

Thorlabs

The Business Challenges

Thorlabs is a market-leading designer and manufacturer of photonics equipment for research, manufacturing and biomedical applications. They provide high-tech and often customized equipment to companies, government agencies and individuals involved in the aerospace, renewable energy, defense, security, medical, biotech, telecommunications or electronics industries.



And for Thorlabs, providing superior customer service is as much a priority requirement as maintaining their quality certifications.

Their challenges? Continue to be the leader in supplying sophisticated equipment to one of the fastest-growing high-tech industries, increase already high customer satisfaction, and eliminate costs.

Their path? Increase the sophistication of internal processes by efficiently increasing automation.

Thorlabs chose to focus on reducing errors in shipping their more than 12,000 products – some of which vary only slightly in shape, size and part number – in support of specific operational goals to:

1. achieve total customer service with same day shipping and zero errors, and
2. fully implement LEAN principles.

The Solution

After a thorough review of available options, Thorlabs selected and implemented the RF-SMART automated data collection solution. With RF-SMART, they could eliminate shipping errors and extend the functionality of Microsoft Dynamics AX, the ERP system they had used satisfactorily for five years.

“We found RF-SMART to fill our needs on three points,” said Sam Rubin, Senior Operations Manager, Thorlabs.

“One, RF-SMART has a small, less intrusive footprint into Microsoft Dynamics AX. Two, it is a product fully maintained by RF-SMART’s developers and RF-SMART support. And, three RF-SMART allows maximum use of the Microsoft Dynamics AX built-in warehouse features we already owned.”

Thorlabs’ implementation was simultaneous in their two largest manufacturing and distribution locations – the corporate headquarters in Newton, NJ and the German facility in Munich, Germany.

The Results

The results exceeded Thorlabs expectations in five key areas:

1. reduced shipping errors (on high dollar precision equipment, one error can be costly)
2. significantly more accurate, reliable and visible inventory
3. reduced inventory on hand
4. reduced new-user errors
5. in-house configurability to continue the improvement process on their LEAN journey.

Each of these improvement areas positively impacts Thorlabs’ customer service and overhead costs.

Since implementing RF-SMART to more strictly manage inventory through their supply chain, Thorlabs has



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increased the accuracy of their same-day shipping by 10% – coming right up to their zero-error goal.

The accuracy of their end-of-year physical inventory also significantly increased with the lowest year-end inventory adjustment ever achieved – only 3/10 of one percent.

Using RF-SMART, Thorlabs also achieved unexpected supply chain accuracy and efficiencies.

Previously, pick-and-pack operations were manual using paper orders as the control check. Thorlabs used the combined abilities of RF-SMART and Microsoft Dynamics AX to revamp their picking and packing processes, eliminating the paperwork for picking and packing, and forcing the pick process to be the total accuracy checkpoint. This revised process works as a safety net by helping the user post and update accurate information into Microsoft Dynamics AX.

Although the initial focus was to reduce shipping errors, Thorlabs experienced additional benefits in improved accuracy and time of accurate reporting throughout their entire supply chain simply by using RF-SMART beginning at materials receiving. As an example of one unexpected improvement, the implementation completely eliminated the lag time between end of production and getting finished goods to the correct location. This vastly increased visibility to and reliability of available inventory for the sales team.

Another unanticipated gain with RF-SMART is the ability to quickly bring new users on board without seeing significant increases in errors. This furthers the goal of providing excellent customer service.

Thorlabs intends to continue their LEAN journey decreasing errors across their processes and



decreasing their inventory on hand. They will more widely integrate these improved processes into all of their divisions – always striving for customer excellence, same day shipping and zero errors.

According to Rubin, “We’ve seen substantial improvements across the entire supply chain implementing the Microsoft Dynamics AX integrated RF-SMART solution enabling the full functionality of AX without requiring an external warehouse management system. Without the full integration of the RF-SMART solution with Microsoft Dynamics AX, these business process gains would not be nearly as significant nor as effectively achieved.”

For more information on RF-SMART, call us at +1 (904) 399-8500 or email us at info@rfsmart.com

About Thorlabs

Thorlabs was founded in 1989 by Alex Cable, a Bell Labs research physicist. Headquartered in Newton, New Jersey, Thorlabs operates internationally with more than 500 employees. Manufacturing and sales offices are located in the United States, Germany, United Kingdom, France, Sweden, China and Japan. Visit them at www.thorlabs.com.