Warehouse Key Performance Indicators – what's relevant?

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Key Performance Indicators (KPI) should be SMART – Specific, measurable, achievable, relevant and time based. That is, the measures need to be clear and unambiguous, able to be measured over time e.g. year on year, or against other operations, are realistic in terms of target setting, are relevant to the company and its customers and finally, are measured over a particular time frame such as per hour, per day, per week etc.

KPIs also need to reflect what is important to your customers and secondly what is important to your own company.

A recent survey on warehouse KPIs by The Warehousing Education and Research Council (WERC) in the USA produced some interesting results. None more so than the fact that two of the top 10 KPI relate to the utilisation of warehouse space during normal and peak operating periods.

There are two fundamental issues here. Firstly what is full utilisation? Frazelle (2002) suggests that the optimum level of warehouse utilisation, depending on the type of operation is a maximum of 86% for non-real time operations and 90% for real time, dynamic operations. Beyond these levels productivity tends to reduce and safety becomes an issue.

Having to wait for pallets to be removed from a location prior to putting away items is very unproductive, even more so if these incoming pallets remain on the loading bay or worse still in the racking aisles. This can also result in delayed orders, product damage and staff frustration.

Secondly we are continually being told that warehouses should be temporary storage areas with products moving in and out of the warehouse as quickly as possible. The higher the stock turn the more efficient the warehouse.

The holy grail of warehouse operations is where products are cross-docked, spending as little time as possible in the warehouse. This requires a significant amount of coordination and accurate information flow.

It is accepted that off-shoring and long production runs result in a requirement for storage however kpis need to be set for motion not for static situations. Increased stock turns lead to improved cash flow and happy customers. Money tied up in inventory cannot be invested elsewhere in the business and the longer stock remains in the warehouse the less it's worth and the more prone to damage it becomes.

The top five most popular Distribution Centre KPI were as follows:

1. On-time Shipments

2. Average Warehouse Capacity Used

3. Order Picking Accuracy

4. Peak Warehouse Capacity Used

5. Dock-to-Stock Cycle Time, in Hours

Frazelle EH (2002) World Class Warehousing and Material Handling, Mc Graw Hill New York

DC Measures 2011 WERC Watch Spring 2011 WERC 1100 Jorie Blvd., Suite 170, Oak Brook, ILLinois 60523-4413.

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