Dynamic logistics: adopting a new supply chain approach
Introduction

In a competitive economic environment where choice is greater than ever for businesses and customers alike, it’s crucial that companies have their logistics activities in order to meet the changing demands of the 21st century. Businesses now operate in an environment where expectations are so high that failing to deliver goods through an inconsistent supply chain is not an option. There are increasing pressures on companies to be able to make same day deliveries.

Furthermore, with consumer demands only likely to increase, businesses will have to ensure they deliver ever more efficient services. UK shoppers are turning to the internet in search of better deals, with some even deserting the high street completely, according to an Accenture survey. The research found that poor customer service and limited product offerings in the high street are increasing online shopping in the UK. 56% of men said they preferred shopping online to the high street, with 44% of all shoppers agreeing with this statement¹.

However, changes in how consumers shop will put additional pressures upon the supply chain. Customers will not want to waste time waiting at home all day for a delivery, and the onus is on e-tailers to get their delivery processes in order.

Zebra Technologies is a leading global provider of rugged and reliable specialty printing solutions including robust mobile printers. The company is heralding a new era for the supply chain process called dynamic logistics.

This white paper will assess how businesses can set new standards by adopting such an approach. Dynamic logistics refers to activity in the supply chain which enables the effective, timely tracking of goods to ensure minimum waste of resources and equips companies to make real-time decisions in the field.

¹ IMRG – High Street shoppers flock to the web – Accenture survey 19/02/2008
Companies should be looking at using technology to enhance their traditional logistics approach. Customers are frustrated by rigorously fixed schedules and if they can’t be flexible with the final part of the customer service experience – the delivery – then they may lose valuable business. The use of mobile technology can help companies provide a range of dynamic activities – from deliveries to collections, through to the entire logistics process, both forward and reverse.

It will also address how a worrying trend of taking a laid back attitude to tracking assets and information is afflicting businesses across the UK creating ‘asset apathy’ issues which will impact profits in the long-term. It will also assess how by tightening supply chain procedures, this approach can prevent such apathy and help businesses streamline their processes during a time of economic slowdown.

**Dynamic deliveries**

Businesses expect deliveries to arrive on time, and failing to make a delivery can cost a business not only time but ultimately money. If you fail to deliver as planned then this will result in a dissatisfied customer who will be put off by poor customer service and may never return to make another purchase.

Within the current delivery environment there are a number of factors that can damage the delivery process and customer experience.

The lack of information often available to a driver regarding the contents of his delivery can cause problems for all parties. If any items for the delivery were unavailable then chances are a new receipt will not have been produced in time. This means the customer receives insufficient information at the point of delivery.

Also, if a customer wants additional items for their delivery, drivers will not have the ability to amend an order and sell additional stock. If they do, it will be very difficult to have an accurate audit trail for the process.

Furthermore, when a driver returns to the depot after making the deliveries then they will be faced with passing back a selection of delivery notes to the administration team. Not only are these likely to be prone to errors, but also the drivers may even lose the notes or the handwriting may be illegible. This can lead to problems, ultimately resulting in unhappy customers due to items missing from deliveries, and feeling that they are paying for items that they do not have. For customers using Internet shopping services, the delivery driver is often the only interaction the customer has with the brand, so a bad experience can cause some serious damage.

Dynamic logistics works across a number of areas:

- **dynamic deliveries** – allows businesses to make real-time adjustments to planned deliveries, providing a more efficient service to customers

- **dynamic collections/reverse logistics** – the issue of collecting goods from consumers or businesses needs to be faultless to encourage repeat purchases and enhance customer confidence. Likewise getting goods back through the supply chain can be a challenge. This process can replenish goods back on the shelf quickly and ready for re-sale

- **total dynamic logistics** – is a combination of how dynamic collections and reverse logistics can work together to provide the greatest efficiency to businesses and customers. This process can ensure that deliveries and collections work in synergy to provide the ultimate service experience
Going mobile

However, some companies have identified the benefits of mobile technologies, such as mobile handsets and printers, that make deliveries dynamic and dramatically improves customer relationships. Companies should be looking to embrace technology that can print an invoice at the time of delivery. This means that if any goods are unable to be delivered, then this information will be included in the delivery note produced. This can either be updated to a server immediately, or synchronised with a server upon the driver’s return to a depot.

Automatic updates can reduce the administration workload, invoicing errors and subsequent outstanding payment. Overall, this will lead to a far more efficiently run business, better informed delivery drivers and, most importantly, happier customers.

Failing to adopt a dynamic logistics approach can affect companies delivering products to businesses regularly where a variable delivery amount is expected. This is most prevalent in areas such as re-stocking goods in retail outlets.

A driver may arrive at a delivery point and find that the customer requires more goods, or different products, than originally ordered. To a retail business it’s important that they can meet their customers’ expectations as empty shelves cost money. If goods are available direct from the vehicle the driver can write a new delivery note to take into account the additional products delivered. However, the company may have a system in place that doesn’t permit additional deliveries.

Once again this will result in poorly handwritten notes. However, mobile technology could immediately improve how businesses deliver value across their organisations.

Thirst for technology

When things work well for deliveries it is a straightforward business, which requires little or no intervention. However, when there are issues with deliveries this is where track and trace and the issue of dynamic logistics comes into its own. One of Europe’s largest bottlers of non-alcoholic beverages used mobile technology to make its business more competitive as it grew rapidly. From January 2006, the marketing strategy changed, the delivery process passed from its existing indirect model to a direct one. This meant every single shop became a direct client of this organisation, and as a result the number of clients increased from 10,000 to more than 150,000. The process of checking between 5,000 and 10,000 deliveries per day across the company and managing any changes was becoming time consuming and expensive.

The main aim of the project was to make the check-in process as quick and accurate as possible while ensuring that handling changes at the delivery was significantly more efficient. In order to make these operational changes this company decided to put in place mobile hardware that would optimise deliveries and reduce the amount of back office work. The solution adopted was built around the Zebra® RW 420™ mobile printer, combined with a handheld terminal and a route pad for housing both devices, to make transport and recharging easier.

This provided major benefits to the business. By digitising information and automating the download of this data, the whole process is much faster. A process that used to take 10-15 minutes for each driver (who makes 30 deliveries every day) is now reduced to 15 seconds. In addition printed documents are clearer than before and free of manual changes, improving billing and reducing customer queries. Secondly, data is transferred wirelessly, removing the need to scan in the delivery notes. This saves time and energy and dramatically reduces the number of errors. Thirdly, once the driver goes back to the store, all the information about his delivery round are downloaded and invoices can be released in minutes instead of days.
Dynamic collections

Businesses often rely upon third party couriers to make collections from either businesses or consumers. Courier services are often viewed as businesses where their approach to customer services could be improved. Technology could play a big part in achieving this.

Traditionally in most instances drivers would depart with their collection paperwork and route sheet and follow this methodically until all collections are made. Drivers are unable to divert or alter their route and will have no communication to head office or a server at head office so they can’t update information. With every collection, carbonated paperwork is completed and a copy handed back to the customer and the probability is that the customer receives an unreadable document.

This makes the collection process very restrictive and doesn’t permit ad-hoc or unplanned collections. In the 21st century flexibility is everything, if drivers have to return to head office to obtain any amendments to their route then this flexibility is denied.

Dynamic reverse logistics

There are two issues of concern when drivers collect a return. The first problem may arise at the warehouse environment if boxes are not carefully labelled on their return, then there is the possibility that goods will be mislaid and therefore not dealt with. This can be costly, especially if goods are returned but not brought back into the supply chain quickly, as companies miss the opportunity to resell a product before it loses too much value.

Secondly, there is the doubt raised in the mind of the customer when passing back expensive items in exchange for a handwritten note. This can fail to instil customer confidence in whether the order is being dealt with accurately and securely.

Taking the right route

If businesses used mobile technology more there could be an exciting development for how delivery services interact with companies. The introduction of hand held technology would provide immediate benefits to companies. Once they arrive at a pick-up point details can be confirmed and a delivery receipt can be printed, together with a bar coded label for the package to identify it on return to the depot.

Also, businesses could save time if they could alter any of their drivers’ routes to incorporate last minute changes to delivery plans. This can help businesses differentiate from competitors and help build brand loyalty.

This can lead to providing additional competitive services which ultimately would lead to cost savings across the business. When drivers approach each delivery they can use their hand held terminals to check the customer’s payment history. Management may decide to move customers with a bad payment record onto a payment system of cash on collection. Here, drivers can print a receipt on a mobile printer following a cash payment from a customer. Not only does this ensure all payments are up to date, but helps boost customer confidence that their payment has been registered.
By embracing technology, businesses can improve their customer service. For example, a high quality shipping label attached at the point of collection eliminates chances of mistakes. Also by using real-time communications, changes of address or re-routing of parcels can be done at the last minute.

Overall, this will improve productivity, efficiency and flexibility. Drivers will have vehicles loaded with fully labelled parcels and can stay out longer in the field and make more collections. This ensures that deliveries are more efficient and the depot can process collections quickly without the need to label every non-contract or ad-hoc parcel.

**Total dynamic logistics**

Some businesses are so focused about delivering orders to their customers that they only think about the process of getting it to the customer in a timely fashion. However, what happens when there’s a problem with a delivery? They need to ensure the return process is as smooth and simple for the customer as possible. Using technology ensures that there is an audit trail from the moment something is immediately returned.

Businesses must also consider the potential business benefits created by being able to collect goods while on a delivery route. These processes are isolated and often customers have to take receipt of a delivery even if the order is wrong and rearrange a collection. Technology should be utilised that will enable a driver to make a collection at a point when he is making a delivery in the same street. Faster collections will also help get assets which can depreciate in value rapidly, back into the supply chain.

IT goods, in particular, devalue quickly as they become obsolete more rapidly. Popular goods such as MP3 players and games consoles have a short life span and businesses can’t allow for goods to get caught up in the supply chain for lengthy periods. Companies cannot afford for any products, particularly expensive ones, to get lost in the return logistics process and must be able to make them available to customers for re-sale.

Current figures show that online shopping is only going to increase in popularity. Online spending in the January sales reached a record high of over £4.5 billion\(^2\) according to figures from the ‘IMRG Capgemini e-Retail Sales Index’. This is the equivalent of £74 spent online for every person in the UK, representing a year-on-year increase of 75%. However, if you have a poor delivery experience from an online business the likelihood is you will never use that e-tailer again. In a fiercely competitive market this is something online businesses can ill afford.

---

\(^2\) ‘IMRG Capgemini e-Retail Sales Index’, December 2007.
Sticking to the job

This is another area where businesses can ensure processes are tightened and businesses operations improve. For example, drivers should ensure that a high quality bar coded returns label is applied at point of collection. This ensures that the warehouse/distribution centre can process an item upon receipt and goods can re-enter the supply chain quickly.

Giving greater visibility of service in the returns process improves customer service. By embracing such an opportunity this will help improve speed and ease of processing of returns at the warehouse. This in turn ensures any credits to the customer will be issued quickly, which will make them more likely to make a repeat purchase. It also allows the back office to spend less time fielding irate customer service calls. With strict control over the returns processing, the business will also not suffer from spikes in credits. These typically occur towards the end of a month when customers traditionally apply pressure at a time when cash flow in the business may be a challenge.

For the majority of organisations their returns process is just as important as their sales process. A healthy supply chain allows companies to have control over this process. Anyone can ship goods out on time, but a detailed and accurate returns process can be difficult. Effective and accurate labelling through the use of mobile printers can be a differentiator between financial hardship and healthy returns.
Conclusion

Significant cost savings can be made by providing greater accuracy of data, better information to customers updated in real-time, and an improved customer service experience. In a world where the customer is king, consumers now expect to be able to buy goods when they choose, as do businesses. If they reach a store and find empty shelves then customers will go elsewhere without a moment’s thought, and chances are they may never return. Likewise, if businesses receive a poor delivery experience then they will look to use a new supplier without a moment’s hesitation.

To be a successful business, companies need to embrace a policy of dynamic logistics and use processes and technology that can help them operate in the multi-channel arena. Businesses must be equipped better for a more customer focused 21st century business environment where a dynamic logistics process will help drive their organisation forward.