**40%** of CSR Budget For Development of SC/ST Societies.

Extended Business of **₹ 108 Million** to 20 AA Vendors

Scholarships Given to **1092** AA (Affirmative Action) Students

# CSR



“Tata Motors has earned a reputation in automobile engineering by producing innovative products which excite our customers globally. As a part of the Tata Group company, we have far richer legacy of contributing to society and nation-building. On completing 150 Years of the Tata Group, we re-dedicate ourselves to shaping the future of our nation, and our commercial vehicle drivers in particular, by delivering sustainable mobility solutions.

Drivers, especially of commercial vehicles, drive our nation come what may. They spend most of their time away from their families and in our vehicles. As the leader in commercial vehicles, we at Tata Motors owe it to these unsung heroes to help improve the quality of their lives and enable them to meet their aspirations, whether it is by providing them with a comfortable environment within the cabin, updating their skills through various training programs, creating awareness about health concerns or in assisting them with avenues for career advancement, as well as recognizing them for their contributions to this great nation.”

**Girish Wagh**  
President, CVBU

Guided by the philosophy of inclusive community development, meaningful social engagement has been at the heart of our corporate social responsibility efforts. Pan India presence (seven manufacturing locations and one corporate location) helps in engaging with diverse social groups and maximising social welfare footprint by deploying Common Minimum Programmes across these locations. The thrust areas of these programmes are - Health (Aarogya), Education (Vidyadhanam), Employability (Kaushalya) and Environment (Vasundhara). Inclusive development is ensured through our Affirmative Action programmes (under the umbrella of Aadhar initiatives) for the marginalised SC/ST communities. In line with our TCoC and values of Tata group, we are committed to build responsible business that meets the needs of our stakeholders.

In line with our CSR policy, we believe in actively assisting in the improvement of the quality of life of the people in the Communities by giving preference to local areas around our business operations. We constantly work towards adding value to each one's life. At the heart of all our endeavours are members of the community who actively participate in the planning and execution of our initiatives. Our planning, with a focus on the community, helps us to understand its changing needs better and thus we develop programmes which address these.

### Our Community Engagement Management



At the Tata Group, we always believe that our core values and community centric approach, forms the bedrock to broaden our CSR footprint and enhance our contribution to sustainable development. As a leading automobile manufacturer with a presence in 175 countries we continuously align our strategies to meet international and national development goals.

### CSR AT TATA MOTORS Approach, Principles & Guidelines

- Philosophy**  
More from Less from More implies striving to achieve scale by judicious utilization of resources, to achieve greater impact. It is realised by forging partnerships and leveraging technology.
- Approach**  
Tata Motors adopts human lifecycle approach by offering age continuum CSR programmes which are horizontally linked to each other.
- Engagement of Tata Motors' Eco-System**  
Engaging business partners in the entire value chain.
- Measuring Impact**  
Adoption of socially appropriate impact measures like SROI.
- Business Connect**  
Employability programmes have business connect.

The CSR committee comprises of 2 Independent Directors, 1 Executive Director and 1 Managing Director. This committee meets 3 to 4 times a year to approve policy and budget related to CSR activities.

The selection of the community engagement activities is done on 5 key criteria:

- Proximity of the local community;
- Alignment with our four focus areas;
- Deprived section of the society (SC/ST) under our Affirmative Action;
- Innovation in our value chain and
- Measurable and clear outcome.

Through our affirmative action programme "Adhar", we reach out to groups (scheduled castes and scheduled tribes) which have been marginalized, historically. Out of our CSR budget, 40% is earmarked for programmes designed to uplift them through education, making them employable and entrepreneurship.

We see employee volunteering as character building activity that helps all our employees become socially responsible individuals. For programme execution, we rely heavily on our implementing partners who are experts in their domain. Guided by the motto of More from Less for More, we collaborate with dealers, subsidiaries and vendors who are the main players of our ecosystem. This

is done with a view of taking our message of social good to a larger base.

Ongoing dialog with stakeholders and experts, and benchmarking our performance, are key foundations for our work. Open communication with community members and our implementing partners helps us to obtain valuable insights to improve our programme.

Health, education, employability and environment are the four pillars of our CSR programme "Ankur". Aarogya focuses on enhancing the health of infants, adolescent girls, pregnant women and lactating mothers. We also hold awareness sessions for community members on preventive measures for better health. Amrutdhara, our flagship programme undertaken by the Sumant Moolgaonkar Development Foundation, facilitates sustainable drinking water solutions.

We are all aware that there is a high dropout rate among students at the higher secondary school stage. Vidyadhanam, our education programme strives to improve the accessibility and quality of secondary education and aims to counter this problem. Special coaching classes are conducted to help students to excel in competitive exams. Financial support is also extended to students to pursue engineering courses. Mentoring sessions with senior Tata Motors management help students understand challenges in their area of interest.

The objective of Kaushalya, the skill development programme is to enhance the employability of youth by training them in automotive and non-automotive trades. Most popular among the training courses are the driver and motor mechanic courses. Community members are also offered agriculture and allied training which helps them to pursue income generating activities like animal husbandry, floriculture and kitchen gardening. Skill development courses include the component of on-the-job-training (OJT) where the students are placed in the Tata Motors ecosystem and are paid a stipend for the period of their apprenticeship.

Vasundhara, our environment programme promotes environmental consciousness among community members, school students and our employees by engaging them in plantation and cleanliness drives. Our CSR teams encourage community members to use renewable energy products by distributing solar lamps. We also promote innovative products like smokeless chulhas that reduce the carbon footprint.





Tata Motors strives for inclusive development through its affirmative action programmes under the umbrella of Aadhar. Affirmative Action focuses specifically on dalit & tribal communities & as a strategy it ensures 40% beneficiary coverage & budgetary allocation from its CSR expenditure. The initiative falls under the direct purview of the CSR committee of board and is championed by senior management across all plants.

The objective of our Affirmative Action (AA) programme is to mainstream Scheduled Castes/Scheduled Tribes communities through focused programmes in the area of Employment, Entrepreneurship, Employability & Education.

We have developed business-linked programs which are implemented across the country in partnership with our dealers & NGOs/Technical training agencies, to bridge this gap. Every year we recruit around 5,000 youth under the Apprentice Training and NEEM Program.

We have also partnered with various State Governments, such as Bihar Mahadalit Vikas Mission & West Bengal Scheduled Castes & Scheduled Tribes Development & Finance Corporation for skill development of SC/ST youth in

automotive trades, in line with our philosophy of 'More from Less for More'

We provide financial aid through scholarships & also conduct special coaching programmes for students belonging to SC/ST background drop-outs of schools (as high as 50%) due to insufficient funds. This helps them to complete their education. In FY 2017 -18, we have given scholarships to 1092 AA students. We have increased our outreach of special coaching classes & presently, 21511 AA students across locations are enrolled in it.

We also train and mentor enterprising SC/ST youth & encourage them to become entrepreneurs. Our Strategic Sourcing Team has undertaken several initiatives to include them in its vendor base. The team identifies AA vendors who can supply auto components & on clearing the initial verifications and quality checks they are registered in the TML database. Efforts are then taken to build capacity of Tier-2 AA vendors to enable them to become Tier 1 suppliers. Currently, Twenty AA Vendors are associated with our Tier-1 supply chain & their share of business has progressively increased over the years.



World Bank data indicates that malnutrition is rampant among children in India. We fare abysmally on the World Hunger Index and India ranks 100th out of 119 countries on the global hunger index (Global Hunger Index, 2017). More than one-fifth of Indian children under five weigh too little for their height and over a third are too short for their age. Our health programmes tackle malnutrition through a holistic approach that involves children, adolescent girls, pregnant women and lactating mothers.

To ensure better nutrition and health awareness for children, pregnant women and lactating mothers we tie-up with anganwadis and nutrition rehabilitation centres. At some locations we have set up malnutrition treatment centres where infants suffering from severe acute malnutrition are taken care of and efforts are directed at improving their health status. Our initiatives also focus on holding awareness sessions for adolescent girls to address their queries on puberty, health and hygiene



IMPACT | Total 3,76,310 Lives Touched

- Addressing Malnutrition
• 89% of the malnourished children are in healthy zone
• 90% of SC/ST children are healthy

2909 lives touched

- Health Awareness
• Visible behavioural change in communities (health and hygiene awareness, WASH knowledge, attitude and practises)

60098 lives touched

Preventive & Curative Health
313303 lives touched

SDG icons: 1 NO POVERTY, 3 GOOD HEALTH AND WELL-BEING, 4 QUALITY EDUCATION, 6 CLEAN WATER AND SANITATION, 10 REDUCED INEQUALITIES, 13 CLIMATE ACTION, 15 LIFE ON LAND

### Day Care Centre at Pantnagar

Rampur and Shiv Nagar slums that neighbour the Pantnagar plant were found to have high number of malnourished children. To support their nutritional needs, improve health status in the district and encourage control feeding, a day care centre was established in collaboration with ICDS, district officials, Institute of Social Development (ISD) and medical practitioners. The centre facilitates outreach services through a team of medical and nutrition experts, provision of nutrition THR on fixed days for SAM and MAM children residing in the project area. The day care centre under the supervision of the ICDS serves 50 SAM/MAM children, where they are monitored regularly and receive monthly medical consultancy. To leverage the services in the rural pocket, mobile outreach health camp was conducted in 5 cluster pockets of the district providing medical, nutrition and referral services to the SAM/MAM children on monthly basis.



Mobile outreach health camp provided services to more than 250 SAM/MAM children in the rural pocket of the district Udham Singh Nagar.

### Amrutdhara (National Drinking Water Programme Through Sumant Moolgaokar Develpment Foundation (SMDF))

SMDF through its Amrutdhara programme aims to provide safe drinking water to water stressed villages across the country on a sustainable basis. The diversity in the geographical landscape gives SMDF an opportunity to innovate on water solutions. Depending up on the terrain, the water solution could be installing RO plant, developing percolation wells or rebuilding water reservoirs.



### Drought Mitigation at Osmanabad

Osmanabad district falls in Marathwada region and was facing drought for the fourth consecutive year. SMDF along with Paryay undertook the project of water conservation by reviving the age old practices of nalla deepening to augment the water storage capacity of the structure. The field team selected three villages - Wagholi, Nagjarwadi and Shingoli which faced severe water scarcity, high rate of migration, decreasing cultivable land on one hand and willingness of villagers to pool in resources on the other hand. The team worked to cater to immediate requirements through building and repair of existing infrastructure, introduction of better farming practises and inputs, long term solutions through capacity building to ensure sustainability of the projects and formation of monitoring and maintenance committees. Nallas were deepened and the farmlands were improved with bunds and farm ponds in the three villages for better catchment. The villagers participated in the infrastructure development phase by shram daan. Combination of availability of better inputs and irrigation increased the crop yield in the villages. A total of 293 farmers were impacted by the project.

Village Name	Kharif Season	Rabi Season
No. of Farmers Benefited	249	389
Acre of land Irrigated	453	787
Total Production in Quintal	2,247.95	7,562
Previous Production in Quintal	805.55	1,833
Per Acre Productivity in Qtl. Prv. Year in Qnt.	20.16	57.74
Per Acre Productivity in Qtl. This Year in Qnt	55.11	1,221.61

- 7.5 km nallas been dug and deepened with storage capacity of 25 crore litres of water
- Recharged 201 wells, 303 bore wells, 20 hand pumps
- Soil moisture improvement on 730 acres of land
- 1.6 times (Rabi and Kharif crops) improvement in production
- Over 40 kms of farm bunding has facilitated in-situ water
- conservation resulting in double/multi cropping
- 5,000 lives positively impacted
- Has arrested out migration of youth to 40%







**IMPACT** | Total **1,01,420** Students Benefitted

<b>Co-curricular Activities</b>	<b>48,847</b>
<b>School Infrastructure &amp; Village Education Development</b>	<b>14,585</b>
<b>Special Coaching</b> Average 5% improvement in marks among students	<b>14,585</b>
<b>Scholarships &amp; Grants</b>	<b>9,910</b>



### Holistic Education Development

Tupudang is a tribal hamlet which fares poorly across the human development indicators. Six more such villages shared the fate of Tupudang in the East Singhbhum district of Jharkhand. Team Jamshedpur took on itself to alter the developmental landscape across these seven villages by instituting programmes which cater to health, education and livelihood. Improvement of educational standards was identified as the top priority as it was found that pass percentage and enrollment ratios were low, drop out rate among students was high, and the school had poor infrastructure. Coupled with this was prevalence of apathy towards education in the community resulting in poor governance at schools. To address these challenges Tata Motors adopted a holistic approach which included instituting need based scholarships for students (especially for girls); introduction of support classes to augment learning in English, Mathematics and Science and improvement of school infrastructure through basic amenities like water, sanitation and classroom furniture. Tata Motors also started night schools to encourage adult learning. This infused interest in parents towards education. To bring in efficiency in school management Tata Educational Excellence Programme (TEEP) was introduced. TEEP follows a graded and time bound approach to management of schools thereby institutionalising better management and governance practises.



### TATA Samarth Scholarship

Tata Samarth Scholarship is a mentorship based rolling scholarship programme jointly instituted by Tata Motors, Tata Communications and Tata Henderickson. The objective of this programme is to support bright young budding engineers from economically weak & socially disadvantaged sections of the society. Till date 100 scholars have been supported financially, imparted soft skills and intense mentoring from the senior leadership of these companies. Of these, 54% are from SC/ST communities and 42% are women. 3 Samarth scholars found employment at Tata Motors upon completion of their graduate degree.

#### Features of Samarth Scholarship

- Scholarship worth INR 25000/ year
- Mentoring from Senior Leadership of Tata Motors, Tata Communications and Tata Henderickson
- Inputs on soft/life skills
- Internships & projects at Tata Motors and Tata Communications



Despite a huge labour pool, employability continues to be a major concern in India mainly due to the absence of a proper linkage between the formal education system and vocational training. A lack of formal skills makes this population largely unemployable. Ministry of Skill Development and Entrepreneurship reports that only 2.3 percent of the workforce in India has undergone formal skill training. Labour Bureau's fifth employment-unemployment survey reported that 13.2% of people between 18 - 32 years of age were unemployed.

Through our Kaushalya initiatives, we partner with skill development centers to support students with technically as well as financially, to address this skill gap. Centres for automotive trades like driver training and mechanic courses have us on board as knowledge and technical partners. We also promote non-automotive, market driven courses such as electrician training, computer skills and beautician training. An additional area that we are involved in is agriculture and allied training in the field of horticulture, floriculture, dairy development and animal husbandry that helps the cultivators earn supplementary income for the household.

**IMPACT** | Total **98,660** People Skilled

- Agriculture and Allied Training **1,461** People Trained
- Auto (driving and Servicing) and Technical Trades **93,715** People Skilled
- **57%** Employment / Self Employment Among Youth Trained
- **54%** of The Placed Youth Belong to SC/ST Communities
- Annual Income of The Beneficiaries Increased By 1 Lakh Rupees
- Non-Auto Training **3,484** People Skilled



### Driving Their Way To Break Gender Barriers



81685 people are trained through this programme across the country

Renugadevi is a mother of two school going children in Villivakkam Block of Tiruvallur District of Tamil Nadu. Her husband's meagre earning as an auto rickshaw driver was insufficient for running the household. She learnt of the driver training programme with AB Trust, a driver training partner of Tata Motors from her friend and without any second thought enrolled herself. At the driver training centre, she felt reassured when she saw other women who chose this path. "I was very excited to learn with the simulator" – exclaimed buoyant Renugadevi. In her 40 days training, along with driving skills their batch was taught soft skills which she found was equally useful in life. Upon completing her training she was offered job by a well known cab service. Some of the participants from the batch were employed at shopping malls as valet parking stewards. As part of the driver training programme, Tata Motors trained an exclusive batch of 120 women as drivers of which 50% belong to the SC/ ST communities. Apart from augmenting their annual income by 1.2 lakhs they have rediscovered themselves. With new found confidence they hope for a better tomorrow. Adding another feather to the driver training programme, Tata Motors in partnership with Pratham and Ola have leveraged on each others' capability to provide placement linkages to trained set of drivers in Mumbai. This programme focuses on grooming novice drivers on nuances of cab service with an earning of over Rs 15000 per month. The flagship driver training programme is conducted across 75 locations in India with the help of 38 partners. Tata Motors helps in developing infrastructure and equipping at these institutes, the trainers are trained by Tata Motors employees. To ensure that facilities at these training centres meet the global standards, the centres are equipped with simulators for better learning and dexterity. The programme has two modules : novice driver and refresher driver training.



### Breaking Gender Stereotypes



81685 people are trained through this programme across the country

Automobile is considered to be a male dominant industry and girls trained at Little Flower institute in Kerala are trying to break this notion. These female trainees are altering the perception that women cannot undertake heavy duty work especially when it comes to being a good technician (motor mechanic). These girls are seen fully greased while attending to a vehicle breakdown brought at Popular Motors. The customers are found awestruck. In the course of nine months of OJT (On-the-Job Training) these girls have proven their mettle as they have already been offered placement with Popular Motors. They also earned huge respect amongst the participants who showcased their skills during the technical festival held at Kolkata. These girls are part of Learn, Earn and Progress (LEAP) programme which imparts automotive skills (service technician) to school dropout youth. This is a one year course jointly run by Tata Motors and dealers. Students get theoretical inputs in industrial training institutes for three months and are placed with dealers to get hands on training through an OJT with Tata Motors dealers and Tata Authorised Service Stations (TASS) for nine months. Post training completion they are assessed by ASDC (Automotive Skill Development Council).

Total Trained **1037**
 Total Placed **84%**
**14%** Pursuing Higher Education
 **2%** Self Employed



**Lab To Land**


Lab to Land is an unique approach for promoting sustainable livelihood among farming community in seven identified tribal villages of Jamshedpur. The rural population is predominantly engaged in agriculture and completely dependent on rainfed irrigation. In absence of quality inputs and technical know-how these farmers fail to grow quality produce and remain susceptible to nature's vagaries (rain, pest infestation and crop failure). Due to their over dependence of monocropping, they are solely dependent on single source of income. Collaboration with Flora Horticulture Society aims to train these farmers as agripreneurs. The project partner brings high end technical know-how and infrastructure comprising of training labs & demonstration centres and experience based learning of various pilot projects. Livelihood security is ensured by diversifying efforts in income generating activities like bee keeping, duck & quail farming, mushroom cultivation, fruit plantation and pisciculture. The incubation phase of new projects at Flora ensure their high performance when implemented on the lands of the farmers. On the land granted by Tata Motors, several farming innovations are tested which were developed in laboratories by the technical partner. Technical know-how and quality inputs are shared with the beneficiary farmers and sustainability

TATA MOTORS CORPORATE RESPONSIBILITY REPORT | 2018 477484. The project is poised to scale up and reach 1000 farming households across 7 villages and enhance their income level by INR 12,000 - INR 15,000 per month by the year 2019. This is ensured by upskilling them. The project with a coverage of 100% tribal farmers and more than 80% female beneficiaries upholds the Affirmative Action policy and simultaneously meets the larger agenda of inclusion and women empowerment. The business interests of the company are linked with peaceful and harmonious relationship with different stakeholders including the neighbouring communities. It also facilitates meaningful engagement of employees in CSR initiative



Till date 254 tribal farmers (196 female and 49 male) have attended training sessions. 100% farmers are engaged in fruit plantation activities whereas 30% of the farmers are engaged in vocations like mushroom cultivation and pisciculture.



First harvest of mushroom cultivation yielded approximately 20 kg per farmer worth ₹6,000 per month.

The project is poised to scale up and reach 1000 farming households across 7 villages and enhance their income level by INR 12,000 - INR 15,000 per month by the year 2019.



The objective of our environment initiatives is to promote and build environmental consciousness among communities especially young and impressionable students. We also promote large scale plantation drives and support the development of community infrastructure. Our CSR teams promote and distribute devices that function on renewable sources of energy like solar lamps to the underprivileged.


**IMPACT**

Environment Awareness  
**56,161** Lives Touched

- Environment Awareness  
**56,161** Lives Touched
- Saplings Planted  
**1,03,746**
- **85%** Survival of Saplings Planted
- **90%** of the Saplings are Local Species

**Story of Smriti Van (Urban Forest)**


15 acres of land near Warje, Pune was transformed to an urban forest with the help of TERRE Policy Centre and Forest department. The local residents planted saplings in the memory of their family members thus earning the forest its name. The forest department collaborated through construction of water storage structures for watering the plants and laying the jogging track. Over the past two years this 15 acre patch is flourishing with rich biodiversity which includes 28 varieties of birds, 15 varieties of butterflies and 10 varieties of reptiles. It has emerged as a mini lung in the area and attracts over 1000 visitors on a daily basis.



## Environment Olympiad



To sensitise future generations on environmental issues and infuse a sense of social responsibility by adopting sustainable lifestyle an environmental olympiad was organised in collaboration with TERRE policy. More than 1,25,000 students took the online quiz which was available in 5 different languages. Students from classes V to VIII participated in the olympiad & Tata Motors collaborated with the west region team to ensure its success in Maharashtra. To ensure greater reach an online portal was set up for registration & study material was disseminated in 5 languages. 25,000 students from Maharashtra participated in the olympiad & 58% of them were girls. To sustain this, many schools have started eco clubs which work on the issues of waste management, water management & reduction in usage of plastic.



The volunteering activities undertaken by employees fall under two formats – Tata Volunteering Week (TVW) Pro-Engage. Tata Volunteering Week refers to month long volunteering activities wherein employees and their family members,

retirees, channel partners, dealers and vendors participate. Pro-Engage is a pro bono volunteering assignment where employees invest their professional/domain expertise to address social issues.



## Entrepreneurship



### Horizon Enterprises

Mr Kanifnath Jawale heads Anom Enterprise whose company supplied oversized safety shoes to Tata Motors. Tata Motors connected him to DICCI & groomed him to diversify their operations to supplying hand gloves, bags & other items. This resulted in an increase of his revenue to well over 6 lakhs annually. In 2015, Tata Motors referred Anom Enterprise to Thermax & John Deere which resulted in an increased income of 3.5 lakhs annually. In 2016, Mr Jawale registered a new enterprise - Horizon Plastic Industry that produces plastic moulds. He was also connected with Tata Capital which funded 18 lakhs towards his capital costs. The volunteering activities undertaken by employees fall under two formats - TVW & Pro-Engage. Tata Volunteering Week refers to month long volunteering activities that employees & their family members, retirees, channel partners, dealers & vendors participate in. Pro-Engage is a pro bono volunteering assignment where employees invest their professional / domain expertise to address social issues.

- Tata Motors engages with SC/ST entrepreneurs with an objective to extend business both within and outside its ecosystem.
- The capabilities of these vendors are enhanced through training and mentoring.
- Quality cost and delivery being equal, preference is given to SC/ST vendors over others
- Till date, 27 vendors have been developed. Cumulative business worth 42 crore has been extended till date.
- 10.8 crore business to 20 vendors in 2017-18.

## Pulse Polio Drive



As part of Tata Volunteering over 300 employees in Pune volunteered to further the mission of eradicating polio from the country. To action this they organised an awareness drive through cycle rally & administered polio drops at various polio centres & sub centres. Family members of employees also participated in these drives.



Through this drive the team was able to reach out to 30,000 citizens in Pune.





# Independent Assurance Statement

## Introduction and Engagement

Tata Motors Limited (hereafter 'TML') commissioned TUV India Private Limited (TUVI) to conduct the independent assurance of TML's sustainability report (hereinafter 'the Report'), which includes "reasonable assurance" of TML's sustainability information for the applied reporting period. This assurance engagement was conducted against the Global Reporting Initiative Standards and AA1000AS (2008) Protocol (Type 2, Moderate Level) for verification of the Sustainability Report. The onsite verification was conducted in May 2018 at Tata Motors Limited, Tata Technologies, and tier-1 supplier Gabriel India Ltd, located at Pune. In addition desk review was carried out for other sites which are parts of report boundary. TML opted for external assurance for the 2017-2018 financial year. The Report covers TML's sustainability information for the period 1 April 2017 to 31 March 2018.

## Scope, Boundary and Limitations of Assurance

The scope of the sustainability assurance includes following:

- Verification of the application of the Report content, and principles as mentioned in the GRI Standards, and the quality of information presented in the Report over the reporting period;
- Review of the policies, initiatives, practices and performance described in the Report;
- Review of the disclosures made in the Report against the requirements of the GRI Standards
- Verification of the reliability of the GRI Standards Disclosure on economic, environmental and social
- Specified information was selected based on the materiality determination and needs to be meaningful to the intended users;
- Confirmation of the fulfilment of the GRI Standards; 'in accordance' with the Comprehensive criteria, as declared by the management of TML

The reporting boundary is based on the internal and external materiality assessment. All the manufacturing plants of TML are part of this assurance. The reporting aspect boundaries are set out in the Report covering the sustainability performance of the TML encompassing below sites.

*Tata Motors Limited, India operations (Pune, Jamshedpur, Lucknow, Sanand, Dharwad, Pantnagar), Tata Technologies Ltd.(Pune), TAL Manufacturing Ltd.(Nagpur), Tata Marcopolo Motors Ltd. (Dharwad, Lucknow), TAL Manufacturing Solutions Ltd.(Pune); TML Drivelines Ltd. (Jamshedpur)*

Our engagement did not include an assessment of the adequacy or the effectiveness of TML's strategy or management of sustainability related issues. During the assurance process, TUVI did not come across the limitations to the scope of the agreed assurance engagement. No external stakeholders were interviewed as a part of the sustainability engagement.

## Verification Methodology

The Report was evaluated against the following criteria:

- Adherence to the principles of Stakeholder inclusiveness, Materiality, Responsiveness, Completeness, Neutrality, Relevance, Sustainability context, Accuracy, Reliability, Comparability, Clarity and Timeliness; as prescribed in the GRI Standards and AA1000AS (2008);
- Application of the principles and requirements of the GRI Standards for its "in accordance Comprehensive" criteria.

During the assurance engagement, TUVI adopted a risk-based approach, concentrating on verification efforts on the issues of high material relevance to TML's business and its stakeholders. TUVI has verified the statements and claims made in the Report and assessed the robustness of the underlying data management system, information flows and controls. In doing so:



- TUVI reviewed the approach adopted by TML for the stakeholder engagement and materiality determination process. TUVI performed limited internal stakeholder engagement to verify the qualitative statements made in the Report;
- TUVI verified the sustainability-related statements and claims made in the Report and assessed the robustness of the data management system, information flow and controls;
- TUVI examined and reviewed the documents, data and other information made available by TML for the reported disclosures including the Disclosure on Management Approach and performance indicators;
- TUVI conducted interviews with key representatives including data owners and decision-makers from different functions of the TML during the site visit;
- TUVI performed sample-based reviews of the mechanisms for implementing the sustainability related policies, as described in TML's Sustainability Report;
- TUVI verified sample-based checks of the processes for generating, gathering and managing the quantitative data and qualitative information included in the Report for the reporting period

## Opportunities for Improvement

The following is an extract from the observations and opportunities for improvement reported to the management of TML and are considered in drawing our conclusions on the Report; however they are generally consistent with the Management's objectives.

Opportunities are as follows:

- TML can undertake assessment of present emission targets following the "Science Based Targets" methodology (Sectoral de-carbonization approach or Absolute based targets or Economic approach)
- TML can include the scope 3 GHG emission as embodied carbon of each material "category 1 : Purchased goods and services" emissions and category 6 : Business travel emissions
- TML can opt for third party assessment of supply chain
- TML can undertake upcoming CSR project e.g. health check-up camp, training on road safety to driver at Transport Nagar of major cities.

## Conclusions

The Sustainability Report was prepared based on the GRI Standards Reporting Principles and Standard Disclosures 'in accordance' with the GRI Standards Comprehensive option. In our opinion, based on the scope of this assurance engagement, the disclosures on sustainability performance reported in the Report along with the referenced information provides a fair representation of the material aspects, related strategies, and performance indicators, and meets the general content and quality requirements of the GRI Standards Comprehensive option.

**Disclosures:** TUVI is of the opinion that the reported disclosures generally meet the GRI Standards reporting requirements for 'in accordance'- Comprehensive reporting criteria. TML refers to general disclosure to report contextual information about TML while the Management Approach is discussed to report the management approach for each material topic.

**Topic Specific Standard:** TUVI is of the opinion that the reported specific disclosures for each material topic generally meet the GRI Standards reporting requirements for 'in accordance'- Comprehensive reporting criteria. The requirements of all material aspect were verified by the assurance team during on site visit.

On the basis of the procedures we have performed, nothing has come to our attention that causes us to believe that the information subject to the Type 2 moderate level assurance engagement was not prepared, in all material aspects, in accordance with the GRI Standards "Comprehensive option" sustainability reporting guidelines, or that the sustainability information is not reliable in all material respects, with regards to the reporting criteria.

TUVI did not perform any assurance of procedures on the prospective information, such as targets, expectations and ambitions, disclosed in the sustainability information. Consequently, TUVI draws no conclusion on the prospective information. This assurance statement has been prepared in accordance with the terms of our engagement. Type 2 moderate level assurance engagement with respect to sustainability related data involves performing procedures to obtain evidence about the sustainability information. TUVI also assured the scope 1, 2, 3, GHG emission of TML. TUVI has evaluated below requirements in context of GRI Standards.



Stakeholder Inclusiveness: Stakeholder identification and engagement is carried out by TML on a periodic basis to bring out key stakeholder concerns as material aspects of significant stakeholders. In our view, the Report meets the requirements.

Materiality: The materiality assessment process has been carried out, based on the requirements of the GRI Standards, considering aspects that are internal and external to the TML's range of businesses. The Report fairly brings out the aspects and topics and its respective boundaries of the diverse operations of TML. In our view, the Report meets the requirements.

Responsiveness: TUVI believes that the responses to the material aspects are fairly articulated in the report, i.e. disclosures on TML's policies and management systems including governance. In our view, the Report meets the requirements.

Completeness: The Report has fairly disclosed the General and Specific Standard Disclosures, including the Disclosure on Management Approach, covering the sustainability strategy, management approach, monitoring systems and sustainability performance indicators against the GRI Standards, 'in accordance' with the Comprehensive option. In our view, the Report meets the requirements.

Reliability: The majority of the data and information was verified by TUVI's assurance team at TML's office on the factory's premises and found to be fairly accurate. Further desk review of web-based data was carried out for all other sites mentioned above. Some inaccuracies in the data identified during the verification process were found to be attributable to transcription, interpretation and aggregation errors and these errors have been corrected. Therefore, in accordance with the GRI Standards and AA1000AS (2008) for a Type 2, moderate level assurance engagement, TUVI concludes that the sustainability data and information presented in the Report is fairly reliable and acceptable. In our view, the Report meets the requirements.

Neutrality: The disclosures related to sustainability issues and performances are reported in a neutral tone, in terms of content and presentation. In our view, the Report meets the requirements.

TUVI expressly disclaims any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement. The intended users of this assurance statement are the management of TML. The management of the TML is responsible for the information provided in the Report as well as the process of collecting, analysing and reporting the information presented in web-based and printed Reports, including website maintenance and its integrity. TUVI's responsibility regarding this verification is in accordance with the agreed scope of work which includes non-financial quantitative and qualitative information (Sustainability Performance) disclosed by TML in the Report. This assurance engagement is based on the assumption that the data and the information provided to TUVI by TML are complete and true.

TUV's Competence and Independence

TUVI is an independent, neutral, third-party providing sustainability services, with qualified environmental and social assurance specialists. TUVI states its independence and impartiality with regard to this assurance engagement. In the reporting year, TUVI did not work with TML on any engagement that could compromise the independence or impartiality of our findings, conclusions and recommendations. TUVI was not involved in the preparation of any content or data included in the Report, with the exception of this Assurance Statement. TUVI maintains complete impartiality toward any people interviewed during the assurance engagement.

For and on behalf of TUV India Private Limited

Signature of Manojkumar Borekar

Manojkumar Borekar
Project Manager and Reviewer
Head - Sustainability Assurance Service

Date: 18/05/2018
Place: Mumbai, India
Project Reference No: 8115643516\_1
www.tuv-nord.com/in



GRI Content Index

Table with 4 columns: GRI Standard, Disclosure, Section Name, Page Number. Includes sections for Universal Standards, Organizational Profile, Strategy, and Ethics & Strategy.

GRI Standard	Disclosure	Section Name	Page Number
<b>GRI 102: General Disclosures 2016</b>	<b>GOVERNANCE</b>		
	102-18 Governance Structure	Governance, Sustainability Management & Initiatives	10 to 17
	102-19 Delegating Authority		10 to 17
	102-20 Executive-Level Responsibility for Economic, Environmental, and Social Topics	Governance	16-17
	102-21 Consulting Stakeholders on Economic, Environmental, and Social Topics	Stakeholder Engagement	42-43
	102-22 Composition of the Highest Governance Body and It's Committees	Governance	10 to 12
	102-23 Chair of the Highest Governance Body		10
	102-24 Nominating and Selecting the Highest Governance Body		10 to 12
	102-25 Conflicts of Interest	Governance- Tata Code of Conduct	13
	102-26 Role of Highest Governance Body in Setting Purpose, Values and Strategy	Governance	10 to 12
	102-27 Collective Knowledge of Highest Governance Body	Annual Report 2017-18	54,55, 72, 77-78
	102-28 Evaluating the Highest Governance Body's Performance		
	102-29 Identifying and Managing Economic, Environmental, and Social Impacts	Key Challenges: Faced and Emerging; Sustainability Management & Initiatives	16-18,40-50
	102-30 Effectiveness of Risk Management Processes	Key Challenges: Faced and Emerging	40-41
	102-31 Review of Economic, Environmental and Social Topics	Sustainability Management & Initiatives-Our Sustainability Governance	17
	102-32 Highest Governance Body's Role in Sustainability Reporting		17
	102-33 Communicating Critical Concerns	Governance- Ethics & Integrity	13-15
	102-34 Nature and Total Number of Critical Concerns		15
	102-35 Remuneration Policies	Annual Report	72,77,78
	102-36 Process for Determining Remuneration		
102-37 Stakeholders Involvement in Remuneration			
102-38 Annual Total Compensation Ratio	157-159,225, 242,249		
102-39 Percentage Increase in Annual Total Compensation Ratio	157-159,225, 242,249		

GRI Standard	Disclosure	Section Name	Page Number
<b>GRI 102: General Disclosures 2016</b>	<b>STAKEHOLDER ENGAGEMENT</b>		
	102-40 List of Stakeholder Groups	Stakeholder Engagement	42-43
	102-41 Collective Bargaining Agreements		42-43
	102-42 Identifying and Selecting Stakeholders		42-43
	102-43 Approach to Stakeholder Engagement		42-43
	102-44 Key Topics and Concerns Raised		46-47
	<b>REPORTING PRACTICE</b>		
	102-45 Entities Included in the Consolidated Financial Statements	About the Report	1
	102-46 Defining Report Content and Topic Boundaries	About the Report: Scope & Boundary	1
	102-47 List of Material Topics	Material Topics	45-47
	102-48 Restatements of Information	No restatement is applicable	NA
	102-49 Changes in Reporting	About the Report	1
	102-50 Reporting Period		
	102-51 Date of Most Recent Report		
	102-52 Reporting Cycle		
	102-53 Contact Point for Questions Regarding the Report	End Cover of the Report	End Cover of the Report
	102-54 Claims of Reporting in Accordance with the GRI Standards	About the Report	1
	102-55 GRI Content Index	GRI Content Index	135-153
	102-56 External Assurance	Independent Assurance Statement	132-134

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>TOPIC SPECIFIC STANDARDS</b>					
<b>ECONOMIC PERFORMANCE</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment ECONOMIC PERFORMANCE Independent Assurance Statement "	44-47,53-54,132-134		
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 201: Economic Performance 2016</b>	201-1 Direct economic value generated and distributed	ECONOMIC PERFORMANCE	53-54	TML, India	Annual reports of each of the subsidiaries are published separately and economic performance of each of the subsidiary is available in individual annual Report. Since all the annual reports are not published at the same time as that of Tata Motors Limited, we have not included economic performance of all the subsidiaries in TML's sustainability report.
	201-2 Financial implications and other risks and opportunities due to climate change				
	201-3 Defined benefit plan obligations and retirement plans				
	201-4 Financial Assistance received from the government				
<b>PROCUREMENT PRACTICES</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Value Chain Sustainability Independent Assurance Statement"	44-47,109-115,132-134		We have started engagement with suppliers for sustainable supply chain in 2016-17. We are in process to include all our Tier 1 suppliers in coming 3 to 5 years. Currently, we are not engaging with our subsidiaries' supply chain. We intend to do it in future.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 204: Procurement Practices 2016</b>	204-1 Proportion of spending on local suppliers	Value Chain Sustainability	109-115		

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>ANTI CORRUPTION &amp; ANTI-COMPETITIVE BEHAVIOR</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Governance Independent Assurance Statement"	44-47,13-15,132-134		
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 205: Anti-corruption</b>	205-1 Operations assessed for risks related to corruption	Governance	13-15		TML India
	205-2 Communication and training about anti-corruption policies and procedures				
	205-3 Confirmed incidents of corruption and actions taken				
<b>GRI 206: Anti-competitive behaviour</b>	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices				
<b>ENVIRONMENTAL</b>					
<b>MATERIALS</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Raw material Independent Assurance Statement"	44-47, 48-50,82-87,132-134		TML India
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 301: Materials 2016</b>	301-1 Materials used by weight or volume	Raw material	82-87		TML India, TAL, TMLDL, TMML
	301-2 Recycled input materials used				TML India
	301-3 Reclaimed products and their packaging materials				TML India
<p>This is not a part of our materiality matrix however, TML chose to voluntarily disclose on anti-competitive behaviour. All the Tata companies needs to adhere to Tata Code of Conduct for business ethic and integrity. Since this is not a part of the materiality matrix we chose not to include the disclosure for our subsidiaries in the sustainability report. We shall evaluate the intensity of linkage of each indicator with the subsidiaries and based on our study, we shall gradually include applicable indicators in the disclosure.</p> <p>TTL being in design development, raw material consumption is not applicable. The amount of recycled material used in the process of manufacturing are not been completely tracked for the subsidiaries. Currently, evaluating the intensity of linkage of each indicator with packaging materials are not reclaimed by our subsidiaries. We shall initiate the process of the subsidiaries. Based on our study, we shall gradually include applicable indicators in the disclosure.</p>					



GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>ENERGY</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Energy and Environment Independent Assurance Statement"	44-47, 48-50,58-67,132-134	TML India	"Energy consumption outside the organisation is applicable for all our subsidiaries however, currently the mapping of the energy consumption outside the organisation is not tracked. TML shall support all the subsidiaries in implementation of process for tracking the indicator and gradually include it in our future disclosure. The reduction of energy consumption within each of the subsidiaries is not currently tracked. We shall initiate the process of assessing the subsidiaries for tracking the relevant information and gradually include the disclosure for subsidiaries."
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 302: Energy 2016</b>	302-1 Energy consumption within the organization	Energy and Emission	58-67	TML India, TAL, TTL, TMLDL, TMML	"Energy consumption outside the organisation is applicable for all our subsidiaries however, currently the mapping of the energy consumption outside the organisation is not tracked. TML shall support all the subsidiaries in implementation of process for tracking the indicator and gradually include it in our future disclosure. The reduction of energy consumption within each of the subsidiaries is not currently tracked. We shall initiate the process of assessing the subsidiaries for tracking the relevant information and gradually include the disclosure for subsidiaries."
	302-2 Energy consumption outside of the organization			TML India	
	302-3 Energy intensity			TML India, TAL, TTL, TMLDL, TMML	
	302-4 Reduction of energy consumption			TML India	
	302-5 Reduction in energy requirements of products and service				
<b>WATER</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Water and Effluent Management Independent Assurance Statement"	44-47,48-50,76-78,132-134	TML India	Since water is not a part of materiality matrix and considering the relevance, we have not included the disclosure on significant water source affected by our subsidiaries' operations in our sustainability report for 2016-17. We shall evaluate the intensity of linkage of each indicator with the subsidiaries and based on our study, we shall gradually include applicable indicators in the disclosure.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 303: Water 2016</b>	303-1 Water withdrawal by source	Water and Effluent Management	76-78	TML India, TAL, TTL, TMLDL, TMML	Since water is not a part of materiality matrix and considering the relevance, we have not included the disclosure on significant water source affected by our subsidiaries' operations in our sustainability report for 2016-17. We shall evaluate the intensity of linkage of each indicator with the subsidiaries and based on our study, we shall gradually include applicable indicators in the disclosure.
	303-2 Water sources significantly affected by withdrawal of water			TML India	
	303-3 Water recycled and reuse			TML, India, TAL, TTL, TMLDL, TMML	

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>BIODIVERSITY</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Biodiversity Independent Assurance Statement"	44-47,48-50,79,132-134	TML India	Biodiversity has been identified as the least critical topic as per our materiality assessment. TML has voluntarily decided to include biodiversity as a material topic for Tata Motors Limited. As per Tata Group sustainability policy, all the Tata companies are to assess the natural capital, including biodiversity, for all its locations. Since the biodiversity has not been identified as medium or high critical issue, we have opted not to include this disclosure for our subsidiaries. We shall initiate the process of evaluating the intensity of linkage of each indicator with the subsidiaries. Based on our study, we shall gradually include applicable indicators in the disclosure
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 304: BIODIVERSITY 2016</b>	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity	79	TML India	Biodiversity has been identified as the least critical topic as per our materiality assessment. TML has voluntarily decided to include biodiversity as a material topic for Tata Motors Limited. As per Tata Group sustainability policy, all the Tata companies are to assess the natural capital, including biodiversity, for all its locations. Since the biodiversity has not been identified as medium or high critical issue, we have opted not to include this disclosure for our subsidiaries. We shall initiate the process of evaluating the intensity of linkage of each indicator with the subsidiaries. Based on our study, we shall gradually include applicable indicators in the disclosure
	304-2 Significant impacts of activities, products, and services on biodiversity				
	304-3 Habitats protected or restore				
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations				

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>EMISSIONS</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Energy and Environment Independent Assurance Statement"	44-47,48-50,58-67,132-134	TML India	Since the energy consumption outside the organisational boundaries of subsidiaries are not tracked, we are unable to calculate the Scope 3 GHG emission for each of the subsidiaries. Since the reduction of energy consumption is not tracked, the reduction of GHG emission could not be calculated. We shall initiate the process of assessing the subsidiaries for tracking the relevant information and gradually include the disclosure for subsidiaries.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
	305-1 Direct (Scope 1) GHG emissions	58-67	TML, India TAL, TTL, TMLDL, TMML		
	305-2 Energy indirect (Scope 2) GHG emissions	58-67			
	305-3 Other indirect (Scope 3) GHG emissions	61	TML India		
	305-4 GHG emissions intensity	62	TML, India TAL, TTL, TMLDL, TMML		
	305-5 Reduction of GHG emissions	62	TML India		
	305-6 Emissions of ozone-depleting substances (ODS)	Energy & Emissions: Ozone Depleting Substance	66	TML India TAL, TTL, TMLDL, TMML	
	305-7 Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant air emission	Energy & Emissions: Air Emissions	65-66		

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>EFFLUENTS AND WASTE</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Waste Management Independent Assurance Statement"	44-47,48-50,69-75,132-134	TML India	
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 306: Effluents and Waste</b>	306-1 Water discharge by quality and destination	Waste Management, Water and Effluent Management	69-75	TML India, TAL, TTL, TMLDL, TMML	NA
	306-2 Waste by type and disposal method		69-75		
	306-3 Significant spills		No significant spills		
	306-4 Transport of hazardous waste		No international transportation of hazardous waste		
	306-5 Water bodies affected by water discharges and/or runoff		69-75		
<b>ENVIRONMENTAL COMPLIANCE</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Environmental Expenditure Independent Assurance Statement"	44-47,48-50,80,132-134	TML India	NA
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 307: Environmental Compliance 2016</b>	307-1 Noncompliance with environmental laws and regulations	Environmental Expenditure	80	TML India, TTL, TMLDL, TMML	

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>SUPPLIER ENVIRONMENTAL ASSESSMENT</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Value Chain Sustainability Independent Assurance Statement"	44-47,48-50,108-115,132-134	TML, India.	We have started the process of engaging TML supply chain in the financial 2015-16 and we are targeting to cover 100% of TML's critical tier 1 suppliers. Engagement with supply chain is a continuous process and we shall continue to increase the coverage of the engagement gradually and increase our coverage to subsidiaries. We have already started engaging with supply chain of TMML. For TTL, TAL and TMLDL the number of suppliers are insignificant as compared to TML and thus, are not included in the disclosure
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 308: Supplier Environmental Assessment 2016</b>	308-1 New suppliers that were screened using environmental criteria	Value Chain Sustainability	108-115		
	308-2 Negative environmental impacts in the supply chain and actions taken		108-115		
<b>SOCIAL</b>					
<b>EMPLOYMENT</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Workforce Independent Assurance Statement"	44-47,48-50,89-97,131-135	TML India	We have not covered benefits and parental leaves for our subsidiaries for the financial 2016-17 sustainability report. Employee benefits at our subsidiaries are as per Tata Group's policy. We shall include the disclosure on employee benefits and parental leave applicable to our subsidiaries in our future sustainability report.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 401: Employment 2016</b>	401-1 New employee hires and employee turnover	Workforce	89-97	TML India, TAL, TTL, TMLDL, TMML	
	401-2 Benefits provided to full-time employees that are not provided to temporary or parttime employees		89-97	TML India	
	401-3 Parental leave		95	TML India	

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>OCCUPATIONAL HEALTH AND SAFETY</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Workplace Safety Independent Assurance Statement"	44-47,48-50,99-106,132-134	TML India	Worker with high rate incident and high risk related to occupation and health and safety topic covered in formal agreement have not been disclosed in this year's sustainability report. TAL, TMLDL, TMML are manufacturing companies and have proper representation of the workers. All our subsidiaries have proper safety standards. Since this is our transition from GRI G4 to GRI standard, we have prioritised to align our sustainability report as per GRI standard and provide maximum disclosure coverage for Tata Motors Limited. We shall gradually start covering this indicator for our subsidiaries in our future reporting.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>"GRI 403: Occupational Health and Safety 2016"</b>	403-1 Workers representation in formal joint management-worker health and safety committees	"Management Systems Workplace Safety"	99-106	TML India	
	403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of workrelated fatalities		99-106	TML India, TAL, TTL, TMLDL, TMML	
	403-3 Workers with high incidence or high risk of diseases related to their occupation		99-106	TML India	
	403-4 Health and safety topics covered in formal agreements with trade unions		99-106	TML India	
<b>TRAINING AND EDUCATION</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Workforce Independent Assurance Statement"	44-47,48-50,89-97,132-134	TML India	This is a voluntary disclosure.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>GRI 404: Training and Education 2016</b>	404-1 Average hours of training per year per employee	Workforce- Training & Development	95-97	TML, India TAL, TTL, TMLDL, TMML	This is a voluntary disclosure.
	404-2 Programs for upgrading employee skills and transition assistance Programs			TML	
	404-3 Percentage of employees receiving regular performance and career development reviews			TML	
<b>CHILD LABOR (For Supply Chain)</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Workforce, Value Chain Sustainability Independent Assurance Statement"	44-47,48-50,99-113,132-134	TML India	We have started the process of engaging TML supply chain in the financial 2015-16 and we are targeting to cover 100% of TML's critical tier 1 suppliers. Engagement with supply chain is a continuous process and we shall continue to increase the coverage of the engagement gradually and increase our coverage to subsidiaries. We have already started engaging with supply chain of TMML. For TTL, TAL and TMLDL the number of suppliers are insignificant as compared to TML and thus, are not included in the disclosure.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 408: Child Labor 2016</b>	408-1 Operations and suppliers at significant risk for incidents of child labor	Value Chain Sustainability	90,109-113		

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>FORCED OR COMPULSORY LABOR (for supply chain)</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Workforce, Value Chain Sustainability Independent Assurance Statement"	44-47,48-50,99-113,132-134	TML India	We have started the process of engaging TML supply chain in the financial 2015-16 and we are targeting to cover 100% of TML's critical tier 1 suppliers. Engagement with supply chain is a continuous process and we shall continue to increase the coverage of the engagement gradually and increase our coverage to subsidiaries. We have already started engaging with supply chain of TMML. For TTL, TAL and TMLDL the number of suppliers are insignificant as compared to TML and thus, are not included in the disclosure.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 409: Forced or Compulsory Labor 2016</b>	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Value Chain Sustainability	90,109-113		
<b>HUMAN RIGHTS ASSESSMENT (For Supply Chain)</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Workforce, Value Chain Sustainability Independent Assurance Statement"	44-47,48-50,99-113,132-134	TML India	We have started the process of engaging TML supply chain in the financial 2015-16 and we are targeting to cover 100% of TML's critical tier 1 suppliers. Engagement with supply chain is a continuous process and we shall continue to increase the coverage of the engagement gradually and increase our coverage to subsidiaries. We have already started engaging with supply chain of TMML. For TTL, TAL and TMLDL the number of suppliers are insignificant as compared to TML and thus, are not included in the disclosure.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 412: Human Rights Assessment 2016</b>	412-3 Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Value Chain Sustainability	90,109-113		

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>LOCAL COMMUNITIES</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives CSR Independent Assurance Statement"	44-47,48-50,117-131,132-134	TML, India	This is not a part of our materiality matrix however, TML chose to voluntarily disclose on our community engagement and impact of business to the local communities. Since this is not a part of the materiality matrix we chose not to include the disclosure for our subsidiaries in the sustainability report. We shall evaluate the intensity of linkage of each indicator with the subsidiaries and based on our study, we shall gradually include applicable indicators in the disclosure.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 413: Local Communities 2016</b>	413-2 Operations with significant actual and potential negative impacts on local communities	CSR	117-131		
<b>CUSTOMER HEALTH AND SAFETY</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Sustainable Mobility Solutions Independent Assurance Statement"	42-45, 46-47, 28-34, 131-135	TML, India	All our subsidiaries follows Tata Code of Conduct and quality assurance for the products. We shall start the process of evaluating the intensity of linkage of each indicator with the subsidiaries. Based on our study, TML shall gradually include applicable indicators in the disclosure.
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 416: Customer Health and Safety 2016</b>	416-1 Assessment of the health and safety impacts of product and service categories	"Sustainable Mobility Solutions Product Stewardship"	28-34	TML, India	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services				

GRI Standard	Disclosure	Section Name	Page Number	Performance Disclosure Coverage	Justification for Exclusions of Subsidiary Information
<b>MARKETING AND LABELING</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Governance, Sustainable Mobility Solutions Independent Assurance Statement"	42-45, 46-47, 10-15, 28-30,131-135	TML, India.	"All our subsidiaries follows Tata Code of Conduct and quality assurance for the products. We shall start the process of evaluating the intensity of linkage of each indicator with the subsidiaries based on our study, TML shall gradually include applicable indicators in the disclosure."
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 417: Marketing and Labelling 2016</b>	417-1 Requirements for product and service information and labelling	Sustainable Mobility Solutions	15, 28-30	TML, India.	
	417-2 Incidents of non-compliance concerning product and service information and labelling		15, 28-30		
	417-3 Incidents of non-compliance concerning marketing communications		15, 28-30		
<b>SOCIOECONOMIC COMPLIANCE</b>					
<b>GRI 103: Management Approach 2016</b>	103-1 Explanation of the material topic and its Boundaries	"Materiality Assessment Sustainability Management & Initiatives Governance Independent Assurance Statement"	44-47,48-50,10-17,132-134	TML India TAL, TTL, TMLDL, TMML	NA
	103-2 The management approach and its components				
	103-2 Evaluation of the management approach				
<b>GRI 419: Socioeconomic Compliance 2016</b>	419-1 Noncompliance with laws and regulations in the social and economic area	Governance	13-17		

**NVG Mapping**

Principle	Description	Page No
<b>Principle 1</b>	Businesses should conduct and govern themselves with Ethics, Transparency and Accountability.	13-17
<b>Principle 2</b>	Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle	28-34
<b>Principle 3</b>	Businesses should promote the wellbeing of all employees	89-106
<b>Principle 4</b>	Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized	117-131
<b>Principle 5</b>	Businesses should respect and promote human rights.	109-113
<b>Principle 6</b>	Business should respect, protect, and make efforts to restore the environment.	58-80
<b>Principle 7</b>	Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner.	18-19
<b>Principle 8</b>	Businesses should support inclusive growth and equitable development	117-131
<b>Principle 9</b>	Businesses should engage with and provide value to their customers and consumers in a responsible manner.	28-34

**UNGC-COP Mapping**

Area	Advanced Criteria	Page Reference
<b>Strategy, Governance and Engagement</b>	<b>Criterion 1:</b> The COP describes key aspects of the company's high-level sustainability strategy in line with Global Compact principles	Details on our high-level sustainability strategy can be found in Managing Director's Statement (Page 2) and Material Issues (Page 45) sections of the report.
	<b>Criterion 2:</b> The COP describes effective decision-making processes and systems of governance for corporate sustainability	Details on effective decision-making processes and systems of governance for corporate sustainability can be found in Corporate Governance (Page 10) of the report
	<b>Criterion 3:</b> The COP describes engagement with all important stakeholders	Details on engagement with all important stakeholders can be found in Stakeholder Engagement section (Page 42) of the report.
<b>UN Goals and Issues</b>	<b>Criterion 4:</b> The COP describes actions taken in support of broader UN goals and issues	All the employees adhere to Tata Code of Conduct (TCoC) which covers topic such as Human Rights, Equal Opportunity and Non-Discrimination in Employment, Bribery and Corruption etc. TML has an Environmental Policy, Climate change policy, Sustainability policy, Safety and Health policy to align the organizations goals with UN goals and targets. Actions taken in support of broader UN goals and issues can be found in Governance (Page 10), Economic Performance (Page 52) Product stewardship (Page 28), Energy and Environment (Page 58), Environmental Expenditure (Page 80), Workforce (Page 89) and CSR (Page 117) sections of the report.

Area	Advanced Criteria	Page Reference
<b>Human Rights Implementation</b>	<b>Criterion 5:</b> The COP describes robust commitments, strategies or policies in the area of human rights	All the employees adhere to Tata Code of Conduct (TCoC) which covers topic such as Human Rights, Equal Opportunity and Non-Discrimination in Employment, Bribery and Corruption etc. TML has an Environmental Policy, Climate change policy, Sustainability policy, Safety and Health policy to align the organizations goals with UN goals and targets. Details on Human Rights Implementation can be found in Governance (Page 10) and Workforce (Page 89) sections of the report.
	<b>Criterion 6:</b> The COP describes effective management systems to integrate the human rights principles	
	<b>Criterion 7:</b> The COP describes effective monitoring and evaluation mechanisms of human rights integration	
	<b>Criterion 8:</b> The COP describes key outcomes of human rights integration	
<b>Labour Principles Implementation</b>	<b>Criterion 9:</b> The COP describes robust commitments, strategies or policies in the area of labour	Details on Labour Principles Implementation can be found in Governance (Page 10) and Workforce (Page 89) sections of the report.
	<b>Criterion 10:</b> The COP describes effective management systems to integrate the labour principles	
	<b>Criterion 11:</b> The COP describes effective monitoring and evaluation mechanisms of labour principles integration	
	<b>Criterion 12:</b> The COP describes key outcomes of integration of the labour principles	
<b>Environmental Stewardship Implementation</b>	<b>Criterion 13:</b> The COP describes robust commitments, strategies or policies in the area of environmental stewardship	Details on Environmental Stewardship Implementation can be found in Governance (Page 10), Product Stewardship (Page 28), Energy and Environment (Page 58) and Environmental Expenditure (Page 80) sections of the report.
	<b>Criterion 14:</b> The COP describes effective management systems to integrate the environmental principles	
	<b>Criterion 15:</b> The COP describes effective monitoring and evaluation mechanisms for environmental stewardship	
	<b>Criterion 16:</b> The COP describes key outcomes of integration of the environmental principles	

Area	Advanced Criteria	Page Reference
<b>Anti-corruption implementation</b>	<b>Criterion 17:</b> The COP describes robust commitments, strategies or policies in the area of anticorruption	We have implemented Policy on Bribery and anti-Corruption in support of broader UN goals and issues. Details on implementation can be found in Governance (Page 10) section of the report.
	<b>Criterion 18:</b> The COP describes effective management systems to integrate the anti-corruption principle	
	<b>Criterion 19:</b> The COP describes effective monitoring and evaluation mechanisms for the integration of anticorruption	
	<b>Criterion 20:</b> The COP describes key outcomes of integration of the anti-corruption principle	
<b>Value chain implementation</b>	<b>Criterion 21:</b> The COP describes implementation of the Global Compact principles in the value Chain	Details on Value Chain Implementation can be found in Stakeholder Engagement (Page 42) and Value Chain Sustainability (Page 109) sections of the report.
<b>Transparency and Verification</b>	<b>Criterion 22:</b> The COP provides information on the company's profile and context of operation	Details on company's profile and context of operation can be found in About Tata Motors Limited (Page 6) and Governance (Page 10) sections of the report.
	<b>Criterion 23:</b> The COP incorporates high standards of transparency and disclosure	This report uses GRI Standard "in-accordance – comprehensive" Reporting Guidelines
	<b>Criterion 24:</b> The COP is independently verified by a credible third party	This report is independently assured by M/s TUV India Private Limited

### SDG Mapping

Sustainable Development Goals (SDGs)	Section name	Page number
<b>No poverty</b>	" CSR", "Value Chain Sustainability", "Workforce"	117,119,89
<b>Good Health and Well-Being</b>	"Workplace safety", & "CSR", "Energy and Environment", "Water and Effluent Management"	100,107,58,76
<b>Quality Education</b>	"CSR"	118
<b>Gender Equality</b>	"Gender diversity"	91
<b>Clean Water and Sanitation</b>	"CSR", "Water management" and "Waste Management"	118,76,69

Sustainable Development Goals (SDGs)	Section name	Page number
<b>Affordable and Clean Energy</b>	"Energy and Environment"	58
<b>Decent Work and Economic Growth</b>	"Economic performance", "Tata Code of Conduct", "Energy and Environment", "Workforce", "Workplace safety", "Value Chain Sustainability"	53,58,13,89,100,109
<b>Industry, Innovation and Infrastructure</b>	"Sustainable Mobility Solutions"	28
<b>Reduce Inequality</b>	"CSR", "Workforce"	89
<b>Sustainable Cities and Communities</b>	Sustainable Mobility Solutions"	28
<b>Responsible Consumption and Production</b>	"Raw material" and "Waste Management"	76,82
<b>Climate Action</b>	"CSR", "Energy and Environment", "Value Chain Sustainability"	118,58,109
<b>Life On Land</b>	"CSR" and "Biodiversity", "Energy and Environment"	118,79,58
<b>Peace, Justice and Strong Institution</b>	Tata Code of Conduct, Value Chain Sustainability	13,109
<b>Partnerships for Goals</b>	CSR", "Environmental Expenditure"	118,80

### Abbreviations

<b>AA</b>	Affirmative Action
<b>ADAS</b>	Advanced Driver Assist System
<b>ARAI</b>	Automotive Research Association India
<b>BS III</b>	Bharat Stage III
<b>BS IV</b>	Bharat Stage IV
<b>BS V</b>	Bharat Stage V
<b>BS VI</b>	Bharat Stage VI
<b>BIW</b>	Body in white
<b>CAE</b>	Computer Aided Engineering
<b>CAFE</b>	Corporate Average Fuel Economy
<b>CCI</b>	Competitive Commission of India

<b>CDP</b>	Carbon Disclosure Project
<b>CFC</b>	Chlorofluorocarbon
<b>CFT</b>	Cubic Feet
<b>CHWTSDF</b>	Common Hazardous Waste Treatment Storage and Disposal Facility
<b>CII</b>	Confederation of Indian Industries
<b>CMVR</b>	The Central Motor Vehicle Rules, 1989
<b>CNG</b>	Compressed Natural Gas
<b>CRM</b>	Customer Relationship Management
<b>CSC</b>	Corporate Steering Committee
<b>CSR</b>	Corporate Social Responsibility
<b>CV</b>	Commercial vehicles
<b>DDT</b>	Defensive Driving Training
<b>DMS</b>	Dealer Management System
<b>DRFM</b>	Domestic Regulation Forecast Matrix
<b>EMS</b>	Energy Management System
<b>ENCON</b>	Energy Conservation
<b>ESG</b>	Environment, Social and Governance
<b>ETP</b>	Effluents Treatment Plant
<b>ERC</b>	Engineering Research Centre
<b>ELV</b>	End of Life Vehicle
<b>FLC</b>	Foldable Large Container
<b>FO</b>	Furnace Oil
<b>FY</b>	Financial Year
<b>GJ</b>	Gega joule
<b>GHG</b>	Greenhouse gas
<b>GRI</b>	Global Reporting Initiative
<b>HCV</b>	Heavy Commercial Vehicle
<b>HR</b>	Human Resource

<b>HSD</b>	High speed diesel
<b>IIT</b>	Indian Institute of Technology
<b>IR</b>	Integrated Reporting
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>ISO</b>	International Organization for Standardization
<b>ITI</b>	Industrial Training Institute
<b>JV</b>	Joint venture
<b>KL</b>	Kilo litre
<b>LAC</b>	Learning Advisory Council
<b>LCA</b>	Life Cycle Assessment
<b>LCV</b>	Light Commercial Vehicle
<b>LDO</b>	Light Diesel Oil
<b>LTIFR</b>	Lost Time Injury Frequency Rate
<b>LNG</b>	Liquefied Natural Gas
<b>LPG</b>	Liquefied Petroleum Gas
<b>MCV</b>	Medium Commercial Vehicle
<b>M&amp;HCV</b>	Medium and Heavy Commercial Vehicle
<b>MW</b>	Mega watt
<b>NCAP</b>	New Car Assessment Programme
<b>NDC</b>	Nationally Determined Contribution
<b>NGO</b>	Non Governmental Organization
<b>NVG SEE</b>	National Voluntary Guidelines on Social, Environmental and Economic
<b>NOx</b>	Oxides of Nitrogen
<b>ODS</b>	Ozone Depleting Substance
<b>OEM</b>	Original Equipment Manufacturers
<b>OHSAS</b>	Occupational Health and Safety Assessment Series
<b>PCBU</b>	Passenger Car Business Unit
<b>PCRA</b>	Petroleum Conservation Research Association





<b>PM</b>	Particulate matter
<b>PV</b>	Passenger Vehicles
<b>RAM</b>	Responsibility Assignment Matrix
<b>RACI</b>	"Responsible, accountable, conduit and inform"
<b>R&amp;D</b>	Research & Development
<b>REC</b>	Renewable Energy Certificate
<b>RRR</b>	Recovery, Recycling and Reuse
<b>SBA</b>	Seat Belt Anchorage
<b>SCOE</b>	Standing Committee on Emissions
<b>SDG</b>	Sustainable Development Goals
<b>SHE</b>	Safety Health Environment
<b>SIAM</b>	Society of Indian Automobile Manufacturers
<b>S MDF</b>	Sumant Mulgaonkar Development Foundation
<b>So2</b>	Sulphur Dioxide
<b>SRM</b>	Supplier Relationship Management
<b>SRoI</b>	Social Return on Investment
<b>STP</b>	Sewage Treatment Plant
<b>TAL</b>	TAL Manufacturing Solutions Ltd.
<b>TAT</b>	Turn Around Time
<b>TBEM</b>	Tata Business Excellence Model
<b>TCoC</b>	Tata Code of Conduct
<b>TDP</b>	Technology Development Programme
<b>TML</b>	Tata Motors Limited
<b>TMLDC</b>	Tata Motors Limited Distribution Company
<b>TMLDL</b>	Tata Motors Limited Drivelines Limited
<b>TMML</b>	Tata Marcopolo Motors Limited
<b>TPM</b>	Total Particulate Matter
<b>TTL</b>	Tata Technologies Limited
<b>VCA</b>	Vehicle Certification Agency
<b>VOC</b>	Volatile Organic Compound

# SUSTAINABILITY POLICY

## OUR PHILOSOPHY

We, at Tata Motors, are committed to integrate environmental, social and ethical principles into our business and innovate sustainable mobility solutions with passion to enhance quality of life of communities.

## OUR PRINCIPLES

To improve our triple-bottom performance, we shall:


- Integrate sustainability considerations into all business decisions, functions and work processes, with the aim of creating value and contributing to sustainable development,
- Follow the highest standards of governance and transparency,
- Embody principles of product stewardship by enhancing environmental, health & safety impacts of our products across their life cycles.
- Provide safe, healthy, clean and fair working conditions to our employees, business associates and all those working on behalf of us and ensure protection of human rights in the value chain.
- Strive to be the neighbor of choice of the communities where we operate and contribute to their equitable & inclusive development and demonstrate corporate citizenship.

## OUR COMMITMENTS

We aspire for the global sustainability leadership in the transport sector and to achieve this, we shall:

- Constitute a governance structure to oversee our sustainability commitment and performance.
- Identify material sustainability issues and develop sustainability strategies with goals, targets, mitigation and adaptation plans aligned with global & national sustainability commitments.
- Undertake natural and social capital valuation to assess and mitigate business risks.
- Report in line with global sustainability reporting frameworks.

9th November, 2017  
Place: Mumbai

  
Guenter Butschek  
Chief Executive Officer and Managing Director





**Your views are important to us, please send your valuable feedback to:**

**Mr. Arvind Bodhankar**

Head - Safety, Health, Environment & Sustainability

✉ [arvind.bodhankar@tatamotors.com](mailto:arvind.bodhankar@tatamotors.com) | [suppliers.sustainability@tatamotors.com](mailto:suppliers.sustainability@tatamotors.com) | [sustainability@tatamotors.com](mailto:sustainability@tatamotors.com)

📍 Bombay House, 24, Homi Mody Street, Mumbai 400 001, India.

