Warehouse Manager for Sage X3

Datalinx COMPUTER SYSTEMS

IWI CONSULTING group

Warehouse Manager

sage | Certified Solution sage X3

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Warehouse Manager

sage X3

Efficiency and cost reduction is key to business success; modern warehouse systems must meet the demands of the supply chain for faster turnaround times with minimal errors and better management of returns.

Datalinx Warehouse Manager for Sage X3 provides the Sage user with cost effective solutions that are designed and developed to deliver the key warehousing functionality that today's businesses require. The application is written for and embedded within Sage, ensuring that data is not compromised since control remains within Sage.

Datalinx have been providing Sage users with warehouse solutions for in excess of 25 years. In line with other Datalinx systems, we analysed the functionality within the core Sage X3 package against the values and requirements of the Sage user. This has enabled us to deliver a system that meets users' needs, is warehouse centric and fully Sage compliant.

Warehouse Manager is integrated into the business processes of Sage and allows the operatives in the warehouse to be wirelessly connected to the central system. It utilises the latest wireless hardware and dedicated Warehouse Manager screens embedded within Sage X3.

Datalinx systems are designed by people who understand warehousing.

Core Business Goals

Increase stock location accuracy by 25%

Receiving products into a warehouse against purchase orders, is part of the routine of all warehouses. Utilising the user friendly hand held terminal not only is the stock file instantly updated with quantities, but the location across multiple bins is also recorded.

Warehouse Manager hand held barcode scanners can be used to rapidly capture batch and serial numbers for those companies with varying levels of requirement for traceability.

Inventory accuracy of 99%

Accuracy of receipt, put away, and picking, improves from 90% with a paper based system to 99.9% when using Datalinx systems. The associated reduced requirements for stock take and stock reconciliation, provide a realistic return on investment of less than 12 months.

Increase the speed of picking by 25%

Combining Sage and Datalinx Warehouse Manager delivers a solution that minimises errors, and quantifiably measures the increased throughput of the individual pickers.

Provide 75% stock count efficiency gains

Carried out by multiple operators, the hand held devices guide users to the relevant locations and request details of the product being counted, together with the actual item count. This information is compared and checked in real time against the expected figures within Sage.

Typically company confidence in stock figures increase to a point where a move to random or cyclic stock takes is a realistic option.

Key business processes include:

Shipping

Increase picking efficiency through the management of sales orders with extensive functionality

- Shipment Preparation/Picking
- Product Status Change
- Consolidated Picking
- Pack and Despatch Bench
- Pick to Carton

Manufacturing

Achieve process and product consistency and deliver high quality goods

- Miscellaneous Receipts
- Miscellaneous Issues
- Works Order Receipts
- Works Order Pick
- Allocations within Sage X3

Warehousing/Distribution

Expand the knowledge and traceability of products controlling business costs

- Purchase Order Receipts
- Location Transfers
- Inter-site Transfers
- Stock Count
- Zones
- Replenishment

Extended Functionality:

- Tracking ID
- GS1 Enabled
- Pallet ID
- Lot and Serial Number Management
- Multi Language Sets
- User Interface Styles Management
- Work Flow Management
- Unit of Measure Conversions
- Graphical Menu's and Screens
- Wireless Connectivity

Sage X3 Integration

Datalinx Warehouse Manager is seen as a module within the core Sage application. This in depth and tight integration is a key differentiator between Datalinx and other warehousing systems.

This direct integration is a core principle of all Datalinx Warehouse Manager systems. With Datalinx the data used for the Sage X3 inventory database and records is also the database and records for inventory within the warehouse and this is always seen live and in real time.

For example, if a person in the purchasing office is seeing 100 bookmarks in stock, then the warehouse operator will also see 100 bookmarks in stock.

When the Datalinx Warehouse Manager application is installed, in line with Sage ISV developers guidelines, a number of additional data fields associated with products and locations (for example) are applied, together with additional business logic that allows the Datalinx Warehouse Manager system to provide the functionality that warehouse users require within the core package.

Parameter Values

"Parameter Values" within Sage are a powerful tool and are used to change and configure the functionality of the system.

Unlike other systems Warehouse Manager uses Sage Parameter Values to provide end users with the flexibility to change the way the system is configured to match their warehouse and business processes.

This is achieved by applying a given functionality at company, folder or user level and can be adjusted by a Sage Business Partner or trained on- site personnel.

The Receipt Process

It is typical that a warehouse system focuses on the booking in and receiving of product via hand held scanners and barcodes. Datalinx programs allow for the receiving of product via the hand held by scanning codes on the products or by selecting the lines from a purchase order.

Occasionally the Sage screens may be the best place to book in the product being received, and with this in mind Datalinx Warehouse Manager functionality extends the standard Sage "Purchase Order Receipts" and "Miscellaneous Receipts" Screens.

Users may follow standard booking in processes within Sage and the added Datalinx functionality will produce the relevant transactions, create Licence Plates (pallet numbers) and enable labels to be printed, ready to be attached to the product being received into stock.

This seamless linking of Datalinx Warehouse Manager and Sage removes the need to book product in twice and also removes the possibility of decoupling operations occuring when product is booked into the "business system" and additionally into the "warehouse system."

Miscellaneous Receipts

"Miscellaneous Receipts" is the business process that is used to carry out the receipt of products into the warehouse without a corresponding transaction such as a purchase order or works order to receive the product against.

Datalinx Warehouse Manager allows the receipt of product to be recorded. Whilst completing the receipt, the application checks and validates to ensure that the product code exists and if relevant, captures additional information such as serial and batch numbers together with date related details such as best before or use by dates.

The resulting transaction is used to update Sage with the receipt as if the transaction had been completed within Sage. The history record will also attribute the transaction details complete with date and time to the individual logged on at the hand held terminal.

Purchase Order Receipts

For many companies the majority of receipts will be against purchase orders previously raised within Sage, be this raw materials for manufacturing or pallets of products for distribution.

At the point of receipt and using the wireless hand held scanners, the warehouse operative has a number of options to identify the specific purchase order to record the receipt against; from keying or scanning the purchase order number when advised on the documentation, to searching the purchase order file against various criteria to find the correct reference.

Having identified the purchase order and product, not only will the quantity be recorded but if required the operator will be prompted for serial and batch references.

Finally, if required, pallet and product labelling may be triggered and printed to static or mobile printers.

Location Transfers

There are many requirements to move product between locations, both at unit and pallet level. Using the "Transfers" option on the hand held is a simple action. The hand held terminal is used to capture the product code/tracking ID and if appropriate, the quantity. The destination location is used to complete the transaction at which point Sage is updated.

Inter-site Transfers

Where a company has more than one site, then the tracking of inventory from one site to another is equally as important as tracking product within the business. The Datalinx Warehouse Manager system enables product, be this at individual or pallet level, to be tracked and controlled as it is transferred from one location (as is defined within Sage) to another.

Consolidated Picking

Utilising and liberating the power of Sage X3, Datalinx Warehouse Manager provides the user with the ability to consolidate a number of orders to be picked at the same time, be this Global or Detail Allocated orders. The user is directed to pick multiple orders in a single walk around the warehouse being guided by the hand held terminal through the process confirming each of the picks as they are completed.

Pack and Dispatch Bench

The pack bench functionality provides the warehouse with a number of functions. It can be used to confirm the correct products are being packed, or where consolidated picking has been used, it will guide the packers to identify the correct product and quantity per order. At the same time updating Sage with the current order status.

Orders are selected on dedicated packing screens which are typically deployed on "touch screen" PC's. This allows each line of the order to be confirmed as packed. Once packed, the order may be dispatched, confirming the shipment in Sage X3 and parcel or pallet labels printed detailing each carton's contents.

Miscellaneous Issues

Stock issues from a warehouse may be referenced against a number of key transactions. Miscellaneous Issues allows for controls to be put in place whereby product is issued without the need to set up other transactions in Sage, for example, samples or consumable products. The information captured ensures that stock levels are correct and accountability of stock leaving the warehouse is maintained.

These transactions, when carried out using the Datalinx Warehouse Manager application may be completed using a combination of scanning and keyboard entry on the hand held, providing a quick and efficient recording of the stock issue.

Works Order Pick

Typically where a business is running Sage manufacturing, there will be Works Orders in operation. The Datalinx Warehouse Manager application's core integration with Sage ensures that the operator's hand held device displays the details of the Bill of Materials for a given Works Order and will guide the user to pick the correct materials as required for the manufacturing process.

At the time of picking, where relevant, factors such as batch numbers and use by dates are utilised and captured to ensure that product traceability is maintained within the manufacturing process.

The hand held scanner will record the issue of raw material and sub-assembles plus the completion of finished product into stock. As is standard with all Datalinx systems, details of the transactions are instantly updated and written in real time into Sage.

Works Order Receipts Completion

Once a product has been manufactured, assembled or repackaged, the Datalinx Warehouse Manager system provides the ability to receipt and process the finished item into finished goods inventory within Sage.

Product Status Change

Within Sage X3 there is the concept of "Product Status". This enables a site to control product manufacture with reference to processes such as QA and Inspection. Datalinx Warehouse Manager will allow the user, via the wirelessly connected hand held scanners to change the status of a batch, pallet or stillage of product.

This updates the status of the product in line with the screen based options of Sage, thereby ensuring that all users have the same view of the product status.

Stock Count

A key operation for any warehouse is to be able to complete a stock count quickly but accurately, thus causing the minimum of disruption to the business.

The Datalinx Warehouse Manager process allows a stock count to be carried out by multiple operators. The hand held devices guide the operators to the relevant locations and request details of the product and quantity found, and where required batch and serial number details.

This information is then compared and checked against the current figures within Sage. At which time the stock adjustment facilities within Sage are used to review for recount or stock level adjustment.

Additional functionality is available within the Dynamic Stock Take module - see Add-on Modules

Sales Order Picking

For many warehouses, particularly in distribution and the supply chain, sales order picking is utilised to prepare products for dispatch.

Combining Sage X3 and Datalinx Warehouse Manager delivers a solution that will ensure high efficiencies and accuracies of picking and dispatching product with the associated reductions in costs. Pick Tickets and Lists are created and authorised within Sage using the standard system functionality.

Once authorised for picking by Sage, the details of the pick ticket will be available for display on the hand held scanner within the warehouse. These units will guide the operative to the appropriate bin advising the quantity and product to pick. Once correctly completed on the hand held Sage is updated as the action occurs in real time.

Allocations within Sage X3

When orders are processed within Sage there are two fundamental states that a given line within an order reaches prior to being passed to the warehouse.

1. A "Detailed Allocation" where due to prior Preparation Planning of the sales order Sage has dictated which product/batch/location that the product is to be picked from. In this situation the picker will be guided to the specified location and whilst the Datalinx Warehouse Manager application will route the operator around the warehouse in the most efficient route, it will not give the operator any choice as to the "lot" or "Batch" which may be picked.

2. When a sales order line has "Global Allocation" status there is flexibility in the batch/lot/location that may be picked. In this situation Warehouse Manager will guide the user to a location to pick from, but at the point of picking all alternative locations may be displayed and picked from, or alternative batches picked from within the same location.

The benefit of this can be seen where a site may have a number of pallets of the same product in a given drive-in racking, but produced across several manufacturing lots. Using Warehouse Manager the picker has the option to efficiently pick a pallet from the front of the rack rather than losing time moving product to select a pallet from the back of the rack.

Similarly, if a pick list calls for a component which is serial number tracked, the approach of using global allocated orders is applied. The picker is not directed to search for a system selected serial number, but at the time of picking the product they are asked to confirm by scanning, the serial number of the product they have selected.

This approach provides flexibility in the way that orders are picked and controlled by utilising the "Detail" and "Global" allocated orders at an order line level.

Pick to Carton

Pick to Carton increases the speed at which orders can be despatched by minimising double handling and scanning of product.

The Datalinx Warehouse Manager application delivers the ability to "Pick to Carton" within a warehouse. Product is picked from the relevant location, typically a pick face, and placed directly into the container or box that it will be shipped in.

As content labels can be generated at the same time as the cartons are packed, these can be printed via mobile printers or generated at a static printer for application at the end of the pick. Or pre-printed labels may be scanner, again saving the user time.

This is another example of the Datalinx Warehouse Manager application expanding the capability of the Sage system.

Zones

Datalinx Warehouse Manager adds the functionality of "Zones" within a warehouse increasing the scope of the warehouse set up. The advantage of zones is that it allows an "overlay" of the locations within a warehouse which can group specific processes together.

For example, a warehouse may have a set of picking bins on different levels of mezzanine floors and the pick list has to present to specific pickers only those picks that are within their zone.

By utilising Datalinx Warehouse Manager, it is possible at a warehouse level to apply zone handling without affecting the standard Sage pick list creation.

Replenishment

Replenishment of locations within a warehouse is critical to ensure that product is available to meet the picking process. Within Sage there are replenishment planning capabilities.

Datalinx Warehouse Manager delivers an immediately actionable replenishment process whereby a warehouse operative is able to walk an area of the warehouse and where locations are low in stock, they can scan the location and will be advised where additional free stock is available in the warehouse, which they can then transfer to replenish the rack or bin.

Enquiries

On the hand held devices there are a number of enquiry screens and functions available to assist in the daily operations within the warehouse. Functionality such as alternative batches to pick further empowers the users to achieve their daily tasks.

Wireless Connectivity

The Datalinx Warehouse Manager application connects to the host Sage X3 application via an enterprise level wireless system. This ensures that operatives are connected and continuously update the central core system, ensuring that all within the company from order processing to accounts have the same real time view of the stock position.

Work Flow Management

One of the underlying powers of the Datalinx Warehouse Manager application is the inbuilt "Work Flow" tool.

GS1 Enabled

GS1 is the global organisation for standards within generic barcoding and the supply chain. Datalinx Warehouse Manager takes full advantage of these standards and is GS1 128 enabled. Products with GS1 barcodes or requiring GS1 barcodes on the outer packaging can be catered for within the Datalinx Warehouse Manager application. This removes the need to re label and brings further efficiencies to the business.

Multi Language Sets

In line with the international and multi-lingual capability of Sage X3, the Datalinx Warehouse Manager system is able; from the initial user log-on, to present the application in a language relevant to that specific person.

This provides the Sage Business Partner with the ability to create and apply language sets for Sage customers. These can be configured to specific users allowing a site to utilise multiple language sets simultaneously, providing their operators with a personalised experience and helping to reduce errors.

Graphical Menu's and Screens

As is expected of any modern warehouse system, it is important for the users to see touch screens with a "graphical" interface. Datalinx Warehouse Manager uses the latest mobile devices in a format that will survive the rigours of the warehouse environment. This ensures that users are guided in simple and elegant screens with an ease of use that allows the operatives daily tasks to be completed without interruption.

Unit of Measure Conversions

Often within the warehouse products are supplied, stored and processes in shipping units e.g. boxed quantities or pallet loads. For instance, within sales order processing, items may be sold in "eaches". The Datalinx Warehouse Manager application provides functionality which will allow units of measure conversions to be applied.

For example, if products are stored in boxes of 10, but a sales order requires 55 units, Datalinx Warehouse Manager will guide the operator to pick boxes of 10 and also 5 single units to fulfil the line on the order.

Tracker ID

The Datalinx Warehouse Manager application has within all of its processes the ability to utilise a Tracker ID. This is typically known as a "pallet ID" or "licence plate" and allows an individual item, a given quantity of items or typically a "pallet" of items to be identified with a unique tracking number.

This tracking number is then used to process that quantity or pallet of product.

Core vs Lite

To satisfy different customer requirements and complexities within their warehouse operations, Datalinx provides two versions of Warehouse Manager, Core and Lite.

Warehouse Manager Lite allows simplistic barcode scanning of inventory transactions to Sage. Whilst the Core system brings warehouse management control and provides a range of additional rules and business processes. Core is considered to be a true Warehouse Management System (WMS).

If your business is managing simple transactions , such as Miscellaneous Issues or Receipts, Warehouse Manager Lite can manage inventory from receipt to despatch. For more compex operations, Warehouse Manager Core provides a full WMS product, with scanning across multiple inventory business processes.

The Core Warehouse Manager system has the option to purchase Add On modules which typically address very specific areas of a business. These are only available to customers with Warehouse Manager Core and cannot be aquired alongside a Lite version.

Tote Tracking Module

If products are shipped in totes that are not returned, the business has an ever increasing overhead that can significantly add to its costs. Traditionally, totes have been tracked by adding a product to the sales order. However, this does not give a true view of the totes' location and requires 'customer returns' to be used to book it back into the business.

The Datalinx Tote Tracking module removes this overhead and allows tracking of totes, and their return. This provides the business with the knowledge to either bill or request return as appropriate. On their return, the status of the tote can be assessed before being made available for re-use.

Recording Unique Tote IDs

Totes are assigned a unique ID which is recorded in a Warehouse Manager screen in Sage removing the need to add totes as a special type of inventory.

Tracking and Enquiring on Totes

Products can be identified as requiring totes. When picking a product requiring totes, the operator is prompted to scan the tote IDs, at which point the tote's status automatically updates to PICKED.

Datalinx Tote Enquiries in Sage enables users picking totes to check whether the tote is free or picked, and if picked, which customer is receiving it.

The number of totes with a given customer can be reviewed.

Booking Returned Totes into Stock

When totes are returned, operators can scan these back into stock, whether this is to the same or a different site.

Managing Usability Status

The Tote Status function allows review of the tote to identify whether it is suitable for re-use, or if it needs maintenance, such as repair, cleaning or other action. Statuses can be defined to reflect an organisation's specific requirements. The operator can scan and update the status of a given tote as appropriate.

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Add On Modules

Dynamic Stock Take Module

This Datalinx module provides a true perpetual inventory model, to allow stock counts to take place as required, rather than on an annual basis. This ensures minimal disruption to the business, reducing cost as the warehouse stays operational even during a count, thereby increasing efficiency.

With Warehouse Manager Dynamic Stock Take, there is no requirement to lock the count area, leaving it operational throughout the stock take, except for the short period when the specific location is being counted.

Dynamic Stock Take also enables multi-count and recount options on the scanners, the ability to handle "discovered stock," stock in unexpected locations, and zero counting when stock cannot be found.

Key Functionality

- Single Count - can be completed by a single
- operator without closing the count area
- Multi Count* - two different operators can complete the count, and if there is an unexplained discrepancy, a third confirmation count is required.
- Stock is only locked whilst a specific location is being counted.
- Sage stock levels/quantities always current
- Warehouse Manager runs in real time, with Sage data always live and up to date
- Functionality usage restricted and based on user permissions

Enhancements

- Flexible generation of counting sheets for ranges of locations, including empty ones
- Dynamic snapshots of stock
- Ability to record discovered stock
- Automatic movement of tracked batches to their correct location
- Minimal operational down time. The product batches and locations are locked at the lowest level, and only during actual counting time.
- Blind counting, in which the operator has no record of what to expect in the location or for the
- product
  Ability to abandon and repeat, or suspend and
- resume the original count
  Multiple counting where counts are repeated several times, by different operators, to get an
- agreed stock quantity.*
  All operator activity is logged.

**Compatible with Sage X3 v11 or later*

"The big driver for us with Datalinx was its tight integration with our Sage software."

"The combination of Sage and Datalinx Warehouse Manager provides a seamless solution with in depth reporting for greater control and business accountability."

"Datalinx software provides us with the ability to run the warehouse within Sage and extends the functionality to do all of our activities."

"Reducing errors on incoming orders through more accurate stock levels and reducing picking errors not only improves our efficiency but maximises our profitability."

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