

## Case Study: Global \$5B Packaging Manufacturer

**How a world-class packaging manufacturer increased operating margins from 11% to 16%, and annual operating profit by \$88 million within two years.**

## Client-at-a-Glance

- 24 Factories in USA
- 654 Production Lines
- 200+ Customer Accounts
- 4,000+ Product Varieties
- 1+ Billion Units per Month

## Overview

A global \$5 billion packaging manufacturer was suffering from declining profitability in its North American business unit as demand began to slacken. Management believed it could increase profits by making better decisions on what products it sold, at what prices, and to whom.

The company adopted the Profit Velocity software platform that year to help improve the way it analyzed profitability and structured customer deals.

Within two years, operating profit was \$88 million higher than it had been (equivalent to 4% of revenue) even though unit volumes had dropped 16% over the same period.

The company dramatically increased its profitability because Profit Velocity's software provided information it never had before: the profit generated per hour of production item by each of its large array of products and customers.

Measuring and managing **profit per hour** — not *profit per unit* — became the key to developing a customer and product portfolio that drove several more points of revenue to the bottom line.

## Business Challenge

### Maximizing ROA in a Tough Economic Climate

The company's profitability was declining due to a slackening economy and its excess manufacturing capacity. From 24 factories around the U.S., the company delivered more than 4,000 products to hundreds of businesses, a complex customer and product portfolio.

Management needed to find ways to increase profits on lower volumes. Like many companies with a complex manufacturing environment (many different products, plants, and customers), it knew in detail the unit margins for each of its products, the profit per unit of product sold.

However, it also knew that this information was not enough to enable it to maximize the total profit from its product portfolio. **Products with higher unit margins were not always the more profitable ones, because they did not necessarily produce more profit per hour of manufacturing time.**

## How Profit Velocity Helped

To rapidly improve profitability, the manufacturer turned to Profit Velocity, using their software to calculate the profit generated per production hour by each of its 4,000+ products.

Management identified which products with higher unit margins actually generated low profit per hour. It also identified low unit margin products that were made fast enough to yield a much higher than average profit per hour.

Armed with profitability insights its competitors didn't have, the company renegotiated or walked away from unprofitable contracts, and competed harder for contracts that could generate profits more quickly. For example, management discovered its business with one very large customer was barely profitable. With information from Profit Velocity, they were able to see how fast each of the many products sold to that customer made profit on the assets. The company was able to restructure the contracts of this key customer, and the account soon became highly profitable.

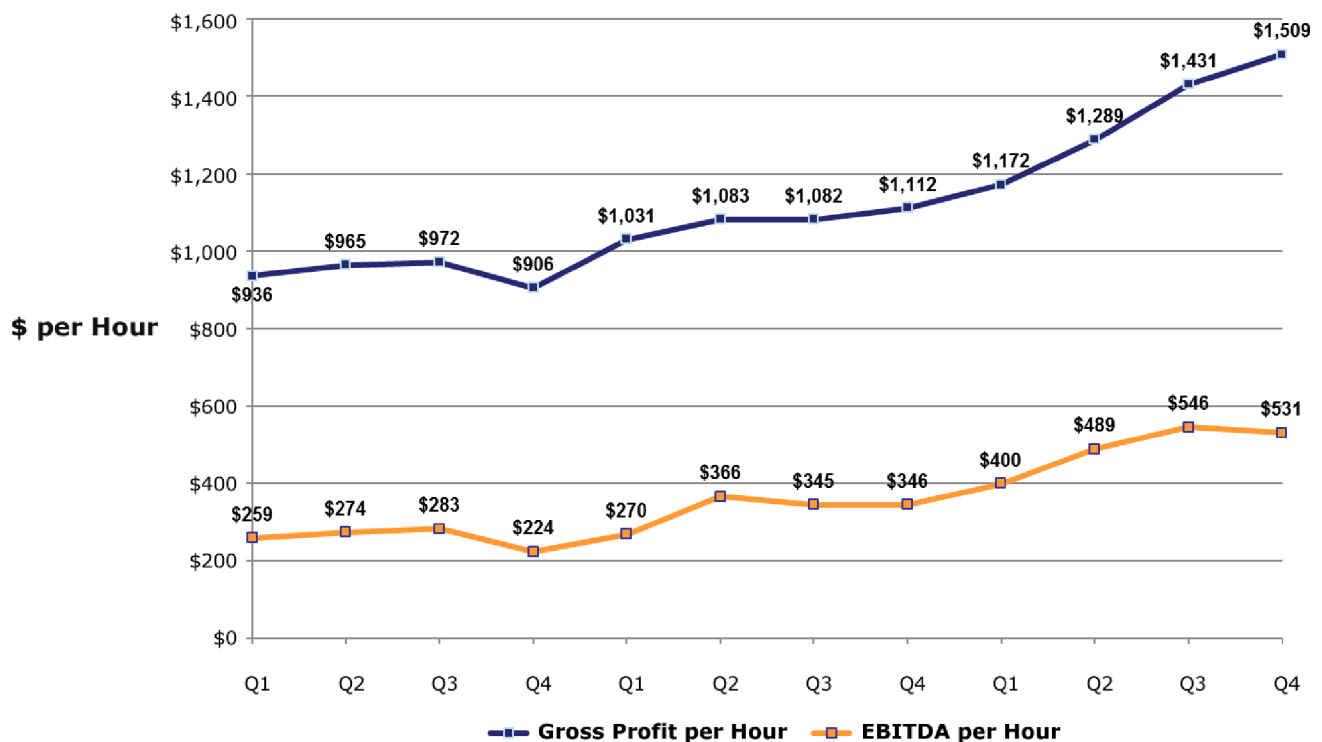
## Key Business Benefits

Over a two-year period, the packaging manufacturer's operating profit margins in its \$2B North American market rose from 11% to 16%. Annual operating profit rose \$88 million, an amount equal to 4% of revenue.

By generating more total profit from lower volume, the company was able to close four manufacturing plants, significantly reducing overhead. At the same time, it reallocated more capacity to products that generated profits quickly.

Management was able to boost the company's profitability because the Profit Velocity software allowed it to monitor and manage profit per hour of production time. Over a two-year period, it improved that key metric by over 60% from \$936 to \$1,509.

**Exhibit 1: Over a two-year period, the company steadily increased both gross profit and EBITDA per hour.**



## How Profit Velocity Reveals Opportunities to Increase Profits

The manufacturer realized that focusing solely on unit margin was not the optimal approach. Conventional accounting systems measure and report product profitability strictly on the basis of margin per unit — revenue generated by a product minus the cost of making it. This approach does not measure or report how fast the different products make profit per hour of time using the assets.

This time-based profit metric is vital, because the metric that investors care about, return on investment, is a measure of how quickly a firm generated profit. Returns are measured per quarter and per year. But few manufacturers measure and report a detailed, time-based profit metric for use in daily decision-making. Without it, managers cannot maximize the rate of return on investment in production assets.

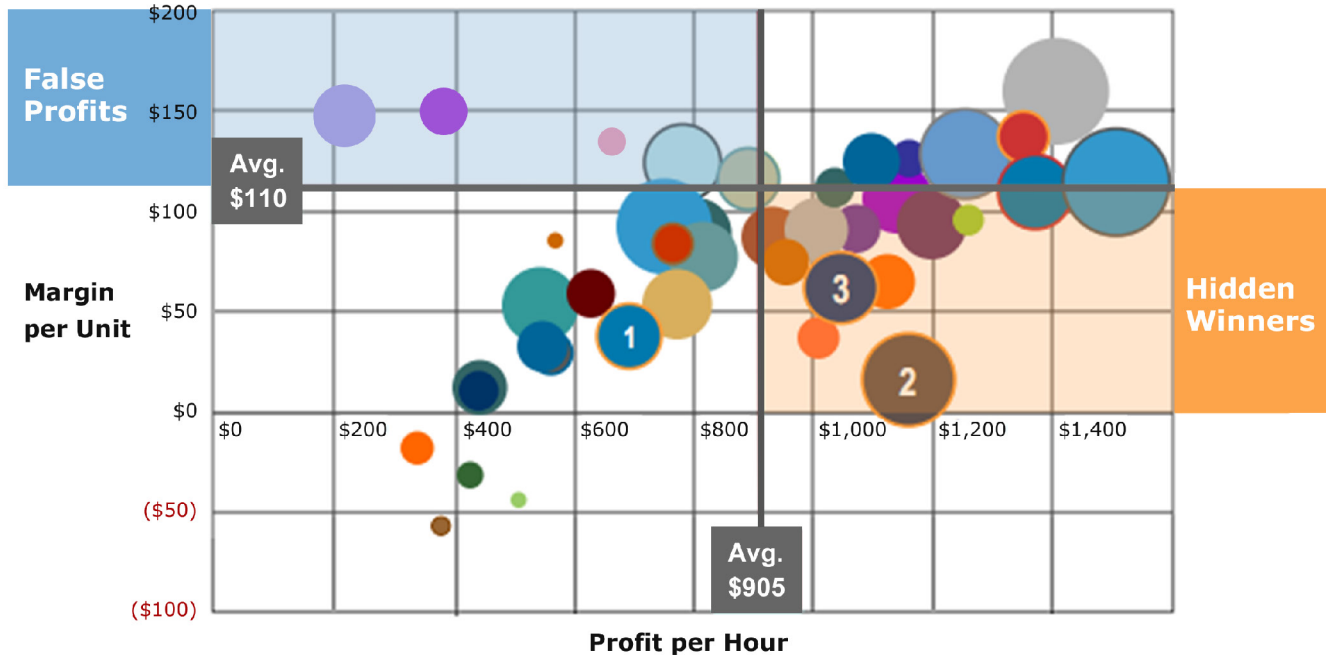
### Profit Velocity

To understand which products are more profitable to make and sell, a company must be able to track **profit per hour** of manufacturing time, not just profit per unit made. This time-based profit metric we refer to as profit velocity.

## “Hidden Winners” vs. “False Profits”

In any manufacturing company with many products and customers, the profit velocity of its products and customers ranges widely. Exhibit 2 compares the profit velocity of a manufacturer’s products against their unit margins. Using profit velocity, management can quickly identify products that are high margin per unit but actually generate low profit per hour (the “False Profits”), as well as low-margin products that actually yield high profit per hour (the “Hidden Winners”).

**Exhibit 2: Margin per Unit vs. Profit per Hour for all the products in a single Product Family. Bubble size is proportional to each product’s Revenue.**



Profit Velocity allows management to drill down into each market segment, product group, or facility to fully understand the sources of high and low return on assets: which products, plants and contracts are responsible and why.

With this information they can continually fine-tune the product and customer portfolio, more aggressively selling products with higher profit velocity. When plant utilization is high, management can also raise prices on products that generate “False Profits,” so that either they become truly profitable, or customers are discouraged from ordering them, freeing capacity for items that generate profit from the assets more quickly.

## Profit Velocity

Profit Velocity has pioneered an innovative information platform for continuous profit improvement. The Profit Velocity software enables manufacturers to significantly increase profits by gaining precise control over their complex mix of products, customers, and facilities.

Profit Velocity works with private equity firms to help them improve the performance of their

portfolio companies. Profit Velocity also partners with management consulting firms to provide an information solution that helps them improve the financial performance of their clients.

High product variety manufacturers in specialty chemicals, electronic components, packaging, industrial parts, and metals have achieved major profit gains using Profit Velocity.