Tractors And Farm Equipment Limited, TAFE, is India’s second largest Tractor manufacturer, operating from three plants. They received the CII-Exim Bank Award for Excellence in recognition of their strong commitment to excel. In addition to their own branded tractors, TAFE makes Massey Ferguson and Eicher brands.

“Previously we were struggling to find a set of truly effective systems. Now that new processes are established, we are very much more clear about what to do and where to act. We will get the desired results, if we follow the new system.”

G. Hari
COO

ANALYSIS
TAFE recognised that there were inaccuracies in their system (MRP) and issues in vendor management that were causing material shortages and problems adhering to their production plans. Renoir was asked to assess the process and assist with a programme to improve performance.

The detailed study of the entire process identified a number of key opportunities:

- Errors in the Bill of Materials (BOM)
- Stock inaccuracy
- MRP (Schedule) inaccuracy
- Improper planning
- Production line stoppages
- High Inventory
- Vendor failures
- Buyers’ skill issues
- Material traceability

PROJECT
The objectives of the 30 week Project “SCORE”, was to improve delivery compliance and increase inventory turnover by addressing the root causes for the material shortages. The plan was to implement a well structured Material Planning & Inventory Management system.

The project team consisted of a Renoir Project Manager and Consultant plus four TAFE employees (Task Force); a Steering Committee headed by the VP Operations and the Madurai Plant head (GM); and two Management Action Teams (MATs) from the Project focus areas, whose role was to drive the changes. Both the Task Force and MATs received extensive training to prepare them to become key change agents for the organization.

During the Focus Process™ the Project team re-visited the opportunities identified during the Assessment. This helped to get buy-in and ownership, and ready plans for change and implementation.

Systems for verification, checking, and correction of the BOMs were developed and implemented and the cycle counting process was overhauled. Bin accuracy and location studies of material were carried out and location lists were developed and circulated to the production cell supervisors. Proper stock recording formats were developed for all areas. To improve MRP accuracy (schedule accuracy) trials were first run on a test MRP system prior to going live. A new process for logging quality deviation approvals (QDA) was established and an Engineering change management system implemented. These changes helped eliminate stock discrepancies.

Key Results
- BOM error reduced from 13% to 1.3%
- MRP accuracy increased by 70%
- Stock accuracy (value) increased by 80%
- Monthly delivery compliance (export) improved from 31% to 84% (AGCO) and from 66% to 76% (EEM)
- Inventory reduced by 10.8 crore

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An improved daily planning system was implemented which finalizes the next day’s plan by 6 PM. The focus was on planning and controlling activities and a number of leading indicators have been added to give management timely alerts and to identify problem root causes.

“Now I can freeze the next day’s plan a day in advance.” Planner.

Inventory: The team identified the main root cause for the excessive inventory - changes in the production plan. With the new system in place, plant management can now easily view the impact of changes in the plan and buyers can track the inventory level on a daily basis. This problem identification helped the project team prove that plan changes are not beneficial and that they also create confusion amongst vendors.

The new system also highlighted excess stock and overflow stock and allowed us to begin moderation of schedules. Previously, if a vendor’s order was delayed, TAFE asked another vendor to supply, however the schedules were not moderated, so that in addition to receiving the material from the alternative vendor, the original order was received and added to inventory. The new system helped put and maintain much tighter control to avoid an excess in inward materials and a series of training sessions was conducted to improve the skill of buyers and ensure that the system was being used.

“I am now finding change in my buyers. With the new process, their frustration is coming down. Cracking the inventory pile up is the major achievement of this project. Thanks to Renoir for helping us resolve the reasons for delivery loss.” Kumaradevan, General Manager.

The project team also looked into delivery compliance issues not related to either MRP or stock inaccuracies. These issues are mainly external such as development issues, vendors’ issues, etc. We developed formats for component tracking and circulated these to all buyers.

Finally, we implemented a daily MIS/Dashboard for the plant and store to enable plant management to see the performance at a glance.

OUTCOMES

“The internal systems are now stabilized. We are having very good control & confidence with internal factors and we should implement the same techniques for resolving external & plant external issues.” J Edwin – VP Operations