

eureka

Issue 11

Autumn
2010

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THE MAGAZINE FOR THE MATERIALS HANDLING PROFESSIONAL



Revolution or Evolution?

*Big impacts lead to big changes.
How do companies thrive out
of the recession?*



Cutting the Carbon Footprint

*Opportunities to reduce
emissions and costs.*



Automation

*Automated materials handling
machinery is great – but is it
the 'magic bullet'?*



eureka issue 11

The magazine for the materials
handling professional

Welcome to the Autumn 2010 edition
of eureka!

In this edition, we take a look
at the way our business is changing, with
investment in automation, skills and in
reducing emissions across the supply chain.

End customers, whether automotive
OEMs or big retailers, like Wal-Mart, are
requiring suppliers to raise their game and
cut emissions. Collaboration, organisation,
buildings and machinery all have their part
to play. Find out what some leaders in their
fields have to say on page 7.

Graham Lovatt has been in the lift truck and
logistics business for over 40 years. He shares
his ideas on pulling out of the downturn on
page 6. On page 4, we consider whether the
latest recession will result in a sea-change in
the industry. Will the downturn be the catalyst
for the whole-hearted adoption of new ideas?

Automated equipment has its place but
there are very few applications where it is
the ultimate answer. What is essential is a
comprehensive site survey, in order to arrive
at the right integrated solution. Read more
from page 10.

The other key factor is skills, from drivers
to mechanics and support staff. The last 20
years has seen big changes in technology
and in education. Do we have the skillsets we
need? Find out, from page 13.

Tell us what you think of eureka! Drop us
a line via our website at www.eurekapub.eu
or e-mail us at comment@eurekapub.eu.



Monica Escutia
Commissioning Editor



eureka's commissioning editor is
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marketing communications coordinator for
Cat Lift Trucks, based in the Netherlands.

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to visit the eureka website
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of useful articles and features.
You can also post comments and
suggestions about the magazine
and future articles you'd like
to see covered.



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Time to change **4-5**
Revolution or Evolution?
A survey in 2009 found that 75% of
respondents agreed that the current
recession has led to significant structural
changes in their organisations. What are
they and how far do they go?

Interview **6**
Graham Lovatt
A legend of the logistics industry shares
his thoughts on thriving out of recession.

Cutting emissions **7-9**
Carbon Dating
eureka! looks at ways companies are
meeting their customers' demands for
higher environmental performance all
through the supply chain.

Equipment and organisation **10-12**
Automatic Loves
One size does not fit all. What factors
should be taken into account in
determining the optimum man/machine
mix for efficient operations?

Training and skills **13-15**
**A Demographic
Timebomb?**
Do we have the right blend of skills and
experience needed for today's more complex
lift truck fleets and logistics operations?



Events Calendar

Date, Event, Location, Website	Overview
24-26 October Supply Chain World Europe 2010 Munich, Germany www.supplychainworld.org	Supply Chain World Europe is the premier event for supply chain professionals to share knowledge, learn, and network with peers.
16-19 November IMHX 2010 Birmingham, United Kingdom www.imhx.biz	IMHX The International Materials Handling Exhibition is the UK's premier event showcasing thousands of products and services from all sectors of the logistics, materials handling and storage industries.
22-25 November MANUTENTION 2010 Paris, France www.manutention.com	MANUTENTION in Paris is an international trade fair for material handling and logistics equipment and systems. As an established event the exhibition is an important networking event in the industry and for the visitor is the key to the whole sector. International manufacturers present their product range and offer a wealth of information about the industry.



Revolution not evolution?

Sue Tupling

Most of the time change happens incrementally, and organisations and markets gradually adapt and evolve. However the crisis caused by the depth of the recent global recession marks an abrupt discontinuity. Such discontinuous change presents leaders with an extraordinary challenge to transform their organisations.

eureka looks at the impact this has on materials handling dealers and calls for a revolution in the way equipment is sold.

In a recent research study, conducted in November 2009 amongst senior managers and leaders in (largely) manufacturing organisations, 75 per cent of people agreed that the depth of the current recession has resulted in significant structural changes to their markets. Such strategic shocks create new landscapes of winners and losers in their aftermath.

Many fleet managers have survived the recession by either doing more with less or putting off doing anything at all. For example a key focus for many forklift users over the last 20 months has been to rationalise the fleet, with fewer trucks producing the same (or more) work.

Typically this is achieved by increasing the capacity rating of trucks used, standardising equipment (i.e. attachments) or by opting for a different fleet mix. This presents an interesting challenge for the dealer, who has to move from selling equipment to becoming a commercial 'advisor' for the customer. Materials handling suppliers need to understand the cost structure of their customers' businesses and think innovatively about how it can be lowered. This not only involves looking at hours and usage rates, but it can mean reviewing the entire application with a fresh pair of eyes, and thinking creatively to present a choice of solutions to the customer. This presents a challenge

Recession Recovery

because the wider aspects of the materials handling operation need to be considered, such as battery management, racking, pallet movements, goods in and out operations.

Quick wins can often be made on standardisation of equipment, such as attachments. A food manufacturer recently standardised its rotator across three trucks, instead of having it dedicated to a single truck. This meant that wear and usage was spread, recovery time and uptime were improved and the company's waste handling operation was optimised.

According to Cat Lift Trucks Dealer, Crepa, this makes the dealer's role bigger and more interesting. But it also requires a different skill set. In addition to good interpersonal skills, product and industry knowledge, account managers need to be flexible and adaptable and have good creativity and problem solving skills.

In fact, according to the research, one of the main predictors of success for any company moving forwards in the new post-recession world is the ability to adapt to changes in customer needs. Nearly three quarters of respondents felt that lack of flexibility, innovation and creativity in the workforce were the greatest risks to the future success of their businesses. So a new set of skills is required to collaborate, create value and innovate to retain and develop profitable and loyal customers.

This skill is evident across the Cat Lift Trucks dealer network and greatly helped by their willingness to work collaboratively as a true partner with customers. The catalyst for this often comes from seemingly 'difficult' customers; Lean organisations, in particular, are focused on improving key processes and using fewer resources, to continually improve customer value. Naturally they demand the same commitment from their suppliers.

For example a large global car manufacturer has a fleet of 90 Cat tow trucks in a RoRo receiving facility at one plant. The previous system did not achieve the company's efficiency goals in terms of number of operator movements and resulted in operator fatigue. Its new Cat NTR30N fleet has been able to deliver improved operator ergonomics and productivity levels that contribute to the plant's lean goals.

Crepa believes that taking this type of improvement to the next stage, could result in development of a 'supertruck'.

"Whilst flexibility is vital in challenging

times, what customers are really looking for is an approach that looks at total cost of process," Crepa's spokesperson and marketing manager Rogier van der Hoeven, said. "60 per cent of the total cost of running a warehouse is labour. If you can make this more efficient you can help the customer reduce costs significantly, but this means looking at the whole process of operation and the related costs. Customers are ultimately looking for machines that can do the work of two or more people, because this means they save not only the cost of the machine but also high associated labour costs."

"Whilst flexibility is vital in challenging times, what customers are really looking for is an approach that looks at total cost of process,"

This type of 'supertruck' can also be achieved through good battery management. In 2009 the sales of electric counterbalance machines outpaced IC engines for the first time in recorded history. Intelligent battery management across an electric fleet can mean a four-fold increase in shift life and therefore productivity.

Whatever the future holds, whether it is the inevitable march of lean, the clamour for sustainability, a post BP drive for safety compliance, one thing is certain: dealers need to be able to adapt to their customers' constantly changing needs. The research concludes that this all boils down to skills, we need a paradigm shift in our models of skills and management to survive in the new post-recession markets. Are you ready for the revolution? ■

Article feedback is welcome: editor@eurekapub.eu

1. The NTR30N delivers improved operator ergonomics and productivity levels





Graham Lovatt

With a distinguished 40-year career in industry, encompassing 16 years' at the helm of two of Europe's leading forktruck manufacturers, **Graham Lovatt** has successfully weathered many recessions. The recently retired industry leader talks to **eureka** about the important lessons of the recent crisis.



Graham Lovatt's tips for thriving out of recession

1. Check that your service providers can deliver on their promises – have clear evidence and measures

2. Having downsized, hold onto the lean cost base, let growth deliver profitability

3. Don't drive forward on too many fronts, prioritise carefully – look closely at the number of projects and initiatives you have on the go at any one time

4. Be brave, act quickly and decisively at the first signs of recession and recovery

5. Be supportive of your people

This recession has presented a massive challenge in many ways. "Firstly, I think it is fair to say it caught everybody by surprise and turned out to be unique in terms of the speed and depth of its impact. Secondly the recovery path is proving particularly difficult to predict. Hope and reality are continuously separated by a large chasm".

"Over the last 15 years, we have enjoyed the benefits of globalisation resulting in a prolonged period of growth. In my early days in the lift truck industry the economic cycles were more frequent and I guess this created a generation of managers who at least had some background in recession management when this one hit. Even with all this experience the current recession has been particularly testing and it must have been particularly challenging for those managers facing their first recession".

The complexities of what caused this economic crisis are well documented if still not fully understood. But how has this impacted on the industrial lift truck market and what changes could it bring for Cat lift truck dealers?

"Even before this recession, end users were buying much more than the Cat product from their lift truck dealers. The product, its quality, reputation, technology, is essential of course; but customers are looking for much more than this".

"Now, even more, they are looking for partners that can help them improve their operational efficiency and thereby contribute to their company objectives. So the services that support the product today have more impact in the ultimate buying decision. This includes the quality, flexibility and innovation in financial solutions, service and rental contracts, spare parts supply, and the provision of value-added services such as fleet audits and recommendations and fleet management programmes".

Lovatt believes, that in the aftermath of the recession, during which downsizing

has become the norm, end users will be increasingly looking for tangible evidence that their suppliers can deliver on their promises.

"This boils down to a few fundamental business capabilities: do suppliers have the people, competencies, capacity, financial strength and structure to meet their demands and expectations in the increasingly competitive, post-recession markets?".

Services that support the product are very important in the buying decision.

The depth and scope of the change that the crisis has precipitated, certainly galvanises customers and industries to react and adapt. Lovatt sees three key trends resulting from the crisis: "The complex nature of this crisis means that for the first time in living history no one can truly predict the speed and rate of any recovery".

"The experience of the last year has tended to make businesses focus on the short term. This could well accelerate the shift towards rental. In some European countries, long-term rental represents as little as 35 per cent of the market; rental provides end users with options and solutions which can help them manage business risks in times of uncertainty without large one time impacts on their cash flow, whilst at the same time allowing them to renew their equipment fleets".

"Many end user organisations have experienced downsizing as a result of the recession. There is little doubt that this will result in even greater reliance on suppliers and even higher demands for support, we will be expected to raise our game. It is my opinion that our industry already offers high levels of service and has the structure and discipline to the raise the bar even higher." ■

CarbO²n dating

Carbon taxes, carbon trading and cutting the carbon footprint are pretty well-known phrases by now but most companies are still missing opportunities to cut their emissions, environmental impact – and costs.

Ruari McCallion looks further along the supply chain.

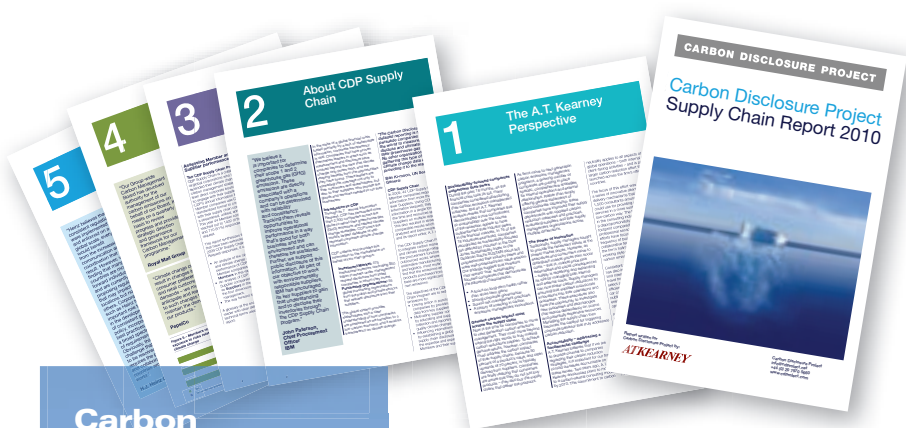
When one thinks about the main producers of CO², one's thoughts naturally turn to manufacturers – after all, is it not they who will have to pay out the most under emissions control regulations? While that is probably true, the number of businesses that will escape completely is, in reality, very small.

A T Kearney, the global management consultancy, recently produced the second annual Carbon Disclosure Project (CDP) Supply Chain Report. One of its key findings is that suppliers are now expected by some of their global customers to demonstrate greenhouse gas emissions management, awareness and action, in order to maintain business relationships.

There are 44 supply chain member companies of the CDP (out of around 2,500 organisations that supply climate change data) and their size more than outweighs their numbers. The membership list includes BAE Systems; Cadbury; Colgate-Palmolive; Dell; GlaxoSmithKline; H J Heinz Co; Johnson & Johnson; Johnson Controls; PepsiCo; Procter & Gamble; Reckitt Benckiser; Sony Corporation; Unilever; and Vodafone Group – big names,

from just about every commercial sector. Just under 40 (89%) of these companies have an established strategy to engage with suppliers on carbon related issues and nearly all of them have an emissions or energy reduction plan in place. Of more importance to the supply chain, including logistics suppliers and warehouse managers, may be the fact that more than half (56%) of these organisations have stated that they expect to deselect some suppliers in the future for failing to meet carbon management criteria set by the companies. Some have also indicated that future contracts will require improved carbon management. →





Carbon Disclosure Project, Supply Chain Members:

Acer Taiwan
BAE Systems UK
Banco Bradesco Brazil
Bank of America USA
Baxter International USA
Boeing USA
Cadbury UK
Carrefour France
Cathay Pacific Airways Hong Kong
Colgate-Palmolive USA
ConAgra Foods USA
Dell USA
Eaton Corporation USA
EMC USA
ENEL Italy
Fiji Water USA
Fujitsu Japan
GlaxoSmithKline United Kingdom
Google USA
H. J. Heinz Company USA
Hewlett-Packard Company USA
Imperial Tobacco Group UK
IBM USA
Johnson & Johnson USA
Johnson Controls USA
Juniper Networks USA
Kao Japan
Kellogg Company USA
L'Oréal France
Logica UK
National Australia Bank Australia
National Grid UK
Newmont Mining Corporation USA
PepsiCo United States
Procter & Gamble Company USA
Rautaruukki Finland
Reckitt Benckiser UK
Rolls-Royce UK
Royal Mail Group UK
SKF Sweden
Sony Corporation Japan
Unilever United Kingdom
Vivendi Universal France
Vodafone Group UK



2. Stephen Easton,
Principal at A.T. Kearney.

→ Serious business

“Major corporations are taking carbon reduction seriously and are developing strategies to address carbon emissions in their supply chains,” said Stephen Easton, A.T. Kearney principal and study leader. “Corporate CEOs and boards of directors are demanding results from company carbon reduction programs not only for the environmental benefits, but for cost-reduction benefits as well.”

The writing on the wall is very clear: suppliers, both of goods and services, risk losing important customers if they don’t pay close attention to their carbon footprints. A major contribution to emissions is made by buildings, which is why there has been such a strong emphasis on heat efficiency and insulation in the EU’s Energy Performance of Buildings Directive (EPBD). It stipulates minimum requirements for ventilation and heat loss, among other issues, and while it has raised some initial capital costs of buildings – and has implications on upgrading and change of use or tenant – it tends to make warehouses cheaper to run over the longer term.

“CEOs ... are demanding results from company carbon reduction programs... for cost-reduction benefits as well.”
Stephen Easton, A.T. Kearney.

Greener ‘sheds’

Some construction companies have gone a lot further than EPBD. In eureka! Issue 5, summer 2008, we had a look at how warehouses can be made much ‘greener’. Featured in that article was a company named Gazeley, which specialises in building eco-friendly warehouses. It has now developed over 6 million square metres of premium warehousing in an expanding number of countries. It began in the UK and has 25 locations there, from Strood in the south to Doncaster and Liverpool in the north.

“Ninety-two percent of the carbon impact of buildings is in their use through their lifetime.” Jonathan Fenton-Jones, Gazeley

Its 180 Ha Magna Park Plaza site in Zaragoza, Spain, offers the Gazeley range of standard ‘eco’ features, which include storm water collection, to minimise water consumption; low-flush volume toilets; super airtight and insulated building envelope, to cut heating and air conditioning power needs; and solar thermal water pre-heating, among a long list. Spain has the advantage of a lot of sunshine, so enhanced solar pv (photovoltaic) panels are among the list of options. Gazeley’s standard eco features are claimed to deliver significant savings in operating costs in the standard package; its fit-out service can help to save even more. A warehouse project it undertook for John Lewis, one of the UK’s leading retailers, delivered over £240,000 (€285,000) of annual savings through extensive use of renewable energy – primarily wind and solar power – and is projected to reduce CO² emissions by around 67 per cent, compared with standard buildings, over its 25-year life. A 45,000 sq m distribution centre it built saves 156 tonnes of CO² a year, compared to standard constructions and services functions.

€285,000 of annual savings through extensive use of renewable energy and 67% CO² emissions reduction.

“Ninety-two percent of the carbon impact of buildings is in their use through their lifetime, which we, as developers, cannot control,” said Jonathan Fenton-Jones, Global Procurement & Sustainability Director. “What we can do is design and construct the building in such a way that it will start life as efficient as possible, with features like storm water recovery, outstandingly effective insulation, geo heat pumps and the capacity to accept solar power arrays included at outset.” The Gazeley template is in operation at 15 locations in France, eight in Germany, three in Italy and another in Belgium.

Random no more

However, it isn’t just power consumption that drives emissions; the organisation of the warehouse itself is important. While battery-powered lift trucks do not emit CO² in operation, they have to be charged and the more efficient they are, and the more effectively they are used, the less power they require – so the days of haphazard storage (or ‘random’, as some called it) are in the past. In a separate article in this edition, we look at site surveys and automation, and the contribution they can make. A useful tool for assessing the extent of the challenge facing warehouse managers has been

produced by the UK’s Carbon Trust. Named the Footprint Expert, it is available online and can be used to compare performance across a growing database. It is designed to provide help and information from rapid assessments (‘hotspots’ through auditable data trails to comprehensive, certified footprints, suitable for external communications. It can be accessed at www.footprintexpert.com.

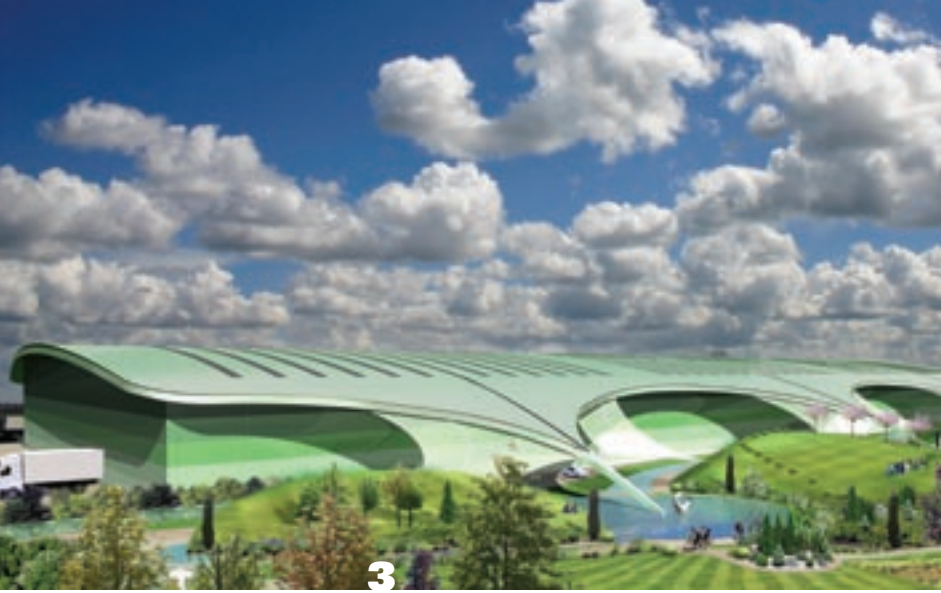
However, while individual companies can have an impact on emissions, the effect will be increased by collaboration – or such is the argument from pallet pool operator LCR, which is working with FMCG (fast-moving consumer goods) clients to collaborate in their supply chains and reduce the number of trips their trucks undertake. Rather than travel back and forth with small loads, LPR frees up capacity by collecting up to full loads of pallets from regional distribution centres and returning them to FMCG manufacturers.

Making collaboration pay

Logistics company DHL Supply Chain is taking the idea a step further by establishing a collaborative platform in its automotive operations. Its project began with an inbound UK freight facility for Jaguar Land Rover’s Solihull, England, site. It dealt with a mixture of FTLs (full truck loads) or LTL (less than truck loads) and developed to include parts management for BMW’s just-in-time requirements and Jaguar’s aftermarket network. At the core of the operation of the collaborative platform is the large cross dock facility at Solihull, which is supported by a fleet of around 350 vehicles and 400 trailers. These are at the disposal of DHL’s central planning team, which acts as a 4PL, pulling in additional, external resources as and when required.

While certain elements of the platform are dedicated to OEMs, such as engine manufacturer Perkins, there is a sizeable part of the operation that is set up to handle variables. Currently, the platform handles spare parts – one for JLR (Jaguar Land-Rover) inbound (UK and EU business), another for common vendors such a Visteon. The set-up is also the UK freight consolidation centre for Ford and BMW’s collection service, which helps to put otherwise redundant JLR real estate to use.

DHL currently undertakes over 1,000 collections per week via the collaborative platform. In addition, DHL handles 2,000 collections for Jaguar Land Rover in the UK and 1,200 from the inbound EU collection service. Deliveries from BMW, various just in time customers, Perkins, Dana and other suppliers, take the total figure up to approximately 5,000



collections per week.

Sharing a proven, established platform reduces vehicles movements, which helps with overall supply chain efficiencies. Reduced movements mean reduced costs as well as improved environmental credentials.

DHL tracks its carbon footprint and believes the adoption of the collaborative platform for inbound parts has resulted in a year on year carbon reduction of 2.5per cent.

“Empty running is one of the industry’s dirty secrets, with well over 60 per cent of the UK’s HGVs still transporting fresh air,” said Bob Naylor, VP of DHL’s UK Automotive Freight business. “This kind of initiative is one way we can continue to reduce that statistic.” Since its adoption by several tier one and tier two suppliers in recent months, confirmed supply chain cost reductions of approximately 10 per cent have been achieved. DHL also focuses efforts on compliance, keeping photographic records of deliveries to identify boxes that cannot be stacked so that instances of poor packaging can be rectified. It visits customers in order to discuss how to optimise schedules and reduce truck movements. But perhaps its most significant achievement is to have created the platform that facilitated collaboration between competitors in the first place.

Perhaps its most significant achievement is to have created the platform that facilitated collaboration between competitors in the first place.

There is no single answer to the legislative and market challenges to reduce emissions, especially CO₂. As discussed, the options will include building construction, layout, operations management and other aspects. However, as the A T Kearney Carbon Disclosure Project Supply Chain Report makes clear, pressure from customers to improve performance will continue to grow as well. ■

Article feedback is welcome: Ruari@eurekapub.eu

3. Gazeley Construction specialises in ‘eco-efficient’ warehouses (Image courtesy of Gazeley)
4. Graded blue cladding on a Gazeley warehouse is visually appealing and blends with the environment (Image courtesy of Gazeley)
5. DHL has collaborated with Jaguar Land-Rover to improve the effectiveness of the supply chain (Image courtesy of DHL)



Automation of warehouses is an appealing concept but the reality is that one size does not fit all. Assessment of needs, followed by installation of the appropriate mix of systems, will deliver better results.

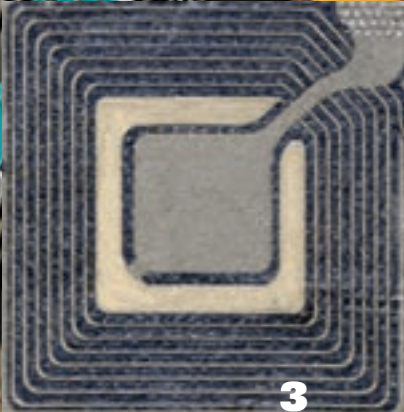
by Ruari McCallion

It's easy to see the appeal of automation in warehouse operations but human beings continue to have a couple of advantages over machines: they learn quickly and they can see and adapt to changing circumstances. They are generally much more flexible than machinery.

A fully automated warehouse works best with same-sized products

That is not to say that automation has no place in logistics operations. Automated systems fall into several categories, from quite simple to very complex indeed. Most will fall somewhere in between. The question is: how much automation, and where?

"A fully automated warehouse will work extremely well when all products have common dimensions and weights and the products are going to be produced in the longer term," said Martijn Ligtoet, warehouse consultant with Cat Lift Trucks dealer, Crepa.



Automatic Loves

Equipment and organisation

An integrated, fully-automated warehouse is fast, very reliable and delivers big savings in flow handling time. If products are constantly changing, by dimensions and by weight, then operators have to give a lot of thought to the issues. "It is always necessary to look for the best solution for the warehouse or site – that is why Crepa undertakes site surveys. No two circumstances are absolutely similar."

An ideal mix

A mixture of automation and manual handling is the right solution, most of the time. It offers a combination of high stacking rate and medium flow handling, with less material handling equipment. It provides a lot of management information and can be optimised when necessary. It makes piece-picking easier and it is flexible.

Bokodes: new kids on the block

Innovation in automation means that new gadgets, widgets and add-ons are becoming available all the time. Barcodes were new and untried, once, and it's likely that at least one of today's emerging technologies will become essential in the future. RFID tags have gained a niche but have not swept the board but their use is spreading as they become smaller and more robust. The new kid on the block is the 'bokode': just three millimetres in diameter, they are capable of holding thousands of times more information than the familiar striped labels. They currently consist of an LED, covered with a tiny mask and a lens. Information is encoded in the light shining through the mask, which varies in brightness depending on which angle it is seen from. Among their claimed advantages are their size and that they can be read from different angles and from further away than a barcode. They can be read by a standard mobile phone camera, so the infrastructure could be relatively cheap. The bokodes themselves, however, cost around

US\$5 each, most of which is represented by the current need for a lens and powered LED display. As they become passive the price will fall but the information capacity will remain. Their flexibility – including the potential to be read at distance online – could make them indispensable. But whether such opportunities should be seized with both hands is very much open to debate.

Denser recipe

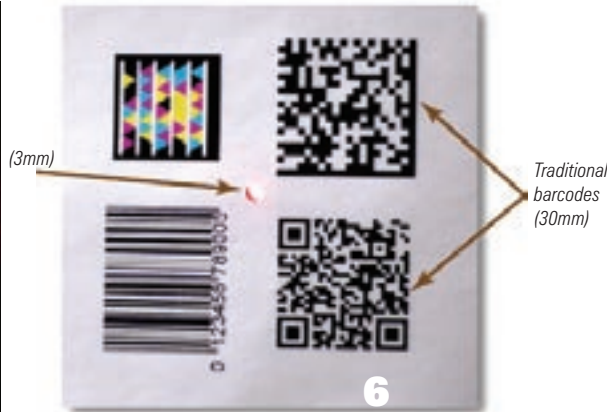
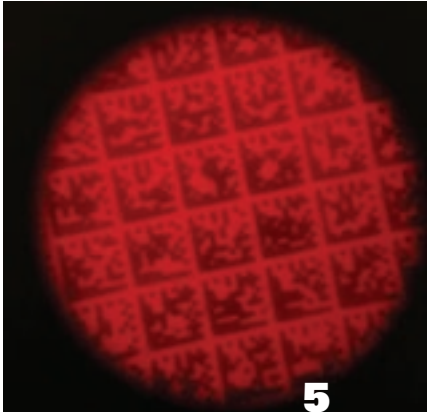
"The recession has seen many companies consolidate their operations and make the most of what they have available rather than investing in additional space," said Edward Hutchison, Managing Director of BITO Storage Systems, part of BITO-Lagertechnik Bittmann GmbH, which manufactures storage and order-picking systems. "This invariably means they require denser storage and order picking solutions. They are also looking at order picking systems that reduce costs to ensure that products can be delivered as economically as possible." But automation, with consequent reduction in payroll, can sometimes be a temptation that should be resisted.

"The recession has seen many companies consolidate...rather than investing in additional space"

"Often, the decision to automate is not the right solution," said Nigel Bailey, senior →

Main image: (Image courtesy of BITO)

- 1. Airport baggage handling systems are outstanding examples of fully-automated materials handling.
- 2. A traditional barcode
- 3. RFID tags are getting smaller
- 4. Modern barcodes store more information...
- 5. ...but still nowhere near as much as the tiny 'bokodes'
- 6. The bokode is less than 3mm in diameter in comparison to the traditional barcodes





6

6. A package being scanned on a computerised warehouse conveyor system.

7. A distribution warehouse automated conveyor line.

8. Man and machine in harmony.

→ consultant with independent consultancy Davies & Robson. Influencing factors include steady demand and external issues, such as land prices and security needs. "If you have a wide and fluctuating level of demand then you may be able to automate part of the operation but not the whole of it." But automation is not just robot vehicles and powered conveyor belts.

Automation is not always the right solution

"In a wireless management system the driver of a lift truck has an earpiece through which he is told what to do. In voice picking, the computer tells the operator what to do, he does it and says that it's done and then gets the next task," Bailey explained. He said that such systems are quite popular with the operators themselves, despite suggestions of stifling initiative and dehumanisation. Instructions are clear and easier to follow than traditional clipboard and paper. Human interaction with automated systems seems to be becoming the norm – but in what mix and to what extent?

Costing the ingredients

"On one hand a company can opt for a long term investment in an automated solution," said Hutchison. While this requires a large initial outlay, it has the potential to deliver big increases in productivity and personnel savings. The size of the initial investment will mean a payback will be measured in years. A lower-level improvement, such as carton live storage, will see a small saving in personnel yet the investment is relatively small so the payback period will be a few months. Either way, a site survey is recommended before

making a decision.

"In general, it is well worth getting an overview from a supplier and then seeking a consultant with experience in the industry," Hutchison said. "This consultant can then provide the optimum solution and put together a tender for whatever equipment is required." Ligetvoet broadly agrees. Crepa works exclusively with Mecalux, one of the largest racking and storage solutions companies in the world. The site survey examines the total costs of process and how the logistics flow. Floor plans, incorporating flow calculations, are drawn up and simulation programs are an increasing and valuable element in the process – Crepa finds it helpful in analysis and decision-making. It is also a useful tool for showing the customer a visual presentation of how efficiency can be improved, together with financial calculations of the total operation. The factors that will be considered include whether it is possible to reconfigure the warehouse from a wide aisle layout to narrow aisle, thus gaining more pallet positions. Moving to narrow aisle will involve looking at other mechanical handling solutions, such as lift trucks.

"You can also look at reconfiguring a typical warehouse layout that operates picking and replenishment from the same aisles to having separate replenishment and picking aisles," Hutchison said. "This would also have a positive effect on the health and safety of the operation." As for the racking itself – is it easy to reconfigure? "Something we are frequently doing at the moment is turning bolt pallet racking into ground level picking systems with buffer storage on the upper levels." According to Bailey, companies are more prepared to look at mini-load and carousel systems, including 'paternoster' units. The site survey looks at the warehouse, looks at the facilities and effectively carries out an audit – where it is now and how to improve it.

"Logistics are dynamic and will change; automation has improved things a lot."

"Lessons are learned from other industries," said Ligetvoet. "Logistics are dynamic and will change; automation has improved things a lot." Whether a company is looking to work better within its existing footprint or move into a new building, the recommendation is the same: a full site survey and maybe a simulation will ensure that the resulting arrangement is best suited to business needs. Analysis of the process step by step provides the opportunity to determine what is best for each location. ■

Article feedback is welcome: Ruari@eurekapub.eu

A demographic timebomb?



There is a skills gap affecting industries across Europe – but it may not conform to general expectations. The question is: how do businesses deal with it?



1

1. Traditional skills and experience – still part of today's workforce

During the 1980s, apprenticeships seemed to fall out of fashion in some countries, the UK in particular. There were exceptions, most notably Germany, but those countries and companies that failed to invest in their future found the consequences really started to bite in the 1990s. Expertise and skills were becoming focused into the older age groups, who were beginning to approach retirement.

In the UK, at least, what followed was a scramble to try and bridge the gap. New apprenticeship schemes were introduced and have been extended. In 2008/9, around 4.8 million people were in post-16 education and training. Britain's government has also introduced training aimed at older (aged 25+) people who need to raise their skills levels. Schemes like these are far from unique across Europe.

Currently, older workers are pretty well-skilled and have been for a long time. Younger people have skillsets that may be different but could be more suited to the modern world; and there is a group in the middle who may have lost and maybe are now targeted with workplace-based training. The differences are quite visible, as

Dr Ugo Turchetti, Managing Director of Italian Cat Lift Trucks dealer Compagnia Generale Macchine SpA (CGM) observed.

"This is one of the main issues that companies and society in general will face in coming years," he said.

"Younger mechanics are much better able to fit the needs of the latest generations of trucks"

It is not unknown for older generations to be critical of the manners, behaviour and level of knowledge of younger people. Today, commentators use the phrase 'dumbing down' in claiming everything is getting easier – and, by extension, that the newer generations have neither the knowledge nor the skills of their elders. Ugo Turchetti does not agree.

New for old?

"New generations grew up among electronic tools," he said. "They are much more familiar with any electronic equipment. Younger mechanics are much better able to fit the needs of the latest generations of trucks; they are





2

2. The paint shop still governs the pace of production
3. Electronic skills are in increasing demand



3



much more familiar with the computers needed to work on the trucks." He maintains that the need for training is actually greater in older generations. That, however, brings its own problems, resistance to change being among them. The solution has to be continuous training, helping even experienced workers to raise their skills levels. But it is not easy.

"Younger people will take advantage because of their ability to learn quicker."

"It is a drastic and painful modification of the older generations' mentality," he explained. "It requires much more commitment and often brings stress and frustration." The established or expected hierarchy will often be modified. "Older technicians may find themselves being overtaken in job quality, careers, income and social status by younger people. And this is hard to accept." Any well-organised company will have ongoing training schemes in place but

this is not the full answer, Turchetti believes. "Continuous training is not able to fill the gap," he continued. Younger people will take advantage because of their ability to learn quicker. Older people find themselves diverted to lower level jobs and sliding down in the social scale." In the extreme, continuous training may just be a way of ensuring that older workers continue to be economically active, rather than losing out completely. Shifts in employment profiles in Europe's cities underline the point, with jobs that required physical strength and manual ability being replaced by service industries. Change is not limited to the shopfloor, either.

Change or die

"Older generations of salesmen, who were used to working mainly through personal relationships, have problems in becoming real material handling consultants, experts in the field, familiar with computer usage, with wide knowledge of contracts, regulations, laws, operating costs, and so on," Turchetti said. "In the material handling industry, even the truck drivers face problems. Younger people are much more comfortable with the new trucks, that often adopt driving system such as joysticks."

However, if new skills are the requirement, it may be the case that they are not necessarily in as wide supply as some may wish. Manufacturing and engineering have an image problem, across Europe. The image of 'dark sweatshop mills', discharging masses of whey-faced workers at the end of each day is largely out of date but office-based, service jobs in finance and so on seem to be more attractive, even after the near-collapse of the banking system. The result is a shortage of key skills in the workforce.

Short, not sweet

"People with skills in particular areas, like robotic operations, are very hard to find on the labour market," said Hans Wijnsma, Co-ordinator of the Company School at Cat Lift Trucks Europe. It provides ongoing training for Cat Lift Trucks employees and, in certain specific areas, for Cat dealers and customers. "Robotics operations are different from crafts. There is a need to understand the entire process, not just your own trade area."

The CLTE School was established in 1998. Its primary offer is training 'on the job' for the company's own production workers and covers disciplines such as welding, industrial painting and assembly technologies, all government-certified to recognised



4

standards. The focus is on quality and training is ongoing throughout the year.

"As well as basic skills we address other specific areas, such as robotic operations," said Wijnsma. "We train people to have a broader perspective and to have an overview of the whole product. Operator training is a small piece of the programme; it mostly about operating the system, which is a craft in itself. It's a tough job to do all day long and we're always searching for improvement in productivity and quality." Operators need to ensure that what they are doing with their system is 100% right when it is delivered to the next stage. "We are delivering a different way of training than in the past, when the focus was much more on the discipline itself. There is difficulty in finding the right people in some disciplines, so the School trains and educates our recruits.

"In the longer term the problem is going to disappear, as the older generations retire."

"We have been offering training for our customers, suppliers and for other companies with similar needs," he continued. "We offer training in areas like Lean simulation and 5S, which is a two-day, 16-hour module."

Next to this, the online e-learning system, catlifttrucksacademy.com, enables users to log on from anywhere with Internet connection. Modules cover a range of subjects, from basic electronics and hydraulics to lift truck and warehouse fundamentals, common rail diesel

components and specific training on reach trucks, to name some examples.

"Our e-learning system has been developed for service, sales and parts employees of our dealers in Europe, Africa and the Middle East," said Ben Brink, responsible of this program at Cat Lift Trucks. "The e-learning coordinator of each dealership decides who is entitled to get access and at what level."

Several dealers are on board as well, which provide technical product support to assist mechanics in the field. Experience remains a valued asset although the older generations have to adapt. The last couple of decades have demonstrated that change is continuous and ongoing training programmes are essential, whether in-house or in collaboration ■ Article feedback is welcome:

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4. Today's lift trucks: complex assemblies of electronics and hydraulics.
5. Not all welding is done by robot.
5. New-generation skills acquired at school are developed at Cat Lift Trucks' training school.



5



6



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