Why Labor-Based ROI Models Can Stymie Innovation And How To Fix It

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There's a lot of expectations around what the digital-physical convergence that defines Industry 4.0 means for manufacturers, especially in terms of how innovation can help them respond effectively to global competition, innovation and labor challenges. But before that can happen, there needs to be a fundamental shift in how manufacturers think about value capture and measurement—particularly when it comes to investing in innovation. Making this shift represents a wholesale change in how manufacturers think of and evaluate potential technology investments, measuring ROI through the lens of holistic value creation instead of what it costs divided by how many jobs it will eliminate.

In this article, I discuss:

• How direct labor-based cost models hobble manufacturing's innovation potential.

• The role customers play in driving new thinking about ROI.

• Changing the entrenched mindset of headcount reduction when evaluating innovation.

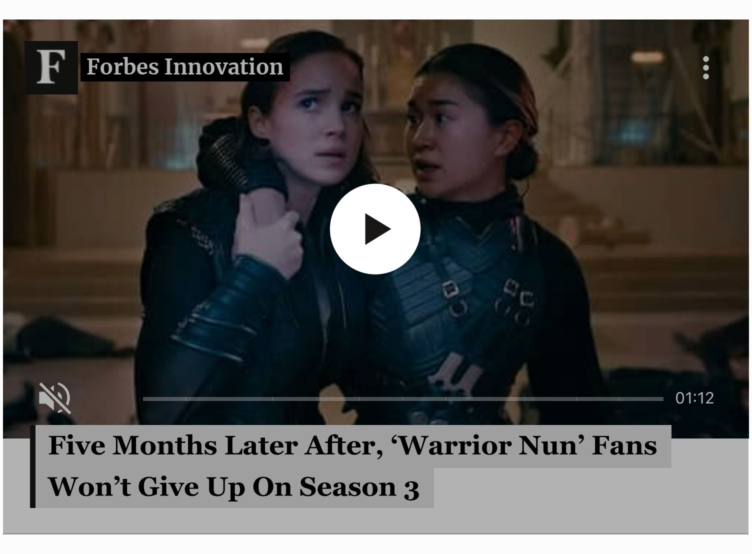
The Drawbacks Of Direct Labor Reduction ROI

A fundamental assumption in manufacturing today is that the biggest efficiency improvements come from automation and eliminating people, with ROI based on how quickly and how many people will be replaced. If new technology is estimated to cost $2 million over three years and comes with no headcount reduction, odds are the project won't be funded.

This singularly focused approach eliminates the essential component that drives competitive advantage in operations: humans. Although there's chatter about how robots and automation will eliminate the need for people in manufacturing, the reality is that people bring skills irreplaceable by technology. A well-trained person can:

• Adapt as conditions change to keep the process running.

• Think creatively to improve the process.



• Collaborate to solve problems holistically.

If you want to accelerate the benefits promised by digital transformation, stop asking, "How much of my direct labor cost will this technology save me?" and start asking, "How much more value will this technology deliver to me, my employees, my customers and my shareholders?"

When applied to the $2 million investment above, that shift in thinking means looking at how the investment contributes to increasing the value of the finished product. For example, a 10% productivity improvement and 5% quality improvement have far-reaching implications for everything from cost to customer experience.

Now, think about additional ROI in terms of efficiencies gained by reducing training hours and the time required for manual data collection or root cause analysis and increasing the speed of continuous improvement gains. Clearly, that $2 million investment has the potential to drive massive gains across the operation and could easily multiply the returns over the long-term, whereas a short-term labor removal model would quickly plateau.

Driving The Value-Based Mindset Starts With Very Different Metrics

In 2016, Klaus Schwab, founder and executive chairman of the World Economic Forum, wrote, "Whether consumers or businesses, customers are increasingly at the epicenter of the economy, which is all about improving how customers are served. Physical products and services, moreover, can now be enhanced with digital capabilities that increase their value."

When viewed through the customer lens, metrics that capture the impact of digitally enabled capabilities include improved quality and reduced prices. For manufacturers, these metrics include increased process visibility, reduced scrap/rework, less time spent gathering data, satisfied employees/job growth, reduced tangibles such as a warranty pool reduction and intangible improvements (e.g., fewer recalls, increased brand/reputation strength and better supplier relationships).

Buyers know that value is multidimensional and includes purchase price, functionality, quality and repairability. So, if buyers spend based on multidimensional value, why don't manufacturers?

The mindset and culture focused on eliminating headcount have been so central to measuring ROI in manufacturing for so long that it will take work to change. Cultivating a new model built on the multidimensional value that customers seek will be worth the effort.

Making Change Happen From The Inside

Progressive plant managers intuitively see the multiple value propositions but struggle to drive a shift. Their challenge? Getting their controllers to think differently about ROI.

Here are four strategies to shift their mindset:

• **Demonstrate that use cases are cumulative.** The project should touch on multiple use cases that layer on one another, driving compounded gains from a single deployment. The more use cases delivered by the same investment, the higher the ROI. The traditional view is that new technology will drive value from A, B and C use cases and, therefore, the net ROI is A+B+C. But manufacturing is an interconnected system, so value isn't realized in isolation. Value from A also drives value in B and C. If standardized work improvement technology boosts training (A), it also increases productivity (B+A) and quality (C+A). The value of that technology is exponential—and it's additional value that would be missed with a traditional ROI model.

• **Educate on the new mentality.** From the factory floor to the C-suite, talk to, teach and train everyone on how and why this approach will satisfy the unique requirements of his or her particular stakeholder interest. The plant manager cares mostly about productivity and efficiency, whereas the CFO wants increased margins and lower warranty risk exposures. Speak to those audiences contextually using their lexicon and hitting on their pain points.

• **Be scientific.** Select technology with clear benefits and ensure the generalizability of the results can be sold and evangelized. Then, assemble a team with representation across the organization—from the plant level to IT to the executive level. As in the scientific method, test new technology against a control to show clear ROI. If you really want to eliminate doubt, consider multiple simultaneous tests against the control.

• **Evangelize the results.** Change doesn't happen overnight, and it doesn't happen at all if you don't talk about it. Share project successes broadly and explain how the new way of thinking about ROI led to faster, deeper and longer-lasting returns.

Ultimately, when you align thinking to the many dimensions by which customers assess value, new ways to more accurately capture ROI follow. The new mindset is built on the recognition that there's greater value to be created with the digital technologies that define Industry 4.0 than simply reducing direct labor costs.

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