



## HAVE YOU REVIEWED YOUR WAREHOUSE PROCESSES LATELY?

“We have always done it that way”. Have you ever received that answer when querying the reason for a particular way of doing things? The chances are that you have and in itself the answer is symptomatic of the need for a review. Was the method developed to overcome a deficiency which can be avoided in another way?

We live in a time of accelerating change and this is equally true of the demands placed on warehouses. Few have the flexibility to accommodate change without loss of efficiency. A frequent weakness is the design of the warehouse itself, i.e. the layout and the types of storage and methods of handling that are available. In most cases warehouse managers just put up with it and continue to operate the best they can. If the company demands that goods are shipped, then a way will be found of shipping them even if it means taking on extra personnel; if the warehouse is ‘full’ stock will be stored in aisles or put into outside storage. Yet often these situations can be avoided by a few relatively low cost actions.

### MONEY WASTERS

Despite the general improvement in processes by most of the larger companies, situations I have seen include:

Situation	Potential solution
Mixed stock in drive-in rack bays	More smaller capacity locations
10+ product codes in a single pallet location	More smaller locations
Pallets being lowered for picking and then returned to a high level location	More low level pick locations or possibly a man-up picking capability
Two man picking using a maintenance cage	More low level pick locations or possibly a man-up picking capability
Pickers waiting for a replenishment before they can pick	Improved procedures for control and co-ordination
Stock locations memorised by the supervisor	Install location recording system
Inbound procedures taking 3 days when 1 day would suffice	Re-organise the work
7 minutes changeover time from finishing one pick route to starting the next	Roll cage collection and deposit points adjacent to each picking zone

Hopefully you get the message. In many smaller and sometimes not so small warehouses the situation is often far from perfect. So where should you start without spending a fortune?

## **A LOGICAL APPROACH**

It is a truism that improvements in processes will usually yield a higher level of benefits than improvements in, say, layout and methods of handling, but even greater benefits can be achieved by considering the two together. Better still is to start with the big picture by looking 'outside the box' – do you need to hold the stock at all?

Consider the reasons for holding stock - how much of it is old, out-of date or obsolete, can it be shipped direct from supplier, can it be cross-docked, can delivery into the warehouse be delayed, can the purchasing profile be changed, can we marshall loads directly to carrier's vehicle etc.?

Once these opportunities have been exhausted, it is necessary to look at the stock profile. This requires numerical analysis of the stock by handling characteristic, quantity and throughput and will lead to recommendations on appropriate storage types to match the particular stock profile. The recommended storage can then be compared with what is already installed and necessary changes made.

When the storage media have been reviewed one can decide the best disposition of stock in the warehouse. This requires analysis of throughputs and will typically result in the fast moving products being located close to Goods Out whereas slow movers will be further away. Other factors such as family groups and stacking characteristics may also be taken into account.

These and a number of other factors all affect productivity and can be summarised under six headings.

## **BOOSTING PRODUCTIVITY BY DESIGN – A SIX POINT PLAN**

### **1. Design for Efficient Operation**

As warehouses become more and more a part of the distribution process, as opposed to a place for simply holding stock, they must be laid out and equipped for movement and not storage. Which are the activities which help convert product from the form in which it was received, typically palletised, into the form in which customers want them? Focus on these and focus on the activities which absorb the most labour, usually picking but possibly rework activities.

### **2. Minimise Unproductive Movements and Activities**

This ties in with concepts such as the Japanese "muda" – meaning "waste", i.e. any human activity which absorbs resources but creates no value. Examples within warehousing include:

- Storing stock which is unlikely ever to be sold
- Holding more stock than necessary
- Trucks travelling unladen
- Keying in data when interfacing or bar code scanning could be used

- Processing of internal paperwork. Can paperwork be eliminated?
- Moving stock to access other stock.

One should also be asking “Can the number of movements be reduced?” Cross-docking would be ideal whether automated or manually controlled. Failing that, then can warehouse movements be reduced to one on the way in to the warehouse and one on the way out?

### **3. Minimise Access Times**

This prompts questions such as:

- Is the picking method optimal for the number of product codes and the required throughput?
- Is the picking route as short as it reasonably can be?
- Would consolidated picking of slow movers be more efficient?
- Would a dynamic pick face eliminate time waiting for replenishments?

The goal is for pickers to spend the maximum amount of time picking and the minimum amount of time travelling or performing administrative tasks.

### **4. Aid the Next Process**

This implies storing reserve pallets or other stock close to its final destination in the pick face. Even if not above the picking location can reserve stock be in the same aisle? In turn this will minimise the time required for the subsequent replenishment movement.

Similarly, at Goods In can we allocate the docks that are the closest to the zone of the warehouse where the goods will be stored?

Is the fast picking area, where most of the picking activity will take place, close to the despatch marshalling area?

### **5. Minimise Interruptions**

Big gains can be achieved by simplifying the activities and procedures that divert an operative from his primary role. Examples include:

1. Minimising the time taken for an operative to acquire his next job. Traditionally it has been necessary to fetch picking lists and other instructions from the warehouse office – an unproductive activity. Using radio or voice terminals these can be relayed directly to the picker as soon as he has finished his previous task.
2. Problem solving is another activity which can be time consuming. In some warehouses supervisor assistance has to be sought for a decision on what to do. This is unnecessary as all common problems, such as occupied locations, stock outs and damages can be recorded and controlled through use of mobile terminals.

## **6. Retain Flexibility**

When designing a warehouse process it is inevitable that the design will relate to today's requirement. It is also likely to take in the requirements of the next 1-2 years. But in 5 years time will the percentage of case picking be the same as now? Or will cross-docking have been introduced? The chances are that nobody knows.

This implies 2 things:

- Equipment and storage facilities must be able to be used for different styles of operation.
- Warehouse management systems must be capable of being adapted to new methods. In particular one must be aware that not all software packages have the same level of flexibility to accommodate future requirements.

It's not rocket science, in fact it should be second nature to most warehouse operators, yet many, if not most, warehouses are less efficient than they could be. Isn't it about time you gave your warehouse processes another look?

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