

Statements in this presentation describing the objectives, projections, estimates and expectations of Tata Motors Limited (the "Group") and its business segments may be "forward-looking statements" within the meaning of applicable securities laws and regulations. Actual results could differ materially from those expressed or implied. Important factors that could make a difference to the Group's operations include, amongst others, economic conditions affecting demand / supply and price conditions in the domestic and overseas markets in which the Group operates, changes in Government regulations, tax laws and other statutes and incidental factors.

Certain analysis undertaken and represented in this document may constitute an estimate from the Group and may differ from the actual underlying results.

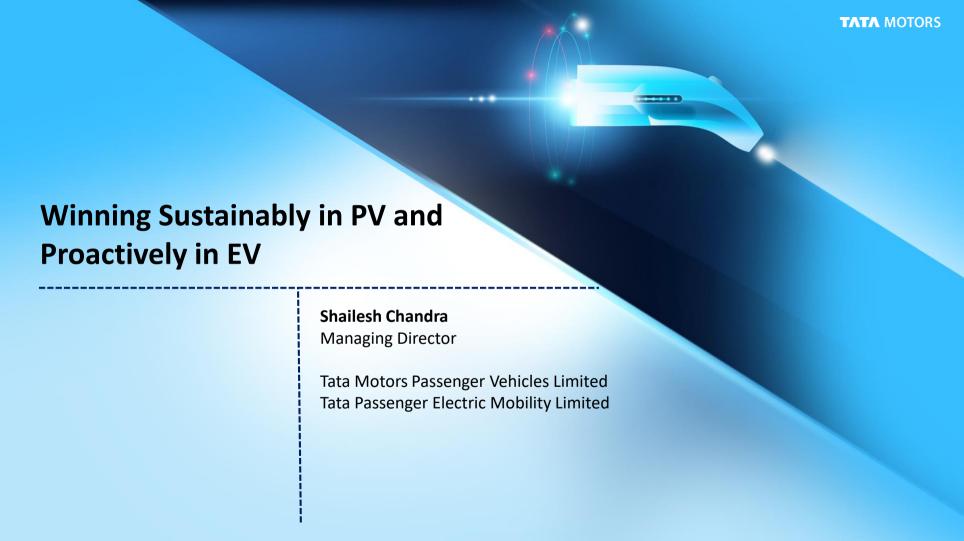
- **Reported EBITDA** is defined to include the product development expenses charged to P&L and realised FX and commodity hedges but excludes the revaluation of foreign currency debt, revaluation of foreign currency other assets and liabilities, MTM on FX and commodity hedges, other income (except government grant) as well as exceptional items.
- Reported EBIT is defined as reported EBITDA plus profits from equity accounted investees less depreciation & amortisation.
- Free cash flow is defined as net cash generated from operating activities less net cash used in automotive investing activities, excluding investments in consolidated entities, M&A linked asset purchases and movements in financial investments, and after net finance expenses and fees paid.
- Retail sales for India business represents the estimated retails for the period
- **Presentation format :** The financial data provided represent the details on consolidated segment level. The operating segment comprise of Automotive segment and others.
- In automotive segment, financial data is presented for sub-segments as below -

Tata Commercial Vehicles (Tata CV) - Includes TML & subs - TDCV, TDSC, TMML, TMSA, PTTMIL and Joint operation TCL

Tata Passenger Vehicles (Tata PV) - Includes TMPVL, TPEML, TMETC, TRILIX and Joint operation FIAPL

Agenda

From	То	Duration (mins)	Schedule	Speaker
9:00 am	9:30 am	00:30	Registration, breakfast, activities	
9:30 am	9:35 am	00:05	Welcome address	
9:35 am	10:30 am	00:55	Winning Sustainably in PV and Proactively in EV	Mr. Shailesh Chandra, MD, TMPVL and TPEML
10:30 am	10:45 am	00:15	Q&A on PV and EV	
10:45 am	11:40 am	00:55	Winning decisively in CV	Mr. Girish Wagh, ED, TML
11:40 am	12:00 pm	00:20	Tea Break and Activities	
12:00 pm	12:40 pm	00:40	Securing EV Supply Chain - Agratas Energy Storage Solutions Ltd	Mr. Thomas Flack, CEO, Agratas Energy
12:40 pm	1:15 pm	00:35	Talent, Culture & Capability @ Tata Motors	Mr. Ravindra Kumar GP, CHRO, TML
1:15 pm	2:15 pm	01:00	Lunch break and activities	
2:15 pm	3:00 pm	00:45	Climate for change	Mr. Jyotindran Sastabhavan Kutty, CSO, TML
3:00 pm	3:30 pm	00:30	Financial outlook	PB Balaji, Group CFO, TML
3:30 pm	3:45 pm	00:15	Tea Break and Activities	
3:45 pm	4:30 pm	00:45	Q&A session	
4:30 pm	5:00 pm	00:30	Vote of thanks and high tea	

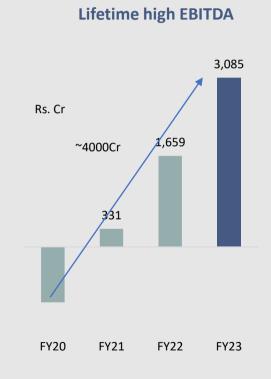


TMPV & TPEM have been on a sharp growth trajectory

Both businesses have achieved "lifetime highs" across operational and financial metrics







Our success is built on a strong set of initiatives

Aspirational Product Portfolio

EV Network & Ecosystem
Development

Front-end Reimagination

Operational Debottlenecking

Product Quality Enhancement

Aspirational product portfolio

Our portfolio has been reimagined with design, safety and technology as core tenets

World class design



- Continuous evolution of new age IMPACT-ful design with focus on improving
 - · Road presence and stance
 - Expressive surfaces
 - Extraordinary Details

Best in class Safety



- Upgrade passive / active safety attributes
 Enhance structure, crash prevention,
 post crash assistance
- Advanced Driver Assist Features (ADAS) –
 L0→L1→L2

New Technologies

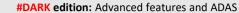


- Modern, intelligent & integrated infotainment and driver information system (HMI)
- Feature upgrade for Connected Car ecosystem
- Tech upgrades on existing engine portfolio for refinement

"New Forever" interventions keep our portfolio fresh

Variants and special editions to sustain interest and address new microsegments of customers

Dark range driving premiumization of the portfolio (Harrier, Nexon, Altroz and Nexon EV)







Tiago NRG: Keeping the excitement on



Kaziranga edition: Inspired by the majestic grasslands



Safari Gold: Exclusive flagship SUV



Reimagined products have given us holistic growth

We have achieved podium finish in nearly all segments that we play in



Widest product portfolio in EVs

Our EV models are #1 in each of their segments, with a strong value proposition

Mid Hatch



Tiago.ev

- ✓ 10,000 bookings in 1 day
- ✓ Delivered 10,000 cars in 4 months

EV Sales Volumes

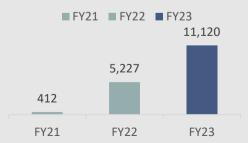


Entry Sedan



Xpres-T, Tigor EV

- ✓ Dominant share in fleets
- ✓ Pipeline for 50,000+ orders

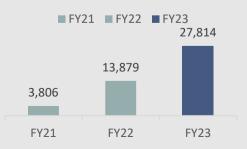


Compact SUV



Nexon EV

- ✓ 50,000+ EVs delivered
- ✓ Synonymous with EVs in India



Tiago.ev is growing the market for EVs in India

Tiago.ev is taking EVs to smaller towns and bringing in new customer segments



Expanding Geographic Markets

City-wise Contribution to Bookings



- ~50% of bookings outside of top 20 cities
- Deeper penetration than Nexon EV in smaller cities such as Bilaspur, Satara, Shimoga and small towns in Kerala

Appealing to New Segments

23% first time car buyers: Directly buying EV without owning a car before

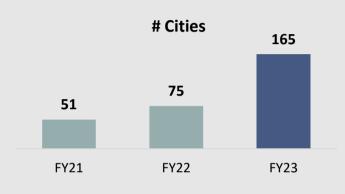
24% women buyers: ~2x industry average for female buyers

56% of buyers aged less than 40 years

EV network and ecosystem

Our wide EV network in India and the Tata uniEVerse ecosystem supported our growth

Widest EV network in India





Tata Ecosystem Advantage





Charging Infrastructure - Tata Power

- 1. 5000+ public chargers
- 2. Home Charging in 170+ cities
- 3. 900+ Community/RWA chargers; 175+ societies in top 5 metros



Localization - TACO

- 50% DVA requirement fulfilled as per Government guideline
- 2. Battery and powertrain capacity augmented

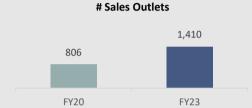
Front-end reimagination drove sharp focus on micro-markets, network growth & customer experience improvement

Tailored initiatives for top 20 micro-markets



- Deep understanding of micromarket specific customer insights
- Focused marketing, network & financing efforts

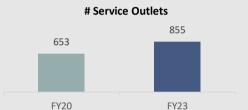
Network growth & profitability





- Expanded network to reach #2 in sales outlets
- Focus on dealer profitability and capability building to improve network health and customer experience

After-Sales re-imagination







- Expansion of service workshops & bays
- Reimagined processes and structured capability building programs for aftersales personnel to improve service quality

Front-end reimagination drove sharp focus on micro-markets, network growth & customer experience improvement

Hyperlocal & digital marketing to drive greater aspiration

Continued sponsorship of IPL to drive strong brand awareness





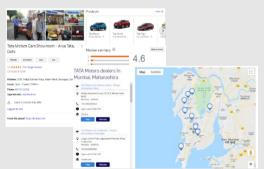




 Hyperlocal digital presence set up for dealerships to drive leads across the network



Hyperlocal Marketing



Google My Business

Customer Experience Re-imagination

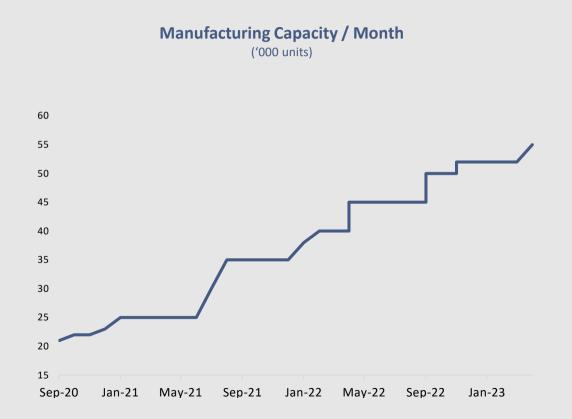
- Creation of a bespoke Customer Experience function
- Revamped sales and service SOPs to focus on customer experience





Operational debottlenecking through multiple levers

Manufacturing capacity scaled up nearly 3x through interventions at the plant and at vendor end



Capacity scale-up driven by:

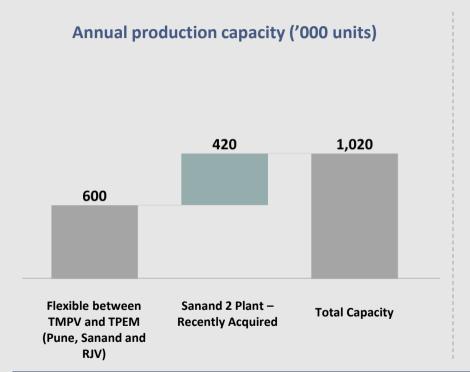
- Agile debottlenecking of model-specific capacities (e.g., Nexon)
- Supplier capacities increased in sync with inhouse capacities (e.g., Petrol engines)

Semiconductor shortage, which was a key bottleneck, was handled through:

- Direct relationship with chip manufacturers
- Dual / alternate source development
- Long term schedule and creating buffer stock for key semiconductors
- Design innovation to reduce number of and use of Next Gen semiconductor

Manufacturing capacity enhancement

Capacity enhancement to ~ 1 million units per annum to support our growth aspirations



Salient features



Smart scalable factory with layout to expand

Excellent infrastructure

Adjacent to our existing plant

Capacity enhancement achieved with prudent capital deployment – potential savings of ~ INR 5,000 Cr

Quality and cost improvements across products

Focused efforts to improve quality and cost efficiency

JD Power Initial Quality Survey 2022









Focus on quality improvements, driven by

- Continual thrust on "Stop the Generation" L1, L2, L3 actions for improved reliability
- Supplier quality improvement through 7 BIQ levers including standardized poka yoke implementation

Cost Reduction Achieved



Structured cost reduction program in place:

- Over 1,200 employees including Product Development, P&SC, Manufacturing and other functions involved in generating ideas
- Focus and discipline in executing identified cost reduction, with strong governance

Key trends in the Indian automotive industry

Indian automotive industry is undergoing a transformative shift

Key Trends

- Customers
- Focus on aspirational features and technology
- Growing environmental consciousness
- Increasing **preference for SUVs** & premium vehicles

Technology

- Growing prevalence of advanced technology features (e.g., ADAS)
- Architectural shift to Software-Defined Vehicles

Regulations

- Focus on safety and emissions reduction
- Support for EV, CNG
- Incentivization for localization esp. in EVs

Competition

- Higher **frequency of launches**
- **Global competition entry** driven by India growth story

Implications for the Industry

- 1. Seament shift towards SUVs and premium products
- 2. Growth opportunity in CNG and EV
- 3. Growing focus on safety
- 4. Need for frequent product refresh
- 5. Localization as a key source of advantage
- 6. Advanced technology as a differentiator

TMPV & TPEM Strategic Pillars

Our strategy is well-aligned to key industry trends

Strategic Pillars for TMPV & TPEM

- 1 Leverage aspirational portfolio, including alternate powertrains to capitalize on segment shifts and regulations
- 2 Proactively grow the EV market in India and maintain market leadership
- 3 Accelerate localization to drive cost efficiencies and secure government incentives
- 4 Focus on advanced technologies to deliver premium customer experience
- **5** Financial excellence and margin improvement to deliver superior returns

In addition, we will continue the front-end reimagination journey to deliver innovations in products and services and enhance customer experience

Aspirational product portfolio with focus on SUVs, safety and technology

New Nameplate Additions



Curvv

Sierra

Avinya









Mid Cycle Enhancements to refresh products













Special Edition & Feature Upgrades

6 airbags **BNCAP**

ADAS and connectivity

Engine upgrades

Safety enhancement

Continually refreshed for features through "New Forever" interventions

Comprehensive powertrain portfolio

Unique advantage of strong products in Petrol, Diesel and CNG

Petrol Diesel CNG



- Widest portfolio of EVs
- Strong pipeline of EV products
- Introduction of new GDI



- Strong products with Diesel Powertrain
- Continued play in Diesel



- Strong product line-up in CNG
- Expansion of CNG portfolio planned

Portfolio to be ready for Flex Fuel

Continuing to expand CNG portfolio with innovative products

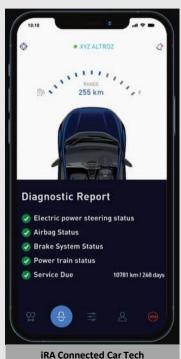
Leveraging deep customer insights to launch product interventions to address unmet customer needs





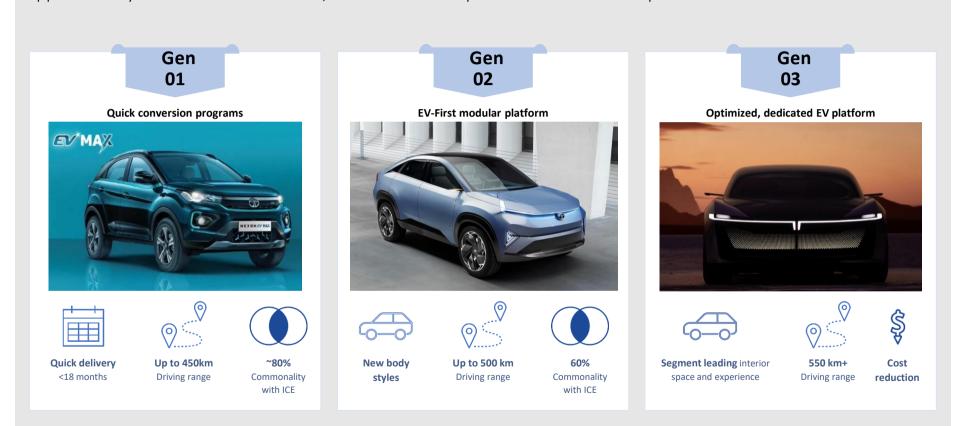






Adaptive product development in EVs

Approach in sync with market readiness, with the intent to provide elevated user experience



Growing the EV market in India

Differentiated approach to growing the EV market in India

Setting New Aspirations



- Long-range, aspirational vehicles setting new aspirations in India
- **Tech-rich products** to appeal to premium customers
- **Differentiated retail experience** for premium products

Driving Fleet Adoption



- Dominant market share in fleets, driven by strong value proposition
- Long-term MoUs with key accounts, including e-mobility market leaders such as Uber and BluSmart
- Partnering with institutional users to reduce their emissions from travel

New products will address additional customer personas

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Aspirational product range is expected to appeal to more premium, individualistic customers

Current Customer Personas



Primarily educated, salaried, middle- to upper middle-class buyers with the following personas:

- Tech savvy early adopters
- Well-traveled/globally experienced
- Environmentally conscious
- Value conscious buyers (high running use cases/ retirees)

Target Customer Personas for New Products



- Individualistic, style conscious
- Socially expressive
- Urban-centric



Persona as a % of TIV



- · Sophisticated, focused on achievement
- Interested in sophisticated aesthetics, innovation, personalization





- Active, Outdoorsy, Adventurous
- · Family oriented
- Safety conscious





- Highly successful & sophisticated
- Wellness-oriented
- Upscale lifestyle

2%

TIV share based on Sigma Mileu persona salience

Growing the EV market in India

Continued myth-busting and ecosystem enablement to drive adoption by first-time buyers, including renters

Myth-busting with 100 Reasons to go EV



Focus on Charging Infra



- Development of shared
 "Community Chargers" to serve apartment societies
- Focus on expansion of public charging network beyond major highways

ocalization of EVs TATA MOTORS

Aggressive localisation to drive cost reduction and to benefit from PLI schemes

Localization Roadmap

2022 Next 3-4 years 20+ <70% 85% Strategic tie-ups Localization by with HV Localization @ Tier1 **Aggressive** FY25 @ Tier1 component vendors localization In-house ~15% BIW Paint Shop & ASSY 600+ Reduction in Non-EV suppliers component costs

Key partnerships and Vendor park





















proximity from manufacturing locations multiple Active vendors

35% Energy consumption from renewable energy sources



plan

Increase in localised supply to drive down costs

Partnerships with marquee suppliers in the ~360 acre vendor park

Note: Deeper localization implies increased locally produced Tier-1 & 2 Components

Leveraging advanced technologies

We will continue to introduce advanced technologies to deliver a premium experience















- Focus on developing innovative electrical & electronics architecture to deliver technology interventions
- Strong collaboration with Jaguar Land Rover to drive synergies across advanced technologies
- Leveraging Tata Group endowments in software and systems design to accelerate path towards Software Defined Vehicles
- Internal capability building underway to enhance ability to deliver advanced technology programs

We are working on advanced digital and connected products to improve customer experience

Driving & trip analytics











Charging SuperApp





Remote commands















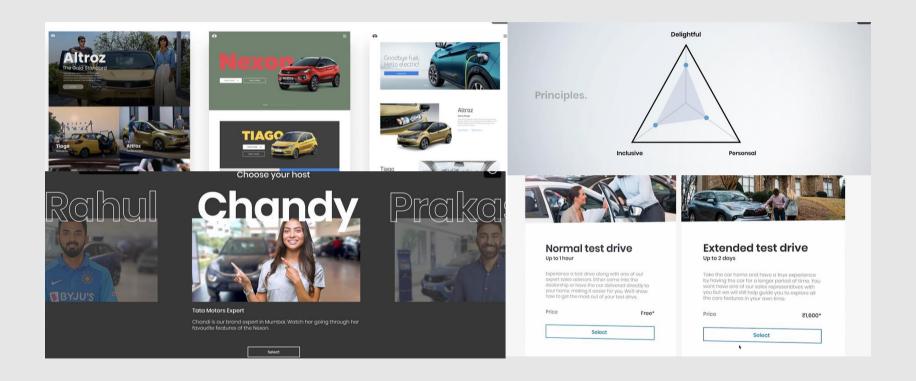




Intent to forge partnerships with Tata Group companies and other ecosystem partners

Leveraging advanced technologies

We are completely re-imagining our customer journeys, leveraging digital tools



Structured margin improvement program

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A structured program has been institutionalized across 4 pillars



Intent to deliver ~ 3% increase in margins in the medium-term

TMPV

"Win" Sustainably

- Sustainable market share gain
- Expand product portfolio and enhance competitiveness
 - New nameplates
 - Multi-powertrain
 - New technologies
- Double-digit EBITDA margin
- FCF positive

TPEM

"Win" Pro-actively; maintain market leadership

- Create wide product portfolio: highest addressable market
- Drive EV adoption/ penetration
 - Network expansion
 - # Cities present in
 - Myth-busting campaigns
- **Ecosystem development:** Tata Universe / Localization
- Positive underlying unit economics → Positive EBITDA delivery



Content

- Year of many firsts
- FY23 business overview
- Levers to drive market leadership
- Mega trends and future growth areas

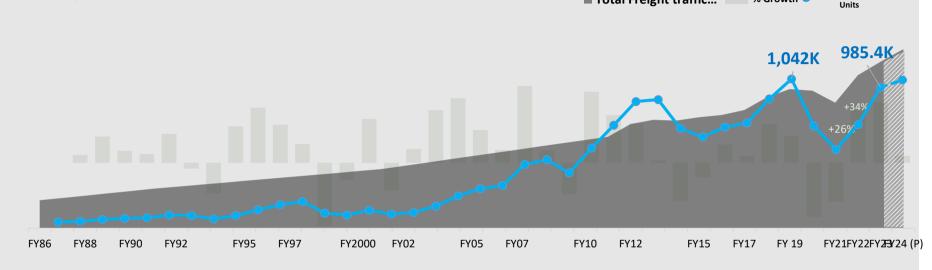


CV Industry continuing to be in upcycle, fuelled by India's growth



Fully emerging from the shadows of pandemic and other disruptions, Indian CV Industry continues to be in robust upward trajectory

Total Freight traffic... ** Growth ** CV TIV2 K



 While FY23 TIV was lower than FY19 peak, in tonnage terms it surpassed the FY19 peak

Tonnage sales

7.3MT in FY23 vs 6.9 MT in FY19

 Strong Infrastructure push by the Government augurs well for Industry

Freight traffic in BTKM

3415 in FY23 vs 3138 in FY22

Source: CRISIL

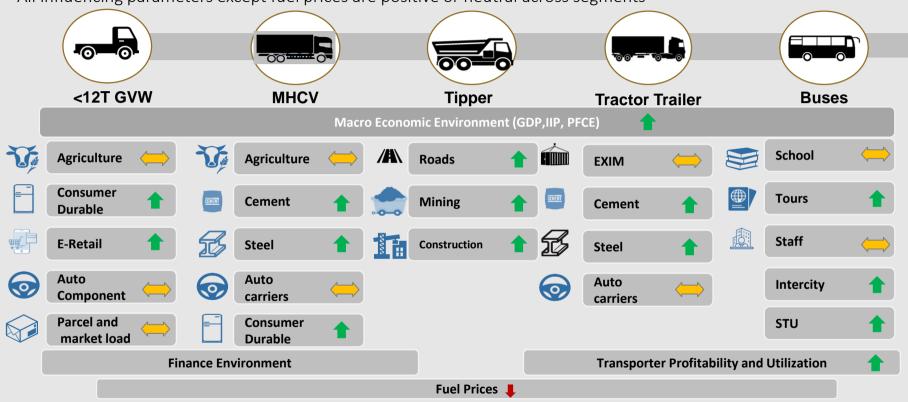
1. BTKM: Billion ton Kilometres

2. TIV: Total Industry Volume

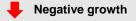
Segment wise influencing parameters (FY24)

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All influencing parameters except fuel prices are positive or neutral across segments



Source: CRISIL Research





0-5% growth

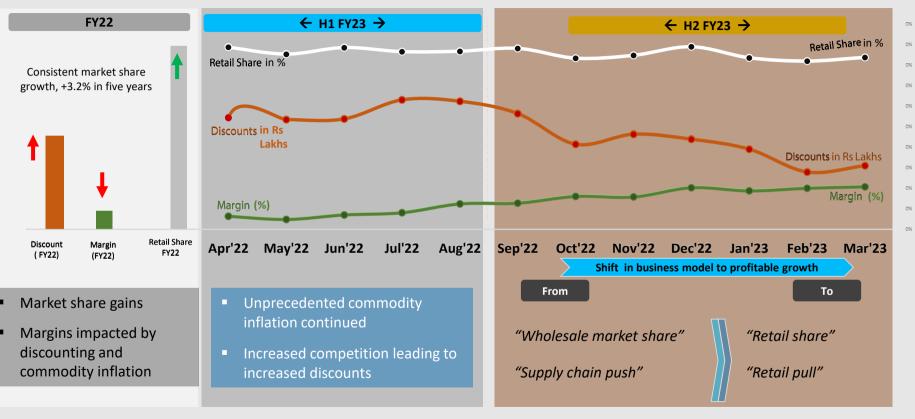


>5% growth

FY23: A Tale of two halves

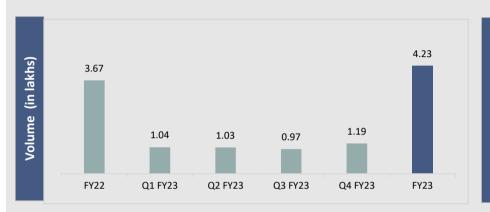
TATA MOTORS

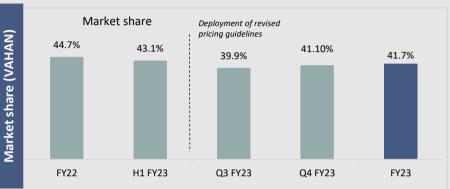
Improved margins through better realization, cost reduction, and commodity prices cooling off (Example HCV trucks)

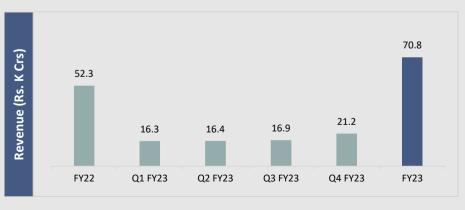


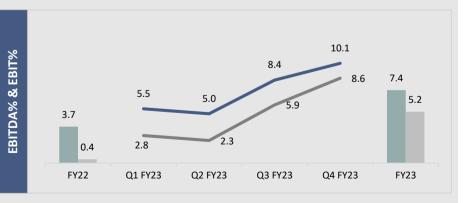
Business achieved double digit EBITDA in Q4, with sequential improvement in margins TATA MOTORS

Q4 EBIT highest in last 21 Quarters, with pull back of discounts and better than budgeted cost reduction









CV Business (Domestic + International)

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Levers to drive market leadership

1 Go to Market Excellence: GTME 5.0

through digitalization for better customer acquisition and stakeholder engagement

2 Building Strong Brand Association

through differentiated content, Influencer advocacy, and a strong digital marketing

3 Enhancing Customer Experience

with customer insight driven superior services and value-adds

4 | Enriching Product & Technology portfolio

Maintain competitive superiority and wider market addressability leveraging modularity and varianting

5 Building competitive cost structure

through material cost reduction, driving capital efficiency and cash management

1

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GTME 5.0: Building analytics-led pricing engine and tools for future

1

Data backed pricing and VAS engine

To drive consistent decisions

2

Building Sales Force of Future

1. Empowering Field Sales Force

- Revised beat Plan
- Pre Visit insights Customer 360
- Sales Guru Chat-bots

2. Capability Building

- Gamified learning
- Confidence Brochure
- Performance Nudges

3

Key Account management

4

Digital Analytics tool and strong review Governance

To drive effective sales decisions

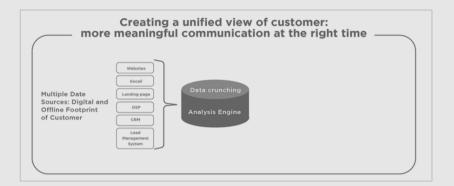
with faster turnarounds leading to

Realization improvement and Market leadership

2

Repositioning Brand and building strong brand associations

Targeted communication based on customer insight analytics



Digital marketing and pipeline management





Leveraging influencer advocacy



51 Mn+ Views

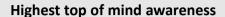
250+ Creators 13 Languages **1500+** Videos

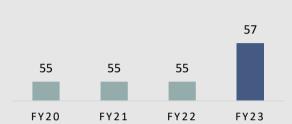
1.5 Mn+ Engagements

Augmenting dealer discovery and online sales

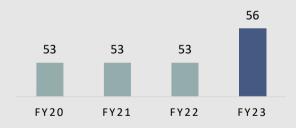


Focused brand actions led to improvement in customer facing metrics

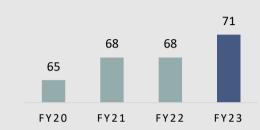




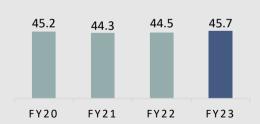
Consideration top box highest since H2 FY19



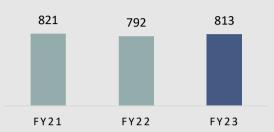
Highest ever net promoter score



Brand Power improved by 120bps

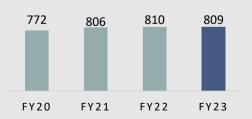


Composite satisfaction score*



*Composite CSAT measurement started in FY'21

Dealer satisfaction index (DSI)



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Enhancing Customer Experience

With customer insight driven superior and agile services and value-adds along with ecosystem plays

Beyond Sampoorna Seva 2.0 Delivering 'Peace of mind'

- 1. Augment service network
- Agile and superior response Improved reach and repair time
- 3. Standardization of customer experience
- 4. Improve spare and service penetration

Value Added Services

Industry first comprehensive add-ons



Uptime Assurance



Fuel Efficiency Management Program



Fleet Management Solution & AMC

Network reach and effectiveness



New formats (Low breakeven)

- +134 New Dealers and 268 sales touch points in 3 Yrs
- +997 service touch points in last 3 Years



Improved Rural Sales and Service reach



Agile and Digitally enabled FoS² (TGMs¹ and Guru Mechanics)



Channel profitability initiatives

>95% dealers cash positive

4

BSVI Phase II and beyond:

TATA MOTORS

Enriching Product and technology portfolio for competitive superiority and wider market addressability

Conceptualization



Beyond mere compliance

Introduction



Impactful and Unmatchable Offer

Selling



Performance Establishment

- Reimagined product range in alignment with Product Attribute Leadership Strategy
- Greater market addressability leveraging 'Modularity', and 'Varianting'

- 'Impactful launches' and consistent communication
- Pricing strategy to reduce discounts structurally

- Value based selling
- Bundled with Value Added Services-Sampoorna Seva, Fleet Edge, Uptime Guarantee



Building competitive cost structure to lower the breakeven, maturing towards

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cost leadership

Cost reduction





Teardown and benchmarking



Advanced VAVE, Digital VAVE (DiVE) and Commercial cost reduction



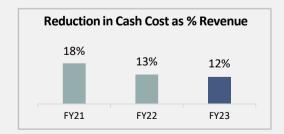
Target costing, Should cost analysis



Blue sky thinking workshops



Work Content Reduction



Capital Efficiency





Focus on Modularity



Standardization and benchmarking



Manufacturing footprint optimisation



Upgradation of current facilities for new tech features such as ADAS, Connectivity



Augmenting development capabilities in E-Aggregate development



Cash Management





Digitization of Cash MIS



Flexibility in payment processing & stakeholder management



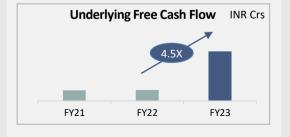
Prudent Capex Spend



Higher incentive realization from Govt.



Reduction in receivable



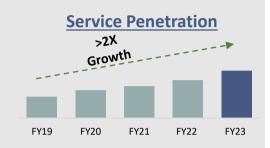
Accelerating after sales business

Expanding downstream portfolio, increasing spare and service penetration with strong revenue growth

Growth Levers

- Competitive product portfolio with branding
- Improve Network Reach, efficiency & profitability
- > Improve sales force effectiveness
- > Improve supply chain efficiency
- Introduced new Digital business Models- E-Dukaan, Leveraging Bandhu ecosystem





Overall NVB Gross Revenue



Spares and Service

Aggregates

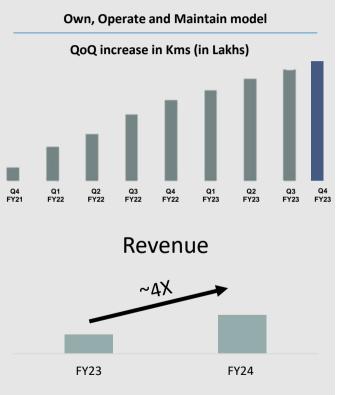
- Prolife(Remanufacturing)
- Allied Business (Lubricants, consumables)
- Fleet Care
- RVSF¹

1. RVSF: Registered Vehicle Scrappage facility

TML Smart City Mobility Solution Ltd: Shared Mobility Play, profitable TATA MOTORS in 1st Year

Operating 730 EV buses across 10 locations; expecting ~ 3.3K buses on road by FY25





Industry Mega Trends and imperatives

TATA MOTORS

Building organizational agility and core domain capabilities to lead the change







ACES

Autonomous

Connected

Shared

Electrification

- Servitisation (XaaS)
- Technology and ecosystem development

Sustainability

Net Zero GHG

Circularity

Renewable Energy

- Accelerating 'Net Zero' roadmap
- 'Global standards and practices (SBTi, Carbon markets, circular business model)

Digitalisation

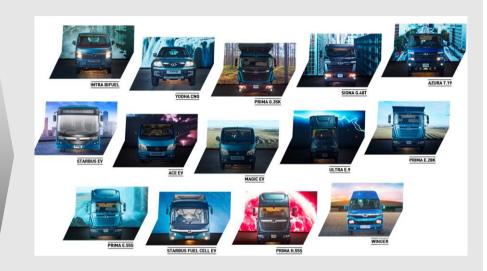
Data Monetisation

End to end digitalised processes

- Analytics based customisation
- Superior customer experience

Investing in technologies and building strategic partnerships to embrace TATA MOTORS the future

- Building Fuel agnostic platforms with Modular architectures
- Driving Electrification and green fuels across portfolio
 - Hydrogen Internal Combustion engine vehicles
 - Fuel Cell Electric Vehicles
 - Battery Electric Vehicles
 - Gas based propulsion (CNG/LNG/Bi-fuel)
- Introduced ADAS features to improve safety and efficiency
- Fleet Edge connectivity services for maximizing fleet and business efficiency



Showcased 14 vehicles & concepts at Auto expo 2023

Driving electrification to lead EV transition in Commercial Vehicles

Delivering comprehensive EV solution, customized to address the intended application requirements



Ace EV

Ramping up deliveries for last mile application across cities



EV Buses

730 EV buses across 10 locations,
Delivery of Fuel cell EV buses started to Indian Oil



Ultra E.9

Prima E.55 and H.55

Concepts unveiled at Auto Show 2023, generating significant interest from customers



Charging



Financing



EV aggregate supply



Service support



Fleet Management **TATA** AUTOCOMP SYSTEMS **Enabling Mobility Solutions**

TATA Motors finance

TATA POWER

TATA CAPITAL

Ecosystem elements

Leveraging 'group' synergy

Digitalization: Fleet Edge- Connected Vehicle Platform

Addressing customer and stakeholder pain and friction points in both truck and trip ecosystems



Value proposition for customers

Fuel management Improve fuel efficiency through driving insights

Vehicle management

- Optimum routing through tracking and geofencing
- Prevent downtime through vehicle condition visibility

Driving management

Better control on safety and utilization

Journey so far

July 2020 : Launched 'Fleet-Edge'

Feb 2021: MVP1, to plan and manage trips

Jul 2022: Insights – showcasing actionable intelligence on fleet

160 K

Customers onboarded

~400 K

Vehicles onboarded

~80%

Monthly active users



Leading the sustainability journey in alignment with project "Aalingana", TATA MOTORS

Finalized RE100 roadmap and registered improvement in external ratings (CDP and DJSI)

Driving net zero

- Products plans aligned to SBTi, to achieve Net Zero GHG emission by 2045.
- Operations: Developed road map to 100% RE by 2030
- Involving Channel Partners through unique initiatives

Circularity

- Water Neutrality:
 Two Plants water neutral, rest by FY30
- Zero Waste to Landfill: Roadmap to reach by FY30
- Re.Wi.Re (Registered Vehicle Scrappage Facility)
 - 1st facility started in Jaipur,
 - Targeting 10 cities in FY24

Preserving nature & biodiversity

- Started Biodiversity baselining, activity to complete in FY24
- Join SBTn (Science based targets for nature) program
- Deploy NBS (Nature based Solutions)









Derived from Sanskrit, "Agra" stands for empowered leadership, combined with "Gravitas" to get "Agratas". Meaning that we are serious about being at the forefront of the global battery industry, pioneering power for the future generations

Agratas | | Global large-scale world-class battery gigafactory



Tata Group aspires to be at the forefront of global battery manufacturing industry



Key areas of play



Immediate focus is on end-to-end cell deign to validation, and, industrialization



















Raw Material Extraction

Material Synthesis & Component Mfg.



Cell Production Cell Testing & Design Validation

Cell Validation Module & Pack Design & Testing

Repurpose & Reuse

Recycle

Agratas also ensures

- political de-risking and control of whole supply chain upstream as well as downstream
- ✓ **localization** of key elements of the supply chain
- ✓ securing of supplies through critical mass/volume

Sustainability is core to Agratas



Green initiatives planned to reduce carbon-footprint across the value chain







Supply Chain

Significant Localization to reduce logistics footprint

Sustainable Manufacturing

~Zero effluents out of factory through recycling within premises

Low waste custom processes

Factory powered by renewable energy

Reuse & Recycling

Repurposing of used cells

Raw material recovery

Recycling of used cells

Sustainable supply chain that enables circular economies

Picture credits: Google



Anchor customers



Leverage to kick-off industrialization at scale





- Premium applications with long-range
- Focus on performance & fast-charging

TATA MOTORS



- Focus on lifecycle and safety
- Affordable to premium target customer segments

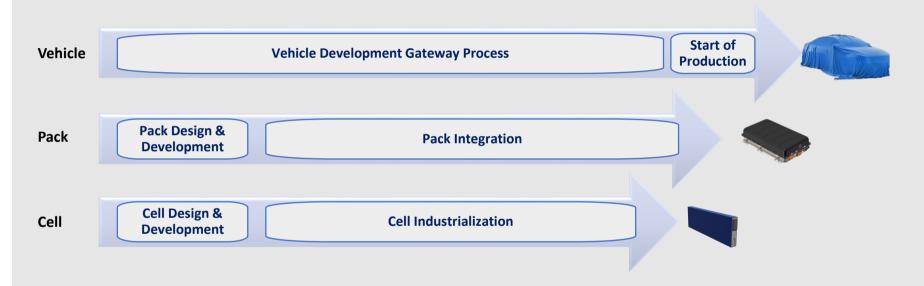




Engaged in developing best-in-class battery over last few years



Integrated battery co-engineering enables faster time to market



- ✓ **Technical advantage:** Deep collaboration to balance cell-pack-vehicle requirements
- ✓ **Futuring:** Joint technology advancement planned well-in-advance

Plan to cover a wide range of customer segments in future



To cater to a large range of applications with varied battery needs

Luxury Passenger Vehicles



- ✓ Long range (500 km+)
- ✓ Fast acceleration (0 100 kph in 4.1s)
- ✓ Fast charge (20 minutes)

Affordable Passenger Vehicles



- ✓ Long Life (8-year battery warranty)
- ✓ Affordability

Commercial vehicles (light to heavy, truck to bus)



- ✓ Optimised for short & long haul running
- Enhanced durability
- ✓ Long battery life

Two-Wheelers and Three-Wheelers



- ✓ Enhanced durability
- Optimised for commuting
- ✓ Affordability

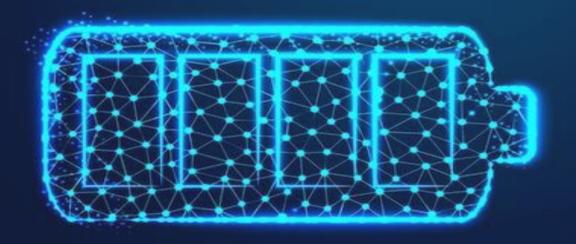
Energy Storage Solutions



- ✓ Harsh weather durability
- ✓ Low maintenance
- ✓ Cost optimisation

Cost, Performance (Range & Acceleration), Durability, Safety & Maintenance requirements define the right battery for an application

TECHNOLOGY



Agratas custom battery design



Unified cell format "Prismatic" developed for Tata Motors and JLR. Easily extendable to other segments



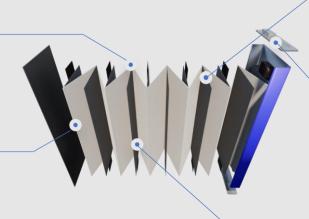
Stacked Prismatic Cell

Superior-cell-to-pack efficiency`

- Optimal pack integration
- Superior volume utilization

Best-in-class fast charge

- Effective thermal management
- Reduced internal resistance



Flexibility in chemistry

 Enables acceleration of future generation chemistries (i.e., all solid-state)

Enhanced safety

- Advanced safety design
- Terminals at either end

High efficiency

- Stacked electrodes provide:
- Superior volume utilization
- Superior structural efficiency

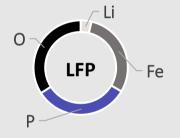
Battery chemistry



LFP and High-Nickel NMC chemistries for TML & JLR applications

Lithium Iron Phosphate ('LFP')

Low cost, long cell life and durable

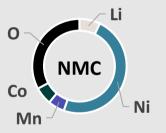


Cathode: LiFePO₄

Anode: Graphite

Nickel Manganese Cobalt ('NMC')

High energy density, enhanced performance, fast charging



Cathode: High-Ni NMC

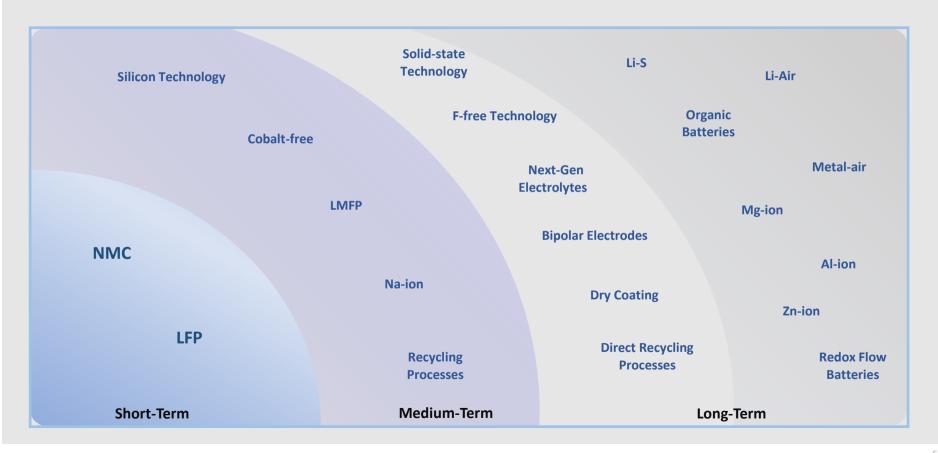
Anode: Graphite with SiO_x

Initial industrialization to focus on both LFP and NMC batteries for Tata Motors and JLR

Futuring battery through technology changes



Plan to deliver best in class batteries for current & future products based on market radar



World-class R&D setup

AGRATAS®

Deep-IP research is core to Agratas





'World-class' research facilities in India and UK



Deep IP development leveraging global talent



Strong connections with leading academic and research institutions

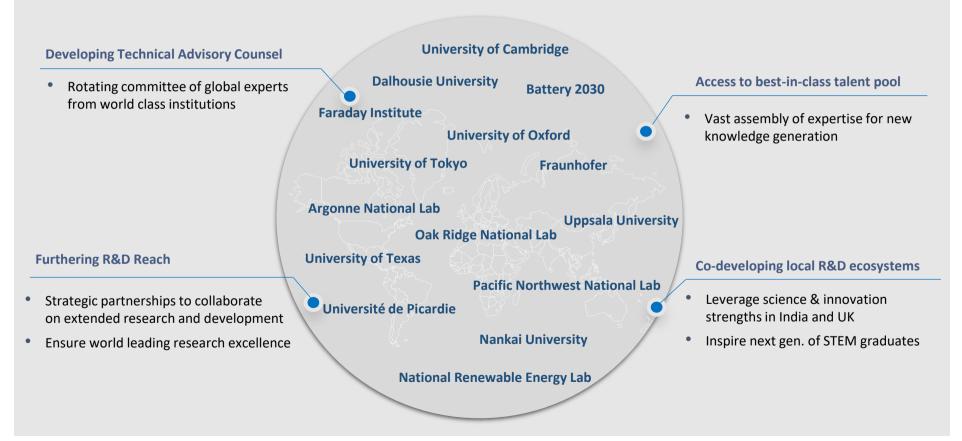


Deep-rooted industrial partnerships

Leverage R&D ecosystems - leading research institutions



Plan to plug-into larger technology advisory counsel to drive R&D





Gigafactory at a glance





Custom processes to ensures easy adaptation of future technologies AGRATAS°

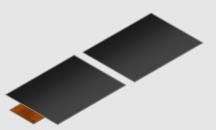
Three main processes with 20+ sub-processes custom-designed to ensure minimal change requirements in future

Electrode Fabrication



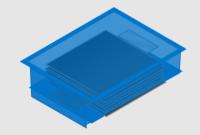
Formation & Testing





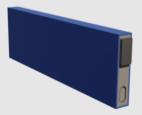
Notched Anode & Cathode





Anode & Cathode stacked & assembled in cell, with electrolyte





The final battery product – Tested & ready to be shipped

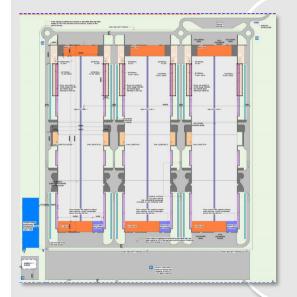
Capex protected for capacity expansion and technology changes



Modular & flexible gigafactories enables easy modifications

1 Factory;

6 Modular Lines; ~8GWh



- Modular approach to laying down lines; can be easily replicated for capacity addition
- Each line to meet specific customer's needs
- Impact of technological changes in cells to **affect not more than 10-20%** of **equipment** ensuring **significant capex protection**
- Equipment integration into facility designed for easy upgradation & quick turnaround times – ensuring faster adaption to technological change

Renewable sources to power the gigafactory

AGRATAS®

Both India & Europe factories to have dedicated renewable resources



- Battery production is an energy intensive industry
- Sustainability targets mandate access to substantial renewable energy
- Energy is also a critical cost driver for battery, battery supply chain and recycling
- Company is investing in RE farms and partnering with existing RE sources to deliver power requirements
- Company is also partnering with Governments to assure access & support over grid to secure continuous power



Enabling individuals and teams grow and excel

1. Culture

• Empowerment, Collaboration & Risk taking

2. Organization Capability

CESS, Digital, Industry 4.0 & Sustainability

3. Leadership Development

People managers & succession

4. Organization Effectiveness

Organization, goals, teams & rewards

5. Employee Experience

Best in class

6. Diversity, Equity & Inclusion

Gender & beyond

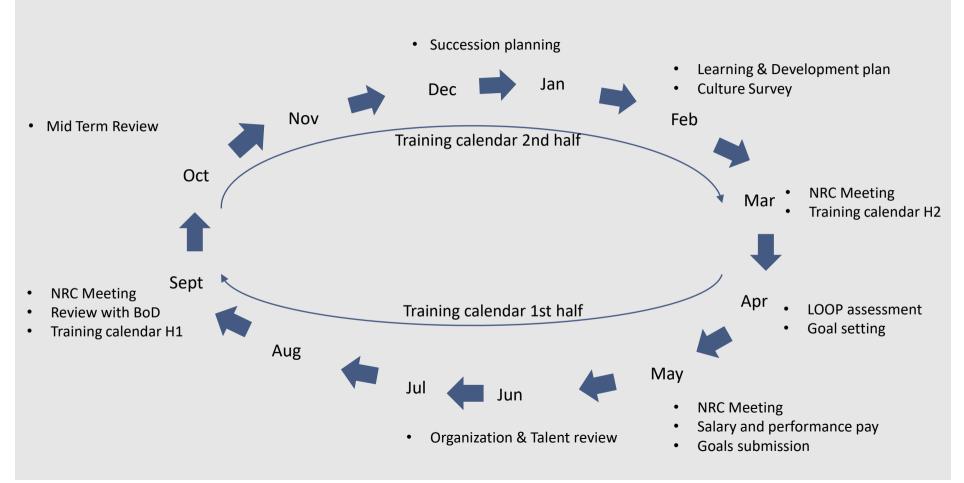
7. Industrial Relations

Proactive & positive partnership

8. HR Capability

Processes, digitization & team

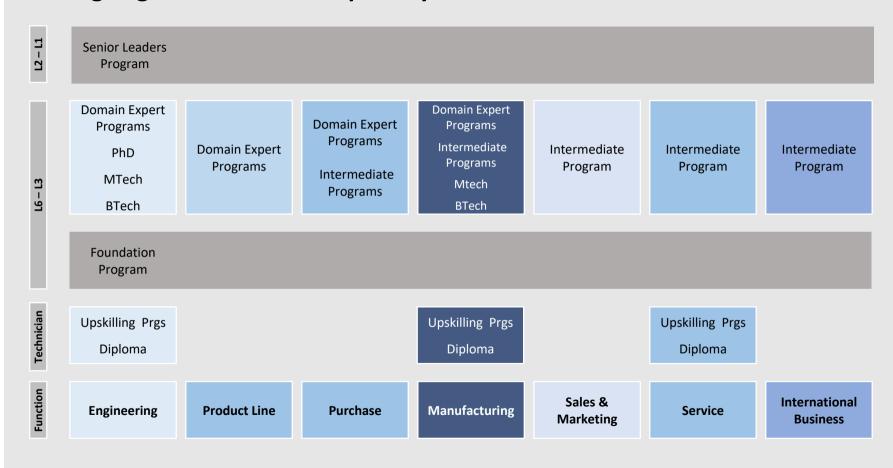
TATA MOTORS



Learning & Development Roadmap

	L6	L5	L4	L3	L2	L1
Org wide capability	CESS Digitization Industry 4.0 Sustainability					
Functional areas	Commercial Operations Engineering Purchase Enabling Functions					
Functional leadership programs	Commercial Engineering Operations					
Professional Skills	Business Communication Presentation Negotiation Decision Making Influencing Emotional Intelligence etc					
Leadership programs		FTSS Blue Mint	Career Enhancer Inner Circle TAS	Leadership Quest TGeLS	TGELS Leaders	hip Trails TGSLS
Manager development		First Time Managers Program	People Manager Program	People Mgr Prgm Hiring the Best	Hiring t	he Best
Transition programs		RISE 5	RISE 4	RISE 3		
Women leaders program	empowHER Emp		owHER			
Higher Education	BTech MBA MTech					

Building Organization Wide Capability in CESS



Upskilling Shop Floor Technicians

TATA MOTORS

1 Training programs for current employees

All Technicians

Future of Mobility Series: Awareness of rapidly changing markets

CESS Fundamental Skills Training Shop specific modules

Select Technicians

2 Higher education for current employees

PRAGATI - Diploma program in Auto Electrical & Electronics and Manufacturing

3 Training for new hires

Full Time Apprenticeship Program

- · Auto Electrical & Electronics
- Mechatronics

Kaushalya - Diploma Program

- Auto Electric & Electronics
- Manufacturing Technology

AT TATA MOTORS

We are connecting aspirations by being bold in thought and action, owning every opportunity and challenge, Solving together as one team and engaging all our stakeholders with empathy. We are **MORE WHEN ONE!**



Bottom Quartile

(0-64%)

TML 2020 59% TML 2023 71% Best Employer 2022 82%

Top Quartile (79%-100%)

71%	TML 2023	81%	Tata Group Large Cos Average
59%	TML 2020	84%	Tata Group Large Cos Top Quartile
67%	India Auto OEM & Components Average	82%	Best Employer 2022

Moderate Zone

(64%-79%)

TML Culture Pillars

Be Bold

2023	2020
70%	58%

Own It

2023	2020
69%	55%

Solve Together

2023	2020
75%	66%

Be Empathetic

2023	2020
77%	67%

Change Management

Understanding

2023	2022
80%	76%

Emotion

2023	2022
80%	79%

Action

2023	2022
67%	61%

Impact

2023	2022
72%	68%

Celebrating diversity, challenging status quo & enabling inclusion

- Sensitization workshops
- Interactions and internship
- Policies and workspace
- Bold changes



- Internal Unions
- Collaborative relations based on trust and respect
- Wage agreement of four years tenure linked to industry, region and productivity.
- Bonus agreement based on profitability, productivity and quality
- 800+ employees assimilated following acquisition of Ford India's Sanand plant
- Unions' active involvement and support across all fronts
 - ✓ Flexibility during Covid 19 pandemic
 - ✓ Productivity, Quality and Safety
 - ✓ DEI agenda

Health TATA MOTORS



Emotional Health

- Employee awareness programs
- Confidential helpline for employees and family
- Counselling service by professionals
- Training for managers to identify stress/ anxiety signals in team members



Preventive Health

- Preventive health check for employees
- Counseling for non communicable diseases.. 93% diabetic & hypertensive employees under control
- Focused efforts on pre-diabetes employees... 3.5% progressed to diabetic stage vs average of 15-17%



Highlights

- All Plants certified with ISO 45001 (Occupational Safety & Health Management System)
- All Plant canteen facilities certified with ISO 22000 (Food Safety Management Standard)
- Gold award from Arogya World for 'Healthy Workplaces" program and OHSSAI foundation in FY 23



Proactive Safety Index

- 18 Lead parameters + 1 Lag parameter (TRCFR)
- Completely digitized across manufacturing units
- Highest PSI2 over last 3 years matches with lowest injury rates in FY 2023



Critical to Safety Stations

- Manufacturing stations with high hazard potential
- Hazard identified through HIRA & mitigated with S1 (people), S2 (Engineering) & S3 (Elimination) safety controls
- Achieved zero LTI at 1076 stations in FY 2023



Zero Incident Plan

Consists of 5 pillars- Felt leadership, Governance, Safety observations, Standards & procedures, Incident investigation with clear activity roadmap

CSR Framework

TATA MOTORS



Health

- Addressing malnutrition
- Preventive and curative healthcare
- Strengthening govt. delivery mechanism



Education

- Coaching classes
- Co-Curricular
- Financial aid



Skilling

- Training in Auto and technical trades
- Training in non-Auto & Vocational
- Agriculture and allied trades



Environment

- Tree Plantation & livelihood generation
- Awareness creation on environment



Rural development

- Integrated Village Development Program Model
- Governance

77%

of malnourished children are healthy

96%

Pass rate of government school supported children

68%

Placed post the training

90%

Survival of Trees

45%

Drop in migration due to sustained livelihood







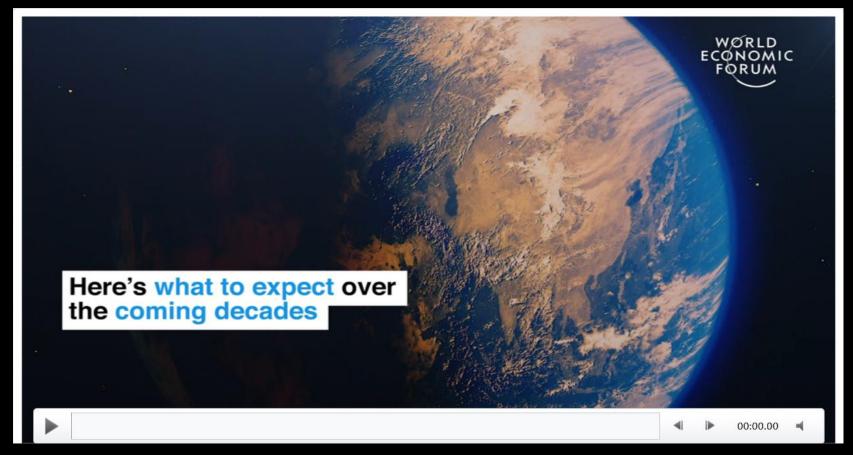
Our Future is based on our Choices

In 2022 India experienced extreme weather events on **314 out of 365 days**

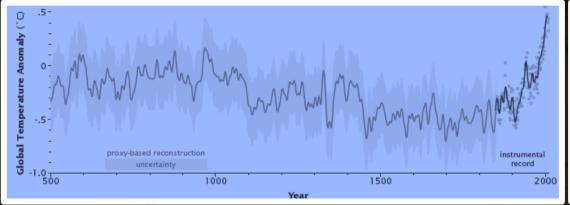
(Source: IMD)

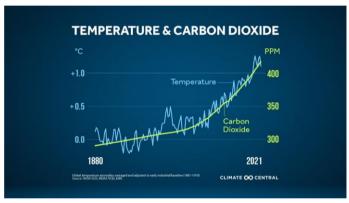
...If we thought the unusually wet May was weird, its is likely to get even more unpredictable & worse over the next few decades

The Future if we continue with Business as Usual



Our Future is based on our Actions





(Source: https://earthobservatory.nasa.gov/features/GlobalWarming/page3.php)

 $(Source: Climate Central\ https://www.climatecentral.org/climate-matters/peak-co2-heat-trapping-emissions)$

GHG emissions from human activity are primarily responsible for the global warming and Climate Change





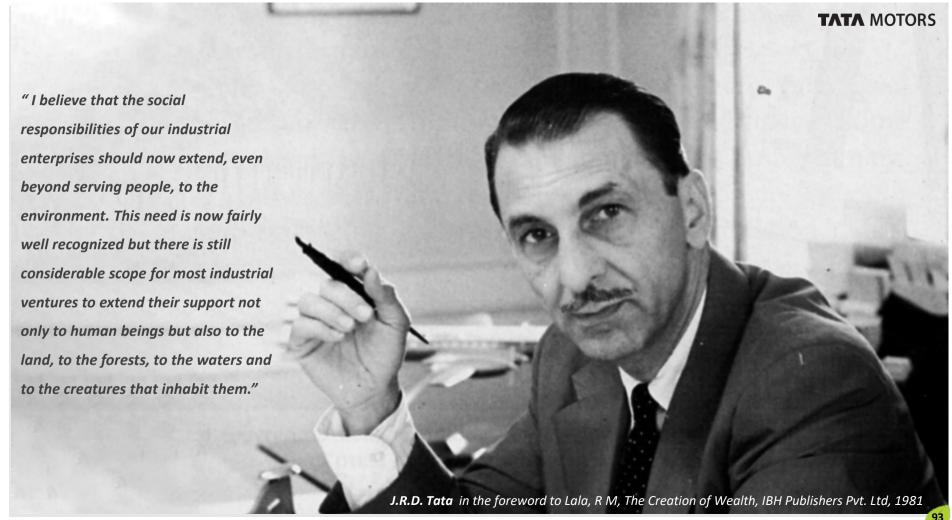


DRIVING NET ZERO, TRANSITIONING
TO A CIRCULAR ECONOMY &
PRESERVING NATURE & BIODIVERSITY
(Project AALINGANA)

EQUITY AND
'JUST TRANSITION' FOR
ALL OUR STAKEHOLDERS

EMBEDDING SUSTAINABILITY & ENHANCING ACCOUNTABILITY & TRANSPARENCY

Tata Motors sees this a decade of sustainable actions and choices that will define who we are for the rest of the century



Committed to set interim Science based Targets

(Targets to be validated)



Committed to NET ZERO by

2040 PV Business 2045 CV Business

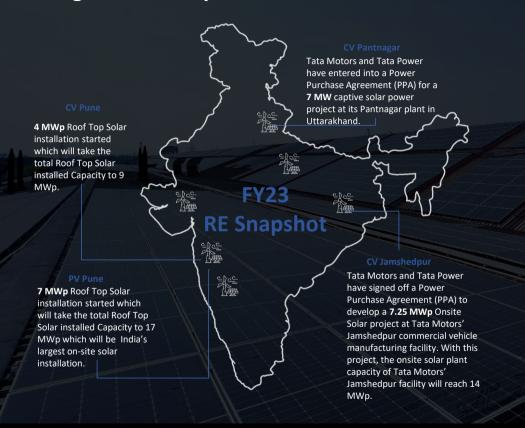


Tata Motors is committed to both long term and near term deep decarbonisation pathway

Driving Net Zero



Driving Net Zero: Operational Decarbonisation



ALL OPERATIONS WILL BE RE-100 BY 2030

(Dharwad Operations is already RE-100)

Today we are at 26% RE across Tata Motors CV and PV Operations and roadmap to RE-100 is clear

Driving Net Zero: Collaboration & Ecosystem Play

TATA POWER

- India's leading player in the EV charging space
- Home charging installation support in all cities to support Tata Motors EV customers
- ~ 2000 public chargers established, providing charging solutions based on solar power

TATA CHEMICALS LIMITED

- Cell development and local manufacturing
- Technical partner for evaluating establishment of Lithium-ion cell manufacturing plan
- Operation for pilot plant for Li-ion battery recycling

TATA MOTOR FINANCE

- Structured solutions for fleet buyers to drive EV adoption including subscription and leasing
- Support in designing innovative financing solutions at attractive pricing by incorporating residual value financing

TATA unieverse

TATA CONSULTANCY SERVICES

TATA ELXSI

- Partners for driving advanced research and product design especially with respect to ADAS systems and connected car tech
- EVs are expected to get more sophisticated in future, requiring dedicated design teams

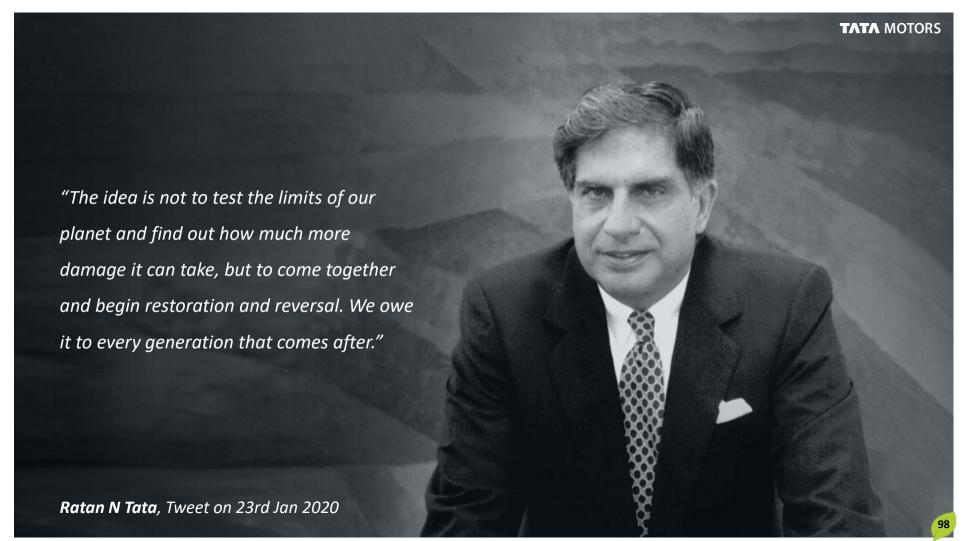
TATA AUTOCOMP SYSTEMS

- Collaborated and completed localising EV powertrain components in-line with phased manufacturing plan
- In addition, all our models have also qualified for 50% domestic value addition requirement specified by the government in order to avail incentives going forward
- Operation of battery assembly plant for Nexon & Tigor

TATA DIGITAL

 Tata Digital as partner for building integrated digital platform across Tata companies to drive user experience and enable cross-selling of Tata Motors EV products

Through Tata UniEVerse, we have synchronized efforts to develop a holistic e-mobility ecosystem to accelerate the adoption of EVs in India.





A Circular Economy is both good for the Planet as well as good for the Business

Pioneering Circular Economy: in our Operations

ALL
OPERATIONS
WILL BE
WATER
NEUTRAL
BY 2030

(Pantnagar and Lucknow Operations have already achieved neutrality)



ALL
OPERATIONS
WILL ACHIEVE
ZERO WASTE
TO LANDFILL
BY 2030

Tata Motors will invest in technologies and community based solutions to ensure net positive impact wherever we operate



Tata Motors has already started this journey and has taken initiatives across each of the pathways of Circular Economy

Pioneering Circular Economy: Enterprise Framework

Materials

Material Circularity

Enabling resource recovery and closing material loop

Lifetime

Lifetime Optimization

Increasing the lifetime of the vehicle and its components

Energy

Product Decarbonization

Achieving net-zero carbon emissions across the whole life cycle

Use

Utilization Improvement

Ensuring efficient vehicle use over time and occupancy

CIRCULARITY
FRAMEWORK
(KPIs, Metrics, Targets)

A Framework that will enable a more fundamental transformation into a Circular Business



J.R.D. Tata on the Lake we now know as the Sumanth Sarovar built by our former Chairman Mr. Sumanth Moolgaokar

Preserving Nature and Biodiversity



CBD COP15 Global Goals

Kunming-Montreal Global Biodiversity Framework

- A) Restore and conserve nature and biodiversity, while halting mass extinction.
- B) Sustainably use biodiversity and nature, for the benefit of present and future generations.
- C) Fairly and equitably share benefits, both monetary and non-monetary.
- D) Provide adequate means of implementation—financial, capacity, scientific, and technological.

Tata Motors is aligning its Biodiversity and Nature Goals to the Kunming - Montreal Global Biodiversity Framework

Conserving Habitats around our Operating Sites

Aligning to Science to Map and Set Targets across our **Value Chain**



Tata Motors is evolving a Multi-Decadal strategy to create a 'Net Positive' impact on Nature & Biodiversity

Preserving Nature and Biodiversity: Around our Operations



Community Interventions

Seva

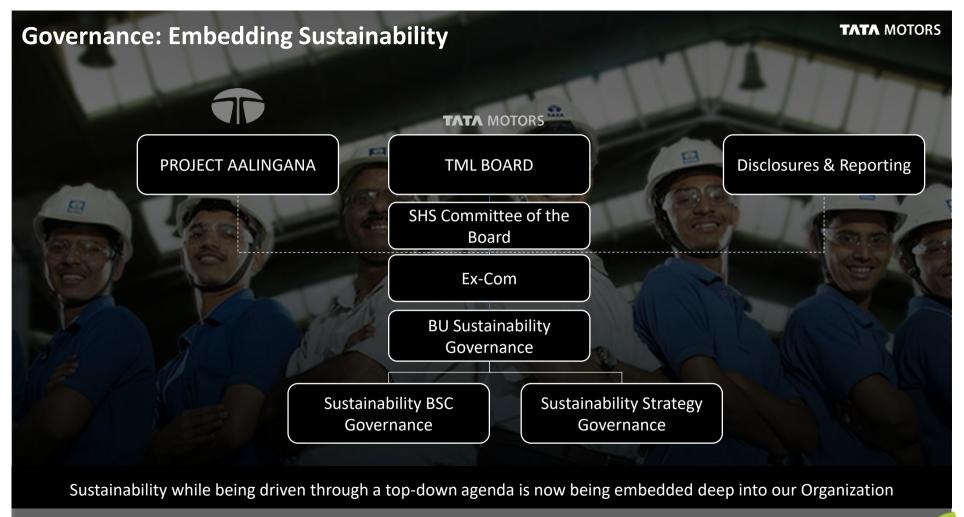
Aadhaar



Vidyadhanam

A 'Just' Transition for our stakeholders

Vasund hara





Tata Motor Limited Automobiles

S&P Global ESG Score 2022

64 /100

As of November 11th, 2022
Boores are inclusive specific.
Less in more at applicationes

S&P Global

Sustainable 1

Significant improvement over last year's score. Inclusion into the prestigious Emerging Markets Index B CDP SCORE CLIMATE CHANGE 2022

TATA MOTORS

Significant two band jump over last year's score.

Our ESG Scores are a reflection of am increasingly comprehensive and transparent reporting

Providing Leadership- Leading by example Water Neutral CIRCULAR **ECONOMY** Ensuring a 'Just' Transition for all our stakeholders

Zero Waste to Landfill Material. Energy. Lifetime. Utilization

NET 2040 for PV ZERO 2045 for CV

EQUITY

RE 100

2030 across all our Operations Investing in Solar and Wind

Science Based Targets for Carbon

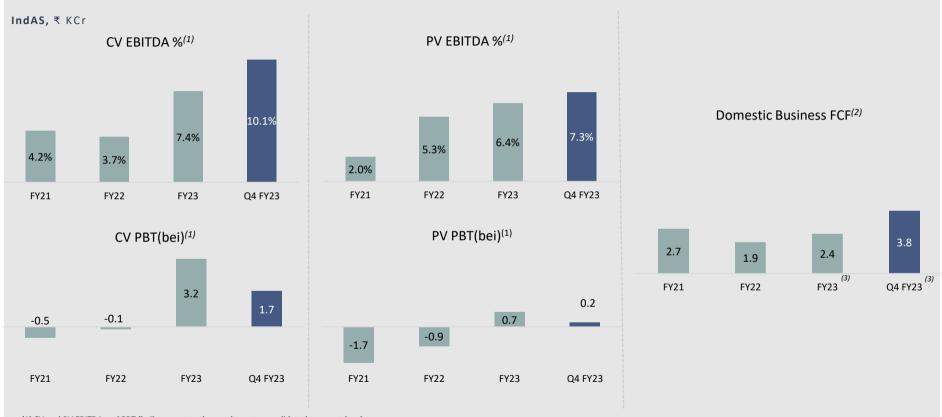
SCIENCE

Science Based Targets for Nature



TML India getting back in shape after a tough few years





⁽¹⁾ CV and PV EBITDA and PBT (bei) represents the numbers at consolidated segment level

⁽²⁾ Includes free cash flows of TML, TMPVL, TPEML and JO FIAPL, TCL, includes corporate and interest outflows not allocated to Tata CV and Tata PV segments, and excludes the data for international subsidiaries of Tata CV and Tata PV segments.

⁽³⁾Excludes amounts related to Ford Sanand acquisition.

Our medium-term goals are well defined

We remain committed to consistent, competitive, cash accretive growth and deleverage the business

ELECTRIC VEHICLES COMMERCIAL VEHICLES PASSENGER VEHICLES STRONG DOUBLE DIGIT EBITDA **DOUBLE DIGIT EBITDA POSITIVE EBITDA MARGINS CAPEX OF \$2 Bn TILL FY27** ANNUAL CAPEX UP TO INR 2,500 Cr. ANNUAL CAPEX UP TO INR 3,000 Cr. STRONG FCF GENERATION **POSITIVE FCF BREAKEVEN FCF**

We are investing to secure our future

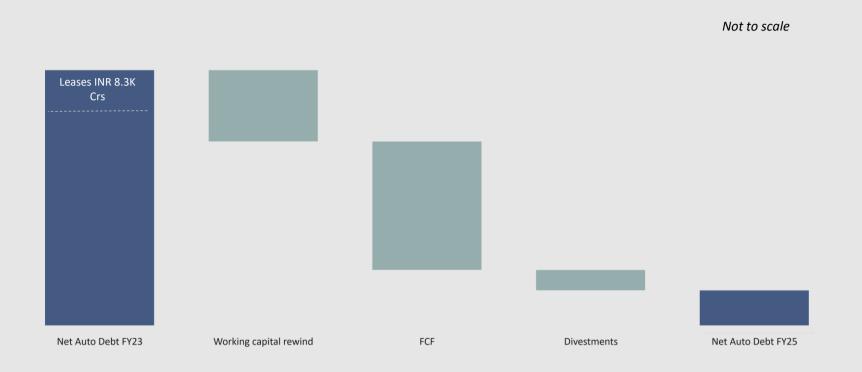
Over 50% spend will be towards green technologies

Domestic Business Investment Spend (CV + PV + EV) INR Crs



...whilst remaining prudent





This approach is being well received by the rating agencies

TATA MOTORS

CRISIL, S&P gives 1 notch upgrade. Moody's and ICRA revise outlook to positive

Rating Agencies	Long Term Rating	Update
CRISIL	AA / Stable	Rating upgrade
ICRA	AA- / Positive	Outlook upgrade
CARE	AA- / Stable	
S&P	BB / Stable	Rating upgrade
Moody's	B1 /Positive	Outlook upgrade

TATA MOTORS

In parallel, a slew of corporate actions have been launched to simplify, synergize and scale



USD 1 Bn raised from TPG Rise Climate in EV business at a valuation of USD 9.1 Bn; will help self fund business capex



TTL files DRHP with SEBI, approval expected later in the year; 20% dilution of stake of TML



Voluntary delisting ADS from NYSE aimed at simplifying reporting requirements



Acquisition of Ford Sanand Facility complete; integration into TML underway and expected to be completed in H2 FY24

We have our task cut out and are executing it with rigour

- Our well differentiated strategy is starting to yield results.
- We will be focused on driving customer centric innovation, service and digitalisation.
- We will integrate sustainability into our business strategy to seize the opportunity presented by leading the shift to a greener future.
- We aim for excellence in execution to deliver our growth and financial targets consistently.



