

A 12-person apparel maker raises productivity by 40.23%: Technology and data

MANUFACTURING

SMALL

TECHNOLOGY AND DATA

+40.23%

UNITS PER HOUR [1]

-63.63%

WEEKLY DEFECTS [1]

-45.45%

WORK IN PROCESS [1]

PROBLEM

Uneven work, defects, excess inventory, and informal methods constrained a small production team. The variation reduced output and made quality problems harder to prevent.

SOLUTION

The team standardized tasks, balanced the process, organized work areas, and used employee improvement proposals. These controls gave employees a common method and made deviations easier to identify.

RESULT

Productivity rose from 20.76 to 29.11 units per hour. Weekly defects fell from 22 to 8 and lead time fell from 6.315 to 4.77 days.

BUSINESS LENS

Porter: better quality and delivery reduce buyer reasons to switch while lower internal waste supports price resilience.

ASSUMPTIONS AND LIMITS

One company. Staff turnover occurred during the study. Published percentage and displayed cycle-time values do not fully reconcile.

DEPARTMENT APPLICATION

TECHNOLOGY AND DATA

Process measures replaced informal judgment.

Application analysis based on the cited source. It is not a separate measured result.

Prepared by Ocmulgee Business Process Solutions from the cited independent source. This is not an Ocmulgee client engagement or an original Ocmulgee result.

SOURCE [1]

International Journal of Lean Six Sigma, 2026. Lean Manufacturing Model for Productivity Improvement: Application in an Apparel SME.
<https://doi.org/10.1108/IJLSS-08-2025-0211>

Peer-reviewed in-situ case study | Size basis: 12 employees at baseline; 10 after staff turnover.