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The Need for End-to-End Strategies and Flexibility in the Supply Chain...

By Anton Nieuwoudt

As this edition of RESULTFOCUSED hit your inbox South Africans have experienced yet another fuel price increase. Not only is there no letup in sight, there is no end of consequences for companies that import, export, ship or manufacture goods.

For us as supply chain professionals, the rising fuel prices should point directly to the need for end-to-end operating models that align with corporate strategy; aggressive, measurable goals focused on continuous improvement; insightful technology investments that drive integration, visibility and flexibility. Especially considering the heightened focus on transportation and labour and its impact on potential near sourcing strategies.

Flexibility still highlights the importance of the supply chain function. To deal with fuel price uncertainties network strategies needs to be built on flexibility.

Procurement specialists recognise the need for flexibility when tapping new sources to reduce supply risk.

Transportation and distribution planners depend on flexibility to provide consistent economical service to customers during times of shifting assets and priorities.

And in planning and forecasting, flexibility in many cases dominates every decision.

In short, companies are increasingly looking towards their supply chains to identify and unlock opportunities for cost containment and efficiency improvement.

In this month's edition of RESULTFOCUSED we gain a better understanding of the Kellogg's Supply Chain, an expert shares his view on whether fracking is a supply chain logistics game changer and we see the impact Gauteng's e-tolls are having on the bottom line of Shoprite. We also see that Panama's new canal locks will reshape the geography of world shipping, when they eventually swing open in 2015, we look at how warehouse management systems are going through an evolution, what the impact of the 2014 economic upturn will be on logistics, and finally we state that the simple truth about how ordinary people accomplish outrageous feats of success is that they do the hard things that smarter, wealthier, more qualified people don't have the courage — or desperation — to do.

Hard work spotlights the character of people: some turn up their sleeves, some turn up their noses, and some don't turn up at all.
- Sam Ewig

SUPPLY CHAIN - FROM MANUFACTURING TO SHELF

By Unknown (businesscasestudies.co.uk)

The Kellogg's Cornflake Company began in 1906 with the Kellogg brothers who originally ran a sanatorium in Michigan, USA. They experimented with different ways to cook cereals without losing the goodness. Their philosophy was 'improved diet leads to improved health'.

Between 1938 and the present day Kellogg's opened manufacturing plants in the UK, Canada, Australia, Latin America and Asia. Kellogg's is now the world's leading breakfast cereal manufacturer. Its products are manufactured in 19 countries and sold in more than 160 countries. It produces a wide range of cereal products, including the well-known brands of Kellogg's Corn Flakes, Rice Krispies, Special K, Fruit n' Fibre, as well as the Nutri-Grain cereal bars.

Kellogg's business strategy is clear and focused:

- to grow the cereal business – there are now 40 different cereals
- to expand the snack business – by diversifying into convenience foods
- to engage in specific growth opportunities.

By acting responsibly, businesses win respect and trust from communities, governments, customers and the public. This enables the business to grow. In the community, Kellogg's is known for its approach to Corporate Social Responsibility (CSR). For example, its programme to promote the benefits of breakfast clubs has provided over one million breakfasts to schoolchildren throughout the UK.

Businesses focus primarily on the creation of profit but increasingly understand that their social and environmental impacts are important. Kellogg's believes in acting responsibly in all sections of the supply chain. This is a better long-term business model for both the organisation and its customers. Amongst other activities, it aims to do this by reducing energy and emissions in manufacturing and distribution and improving packaging.

Kellogg's Global Code of Ethics demonstrates a commitment to act respectfully and ethically. 'Our mission is to drive sustainable growth through the power of our people and brands by better serving the needs of our consumers, customers and communities.'

This case study shows how Kellogg's fulfills this mission in the later parts of the supply chain from manufacturing to shelf.

The Supply Chain

The industrial supply chain consists of three key sectors:

Primary (or extractive) sector - providing raw materials such as oil and coal or food stocks like wheat and corn. Some raw materials are sold immediately for consumption, such as coal to power stations. Others are used further up the supply chain to be made into finished goods.

Secondary (or manufacturing) sector industries make, build and assemble products. Examples include car manufacturers or bakers who use primary products. For example, Kellogg's purchases rice for Rice Krispies and corn for Cornflakes.

Tertiary sector industries do not produce goods. They provide services such as in banking, retailing, leisure industries or transport.
From start to finish of the supply chain a range of agencies or departments are involved.

These include research, quality, purchasing, sales, and transport and distribution. As part of their business strategy, companies need to consider how best to acquire and distribute raw materials. Businesses such as Kellogg's recognise the importance of storing and transporting products effectively. Kellogg's seeks to organise transportation and storage of materials and finished products to minimise costs and environmental impact. Increasingly governments are working to encourage businesses and individuals to reduce their carbon footprint and the effects of global warming.

In the supply chain, there are a number of areas where waste can be identified. Lean production is an inventory system enabling the streamlining of processes and elimination of waste. Kellogg's regularly evaluates its production methods to ensure that they give the required outcomes and that waste is reduced. This aids competiveness and profitability by lowering overheads and unit costs.

In the past, businesses thought it was more effective if they carried out several parts of the supply chain, like manufacturing and transportation, themselves. To meet requirements and provide customer satisfaction, this meant deliveries taking place frequently and often without consideration of impacts on the environment. An urgent order might result in a half-empty vehicle making the delivery to a waiting customer. If this happened regularly it would be a waste of time and fuel. Consumers and governments now look for more environmentally-friendly methods of production and distribution systems. It is therefore more efficient and cost-effective for Kellogg's to specialise in the area in which it is expert – manufacturing. It does not have its own distribution fleet but uses partners for its transport needs.

The Supply Chain - The Secondary Factor

Kellogg's is a secondary sector business. It obtains its raw materials of wheat, corn, cocoa, rice and sugar from primary suppliers around the world. These materials help make over 40 different breakfast cereals and snacks to sell to customers through the tertiary sector. It is a large-scale manufacturer and stores sufficient stocks to meet customer orders. As part of its Research and Development (R&D) programmes, it develops recipes to extend its range of cereals and snacks.

Kellogg's believes in acting responsibly in all sections of the supply chain. This is a better long-term business model for both the organisation and its customers. Amongst other activities, it aims to do this by reducing energy and emissions in manufacturing and distribution and improving packaging.

Large-scale manufacturers like Kellogg's need to consider many different aspects of their operations:

- where to locate the business – this could be near to materials' suppliers. For example, power stations are often sited near to coal sources to reduce delivery costs. Frozen peas factories may be near farms to ensure the product is fresh. Kellogg's ingredients are grown in many countries. It is more important for its manufacturing sites to be near to distribution channels and customers so products can reach shelves quickly.
- size and scale– they need large factories with adequate space for equipment and production processes. They also need to accommodate the frequent delivery of incoming materials and outgoing finished goods.
- where and how materials and finished goods are to be stored until needed for sale. As part of Kellogg's manufacturing process it packages products ready for immediate distribution.
- where its customers are – Kellogg's does not sell its breakfast cereals directly to consumers. It uses intermediaries like wholesalers, supermarkets, high street stores and hotels. Transportation and storage occur between all stages of the supply chain.

Kellogg's largest UK production plant is at Trafford Park in Manchester. One of its storage depots was 15 miles away at Warrington. Kellogg's moved this storage to a new warehouse site in Trafford Park, only one mile away from its production base. This provides specialist energy efficient warehousing of stock 24 hours a day. To improve its distribution, Kellogg's collaborates with TDG, a logistics specialist. This reduces transport costs considerably and is energy-efficient. Kellogg's has reduced both its carbon footprint and costs as a result.

The Food and Drink Federation (FDF) is an umbrella organisation for food and drink manufacturers and has called on its members to improve their environmental performance by reducing: 1. levels of packaging to consumers, 2. use of water during production, 3. impact of transportation, 4. waste to landfill, 5. energy use during production.

Through the FDF, Kellogg's has signed an agreement with 21 major companies to improve water efficiency, reduce wastage and cut CO_2 emissions. Together these companies aim to save 140 million litres of water per day. This will reduce their water bills by £60 million each year. Kellogg's has also joined with the international company Kimberley Clark, which makes paper products like tissues, to reduce carbon emissions by sharing delivery services.

Kellogg's now has targets in these areas and where possible builds these aspects into Service Level Agreements with partner companies in the primary, secondary and tertiary sectors.

The Supply Chain - Tertiary Sector

The final stage in the industrial supply chain is the tertiary sector. The tertiary sector provides services. It does not manufacture goods. This sector involves:

- retailers like supermarkets that purchase manufactured goods from secondary sector businesses and sell them to the consumers
- service companies who may deal in, for example, finance, computer systems, warehousing or transportation.

Retailers want to hold limited stocks of products to reduce warehousing costs. Kellogg's uses a system called just-in-time to provide an efficient stock inventory system. This means that just enough product is made to fulfill orders and limited stock is kept. Kellogg's needs to get the balance right at each section of the supply chain. Late deliveries or inability to deliver due to a lack of products might make retailers buy from competitors.

Storing stock and transporting it are key activities that link all three parts of the supply chain. Kellogg's employs specialist transportation and storage companies to be responsible for all the logistics aspects of its business. One of Kellogg's partners, TDG, stores and transports pallets of Kellogg's cereals. This allows Kellogg's to concentrate on its specialist area of manufacturing cereals and other food products. Kellogg's also shares transportation with another manufacturer, Kimberley Clark. This has reduced distribution costs, helping keep Kellogg's products competitive. The system helps reduce the number of part-full or empty vehicles on the road. This saves time, road miles and provides additional benefits of reducing CO_2 emissions.

Kellogg's has major relationships in the tertiary sector. These include the major retail supermarkets such as Tesco and ASDA and some of the wholesale sector such as Makro. Kellogg's relies on retailers to help them promote a good relationship between the consumer and its products. To drive sales, Kellogg's is involved in initiatives that help add value for retailers. An example of this is the Shelf Ready Unit that Kellogg's developed with Tesco. This displays Kellogg's products easily and effectively. This means that the supermarket uses less staff time (and cost) in setting up a display. The display is attractive and easier for consumers to choose from, increasing turnover for Kellogg's and Tesco.

Managing the Supply Chain Effectively

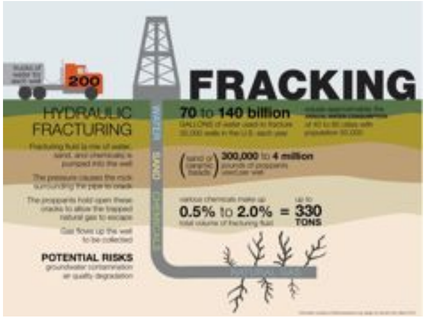
Having the right marketing mix ensures businesses have the right product, in the right place, at the right time. Kellogg's manufactures the right products based on research into consumer needs. It manages the distribution channels to place its products in stores. Its focus on cost effective systems ensures its prices are competitive. It works with retailers to improve promotion of its products. Retailers want to hold limited stocks of products to reduce warehousing costs. Kellogg's uses a system called just-in-time to provide an efficient stock inventory system. Just-in-time means that just enough product is made to fulfill orders and limited stock is kept. Kellogg's needs to get the balance right at each section of the supply chain. Late deliveries or inability to deliver due to a lack of products might make retailers buy from competitors. Through its collaborations with TDG and by relocating some of its warehousing, Kellogg's now has a more efficient distribution system. Computerised stock holding systems ensure shelves are always full and orders are delivered on time. This helps Kellogg's to keep stocks to a minimum. It also helps customers like ASDA and Tesco to reduce their stocks too.

This illustrates the effectiveness of Kellogg's supply chain management (SCM). This was achieved by a collaboration of industries within the supply chain. Each company works within their specialist area to provide products and services to consumers. a) Distribution has improved through the collaboration of Kellogg's, Kimberley Clark and TDG. Storage, in itself, is investment without returns. Every day materials or products are on a shelf, they are costing money without earning any profit. Retailers do not want a warehouse that is unnecessarily full and neither do manufacturers. When deliveries are made, lorries need to be full to minimise unit costs of transportation. This collaboration has helped all of these aspects. Customers are guaranteed deliveries on time because stocks are monitored effectively. Deliveries are cost effective as lorry capacity is used effectively. Retailers like ASDA and Tesco benefit as they are kept stocked without storage costs. Therefore their advertising yields good returns, as customers are always able to buy Kellogg's products. b) The lean production system streamlines processes and eliminates waste. Computerised warehousing means that products are manufactured efficiently, then transported straight from the warehouse to retail customers. This avoids delay to customers. TDG keeps the warehouse costs low through computerised heating and specialist transportation skills. The computerised stockholding shows immediately when shelves are empty. This then automatically generates orders to the manufacturing base at Trafford Park to replenish stocks. This minimises waste and the lower costs have increased Kellogg's profits. This also helps the company to keep prices competitive, which keep customers happy and loyal. The effect on the environment is good too as heating and fuel costs are minimised.

Conclusion

The three sections of the industrial supply chain need to interact to ensure goods or services reach consumers. The efficient delivery of the product to the consumer at the right price, in the right place and at the right time will result in good business for each link of the chain. This takes strategic planning and effective collaboration with all partners.

Specialisation is more cost-effective for Kellogg's and partnering with other industry specialists reduces costs to the business, the customer and the environment. Kellogg's champions socially responsible operations. Through effective supply chain management, it benefits itself, the environment and other businesses. - ***RF***



FRACKING: A SUPPLY CHAIN LOGISTICS GAME CHANGER?

By Larry Lapide
(supplychain247.com, January 2014)

This column represents the annual oil update I've been writing since my first column appeared in the January/February 2007 issue of SCMR ("Is Your Supply Chain Addicted To Oil?").

During the "Era of Cheap Oil" (between 1986 and 2002), "real" (i.e., deflated) oil prices bounced around from \$20 to \$30 per barrel.

The period also overlapped with the heyday of the Supply Chain Management (SCM) evolution that began in the mid-1990s.

Over this time companies started altering their networks to embrace the integration and globalisation of supply chains, leveraging cheap oil to lower costs and inventories.

Real oil prices have been hovering around \$100/barrel since the Great Recession, despite the dismal global economy. Prices are now three to four times higher than they were during the Era of Cheap Oil.

I've been postulating that once the economy starts growing more robustly, oil prices would steadily rise with greater volatility well past 2020. This would be due to increased global demand and the need to leverage more expensive oil-drilling methods - such as deep-water drilling and shale-oil fracking (an extraction technique) - in order to meet increasing demand.

I've been advising managers to alter supply chains to wean them off oil. Future supply chains need to be slower and designed to minimise costs and maximise energy efficiencies, rather than minimise costs and inventories.

Has Fracking Changed the Game?

This past year, however, has been different than discussed in prior updates; bringing to mind a quote from Yogi Berra that goes: "The future ain't what it used to be." I'm wondering: Has the future of oil changed?

I've thought long and hard about what to say this year because of all the media buzz around shale oil and natural gas fracking as energy saviors, maybe bringing back cheap energy and rendering the big user oil countries less dependent on oil, and less dependent on OPEC and other oil producing countries.

Below are some of last year's news items:

- According to the U.S. Energy Department (Wall Street Journal, 7/26/13, "US Sees Boom in Global Energy Use") "The world will use far more of every type of energy in coming decades." Oil, natural gas, and coal, however, will still account for 80 percent of energy use by 2040. Energy use will grow 56 percent from 2010 to 2040, mostly from use for electric power generation and transportation.
- In 2013, the U.S. started producing more crude oil than it imported due to reduced consumption and increased production from fracking. In addition, by 2020 the U.S. will overtake Saudi Arabia as the world's largest producer of oil. Also, the U.S. has achieved self-sufficiency in natural gas, and currently has a surplus.
- Trucking companies are thinking seriously about using liquid natural gas (LNG) fueled vehicles. Large fleet operators such as Lowe's, P&G, FedEx, and UPS have announced initiatives to shift more rapidly from diesel to natural-gas fueled vehicles.
- Much of the additional natural gas is going to fuel electric power plants that were burning coal (the dirtiest carbon-based fuel). However, it has been recently reported that fracking sites are depleting faster than expected in comparison to traditional oil and gas extraction sites (USA Today, 11/03/13, "Could fracking boom peter out sooner than DOE expects?"). The Energy Information Administration projects that U.S oil production is expected to increase until 2019 and decrease after that. This means that the potential for shale oil and gas fracking to ameliorate some energy issues may be less optimistic than originally thought.

Still Heavily Affected by Oil Pricing

Does the above information say the future energy picture has changed for supply chain managers? I think not. While the long-term picture might change, cheap oil is out of the picture.

Supply chains will still be dependent on the vagaries of oil prices because they will still be using oil or because other energy sources will be priced in lock-step with oil pricing. For the next couple of decades oil will stay the preferred energy source.

In the short term, it won't change much because it takes years to materially affect and alter supply chains, including the fact that the energy supply chain itself must change. However, while the long-term looks to be rosier re: oil dependency, this too is uncertain and not as optimistic as one might initially think.

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Oil dependency will vary in three aspects of SCM: 1) materials, components, and packaging, 2) energy used to operate manufacturing & distribution equipment and facilities, and 3) transportation services.

Much of today's materials, components, and packaging are oil-based plastics. Over decades there has been a significant shift from being largely composed of glass, metal, and paper to plastic. With the recent rise in oil prices a shift away from plastic to paper-based packaging, for example, has begun. The shift from oil-based will continue indefinitely, and for this aspect, natural gas is not a replacement for oil.

The energy used to operate equipment and facilities is largely electricity with some oil-based diesel. So this aspect does not represent a significant portion of oil-based usage in supply chains. In the long run this minor portion of oil dependency will grow, but will not be the major focus area in which to reduce oil dependency.

Transportation is the major portion of oil dependency for supply chains. Moving goods around represents a sizeable portion of oil usage today, much in the form of diesel. It is clear that the transportation industry is planning to shift as rapidly as possible to LNG fuel.

The question is: How rapidly can that shift really occur? First, the truck manufacturers need to start making natural-gas fueled trucks in large volumes. Long-haul trucks, for example, are still on the drawing board. Then it will take more than a decade to replace the trucks on the road, as well as to establish a network of LNG stations to replace the vast network of diesel-fueling stations.

Therefore the demand for LNG will take decades to come to fruition. Meanwhile on the supply side, LNG has issues in terms of how fast sites are depleting; so more time than originally anticipated might be needed to find and tap into natural gas reserves. In short, looking at the supply-demand picture, it will take decades to shift the lion's share of diesel to LNG.

To summarise, my view has not been altered by the recent news around fracking. Managers should continue to make their supply chains more energy efficient, because the dependency on oil is here to stay for quite some time. - ***RF***

SHOPRITE'S R4 MILLION E-TOLL BILL

By Unknown (businesstech.co.za, February 2014)

South African retailer Shoprite says that the direct e-toll cost for its own fleet is R4 million, which will raise the price of food for the Gauteng consumer.

Earlier this month, listed transport logistics and mobility group, Super Group also highlighted the impact of e-tolls on its business.

Economists have warned against the negative effect that e-tolls on consumers, while debt management firm, Debt Rescue, last month reported a sharp increase in the number of deeply indebted consumers seeking help in the form of debt review, following the introduction of toll fees.

Super Group CEO, Peter Mumford warned against Sanral's e-toll system cost implications, when he announced the group's financial results on 10 February.

He told Moneyweb: "It's fairly significant. Like most of our competitors we can pass on statutory costs on a lot of contracts. Where we can't it is significant, the costs themselves are significant and so is the administrative burden involved in managing the whole e-toll accounting."

In results for the 6 months ended December 2013, Shoprite said that turnover increased 9.7% to R51 billion.

Trading profit was up 7.5% to R2.7 billion, while headline earnings per share rose 7.9% to 341.0 cents.

The group declared a dividend per share of 132 cents (2012: 123 cents), showing an increase of 7.3%.

Shoprite pointed to a difficult trading environment. "Middle- and lower-income consumers, many of them overburdened with debt, are struggling to make ends meet due to spiraling increases in their living expenses and transport costs.

"The consequent lack of disposable income has a severe impact on the retail environment in which competition for the consumer's rand has greatly intensified in the six months under review," it said.

The group's ticketing business, Computicket is undertaking an extensive systems upgrade "to create a state-of-the-art booking engine, which will greatly increase its agility in handling extreme peaks in ticket demand".

Last week, Sanral noted that in excess of 1.2 million e-tags had been registered for e-tolls, with between 30,000 and 45,000 people registering on Sanral's system each week. - ***RF***

RIPPLE EFFECT: CARIBBEAN PORTS AND THE PANAMA CANAL

By Unknown (economist.com, February 2014)

The wrangling between the Panama Canal Authority and a Spanish-led consortium may soon be settled. Work on the project to expand the canal began again on February 20th, after rows about cost overruns had stalled construction since the start of the year. A preliminary accord between the two parties, reached on February 27th, now sets an end-2015 deadline for completion of the work. For some in the Caribbean, further delays would suit their purposes.

When they eventually swing open, Panama's new canal locks will reshape the geography of world shipping. The largest ships to squeeze through the existing locks need a water depth of just over 12 metres, and can carry around 4,400 containers. The new locks will accommodate ships which can take almost three times that load and need a draft of over 15 metres.

These monsters will slash shipping costs for Pacific cargo en route for Atlantic ports, and boost the 6% share of world trade that the Panama canal now claims. But few ports have the water depth needed to enable the new Panamax ships to dock. Lots of cargo will be unloaded onto smaller ships at a few "transshipment" hubs, before being shipped to their final destinations, and several Caribbean islands are vying for the business

Hong Kong-based Hutchison Port Holdings has been ready for years. Its Freeport Container Port on Grand Bahama, a northern island on the Bahamas, opened in 1997; with 16 metres of water depth, it can easily take the giants. There is plenty of land for storage, and a nearby airport. Preliminary work has started for a fifth-phase expansion. Hutchison's portfolio of ports also includes Balboa and Cristobal, at the Caribbean and Pacific ends of the Panama canal.

Freeport has rivals. It is little more than 100 miles from Miami, which plans next year to complete a $2 billion dredging and investment programme, and will offer a connection to America's highway network. Further up the eastern seaboard of the United States, ports in Norfolk, Baltimore and New York will also be able to host the new ships. For America, onshore hubs have security advantages; witness a skirmish between the United States and Freeport over who pays security costs for nuclear-radiation screening of containers bound for the United States.

Brazil and Cuba agreed in 2009 to develop the port of Mariel, west of Havana, through a partnership between Brazil's Grupo Odebrecht and a state-owned Cuban company, with PSA International of Singapore as operator. The port has been dredged to a comfortable 18 metres and was inaugurated in January. But a major transshipment role is blocked by the American trade embargo: ships which have been to Cuba are barred for six months from American ports. More time to complete the Panama expansion means more time for the embargo to lift.

Kingston in Jamaica is a long-established hub, but it has the most work to do to catch up with its rivals. Almost eight years after Panama's president formally launched the canal project, Jamaica has not finalised its dredging proposal to increase the draft at its port. Environmental approval is expected by mid-year, but the finances are complicated by port privatisation, which is expected by September.

Another contender isn't even under construction yet. China Harbour Engineering Company, which has its western-hemisphere headquarters in Jamaica, has a framework agreement for building a new port on the uninhabited Goat Islands, around 30km west of Kingston. This would link to a "global logistics hub," with container storage and a fast overland route to a revamped second-world-war airport at Vernamfield, 55km west of Kingston. Environmental concerns are a big obstacle, however: the Goat Islands and their surrounding waters are a protected area. A proposed coal-fired power station does not endear the project to environmentalists. That might cause a few delays of its own. - ***RF***

MAKING THE CASE FOR WMS

By Bob Trebilcock (supplychain247.com, May 2013)

In the last two years, there has been a lot of buzz around a new generation of warehouse control systems (WCS). These solutions are taking on the order fulfillment tasks once assigned to a warehouse management system (WMS), especially in highly automated facilities with complex order fulfillment strategies serving omni-channel retail sales environments.

Less heralded has been the fact that WMS continues to evolve, add functionality and expand its reach in these same complex fulfillment environments. Just as WCS has moved up from the machine level to manage picking and packing tasks, WMS are more involved in order management, planning, predictive analytics and supply chain management than ever before. Those are areas that were once the province of enterprise resource planning (ERP) and supply chain management systems.

"The WMS market is going through an evolution," says Dwight Klappich, a vice president with the research firm Gartner. "In the past, they were primarily execution systems. But warehouse systems are getting smarter. They are becoming more predictive; they are adding more analytics; and they can provide more visibility into the extended supply chain."

With that in mind, let's make the case for WMS—where it is today and where it's going.

Putting the M in WMS

When Klappich looks at the WMS market, he makes a distinction between Core WMS and Extended WMS.

Core WMS executes the basic transactions that warehouse systems have handled since the first commercial WMS: receiving, putaway, pick and pack, shipping, and cycle counting. In fact, Klappich argues that early WMS could rightly have been called warehouse execution systems because their primary role was to make things happen.

Core WMS is a mature technology; any system that calls itself a WMS offers those features. "When you look across the market, we're seeing parity around Core WMS," Klappich says. "The capabilities are pervasive, from solutions targeted at small or mid-sized businesses to WMS offerings from ERP vendors and the robust offerings provided by the best-of-breed WMS vendors."

In this area of the market, ERP vendors like SAP, Oracle and Infor have especially upped their games. "Today's ERP warehouse management systems are the equivalent of a souped-up Toyota Camry," he says. "They can satisfy the requirements of most conventional warehouses with some automation."

Parity, however, doesn't mean that all WMS are created equal. Best-of-breed players like Manhattan Associates and JDA (formerly RedPrairie) are the BMWs of today's market, or what Klappich calls Extended WMS. "Most of the market are Camry buyers," Klappich says. "But there are times when you need a BMW. Best-of-breed is being pushed more toward the higher end of the market because they have experience in the most complex environments."

While Core WMS is focused on execution, Extended WMS "puts the M in WMS," Klappich says. Extended WMS brings management functions such as wave planning, multiple picking strategies, labor management, dock scheduling, slotting and other advanced management capabilities to the table. These systems are also adding more analytics and reporting functionalities. The best of these systems are developing capabilities to monitor real-time processes and predict when and where bottlenecks may occur.

"Core WMS has always been reactive,"

Klappich says. "It didn't know there was a problem until you had a problem. A predictive WMS can look at a group of orders and say: You're going to have a problem in packing. You need to solve that."

The industry may not be there yet, Klappich adds, but it is moving in that direction.

Workflows and mobility

A WMS is no longer just for the big guys. Increasingly, Tier 2 companies are struggling with the same issues as their larger competitors. That has led to more robust WMS for the secondary market.

"Tier 2 retailers and distributors may only have one DC and a smaller volume of orders than the big guys," says Chad Collins, chief marketing officer for Accellos. "But they are pursuing the same omni-channel strategy as the big guys."

Similarly, small manufacturers and distributors are being pushed by their retail customers to participate in custom labeling and shipping initiatives and to drop ship retail orders. They now need the ability to receive an EDI (electronic data interchange) feed to share order information, to pack orders differently for each customer and to generate unique workflows for replenishment and direct-to-consumer orders.

"We used to see one side of the warehouse dedicated to retail replenishment and the other side set up for direct-to-consumer," says Collins. "Now, they're picking from the same locations to leverage inventory, but setting up different workflows according to the order."

The WMS is also extending its reach beyond the four walls. Accellos, for instance, has created a set of quality control applications that allow a retailer to do a quality assurance audit at a supplier's location using a smart phone and roll that information directly into its WMS. Similarly, a track-and-trace application can be loaded onto an Android-enabled smart phone that extends WMS to the point of delivery. "GPS tracks the truck as it makes a delivery, the driver can capture product as it comes off the truck and capture a signature as it's received," says Collins.

A new level of visibility

Supply chain managers have been trying to get visibility into their operations as long as there have been supply chains. In an omni-channel operating environment, visibility is more critical than ever. "When a customer places an order, you need to have some degree of confidence that the inventory is going to be there," says Scott Fenwick, senior director of product management for Manhattan Associates.

While WMS have been providing visibility into inventory inside the four walls of the DC for years, today's systems have to provide a comprehensive view of inventory and assets across the supply chain. "The WMS has to provide visibility into a network of DCs, your suppliers' inventory and inventory that's in transit," says Chuck Fuerst, director of product strategy for HighJump Software. To do that, the WMS is taking feeds from point of automatic ship notification (ASN) and the transportation management system (TMS).

The biggest change, however, may be that Extended WMS are now integrated with store point-of-sale systems for those retailers that are also filling orders from their stores. "Years ago, most retailers didn't have a clue as to how much inventory they had in the store," says Tom Kozenski, vice president of industry strategy for JDA Software. "We're now extending the view of inventory right down to the store shelf." A large retailer filling orders from multiple nodes may be monitoring inventory from 20 DCs and 400 stores, with updates from store point-of-sale systems as often as eight times a day. "The only thing we haven't figured out is how to track the inventory in the shopping cart before you get to the register," says Kozenski.

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When solutions converge

As Extended WMS takes on a broader management role, they are integrating with other systems to make more intelligent decisions and create more optimised supply chain processes. The market calls this process convergence.

For instance, the WMS BMWs include a decision engine that sits between the order management system and the distribution centers or retail stores to decide the best location to fill an order. "The system can look at factors such as where did the order originate from or how much will it cost to replenish the inventory," says Fuerst. "For instance, if you received the order late in the day, does it make sense to fill it from a West Coast distribution center that might be working for another three hours rather than rush it through an East Coast location."

In addition to monitoring inventory, today's WMS are able to monitor the various functions of the warehouse to better manage work in a facility. "With predictive analytics, we're looking at the various functions to get more insight earlier into what's going on rather than waiting for the end of the day," says Fenwick. "Demand forecasting, for instance, drives replenishment. But it can also be used to make slotting and labor decisions that will smooth out the work."

Those examples illustrate ways the WMS is optimising functions within the facility. At the highest level, end users are using supply chain execution systems to optimise an end-to-end process, from source to the final customer. "If your warehousing and transportation are coordinated, there is a link between the TMS, the dock scheduling solutions and the warehouse management system," says Andres Botero, the global head of marketing for supply chain management at SAP. "When a truck arrives at the gate, a dock is available and the receiving team is waiting to unload the trailer."

When solutions converge, a change in one system—like an increase for an order from 1,000 to 2,000 cartons—flows through all of the systems associated with that order. "In a conventional supply chain execution system, I have to recreate the new order in the transportation system, the WMS and any other system," says Botero. "If the systems have converged, a modification in the order management system will update every other system."

Similarly, retailers are using the expanded functionality of a WMS to optimise their sales across their network. "A retailer that can fill an order from the store and ship it to a home can sell through their in-store merchandise and avoid markdowns or a return to the warehouse," says JDA's Kozenski. "At the end of the back-to-school season, it may be profitable to ship from a store at a marked-down price to clear out merchandise. An Extended WMS can make those kinds of decisions and then execute on the plan."

At the end of the day, Kozenski adds, WMS systems are still doing many of the things they did from the start. "For decades, a WMS has been a real-time application," he says. "What's changed is the technology structure. Today's WMS talks to components, to conveyors and WCS systems, to ERP systems and to store systems. The communication is more real time and easier to manage." - ***RF***

HOW WILL LOGISTICS BENEFIT FROM THE 2014 ECONOMIC UPTURN?

By John Manners-Bell & David Buckby (suppluchain247.com, February 2014)

Economists believe that emerging markets will continue to grow faster than developed economies throughout the rest of the year.

However, the performance of the Western world will improve in 2014 while emerging market growth will not be quite as impressive as it has been.

- As of January 2014, the IMF forecasts global growth of 3.7% in 2014, mainly on account of recoveries in advanced economies. 2013 global growth was 3.0%
- The IMF says growth in the US will be 2.8% in 2014, up from 1.9% in 2013
- The Euro area recorded negative growth of -0.4% in 2013. Growth of 1.0% is anticipated in 2014.
- Chinese growth in 2013 was 7.7%. It is predicted to slow to 7.5% in 2014
- India's growth was 4.4% in 2013. Its economy is expected to grow by 5.4% in 2014
- Japan's economy grew by 1.7% in 2013. The same growth rate is forecast for 2014
- UK growth was 1.7% in 2013. Higher growth of 2.4% is predicted for 2014

As economic output will impact positively on the volume of freight being moved – and this will improve profitability in many sectors where capacity and demand are in some sort of alignment – this is good news for logistics companies.

The shipping and air cargo sectors are special cases, where structural reforms will be needed to benefit from these improving underlying trends. The return to growth of the Eurozone could possibly have the biggest effect with the European road freight sector having most to gain.

Looking at international trade, global volumes stagnated in 2013 although a significant rebound is expected in 2014. Perhaps the most telling statistic is the predicted sharp rise in developed countries' imports in 2014, reflecting general economic recovery in the Western world.

- WTO expects total merchandise trade growth to be 2.5% in 2013. It is forecast to rise to 4.5% in 2014
- Developed economies' exports forecast to grow by 1.5% in 2013 and 2.8% in 2014. Developing economies' exports forecast to grow by 3.6% in 2013 and 6.3% in 2014
- Developed economies' imports forecast to grow by -0.1% in 2013 and 3.2% in 2014. Developing economies' imports forecast to grow by 5.8% in 2013 and 6.2% in 2014

From these figures it can be seen that the GDP/trade multiplier has, at least temporarily, disappeared. In the past there had been an established correlation between the increase in GDP output and growth in trade. As we have seen, though, the IMF estimated economic output in 2013 to be 3% whilst trade grew at just 2.5%.

One probable reason for this is the change in emphasis of investment decisions which have been focused on domestic growth rather than on international. China, for example, has invested heavily in its domestic economy (infrastructure for example) in order to maintain economic output at its 7.5% target.

There are three major fronts on which trade liberalisation may move forward in the near future:

1. The Trans-Pacific Partnership (TPP), under negotiation since 2005, aims to reduce non-tariff barriers such as import quotas and other regulation. It involves 12 countries, which include the United States and Japan, but not China. The deal should be concluded in 2014.
2. The Trans-Atlantic Trade and Investment Partnership (TTIP) between the United States and the EU also aims to reduce non-tariff barriers and harmonise regulation. Leaders hope to be close to the finish line by the end of 2014, with a deal hopefully finalised in 2015.
3. Perhaps most significantly of all, the multilateral trade deal agreed in Bali in December 2013, which was the result of 12 years of negotiation since the "Doha round" began in 2001, will reduce tariffs and other trade barriers. According to The Economist, "The trade-facilitation measures agreed in Bali could cut the cost of shipping goods around the world by more than 10%, by one estimate, raising global output by over $400bn a year, with benefits flowing disproportionately to poorer countries."

One issue which may well worry logistics companies in the developing world is the effect of the US Federal Reserve tightening monetary policy in 2014. The Fed scaled back its quantitative easing program from $85bn in December 2013 to $75bn in January 2013, and it will eventually decline to nothing by the end of 2014. Interest rates may also rise in the year. As rates of return improve in the US, investors will increasingly come back.

As demand for emerging market currencies falls and demand for US dollars increases, emerging market currencies will lose value while the US dollar will gain. This should make emerging market exports cheaper but they will have to pay more for imports, so we expect global trade patterns to adjust to this policy.

The expectation of monetary tightening arriving in 2014 has been blamed for a number of emerging market currencies depreciating in 2013. For example, the Indian rupee hit a record low in 2013, while the South African rand and Brazilian real hit four-year lows against the dollar in 2013. Almost all Asian economies have experienced sharp depreciation in 2013, with the major exception of China.

2014 is set to be a very good one for the logistics sector, with the possible exception of the air cargo operators and shipping lines. Overwhelming supply side issues will need to be addressed before they can benefit from the demand-side upturn. For freight forwarders we may see a 'golden year' with rates still low but volumes increasing.

Many emerging markets have responded by increasing their own interest rates in an attempt to prevent capital from flowing back to the US and preserving the value of their currency. Higher interest rates in emerging economies are likely to slow down their overall economic growth. The difficulty as always is knowing by how much emerging market currencies will depreciate, and how much their overall growth will be affected.

The most likely outcome would seem to be a return to the trade pattern established in the 2000s. A strong economy in the US will start sucking in imports from China and Asia, aided by a strong currency. The situation in Europe is not so clear as although the UK is seeing strong growth and the Eurozone is recovering, economies are more fragile and it is doubtful whether currencies will strengthen.

There is also the question of near-sourcing, which is exciting many politicians with the tantalising prospect of manufacturing jobs returning to developed economies. This will rely on increasing input costs in Asia tipping the balance in favor of production closer to home. Two of the main cost categories are transport and labour.

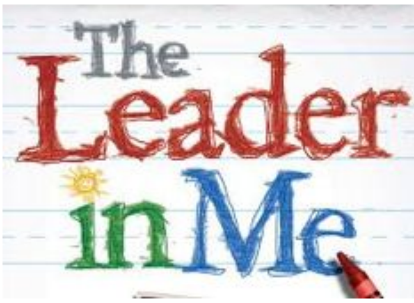
Transport rates, such as shipping and air cargo, are still floundering due to systemic over capacity in the industry. On top of this oil prices are relatively stable, or even on the slide. The oil price has tended to stay in the region of $100 to $120 a barrel since about mid-2011, with varying degrees of volatility in 2011, 2012 and 2013.

The IMF states that oil prices fell by 0.9% in 2013. It predicts they will fall by 0.3% in 2014. However as usual, the major issue for 2014 will be volatility and this is very hard to predict. On the other hand, China will continue to experience rising labor costs in 2014 and this will make sourcing decisions finely balanced.

Conclusion

2014 is set to be a very good one for the logistics sector, with the possible exception of the air cargo operators and shipping lines. Overwhelming supply side issues will need to be addressed before they can benefit from the demand-side upturn. For freight forwarders we may see a 'golden year' with rates still low but volumes increasing.

Stronger consumer sentiment in the US and Europe will benefit downstream distribution companies and the continued rise of e-commerce will drive forward express parcels carriers. Tapering of quantitative easing policies will inevitably affect developing economies, but they will also benefit from strengthening demand in the developed world. In Asia, Japan's return to growth will have a major impact on the prospects of its neighbors. - ***RF***



NINETEEN HARD THINGS YOU NEED TO DO TO BE SUCCESSFUL

By Dan Waldschmidt (businessinsider.com, January 2014)

You have to do the hard things.

1. You have to make the call you're afraid to make.
2. You have to get up earlier than you want to get up.
3. You have to give more than you get in return right away.
4. You have to care more about others than they care about you.
5. You have to fight when you are already injured, bloody, and sore.
6. You have to feel unsure and insecure when playing it safe seems smarter.
7. You have to lead when no one else is following you yet.
8. You have to invest in yourself even though no one else is.
9. You have to look like a fool while you're looking for answers you don't have.
10. You have to grind out the details when it's easier to shrug them off.
11. You have to deliver results when making excuses is an option.
12. You have to search for your own explanations even when you're told to accept the "facts."
13. You have to make mistakes and look like an idiot.
14. You have to try and fail and try again.
15. You have to run faster even though you're out of breath.
16. You have to be kind to people who have been cruel to you.
17. You have to meet deadlines that are unreasonable and deliver results that are unparalleled.
18. You have to be accountable for your actions even when things go wrong.
19. You have to keep moving towards where you want to be no matter what's in front of you.

You have to do the hard things. The things that no one else is doing. The things that scare you. The things that make you wonder how much longer you can hold on.

The simple truth about how ordinary people accomplish outrageous feats of success is that they do the hard things that smarter, wealthier, more qualified people don't have the courage — or desperation — to do.

Those are the things that define you. Those are the things that make the difference between living a life of mediocrity or outrageous success.

The hard things are the easiest things to avoid. To excuse away. To pretend like they don't apply to you.

The simple truth about how ordinary people accomplish outrageous feats of success is that they do the hard things that smarter, wealthier, more qualified people don't have the courage — or desperation — to do.

Do the hard things. You might be surprised at how amasing you really are.
- ***RF***

Note - All credit goes to the particular author and/or publication of the articles shared in this publication das[R]ESULTAT

integrity • independence • results

Result focused logistics and supply chain advisory services

By Anton Nieuwoudt / Niels Rudolph

dasRESULTAT is a results focused logistics and supply chain management advisory company with greater than 30 years combined experience in various functional areas of logistics and supply chain management across diverse industries.

Our primary objective is to support our clients to reduce operational costs and increase their service offering to their clients through optimising their supply chain, by offering a wide range of services based on our own practical experience.

dasRESULTAT stands under joint leadership of Anton Nieuwoudt and Niels Rudolph.

Leadership

Anton has close to 15 years experience in logistics- and supply chain management across various industries.

Prior to co-founding dasRESULTAT as a boutique logistics and supply chain advisory company, Anton was at Accenture where he was involved in various projects in the Retail, Mining, FMCG and Energy sectors. Here he was able to expand and apply his fulfillment, supply chain management, supplier management, project management and business consulting expertise.

Anton also worked at DB Schenker where he gained experience in integrated logistics management, spare parts logistics as well as inbound- and outbound logistics solution implementation.

Anton holds a Bachelors degree in Marketing from the Rand Afrikaans University and a Masters degree in Logistics Management from the University of Johannesburg.

Niels has more than 20 years experience in logistics- and supply chain management mainly within the 3PL industry.

Prior to co-founding dasRESULTAT as a boutique logistics and supply chain advisory company Niels founded ORAscm as a specialised logistics consultancy company. He also worked at DB Schenker and PriceWaterhouseCoopers in Germany as a project consultant.

Niels spent the largest part of his career at DB Schenker in various roles in Germany, Singapore, Malaysia and South Africa. During his last role at DB Schenker in South Africa, Niels was responsible for logistics development, reporting directly to the CEO. Here he applied and expanded his knowledge to develop logistics solutions across the local automotive, high-tech and retail industries.

Niels holds a Diplom Betriebswirt (BA) from Staatliche Berufsakademie, Mannheim (Germany).

Functional experience

Our functional experience include among others warehouse design & management, transportation management, inventory management, demand planning, supply planning, supply chain planning, supplier relationship management and project management.

Industry exposure

We have had exposure to industries such as retail, automotive, consumer goods and services, petrochemical, mining and defense aerospace.

Core offerings

Through our core offerings we can support our clients to achieve strategic, tactical and operational results. These offerings cover areas such as Strategic Supply Chain Planning, Fulfillment, Sourcing & Procurement, and Project Execution.

Credentials

Since founding the company in the fourth quarter of 2012 we've been involved in various engagements.

Our primary engagement in 2013 has been with a leading global third party logistics company. Here we've been tasked to support them in their turn-around of their contract logistics department, transportation management strategy and operating model design, Africa business development strategy, and procurement strategy development.

Secondary engagements during our first year of operations included a warehouse performance assessment at the Cape Town operations of a global apparel company, supporting a logistics service transition at a German automotive manufacturer, and providing warehouse implementation support for an agricultural equipment manufacturer.

We are currently supporting a transportation consulting company with project management at a South African FMCG company and with a supply chain assessment at a Durban based manufacturer of engineered wood products. - *RF*

dasRESULTAT (Pty) Ltd.

25 Kelly View
11 Kelly Lane
Bedfordview
Gauteng
2007

dasRESULTAT is a result focused logistics and supply chain management advisory company.

We partner with our clients to identify and unlock practical and sustainable solutions.

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Thought Leadership @ dasRESULTAT

www.dasresultat.com/thought-leadership/

in

www.linkedin.com/company/dasresultat

Anton Nieuwoudt
anton.nieuwoudt@dasresultat.com
+27 82 495 3419

in

za.linkedin.com/in/antonnieuwoudt/

Niels Rudolph
niels.rudolph@dasresultat.com
+27 79 588 8098

in

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