FROM PAPER TRAILS TO DIGITAL HIGH-WAYS:

A PRACTICAL GUIDE TO MODERSINSING WAREHOUSE OPERATIONS

Despite widespread digital transformation in distribution, it's not unusual for companies to still be using paper-based systems. Not only are they inexpensive and simple to operate, but most companies will also typically begin with a paper-based system. These systems are familiar and practical and employees are reluctant to move away from them.

This inertia can prevent companies from undertaking improvement projects in the warehouse, even though there are clear benefits of doing so. Automation is often seen as unnecessarily disruptive, difficult to implement and costly. After all, if the paper system works, why break it?

But the fact is, when you look more closely, for most distribution operations, paper-based systems simply don't work. They certainly don't work in terms of optimising worker productivity, enhancing efficiency, streamlining order fulfilment or boosting sales and profit. They can inhibit a company's ability to reach its full potential, preventing it from growing and competing in an increasingly digital world.

For all distribution operations, there comes a time when the paper system becomes unwieldy. There are too many SKUs to handle, stock cannot be easily located for picking and staff become overworked and inefficient. Using a paper system to manage a warehouse when it gets to this stage has impacts in terms of costs, time and accuracy.
Implementing automation – by using a warehouse management system (WMS) – eliminates these problems and allows a company to achieve greater productivity and efficiency, which ultimately leads to greater profitability.

The actual transition from paper-based operations to using a WMS needs careful and thorough management so that the benefits can be properly realised.

This guide points out the drawbacks of paper-based systems, explains how a WMS can benefit you and has a step-by-step guide you can follow to help you manage the process.

An overview of paper-based warehouse systems.

> A large number of warehouses still rely on paper-based systems.

In the not-so-distant past, paper was the backbone of all warehousing. From tracking stock levels and bin locations to order picking and processing, everything was done manually.

It wasn't until 2018 that a well-known annual survey of US warehouses found that the use of paper-based systems had finally fallen below 50% for the first time. But there are still a very large number of warehouses that rely on paper-based systems.

For warehouses that use physical documents and manual processes, these would be the typical procedures followed.

01

Order receipt and verification

The order is received, either electronically or physically. Details like the customer's name, address, item numbers, quantities, shipping instructions and payment information are captured. This may be done automatically if the company has an ecommerce website, but the information may need to be manually keyed into an order management system or a spreadsheet.

If necessary, the order is reconciled against a purchase order. This may involve it being printed before being verified. An employee will cross-check that the information is right, before tick individual lines to confirm and possibly also signing the order.

02

Order processing

The order is printed and sent to the warehouse. Along with the paper picking list, which details the items and their locations, there may be a paper packing slip, for adding into the customer's order.

03

Picking

The picker uses the picking list to go to the locations of the items to be picked, marking off each item on the list as it is picked.

04

Packing

The picked items are taken to a packing station. Each item is again checked against the order to ensure accuracy. The order, along with the packing slip, is packaged for shipment.

05

Shipping preperation

The packaged order may need to be weighed to determine the relevant shipping carrier or costs. A shipping label is printed and added. If the warehouse is truly manual, this label may be completed by hand.

06

Dispatch

The packaged order is placed in the shipping area to await collection by the internal driver or shipping provider. Shipping information is manually recorded against the order and a paper manifest of the shipping documentation is printed for each carrier.

07

Documentation

The original order is marked as shipped and any associated payment and shipping details are noted. Copies of the order, picking slip and any shipping documents are filed for record-keeping. This is essential for tracking the order, processing returns and for audits.

08

Record Updates

The inventory records are updated manually to show that the items have been taken from stock. The order management system or spreadsheet is also updated to detail what products a customer has ordered and when.

The challenges of paper-based warehouse systems.

These sorts of paper-based warehousing processes are prone to errors, inefficiencies, delays and customer dissatisfaction. Small and medium sized warehouses tend to persist with paper due to fears about the costs and disruption of automation. The perceived challenges of transitioning to a new and unknown system, the time needed to retrain staff and the need for wholesale organisational change can mean they defer the decision to automate – or reject it completely.

However, using paper is beset with a number of critical problems and challenges that can negatively impact warehouse processes. Here are some of the common issues with paper-based warehousing.

Errors and inaccuracies.

Paper-based systems are prone to errors. The data may have been entered incorrectly in the first place. For example, the wrong stock location on a picking sheet would cause a picker to take an unnecessary detour when finding goods for an order. Or it may be difficult to decipher someone's handwriting, resulting in the wrong quantity of items being despatched. Lost or misplaced documents can completely sabotage a pick run or an order, resulting in delays and frustration.

Inefficient stock management.

Lack of real-time data causes inefficiencies in stock management and incorrect order fulfilment.

A mistake where a worker fails to manually update inventory levels after making a pick can mean that stock levels are completely wrong. The company could then go on to sell stock that wasn't available, leading to additional inconvenience and time needed to sort out the order with the customer.

Inaccurate inventory records that imply more stock is available can mean replacement stock is not ordered in time, causing a company to miss out on potential sales.

Time-consuming processes and delays.

Manual processes are slow and inefficient, especially in larger or more complex warehouses. This can lead to longer order processing times and slower delivery times.

Inefficient tracking and handling of goods also slows operations down. It makes it harder to find goods in the warehouse, for picking, replenishment and cycle counting.

Increased costs.

Manual, paper-based processes have an impact on costs. It can take a number of lengthy processes to carry out a few simple operations that an automated system can do far more quickly and without any intervention. With more staff undertaking complicated manual tasks, labour costs go up.

There are also additional costs involved with a paper-based system. It requires several printers, lots of paper, plus toner or ink cartridges – all of which are expensive.

There are lost opportunity costs to consider, too. Inaccurate inventory records can mean lost sales, with companies unable to fulfil orders.

Inability to scale and adapt.

Working manually with paper makes it difficult for a company to scale and adapt to new business demands.

While a paper-based system may work very smoothly for the smallest operations, there comes a time where it is untenable. This is different for each warehouse, but at some point, the system simply cannot match the demands of the operation when it comes to the number of SKUs or quantity of orders to be processed.

CASE STUDY: Paper-based systems hamper the growth of Virgin Wines.

Virgin Wines discovered the limitations of its manual, paper-based picking system when it began to grow. As it began to despatch an increasing number of orders, the manual processes started to limit the warehouse's efficiency.

Paper was also hampering the purchasing team. Gareth Nutt, Chief Technology Officer, says, "At busy periods, our wine buyer was completely blind about the current stock situation. Using a spreadsheet, he had to estimate what orders had gone through so that he could calculate the purchasing requirements."

The company recognised it needed to invest in automation to allow it to scale any further and has now successfully implemented Körber WMS.

Excess paperwork.

Having a lot of paperwork to manage can be time-consuming. It becomes a laborious task for staff to print, manage and store it all. Precious space in the warehouse needs to be dedicated to storage and there are inefficiencies with accessing it. Even finding the right records can be slow and cause problems where indexing is not complete or accurate.

The excessive use of paper and ink carries an environmental cost. Systems dependent on paper not only consume valuable resources, but also contribute to increased carbon emissions. A paper-free operation is more efficient and is less environmentally detrimental.

Security risks.

Paper-based systems are more vulnerable to security risks. Paper is susceptible to damage – from water, fire, pests or simple wear and tear. Unlike digital systems that may have multiple backups, if a paper document is damaged, the information might be permanently lost.

Physical records can also be stolen, leading to potential data breaches or business interruptions. Equally, it is easier for anyone to access and read paper documents, risking sensitive information getting into the wrong hands.

Records kept on paper can be altered, tampered with or forged, which makes fraud more possible. Tracing actions or changes made on paper can be difficult too, often making it impossible to track any fraudulent activities or unauthorised access.

Customer dissatisfaction.

Customers want swift and accurate service when placing orders. However, paper-based systems often have slower order processing times and there can be fulfilment inaccuracies. This can frustrate customers, causing them to seek alternative suppliers.

Negative experiences may prompt customers to leave unfavourable online reviews, which can influence other customers' perceptions. Over time, shortcomings like this can result in lost sales and difficulty attracting new business.

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Compliance issues.

Companies that rely on manual systems may not be easily able to comply with regulations, such as those governing food safety and hazardous materials.

Manual record-keeping does not offer the robust traceability and rapid retrieval needed for compliance checks or audits. Delays and inaccuracies when using paper can make it difficult to validate that regulations have been adhered to, potentially exposing a company to penalties, legal ramifications and reputational damage.

Automating your operations with a warehouse management system (WMS).

As technology continues to advance and becomes more affordable and user-friendly, the shift from paper to digital is becoming more common. The long-term savings, efficiency and accuracy gains that businesses achieve with digital systems soon outweigh the initial challenges and costs of implementation.

A warehouse management system (WMS) can automate and streamline the manual and paper-based warehouse processes, reducing costs, improving accuracy, increasing productivity and enhancing customer service.

A WMS supports and optimises day-to-day warehouse operations and processes, including warehouse layout, staffing, receipt, picking, packing, replenishment and despatch.

The benefits of automated WMS solutions.

Using an automated WMS brings increased efficiency and improved stock accuracy. For many warehouse businesses, a WMS can realise a positive return on investment in a matter of months, through significant cost and time savings that come from enhanced productivity and streamlined operations.

Körber WMS is a fully featured warehouse management system that integrates with ERP systems, transport management systems and other logistics and distribution software to provide end-to-end supply chain management for sophisticated warehouse functionality.

It does so much more than just stock management, with features that optimise the entire range of activities in the warehouse. It meets both simple and complex warehousing and stock requirements by optimising workflows, reducing costs and improving warehouse efficiency, productivity, customer satisfaction and profitability.

Körber WMS has a comprehensive range of standard, out-of-the-box functionality, but is also highly customisable and extensible, allowing workflows and processes to be tailored for more complex needs.

Here are some of the key functions and benefits of Körber WMS over a paper-based system:

01

Optimised use of warehouse space.

By recording the dimensions, weight and volume of each product, as well as tracking storage locations and stock use, Körber WMS can pinpoint where to locate stock to make the best use of the available warehouse space.

This makes putaway far simpler than with a manual, paper-based system. Using putaway logic, the WMS manages the locations for each SKU. Warehouses can also define tailored rules that further maximise the use of the space. For example, products can be commingled or stock can be segmented over different warehouse zones. This can enable a business to carry more SKUs or to stock larger numbers of products, making it better able to meet customer demand. With maximised space utilisation like this, the distances workers need to travel is also reduced.

Using the slotting feature of Körber WMS optimises the storage of goods even more. This locates faster-moving goods in the most easily accessible areas – perhaps close to packing or despatch – and places those that are purchased less often in more out of the way areas. This speeds up many operations, such as putaway, replenishment and picking.

02

Stock and order accuracy.

Stock levels are always accurate and up to date with a WMS, especially when used in conjunction with RF technology that eliminates any use of manual checking and paper-based tracking.

Balloon customers have quickly achieved more than 99 per cent stock accuracy using Körber WMS. They have also been able to eliminate time-consuming annual stock takes, which previously could have interrupted operations for a day or more. With cycle counting functionality, stock is kept up to date, errors are minimised and discrepancies are quickly identified, so they can immediately be investigated and remedied.

Improved order accuracy prevents shipping the wrong items and having to reship orders or issue refunds. This maintains high levels of customer service and limits unwarranted additional shipping expenditure. Körber WMS provides 99.9% shipping accuracy, helping to get orders right the first time.

03

Reduced stock holding.

Using paper, it is extremely difficult to assess how much stock to carry. Holding too much stock ties up cash, affecting working capital. A WMS provides stock forecasting and assessment that can reduce the money tied up in stock by around 20%.

With a lower stock holding, there are also other financial benefits, such as eliminating or reducing insurance and taxes, or risk costs like obsolescence, damage and theft.

As stock holding costs are reduced, there is a corresponding increase in stock turn rates. Raising stock turnover improves price stability and allows the warehouse to introduce new products that can be rotated, meaning lower levels of waste, which can be particularly important in industries like food and pharmaceuticals.

CASE STUDY: CMS Distribution replaces paper-based warehousing that was impeding profitable growth.

CMS Distribution was running a paper-based system that was hampering its growth. Controlling its receipts, inventory and shipments on paper meant it couldn't scale the business. Growth had also made it harder to manage the millions of pounds of inventory via spreadsheets.

Managing its picking activities via paper brought additional challenges, with operatives finding it hard to be certain they were picking the right product. To ensure there were no mistakes at all, the company had to verify the paper operation by adding in layers of manual checking and rechecking.

Without having to increase admin resources or invest extra time into new processes to cope with its paper systems, Körber WMS has brought automation improvements that have allowed CMS Distribution to grow.

04

Improved productivity and task management.

Employing an automated system improves productivity, typically reducing labour costs by 20-30%. This means that more orders can be processed, using the same number of workers.

Picking represents around half of the labour costs in a warehouse. Using the advanced picking strategies of Körber WMS, significant savings can be made. There is flexibility to choose from several different picking strategies, such as batch picking, wave picking, waveless picking or zone picking. This allows companies to choose the right picking method that will ensure its orders are fulfilled as quickly as possible.

Using work prioritisation and task interleaving capabilities, unnecessary movements in the warehouse are reduced. The WMS automatically combines tasks, which is simply not possible with a paper-based system. Worker movements are linked, such as incorporating an order pick with a putaway task in a single trip. All sorts of tasks can be combined, including picking, replenishment, packing, stock transfer and cycle counting.

CASE STUDY: LSE Retail takes the guesswork out of replenishment.

Rapidly growing online retailer of lighting for the home, LSE Retail used to undertake replenishment visually. A worker would go down an aisle with pen and paper to eye what needed replenishing. Picking, too, involved a significant amount of manual admin.

The company has prioritised the optimisation of its picking, packing and replenishment and has implemented Körber WMS to help improve these processes.

05

Traceability.

Some warehouses stock foods that have precise use-by dates or are legally required to accurately track goods like pharmaceuticals through the supply chain. Recording products like this on paper is labour-intensive and error-prone, making it difficult to accurately track these items.

Batch and lot traceability features in Körber WMS address these issues by ensuring individual products can be quickly tracked. By recording attributes such as expiration dates, serial or lot numbers, batch numbers and so on, stock can easily be located. This makes it simple to pinpoint a product that has gone out of date or to find a batch of products with a manufacturing issue.

Using serialisation, the WMS creates unique serial numbers for goods, helping to address counterfeiting and delivering an additional tracking method that provides excellent recall management and quality control.

CASE STUDY: Birchall Foodservice replaces paper to improve transparency and traceability.

Birchall Foodservice had been using a paper-based warehousing system but this lacked KPI monitoring and inventory records were inadequate.

To achieve a warehouse operation that was more efficient and more transparent, the company implemented Körber WMS. Replacing the paper system brought efficiencies with stock replenishment, more accurate picking and greater transparency and traceability.

06

Visibility.

With a paper-based system, any updates are manual and often delayed. Körber WMS provides real-time information on stock levels, order status and even worker productivity.

With advanced analytical tools, it's easy to generate comprehensive reports on warehouse performance. For example, management can set and track core KPIs that help the warehouse attain various productivity and profitability targets.

A WMS keeps a digital record of all transactions and movements, making it easier to track items for quality checks, recalls or compliance audits. It is always clear exactly what is in stock and where in the warehouse it is located – all in real time. This is cumbersome and difficult to do on paper. It is particularly risky with perishable goods and high-value items, where a mistake can be costly.

For items subject to regulatory compliance or which need to be traced accurately, an audit trail is fast and simple with Körber WMS. With a paper-based system, it could require many hours of sifting through stacks of paper records.

CASE STUDY: Improved visibility for Rapid Electronics.

Rapid Electronics was running a paper-based warehouse. But it suffered from critical shortcomings in terms of visibility. Ed Parry, Head of Operations for Rapid Electronics, explains, "Once an order was released to picking you didn't know its status until it was despatched."

Implementing Körber WMS has overcome this lack of information and brings more visibility of order status, better collation of the company's data and more accurate picking and putaway.

07

Cost reductions.

While there are upfront costs associated with implementing a WMS, in time, significant savings can be made.

Smaller, less complex operations can see a return on their investment within just a few months. For larger businesses, achieving a positive ROI may take longer. But thanks to productivity increases, waste reduction and efficiency improvements, in the longer term, a business will soon realise the financial benefits of implementing a WMS.

When is the right time to move away from paper?

As you grow and your transactional volumes increase, relying on a paper-based system can become a significant hindrance, resulting in inefficiencies and errors.

The right time to transition away from paper and implement an automated warehouse management system is when the costs of manual errors, slow processing times and challenges in scalability start to impact your business performance and customer satisfaction.

Even if the scale of your operation hasn't yet reached a critical point, you may start to find it harder to meet regulatory compliance, as manual tracking makes things more cumbersome and error prone.

These are all clear indications that automation is the next logical step. Once you have identified that a paper system is no longer serving your business well, it's time to start researching your options and planning how your company will upgrade to a more superior, automated system.

Step-by-step guide to transitioning to automated warehouse management.

Transitioning to an automated WMS is a significant step in modernising and optimising your warehouse operations. Making this change requires careful planning, a thorough understanding of your core processes and a commitment to change. This step-by-step guide will help ensure your implementation project is smooth and effective.

01

Establish a project team.

The first step is to build a project team that will lead the system selection and oversee the implementation.

Involve stakeholders from across the business, so that all needs are accounted for. Include staff from the warehouse, transport, IT, finance, HR and sales and marketing to ensure that your system meets the needs of other departments and integrates with other applications used in your business.

Finally, appoint a project lead and assign other responsibilities so that your project team remains accountable throughout the implementation.

02

Set objectives and project parameters.

The project team needs to set the objectives for the implementation, along with accurate timescales and budgets. Sometimes realistic timeframes and expenditure are hard to establish and will often change due to amendments in the scope of the project. However, having an initial idea of both helps with planning and budget approvals processes, so it's vital to have an approximation at least.

Next, set the business goals for the automation project. What do you want to achieve and how will the new WMS meet your objectives?

Having clear goals helps you build a systematic road map and enables you to check and measure your progress later on. This allows you to track whether the project is on course and, ultimately, whether or not it has been successful.

Examples of the kinds of outline objectives that you might want to set for your new warehouse system include:

- Streamline warehouse and supply chain processes
- Reduce manual data entry errors
- Optimise warehouse space utilisation
- Reduce stock levels and stock carrying costs
- Minimise out of stock situations
- Improve stock accuracy
- Enhance worker productivity
- Improve order fulfilment speed
- Optimise picking routes to speed up picking
- Deliver accurate, real-time stock visibility
- Enhance traceability
- Minimise shrinkage and loss
- Reduce delivery times
- Enhance customer service and satisfaction levels
- Improve demand forecasting
- Increase scalability for future growth
- Strengthen compliance capabilities
- Improve reporting analytics with trackable KPIs
- Integrate with other systems (ERP, ecommerce website, demand planning and forecasting, CRM, robotics, etc.)

03

Define your requirements.

It is vital that your needs gathering process is comprehensive and detailed. You want to define the scope of the project accurately and produce a detailed list of required functionalities.

To prevent having to implement costly changes later on, you must be careful not to overlook anything. Get everything right and your final warehouse system will work as you and everyone else expects.

Map out your processes and check at this point if there are improvements that can be made. Can you accelerate picking, for example, or combine putaway trips with picking activities to speed up operations in general? Undertaking a time and motion study can help you identify inefficiencies and opportunities for improvement.

Seek the input of everyone that will use the system or is affected by it in any way so that you properly assess your current warehouse operations as well as your future needs.

Don't forget to detail which other applications your new system will need to integrate with an- list their specifications and system requirements.

04

Assess different WMS solutions.

The next step is to evaluate your needs against the available warehouse solutions, comparing capabilities and features.

It is key to understand the different types of WMS so that you choose the one that is right for your operation.

Check which systems have the features you want and consider how well they can each be tailored to your own business needs.

Review costs and discern how well regarded the software is by others in your industry. Check the roadmaps for each application and see what investment each provider puts into its software.

05

Select an implementation partner.

Choosing the right partner is a crucial part of the process. You will want to work with a company that understands your business and has extensive experience of implementing similar projects.

You may choose to undertake a formal process, writing a request for information. This will help you uncover more about prospective partners, such as:

- How long they have been in business, the number of staff they employ, their turnover and financial stability, which technologies they offer
- Their employees' technology experience and qualifications
- How many customers they have, in which industries and for what applications
- What case studies, references and testimonials they have
- What levels of support cover and training they offer
- Which project planning and implementation methodologies they use.

Using the responses, along with follow up calls and meetings, you can assess the general suitability of each vendor. You should aim to cut down your list, so you are left with two or three businesses.
You can then send a request for proposal, detailing the full requirements you have identified, with the aim of receiving a full quotation with costs, project timescales and software specifications.

06

Implementation and project management.

Managing the transition process can be undertaken in conjunction with your chosen provider. They will appoint their own project team, comprised of specialist consultants and developers, to ensure a successful implementation.

They can also manage any data cleaning and migration. You may have little digital data if your operation was previously entirely paper-based, but records from your paper system can be entered into the WMS. You will want to incorporate product details, existing stock counts, supplier data and customer details.

Internally, you should employ best practices for communicating and managing the transition. You will want to address any resistance to the change and plan for comprehensive user acceptance and software training.

07

Go live.

The 'go live' stage is the pivotal moment where your project transitions from theoretical planning and testing to real-world application.

Your new WMS becomes operational and starts to manage real business processes. As your users begin to engage with the live system, monitor it closely for any unexpected behaviours or issues. Your WMS implementation partner will have staff on standby to manage the go live operation and address questions or troubleshoot issues.

In addition to checking and validating that data is being processed correctly and that any integrations with other systems are working seamlessly, the actual warehouse operations – like picking, packing and stock counting – should be cross-checked to ensure that the WMS's outputs match your real-world observations and results.

08

Monitoring and continuous improvement.

After things stabilise, perhaps a few days or weeks after the new system has gone live, you should review and evaluate the success of the implementation. This will help you understand any outstanding challenges and plan for any further system enhancements or training needs.

Your new WMS will assist you by tracking your KPIs so that you can measure performance improvements. And you should continually assess and optimise your system so that you get the best out of it and adapt it to any changing needs.

Conclusion.

Implementing a WMS is a transformative step for any warehouse business. It offers the potential for significant efficiency gains, cost reductions and improvements in visibility and customer satisfaction.

The journey from a paper-based system to a fully automated, digital platform is not without its challenges. But with careful planning, wise investment and the help of an expert implementation partner, the benefits can quickly outweigh any hurdles. The ability to track stock in real-time, improve worker productivity and achieve clear visibility are just some of the advantages that make the transition worthwhile.

Replacing paper and modernising warehouse operations positions a business to act with greater accuracy and agility. With customers continually expecting better service and ever faster delivery, transitioning to an automated WMS can serve as a strategic move for long-term competitiveness and growth.

The benefits of implementing a WMS such as Körber are compelling and offer the pathway to a transformed warehouse that delivers operational excellence and enhanced profitability.

The Balloon team is here to help!

If you have any questions about how our solutions can improve your business, get in touch with our passionate team here.

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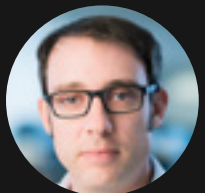

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Founded in 2003 and based in West London, Balloon One is an End-to-End Supply Chain Systems provider with a focus to deliver agile solutions through a pragmatic approach to their customer's distribution operation, large or small, every time. Balloon One provides WMS, ERP, TMS & Automation, to enable greater interoperability between processes throughout the supply chain. With a value driven and fact-based strategy, Balloon works with clients to not only identify and resolve their pain points but to facilitate the growth of their businesses.