Logistics supply chain

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Within the context of a column with a focus on information technology (IT) in a publication dealing with imports and exports the logistics supply chain provides an obvious subject for discussion. This article is intended to stimulate some thoughts on the issue of optimising the use of IT systems in this environment.

Irrespective of the prevailing economic circumstances, although the current industry climate may provide greater focus on the issue, improvements in efficiencies in supply chain management is an ongoing challenge to all organisations participating in the logistics chain, either through the physical movement of goods or the associated provision and processing of information.

IT is integral to the supply chain performance

Given the integral data requirement in the supply chain it is common cause that information technology systems, whose purpose is the provision and processing of such information, have the potential to contribute to the supply chain efficiency. Indeed, it is hard to imagine any element of the supply chain which is not already, to a greater or lesser degree, dependent upon computerisation and hence already receiving some benefit through leveraging IT. This includes activities as diverse as initiating an order on the supplier as stock levels drop below predetermined levels, planning the loading of a ship, communicating shipment progress to the Importer, submitting Bills of Entry/Exit for customs clearance, managing the local delivery of goods and of course all the ever important accounting associated with each activity.

Given the above, the IT processing component warrants ongoing monitoring to ensure that, firstly, those areas where computerisation will offer benefits are in fact considered by management in every aspect of the logistics business and, secondly, that the optimal return is obtained in those areas in which the organisation has invested. Responsible management should be able to answer each of the following questions:
– "Can we leverage IT in our business, and where?" and
– "Where we already use IT, are we getting the most out of it?"

Where do you commit the IT resource?

Two distinct areas for IT intervention in the supply chain may be identified, those systems and procedures which are:
• internal to an organisation (ie within the organisation)
• mechanisms to transfer data between individual organisations in the chain

Both of these are valid areas of investment, however, there are some differences which in our experience need to be noted:

Characteristics of IT intervention in internal organisational systems include:
• Benefits accrue direct to the organisation making the investment (ie there is a direct correlation between the effort and the reward)
• Intervention is in control of the organisation management
• Such investment will generally result in a high and long return to the organisation, where successfully implemented
• Management competence and accountability is a significant factor in the success of any intervention

Conversely, where the IT intervention is directed towards inter-organisational systems the following observations may be made:
• Intervention is dependent upon cooperation and coordination between the two organisations.
• The party supplying data generally incurs the direct cost, but may not experience the direct benefit
• Individual accountability for the end result is generally weakened by the split across two organisations
• Investment may be nullified by a change in the partner

The implications of the above comparison is that applying an IT solution to systems internal to an organisation probably has the potential to yield higher efficiency gains for the individual organisation than IT investment in inter-organisational systems, but may well require greater commitment of the resource within the organisation. It does not imply that an investment in inter-organisational systems should not be pursued but rather indicates the priority which management should address the issue. ◆