

## Case Study: \$2B Electronic Components Manufacturer

**How a leading Asian electronic components manufacturer launched a next-generation product line while driving the product line's operating margin from 41% to 51%, adding \$10 million more profit dollars to the bottom line.**

## Client-at-a-Glance

- 7 Factories in Asia
- 5 Major Technology Groups
- 4500+ Production Centers
- 275+ Customer Accounts
- 9,500+ Product Varieties
- 850+ Million Units per Month

## Overview

During a turbulent economic period, the senior management team of a \$2 billion dollar manufacturer of advanced electronic components realized they had less than perfect visibility into the profitability of their complex mix of products and customers. Management suspected they could generate more profits from their assets by better prioritizing customer orders to speed up profit flow.

## Business Challenge

The company adopted Profit Velocity's software platform to provide new insights into the profitability of each product and customer account. Facing limited availability of the cutting-edge production equipment needed to produce their soon-to-be-launched product line, management used the Profit Velocity software to reprioritize customer orders.

By prioritizing incoming orders based on how fast they would flow profits through the limited capacity of state-of-the-art production equipment, management drove profit per machine hour from \$1,063 to \$4,382. At the same time they dramatically ramped up unit volume and revenue. During the period, operating profit for the new product line rose from 41% to 51%.

## Maximizing ROA in a Tough Economic Climate

The company has a complex and technologically advanced manufacturing environment: 7 factories, 5 major technology groups, 4500+ production centers, 19,500+ products, and 275+ high-tech customers.

Like every sophisticated company with a complex manufacturing environment, management knew in detail the profit per *unit* of product, but they had never measured profit per *hour* of production time.

They realized that products with high unit margins did not always produce the highest profit per hour of manufacturing time. Sometimes low-margin products with faster throughput rates produced more profit dollars per machine hour.

But lacking a workable profit per hour metric, management could not be sure which products were more profitable from the investors' point of view— that is, which produced the best return on production assets.

Consequently, management did not have the information needed to properly prioritize incoming orders or focus capital spending to maximize return on investment.

## How Profit Velocity Helped

Once the company started using Profit Velocity's information platform, management was able to accumulate enough data on their new product line to analyze its financial performance over its first two quarters. They soon discovered that the average profit per hour of the new product line was collapsing.

The cause? A few customers were rapidly expanding their order quantities for product items that showed good per unit margins but delivered very low profit per machine hour. Those large, low-profit velocity orders were crowding out orders with far higher profit velocity.

Armed with these new insights, the demand management team began giving faster order commit turnaround times and earlier delivery dates to high-profit velocity orders. And when sales reps complained about orders that were not getting priority, the demand management team was able to show the low-profit velocity ranking of those orders at the back of the queue.

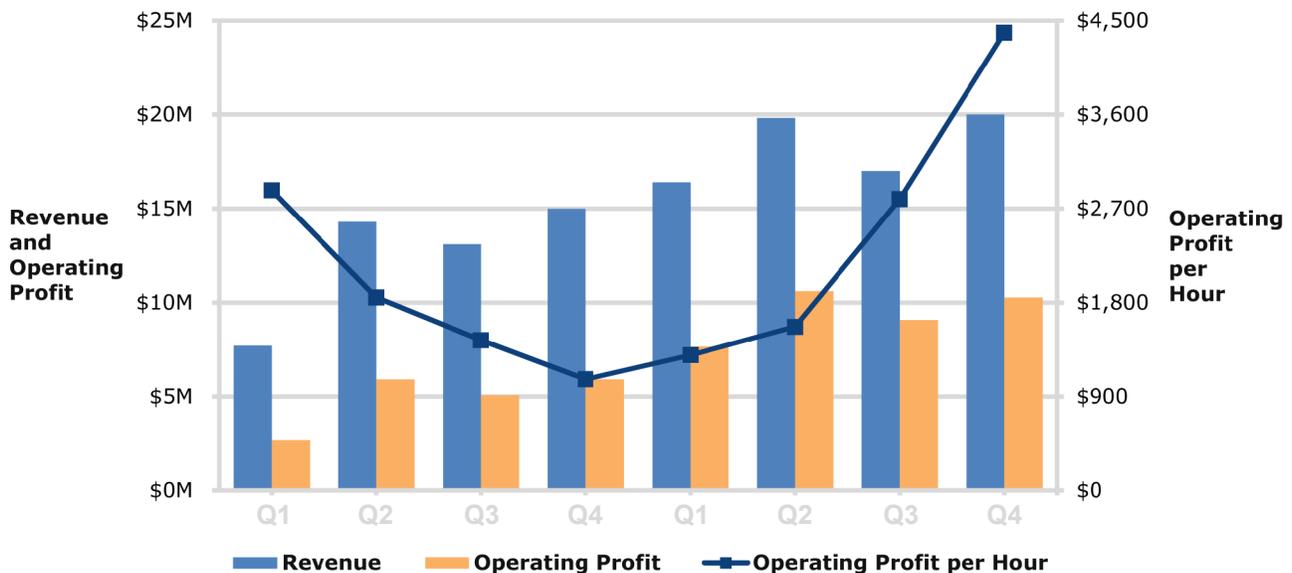
Responding to the new priorities, the sales team began to push more of the products that demand management favored with faster capacity commitments and shorter delivery dates.

While the capacity allocation process influenced the sales team to alter the stream of incoming orders, operations management also used profit velocity to replan their capital spending.

As production capacity to support the new product line was expanded, they focused on adding specific equipment types that had been delivering the highest profit velocity. Meanwhile, they reduced investments in equipment types that yielded low profit velocity. Reshaping the capacity mix of available machine types encouraged sales to emphasize high profit velocity products, and helped further accelerate the overall flow of profits through the assets.

Within a year, profit per hour rose from \$1,063 to \$4,382. That drove up operating margins from 41% to 51%, adding \$10 million in profits on annualized revenues of \$80 million and delivering sufficient returns on investor capital to sustain the company's strategic move into the rapidly expanding market for this new product technology.

**Exhibit 1: With profit velocity guiding decisions, Operating Profit per Hour grew from \$1,063 to \$4,382 per hour which added \$10M in profits.**



## Key Business Benefits

To track the financial performance of major capital investments in the cutting-edge production equipment required to support the introduction of next-generation product technology, operations management began monitoring the profit velocity of each of the various products within this new product line. A year later, the company reaped major benefits:

- Demand management teams were able to rank and prioritize orders based on profit velocity
- Company increased profit velocity from \$1,063 per hour to \$4,382 within one year
- Management team was able to improve operating margins from 41% to 51%
- Company added \$10M in profits on \$80M in annual revenues
- Operations management was able to optimize capacity planning and future investment

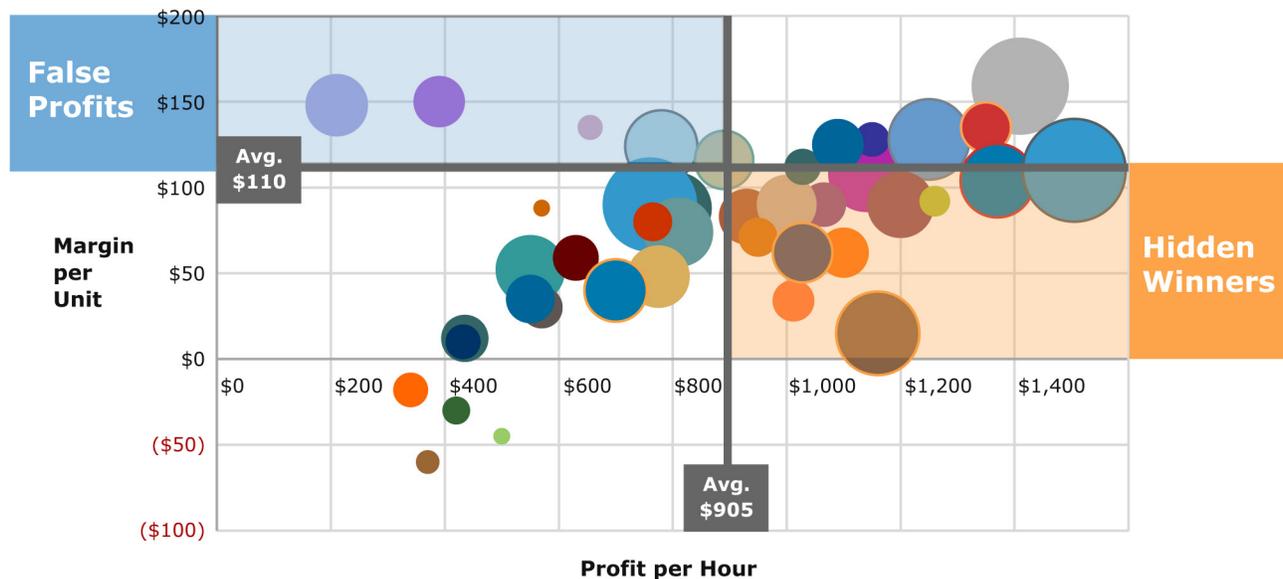
## How Profit Velocity Reveals Opportunities to Increase Profits

Today, virtually every large manufacturer uses sophisticated systems to precisely measure the *profit per unit* for each of its many products. But few have the tools to measure the *profit per hour*—of profit velocity—of key machines as they produce various product items for different customers.

In complex manufacturing environments, the profit velocity generated by the many product items and customers ranges quite widely. In Exhibit 2, all the products in a given product family are graphed with margin per unit on the vertical axis vs. profit per production hour on the horizontal axis.

With this view, management can identify both profit problems and opportunities: high-margin products that generate profit too slowly (“False Profits”) and low-margin products that generate profit quickly (“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.**



Using this information, management can start adjusting how it prioritizes orders to maximize the overall rate at which profits are generated. Management can also better focus capital expenditures in support of specific product subgroups and equipment types that generate profits faster. Accelerating overall profit velocity drives up return on assets and return on equity, the metric investors care about most.

## 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.