

# Common Sense Ways to Increase Productivity, Quality Consistency

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By DAVID GULATI, President, [Fidelity Technologies](#) [1]



Since Fidelity Technologies was founded in 1988, the company's mission has been to provide value to our customers by fulfilling contracts in a timely and cost-effective manner. It has always been our goal to operate with as little waste as possible, so we can be ultra competitive, yet still earn a profit.

When Fidelity bid on a series of U.S. Army contracts last year to produce a portable power distribution system known as [Power Distribution and Illumination System, Electrical](#) [2] (PDISE), we knew that it would take Lean manufacturing principles to make the work pay off.

Fortunately, we had space in our Reading, PA headquarters to build a streamlined assembly line from scratch.

The contracts, worth as much as \$124 million over a five-year period, represented a major effort from Fidelity to rebuild and promote our manufacturing division after years of focusing on other areas of our business.

PDISE is comprised of reliable, quick-to-assemble, modular power distribution equipment that is critical to deploying tactical electric power grids. It is used to subdivide and distribute electricity from single power sources to multiple equipment users within shelters and various unit complexes, and thus is a critical element of the Department of Defense (DOD) power structure.

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The PDISE contract required Fidelity to deliver 250 PDISE units every month. This rate breaks down to a daily completion pace of one unit every 32 minutes.

Thanks to our Lean system, Fidelity has been able to maintain a 100 percent on-time delivery record. We have become so efficient in our manufacturing process that we have been able to support the Army's request to build 375 units per month with the same workforce, even on one shift.

We challenged ourselves to design the operation in such a way as to make the best use of our limited floor space, maximize cash flow by minimizing inventory, eliminate wasteful activities, and establish a Lean culture among existing and new employees.

To open up the manufacturing floor space, walls, and offices were removed, and the cafeteria was relocated. Whenever possible, existing equipment and fixtures that fit the specifications of the contract were used.

The warehouse was gutted and reconfigured to support the demands of the PDISE program and our Lean operation. Racks were sized to represent a truckload of finished product. A full rack serves as an easy visual signal to schedule shipping.

We implemented what we call a "consumption-replenishment model" throughout the assembly line, in which we only produce when there is empty space on the inventory shelves.

An empty tote is the signal to produce and deliver more product. The protocol limits our exposure to problems that can result from overproduction and surplus inventory. We carefully and shrewdly negotiated contracts with suppliers, selected talented employees from a deep labor pool in the Reading area, and set up a testing system that accommodated our rate of production.

At all points of the manufacturing process, we focused on identifying and implementing simple changes to make our processes better and eliminate waste. Our employees are empowered to make suggestions on improving efficiency and eliminating any problems they become aware of.

Our hard work and persistence is paying off. Due in part to the PDISE contract, Fidelity was named the fastest-growing company in the greater Reading area by The Greater Reading Chamber of Commerce & Industry and was listed number 32 on Deloitte's Greater Philadelphia Fast 50, which ranks the fastest-growing technology companies in the region.

In addition, *Inc. Magazine* ranked Fidelity number 2,260 on its list of the [5,000 fastest growing](#) [3] privately held companies in America.

Most importantly, our customers are pleased. They have been able to continually receive a quality product, on time at a competitive price.

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Building a production line from scratch was a huge challenge, but it proved to us that lean manufacturing principles are more than just words in a business textbook or CEO speak. They are common sense ways to increase productivity, quality, and consistency.

Earning the contract to produce PDISE units was a great opportunity. Because of Lean principles and the hard work of our managers and staff, Fidelity has made that opportunity pay off.

*What's your take? Please feel free to comment below or contact Gulati via 610.929.3330. For more information, please visit [www.fidelitytech.com](http://www.fidelitytech.com) [1].*

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### Links:

[1] <http://www.fidelitytech.com/>

[2] <http://www.fidelitytech.com/ma/products/PDISE.html>

[3] <http://www.inc.com/inc5000/2010/index.html>