

Enabling Smart Engineering



Being in the automotive industry today entails the mobilization of multiple IT systems that continuously generate huge amounts of data. Data is collected from project teams, budget, inventory, risk analysis, and many other departments of daily business activities. With the influx of so much information requiring analysis, it can be challenging for companies to visualize and manage all the data to enable key decisions. While it has become an industry-wide challenge to collect and compare data from so many different systems at once, it presents a significant opportunity to drive growth in the emerging and evolving connected-machine era.

Mahindra & Mahindra is a global pioneer in the transportation business including automotive, aerospace and the agribusiness. 50 to a 100 systems are required for any automotive project the team works on, some of which include product cost, inventory and billing. All these systems are required to be interlinked for a properly functioning parent system. Collaboration is required between product and manufacturing engineering, cost and legacy systems. The various systems such as Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), Product Lifecycle Management (PLM), Systems, Applications and Products (SAP) and Tool Data Management (TDM) generate specific data in the product life cycle as the product matures. Data needs to be collected from the various departments and systems to facilitate complete analysis and key decision making.

Part of Altair SmartWorks™, Altair SmartSight™ is a data analytics platform that speeds up data visualization, exploration, and discovery. It collects and aggregates data from various systems and brings it together to view in interactive dashboards. Mahindra & Mahindra used the SmartSight platform as an integral part of the vehicle engineering product development process to automate production planning and engineering, which enables them to easily visualize the data and analyze projects at all stages of development for improved decision-making.

Mahindra Rise.

Industry

Smart Engineering • Region, Asia

Challenge

To create a standardized decision support system in product development cycle from multiple data sources and presents the 'right' information at 'right' time to the 'right' person

Altair Solution

Altair created a web business intelligence platform in engineering layers of analytics on top of the customers' systems using SmartWorks™. With this platform, users can formulate custom KPIs and parameters using an intuitive drag and drop interface.

Benefits

- Drastically reduced data consolidation from many sources
- Security based upon role access control
- Faster decision-making capabilities
- Data consistency and transparency
- Improved efficiency

The Technology

Mahindra & Mahindra used SmartSight for optimal data collection and visualization. Synchronized data stemming from the various sources for PLM, SAP, ERP and other local system databases, was connected to their central solution to determine Key Performance Indicators (KPIs) to assess implications of design changes on vehicle weight, risks at all stages, and cost management.

Dynamically tied to data, the KPIs are represented within SmartSight used by the product management, vehicle integration, weight/mass balance, and cost management teams. It allows the teams to go through the multiple platforms via one, up-to-date interface. The information is dynamic, not static, with a live feed of data and instant refreshes.

With this secure platform, based upon role access, control users can formulate custom parameters and perform simulations using an intuitive drag and drop interface and then share and manage these to use in their own analyses.

The Team

SmartSight worked with Mahindra & Mahindra to create a solution for visualizing and easily analyzing data from and across multiple systems. They selected to work with Altair due to their knowledge on the functional automotive & the analytics side.



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