Whitepaper

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LOGISTICS AS A CORE BUSINESS: THE BEVERAGE INDUSTRY

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In the beverage industry, many innovations created for the logistics sector have asserted themselves. The industry relies on distribution and is completely dependent upon logistical processes. At the same time, beverage manufacturers and merchants have fundamental requirements that also apply to other sectors in the industry. Accordingly, many companies have invested in their logistics or executed improvement projects. The responsible parties know the value of modern technology which allows fast delivery to the customers. The control of the logistical processes and the employees and vehicles that execute them are of central importance. Therefore, many IT or logistics specialists in the beverage industry say that without a warehouse management system like EPG | LFS, their operation couldn't be maintained. This is clearly expressed in the words of Berthold Kress, Head of Logistics at the beverage wholesaler Heurich; the processes of his company remind him of a clockwork mechanism: "The benefit, on a purely logistical level, is magnificent." In addition to producers such as Förstina, Erdinger, Röhnsprudel and Aqua Römer, distributors such as Trinkgut, Trinks, Waldhoff; Gelos and Fako-M rely on EPG | LFS. To date, its manufacturer, EPG, has invested more than 2,000 manpower days in programming functions for the beverage industry.

Beverage trade and production are influenced by seasonal fluctuations more than any other industry in the economy. It is therefore even more important to optimally utilize the existing infrastructure. When orders flood in during the summer, the entire logistics department must function in a uniform manner. Every truck, every forklift and every picker must work as a part of the whole to handle the order. The control station dialog in EPG | LFS allows the logistics to be controlled down to each individual order. It is thus possible to pick based on order and tours. If the second option is selected, the tour can be distributed to several pickers to avoid or reduce waiting times for the truck. The system allows articles that have just arrived to be shifted directly to goods receipt, for instance when beverages arrive for which other, already processed orders are waiting. The term used by beverage manufacturers called "cross-docking", means that a part of the freshly produced goods are not stored, but are directly directed to the trucks which are already waiting. Picking is similarly flexible, for instance, when an article in high-bay storage should be stored as close as possible to the picking position. The same applies for retrofitting such positions. With the order, the forklift driver receives a notice if only one part of the pallet is to be placed in the continuous box rack. If, however, the inventory is at "zero", the system issues the instruction to first fill the picking position.

If an order is transferred from the ERP system to EPG | LFS, first, it is divided in to full pallets, individual containers and additional articles, from benches to glasses. Different types of picking are common. If advertising materials such as beer mats and coasters are to be included, receipts or lists are still used. More frequently, MDEs are used which the picker uses as a handheld or which

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is attached to his/her belt. However, today, pick-by-voice is currently most common. The employee is connected to the system via a headset, receives instructions and passes on a confirmation or changes. Both hands are free while working which is a significant advantage in the beverage industry. Pick-by-voice is in use at 120 locations, the significance of which is indicated in the fact that EPG operates its own repair center for hardware. As Winfried Röhrig, Head of EDP at Förstina determined, an employee previously picked around 250 beverage crates per hour. After introducing pick-by-voice, this value is at 390 to 420 crates. In addition, a goods controller is no longer required, says the project manager. Picking is optimized with regards to path and packing, the lift trucks are controlled by the system which also specifies the loading equipment and numbers for the packaging unit (NVE). When a pallet is ready for shipping, printers attach one or two labels with the NVE and a bar code. Beer kegs are handled in a separate department where several NVEs are assigned to a rack position. Subsequent delivery is executed automatically, whereby EPG | LFS defines the location at which the pallets are placed. The selection can be set and can be based on the article, batch, minimum expiration date (MED), quantity per loading equipment, quality marking, etc. However, the forklift driver has the right to define a different position, for instance, if the assigned position is not reachable. In this case, the system reports where it has deposited the goods.

In addition to high-bay storage, block storage is also widespread at beverage merchants and manufacturers. However, while the former works with several pre-sorted product lots, relatively small quantities and fixed batch sizes, the latter has to work with fluctuating sizes. In beverage production, it is often only possible to estimate how many pallets a batch yields. More pallets may be produced than fit on the block size and it would be pointless to assign a whole new block for three or four pallets. However, the driver can assign the position manually and store pallets in the block even if they slightly exceed the size and stick out into the aisle. In addition, europallets and Brunnenwasser pallets can be stored together. A dynamic field assignment in EPG | LFS allows the appropriate size to be assigned. There is a special function only for manufacturers for setting aging times for certain batches that may only be delivered after that date. But there are certainly needs that only pertain to merchants. Merchants usually have several articles in their product ranges and require smaller blocks, but there are exceptions. This applies for special offers, in which large quantities of a beverage have to be handled, but also for products from local manufacturers whose beer or mineral water are in high demand. These goods are reserved in special blocks from which delivery is easy.

Many articles are not stored in just one storage location. They are requested often and are therefore stored in several locations. These products should be removed as close to the probable place of provision to avoid longer transports through several halls. Reservations should be made in strict compliance with the FIFO date. However, the selection of another storage position is at the

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discretion of the employee handling the loading. To this end, the forklift driver first enters the complete position coordinates of the removal position selected. Then the system internally reviews the requirements such as the article number, MED, FIFO, etc. If the permitted FIFO date is exceeded, the reserved inventory will be specified for relocation. Then, the number of pallets the employee wants to remove from this block is entered. If the number entered is greater than the free, available quantity in the block, the employee will receive an error notification. In this case, the forklift driver must select a smaller quantity. Finally, EPG | LFS exchanges the reservation of the original block with the one selected by the forklift driver by subtracting the quantity removed.

During the implementation project, Fako-M determined that EPG's experience was a very positively evident. Andreas Richardt, Commercial Manager at Förstina, also makes note of this. According to him, it is important to have a partner "that has already completed several projects in the beverage industry and also realizes this goal-oriented project implementation for us." But it is also due to the software, if it can be implemented at the company quickly. The processes in EPG | LFS can be parameterized which not only allows for quick implementation. New locations or warehouses can also be integrated very quickly. This led to many customers expanding the software to further departments completely on their own. It is also possible to create templates for settings from other companies in EPG | LFS. Using these templates, configurations in comparable warehouses can be transferred very quickly to logistics departments yet to be set up. Standard interfaces are of similar significance, for instance, for integrating with Copa, the leading ERP system in the beverage industry with which around 30 installations are created.

In a fast-paced industry like the beverage market, there are always new requirements. One of them is the growing diversity of articles that primarily arises due to the increase in mixed drinks. To handle this, a dynamic storage system with container types was set up in EPG | LFS. This way, a picking warehouse can be set up with one hundred positions at which beverages with 0.5 liter bottles can be prepared for shipping on the container level. These positions can be assigned freely, so a beer, then a mixed drink and finally another beer can be processed at this location. There are also new developments in tour planning in EPG | LFS. A tour can now be assigned manually or automatically with roads, track routing and consideration of restrictions such as reaching customers quickly. Online tour processing also has significant benefits. If the driver is at the customer's location, this is entered in the MDE which contains the tours. The driver then scans the pallets, which are transferred to the warehouse management system via GPRS and UMTS. This way, there is gapless documentation of which goods were delivered. Additional functions that are important in the industry are part of the standard. This includes management of the MEDs and remaining terms, breakage and batches. A report for the latter can be printed out per mouse click which lists all of the customers supplied from that batch. If the acceptance of the goods is refused by a customer, the goods can be stored simply via the NVE. Using the same method, goods can be relocated and a new delivery certificate with the date is generated. Many functions in the standard and their linkage ensure the flexibility with which EPG | LFS fulfills the complex requirements of the industry. With EPG, it is backed by a complete solution provider that, with its many years of industry and project experience, offers a package which includes tried-and-tested expertise in addition to EPG | LFS and pick-by-voice.

A short description of EPG | LFS in the beverage industry

- Managing a total turnover of around 2.3 billion euros at 70 locations

- Controlling and monitoring the overall warehouse logistics via a control station

- Different types of path and packing-opitmized logistics: Pick-by-voice, MDE, receipts

- Managing different warehouses: High-bay storage, block storage, picker storage

- Cross-docking for directly transporting articles for loading

- Relocation strategy in accordance with MED, batch management, FIFO, aging times, special offers

- 1.2 million picks executed and 400,000 pallets moved per day

- 300 pick-by-voice clients in use

- Improving the picking times by 35 percent, the average warehouse productivity by 40 percent

- The "interactive voice picking“ from EPG 2009 and 2012 awarded the Voice Innovation Award

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