

## TMTL Throughput, Alwar

One company, one goal

TAFE is a major, US\$ 1.6 billion tractor company incorporated in 1960 at Chennai, India, in collaboration with Massey Ferguson of the USA. TAFE acquired Eicher tractors in 2005 through a wholly owned subsidiary "TAFE Motors and Tractors Limited" (TMTL). Renoir Consulting has a long history with TAFE and collaborated again as an implementation partner for improving the overall plant throughput of Eicher Engines at TMTL's Alwar Plant.

### ANALYSIS

Following successful Projects with TAFE: Material Planning & Inventory at Madurai, Stores & Planning at Bangalore, and Supplier Quality and Vendor Planning at TMTL, Bhopal, Renoir conducted a short study at the TMTL, Alwar plant to identify improvement opportunities in overall plant throughput.

The initial study revealed a number of issues which were affecting plant efficiency and reducing the overall throughput. The three most significant issues were:

1. Downtime due to break-downs on critical (bottleneck) machines
2. Downtime due to non-availability of components
3. Low employee productivity

As a result of these issues, the plant was operating at capacity levels of around 60% and productivity ranged between 35% - 65% in most areas.

TMTL asked Renoir to help develop and implement systems to achieve the desired business objectives, an improvement of 30% in plant throughput. The Project, named "DRONA" would focus on three key areas:

1. Overall Equipment Effectiveness
2. Supply Chain Reliability
3. Organization Effectiveness

### PROJECT

The goal of Project DRONA was very clear and straightforward:

*"Improve the overall plant throughput from 42,000 engines per annum to 55,000 engines per annum in 24 weeks"* – A jump of 30% in terms of throughput from the same plant, same machinery, and same people, without any additional investments.

Key to succeeding was developing an effective management control system to enable better planning, co-ordination and informed decision making.

The project team consisted of Project Manager and Consultant from Renoir as well as 3 Task-force Members from TMTL. Three Management Action Teams (MATs) were also formed:

- Supply Chain Management (SCM) chaired by the Head of SCM
- Maintenance Operations & Quality chaired by the of Head Assembly & Maintenance

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"Renoir is completely different from all the consulting companies I have seen till date. Their approach of working at ground-most level makes even the operators feel a part of the project. They have tirelessly hand-held every single individual to ensure that systems are used and not just complied with. They have played the role of the spark-plug in an engine."

**MAT Chairman(Head – Engine Assembly, Testing & Maintenance)**

#### Key Results

40% Plant throughput improvement

Engine production from 135/day to 185/day.

Plant OEE from 60% to 83%.

Machine downtime reduction: 30%-45%

Material schedule adherence from 70% to 91%.

Reduction of 3-day shortages from 100+ to 35.

Sales & Operations plan adherence from sub 60% to 100%.

Inventory turns ratio improved by 30%.

“I have never once regretted the decision to engage Renoir to deliver these important changes to my business.”

**Zane Fulljames**  
**Chief Executive Officer**

- Organization Effectiveness chaired by the Head of HR

A Steering Committee was also formed to review the progress of the individual MATs and it was chaired by the Plant Head.

The goal was for the Taskforce and MAT teams to drive the change, developing ownership and sustainability. Renoir provided extensive training to develop them as Change Champions within the various functions.

Each MAT conducted extensive data analysis, field studies, organization surveys, and process studies to identify and understand in detail, the areas of improvement in each function. A comprehensive set of SMART KPIs were identified for each MAT and targets were set. Using the improvement levers, each MAT developed an action plan to improve their KPIs from the current base levels to the set target levels.

Renoir then helped the MATs in developing systems and processes including:

SCM MAT	MOQ MAT	OE MAT
Buyer Planning System	Short Interval Control	Employee Engagement Schemes
3 day Supply Chain Visibility	Overall Equipment Effectiveness	Employee Training Plan
Sales & Operator’s Planning	Value Stream Mapping	Knowledge Management
Inventory Cycle Counting	Shift Handover Systems	Continuous Improvement
Supplier Issue Management	PM Effectiveness	Rewards & Recognition Schemes

**RESULTS**

The results were astounding and tell a great turnaround story. The annualized plant throughput improved by a staggering 40%, versus the original 30% commitment.

In addition, more than 3200 man-hours training has been conducted across the plant, 1000+ by Renoir and 2000+ by the MAT teams. This significant involvement by the MAT members augurs well for continuous improvement and sustainability.

**THE RENOIR GROUP**

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