

TDS

Thinking outside of the box to boost productivity and reduce waste

The Thermo Scientific™ Tailored Delivery Solution (TDS), our innovative laboratory media stock management system, has saved one facility an estimated 50 man-hours every week while significantly reducing waste.

In fact, Quest Diagnostics is so impressed with the service, which takes deliveries out of cardboard boxes and packages them on scannable, trackable crates or trolleys to enable delivery directly to storerooms or production lines, that it's now rolling it out to sites across the US.

Here, Nick Serafino, the company's National Director of Supply Management, explains how and why his team implemented TDS in a new, state-of-the-art facility, what it has helped them to achieve, and why he wouldn't think twice about recommending it to his fellow laboratory leaders.

Why TDS?

When Quest, which has more than 40,000 employees and carries out around 500,000 clinical microbiology tests every day across the US, was setting up a new facility in Clifton, New Jersey, it wanted a more effective material flow for its automated lines.

Serafino, who has worked for the company for 14 years, said: "We had limited space, so we needed a solution that minimized footprint. Our facilities use between 8,000 and 10,000 plates a night, and that takes up a considerable amount of space.

"We also wanted to reduced nonvalue-added activities, like removing trash and storing."

TDS, he said, presented the perfect solution.

How does it work?

As the name suggests, TDS is tailored to each customer's requirements. Explaining how it worked for Clifton, Serafino said they had a flexible standard order, based on the free flow of data between the two companies.

"Around six carts, containing between 400 and 600 plates, are delivered to the facility each day. They are rolled off, we check them in, then they are rolled down to the automation line and swapped out with the waiting empty cart. The empty carts are sent back to Thermo Fisher Scientific to get refilled for the next day," he explained.

"Each cart services one line, and the technician has the opportunity to change the contents of the next delivery. This allows us to compensate for any downtime or demand shifts, and ensures we're not overstocked with supplies."



How easy was it to implement?

After deciding that TDS was the right solution, Serafino first piloted it for three-months in the lab Clifton was designed to replace.

“The carts had to be designed specifically for the facility,” he explained. “They had to fit into a little niche on the automation line. We also had to make sure the products were on the right shelves to align with the equipment.

“We worked very collaboratively with Thermo Fisher during the pilot so that when we went live with a new line, everything lined up.”

Serafino described it as a “very positive experience”.

“I don’t think we could have done it without the collaboration and cooperation of the Thermo Fisher team, both locally and in Germany,” he said.

What benefits has TDS brought?

Quest estimates the TDS solution has saved around 50 man-hours a week, and a significant volume of waste, at the Clifton facility.

“We are not removing the trash, we are not sorting out the deliveries, and we are not storing or moving the deliveries. The supplies roll right onto the production line.

“A lab tech no longer has to leave the automation line to get something from the refrigerator, unbox it, then bring it back. They just turn around, grab the product, and put it on the machine,” said Serafino, comparing the process to that used on automated car production lines.

“It’s keeping the lab tech on task. There’s no nonvalue-walking or waste generation.”

Almost daily data transfers between the two companies on volumes and demand allows Thermo Fisher to keep Clifton at a 100% fill rate and avoids unnecessary line shutdowns.

Minimizing storage space has kept capital investment in the facility to a minimum, and optimizing workflows has reduced delays to testing – all of which has huge implications for both the business, and for the patients they serve.

“Patients are looking for their test results in a timely manner, so any delay for any reason can increase their anxiety. At Quest Diagnostics, the patient is very important, and there’s a huge focus on avoiding disruptions so we can keep those tests going.”

From a business point of view, manpower savings increase productivity, and reducing waste cuts costs while also contributing to the company’s sustainability goals.

What next for Quest and TDS?

Quest is now working on rolling TDS out to an additional five to eight diagnostics sites across the US, said Serafino, who recommended the service to his fellow laboratory leaders.

“In this current environment of supply chain constraints, it’s essential that collaborative relationships with suppliers are in place to ensure you’re optimizing the flow of materials and data.

“I would strongly recommend TDS to other companies because it’s an end-to-end supply chain solution that gets the right product to the right line.”