# Successful LogisticsExpansion with TGW and IGZ: More Power for Conrad Electronic

**100,000 square metres of pure logistics. Efficient, standardised processes, enhanced capacity and highest customer service – these were the objectives of the expansion of the existing logistics installation. And this was what did Conrad with systems integrator TGW and the SAP Logistik-Projekthaus IGZ.**

Conrad has made its way from a family-owned company founded in 1923 to a leading multi-channel retailer for technical equipment. Whether in the 30 stores across Europe, in the country-specific online stores or via print media for various target groups – Conrad offers their customers a broad assortment of more than 700,000 products. A paradise for technology and electronics: the permanently growing assortment ranges from smallest electronic building parts over measuring technology up to the latest entertainment electronics, computer and communication technology as well as a fascinating selection of products of leading manufacturers and competent own brands.

In 2013, the successful partnership between TGW and the electronics expert was started, when they planned the significant expansion of the existing site in Wernberg, Germany. Before that, Conrad and IGZ had started to develop an entire IT integration of their logistics with SAP EWM including the corresponding migration steps.

With a growing range of products, the warehouse burst at its seams – more space, more capacity, more efficiency as well as a future-proof SAP IT platform with warehouse management and material flow system were required. Together with TGW and IGZ these objectives were aimed at: a higher storage capacity, a doubling of shipped packages with 100,000 packages per day, customer delivery within 24 hours supported by an automated, efficient and ergonomic logistics system. After IGZ had proven that the performance requirements and telegram frequencies could be fulfilled with SAP by using the SAP Material Flow Controls, Conrad decided to build the new shuttle warehouse with a continuous SAP EWM (Extended Warehouse Management)/Material Flow solution without additional IT sub-systems.

**Unique logistics centre serves stores and online-shoppers alike**

In the Southern German town of Wernberg-Köblitz, Conrad operated their one and only distribution centre to supply the European shops and online customers at the same time. Previously, about 35,000 packages have been sent to 150 countries – however, the growth of the past years showed that Conrad was ready for more and consequently, an extension was the only solution for their plans. “We know how our business works, and we knew that our growth would result in a logistics centre that did not suit our needs anymore. We always have to think about our future, and the TGW logistics centre was a solution that provided us with both: capacity and performance”, says Udo Hermannstädter, Head of Logistics at Conrad. The result: The possibility to ship up to 100,000 packages per day.

TGW realised a solution including a STINGRAY shuttle warehouse with more than 200,000 storage locations and a performance of 2x6000 tote storage and retrieval movements per hour being the centrepiece of the entire installation. Another highlight is the continuous realisation of the warehouse management and material flow controls of the shuttle warehouse with SAP EWM and material flow controls from goods-in to goods-out, which was integrated into the existing SAP ERP system as well as into the installation itself. Typical operations for the electronic retail industry include the automated forecast and case calculation of shipping cartons, order consolidation or packaging processes as well as the returns handling. Within the SAP EWM and MFC there are highly complex sequencing algorithms to use the maximum technical installation performance.

**Growing stock – growing logistics facilities**

As soon as the goods arrive at the distribution centre of Conrad, they start an elaborate journey through the logistics stations. From the goods-receiving area, they are transported to a re-packing area consisting of 36 workstations, where the goods are put into totes for a safe transport though the logistics centre.

The totes are then stored in the massive TGW STINGRAY shuttle warehouse where 375 shuttles meticulously serve the three picking levels with 15 goods-to-person picking workstations each. All shuttles are directly controlled by SAP EWM/MFC, a further material flow system was not required. “In this distribution centre, we service 2/3 direct online customers and 1/3 our international stores. This is why 30 of the workstations are reserved for online orders, the other 15 workstations take care of the stores. We wanted to use the existing footprint effectively, this is why we opted for picking operations on three levels,” Udo Hermannstädter adds. Goods that are sent back from the stores arrive in cartons and are re-integrated into the shuttle warehouse in the so called store buffer.

At the 45 ergonomic picking stations, Conrad made sure that they offered a convenient working environment for their employees. “It was very important for us that the equipment in this area works silently, to provide our employees with an ideal workplace. SAP EWM furthermore provides easy-to-use touch dialogues. The goods-to-person picking stations are supplied according to a defined sequence, and several orders can be picked in parallel. We installed a soft floor to improve the conditions of working in a standing position. Some of the working stations can be adjusted to the pickers’ body height,” says the Head of Logistics. “This new picking area allows us to work more efficiently, and with the zero-error tolerance of the system we achieve remarkable picking performances. We have doubled our performance!"

Once the goods have been picked at the picking stations, they are transported to the goods-out check with a weighing and camera system. The system does a quality check and examines the expected and the actual weight of the orders as well as the barcodes. This is done at one of the 21 goods-out check workstations. Finally, the cartons are sealed and labelled accordingly.

If Conrad offers special fares for any of their products, another picking area becomes active: the single-order picking. “Sometimes, we have special offers which are then ordered in large amounts such as flash drives or headphones. We outsource these orders to the single-order picking area. If the area is not used for these kinds of orders, we use it during peak seasons as well,” Udo Hermannstädter explains.

The TGW Natrix shipping sorter distributes the order cartons to the respective routes, where they will be conveyed into the trucks on the various telescopic boom conveyors. The new system achieves a performance of 6,000 packages per hour. “It enables us more flexibility in the dispatch organisation. With another 16 shipping gates, we can react flexibly,” Conrad’s logistics expert is happy.

**Spot landing: Conrad happy with new system**

With the 56-million Euro investment in the new logistics installation, Conrad was able to continue its growth and prepare itself for a promising future. “We expect further growth during the next year, and the expansion of our logistics facilities will definitely help us pursue our strategy,” Udo Hermannstädter knows. Also Markus Augeneder, Managing Director at TGW, is very pleased with this project: “The figures of Conrad’s logistics centre are obvious. A new high-performance system by TGW enables Conrad to service the various distribution channels from one logistics centre and at the same time offer optimum customer service. We are very proud to prepare Conrad for its growth of the next years and are happy about the remarkable increases in efficiency and strong processes. It is always a pleasure to be part of our customers’ success.”

“The consistent control of the e-commerce processes and the installation technology with SAP EWM/MFC in Conrad’s new logistics centre sets worldwide standards for the successful implementation of SAP standard software in the logistics industry,” adds Wolfgang Gropengießer, Managing Director of IGZ Ingenieursgesellschaft für logistische Informationssysteme. With the expanded warehouse capacity, an efficient goods-to-person picking and a high-performance system throughout the entire logistics centre, Conrad is able to put their plans into practice. Furthermore, the existing logistics operations will be migrated to SAP EWM/MFC with the support of IGZ during the next three years, in order to add value to the implemented SAP software and processes in all parts of the logistics centre.

www.tgw-group.com

**About TGW Logistics Group:**

TGW Logistics Group is a worldwide leading systems provider of highly dynamic, automated and turn-key logistics solutions. Since 1969 the company has been implementing different internal logistics solutions, from small material handling applications to complex logistics centres.

With about 2,500 employees worldwide by now, the Group implements logistics solutions for leading companies in various industries. In the business year 2014/15, the TGW Logistics Group generated sales revenues of 475 million Euros.

**Pictures:**

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