



Operational Excellence Improvement in a Global Pharmaceutical Company

A major global pharmaceutical company was faced with upcoming patent expirations and overall excess capacity. As a result, many of the operation sites across the Americas were being consolidated. The client engaged Tefen at their South American plant, which was set to absorb more products than available capacity could handle due to the consolidation. The client was faced with a need to increase capacity while reducing operating costs to stay competitive in that market sector.

Challenge

Tefen's first step in developing and implementing an operations excellence plan for continuous improvement was to perform a diagnostic of the client's operations.

The following challenges were identified:

- Product packaging had a large number of SKUs with small batch sizes causing frequent changeovers, downtime, and inefficient production runs.
- Maintenance personnel stretched thin due to firefighting issues that occurred on the production lines.
- A large number of SKUs needed Quality testing for the various markets served, leading to excess waste and long cycle times

Working together, Tefen and the client were determined to:

- Increase capacity of packaging lines, as measured by Overall Equipment Effectiveness (OEE)
- Reduce the production labor force with a target of 8- 12 FTEs
- Increase customer service levels in maintenance by adopting a Total Productive Maintenance approach with a target labor force reduction of 2-5 FTEs

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- Implement Lean Operational Methodology in the Quality lab, to reduce labor by 7-15 FTEs

How Tefen Helped

To improve OEE, Tefen addressed the challenges of availability and performance in the client's operations.

Packaging: Tefen's diagnostic showed that the greatest gap in the client's operational times was change over. In order to improve changeover time, a set of lean tools was developed with the operators. Using SMED techniques the process was structured and simplified to improve operational capacity. Additional focus was placed on equipment downtime and operator line balancing to improve the client's Packaging lines operation. Tefen implemented a metrics system to give a clear picture of the current downtimes in operations and overall efficiency and performance.

Sustainability: A critical part of the Tefen methodology is the sustainability of the tools implemented. To ensure continuous improvement, it was supported and re-enforced through training and awareness and management buy-in.

Equipment Maintenance and Prevention: The work performed in Engineering supported the Performance measure of packaging line OEEs. With equipment being expected to breakdown, the question was prevention: when and if anything could be done to prevent it from occurring. Tefen implemented a Total Productive Maintenance (TPM) system for the packaging lines. Working with the mechanics and operators, the various problems with individual pieces of equipment were identified and a system was put in place to reduce the disruptions to operations. The 3 pillars of TPM implemented included: Preventative maintenance, autonomous maintenance, and predictive maintenance. By empowering the operators to make decisions and maintain their respective equipment, there was a shift in ownership and easier buy-in to the new process.

Streamlining Quality Operations: The Quality Control lab operations included testing of raw materials, work in process, and finished goods. Long testing lead times and backlogs hindered the lab's operations. In order to streamline operations, Tefen deployed a six step methodology. The first step was to eliminate any redundancy in operations. In addition, Tefen implemented a work cell concept to reduce the overall analyst walking distance by 60%. Tefen used 5S methodology, a Kanban system, and a Hijunka board in the lab so analysts were able to pull orders in optimal batches, rather than having inventory pile up. As a means of ensuring sustainability, Standard Operating Procedures and metrics system were implemented.

Performance Excellence Delivered

As a result of Tefen's engagement, the client saw improvements in packaging, maintenance, and the quality lab.

Packaging: The packaging plant OEE was increased from 27% to 41%. The increased capacity helped reduce thirteen FTEs and an additional reduction of six FTEs based on improved layout and ergonomics. The packaging operations also saw a cost reduction of \$200K by improved non-destructive testing.

Maintenance: Working with the engineering team, TPM was implemented on a pilot line, which included a Uhlmann Blister and Cartoner equipment. Ultimately, 1 FTE was reduced following the reduction of maintenance tasks and support functions.

Quality Lab: Nine FTEs were reduced due to reduced testing of Imports and Raw Materials, the elimination of redundant in-process testing, and the implementation of a new process, Kanban and Work cell concept. Future improvements in Quality Assurance inspection reduction of in-coming materials were recommended.

About Tefen

Tefen is an international management consulting firm, committed to improving overall operational effectiveness for Fortune 500 companies around the world. The firm's main areas of focus include operations excellence, manufacturing, quality, customer service, research and development and supply chain management. With its "hands-on" approach philosophy, the company has achieved tremendous success in delivering quantifiable and value-driven results for its clients in a variety of industries, including healthcare, life sciences, general manufacturing, high-tech and financial services. All of Tefen's support programs are ISO 9001 certified. Tefen currently employs over 300 professionals worldwide.

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