

ENTERPRISE CASE STORY | MLE SYSTEM

KAIZEN PRACTICES IMPROVE PERFORMANCE AT FLEXIBLE PACKAGING AND CREATE ECONOMIC OPPORTUNITIES FOR WOMEN AND YOUTH

Flexible Packaging Manufacturing PLC was established in 1997 and has an average production capacity of 2,100 tons of packaging materials per year with 130 permanent employees, 30% of whom were women in 2022. Similar to many manufacturing companies, the firm was operating below its capacity with limited productivity, and therefore, limited economic opportunities for LIWAY's target groups of women and youth.

Flexible Packaging was selected as one of five medium and large enterprises (MLEs) to participate in the pilot of an intervention to improve production management for enhanced productivity and quality. Implemented with the Ethiopian Kaizen Institute (EKI), the intervention involves training and certifying local consultants on the Kaizen approach, which is used by trainees to consult manufacturing firms on production management improvements.

In 2020, the annual sales was **300,000 ETB** and at the end of 2021, it was **5 million ETB**. As the general manager described, *"Compared to our production capacity, the annual sale in 2020 was the lowest sales we ever had"*. In April 2021, a private consultant and a technical advisor from EKI were assigned to facilitate implementation of the intervention with the aim of improving capacity utilisation rate and business performance of the company. The consultants conducted a scientific diagnosis and identified more than 20 constraints affecting the firm's performance. Critical constraints were selected for the application of countermeasures in consultation with top management. These included the inefficiency of the most critical of the factory's three main production machines, low production volumes and productivity, a high defect and rework rate, a poorly organised and unsafe work environment, and the absence of a medium and long-term strategic plan.

Critical constraints selected to apply countermeasures:

- 1) Low machine efficiency rate
- 2) Low production & productivity
- 3) High defect and rework rate
- 4) Poorly organised and unsafe work environment
- 5) Absence of a medium and long-term strategic plan

Before applying the countermeasures, leadership and technical staff were trained on Kaizen tools to institutionalise the plan and sensitise the need for continuous improvement. As a result, a cross-functional team was established to create a company-wide task force.

COUNTERMEASURES AND RESULTS

Optimising the Machine Capacity Utilisation Rate: The flexography printing machine is one of the critical machines with the highest workload and customer demand. The machine's Overall Equipment Effectiveness (OEE) was low in terms of availability and quality. The downtime is high due to the lack of needed skills of operators in cliché cleaning, cylinder adjustment, proper use of cleaning chemicals, film size, volt, and gear. The consultancy team applied the Total Productive Maintenance (TPM) technique and significantly improved the overall effectiveness of the machine.

Improving Process and Workplace Management: To create a consistent work environment by setting systems and standards, the team applied the basic Kaizen principles using the 5s tools (Sort, Set-up an order, Shine, Standardise, and Sustain). Related training and standardisation work have reduced search time, the rework rate of a plate, and machine waiting time, which has led to improved worker job satisfaction and increased productivity.



Before

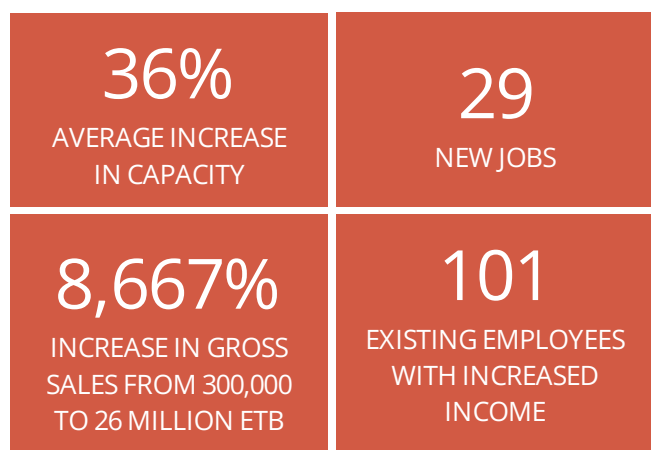


After

Strategic Plan Development: During the assessment, the firm’s business performance was highly affected by Covid-19 and other factors, and there was a lack of strategic insight to overcome the situation. Hence, improving quality, cost, and productivity with systematically designed business policies and clearly defined goals for each department was found to be crucial to sustainability. Based on these facts, the firm invested in the development of a five-year strategic plan. The strategic directions have improved customer relationship management (CRM) and supply chain management (SCM) systems and have also helped the firm solve its problem of raw material shortage from the foreign market by identifying and establishing linkages with local market suppliers.

The countermeasures led to enhanced skills of employees, improved workplace management, and a **36% average increase** in the capacity utilisation rate. The gross sales for 2022 reached **26 million ETB** from **300,000 ETB** in 2020. Most importantly, the increased performance of the firm has created **29 (8 female)** new job and increased income for **101 (30 female)** existing employees.

Ato Moges, General Manager of the firm explains the benefits of the Kaizen intervention as follows:



“ Our gross sales moved **from ETB 300,000 to 5 million and 26 million in 2020, 2021 and 2022** consecutively. The intervention uplifted our performance. I advise leaders of MLEs to commit themselves to change and invest in consultancy services to improve productivity through the Kaizen philosophy. ”