



Damco eGuide

SIX WAYS TO LOWER YOUR LOGISTICS COSTS...

...without compromising on speed or quality

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01. MANAGEMENT SUMMARY

The most reliable estimates put the average costs of logistics, across all industries and company sizes, at close to 10% of total sales revenue – high enough to justify the question what can be done to reduce them. There are thorough ways to approach the issue, such as supply chain redesign, which are guaranteed to work but take considerable time and effort. However, in most supply chains there is also some low-hanging fruit, which is the focus of this white paper.

Transportation costs generally represent the largest contribution to total logistics spending. They may be brought down by consolidating less-than-container and less-than-truck loads, by adapting an NVOCC approach to benefit from fluctuating freight rates, or by centralising procurement. Modal shifts, especially replacing airfreight, can be very effective, and scrutinising transportation invoices will usually be worth the effort.

Delivery costs are significant and the penetration of e-commerce plus the associated rise in customer expectations tend to drive them to still greater heights. It is no wonder that there are many experimental initiatives to fulfil the essential last mile more cost effectively without affecting the consumer's experience. Part of the solution may also lie in adaptations earlier in the supply chain. Delivery in emerging markets deserves special attention: existing First World models rarely fit.

Inventory is another important cost element, and better forecasting appears to be the most effective instrument to reduce costs here, with established as well as innovative technologies being offered. Network optimisation is a guaranteed, but not necessarily simple way to reduce inventory levels and costs.

Returns and repairs, decisive parts of the customer experience, can become very costly if not handled well. Reverse logistics is a field of its own. Optimising the return and repair process for speed will reduce costs, but minimising the number of returns is even more powerful. This can be achieved by establishing and enforcing strict return policies and by providing better and more complete product information.

Supply chain vulnerabilities are a cost factor that only becomes visible when something out of the ordinary happens. Making a supply chain more robust to disruptions creates expenses now, but can save a fortune in cost and reputation damage later.

Partial solutions have a limited effect and can even be counterproductive for the supply chain as a whole. The ultimate tool for logistics costs reduction is a system that provides a transparent view of the entire supply chain. For this type of solution, support of external specialists is usually indispensable.

02. PICKING THE LOW-HANGING FRUIT IN SUPPLY CHAIN COSTS

From a business point of view, logistics costs are just another overhead and therefore every way to reduce them is welcome. Depending on the industry, its scale, and its particular business model, the actual impact of logistics costs may vary. But with a reported average across a wide range of industries of 9.34% of sales¹, the contribution of logistics costs to total costs definitely is not negligible.

Many things can be done to reduce logistics costs, and many approaches have proved to be successful. Supply chain redesign is one example, but that could involve a fundamental operational change that could take considerable time and other resources which companies typically perform no more than once every five years. Fortunately, besides these sort of radical interventions there are other, a bit simpler things a business can do to pick the proverbial low-hanging fruit.

This white paper covers a number of aspects to consider when you want to reduce supply chain costs without affecting your speed or service levels. Not all of them will apply equally in every situation and some are more complicated than others. You may likely have implemented several of them a long time ago and these may be due for review. Others, however, may alert you to something you haven't done yet or trigger a new idea for your specific situation, enabling you to take that next step in logistics cost reduction.

¹ Logistics Cost and Service 2014, Establish (presented at CSCMP's Annual Global Conference, 2014)

03. TRANSPORTATION COSTS

Transportation accounts for a significant share of total logistics costs for any company dealing with physical goods. Analyst's reports present different estimates, with a highest average value of 47% of total logistics costs². The actual number may be higher or lower for your company, but even at the lower range of the scale it is a cost element that is worth looking into.

Consolidation

Focusing on cost drivers that are easy to identify and remedy, a first one is the effect of less-than-container and less-than-truck loads. Any effort at improvement here begins with having reliable data available. Do you know what fraction of the containers you ship and of the trucks that move your cargo are fully loaded? If you don't, it will most likely pay to find out. The numbers will help you to assess the potential benefits of load consolidation. Developing and implementing a consolidation strategy may be something that you can do yourself or should leave to an external party such as a 3PL.

Benefit from freight rate variability

Due to their annual procurement cycle, many shippers pay a fixed rate for their shipments for a given 12-month period. While this provides certainty and protection against sudden fluctuations, it also precludes the possibility of getting a better rate if that becomes available. In an environment where freight rates are extremely volatile (see figure 1), it can be advantageous to take the approach of a non vessel owning common carrier (NVOCC) and 'play the market', even if only to a certain degree. Because this requires specialised skills and excellent market intelligence, it is usually something that the average company would be wise to outsource.

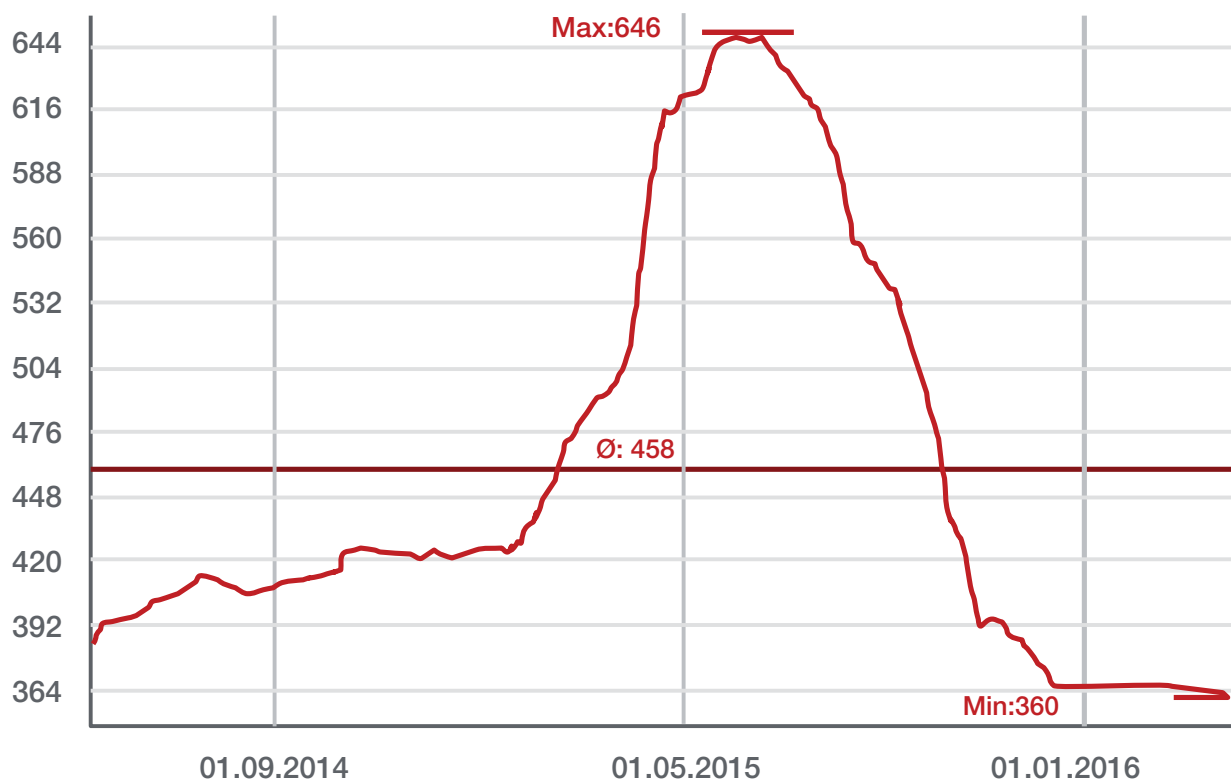


Figure 1. The Harper Index is an indication of the price levels for container shipping. Mismatches between supply and demand can cause prices to vary widely over relatively short periods of time.

² Logistics Cost and Service 2014, Establish (presented at CSCMP's Annual Global Conference, 2014)

Centralised procurement

With few exceptions, companies that run an international supply chain with several origin and destination regions at some point find themselves with a patchwork of logistics supplier contracts. Based on the way their targets are set, local organisations often negotiate terms that are not beneficial for the overall supply chain — usually with good intentions, and without being aware of it. Centralised procurement can be a good means to reduce transportation costs, provided it respects the logistic requirements of the supply chain instead of just pushing for lower prices and creating all sorts of collateral damage in the operation.

Modal shifts: replace airfreight

Airfreight is by far the most expensive mode of transportation, but many companies see it as unavoidable for their particular situation. In some cases this is true. But in many others a closer look at the supply chain reveals that a shift to a different mode (usually, air to road) or to a combination of modes also supports the required delivery times. Because of the extreme price difference between air and all other modes, it usually pays to explore the potential benefit of a modal shift for any organisation that consistently, or perhaps worse, casually, uses airfreight.

Study those invoices

This may sound obvious, but it is still worth mentioning: make sure that the invoices that you pay match the services that you received as well as the underlying contracts. Many companies don't have a functioning process in place to validate the freight invoices they receive. If your company is one of them, you will sooner or later pay more than you should. A good system will also enable you to obtain reliable metrics about your transportation costs that you can use for optimisation purposes.

04. DELIVERY

The supply chain segment that receives most news coverage is the delivery part, not only because it is abuzz with predictions, changes, and experiments, but also because it is the place where the supply chain meets the customers, with their ever-growing expectations.

Same-day delivery, an elite service only a decade ago, has become the norm in many consumer and business environments and online retailers are now running trials with one-hour delivery. Amazon is studying drone delivery and has been testing deliveries through bike messengers in Manhattan. Ubercargos was launched as a way to use private drivers for the last mile, and numerous other initiatives are being discussed.

All of this frenzy is driven by the value that shoppers put on control over the time and place of receiving the goods they ordered online. According to the 2013 IMRG Consumer Home Delivery Survey, a large majority of consumers rate the ability to specify a delivery date (and preferably, a time) as important to their experience. Inspired by what they see, business customers have also become more demanding.

Experiments in the last mile

The term 'last mile' refers to the final leg of the supply chain, the transportation from the last local or regional hub to the delivery address. Its actual length may indeed be around a mile in densely populated urban areas, but it could also be a hundred miles or more in geographies with low customer densities. 'Final delivery' is the more accurate term.

Industry estimates put the cost of final delivery anywhere between 25 and 50% of total transportation costs³. Whatever the real number may be, final delivery absorbs huge amounts of money and the trend is still rising. With the growing volume of e-commerce home deliveries the associated problems seem to increase exponentially. Traffic congestion is one of them: in some cities a gridlock of home delivery vans is close to becoming a reality. Measures to reduce urban traffic, such as congestion charges or time restrictions on deliveries, add to the problem. Failure to deliver at the first attempt (28% of parcels, in a Dutch study⁴) is a major cost factor.

There are many initiatives aiming to reduce delivery costs. Giving consumers more options for the time and place of delivery (at home, at work, at a pickup point, in a store, or even in the trunk of their parked vehicle – a Volvo experiment⁵) is a way to reduce the number of failed deliveries. Combining deliveries from different vendors to the same address reduces total driving kilometres and the associated costs. Retailers and delivery companies are experimenting with forms of crowdsourcing as a way to reduce delivery costs, for example by offering shoppers a discount for delivering items to addresses on their way home.

³ <http://www.ipa.udel.edu/publications/FreightMovementCDBs.pdf>, <http://www.koganpage.com/article/challenges-of-the-last-mile-delivery-in-serving-e-commerce-business>, Global Trends & Forecasts 2015, Planet Retail 2014

⁴ Building the Shopping 2020 Supply Chain, Expertgroep Supply Chain, 2014

⁵ Global Trends & Forecasts 2015, Planet Retail 2014

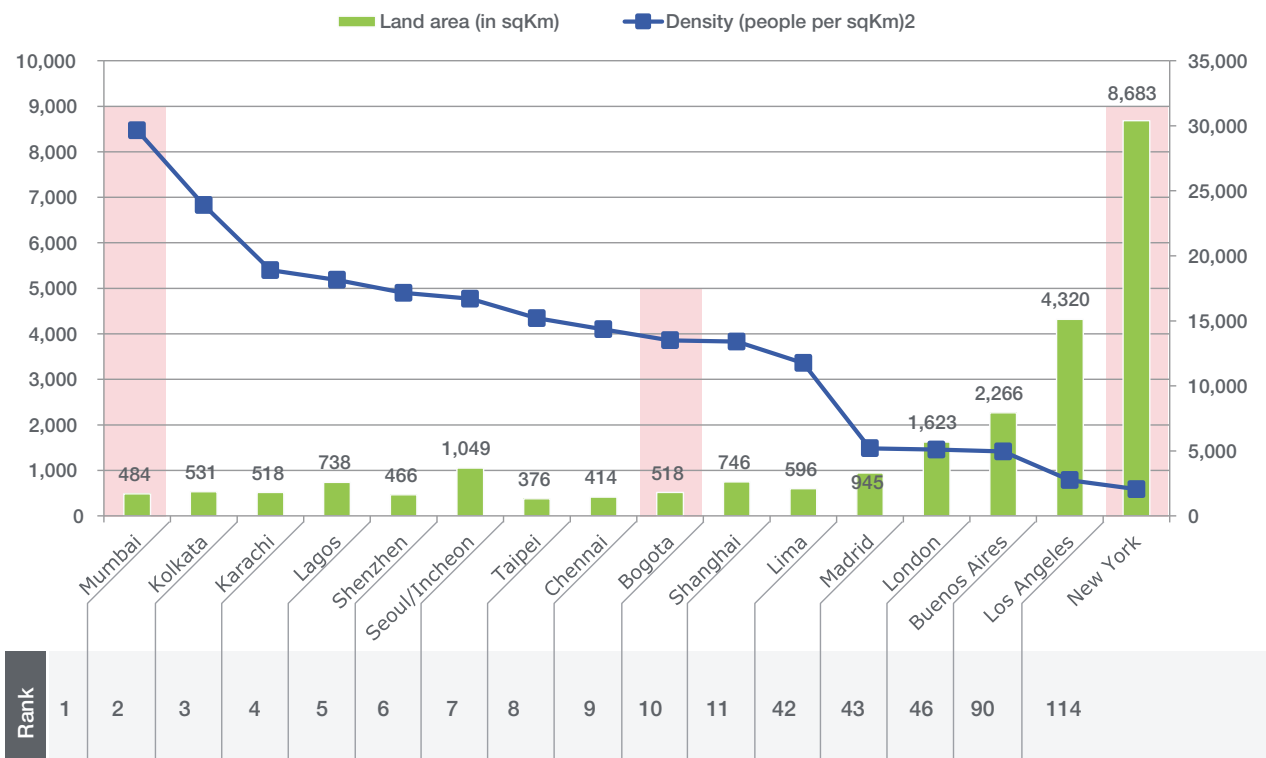
Consider the context

It would be a mistake to focus on the final delivery in isolation when attempting to lower costs, because at least some of those costs are determined elsewhere. Smarter packaging, for example, can reduce cargo volume and weight and minimise damages. IKEA, a pioneer and trendsetter in this field, has taken the integrated approach to the extreme by having its customers take care of final delivery themselves – while even feeling happy about it!

Understanding delivery in emerging markets

For successful brands in developed markets it is a logical next step to try and gain a foothold in emerging markets. Even in the world's poorest countries there are people with high standards of living, and in bigger cities of 10 million people or more even a small percentage of the population translates into a large number of potential customers.

It would be a naive and costly mistake to copy-paste the distribution models that are successful in developed environments for use in emerging markets. The differences are just too huge to ignore.



A comparison of large-city population densities worldwide shows that densities are much higher in emerging countries.

Population densities in emerging market cities can be much higher than in mature markets (compare Mumbai, with over 29,000 people per square kilometre, to New York City, with just 2,050). Due to the prevalence of mom and pop stores, the number of store locations is much larger and the average shipment size much smaller, making logistics operations in emerging markets fragmented in comparison to mature markets. Since creating a freight-environment is not a first priority for the urban authorities, congestion and delays can pose huge challenges. The only way to deal with the situation and prevent unnecessary costs is to put aside First World assumptions and develop the distribution networks from the ground up. Or, in many cases, to find a logistics provider who knows the market and partner with them.

05. INVENTORY

According to the breakdown by Establish quoted before, inventory cost on average represents 24% of total logistics costs across all industries, but this number will be higher for retail, lifestyle, and FMCG companies. The biggest factor is normally the cost of the capital that is tied up in the inventory, but there are less visible costs that add to this, such as insurance, degradation and damage, loss and theft.

There is every reason to keep inventory at the lowest possible level, but the multi-million-dollar question is what exactly constitutes the lowest possible level. Every supply chain manager is involved in an ongoing balancing act between capital, control and availability. Overstocking is a drain on resources, understocking results in missed sales. No wonder that companies go to great lengths in trying to forecast demands.

Forecasting

In view of the critical importance of forecasts it is surprising that many analysts report that a large share, or even a majority, of companies rely on nothing but spreadsheets to forecast demands, ignoring the fact that in recent years powerful ERP systems and dedicated solutions have been introduced that can do a far better job. According to a recent trends report by eft⁶, predictive analytics, of which demand forecasting is a sub-field, will gain considerable traction over the next few years. But the effectiveness of even the most powerful tool depends heavily on the quality of the data it is fed.

A complete forecasting process may follow a top-down approach. It usually starts from historical data for the product under consideration or similar products, which will give insight in long-term trends and seasonal variations. On top of that it should consider general economic trends (those affecting the entire economy or the particular industry). On a more detailed level new product introductions, promotions, advertising, and — not to be forgotten — competitors' actions will be included.

Forecasting can be supported by automated tools, which can prove very helpful to process the large amounts of available data, but ultimately it is also an art that requires the insight of experienced planners familiar with the industry. This is an area where collaboration with suppliers in the supply chain (manufacturers, distributors) will prove valuable: combining resources, observations and understanding will result in a better and more reliable forecast.

One can still go a step further by influencing demand to match the planned supply, for example by dynamically adjusting prices or delivery conditions. The main hurdle for this is that consumers are not very willing to accept variable pricing for identical items.

The swelling tide, if not the tsunami, of 'big data' gives rise to another development that is referred to as 'demand sensing'. With the availability of point of sale data at the level of individual transactions, detailed clickstream data of all relevant websites, statistics on trending topics in various social media, real-time weather conditions, news about the behaviour of competitors, and a sea of other information, it should be possible to forecast the real demand for any product consistently, within narrow margins. That goal has not been reached yet, but the technology is progressing rapidly. Research indicates that early adopters of demand

⁶ Hot Trends 2015, eft.

sensing software did better than their peers⁷. And Amazon reportedly is working on algorithms that enable them to pre-position or even ship items before they are actually ordered⁸.

It should be noted, however, that this is not exactly a 'quick win' because it requires dedicated effort and substantial investments.

Network optimisation

Another approach that is guaranteed to pay off, but that also takes time and effort, is to have a look at the structure and organisation of the distribution network. As a rule, distribution networks develop over time in response to shifting market conditions. When sales grow in a particular area, a DC is added there. In response to the introduction of e-commerce, brick-and-mortar retailers initially established 'fulfilment centres' in a parallel structure to their existing supply chain. The end result may be, or most likely is, a network that performs significantly less than it would if one could design it afresh for the current situation. Pure e-commerce companies of course developed their networks for e-commerce from the ground up, but they too face changes: some indeed have found it necessary to establish a brick-and mortar presence, which also impacts the network.

One consequence of having too many DCs in the wrong places is that total inventory will be too high. A network optimisation exercise will remedy that, but it will also reduce costs in many other ways by lowering operational expenses and reducing trucking distances (which, as a bonus, also improves the carbon footprint). Overall cost reductions between 6 and 20% have been reported.

⁷ http://www.supplychain247.com/article/new_perspectives_on_the_value_of_demand_sensing

⁸ http://www.supplychain247.com/article/amazon_plans_to_ship_deliver_your_packages_before_you_even_buy_them

06. LOWERING THE COSTS OF RETURNS AND REPAIRS

Hassle-free returns have become an essential element of customers' expectations in engaging with webshops as well as physical stores. For many companies, liberal returns policies are a key constituent of their branding — Zalando was a successful pioneer in this arena, creating a competitive advantage with free returns for 100 days. The downside is that returns have grown to huge volumes. Zalando's return rate amounts to 50% of its deliveries, and in the UK the returns of clothing in the week after Christmas 2014 ('Returns Week') were 46% of total online sales⁹. The costs involved with returns are immense: the Reverse Logistics Association estimates the annual costs of returns in the United States at between \$150 and \$200 billion. Inbound Logistics estimates that "the average retailer's reverse logistics costs for consumer goods are equal to an average 8.1 percent of total sales – a figure which, unlike forward logistics, includes the value of the goods."¹⁰

Besides returns, reverse logistics also includes the back-and-forth of items that need to be repaired or replaced. The total volume of repairs is much smaller than that of returns, but the ratio between the two streams is very different for different industries.

Obviously, reverse logistics is not a detail that can be added to the supply chain as an afterthought. Not only is it too important for that, but also the processes involved are quite different from those in the outbound supply chain. Below are some of the areas to explore for companies that want to optimise their returns and repairs logistics and reduce the associated costs.

Implement clear return policies and consider charging costs

Although online retailers have spoiled consumers with easy returns, everybody knows there is no such thing as a free lunch. Consumers understand (but maybe choose to ignore while they can) that they pay for their 'free' returns in one way or another. The number of returns can be reduced by sticking to clear return policies, offering free returns under specific conditions and charging a reasonable cost otherwise. Another option is price differentiation, comparable to the difference in air fare levels with different service options, by offering discounts for consumers declining the possibility of free returns or adding no-charge returns as an additional, paid option.

Manage the return and repair process for higher speed

One costly problem with returns, especially in the retail and lifestyle industries, is that fashionable items have very limited shelf life. If processing returns takes too long, items that could otherwise be resold must be discounted or even discarded. The trick is to get the item to the place where it is most likely to be sold quickly, be that a fulfilment centre for online sales or a physical store where the item is in demand – keeping in mind that an item that was sold online first may need to be moved to a store to be sold a few weeks later, or the other way around. Ideally, as soon as an item is returned to a shop, a pickup point or a returns facility, scanning its barcode or RFID should trigger an immediate transfer to its best current sales location. This evidently requires full transparency of stock levels across multiple locations and all channels. If a company doesn't have that in place yet, managing returns may be one of the reasons to start working on it.

⁹ <http://ecommercenews.eu/returns-week-burden-online-retailers/>

¹⁰ <http://www.inboundlogistics.com/cms/article/managing-retail-returns-the-good-the-bad-and-the-ugly/>

For repairs, the goal is to get the item to a designated repair facility in the most efficient way, to process the repair as needed (which may involve a diagnosis, the actual repairing or replacement, and often will include some form of interaction with the customer) and to ship it back to the owner. Here, too, speed is important because a long wait negatively affects the customer's experience.

Prevent returns and repairs

By far the most cost-effective way of dealing with return costs is preventing them. Some of the problems are intrinsic – in the garment industry, the returns caused by the mismatch between on-screen RGB colour, print CYMK colour, the colour in the fitting room lights, and the colour at the candle-lit dinner, is notorious. Poor or misleading product information, including sizing, is another issue. But a significant proportion of returns and repairs are generated by logistics issues – inaccurate picking, missing items, missed deliveries, transit damage, packages left out in the rain. These are avoidable, and measures to prevent them will pay for themselves rapidly, both in cost and in brand reputation.

07. IDENTIFYING AND ELIMINATING VULNERABILITIES

In the search for cost reduction it is tempting to optimise a supply chain for a maximum fit with its current environment, but this is a short-sighted approach that introduces serious risks. It's a bit like driving a vehicle without seat belts or airbags: thanks to the reduction in weight you will save fuel, but the risk bears no proportion to the advantage. Any supply chain that is operating smoothly in a stable environment today, will at some point be exposed to disruptions — political changes, strikes, floods or any other type of mishap. The question is not if, but when.

Designing resilience into a supply chain does create additional costs, but these should be considered as an insurance premium to avoid larger damages. The decision on how much resilience is enough is a strategic one, and the right balance will be different for different companies and situations.

08. TAKING AN INTEGRATED VIEW OF LOGISTICS COSTS

To assess and improve the resilience of a supply chain, one has to look at the supply chain as a whole. The backup for a supplier in one region, for example, may be located in another region, and switching between them may also result in a change in transport service providers. In that sense, introducing resilience is part of a larger topic: the need to look at supply chain operations with an integrated view. Optimising individual supply chain elements does not automatically result in an optimal overall solution and, if not done carefully, may even be counterproductive.

The key to supply chain efficiency and cost effectiveness is to look not only at the individual components but at how they interact. The growing awareness of the need for this type of approach is reflected by the popularity of terms like 'Control Tower'. Recent developments in software and communications technology have made it possible to create systems that can collect and analyse the huge quantities of data involved and present them for use in a meaningful way.

Introducing a Control Tower management layer is a phased process that may, depending on the starting point, take years rather than months to come to full fruition. But among all the actions and options described in this paper it is also the one that will yield the largest payoff. This is an area where a variety of parties, from software vendors and business consultants to 3PLs, are offering their services.

About the author



Nirmal Thakkar is in the Supply Chain Development function with Damco. Nirmal has been in the global logistics industry for 10 years and has held range of different roles within Damco [and prior to that with Panalpina] spanning from continuous business improvement and freight forwarding to automotive logistics.

About Damco



Damco, one of the world's leading third party logistics providers, specialises in delivering customised freight forwarding and supply chain solutions. The company has more than 300 offices in over 100 countries and employs 11,000+ people. Damco is part of the Maersk Group. More information about Damco can be found on www.damco.com