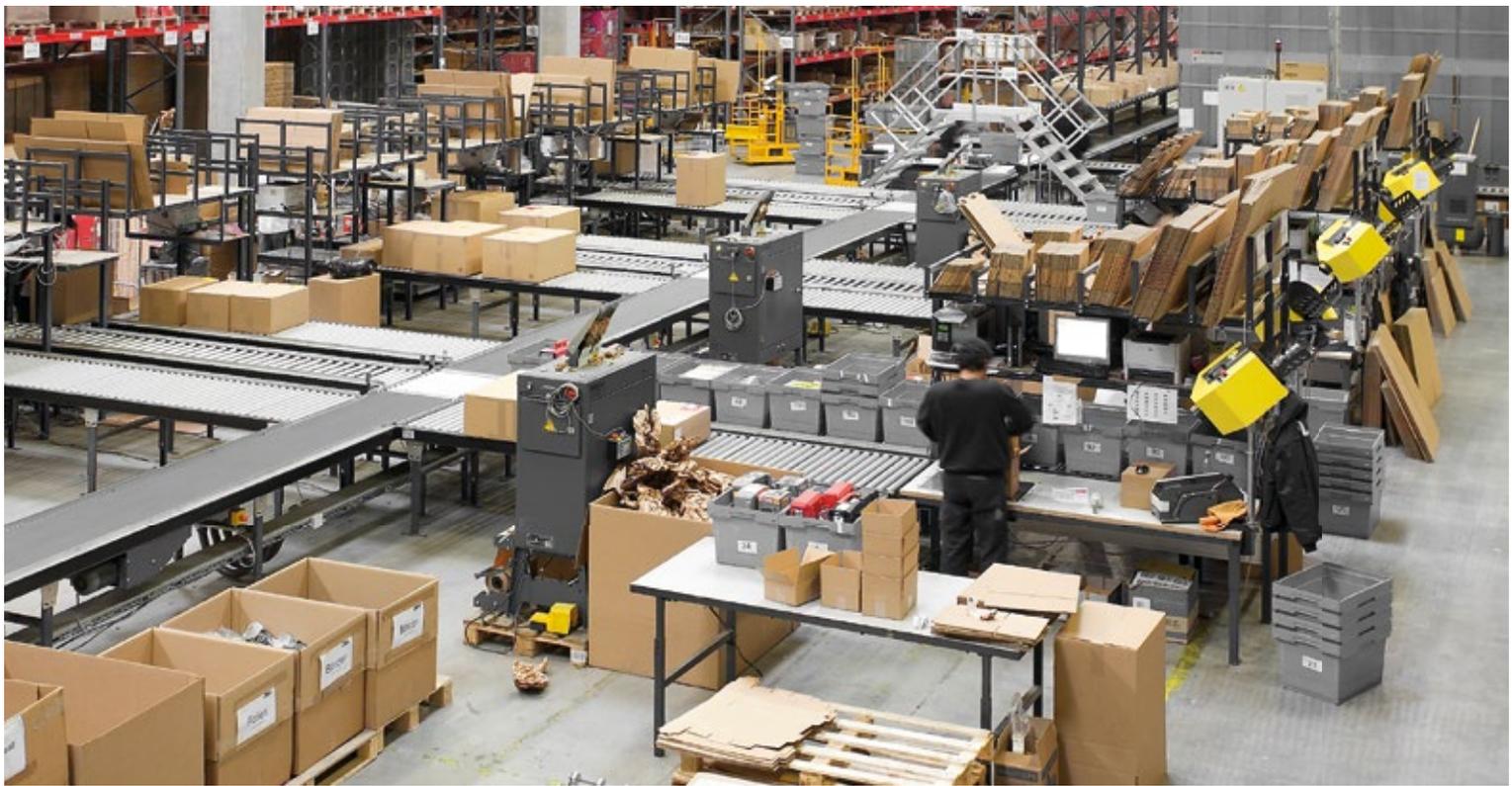


AEB software suite manages the global distribution of power tools





The packing area at the ELC near Stuttgart has six packing stations each for small and large packages and five pallet packing stations. In the background is the pallet area with five stacked levels. Picking is done from the lower two levels, while the upper three are for replenishment

— AEB software suite manages the global distribution of power tools

Techtronic Industries (TTI) relies on ASSIST4—the shipping and export solution from Stuttgart-based software developer AEB—for support in efficiently managing the complex requirements inherent in exporting, especially to non-EU countries.

Cross-docking in Norway, collective consignments to Switzerland, exports to Australia—these are among the diverse and complex needs of Techtronic Industries ELC GmbH when it packages and ships power tools of the brands AEG, Milwaukee, Ryobi and Homelite from its European logistics center (ELC).

The ELC, located in Schwieberdingen in the southern German region of Swabia, houses some 25,000 parts. It is from here that replacement parts, accessories and equipment go out to recipients in Europe, the Middle East, Latin America, Australia and Africa. The consignments, which often consist of small packages, are frequently sent by parcel services such as UPS and DPD. These and other carriers are all located within a radius of just five

kilometers from the ELC—one reason the location was chosen.

The decision to locate the ELC near Stuttgart was made in 2007. Atlas Copco, the former parent company in Sweden, had sold the Milwaukee and AEG brands to the Hong Kong holding Techtronic Industries (TTI) three years earlier. “We faced the challenge of implementing a system that was able to handle or could be adapted to our complex needs. We needed to find both the right location for our new logistics center and the right software support,” recalls Thomas Winter, IT Director for EMEA at AEG Electric Tools GmbH.

Project Director Vitus Müller-Chorus adds: “Since we didn’t have our own logistics department, we decided to hire an outside provider to manage the

AEB Success Story
Techtronic Industries





The packing list data and the content and weight specifications must match precisely, especially for non-EU exports. This is rigorously checked by ASSIST4.

warehouse. Upon the request of TTI, the provider is using ASSIST4, the shipping and export solution from AEB.” When picking is complete, the data is transferred from the SAP system to the ASSIST4 software, an integrated foreign trade and logistics solution that organizes, monitors and controls the entire supply chain.

ASSIST4 handles a total of 4,000 so-called “picklines”—delivery note line items picked each day. This corresponds to an average daily volume of 1,000 consignments, one fifth of which go out to non-EU countries. These consignments include everything from rechargeable power screwdrivers, jigsaws, saw blades, seals and chainsaws to table saws weighing up to 35 kg. The parts and equipment for the AEG brands and the premium brand Milwaukee are produced in Winnenden (Germany) and Nyrany (Czech Republic). Other production facilities are located in China.

The proportion of small packages sent from Schwieberdingen is relatively high. The average package weighs 10 kg. “These numerous small

packages have to be packaged quickly and accurately and sent out—efficiency and quality play an important role.

Any picking, packing or quantity errors would have an immediate impact on customer acceptance. That’s why it was important for us to integrate control mechanisms,” emphasizes Winter. One example is the qualified packing that takes place at the 15 packing stations, where integrated scales and scanners automatically check whether the right items are packed in the right quantity.

Pick, pack and ship

Exports outside of Europe account for about three percent of consignments and ten percent of revenue. Sales orders to Switzerland and Norway account for about another ten percent of revenue. “Our shipping and export needs are extremely complicated,” emphasized Winter. His colleague explains why exports present such a challenge: “Each country and sometimes each customer insists on certain rules.

One demands proforma invoices in a certain format, Poland requires that certain labels be attached, operating instructions must be enclosed properly,

and the Russian customs office is very particular that the pallet weight be indicated correctly,” explains Müller-Chorus. Thomas Winter agrees: “The accompanying documents and weight specifications must be 100 percent accurate. This is another reason why we use ASSIST4: to be sure that everything is right and that packing lists and package content lists meet the appropriate requirements.”

Because the export process is so complex, consignments for branch offices in Russia or distributors in Australia are bundled into collection containers in the goods issue area and sent out as collective consignments every two to three weeks.

Cross-docking in Norway

Another portion of the consignments goes to Oslo. A major Norwegian client has a logistics center there that supplies all affiliated retailers throughout the country.

TTI Norway receives direct orders from 50 to 100 retailers. These orders are forwarded each day to the ELC in Germany and leave Schwieberdingen on the very same day. To facilitate cross-docking in Oslo, everything is prepared in the ELC so that the consignments for the various retailers can be forwarded directly to goods issue in the Norwegian logistics center. Using the “box in a box” principle, the individual consignments are already fully labeled in Germany. This simplifies transport and also offers cost

AEB Success Story Techtronic Industries



benefits. “Instead of paying customs for each individual consignment, you can submit a collective declaration. This makes a difference in the customs duties,” says IT Director Winter, explaining the advantage of collective consignments. Legally, the customs duties are paid by the Norwegian office of Techtronic Industries, but it’s the carrier that delivers the goods directly to the customer. All the carrier needs to do is remove the top label from the “box in a box” before forwarding the consignment directly to the retailer.

The label determines the direction

Whether it’s a pallet consignment, a UPS parcel, a DPD package, an express consignment or an export to Switzerland—a special conveyor belt set up between the packing stations automatically transports the consignments to the right station, where ASSIST4 handles quality control and helps the user prepare all the necessary labels. This includes not only the delivery note and the correct label for the carrier but also a customer-specific label with an outward transfer code and a list of the package’s contents for the consignee.

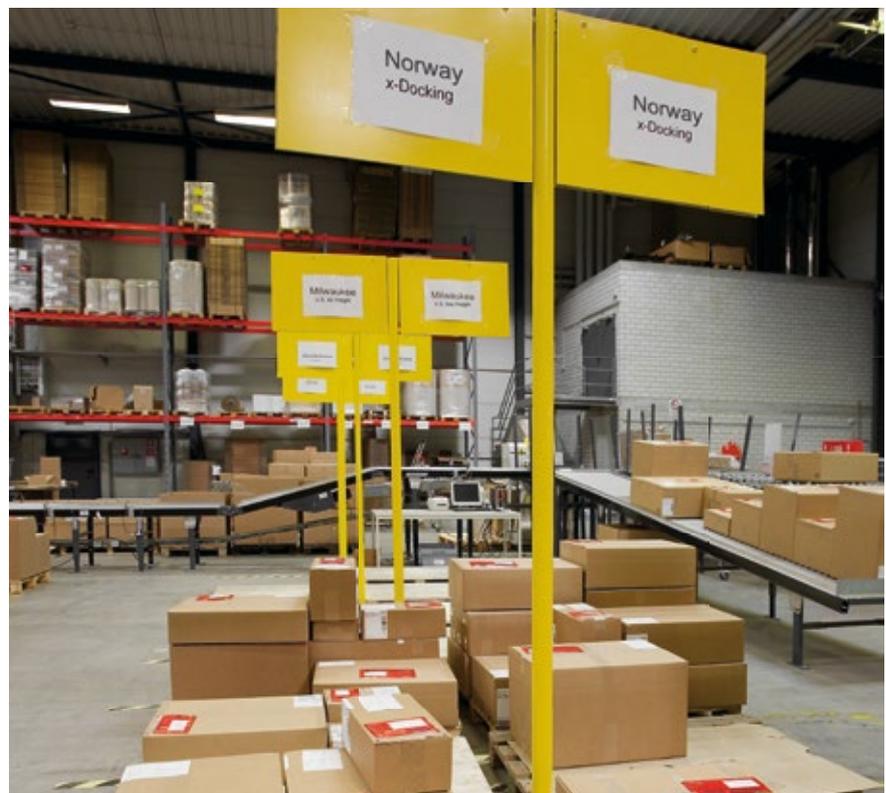
The outward transfer code given to each package at the end of the packing process ensures that the package goes to the right place in the loading area. It is read by scanners on the conveyor belt, and the package or parcel is then moved to the correct collection point, depending on the destination or transporter.

Most of the packages move directly to the UPS bridge into the container positioned there. Packages for customers in the Netherlands are separated out, because they are transported to the hub in Frankfurt and picked up earlier. Many customers stipulate pickup by DPD; such packages are also separated out. All special consignments and export consignments requiring additional manual handling are stored at collection points, where they are furnished with additional export documents or commercial invoices.

Continuous optimization

IT Director Winter and Project Director Müller-Chorus are tireless in their pursuit of further optimization of the picking and packing process. “We want to further accelerate lead times

and have identified additional areas for improvement. Plans for this year include optimizing the pick routes and moving from manual to electronic picklists. In addition to the picking logic in SAP, we’re also contemplating faster packing options within ASSIST4. Right now, we’re consciously carrying out quality control at the packing station,” explains Müller-Chorus. “ASSIST4 came to our aid at the right time in meeting our diverse needs. The AEB software suite not only handles our entire shipping processes—throughout Europe and internationally—and provides an electronic interface to the carriers, it even manages the electronic ATLAS export processes with German customs and the mandatory compliance checks,” concludes IT Director Winter.



AEB Success Story Techtronic Industries



In the “box in a box” procedure, goods bundled together for shipment to a particular country are packaged and labeled such that they can be unpacked upon arrival in the foreign country and directly forwarded to their final destination.

AEB Success Story

Techtronic Industries



Visibility & Collaboration Platform



Order Management



Warehouse Management



Transport & Freight Management



Customs Management



Compliance & Risk Management

At a Glance

Customer

- Name: Techtronic Industries (TTI)
- Industry: Power Tools
- Employees: 30,000

Challenges

- Diverse and complex requirements for shipping to non-EU countries
- Challenging integration of processes due to the warehouse being managed by an outside provider
- Complex package management due to high share of small orders

Solution

- Implementation of ASSIST4 Customs Management and ASSIST4 Transport & Freight Management
- Introduction of control mechanisms for qualified packing at 15 packing stations: automated checks for correctness of items and quantities
- Collective consignments with individually labeled consignments: enables cross-docking in Norway and direct shipments to retailers

Results

- Export documents are 100 % correct and meet individual customs and customer requirements
- Electronic interfaces to carriers
- Correct carrier and customer-specific labels
- Increased customer satisfaction through increased efficiency and service quality