

CASE STUDY

Digital Transformation in Automobile
Manufacturing Leveraging MES:
ITC Infotech Engagement With One of The
World's Leading **Two Wheeler Manufacturers**

ITC Infotech client is one of the world's leading two-wheeler manufacturers (Client).



Client Situation

In 2021, client's market share in the automobile two-wheeler sector was over 35%. ITC Infotech was chosen to help client in digital transformation journey leveraging MES to achieve its mission of setting up the benchmark in technology and quality.



Client Challenges

Client is moving forward on its digital transformation journey leveraging manufacturing execution systems MES and was facing following specific challenges:

- Digital transformation program to have full backward traceability on a high-speed manual operation
- Implementing MES without disturbing the takt-time
- The Covid pandemic induced restrictions forced all vendors to work remotely and collaborate through MS Teams
- End to end traceability for 20+ critical components over a network of 700+ suppliers
- Consistent product quality meeting customer requirements
- Visibility required about people, process, and systems at the supplier manufacturing locations
- Improved machine efficiency and productivity
- Information to be captured directly at the source
- To have a single source of truth along with closed loop mechanism to improve quality and process

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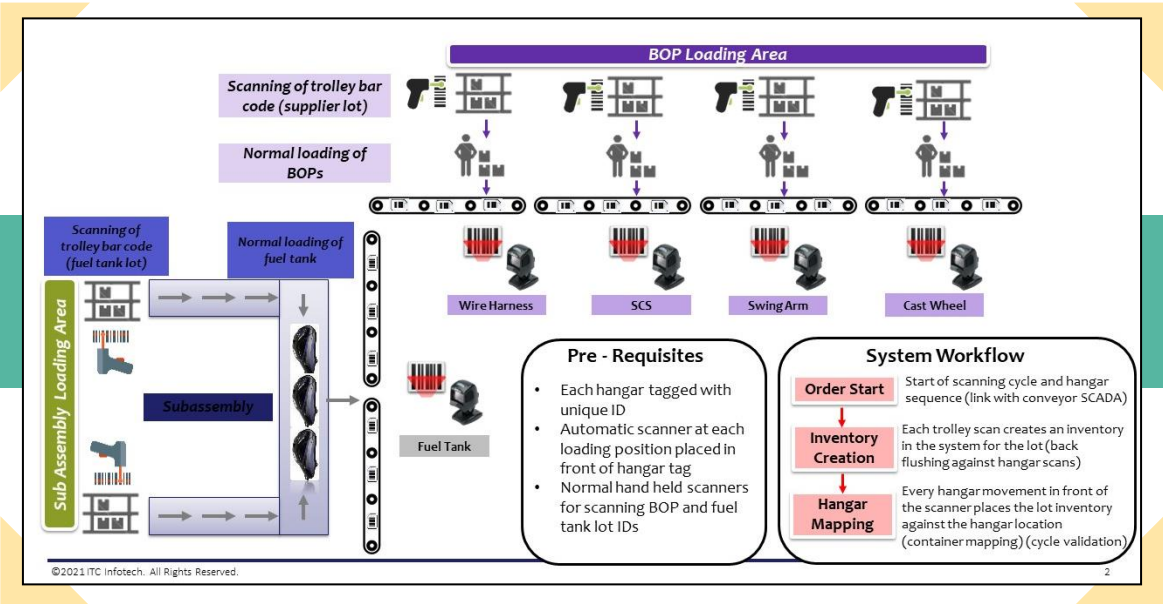


ITC Infotech Solution

ITC Infotech provided a comprehensive MES solution to client from design to implementation and program management. Specific activities performed are:

- Undertook a detailed Discovery and Design phase for understanding the process, pain points, maturity of present technology used in shopfloor also gathered information influencing the data flow from machine to MES
- ITC Infotech followed agile methodology to deploy the MES solution.
- Replication of the modules was done by creating a Global Template. This accelerated the deployment and also provided client with consistent quality.
- End to end solution for traceability in the entire factory value chain by scanning each hanger which are provided with unique ID. Solution is explained for high assembly line in below exhibit 1
- Logistics execution template to synchronize material management and flow in the plant.
- Transition to pull based manufacturing driven by the frame assembly line. As each trolley is scanned it creates an inventory in a system which drives pull based manufacturing. Exhibit below explains in pictorial view
- Real time visibility into critical machine data and KPIs
- Prepared detailed cutover and rollback plans with roles & responsibilities for Application shutdown, Data Backup and Restore, Application reconfigurations Application startup and Sanity testing, Reconciliation etc.
- Migrated QA and Pre-Prod systems prior to the cutover
- Elaborate Program Management and detailed status reporting meetings with the right stakeholders

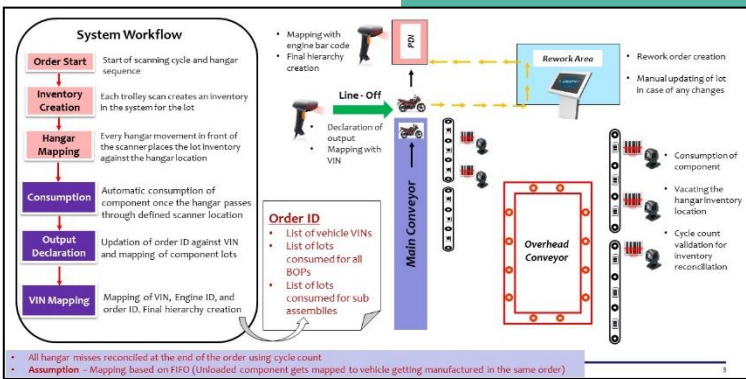
MES was implemented to a very high-speed assembly line, where it was necessary to have the traceability of the materials used for assembly. For all the critical components a barcode was introduced and the same was getting scanned in MES through scanner at line. This helped customer to have the information such as when the material was used, at what time for which batch etc. In the below snapshot you can see



components are loaded on the line either in trolley or individually for critical components. Each trolley/component were scanned at line to provide the traceability. This implementation was done for main line and subassembly line as well.

Exhibit 2: End to End Traceability

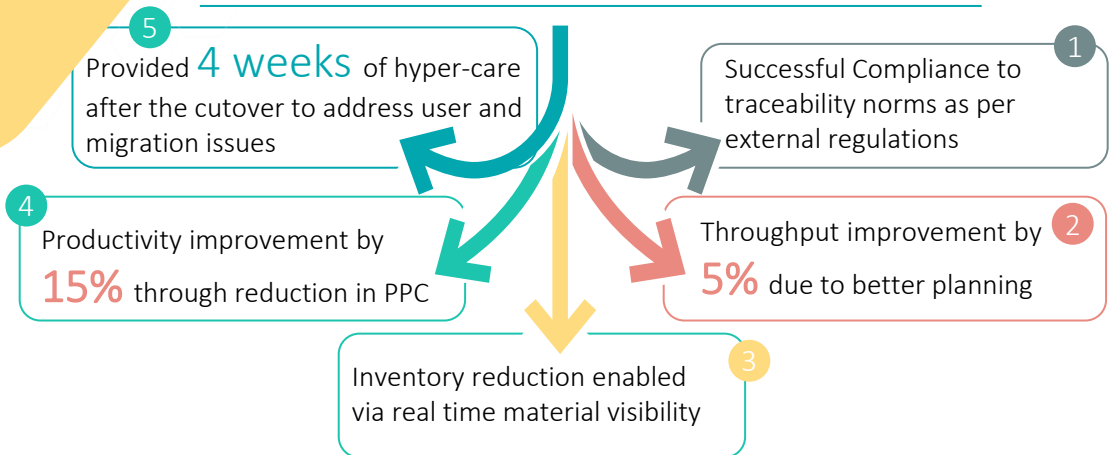
Solution was not only implemented to track the components but also automatically calculate the consumption and also mapping of component lots to order ID, Engine ID. Pre-Delivery Inspection (PDI) was also mapped to the vehicle there by giving end to end traceability.



Results & Client Benefit



ITC Infotech completed the engagement successfully. Specific results and client benefits achieved are discussed below



Bottom Line

ITC Infotech can help automotive manufacturers in their digital transformation journey leveraging MES. The successful example discussed is testimony to ITC Infotech's automotive domain expertise and MES service competency. For details about ITC Infotech MES capabilities please refer: <https://www.itcinfotech.com/capabilities/manufacturing-execution-systems/>

About ITC Infotech

ITC Infotech is a leading global technology services and solutions provider, led by Business and Technology Consulting. ITC Infotech provides business-friendly solutions to help clients succeed and be future-ready, by seamlessly bringing together digital expertise, strong industry specific alliances and deep domain expertise. The company provides technology solutions and services to enterprises across industries through a combination of traditional and newer business models, as a long-term sustainable partner.

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