

Moving Air

Taking Control of Logistics Costs

How warehouse operations can combat the unsustainable economics that result from express carrier charges in the “volumetric age”

The green agenda permeates virtually every area of our lives. We are constantly being asked to evaluate the environmental impact of our actions and lifestyles; we are being continually beseeched to reduce our “carbon footprints” in personal and commercial activities.

For all organisations, the Corporate and Social Responsibility (CSR) mission has assumed altogether much more importance. It is no longer acceptable for an organisation to pay lip service to its duty to society and the environment; it must talk the talk and walk the walk.

Consequently for the distribution and transport industry questions of emissions, food miles and physical damage to roads are all part of a complex mix that has to be met with a meaningful and considerate response.

Global geo-politics exacerbates the price volatility of fuel; the market is already sensitised, the price loaded with taxation. Governments will come under increasing pressure to force behavioural changes to carbon producing activities by pushing up fuel duties even further.

The issues of delivering shareholder value and long term survival are ever present as competition in the global marketplace increases in intensity. If the customer is King, then efficiency is surely Queen.

For some organisations in the transport and distribution sector this has led to economies of scale from mergers

and acquisitions. Smaller players have had to squeeze every part of their operation in the search for efficiency.

Historically, the cost of transporting goods was always directly calculated by weight. Illuminating the relationship between weight and volume, it was highlighted that a vehicle may be full in terms of volume, yet be well below its maximum laden weight.

The revelation of this fundamental source of inefficiency caused a major upheaval to the way that the express carriers charge for their services.

The cost of transport services is now a function of two components:

- Volume
- Weight

This paper will discuss how businesses with warehouse operations that rely on the distribution and transport industry for their logistical requirements can lever new technology. This will align their efficiency with the transport and distribution sector, and make sure that they are being charged appropriately.

They will be able to correctly determine their transport costs, produce accurate forecasts. They will be able to check that the correct charges are passed on to them and that they pass appropriate charging down the chain.

Everybody wants to be JIT

A likely candidate for title of the greatest of the Orient's many lessons to modern industry has been kaizen and the related kanban system.

The principle of running with as little inventory as possible while retaining the capability to respond to market demands in an instant is one of the cornerstones of modern logistics.

The desire to hit the sweet spot of Just-in-Time has become a universal truth.

The increased demands of operations such as technology reselling, retail catalogue sales and e-commerce means that there has been considerable investment in warehouse systems.

This optimisation of the warehouse has been brought down to something of a fine art.

The most widely used warehouse management systems (WMS) that enable this come from vendors such as HighJump Software, Red Prairie and Manhattan Associates.

In the fierce modern marketplace finding extra cost reductions that can be used to reduce the ticket price or boost the margin has become a necessity if not a compulsion for all.

The negligible price difference between competing goods of equal function and quality has placed an emphasis on quite literally bringing goods to market more cheaply than the competition.

One of the areas that have come under scrutiny is the supply chain network. There are massive commercial advantages to be gained for those that can create the most efficient supply chain networks.

Research suggests that the best performing supply chains can reduce inventory by 15% and are 60% faster to market.

SAP or Oracle's JD Edwards are among the ERP software solutions commonly used to control the supply chain.

In an ideal world each organisation would have the resources of a distribution and transport arm to hand.

In reality only the largest organisations will possess the capability to completely fulfil their logistical requirements themselves. The vast majority must outsource this as a service.

JIT has filtered down; B2B and B2C customers, placing their orders just before cut off times have an expectation for rapid delivery to satisfy commercial and personal needs. Swift parcel delivery from express carriers is now often a pre-requisite.



The efficient warehouse and inefficient packaging

Having fantastic in-warehouse systems that can accurately handle large volumes of goods inwards, provide quality checking and assist the picking process internally may mean that an organisation is super-efficient within the confines of its own building.

But all of this can be let down at the hand over point for delivery fulfilment.

Organisations that adhere to manual packaging processes and run traditional cost calculations based on weight are failing to optimise their packaging operations in line with the express carrier sector's volumetric method for consignment costing.

Manual packing systems mean that consignments may be shipped in packaging that is not the most appropriate. Boxes will often be too large; fragile goods may require disproportionate amounts of protective material; quite frequently outer cartons will be mostly filled with air. This basic inefficiency in packaging materials has a cost implication – the excess material is a preventable loss.

In our new found “collective green consciousness” profligate waste should be of concern to all; where excess packaging was an irrelevancy in the past, it is now to be avoided at all costs.

The cost effect of superfluous packaging, especially any which is voluminously inappropriate is compounded by the methods that express carriers now employ to calculate charges. By factoring in the physical volume as well as the weight of the consignment, a price derived from volumetric techniques may be three times higher than one calculated on weight alone.

The price of transport is set to continue to rise. It is likely that the rate of this increase will be the lead factor in the inflation of the prices of manufactured goods and commodities.

Moving air, and more importantly paying for the privilege to do so, is an unsustainable “strategy” in this modern economic climate.



Taking control of the volumetric issue

The super-efficient warehouse that does not take control of the volumetric charging issue imposed by express

carriers could almost be accused of negligence. How can a business so focused on efficiency within one part of its operation be so lax and inefficient within another?

The burgeoning cost of transport does not have to remain an area over which organisation’s requiring the services of the express carrier industry have no control.

Poor packaging optimisation, the consequent waste of packing materials and the ill determined carriage charges that result from volumetrics is a problem that can be easily rectified.

The leading manufacturers in the field of dimensioning technology have been developing solutions for over 20 years. Market leading integration specialists have been solving problems at many points of the supply chain for at least a decade.

This is proven no-risk technology; the pros and cons of the various flavours are well understood and the appropriate solution can be specified for each individual defined requirement.

From compact stand alone units that are ideal for the smaller operation to fully integrated multi-point systems that can meet the needs of a major distribution hub, the range of solutions meets virtually every requirement.

The inaccuracies that are inherent with a manual system such as hand measuring, calculating and inputting are eliminated. An elaborate set of repetitive tasks prone to human error can be purged.

Staff can be redeployed so that they are used in the most effective way.

With the ability to perform dimensioning in seconds the technology readily integrates into existing package handling systems in unobtrusive installations.

Automated technology captures the data and exports it in an industry standard format that can easily be reconciled to warehouse management and ERP systems.

Rapid ROI

Beyond managing distribution and transport costs, efficiency benefits extend to the effective use of space, the optimisation of package sizing and returns and inventory control.

For modern, high volume businesses this may mean that operations can be extensively streamlined. The experience for some organisations is that they have been able compress their activities into a single shift reducing staff overhead significantly.

The efficiencies that are gained across these different aspects have enabled some organisations to realise a ROI in a matter of a few days.

Summary

Green issues and fuel costs are creating inflationary pressures on the cost of transport and have led the transport and distribution industry to move towards a volumetric basis for charging.

The desire for the inherent efficiency of Just-in-Time led organisations with warehousing and supply chain operations to take control of their inventory with WMS and ERP software solutions.

With the most efficient supply chains reducing inventory by as much as 15% and time to market 60% faster, significant competitive advantage can be obtained. The capital released is measured in millions by larger organisations.

The emphasis on quite literally bringing goods to market more cheaply than the competition has led organisations to seek efficiency in other areas of the supply chain.

Manual packaging systems are inherently inefficient because of repetitive human tasks that are slow and prone to error. The lack of optimisation in package sizing is inherently inefficient; it wastes packaging material; leads to the transport of largely "empty" boxes and leads to ill determined charging by the express carriers. This is an unsustainable economic situation.

Mature technology has the ability to rectify this problem and ensure that carriage charges are minimised by the optimal packing of consignments.

It is possible to recoup ROI in days as extended benefits deliver efficiency in the effective use of space, the optimisation of package sizing and returns and inventory control.

About Mettler-Toledo

METTLER TOLEDO specializes in the area of precision instruments for professional use. In addition to a wide product array, we offer the most comprehensive range of services in our industry on a global level. With more than 10,000 employees, we generate annual sales of over USD 1 billion. Mettler-Toledo International Inc. has been listed on the New York Stock Exchange since 1997.

Our comprehensive industrial solutions cover the diverse steps in a host of manufacturing processes at many of the same customers as served for the laboratory. Solutions range from receiving raw materials through various manufacturing processes, in-line process control and end-of-line packaging control, to logistics and shipping. Increasingly, these solutions are fully integrated into the customer's IT environment, helping automate their workflows.

The market responsibility for METTLER TOLEDO's transport and logistic solutions is handled by the daughter company METTLER TOLEDO Cargoscan. Cargoscan dimensioning is a leading brand in the business and has been building the market for more than 20 years.

Mettler-Toledo Cargoscan AS

Ulvenveien 92B
N-0581 Oslo, Norway

Tel: +47 23 06 77 77
Fax: +47 23 06 77 78
Email: cargoscan@mt.com

www.mt.com/tandl

For more information