

AR No.2

Barcode Labeling

Recommended Action

Two full-time employees manually stick barcode labels onto each package. A barcode-labeling machine can do this more efficiently and reduce labor costs.

Assessment Recommendation Summary		
Cost Savings	Implementation Cost	Payback (years)
\$18,830	\$27,000	1.4

Background

Your company produces a large number of products with low volumes, so printing barcodes directly onto packaging would not be feasible. The solution your plant has found is to print barcode labels separately and manually stick each label onto the cardboard backing. Three full-time employees currently work at this station, two attach label to product, and one controls the computer and barcode printer operations.

A barcode-labeling machine would reduce staff to one employee at this station, and decrease the amount of time spent preparing packaging for final assembly.

Anticipated Savings

A barcode-labeling machine will reduce labor costs by 80 hours week. The labor savings (LS) can be calculated by multiplying the burdened wage (BW) by number of hours per worked per year (H). Your company provided all figures used in this section.

$$\begin{aligned} \text{LS} &= \text{BW} \times \text{H} \\ &= \$7.47/\text{hr} \times 56\text{hr}/\text{wk} \times 51\text{wk}/\text{yr} \\ &= \$21,330 \end{aligned}$$

Annual costs to operate and maintain the new equipment (OM), which includes energy costs, are estimated to be 10% of equipment cost or \$2,500. Based on equipment specifications, the barcode labeler requires less than 1 kW, therefore we believe it will have a negligible increase.

Savings Summary			
Source	Quantity	Units	Cost Savings
Labor	2	employees	\$ 21,330
Operation / Maintenance			\$ -2,500
Total			\$ 18,830

Implementation Cost

A company has already assessed your site and determined an equipment cost of \$26,000. They also estimated an installation by their employees and training time for your employees of 8 hours. Therefore, implementation cost (IC) associated with a barcode printer for a company with your product volume and variety is \$26,000, plus installation and training costs. Equipment includes conveyor, label applicator, and tab feeder.

Implementation Cost Summary			
Source	Quantity	Units	Cost Savings
Equipment			\$ 26,000
Installation/ Training	8	hr	\$ 1,000
Total			\$ 27,000

The savings will pay for the implementation costs in 1.4 years.