



REDUCING TRANSPORT COSTS WITH LOGISTICS OPTIMISERS

The increasing expenses involved in the transportation of goods are becoming a real headache for those in the fresh produce industry. The latest extortionate fuel hikes are only going to make matters worse.

In addition, increasing labour costs and accelerating government regulations means that the knock on effect on profitability will be significant. Furthermore, the pressure on companies to reduce their carbon footprint is going to continue to bring this aspect of food production into the political limelight.

This does not come as news to transport planners who battle on a daily basis with the difficult task of optimising their available transport and personnel resources. When operating with small fleet sizes, the task is manageable as an experienced planner will rely on his knowledge of the resources and routes to efficiently plan the trips. However, consolidation within the transport sector means that the number and variety of vehicles in the average fleet has increased significantly in recent years. The forecast is for this trend to continue to enable transport businesses to benefit from economies of scale.

The logistics involved in the planning process can be pretty daunting. The variables include the proposed trips, the available vehicles, loading and product mix considerations, dropping and pick up restrictions, vehicle access rules and driver accreditation, availability and working preferences. This is manageable when everything that has been meticulously planned works out.

This isn't real life. Vehicles break down, drivers go sick, traffic snarl ups are a fact of life and the invariable last minute "specials" have to be facilitated. These factors mean that replanning has to take place at short notice and under maximum pressure. In this scenario, errors occur and inefficiencies are likely to creep in. In meeting the demands of the revised requirements, the cost aspects have to take a back seat to getting the job done. The effect on the company profitability can be serious. Just one unplanned journey a day costing £500 to recover an error can drain over £180,000 from the P & L in a year.

Traffic planners use a variety of techniques to manage the logistics involved in planning the workload. These vary from paper based systems, specialist planning tools and the ubiquitous

spreadsheet. The spreadsheet is by far the most common as it is cheap, easy to set up and update. However, its limitations quickly become evident as the fleet size increases. Errors in the model can creep in while management reporting can be nonexistent. This also makes them difficult to use in strategic and tactical mode. However, these are now being replaced by easy to use software designed to cope with the complexities of the planning and replanning process.

A logistics optimiser provides the transport planner with a tool to minimise working time or driving distance to achieve any set of collection and deliveries within a given set of resources. Such systems use evolutionary algorithms to minimise the total working time or total driver distance in order to efficiently plan the trips.

The advantage over traditional methods is that such systems can be used for both strategic and tactical purposes i.e. "what if" scenarios. For instance, this can enable management to assess the impact of taking new business on top of current commitments. It also helps in assessing utilisation levels as well as the cost effective use of various depots in servicing customer requests. However, it is when such tools are linked to a back end business management system that significant additional benefits can be gained.

What this does is to facilitate the planning of transport requirements directly from live business transactions. It also handles the management of management of pallets, lot and serial number tracking for third party products as well as full warehouse and driver documentation. The result is a seamless automated end to end administrative process that captures and reports events as they happen throughout the supply chain.

Companies who adopt such systems will invariably have a significant cost advantage over tradition planning methods as well as improved customer service. This will enable them to compete more efficiently using dynamic information as a business aid.