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Mahindra and Mahindra Automative Division

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1. Introduction: -

Overview of Mahindra & Mahindra Automotive Division -

Mahindra & Mahindra Limited, a member of the Mahindra Group, ranks among India's biggest automotive producers, recognized for its durable utility vehicles, tractors, and an expanding range of electric vehicles. The automotive sector is the heart of M&M's operations, playing a crucial role in the company's income and brand value.

Beginning in the late 1940s with the licensed assembly of Willys Jeeps, M&M has transformed into a leading force in the Indian automotive industry. The company offers a variety of products including multi-utility vehicles (MUVs), SUVs, pickup trucks, commercial vehicles, and electric three-wheelers, catering to different consumer groups from rural communities to urban transportation needs.

Indian Automotive Industry Context -

Sure, please provide the text you need to be paraphrased. Indian Automotive Sector Landscape India ranks as the fifth-largest automobile market globally and is anticipated to expand quickly, fueled by increasing incomes, urban development, and government incentives. The sector accounts for approximately 7.1% of India's GDP and provides direct and indirect employment to more than 35 million individuals (SIAM, 2023).

The industry is experiencing a significant transition towards eco-friendly transportation, driven by government initiatives such as FAME II (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles), support for domestic production, and growing environmental consciousness among consumers. Electric vehicles (EVs) are emerging as an essential growth area, showing considerable promise in two-wheelers, three-wheelers, and passenger vehicles.

Mahindra & Mahindra has been leading this change by investing in electric vehicle technologies, increasing manufacturing capabilities, and introducing new EV models designed for Indian environments.

Company history

Early beginning (1940s-1990s) -

Mahindra & Mahindra's odyssey in the automotive industry commenced in 1945 when the firm began assembling Willys Jeeps through a licensing deal with Willys Overland Corporation, USA. This collaboration established the basis forM&M's reputation for tough, durable vehicles ideal for Indian landscapes, especially in rural and military areas. The initial Jeeps established the foundation for Mahindra's enduring emphasis on utility and multi-utility vehicles.

2.2 Expansion and diversification (1970s-1990s) –

During the 1970s and 1980s, Mahindra broadened its automotive range beyond licensed Jeeps by creating local designs and improving production abilities. The introduction of the Mahindra Jeep CJ series established its foothold in the utility vehicle market. During this time, M&M started serving commercial vehicle clients by launching light trucks and tractors, although tractors are not the focus of this report.

By the 1990s, Mahindra began sending vehicles to foreign markets including the
United States, Africa, and the Middle East, expanding its worldwide presence. The company expanded its product range with models such as the Bolero, which emerged as a leading SUV that blends durability with passenger comfort, appealing to both urban and rural consumers

Overview

Mahindra & Mahindra Limited functions as a division of the Mahindra Group, a varied multinational conglomerate based in Mumbai, India. The automotive sector is a primary area of the company, tasked with the design, production, marketing, and sale of passenger cars, commercial vehicles, and electric cars.

The company adopts a divisional organizational structure, enabling targeted management and operational effectiveness for various automotive product lines. This framework fosters innovation, enhances market responsiveness, and simplifies decision-making processes

Key Leadership

1. The automotive sector is managed by a committed leadership group that includes:
2. Chairman and Managing Director: Anand Mahindra (Mahindra Group)
3. CEO & President, Automotive Division: Dr. Pawan Goenka (through 2021) / (Current CEO name according to most recent information)
4. Chief Technology Officer: Overseeing research, development, and innovation efforts.
5. Director of EV Operations: Manages electric transportation strategy
6. Leaders of Passenger and Commercial Vehicle Business Units: Accountable for their specific product lines

Subsidiaries and joint ventures

Mahindra & Mahindra's automotive division is supported by several subsidiaries and joint ventures that contribute to technology, manufacturing, and market expansion:

Mahindra Electric Mobility Limited: Focused on electric vehicles and EV technology development.
SsangYong Motor Company: South Korean subsidiary acquired in 2010, providing access to global technology and design.

Tech Mahindra: IT services subsidiary supporting automotive software and digital solutions.

Mahindra Trucks and Buses Ltd (MTBL): Dedicated unit for commercial vehicle manufacturing and marketing.
Mahindra Rise: The umbrella brand encapsulating innovation and customer- centric mobility solutions.

Operational structure

The automotive sector functions through various business units, each handling a Specific product category:

Passenger Vehicles Division: Manages SUVs, sedans, and passenger automobile **Commercial Vehicles Division:** Specializes in light commercial vehicles, trucks, and three-wheeled vehicles.

Electric Vehicles Division: Focused on the design, production, and marketing of electric vehicles, including both personal and commercial models.

These units collaborate with production facilities, research and development centers, marketing, and post sales networks to provide comprehensive automotive solutions.

Reporting and Governance

Mahindra & Mahindra adheres to a strong corporate governance structure with a board supervising all sectors. The automotive sector consistently provides the
group board and shareholders with updates on financial performance, product development, and market strategy.

Product portfolio of Mahindra and Mahindra automotive division

Passenger Cars
Mahindra & Mahindra has secured a robust foothold in India's passenger vehicle sector, especially with its SUVs and multi-utility vehicles (MUVs). The company's offerings address a variety of consumer demands — ranging from durable, off- road-ready SUVs to city-focused designs.

Important Models

Mahindra Scorpio-N: Recently introduced as the next-gen Scorpio, this mid-size SUV merges contemporary design, cutting-edge technology, and robust performance. It aims at urban and semi-urban consumers seeking durability and aesthetics.
Mahindra Thar: An iconic off-road SUV celebrated for its toughness and classic design, the Thar enjoys popularity among adventure lovers. **Mahindra XUV700:** Marketed as a high-end SUV, the XUV700 includes sophisticated driver assistance systems, turbocharged powertrains, and integrated vehicle technology.
Mahindra Bolero: Recognized for its strong construction and practicality, the Bolero continues to be favored in rural and semi-urban areas. **Mahindra Marazzo:** A versatile vehicle (MPV) designed for family and business transportation requirements.

Commercial Autos : Mahindra's range of commercial vehicles meets the requirements of small to medium enterprises, logistics firms, and public transportation industries.

Essential Models

MahindraJeeto: A compact truck favored by small enterprises for final delivery.
Mahindra Bolero Camper: A light commercial truck ideal for transporting cargo and passengers.
Mahindra Furio: A truck suited for mediumduty tasks, engineered for transporting heavier loads. **Mahindra Supro:** Offered in both cargo and passenger versions, the Supro is widely utilized for urban commercial transportation. **MahindraBlazo:** A robust truck designed for transporting cargo over long distances.

Electric Cars (ECs) As a leader in India's electric vehicle sector, Mahindra provides a variety of electric passenger and commercial vehicles aimed at fulfilling the growing need for eco- friendly transport.

Main Electric Vehicle Models

Mahindra eVerito: India's inaugural electric sedan, mainly aimed at fleet operators and environmentally aware citycommuters. **Mahindra eSupro:** An electric vehicle designed for cargo and passenger use. **Mahindra Treo:** A leading electric three-wheeler in last-mile cargo and passenger transport sectors across Indian urbanareas. **Mahindra eKUV100 (forthcoming):** A small electric SUV targeted at the mainstream market.
Mahindra eXUV300 (in development): Anticipated to enter the electric compact SUV market.

Product highlights and market positioning

Mahindra & Mahindra's product approach emphasizes toughness, cost- effectiveness, and flexibility to Indian weather and road situations. The organization highlights:

Elevated ground clearance and sturdy suspensions for rural markets.Integration of connected vehicle technologies and entertainment systems in luxury models.
Providing electric mobility options that align with affordability and distance for Indian consumers.
M&M Manufacturing Plants in India map — showcasing Chakan, Kandivali, Zaheeraa'd, and Haridwar sites with concise descriptions of their specializations. **Flowchart of Vehicle Production Process** — depicting stages such as stamping, welding, painting, assembly, quality inspection, and dispatch. **Growth Chart of Production Capacity** — illustrating the rise in volume for passenger vehicles, commercial vehicles, and EVs over the past decade.

Technology and innovation

Research and Innovation - Mahindra & Mahindra's dedication to innovation is clear through its comprehensive R&facilities, which aid in the advancement of state-of-the-art automotive technologies. The organization runs several research centers throughout India, featuring its main R&D facility in Mumbai and dedicated EV research laboratories in Chakan, Maharashtra.

The teams in R&D concentrate on vehicle design, powertrain innovation, efficiency enhancements, and safety upgrades. Partnerships with educational organizations and tech collaborators allow M&M to integrate worldwide best practices and new technologies.

Technologies for Electric Vehicles - Being an early entrant in India's electric vehicle sector, Mahindra has created in- house battery management systems (BMS), electric drivetrains, and vehicle control units designed for Indian driving environments.

Significant	**technological**	**progress**	**encompasses:**
Lithium-ion battery	packs featuring	improved energy	density and thermal
regulation.			

Braking systems that regenerate energy to enhance efficiency. Lightweight chassis configurations to enhance range without sacrificing safety. Rapid charging features in accordance with India's developing charging network. The firm is additionally pouring resources into solid-state battery research and vehicle-to-grid (V2G) technology to prepare for upcoming mobility trends.

Vehicles that are Connected and Intelligent - Mahindra is incorporating advanced connectivity capabilities into its latest models, like the XUV700, via the 'BlueSense' connected car platform. Characteristics comprise:

Instant vehicle diagnostics. Control of vehicles remotely using smartphone applications. Software updates delivered over the air (OTA). Improvements in navigation and infotainment features. These technologies improve user experience and offer data-informed insights for predictive upkeep and customer support. Eco-friendly Innovations.

M&M's commitment to sustainability encompasses not only EVs but also lighter materials, environmentally friendly production methods, and initiatives for reducing waste.
The company utilizes recycled materials in vehicle parts and is investigating hydrogen fuel cell technology as a possiblefuture powertrain alternative.

Visual Recommendations: Image of Mahindra's research and development facility in Mumbai or Chakan. Schematic illustrating EV technology elements (battery, motor, BMS). Image or graphic showing the features of BlueSense connected vehicles. Chronology of important technological achievements in Mahindra's

Case Studies

Automated Storage and Retrieval System (AS/RS) at Nashik Facility –

Task -
The paint shop ran on three shifts, while assembly functioned on two—creating complexity in coordinating the delivery of painted bodies. The previous conveyor-based buffer required as much as 30 minutes to access a painted body, leading to production holdups and ineffective plant arrangement.
Resolution
In June 2013, Mahindra collaborated with Daifuku to implement a unit-load AS/RS (Automated Storage and Retrieval System) for storing and sequencing painted vehicle bodies. It employs vertical storage (up to 15.5 m tall, ~92 vehicle capacity) and overhead conveyors, featuring rotating turntables for loading/unloading.
Effect -
Conserved considerable floor space, allowing centralized parts storage adjacent to assembly—enhancing parts-picking efficiency. Daifuku team completed their work ahead of time with great reliability, receiving accolades from Mahindra's senior paint manager.

Design Revamp Led by Pratap Bose & the "Twin Peaks" Concept -

By FY 2021, Mahindra's share of the passenger vehicle market dropped to 9.4% (from approximately 11.2% in FY 2019). Customers were progressively appreciating fashionable, desirable SUVs.

Change Approach - June 2021: Appointed Pratap Bose, previously the Global Design Head at Tata Motors, as Chief Design Officer.

Created an international design network:
M.A.D.E. located in Banbury, UK – a Studio for Capability & Concept Mahindra India Design Studio (MIDS) located in Mumbai fitted with clay modeling, VR, and paint laboratories. Pininfarina Design (Italy) – elevating worldwide elegance Aug 2021: Introduced "Twin Peaks" visual identity for the SUV range, beginningwith XUV700—representing modernity, durability, and upscale qualities.

Outcomes -
Between FY 2021 and FY 2024, vehicle revenue surged by +282% (₹45B to
₹101B), whereas rivals experienced slight increases. Market share increased to 12.6% by FY 2023—exceeding pre-pandemic figures. As reported by Pune Mirror, teams under Bose quickly delivered six new vehicles, supported by advanced tools

Market analysis

Overview of the Indian Automotive Market -

In 2025, India ranks as the 4th biggest producer and the 3rd largest vehicle market in the world, contributing approximately 7–8% to GDP and providing jobs for around 37 million people. The industry encompasses passenger cars (4.1 million units in 2023, expected 6 million by 2030), commercial vehicles, two- and three-wheelers, along with electric vehicles.

Impacted by increasing incomes, urban growth, and an expanding middle class, the industry's overall worth is projected to reach USD 300 billion by 2026.

M&M's Market Standing -

By April 2025, M&M surpassed Hyundai to rank as India's second-largest automaker, following Maruti Suzuki (holding around 40% market share). Leading in SUVs and commercial vehicles, M&M commands an estimated
~15%share of the SUV market. Under the leadership of MD & CEO Dr. Anish Shah, the firm is amplifying efforts in EV, software-defined vehicles, and luxury SUV projects.

Competitive landscape -

Maruti Suzuki: Leading in sales, specializes in compact vehicles with extensive service network; transitioning emphasisto SUVs and electric vehicles.
Tata Motors: Dominant in EVs (Nexon EV ~70% market share) and premium SUVs (Harrier, Safari); possesses JaguarLand Rover.
Hyundai, Kia, Toyota: Strong contenders in the midsize SUV and hybrid segments (Hyundai Creta, Toyota hybrids).
New players and electric vehicle startups: MG, Ola Electric, Tesla (launching July 2025) increase competition levels.

Consumers trends and preferences -

High demand for utility vehicles (UV/SUV) –approximately 56% market share in 2024; SUV growth around 14% fueledby aspirational consumers.
Increasing interest in connected technology and ADAS: around 3–6% adoption expected by 2025, with a strong desire(~88%) to invest in intelligent features.
Transition to MaaS and subscription models, particularly for the younger demographic aged 18–34, focusing on monthlybudgets below INR 30,000.
Consumers aware of sustainability are receptive to EVs and hybrids, yet full EV uptake is still low (around 2% atpresent); hybrids anticipated to grow to 18–20%

Growth opportunities -

SUV and premium segment: Keep leveraging robust consumer demand and the trend towards premiumization.
EVs and hybrids: The market for BEVs is expected to expand quickly (CAGR
~49% by 2030), driven by incentives (PLI,FAME, ACC). Hybrids provide significant volume potential as well.
Connected vehicle technology / ADAS: Subscription models with high margins, remote enhancements, and infotainmentfoster distinction.
Export growth: Utilize FDI, cost efficiency, AND local production increase to export vehicles and parts.
MaaS solutions: Rely on ride-hailing collaborations and subscription offers targeting younger, city-dwelling consumers.

13.SWOT Analysis

13.1 Strengths -

Top brand in SUVs and commercial automobiles. Robust R&D with approximately 210 patents, Research Valley, and a focus on technology.
Expanding EV and connected vehicle framework, supported by international partnerships.
Broad network of rural areas and dealerships.

13.2 Weaknesses -

Falling behind in small vehicles and two-wheelers. EV supply chain reliant on rare-earth imports and financial support. Reduced brand loyalty in entry-level markets.

13.3 Opportunities -

Luxury SUVs, hybrid/electric offerings, telematics systems, and subscription services.
Local manufacturing of EV components—PLI-supported ACC, FAME. Ride-sharing/MaaS, countryside transportation, and post-sale services.

13.4 Threats -

Intense rivalry among sectors (Tata, Maruti, Hyundai, electric vehicle startups) Risks in the supply chain: commodities, rare-earth elements, semiconductor shortages, geopolitical factors. Fluctuations in policy and regulations concerning subsidies and electric vehicle standards.
Swift technological upheaval caused by outside competitors (Tesla, Ola, etc.).

Outlook and strategic recommendations

Future outlook -

The dominance of SUVs and premium vehicles will persist, while EV sub- segments will increasingly gain popularity. The adoption of electric vehicles will rise to approximately 10–15% by 2030, with hybrids becoming widely accepted.
Connected and software-defined vehicles will become the norm in mid-to- premium segments.
Export growth driven by regional production capabilities and supportive policies.

13.2Strategic recommendations -

Broaden the hybrid-ICE-EV lineup, particularly in the SUV categories. Develop strong supply chains by investing in the localization of battery components and rare-earth materials. Generate revenue from connected features through software subscriptions, over- the-air updates, and advanced driver-assistance systems. Expand into Maas and subscription models, focusing on urban youth.

Collaboration at Tier1, partnerships in R&D for AI, autonomous systems, and next-generation batteries.
Adaptive policy interaction to manage changing regulations and obtain benefits. Worldwide expansion, utilizing cost advantages for export strategy.

CONCLUSION –

The revitalization commenced with a redesign of its philosophy and vehicle range, highlighted by the launch of the "Twin Peaks" identity and a strengthened focus on aesthetics and performance. This not only increased Mahindra's attractivenessto ambitious city consumers but also enabled it to regain and expand market share in a sector led by global and local giants. Strategic leadership, which involved the onboarding of Pratap Bose and the creation of global design studios, drove this change, transforming Mahindra into a brand with worldwide design credibility and local significance.

Equally important has been Mahindra's dedication to the future of transportation. Its initial investment in electric vehicles has evolved into a unified strategy under Mahindra Electric Automobile Ltd., featuring bold plans to enhance EV adoption. The company has created its own EV platform (INGLO) and established partnerships to ensure technology, battery sourcing, and design knowledge. This establishes Mahindra firmly in a nation advocating for swift EV adoption via policy incentives and increasing consumer demand for cleaner options.

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