



CASE STUDY

Unified Enterprise Intelligence

A unified data and control tower ecosystem that reimagines how Mahindra & Mahindra makes insightful decisions across its automotive and farm businesses.

TECH
mahindra

OVERVIEW

An Era of Connected,
Insight-Led Organizational
Operations



Mahindra & Mahindra (M&M) is a global leader in automotive and farm machinery, managing one of the industry's most diverse and complex operational landscapes. With businesses spanning across SUVs, EVs, tractors, commercial vehicles, and connected mobility, the organization handles vast volumes of data across hundreds of functions and systems.

M&M embarked on Project Vihaan to unlock the full potential of its data and empower leadership with real-time, enterprise-wide visibility. We partnered with M&M to build an integrated digital backbone consisting of the Mahindra Data Platform (MDP) and the Operating Heartbeat (OH) control tower — the industry's first large-scale automotive Data Mesh implementation on GCP coupled with a C-suite-focused dashboard suite.

This platform unifies 25+ source systems, 1,400+ KPIs (scaling toward 2,000+), and multiple business domains into a single, intelligent decision ecosystem.

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We did not solve a data problem - we solved a business problem. Through strong governance, disciplined execution, and close collaboration with business teams, we turned complex data into trusted insights that shortened decision cycles and directly improved day-to-day operations

-Zahira Huda, Head - Auto Digital Center

The Objective

M&M's main aim was to transform its fragmented data environment into a cohesive, intelligent system that would:

1. Provide a single source of truth by giving an organization-wide view of performance across business and support functions.
2. Enable real-time insights for leadership through a responsive, scalable architecture.
3. Strengthen decision-making with AI/ML-driven analytics, forecasting models, triggers, and conversational capabilities.
4. Establish governance and prioritization framework for data products, security, privacy, and KPI design.
5. Reduce manual effort, address inconsistencies in the data, and prepare for multi-entity expansion.

The Goals

1. Enable Seamless Enterprise-wide Visibility

To provide leadership, consistent and accurate insights across 100+ functions with immediate access

2. Intelligence-Led Operations

Make a shift from reactive reporting to proactive decision-making using data signals, advanced analytics, and automation.

3. Strengthening of Digital Maturity & Governance

To create scalable and responsible transformation by a structured approach for KPI definitions, data quality, and domain ownership.

4. Build Platform for Future Innovations

Lay the foundation on a forward-looking base for multi-entity integration, AI adoption, and continuous expansion of data products and KPIs.



The Partnership

Tech Mahindra collaborated with M&M to:

- Ensure full coverage and to avoid duplication we co-created KPI frameworks using the MECE methodology
- Integrate of 25+ operational, manufacturing, dealer, finance, and customer systems into a cohesive data layer.
- Drive consistent decision-making across the enterprise to standardize the definitions, processes, and workflows.
- Deliver a control tower experience tailored for C-Suite executives, functional heads, and operational teams to ensure a strategic alignment from top to bottom.

This partnership creates a mark as one of the most comprehensive transformations attempted by any automotive OEM globally.

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This program provided comprehensive visibility throughout the automotive data value chain, forming a solid base for AI applications. It supported quicker, more informed decision-making and insighting, allowed for proactive risk and cost management, and turned complex data into tangible business and financial results.

-Rucha Nanavati,
Chief Digital Transformation Officer,
Mahindra Auto



Our Approach & Solution

Our execution strategy was built on two core pillars which were supported by analytics, governance, and large-scale engineering.

1. Mahindra Data Platform (MDP)

- The foundation for enterprise data consolidation and consumption was built on GCP:
- Data Mesh architecture organized around domain-specific data products.
- Integration of IoT streams, batch pipelines, and system-of-record data.
- Scalable storage and processing using BigQuery, Pub/Sub, Dataproc, and Dataplex.
- Metadata, discovery, and governance via Alation to ensure auditability and trust.
- Marketplace of standardized KPIs ready for reuse and rapid onboarding of use cases.

2. Operating Heartbeat (OH)

A comprehensive suite of C-suite dashboards enabling high-speed insights:

- 588 KPIs already live with a roadmap to 2,000+.
- Coverage across finance, sales, service, CX, S&OP, quality, HR, and sourcing.
- Sub-2-second response times for critical KPIs.
- Qlik Sense SaaS-based visualization with a simplified user experience.

3. AI, ML & Advanced Decision Intelligence

The platform enhances the decision-making process by embedding intelligence into key processes:

- ML-driven forecasting using repurposed OH data for S&OP and Kinaxis.
- Anomaly detection for supply chain, quality, and service operations.
- OBD analytics and connected-vehicle insights enabling hyper-personalized actions.
- GenAI-enabled conversational experiences for leadership.

4. Industrialized Execution Model

Accelerating delivery at scale, four specialized teams operated parallelly:

- Business Analysis (requirements, KPI definitions)
- Infrastructure & Cloud Engineering
- Data Engineering (MDP development)
- Visualization & UX (OH dashboards)
- This ensured steady progress despite legacy data quality challenges, customizations, and a highly varied business portfolio.

Outcomes & Wider Impact

1. Enterprise Gains

- 25% reduction on operational reporting costs.
- 30 - 40% cloud cost optimization, which includes nearly 40% savings on computer processing.
- 30% increase in productivity using unified dashboards and automation.
- A faster S&OP cycle with enhanced forecasting accuracy.

2. Unprecedented Enterprise Coverage

- Integrated 25+ source systems and ingested approximately 10 TB of initial data.
- Expansion from 400+ KPIs to 588+ delivered, with 2,000+ in progress.
- Coverage of 100+ functions across M&M's auto and farm businesses.

3. Reinvented User Experience and Collaboration

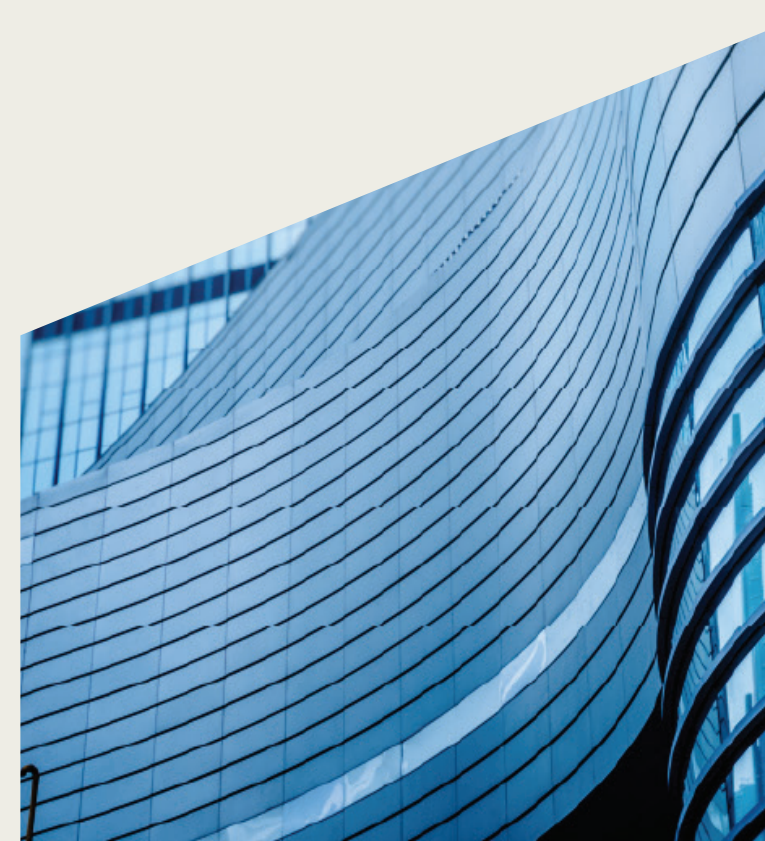
- Dealer Profitability dashboards cut weeks of manual work into real-time insights.
- Single unified platform offering seamless access to KPIs across departments.
- Stronger cross-functional collaboration was enabled by shared, accurate insights.

4. Sustainability & Efficiency

- Cloud-native design supported in reducing dependence on physical infrastructure.
- Optimum utilization of resources improved operational efficiency and reduced environmental footprints.
- Fast deployment cycles supported in continuous innovation along with lower waste.

5. Inclusivity & Diversity of Thought

- Democratized access to insights for leadership teams, operational teams, and domain experts.
- Ensure a balanced representation of business perspectives, a holistic approach was opted to create KPI's.
- First group-level platform of its kind in the global automotive industry which enabled equitable data access across functions.



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Data and AI are shaping the automotive industry through connected experiences, intelligent operations, and predictive ecosystems. Our partnership with Mahindra & Mahindra stands out for what transformation truly looks like. Together, we have built an enterprise-wide platform that unifies data, accelerates decisions, and sets the benchmark for digital innovation.

-Saurabh Jha, SVP & Global Head,
Data & Analytics, Tech Mahindra

About Tech Mahindra

Tech Mahindra (NSE: TECHM) offers technology consulting and digital solutions to global enterprises across industries, enabling transformative scale at unparalleled speed. With 152,000+ professionals across 90+ countries helping 1100+ clients, Tech Mahindra provides a full spectrum of services including consulting, information technology, enterprise applications, business process services, engineering services, network services, custom experience & design, AI & analytics, and cloud & infrastructure services. It is the first Indian company in the world to have been awarded the Sustainable Markets Initiative's Terra Carta Seal, which recognizes global companies that are actively leading the charge to create a climate and nature-positive future. Tech Mahindra is part of the Mahindra Group, founded in 1945, one of the largest and most admired multinational federation of companies. For more information on how TechM can partner with you to meet your scale at speed™ imperatives, please visit <https://www.techmahindra.com/>.



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