**Challenges in Fashion Logistics**

**Getting a grip on the unpredictability of demand, improving the service level and at the same time dealing with the shortage of labour – these are three major challenges in fashion logistics. The intralogistics provider TGW presents two ways to master these challenges. The state-of-the-art solutions allow companies to invest in high automation without the risk of being inflexible.**

People in retail business have looked at these statistics very carefully: According to a study by the German e-commerce and distance selling association (Bundesverband E-Commerce und Versandhandel Deutschland, bevh), gross sales of goods in e-commerce increased significantly in 2018 – by 11.4 percent to 65,1 billion Euros. In the association's annual study “Interactive Retailing in Germany”, 40,000 private individuals aged 14 and over were surveyed between January and December 2018 on their spending behavior. According to the survey the pure e-commerce player were able to increase additional sales by 14.0 percent, or more than one billion Euros, to 9.77 billion Euros. And multi-channel retailers also grew by a double-digit percentage of 12.9 percent.

But not all retail companies can open a bottle of champagne when looking at their turnovers and returns. For years Gerry Weber's share price for example has practically known only one direction – downwards. In January 2019 the company has filed for bankruptcy. The German brand is only one example of a few companies that are faced with problems at the moment. There is not only one reason for being in dire straits. But nowadays one key to success, apart from pricing and brand value, is a smart supply chain strategy – no matter if your company is active in fast fashion or luxury fashion business.

**Unpredictable ratios**

Apart from a growing e-commerce business and shorter cycles for new products we see another trend in the fashion industry: No one can predict the ratio between sales in retail shops and e-commerce. „On a day like Black Friday the ratio will be completely different from the one the day before“, says for example Raffaele Destro, industry manager fashion at TGW. All in all surveys say that orders are getting more frequent and smaller.

**Automation as a key for success**

As one solution, companies are investing in tools like predictive or prescriptive analytics for forecasts. „But considering successful supply chain management that is not enough. Of course, predictive analytics is based on historical data and can give you an idea, what the near future may look like. But companies have to make sure that the distribution network will also work perfectly in the mid-long term. The combination of predictive analytics and the concentration on ways to grant flexibility to the changes in order profile is the right way”, says Raffaele Destro. But for complex supply chain situations companies need excellent strategies. Automation is one of the most important keys for success. Raffaele Destro: „The question is not: Shall we automate or not? But rather: What level and type of automation is the right one?“

**Low inventory in the shops**

Generally speaking everyone agrees that there is a need to ship to stores the right SKU's at the right time and in the right quantity. And it is also important to reduce the inventory in shops to avoid overstock. Because having unsold stock at the end of the collection or the season often forces mark-downs to get rid of unsold inventory. And this generates loss of revenues and, which may even be worse, loss of brand value.

But having the right SKUs at the right time and in the right quantity in shops and holding less inventory in shops, requires fast and frequent replenishment. Another driver for that trend are "click & collect" orders that are sent to stores for pick-up.

**Merge the channels**

In the past some companies, which were mainly active in the retail or wholesale distribution channel, did not exactly know how to deal with e-commerce. Therefore some separated the two channels – sometimes even in different distribution centers. But nowadays that is old school. The champions follow another strategy: Merge the channels and make sure you are as flexible as possible. But this means: You must have smart solutions that can handle any situation from a Black Friday scenario with a mountains of e-commerce orders to a rainy Saturday with thousands of people shopping in malls.

Old intralogistics solutions are not the smartest way to deal with that situation. More frequent deliveries means more orders have to be processed every day. This might become an issue for solutions based on standard sortation due to the constraint represented by the number of physical destinations available. And smaller orders mean that the typical batch effect is reduced; therefore batch picking is less effective, unless you find yourself in special situations.

TGW offers FlashPick® and OmniPick® to master the unpredictable. The company has developed a tool that helps to find the most appropriate solution for fulfilment companies. FlashPick® and OmniPick® address, compared to other solutions, all three major challenges of the industry: The solutions help companies to master the unpredictability of demand, to increase the service level and to deal with the scarcity of labour.

**FlashPick**®

FlashPick® is a smart Goods-to-Person (GTP) order fulfilment solution for single piece picking. It is based on a shuttle system for automated storage and retrieval (AS/RS) of containers. The second part is a high-performance one-to-one picking workstation, where a person or a robot picks. The principle behind it is discrete order-by-order fulfilment, therefore TGW does not use a batching of orders. The process is very simple for the picker: The system presents one SKU container to pick from and one order container to pick into. After the picking process SKU containers return to the system while order containers can be routed towards the shipping area.

**Any order size**

The solution has a number of advantages: FlashPick® is a one-touch solution for orders that can be picked directly into shipping cartons or totes. If the system is combined with Rovolution, TGW´s intelligent robot for automated picking, the solution turns even into a zero-touch system. The order lead times are only between ten and 15 minutes. FlashPick® can be used for push and pull operations – that means initial allocation and replenishment. The main advantage is however: Companies can use FlashPick® for all distribution channels – retail, wholesale, omni-channel and direct – and all business models, from high fashion to fast fashion, luxury etc.

**Short lead times**

Compared to other solutions, FlashPick® has a number of advantages: TGW has the fastest shuttle aisles and the fastest pick stations in the market. At a sustainable rate TGW talks about up to 600 order lines per hour, if a person picks from a single SKU container and drops the item into an order container. The design is flexible as well: You can transport containers from any aisle to any pick station. Moreover a company can use as a very last step the TGW PickCenter Rovolution, an automated picking robot, together with the system. “We engineered an autonomous cognitive robot which is intelligent, self-learning and flexible”, says Raffaele Destro.

**OmniPick**®

In certain scenarios, in case of a high e-commerce ratio for example, it makes sense to use the OmniPick® solution, which TGW presented at LogiMAT 2019 for the first time. The company worked intensively on the solution, because the experts wanted to make sure that all major challenges of the industry can be addressed with the same solution. OmniPick® operations and performances are based on items – and the picking strategy is based on batching orders. Companies can use it as a person-to-goods (PTG) order fulfilment solution. But they get the highest benefits from a goods-to-person (GTP) order fulfilment solution. The latter is based on a shuttle system for automated storage and retrieval (AS/RS) and a high-performance pocket sorter system. When using the system in GTP operations, the order lead times can be reduced down to 90 minutes.

Raffaele Destro underlines that the GTP mode is the most interesting. How does it work? First the SKU containers are retrieved from the shuttle system and routed to the induction stations. In a second step the operator takes the required item out of the container – the quantity is based on batch requirement – and inducts one item at a time into a pocket. In a third step the pocket is routed in a hanging position towards a dynamic buffer.

**Automated unloading**

OmniPick® would be a two-touch solution, if the system were equipped with manual induction stations and manual packing stations. But the core feature is that the patented pocket design allows a one-touch solution, if the system is equipped with manual induction stations and automated unloading stations for the orders that can be directly fed into shipping cartons or totes. “The automated unloading is a huge benefit already. In the very last step the system can even be turned into a zero-touch solution, if it is equipped with automated induction station, our automated PickCenter Rovolution, and automated unloading stations“, explains Raffaele Destro. Experts have measured up to 1.000 items per hour that were directly unloaded into order cartons or totes.

Why is OmniPick® so special? Retail expert Destro says: „Generally speaking the solution has, I am talking about the fully automated mode, the highest level of automation for a pocket sorter in the market. But the customer has already interesting benefits in the base configuration, because TGW has introduced automated unloading as a standard pocket feature there.” Among other advantages Raffaele Destro mentions the easy maintenance and access of the solution as well as the simple and smart open conveyor profile technology.

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**About TGW Logistics Group:**

TGW Logistics Group is a worldwide leading provider of intralogistics solutions. For 50 years this Austrian specialist has been providing automated systems for international customers from A as in Adidas to Z as in Zalando. As a systems integrator, TGW provides planning, production, and implementation of complex logistics centers – from mechatronics to robotics and from control systems to software solutions.

With approximately 3,500 employees, TGW Logistics Group has offices in Europe, China, and in the U.S.A. In the 2018/2019 business year the company achieved a total turnover of € 719 million.

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