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Recent SAP EWM innovations regarding smaller and more dynamic customer orders

An answer to changing requirements within the logistics execution process due to growing e-commerce activities.

Introduction

Imagine you are Charlie, the warehouse manager at a successful manufacturer and seller of sports equipment. Recently the company has experienced a quick shift in type of demand.

Only a few years ago the products were almost exclusively sold to large retailers, often with their own distribution centers. However, your new E-commerce platform to sell directly to consumers, turned out to be an enormous success. Good news, however this means a big change for the supply chain operations.

From fulfilling a relatively small number of large orders towards very large volumes of small orders, often combining different kinds of products. The leadership decided to implement a new warehouse management solution (WMS) to support the deviant characteristics of these new logistics execution processes, compared with the established processes.

This solution is fully dedicated to the fulfillment of a high volume of smaller orders, often with fast delivery times and a relatively high percentage of customer returns. Although this dual solution is sufficient in order to respond to the demand of today, having two separate WMSs might make little economic sense on the longer term.

Recent innovations in the WMS delivered by SAP®, Extended Warehouse Management (EWM),

are resulting in a system that can be much more valuable for companies with multichannel commerce than before. In the next sections, we will highlight the most important innovations within the latest SAP EWM release, regarding the processing of ever smaller and more dynamic customer orders.

Pick by cart

Historically at Charlie's company, most customers used to order in larger quantities. The bulk of the work was executed with forklift trucks picking up full pallets. A warehouse worker collected the remaining smaller quantities by driving through the warehouse with a pick handling unit. However, the introduced e-commerce platform resulted in many smaller orders; often consist of combinations of different products.

An effective approach in this case could be to follow the shortest route through the warehouse walking with a cart. The new offered functionality by SAP EWM is a SAP Fiori application called "pick by cart", that enables picking of multiple orders in an efficient manner. This application is dedicated for picking supported with carts. For that reason, it is designed as a simple and easy to use tool. It supports warehouse workers by offering a visualized presentation of the cart at any mobile device. Users are guided by the pick by cart application at what logical position

on the cart the handling unit containing picked goods should be placed. Subsequently this logical position will be stored in the system during the picking process, so efficient further delivery processing can take place.

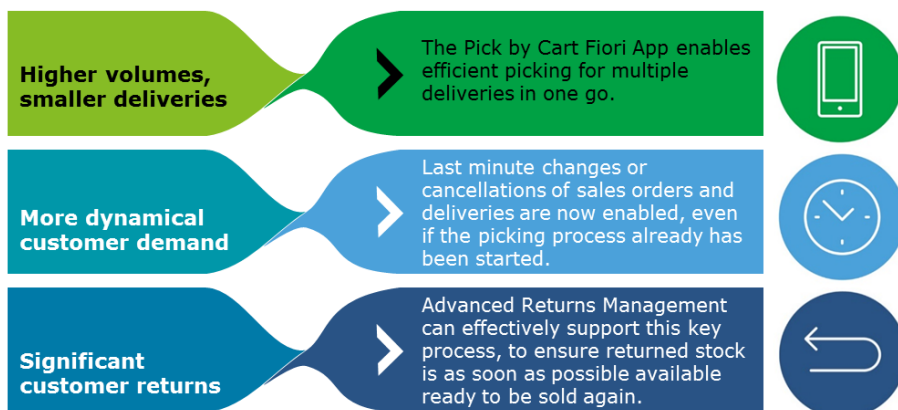The process supported by the Pick by cart app consists of three steps:

• Preparation of the cart by already creating and positioning the pick Handling Units

• The actual pick step, where the pick tasks for example can be grouped together based on the same source bin

• Unloading at the destination. To achieve maximum efficiency, HUs with the same destination can be unloaded in one action.

The Pick by Cart app enables a more efficient picking process, in case multiple smaller deliveries are combined.

Last minute order changes and cancellations

It might happen that for some reason, customer requirements are adjusted last minute. Earlier on, it would be problematic if this would happen after the orders were already released to the warehouse to be executed. This is especially the case when you are working with a decentralized WMS, as SAP EWM used to be in the past. A time consuming process is then necessary that, for example, included contacting a warehousing

Key e-commerce challenges and solutions

Higher volumes, smaller deliveries	The Pick by Cart Fiori App enables efficient picking for multiple deliveries in one go.	
More dynamical customer demand	Last minute changes or cancellations of sales orders and deliveries are now enabled, even if the picking process already has been started.	
Significant customer returns	Advanced Returns Management can effectively support this key process, to ensure returned stock is as soon as possible available ready to be sold again.	

key user to adjust or reject a specific delivery. However, SAP introduced functionality in its latest EWM release that enables much more flexibility to change the sales order quantity, even if the logistics execution process in the warehouse already has been started.

Depending on the progress of the picking process, the quantity change is reflected within EWM in different ways. Let us have a closer look in the example when the sales order quantity is reduced after the picking task has already been confirmed. When the products arrive to a packing work center, the warehouse worker will be informed via a mobile device that a part of the quantity is not needed anymore. Subsequently, the stock will be released from the order and can be returned into storage. In case of a completely cancelled sales order, the whole delivery quantity will be released.

Being able to adjust sales orders and deliveries in the ERP system even after handover to warehouse operations boosts the responsiveness to last minute changes of customer requirements.

Moreover, it will also be possible to make certain changes within the outbound delivery in SAP ERP, up to the latest moment practically possible.

Examples of last moment delivery changes include:

• Quantity and batch updates up to the moment that the picking process has started.

• Means of transport until the moment a transportation unit (TU) has been created. A TU is the EWM version of a shipment.

• Any delivery texts until an Outbound Delivery (OD) is created in EWM. The OD is a document that is created as follow up of an Outbound Delivery Order (ODO), usually after goods issue posting.

Significant customer returns

Another characteristic of doing more e-commerce business directly with consumers is the relatively high percentage of returns. Examples are known of businesses dealing with returns of around 30 up to 50% of all online goods sold. For this reason, a return management process with proper supporting tools can be considered as a key process. The optimal handling of returns ensures shorter throughput times and products can be sold again as soon as possible. This will result in lower inventories on hand.

Also in this area, SAP has improved its solution. This improvement is realized via Advanced Return Management (ARM). Setup of ARM results in a tight integration of customer return deliveries, returns quality inspections and the execution of this returns process within EWM. The most recently added feature enables the execution of returns inspections at goods receipt in EWM, based on a returns order. The inspection results are sent back to the ERP system and a

logistical follow-up action can be triggered.

Logistical follow-up actions include:

• Transfer to free available stock
• Ship to other plant
• In-house repair
• Transfer to scrap for customer

By optimizing your customer returns process the salable goods will be available sooner to be delivered again, resulting in lower inventories on hand.

Conclusion

The changing scope of logistics execution processes that growing e-commerce activities bring, results in changing requirements to a WMS. We have provided an overview of recent innovations within SAP EWM that makes the system significantly more suitable for businesses that are dealing with increasingly smaller and more dynamic customer orders. Improvements have been observed in various steps of the order to cash process, including customer order changes, execution of the picking process, and customer returns processing.

For companies working with two different WMSs like Charlie's imaginary company, it might even be economically interesting to consolidate them into one state-of-the-art SAP EWM solution.

How can Deloitte help?

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Deloitte is pleased to have received a 2017 SAP® Pinnacle Award as the SAP S/4HANA® Partner of the Year–Large Enterprise Companies, which recognizes its outstanding contributions working with SAP. With more than 16,000 practitioners dedicated to SAP solutions in its global network, Deloitte has served more than 3,500 clients, assisting them in their efforts not only to efficiently implement SAP solutions, but equally important, to realize business value from those investments.

Deloitte's long history of defining WMS strategies and successful implementations of SAP EWM makes it an ideal partner for any company to experience this journey together.

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