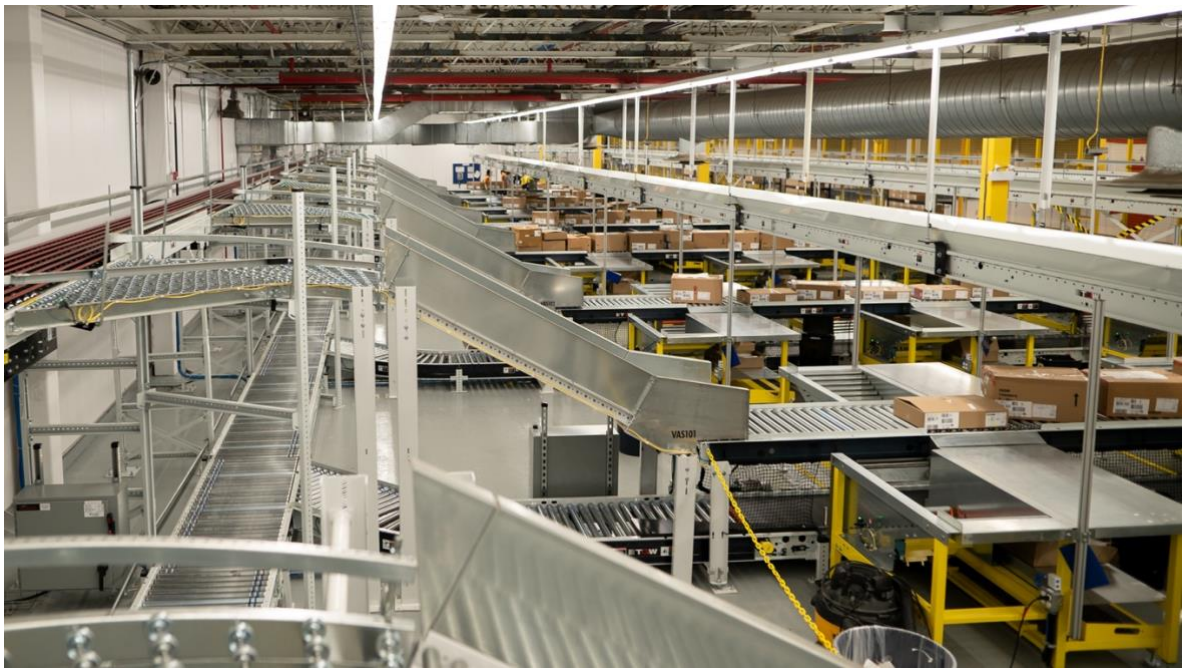
LEVI STRAUSS & CO.
INTEGRATIONS FUFILLMENT & SHIPPING SYSTEM



SilMan Industries provided system design and installation services for the Levi Strauss & Co. Distribution Center in Toronto, Ontario, Canada.

(Follow this link to view a video of this project.)

The Situation

Levi Strauss is a legend. Born in San Francisco, Calif., the company is a product of the gold rush era. And indeed, the Strauss family struck gold. By the time the company went public in 1971, Levi Strauss products were being sold in 50 countries.

In 1978 Levi Strauss established their first distribution center ("DC") in Canada. Since then, the Canadian public has fully embraced Levi fashion. In addition to their 30+ corporate retail spaces, Levi products are available in a variety of brick and mortar stores and chains, and e-commerce platforms.

Levi Canada has achieved consistent gains in market share over the last four decades, but those gains took a toll on the Toronto plant. In response, beginning in 2017, Levi began planning improvements to the DC, and in 2018 SilMan Industries was awarded a contract to renovate the entire order induction and sortation fulfillment system.

Phase 1 of the project concluded in July of 2019. Phase 2, the final conversion of the Warehouse Management System ("WMS") is due to be completed in early 2020.

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The Facility

A number of crucial renovations to the facility had been completed prior to the SilMan Team coming onsite.

First, updates to the storage system add density of cases and pallets, increasing the number of primary pick locations in the overall system. Additionaly, new order-picking carts boost the number of discrete orders that team members can pick on a single cart, and increases user safety and ease of use.

Secondly, upgraded pallet racking systems expand the consolidation of orders in shipping, thus providing a buffer for orders queued for shipping.

And third, beyond the fulfillment system, office and team member areas were renovated, providing an enhanced work environment for the staff and visitors alike.

The central innovation provided by SilMan was to create two distinct flows through a single induction point. This arrangement splits orders flagged for Value-Added Services from those to be directly sent to shipping. The result is a continuous flow to VAS and shipping, avoiding bottlenecks and increasing throughput.

The Project

The scope of work for the project includes upgrades to equipment and controls, as well as operational and ergonomic improvements to the Value-Added Services and Shipping area.

The existing system was replaced with a three-part solution: Picking Induction Conveyors, Value-Added Services Systems and Shipping Conveyor Systems and Sorters.

Additionally, in Phase 2, Levi will be able to further sort VAS orders by specific services to be provided, creating additional efficiencies to the overall VAS process.

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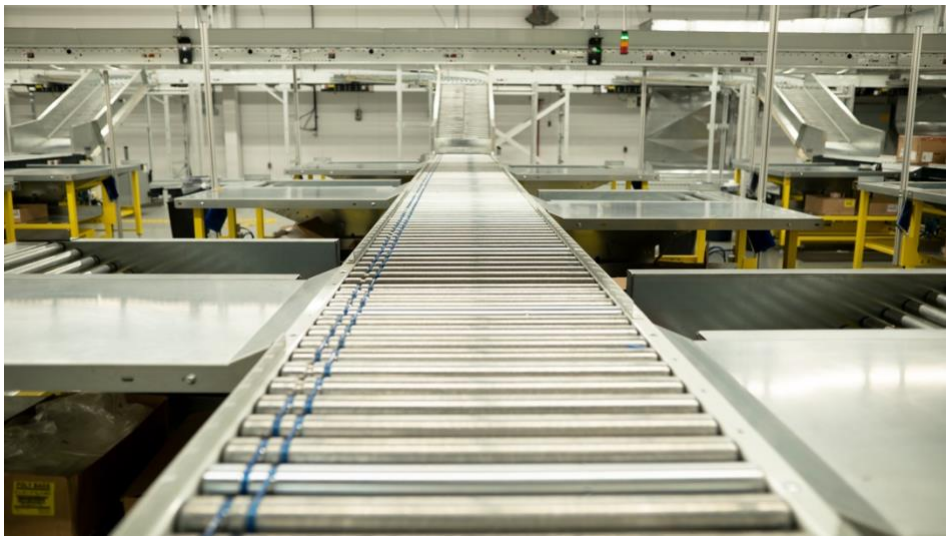
Controls

SilMan's Warehouse Control System ("WCS") provides the needed functionality for Levi to direct orders to their respective destinations (Value Added / Quality Assurance / Direct to Ship). The WCS solution provides management with system configuration tools to manage order and ship priorities, depending on daily workflow. SilMan WCS also provides real-time system performance metrics along with a Human Machine Interface (HMI) that allows users to evaluate system performance.

Value-Added Services



The Value-Added Services ("VAS") process lies at the center of the Toronto operation. Orders flagged for special handling, such as price tags, security devices or other promotional collateral, are serviced by the Levi VAS team. This specialized quality assurance and service team adds tremendous value to key Levi's partners.

Once completed, VAS orders are inducted onto the outbound conveyor, joining the cross-dock "Direct to Ship" traffic. The system automatically weighs and scans each order before sortation to shipping.

Shipping

This final sort directs the order to palletizing stations near the shipping doors.

The newly expanded shipping area is an essential accompaniment to the system upgrade. Additional lanes, and increased space between lanes, were added to the shipping area. More palletizing positions have been created and dock access is expanded.

As a result, the shipping center is able to manage the increased speed and volume of the upgraded system, with reduced risk to fork operators.

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Solutions and Results

System Performance

The upgraded system replaces legacy equipment, which required constant repairs resulting in down-time and lost productivity. The new system provides increased capacity and system performance that exceeded Levis expectations from the moment they assumed control of the system.

Team Member Wellness

Updated VAS stations provide improved ergonomics, including adjustability to each team member's height. Each station also has a gravity induction feed that inducts orders efficiently to the outbound conveyor to shipping. Awkward lifts and twists are avoided.

Efficiency

All VAS Station induction conveyors have built-in functionality that maximize accumulation for increased volume delivered to all VAS lanes/stations. This increases the number of orders processed per station/team member and overall throughput capacity. No idle time!

Going Live

And finally, the new system was implemented without interruption to existing operations, and provided increased throughput rates the first day of implementation. The installation was an instant success.

[Photo caption: The Levi Strauss Toronto team gathers to mark the first day on their new system.]

Equipment Utilized

SilMan is grateful to the many partners, vendors and tradesmen who made this successful outcome possible.

Company	Product
TGW	Narrow Belt Sorters, Accumulation Conveyors and Motorized Driven Roller Accumulation
Manhattan Associates	Warehouse Management Software (version 2018)
Cognex	Scanners
Mettler	In-line scale

David Rebata and Keith Hiyama are account managers for the project.

About SilMan

SilMan Industries (previously SilMan Construction) is based in San Leandro, California. Founded in 2008, the firm operates nationwide in three divisions – Construction, Material Handling and Site Services – and partners with "best in class" companies in the Industrial, Manufacturing, Distribution and Public Works sectors. For more information, please visit www.silmanindustries.com/about.