Wireless Warehouse: Control Station

Transport optimization in a manual warehouse not only saves time and money for the forklift fleet and its operating personnel, it also greatly reduces errors and interruptions in production due to material not being made available on time or delays in shipping due to missing merchandise and finished products at the point of delivery. In addition, the number of picks is significantly reduced, which also reduces damage to the transported goods by the same percentage.

Our Wireless Warehouse Software (WW) from ConnectData has been used successfully by more than 100 companies for almost two decades. Through the close connection with the ERP system, WW significantly reduces error rates and the time required for internal transport through automated data acquisition and data control.
The new WW warehouse control station module is the first software product to support warehouse management in prioritizing storage, retrieval and transfer transactions and to give forklift drivers clear specifications for the transport orders to be carried out.
Of course, the company ERP remains the leading system in terms of master and transaction data. All warehouse relevant changes in the ERP are transferred to the WW via an interface and made available to the control center.
WW warehouse control station is adapted to the requirements of your company by customizing in such a way that the module is able to independently prioritize all pending transport tasks in the warehouse.
These are optically visible in the control station, the priorities can be changed by the warehouse management through manual intervention, if desired and permitted.
The individual stackers are assigned the pending transfer orders from the nearest warehouse (according to the priority list) on the basis of the warehouse coordinates at which they are currently located. For this purpose the driver has a mobile device (PDA; scanner, tablet, ..), which is controlled by the WW software.
A simple example: If the forklift carries out a stock transfer from warehouse A goods receipt to location B raw material, the WW control station system will assign it a pending stock transfer from warehouse B raw material to warehouse C supply point production as the next transport order - if the warehouse management does not give it an even more important stock transfer order by manual priority.
The transport orders can be made visible on large screens in the warehouse and, if necessary, adapted on the PC via the software in the warehouse office.
All relevant information such as outgoing and incoming warehouse, times, quantities/pallets, parts information, order status, etc. are available to the user at any time.
It is important that the WW warehouse control station module is a flexible system, which determines the pending transport orders by mathematical optimization, but does not make any rigid specifications. It flexibly adapts to the needs of daily warehouse life in real time and yet supports transport operations in a highly informative manner.

Transaction Connectors

Material stock transfer orders originate in the enterprise ERP.

A goods receipt is controlled by the characteristics in the material master. Consignment material must go to the consignment warehouse, trading goods and finished products to the shipping or packaging warehouse, raw materials to the raw material warehouse, and so on. The ERP movement data (material reservations, shipping orders, and so on) determines how important and how fast a stock transfer is or must be carried out.
A material reservation for production whose production order has already started but is currently at a standstill because the material is missing will inevitably receive a stock transfer order of the highest priority. Consumption-controlled MRP material without reservations, on the other hand, has a rather low priority. The same applies to finished goods and trading goods. Overdue sales orders receive high priorities with regard to goods staging, whereas replenishment receives low priorities.

In order for the WW control station to receive and calculate the pending transport orders in real time, it needs the relevant transaction data from the ERP system in real time. For this purpose ConnectData developed connectors, small software modules, which are flanged to the ERP system and which transfer the transaction data from the ERP to WW - without modifying them of course. The number of connectors required depends on the degree of utilization of the ERP system. The connectors are independent software parts and not a modification of the ERP system. They are inserted at clearly defined and documented points and are available again in the same form even after an ERP release change. The installation is carried out in cooperation with the company's IT department.

Prioritization module

The module calculates the priorities of the pending stock transfer orders according to the warehouse guidelines and the specifications of the ERP system. The standard prioritisation in the WW control station is adapted and carried out by ConnectData in cooperation with and according to the specifications of the company using it.

Control station monitor

A pure indicating instrument. A console can be used at any time to set which stock transfer orders are displayed. Either transaction-related (ALL, goods issues, material staging, etc...), or storage location-related (warehouse A, B, C...). A combination of transaction and warehouse is also possible. Sorting by date, priority ... can also be flexibly defined.

PDA application for forklift drivers

If WW from ConnectData is already in use, the drivers receive a further menu item in their application "Next transport order" on their PDA (scanner, forklift terminal, tablet ..). The driver receives his next transport order here according to the order prioritization. If this cannot be carried out - for whatever reason - the driver can, under

certain circumstances (company-specific definition), skip the order by specifying a reason and call up the next order in the priority.

If a transport order specified by the control center with the highest priority exists, it is assigned to the driver closest to the warehouse in question. If a transfer order is transferred from a forklift truck, it can no longer be called up by other drivers in the system and the order is assigned the status "in process" in the control station, specifying the forklift truck and the degree of processing.

If WW is not yet in use, the basic functions plus WW control station must be newly implemented and installed.