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Allowed us to identify new, previously unknown suppliers as well as strengthen relationships with those we currently work with."

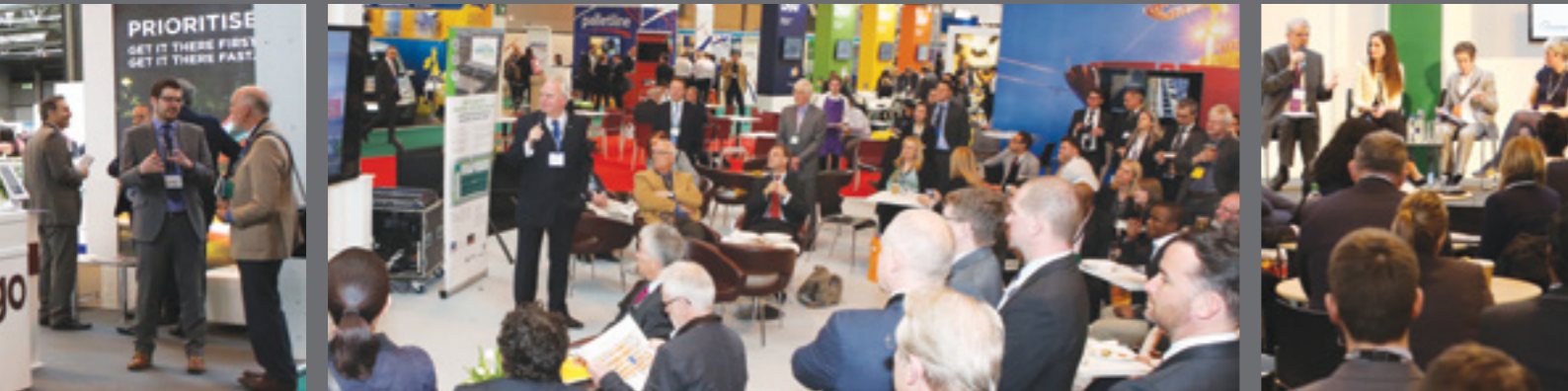
Nissan Motor Manufacturing UK Ltd

As mentioned, we are delighted (and a little embarrassed) by the number and quality of the leads we achieved from the show in April this year; almost overnight, our new warehouse is now fully committed. We would like to thank you for a fantastic show."

Sales Director, major logistics company

Very good. Speeds up decisions as all stakeholders are in the same place. Meetings take place that could take 2 months to co-ordinate diaries for."

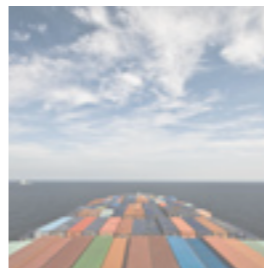
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A WORD FROM THE CHAIRMAN



Philip Chaganis OBE
Chairman - Strategic and Quality Committee, IoSCM

The more I learn about supply chain management the greater my appreciation of the importance of our profession to the success of human development. In my case, nowadays, most of my understanding of the wider significance of supply chain management through the ages comes from reading rather than doing, and invariably much of what I read gets me thinking about the logistical implications and the supply chain challenges associated with nearly everything that has happened around the world since human beings started to make their mark and began to trade and integrate as groups – and that's a very long time. Constantly dipping into the past, I find myself asking - How on earth did they manage to do all that? – putting the emphasis on the word 'manage'. But they did 'manage' albeit under very different and, undoubtedly to us, unfamiliar circumstances.

Being a committed 'logistician' in the broadest sense of the word seems to grip me like an affliction because I just cannot stop thinking about how people in the dim and distant past achieved this, that or the other under the circumstances that prevailed at the time without ever knowing the meaning of the term 'supply chain management'. Often it seems to me that although these ancient managers were indeed competent organisers, doers and great achievers, they did what they had to do without really knowing much about the bigger picture. And in the difficult jobs they were doing I cannot imagine that they worried in the slightest about their own professional development or career pathways!

But, in reality, I think I am probably wrong in suggesting that these people lacked professional understanding and I suppose it would help if I read more deeply into what historians know about how things were done and how people developed themselves through the ages.

Can you imagine being a supply chain manager (or whatever they were called) involved in the building of a magnificent structure or a fleet of ships for an expedition way back in time? Have you ever wondered how effective control was exercised over great distances in support of international trade before the telephone was invented? Could you see yourself having a part to play in the development and maintenance of a trade route across land and sea long before the days of the internet?

Some things never seem to change in the sense that the logistical and supply chain management challenges associated, with the massive humanitarian support operations we now see almost daily on our TV screens are, sadly and regrettably, repeats of the sort of challenges logisticians have faced from time to time in similar circumstances over the centuries. There appears to be nothing new in the way these heart-rending humanitarian support tasks have to be tackled.

However, something quite new and very exciting has captured the imagination of many professional logisticians as they tackle the complexities associated with the other dramatic events being played out on our screens at the moment – that is, continuous support operations to ensure the survival and development of the 'International Space Station' where human beings of a different kind have broken through barriers and need to be sustained.

The International Space Station is a reality; it is now another node on the global supply chain network. Over the next few decades, I expect those time honoured principles of operational logistic support and supply chain management will again prove essential in every effort to enable our astronauts to explore and establish themselves in places far beyond what is now possible. In all this, I see the ability of logisticians and supply chain managers to innovate and 'think outside the box' being thoroughly tested, as has always been the case when exciting, new challenges come along.

Unfortunately, not all IoSCM members will find the time to read our e-magazine each time it hits the screen. If you, like me, have a selection of journals and quarterlies on the go at any one time, I would not be surprised if the best you can do is to achieve only the limited benefits to be gained as a 'rapid scanner' or 'speed reader' when it comes to trying to absorb all the latest information and updates on your chosen subject. But remember, time spent in carefully selected and targeted reading is seldom wasted and there is plenty in here to choose from.

Philip Chaganis OBE, Chairman IoSCM



NEWS

EXPORT GROWTH FOR AUSTRALIA

The second half of 2015 was a great one for Australia's export industry.

The economy grew by 2.5% in three months to September, compared to last year when the previous quarter was 1.9% and forecasted as 2.4%.

Despite a slowdown from its biggest trading partner, China and falling commodity prices, exports have surprisingly risen and provided an economy boost. In fact, exports jumped 4.6% adding one percentage point to Australia's GDP (Gross Domestic Product).

This was surprisingly during the time the Australian dollar dropped 9%, a record low, as the central bank tried to boost economy activity.

However, Paul Dales, Chief Australian economist at research from Capital Economics warns that the strong exports are unlikely to be sustained. "With overseas demand soft, we are not convinced that net trade can completely fill the hole...This is the main reason why we doubt that economic growth will accelerate significantly next year." He said.

Australia's economy has seen moderate growth in recent years after the investment in the mining sector, which had been a key driver of growth over a decade ago.

The mining boom began after a rise in demand of raw commodities in fast growing economies such as Asia, China and India.

In the past decade high commodity prices created massive mining investment and large increases in mineral exports, whilst creating thousands of jobs within the sector.

Australia's commodity exports rose significantly during the boom with minerals, fuels and agricultural produce amounting to around two thirds of total exports. Australia's top three mining exports are iron ore, coal and LNG (liquified natural gas).

The mining boom also strengthened Australia's terms of trade (the ratio of prices received for commodity exports compared to prices paid for imports). This meant a rise in Australia's purchasing power over foreign produced goods and services.

This was reflected in the exchange rate that made imported goods and service significantly cheaper for Australian consumers. However, the downside of the boom meant that the car industry and tourism were made to compete on the international market which contributed to the 'Dutch Disease'.

The 'Dutch Disease' theory states that the real exchange rate appreciation worsens the international competitiveness of the economy's traditional tradable industries, especially the manufacturing sector.

It's safe to say that an economy boost is always a good thing but it also poses challenges within industries as we can see here; but whatever may lie ahead for Australia's economy in 2016, they're off to a good start.

ELECTRIC DOUBLE DECKERS – LOOKING TOWARDS THE FUTURE

The first ever all electric double decker London Red bus was unveiled in October to celebrate the state visit by Chinese President Xi-Jinping but it also paves the way for the future of public transport.

Chinese company, BYD has created the bus along with a further four which started operating before the New Year. The buses operated by Metroline now runs the 98 Route and carry up to 81 passengers each in fully air conditioned comfort.

The bus can travel up to 190 miles in city traffic on one single charge. It takes 4 hours to recharge but uses the cheaper alternative to fuel via off peak electricity.

Before the double deckers were unveiled back in October, two pure electric BYD single deckers were successfully trailed with the bus company Go-Ahead on two London routes for two years. Due to this success BYD were asked to supply Go-Ahead with a further 51 single decker electric buses.

But it wasn't an easy ride in convincing the Mayor of the city. Isbrand Ho, Managing Director of BYD Europe explains; "The Mayor of London challenged us that he did not believe an electric double decker was technically feasible but we took up the challenge and in less than two years created a bus you are seeing today."

The order also marks the partnership between BYD and bus bodybuilding company, Alexander Dennis. BYD supplied Alexander Dennis with its electric batteries and chassis technology before the final product was assembled in their plant in Falkirk, Scotland.

The partnership was strengthened after signing an agreement worth £660m which proposes building 200, single decker buses annually and turning over a profit of around £660m in the next 10 years.

But that's not the end. They've also discussed extending their partnership by introducing double decker buses into the agreement, which Alexander Dennis is a renowned World leader in. This potential could then bring in around £2bn if it goes ahead.

The production of BYD's Iron Phosphate Battery which has expanded into: automobiles, trucks, utility vehicles and energy storage facilities project its core value as producing clean energy platforms. The battery is fire safe, recyclable and has a long cycle life.

Leon Davies, Transport for London's Managing Director for Surface Transport said: "BYD is a big player in this market and has invested heavily in developing the battery technology and also battery management technology... It is also exciting to see BYD work in partnership with Alexander Dennis who has a well established reputation in London and Europe."



Melbourne, Australia



YOUNGER DRIVERS NEEDED FOR HGV CAREERS

The website HGVtraining.co.uk found that only one in five 18-24 year olds would consider a career in lorry driving and with a big gap forming within the industry, something must be done.

This gap to be filled is very large. In fact, forecasters have predicted that at least 50,000 additional drivers are needed to meet demand within the UK's logistics industry by 2020 and with the average age of a driver at 57 years old, it's clear that newer and younger drivers are needed.

The survey asked 2,000 individuals and found that 28% of 25 to 34 year olds would consider the role and 35% if 35 to 44 year olds, showing a clear age gap in potential drivers.

It also revealed the reasons behind the lack of interest forming a career as a HGV driver. The top three reasons were as follows; a perceived lack of career progression, boredom and the cost of training, which is currently around £3,000 for the CPC professional driver qualification.

Gary Benardout, Co-Founder of HGVtraining.co.uk said: "Our research proves that there is a good appetite for a career in logistics and our task – and the task of the industry as a whole – is to bridge the gap between interest and recruitment. It's not an easy task, or one that can be completed immediately, but the sooner we tackle the issue, the sooner a resolution can be achieved."

Due to its findings HGVtraining.co.uk have released its own Young Truckers Manifesto, which they hope will help them tackle the lack of young people wishing to start a career in trucking.

The plan sets out the following aims:

- 1) A Government commitment to establish a £25m fund dedicated to training drivers aged 21-25
- 2) Guaranteed free re-takes of the CPC for those who don't pass first time
- 3) An increased focus on promoting a career in logistics in schools, similar to the German style emphasis on vocational options.

Their three point plan builds on the recent announcement of the HGV Trailblazer Apprenticeship which was approved in December 2015.

Richard Burnett, RHA Chief Executive welcomed the result: "The approval of an LGV apprenticeship Trailblazer scheme is certainly a step in the right direction, but we need bold strides if we are to tackle the driver shortage."

However, this does not find a quick fix solution to the lack of female lorry drivers which was also a key find within the survey. HGVTraining.co.uk found that only 14% of women would consider switching to HGV driving and more than a third did not see it as a female friendly career.

There may be many steps currently taking place in trying to secure an interest from the younger generation, but there are still many hurdles to pass to secure the 50,000 additional drivers needed by 2020, especially in recruiting female employees.

www.HDVtraining.co.uk

FORECASTS FOR THE SUPPLY CHAIN IN 2016

It has been claimed that there will be two key factors which will dominate the supply chain within the UK this coming year.

First, the trend of minimal year-on-year growth in consumer goods spending both in the UK and Europe which will encourage manufacturers to look for opportunities to consolidate and lower costs, whilst focusing on the developing world markets with higher growth potential.

Second, competitive pressures placed on manufacturers. Those based within the developing world are leveraging their low cost base and local knowledge to secure business within the local and international markets.

In 2015 the industry saw cost control and consolidation as a key factor and it is likely to stay this way over the coming year.

Nick Miller, Head of FMCG at Crimson & Co stated: "2015 saw a continuation of the effects of the 'Great Recession' starting in 2007, with historically low revenue growth, margins and shareholder returns."

The Eurozone for instance experienced a slow growth in November, falling to just 0.3% and in Italy growth was as low as 0.2%. China also experienced a significant fall in growth, with their results at a six year low of 6.9% in Q3.

But it seems that due to this growth, large acquisitions and takeovers focused on cutting costs in supply goods and services to the market.

One example is the Kraft and Heinz's merger last July, which led to multiple cost cutting measures. This is also true of the recent takeover of SABMiller by ABInbev.

Miller claims that this trend is set to continue within the supply chain, with larger companies merging to create greater economies to further control low cost methods in order to reach great and wider audiences.

Miller explains this method and how drinks manufacturing giant Coca Cola have gone on to purchase Innocent drinks: "In this way, supply chain innovation will also be driven by a need to curb costs and expenditures.

Small companies, that are more flexible than larger corporations, are able to react to market developments faster, changing their strategies to bring fresh ideas for supply chain excellence.

Larger players, unable to invest in this dynamic way of working, have tended to buy innovation by acquiring smaller companies."

He concludes: "Just as with innovations in the supply chain, large businesses will likely look to purchase small companies in developing areas to speed their time to market, instead of building their own on-the-ground agencies. This will be a more cost effective way of speeding growth in these regions, as well as providing immediate expertise into valuable areas."

These factors are of course predictions, but one thing is for sure; growth is a fickle measurement and can fluctuate greatly around the world, which as Miller calculates could lead to more and more mergers between small and large organisations.



IN-FLIGHT ENTERTAINMENT REVOLUTIONISED

Advances in technology and an increase in air travel have led to many electronics companies into the in-flight entertainment market which is great news for passengers.

Various airlines are aiming to set a new standard for in-flight entertainment through the use of wireless streaming. Airbus is one company looking into using such technology via Rockwell Collin's Paves on demand in-flight Entertainment (IFE) system.

The above system will be installed on 85 new Airbus A320 aircraft. This will allow the airline to stream videos content via a wireless system to more than 250 passengers whilst harnessing a flexible, open-software to support a wide variety of apps and services.

One of the innovative design benefits is that each system is 'seat centre', meaning that each seat is independent from each other. Eliminating mass disappointment if one system was to encounter an issue as only that in-seat system would be affected.

The Paves IFE system is also being offered to the Boeing 737 MAX. Vice President and general manager of information systems Rockwell Collins, Greg Irmen stated the importance of providing the best possible in-flight experience to passengers. He said: "Airline passengers are increasingly expecting to have content available through their journeys, which presents significant opportunities for airlines to uniquely connect with their customers...Having a high performance media distribution solution for the entire aircraft is a must as this becomes reality."

It seems that other airlines around the World are also recognising the possibilities and importance of in-flight entertainment. Spring Airlines based in Shanghai recently launched their first in-flight Wi-Fi distribution system which was developed by embedded computers and industrial PC systems company, Kontron.

This Wi-Fi feature is a regular in-flight service streams, HD video on demand content as well as the providing passengers with the ability to play and immerse themselves in games, news and online cabin chat during their journey.

Another airline looking at proving such services is Virgin America. The US airline recently announced that passengers will be able to watch the entire Netflix catalogue for free whilst on board.

This in-flight entertainment service is made possible due to a partnership between Virgin America and ViaSat, a global provider of satellite and wireless services. This partnership will provide faster Wi-Fi to Virgin America's 10 new airbus A320 aircrafts over the next year and will provide passengers with access to the entire Netflix catalogue.

Not only will passengers be able to catch up on the latest shows but they will also be able to view the latest cinema releases without leaving their seat. BAE System's IntelliCabin in-flight Entertainment (IFE) is the first of its kind to secure approval from a major Hollywood studio to stream the latest blockbusters directly onto its tablet based system. This allows streaming of content to both passenger and cabin owned devices.

The technology works by streaming the films from a local server installed within the aircraft equipped with the IFE solution technology.

Director of cabin systems at BAE systems, Jared Shoemaker, stated how the technology is a 'game changer': "We are now able to provide airlines with the extraordinary capability to stream early window content to passengers devices, this is a game changer for our industry and will enable airlines to provide exceptional travel experiences to all its passengers."



UK INTRODUCES THE LIVING WAGE

In April this year the UK will increase the minimum wage from £6.70 an hour to £7.20, giving those on low pay an extra £1,000 a year in their pocket.

Conor D'Arcy, policy analyst at the Resolution Foundation, said: "The National Living Wage will give a welcome wage boost to six million workers. Pay rises don't come for free, and the expected rise will take the wage floor into uncharted territory. But with the economy getting stronger the vast majority of employers should be able to afford the new higher wage floor, which will allow their lowest-paid staff to share in the recovery."

The announcement by George Osborne surprised many including the Low Pay Commission who tells the government what the National Minimum Wage should be. Interestingly, since the announcement in his summer budget, the Commission has advised how to raise the rate from £7.20 to £9.00 by 2020.

The rise in pay is the largest annual increase in minimum rate in any G7 country in 2009 and has improved the lives of over one million workers aged 25 and over.

However, not everyone has waited until the policy came into place this April and raised the rate to £7.20 well before spring by extending the wage to workers under 25 years of age.

Every autumn XpertHR do a survey on employers pay and the most recent found that 25% of 313 companies would have to raise the wages of their staff due to the pay increase.

However, it also found that in fact on the whole fewer than 8.2% of employees would have to adjust their pay levels, which accounts for 3% of all employees.

It may be too early to say but the non for profit/charity sector could be highly affected, as they struggle to match pay rates within the private sector.

A third of 148 charities surveyed in XpertHR's voluntary sector salary survey have staff that is eligible for a pay rise, accounting for 8.7% of the workforce.

Those who rely on 'cheap labour' such as within the hospitality sector and retail felt they would have to raise prices due to the inflation. Amazingly, 27% said they would have to employ fewer people and 18% said they would offset costs through changes to their wider reward packages.*

Before the new policy comes into place, 70%* of workers said that they felt more positive for themselves and their families as a result of the pay rise.

Other findings from a government survey found that 59% of those asked will feel more motivated as a result of the rise.

There's no doubt that there's two sides to the story but surely as it benefits over one million workers in the UK, the positives out way and potential rises in consumers pockets.

*<http://www.westernmorningnews.co.uk/25-workers-pay-rise-National-Living-Wage-2016/story-27793849-detail/story.html>

*<https://www.gov.uk/government/news/new-national-living-wage-to-give-living-standards-boost-to-over-a-million-workers>

*<http://www.theguardian.com/business/2015/dec/21/uk-bosses-cautious-pay-rises-2016-cbi>

BEDFORD COLLEGE OPENS NEW £2M BUILDING

In December 2015 there was a fabulous new addition to Bedford College in the form of the £2million Stansfeld Building.

The Stansfeld Building was named in honour of the College's founder, Margaret Stansfeld who was an educational pioneer, campaigning for women to be included in educational and political life.

She founded the first Bedford College, a specialist centre for training PE teachers more than a century ago. In 1976 her college, along with the Bedford Training Centre and Mander FE College in Cauldwell Street formed 'Bedford College of Higher Education.'

MP Richard Fuller who officially opened the £2m building stated: "It is a delight for me to be able to open this building which demonstrates how Bedford College is continuing the work of its founder Margaret Stansfeld in ensuring inclusion for all in education."

This new addition will provide a specialist environment for students aged 16+ with learning difficulties and links the current award winning Bedford College with it's past as part of 'Bedford College of Higher Education.'

The building has also been designed to keep with the historic landscape of St Mary's, which is said to be the oldest brick property in town. Ashe Construction worked closely with the college to demonstrate their joint commitment to designing a modern, sustainable build.

Ian Pryce CBE, Principal of Bedford College states: "Our Cauldwell Street site has developed over decades – and some of the buildings could not be described as 'things of beauty'. However, we are replacing it jigsaw piece by jigsaw piece, as finances allow and as the college expands."

"We have turned the 1950's workshop block into a shining eco-beacon with our solar panel and turbine-topped Brundtland Building – it looks fantastic and saves energy."

"We have removed the unsightly old bus garage which used to be the art block and replaced it with the riverside South Bank Arts Centre. Now we have improved the St Mary's Street boundary with a building which is keeping with this historic area."

The Cauldwell Street campus will continue to offer a range of HNC's and HND's foundation degrees and further degrees linked with local universities. Students on this campus range from 16 year olds taking their first steps towards employment to those in their 20's and 30 who are gaining degree level qualifications.



A.I. IN THE WORKPLACE

Artificial Intelligence is becoming a reality but what does this mean for the supply chain and could it threaten the roles of their human counterparts?

A study by Oxford University and Deloitte has predicted that around 35% of current UK roles are at high risk of being computerised and due to this potential risk, the BBC have recently created a calculator to help individuals estimate the risk of them being replaced by a machine within the next 20 years.

It allows individuals to have an in depth insight including; current salaries within the UK, the total number of individuals who currently have this role and how likely their role is to be lost to a piece of artificial intelligence.

The calculator predicts that social workers, nurses, therapists and psychologists are amongst the least likely roles to be taken over due to the empathy needed. Roles requiring employees to come up with original and creative ideas also have a lower risk of losing their job. This also applies to those roles which require a high level of negotiating skills such as managerial roles.

As the technology develops robots are gaining important coordination skills allowing them to synchronise a wider range of complex tasks such as assembling objects which would have once been the job for man rather than machine.

However, it's not only coordination tasks robots are now being used for, they also complete administrative tasks such as scanning thousands of documents for pre-trial research.

Oxford University academics Michael Osborne and Carl Frey have calculated how at risk jobs are based on nine key skills requires to perform it such as: social perceptiveness, negotiation, persuasion, assisting and caring for others, originality, fine arts, finger dexterity, manual dexterity and the need to work within small or cramped work spaces.

Their research was originally carried out using detailed employment data from the United States O*NET employment database. The data was then adapted to find the corresponding job roles within the UK from the National Statics job classifications.

Daniel Ball, director at Wax Digital stated: "Robots in the sense of mechanical beings are already well-established at the warehousing end of procurement supply chain life. We're now seeing a new breed of intelligence automated assistants moving further into the workplace..."

Transport

Jim McNeil, Chief Marketing officer at Netscout predicts automated cars will become a regular sight on America's roads in the not so distant future: "I think we're going to see a fair number of self-driving cars in the US by 2020." Surely when this occurs, freight vehicles won't be far behind.

In fact, DAF Trucks is already experimenting with technology that allows several lorries to be driven in convoy. The technique of 'platooning' is when all the vehicle's, accelerating, braking and steering is controlled by a driver of the lead truck.

A report by AXA has calculated that over the next 10 years the logistics sector could save up to £47.5billion as a result of driverless technology due to savings on labour, reducing fuel consumption, insurance and better vehicle utilisation. It has also been suggested that driverless technology could be used at various points throughout the night to cut road congestion.

However, there are concerns around cyber threats on such vehicles. McNeil states: "Right now you can hack a car that is connected (to the internet) and control the brakes, engine or accelerator. There needs to be safety checks put in for those systems."

Supply Chain

The internet of things (IoT) which enables objects to exchange and collect data from each other is thought to potentially revolutionise the supply chain in the years to come. It may not physically be a robotic machine but the technology behind the chip could pave the way for massive changes.

Research from Accenture found 32% of boardroom executives are aware of the phenomenon and believe that it will significantly improve supply chain transparency. This is due to using electronic chips inside products which can send 'demand signals' directly to the supplier and excluding the 'middle man' of the purchasing organisation.

Another potential advantage of using these chips could be to track goods in shipment to inform them of where they need to go. They can also be used to automatically send an electronic contract/ payment once the shipment it has been delivered eliminating the need of purchase orders or invoices.

But that's not the end; machines have also made their way into the London Gateway port, loading containers onto trucks which slashes the turnaround time but Mr Ball suggests that the potential for robots goes far beyond deliveries.

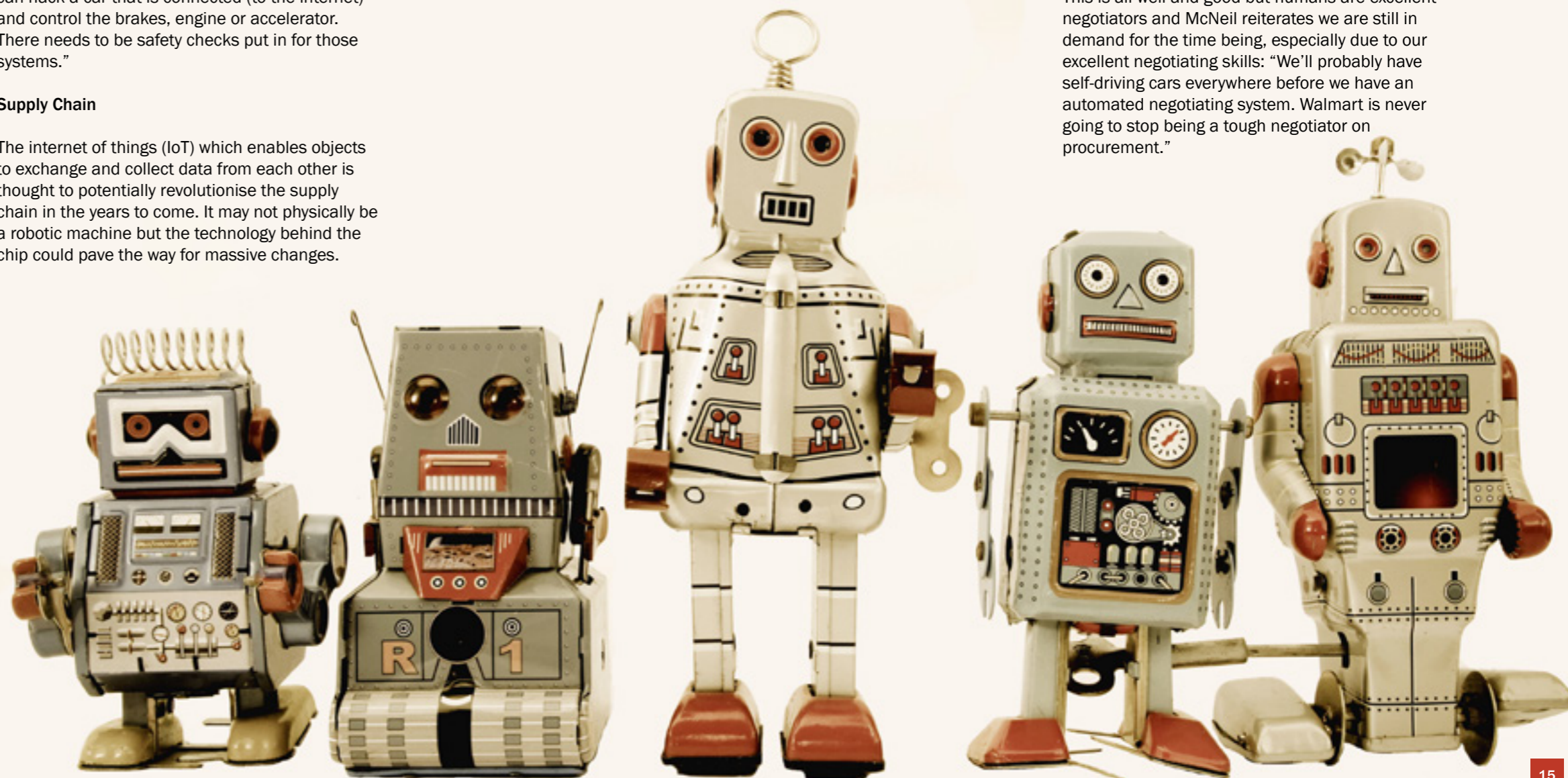
He stated: "...with the emergence of genuinely smart robots taking control in a number of areas that still often involve intensive manual

intervention. We're talking about spend analytics, supplier risk, invoice processing, factoring, benchmarking and category research."

Alan Day, Chairman of supply chain and procurement consultancy, State of Flux, agrees that humans will need to be used for key areas of procurement: "All this still needs human intervention, but once you've got the requirements and you're running a request for proposals (RFP) that's just a series of decision trees. That's decision analysis, which is basically robotics. The values we then add is not running the process of an RFP, it's around internal customer understanding and needs analysis. At the back end, it's around supplier relationship management."

Day also believes that robotics could be used for aspects of supplier performance management: "Theoretically you could automate a lot of your performance metrics. When you get within certain boundaries or if suppliers fall behind a target or outside a banding, this should trigger a series of decision trees on whatever activity kicks in, even if it's just raising an action item to address it."

This is all well and good but humans are excellent negotiators and McNeil reiterates we are still in demand for the time being, especially due to our excellent negotiating skills: "We'll probably have self-driving cars everywhere before we have an automated negotiating system. Walmart is never going to stop being a tough negotiator on procurement."





SOCIAL ENTERPRISE

Ever thought about buying from a Social Enterprise business? After the UK passed The Public Services (social value) Act 2012, all relevant organisations within the UK were required to consider how the services they commission and procure may improve the economic, social and environmental well being of their area.

One way in which businesses can meet their legal obligation is by working with social enterprise suppliers. These businesses reinvest the majority of their profits back into the community. They trade to tackle social problems, improve communities, people's life chances and the environment.

These social enterprises come in all different shapes and sizes, from large international organisations to small community based but they all have one thing in common. They aim to generate their income by selling their goods and services rather than giving our grants and donations to causes.

Private sector companies such as Johnson & Johnson are not obliged to buy from social enterprises but choose to do so. In fact, they have ambitious plans to support 150 jobs by 2020 for

those who are finding it difficult to secure employment such as: those with a long-term illness, mental health problems, criminal record, a disability, are homeless or young and unemployed.

This new venture equates to an investment of around £150million in the job market. Hugh Chamberlain, Johnson & Johnson's procurement lead for business services in the UK stated: "From a procurement perspective it means we can help people to lead happier, healthier lives simply by the way we spend money in our supply chain." In fact, Johnson & Johnson originally decided to try this approach in some areas of Europe, South Africa and Switzerland but now have plans to extend into other markets such as Ireland.

"We can help people to lead happier, healthier lives."

Their current social enterprise suppliers including, film company Inside Job Productions and ground maintenance and facilities service supplier Blue Sky both of which support ex-offenders. Another is Haven Products who employed disabled people and provides contract packing, quality inspection, secure storage, printing and mailing.

Chamberlain enjoys working with social enterprises as Johnson & Johnson are focused on health benefits and creating employment. He went on to say: "I talked to some of the guys about how difficult it is to get a job once you have a criminal record. They're just incredibly desperate to find employment opportunities and that why these organisations are so good."

"Connects private and public sector buyers with more than 8,000 social enterprises across the UK."

If you're thinking about using a Social Enterprise supplier there are numerous ways of sourcing them, for instance, Johnson & Johnson received support from Social Enterprise UK who helped to identify suitable suppliers. There's also the Buy Social Directory. Noa Burger and Annabel Lenton of the City of London Corporation corporate responsibility team said: "The Buy Social Directory has been produced to help you to identify and contact social enterprise suppliers quickly and for free... It connects private and public sector buyers with more than 8,000 social enterprises across the UK."

A WORD FROM THE SOCIAL ENTERPRISE BUSINESSES

But what are the benefits of buying from Social Enterprise suppliers? Ann Summerhayes, managing director of Inside Job Productions said: "Whether you're buying office supplies or a birthday present, social enterprises are rapidly becoming the obvious way to shop. We're dynamic businesses just like any other but we invest in our profits in ways that benefit society. For us, that means supporting ex-offenders into further training and the workplace."

John Chesters, commercial director at Blue Sky Development states: "Buying social is about making sure every £1 a company spends can bring much more. It isn't about a charitable donation, it's establishing a commercial contract with an organisation which recognises it needs to perform (or even out-perform) competitors."

**SOCIAL
ENTERPRISE
UK**

ARE YOU LEAVING A LASTING IMPRESSION FOR THE BETTER?

Have you ever thought about taking a step back and looking at how your business is affecting the planet? One company who has, is Kering who sells luxury brands, including PUMA, Stella McCartney and Gucci. They looked at their EP&L (Environmental Profit and Loss) and decided to do something about it.

But what is the importance of an EP&L? An EP&L assesses how much a company would need to pay for the environmental impact their water consumption, energy use, waste disposal and land use causes to the planet. This also allows them to evaluate the risks their business poses and gives them an opportunity for analysis.

Kering produced such a plan and discovered that they may encounter some difficulties involving luxury materials such as silk and cashmere. This is due to the complex nature of producing such luxurious materials. Michael Beutler, Kering's sustainability operations director states: "Cashmere involves raising goats, mainly in Mongolia and brushing their hair to weave it." He adds "There is a growing demand for it...but the goats are raised by nomadic goat herders, they take up a lot of land and as they graze the increasing number of goats puts stress in the land."

This over consumption of land has caused a reduction in grasslands which has caused dust storms across China. These dust storms have led to a lower air quality and affected the production of silk, creating a domino effect; however Kering decided to look at ways of resolving these issues.

They have started using fibres taken from off cuts for their Gucci cashmere and significantly reducing the demand for virgin fibres and business costs. Kering have also looked at using organic cotton which has an 80% less impact on the environment and recycled polyester which has an 89% lower impact.

A survey by Supply Chain Management World found that water and energy were named as the top two priorities when executives were asked to identify their biggest concerns regarding the supply chain within the next 10 years.

Highlighting hot spots within the supply chain allows management to see the potential problems. Beutler states: "If you are seeing environmental stress in a particular area you are sourcing there's a chance there's going to be a disruption of some kind either in terms of price or availability."

In 2014 Asda stated that 95% of its fresh produce was at risk due to rising temperatures and changing weather patterns and estimated that this could equate to a sourcing, processing and logistics risk of £370 million.

Another company which has re-evaluated their environmental footprint is food producer Olam International. They've introduced bee friendly farming techniques in the United States and Australia to protect 2.7 billion bees that pollinate its almond orchards. They also introduce new bees annually which are managed by a professional beekeeper.

Other practices include avoiding use of any insecticide products during pollination periods, applying tree fungicide at night when bees aren't active and experimenting with growing different trees and crops.

They've even gone as far as implementing a control plan for use of neonicotinoids, as pesticide linked to harming the bee population within its palm and coffee plantations amongst its farm suppliers. The code aims to educate farmers in how to use pesticides responsibly and ensure they have access to tools to implement these practices.

In Cochin in India, a small scale chilli farm has been able to cut their pesticide use by over 30% and costs up to 15% using these methods.

However, it seems that this is not a high priority on everyone's list. In a recent survey on procurement decisions made across Europe and North America, individuals were asked to list the most important indicators by which their performance was measured and surprisingly or not, depending on your stance; sustainability was far behind other measures.

This could be due to companies not actively being portrayed as an example of good practice. An example of this is French water company Vittel, who paid for an ecosystem service. They paid farmers to avoid polluting water that would be bottled for use. This was nearly 10 years ago and has long been overlooked.

Beutler also makes a good point that with few businesses doing this sort of analysis and actively trying to become more sustainable the magnitude of the challenge is much greater. An example he gives is that if all of the leather consuming businesses were to join forces they would only represent 8% of the value of the cattle industry. But there could be good news for potential sustainable businesses and a last piece of hope.

The Natural Capital Project has introduced the Natural Capital Protocol to measure the impact on natural capital in a similar way as the Greenhouse Gas Protocol.

It aims to support companies in a number of ways by helping them make decisions on the following: risk management, new revenue streams, improving products and value chain innovation and preparing for future reporting and disclosure.

Web links:

Kering - <http://www.kering.com>

Natural Capital Protocol - <http://www.naturalcapitalcoalition.org/natural-capital-protocol.html>

Natural Capital Project - <http://www.naturalcapitalproject.org/>

Supply Chain Management World - <https://www.scmworld.com/home/>

Trucost - <http://www.trucost.com/environmental-profit-and-loss-accounting>

THE FIGHT AGAINST FAKERY - MANUKA HONEY

Manuka honey has become a firm favourite for many; especially celebrities but they are concerns surrounding its authenticity.

Official figures published in The Grocer magazine found that 1,700 tons of Manuka are produced annually however 100,000 tons are actually sold which is where these concerns stem from.

The New Zealand honey makers who produce Manuka are taking control and have introduced a device to test whether the honey is genuine. The authentic Manuka honey is produced by bees whose hives are near the flowering wild Manuka bushes, hence the name. These bushes grow mainly on New Zealand's North Island and are used in Maori medicine for cold, stomach upsets and as a painkiller.

The Unique Manuka Factor Honey Association (UMFHA) has unveiled a portable device which indicates whether or not the product is genuine. The device was developed by a team from the University of Auckland and uses fluorescent light to detect signature compounds that are unique to Manuka honey. Such devices are also currently used to confirm purity and the quality of cheese and milk.

Leading consumer countries such as the UK and China have called for better testing to ensure that what is sold is authentic, as Manuka is often diluted with other cheaper honeys. This is due to the lack of guidelines within the UK market which does not state the level of active ingredients needed to be present to distinguish that the product is in fact Manuka honey, which in turn means that brands with little or no such content can sell their products with that name.

The UMFHA stated: "Once in production the units can be deployed throughout the supply chain. Their probability and ease of use will ensure they will be used widely to help safeguard consumers worldwide and provide a solid foundation for the continued protection of our industry."

The problem is so dire that the Food Standards Agency in Britain has sent a nationwide alert to all trading standards departments to be aware of fakes.

But why is there some much hype surrounding the genuine product? Scientists at the University of Waikato in New Zealand have made strong claims about its properties. Biochemist Professor Peter Molan who led the investigation states that the honey has additional bacteria killing powers compared to other honeys.

A study in 1991 published by Professor Molan and his team removed the hydrogen peroxide from a range of honeys, including Manuka and the findings reported that only Manuka retained its ability to kill bacteria.

Surprisingly, until the 1980's beekeepers discarded Manuka honey due to its strong medicinal taste and even used it as cattle feed until scientists at the University of Waikato made strong claims of its medicinal benefits.

But it's not only New Zealand honey that claims to have medicinal powers. Scientists at the University of Thessaly in Greece conducted a study on 31 local Greek and Cypriot honeys and investigated their superbug killing abilities.

This is also true of two Canadian Universities who have reported that honey made from the country's buckwheat flowers and the Canadian clover may have as many benefits as Manuka due to its ability to soothe skin rashes.

Honey has always been known for its medicinal properties for the past 4000 years. The Ancient Egyptians used it for its anti-bacterial properties as they believed it was the nectar of the gods and the Romans used honey as a substitute for gold to pay taxes.

One thing is for sure, even if manuka does not have any unique healing qualities this device will at least prove if it's genuine Manuka.

<https://www.manukahoney.co.uk/info/about-manuka>



NEW RECIPE FOR CADBURY'S FRUIT & NUT BAR

You may or may not be aware that Cadbury decided to controversially introduce sultanas into its Fruit & Nut chocolate bar recipe for the first time in its 90 year history.

The reason? To ensure greater flexibility of supply when it comes to dried fruit within their chocolate bar.

Clare Low, marketing manager for Cadbury Dairy Milk said: "We are committed to making sure that Cadbury Dairy Milk Fruit & Nut remains true to what makes it so special – the iconic blend of Cadbury Dairy Milk chocolate, dried fruit and almonds."

Cadbury Dairy Milk is made with fresh liquid milk – a glass and a half to be precise for every pound of chocolate. It quickly became the market leader in the UK after it was launched in the early 1900's.

Bars are now enjoyed in 33 countries across the globe and available in 23 varieties such as, the famous Fruit and Nut.

Turkey is one of the two largest producers of dried fruit; California being the other and last August Turkey raised its prices for sultanas and raisins due to a low crop forecast. In 2014, Turkey produced 328,000 tonnes of dried grapes however in 2015 it predicted a drop of 39% to 200,000 tonnes hence the increase in price. This poor crop was due to frost in April and hailstorms in June.

Cadbury did not go into this decision to change its ingredients lightly; they've been consulting with consumers by testing their taste buds.

Mondelez International which owns the company conducted research in August last year and even though 50% of Britons claimed to know

the difference between sultanas and raisins only 7% actually did. Sultanas are dried white grapes and raisins are dried red grapes.

Cadbury said that in the taste test: "Many consumers noticed no change when trying both bars." They added: "While raisins have actually traditionally been the 'fruit' of Cadbury Fruit and Nut, sultanas have been brought into the fold to add more variation. It's important we have a flexible supply of the dried fruit we use in our famous Fruit and Nut bars to both retain quality and ensure it's still an affordable treat."

The move to ensuring more flexibility of supply is also due to Mondelez aiming to save \$3 billion from 2013 to 2016 through innovation in its supply chain and to reduce its environmental footprint by 2020.

President of Mondelez Europe, Hubert Weber said: "Our Sustainability 2020 goals place us at the forefront of the fight against climate change and support our ambition to be the leader in well-being snacks, while reducing costs and generating efficiencies that accelerate our growth."

Mondelez states that these goals are part of their Call for Well-being which is a call for action focused on four key areas that are crucial to the well-being of the world such as: sustainability, mindful snacking, communities and safety.

The new bars were made in the Bournville factory and introduced at the end of 2015 but with no change to the packaging it may be difficult to differentiate between the new and old.




TURBULENT TIMES AHEAD FOR BRITISH FARMERS

British farmers have faced many a turbulent time recently due to a fall in global food and milk prices. In fact the UN Index shows that food prices have fallen at the fastest pace since 2008.

The National Farmers Union has warned that only 53% of British food will be produced by domestic farmers by 2040 and when farming in the UK contributes to around £38bn to the British economy it could spell trouble.

There's no doubt that the industry are taking such statistics seriously and trying to do something about it before it's too late.

One company that are trying to tackle the growing issue is Arla Foods. A study found that seven out of ten shoppers would prefer to purchase dairy products from company owned farms. Ash Amirahmadi, head of milk and member services at Arla said: "People are telling us they want to support dairy farmers but they don't know the best way to do it so we're making it as easy as possible by putting a clear mark on all of our products. Our farmers are getting out there and on the road to tell as many people as possible about the importance of supporting farmers..."

To support and raise awareness of the farmer's plight Arla Foods took a cow parade across London. This consisted of white plastic cows moving across London, starting at Covent Garden, Abbey Road and ending at the London Eye. The campaign was called 'White

Wednesday' and draws on YouGov research that 60% of consumers would pay extra for dairy products if it went back to the farmers and seven in ten would prefer to buy dairy products direct from companies owned by the farmers themselves.

Arla have proactively listened to consumers introduced the Farmer-Owned Marque on its products to highlight the fact that they are the only farmer-own co-operative that shares profits between all of its 12,700 farmers. This means that when consumers purchase any Arla product with the Farmer-Owned Marque displayed they know that they are directly supporting the farmers who produced it.

But it's not only dairy farmers that have been suffering. The price of lambs have fallen by half over the past year and the National Farmers Union has claimed that Britain is no longer self-sufficient in food, as the proportion of domestically produced food has dropped from 87% in 1990 to just 68% in 2015. It's also claimed that our dairy industry relies heavily on imports from other countries such as China, India and Africa for cattle feed.

The collapse in the global food commodity may also be due to the actions of supermarkets who have been accused of paying unfairly for produce. Supermarkets account for nearly 70% of milk sales meaning they have more pricing power when it comes to buying and selling, which is why we often see a price war between the large supermarkets.



However, the supermarkets state that the low prices are due to a surge of cheap imports from Europe, prompted by the European Union's recent decision to impose limits on country to country milk production as well as Russia's move to block Western imports.

Farming unions state that while the cost of producing a litre of milk is around 33p, they only get around 23p per litre from supermarkets. This equates to a fall of 25% in the past year. There's also the decline in farms themselves.

A report by the House of Commons suggested that the number of farms have halved from 28,422 in 2000 to 14,159 in 2013.

Not only have the number of farms depleted but also the number of British cows. The total number of cows has fallen by 25% from 2.32m to 1.78m between 2010 and 2013, compare this to the number of cows in 1980 (3.2m) and you can see a clear decline.

Andrew Critchlow in the Daily Telegraph explains that the UK's farms are much smaller to those in countries such as New Zealand, making

it milk more expensive to produce: "Giant dairy farms have left their mark on the land with purposes built cattle runs and giant milking parlours...Britain is arguably behind in large scale industrial farming practices."

But there could be a light at the end of the tunnel. In December the European Union were forced to dole out £363m in emergency funding for farmers across the continent who face a bleak future due to the collapse of prices for dairy and meat.

There's also been a suggestion that farmers could cut out the middleman and sell direct to supermarkets. The Co-Op already pays above market rates for those farmers willing to do this but it may not be practical for smaller farmers.

Another positive is that Morrisons have agreed to sell a special brand of milk alongside their regular which pays an extra 10p to farmers.

Watch this space, 2016 could shake up the milk industry...

BAE SYSTEMS TO CREATE NEXT GENERATION RIB

A new contract has been awarded to BAE Systems to manufacture a next generation rigid inflatable boat (RIB) for the Royal Navy.

The Secretary of State for Defence, the Rt Hon Michael Fallon announced in December that a £13.5m contract to BAE System had been awarded for 60 new Pacific 24 Rigid Inflatable boats.

Defence Secretary Michael Fallon stated: "The 60 new RIBs provide a vital capability to the Royal Navy and are a clear benefit of the £178bn this Government is investing in new military equipment."

The next generation Pacific 24 Mark -4 will be deployed on Royal Navy ships such as Off Shore Patrol Vessels as well as the new Queen Elizabeth Class aircraft carrier due in Portsmouth in 2017.

The RIBs are vital to the Royal Navy and will deploy from ships or the shore at speeds of up to 38 knots (44mph) as a rapid response craft to perform a variety of tasks such as; rescue, anti-piracy and counter narcotics missions.

These high energy operations can put a lot of strain on the crew which is why the new Pacific 24 Mark-4 will include high performance shock absorbing seats which will minimise fatigue and allow them to travel up to six times their current distance.

A team of 19 BAE Systems employees will start work very soon on this huge project (early 2016) at the company's small boats manufacturing facility at Portsmouth's Naval Base. The project is likely to take four years to complete.

Product and training services director at BAE Systems, Les Gregory said: "Our focus for the next generation Pacific 24 was to extend the operational capability of a boat's crew through the use of shock-absorbing seats designed to reduce driver and crew fatigue."

He went on to outline the benefits of the new seats and what challenges lay ahead for the manufacturing team: "The new seats provide significantly greater performance but are much heavier, so we are faced with an additional challenge to reduce the weight on the boat elsewhere to compensate. Structural composites and a lighter engine gave us the biggest weight savings, whilst ensuring we maintained the necessary payload requirements."

The new Pacific 24 is a significant improvement from its predecessors. It features a 370HP twin turbo diesel electronic engine with inbuilt self-diagnostic technology.

The boats also now include the Safety of Life at Sea accreditation meaning they can be used for rescue missions.

This news follows BAE Systems first in water demonstration of an unmanned RIB. The BAE System funded development is being designed as a potential development for the Pacific 24.

It has the potential to change the face of the Royal Navy as it will allow crew members to carry out vital tasks such as, high speed reconnaissance and remote surveillance whilst keeping sailors out of harm's way and reducing crew fatigue which is vital for rescue missions.



BAE SYSTEMS



BUMBLE BEE POLLINATION AFFECTED BY PESTICIDES

A recent study has found that exposure to neonicotinoid pesticides not only affects the pollination process of bumble bees but the quality of the apple crop.

The study carried out by Nigel Raine at the University of Guelph, Canada showed for the first time how exposure to field levels of the pesticide can reduce the pollination process of bumblebees when delivering to apple crops. Raine and his researchers exposed 24 bumblebee colonies to levels of neonicotinoid pesticide thiamethoxam and mimicked spring pollination conditions whilst including control groups.

The findings concerned Raine, as he discovered that the effect the pesticide had on bees and the ability to pollinate the apple crops could affect other crops too.

He states: "If exposure to pesticides alters pollination services to apple crops, it's likely that other crops, particularly fruits, vegetables and nuts and diverse wild plants that rely on bumblebees could also be affected."

However in light of these findings, neonicotinoid is the most widely used group of insecticides and are relatively new, as they've only been used within the last 20 years.

They are systemic pesticides which are absorbed by the plant and transported to the leaves, flowers, roots, pollen, nectar and stem and remains in the plant for many weeks which makes them attractive to the agricultural industry.

However, one neonicotinoid in particular; clothianidin has become an increasing concern to bee keepers, as many have suspected that the use of this toxin has resulted in a rapid decline of the bee population. Such concerns, have led to partial bans in several European countries including, France, Italy, Germany and Slovenia.

But it's not only the effect of bee pollination that has prompted concern for bee keepers and bee lovers, as many groups within the US have asked the Obama Administration to regulate pesticides.

In fact 128 groups have signed a letter asking for stricter regulations and argue that pesticides have led to a sharp decline in bee populations and other insects.

HOW THEY WORK

The neonicotinoids work by affecting the central nervous system of insects. They bind to receptors of the enzyme nicotinic acetylcholine, causing excitation of nerves which leads to paralysis and eventually death.

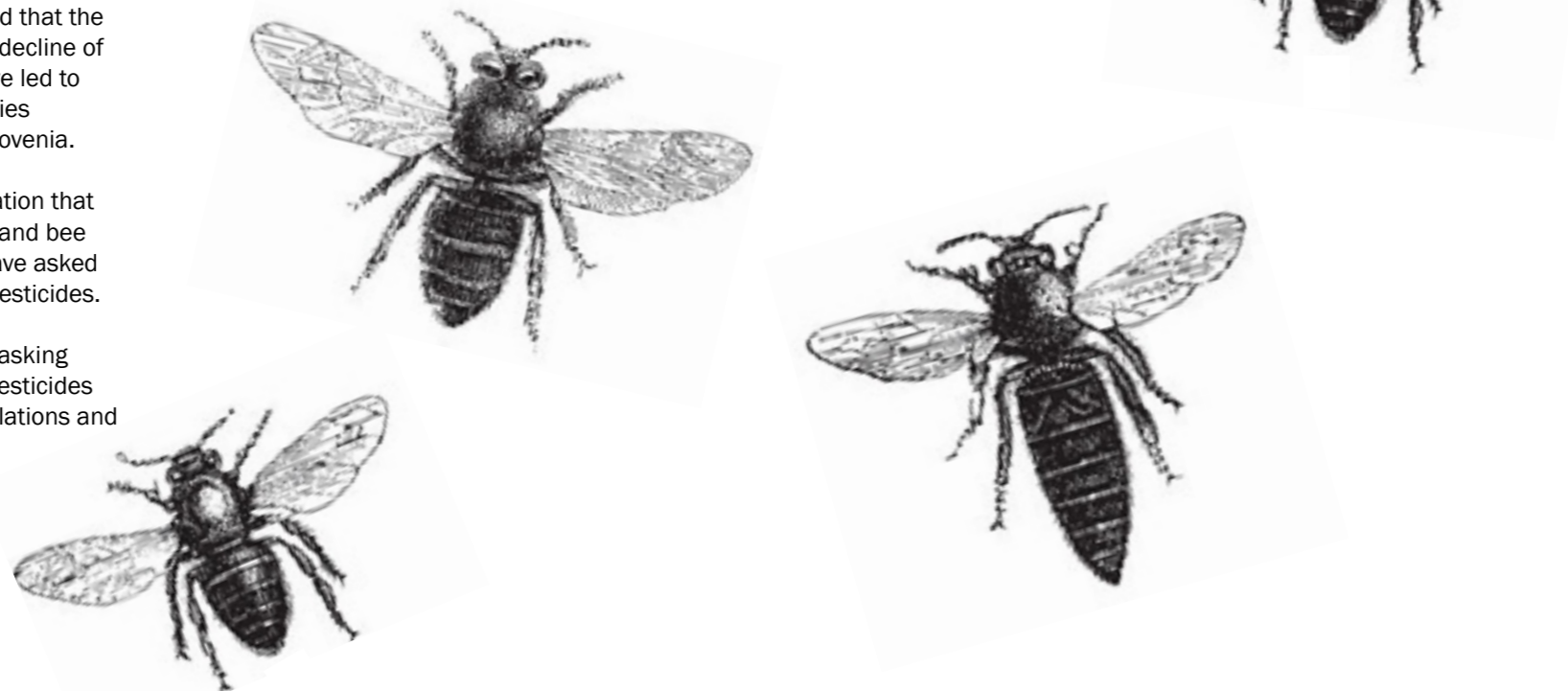
This type of insecticide is more harmful to bees as they have more of these receptors than other insects and fewer genes used for detoxification.

Bee keepers have also seen an increase in Nosema fungal disease amongst bees reared in colonies exposed to very low doses of another neonicotinoid; imidacloprid which was originally considered to be safe levels for bees.

As stated above, one of the attractive features of this particular insecticide is that it lasts for longer periods than older and more traditional sprays.

It can also be applied in very low concentrations, meaning they can be applied at lower volumes. They were originally introduced as a much safer option for humans, livestock and birds compared to other insecticides, however as the study shows over the years it has become clear that they pose risks to bees and other non-targeted insects.

Research has also shown that high concentrations can be absorbed via 'guttation' (droplets on young leaves, which contain dissolved substances) which poses a risk to bees and other insects which collect these droplets as drinking water for the hive.



SEED TREATMENT

There have been many documented incidents of acute bee poisoning due to mechanical problems with the seed treatment process and field sowing of neonicotinoids.

One such incident was in 2008 in South West Germany where millions of bees died following the sowing of maize seed which was treated by clothianidin.

It was discovered that the seed company involved had failed to apply sticking agent correctly during the seed treatment process which caused clothianidin dust to be released from the drilling machines.

A similar incident occurred in 2010 in Mid West America when bees were killed during a sowing of maize seeds, when the clothianidin and thiamethoxam were released via talc used to allow the treated seed to flow smoothly through the air assisted planter equipment.

ECONOMIC IMPORTANCE OF BEES

The study shows the effect of the pesticides on the bumblebee's ability to pollinate to help harvest apples which as a crop has a significant importance to the global economy.

More than 75m tonnes of apples are harvested annually and Raine suggest that this vital pollination process contributes to nearly \$500bn annually to the global agricultural economy.

The bees are vital to the pollination of apples as they impact on the seed number, fruit set, fruit size and shape of the apples.

ELECTRIC CARS ON THE RISE

Electric cars on the rise, with around 40,000 plug in vehicles currently on the roads compared to just 3,500 in 2013.

This increase is partly due to the greater level of choice to motorists, improvements to charging points and Government backing.

The plug-in car grant which was originally to end in March 2016 has now been extended to 2018 to encourage a further 100,000 UK motorists to purchase greener alternatives.

The grant provides buyers with up to £4,500 towards new electric, hybrid or hydrogen vehicles. A further £500 grant will be available in March to those who own ultra-low emission vehicles who install a dedicated charge point at their home, which covers approximately half of the cost.

Transport minister, Andrew Jones said: "We are determined to keep Britain at the forefront of the technology, increasing our support for plug-in vehicles to £600m over the next five years to cut emissions, create jobs and supporting our cutting edge industries."

Other benefits of the grant include those with a zero-emission vehicle with a range of more than 70 miles, including hydrogen fuel cell vehicles will receive the full £4,500 grant, however hybrids costing under £60,000 will receive £2,500.

FOCUS ELECTRIC

Ford are to invest an additional £3bn and create a further 13 new electric models by 2020 which will generate Ford's largest ever electrified vehicle investment within a five year period.

Ford currently sells electric, hybrid and plug-in hybrid versions of its Focus, Fusion, C-Max and Lincoln MKZ vehicles.

The new Focus Electric out this year will take 30 minutes to charge up to 80%, which is around two hours faster than their current version and also has an estimated 100 mile range compared to 76 miles.

North American and European customers will benefit from a 'brake coach' which hopes to teach the driver to use their breaks more smoothly to maximise the energy captured through the vehicles Regenerative Braking System.

This type of breaking recovers more than 90% of the energy and sends it back to the battery pack for later use, creating a more efficient driver.

The new vehicle also tracks the driver's efficiency with a next-generation SmartGauge with EcoGuide which features a MyView screen allowing the owner to customise their screens to their liking. This feature allows the driver to see real time information regarding their efficiency.

Another feature displays illuminated blue butterflies when driving efficiently or when the driver has enough range to reach the nearest charging station which has been entered into the vehicle's Navigation System.

Raj Nair, Executive Vice President of Product Development states: "The challenge going forward isn't who provides the most technology in a vehicle but who best organises that technology in a way that most excites and delights people."

FUEL FOR THE FUTURE

Japanese firm Nissan has a proven commitment to manufacturing electric vehicles and is now collaborating with the world-renowned architectural firm Foster+Partners to develop the future of fuel stations.

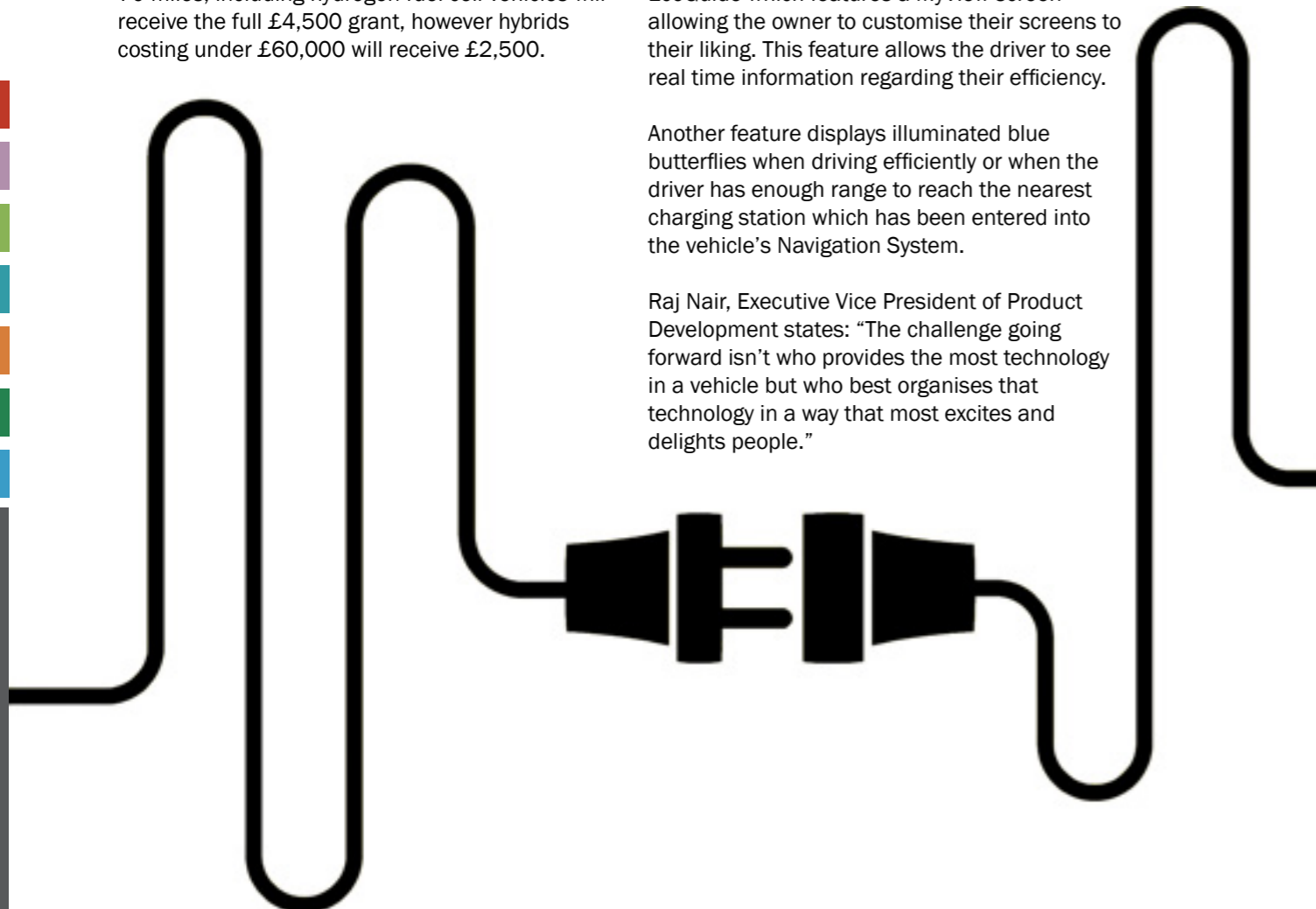
With almost one million electric vehicles predicted to be on the roads by 2020, there is a desperate need to future proof our fuelling stations.

Jean-Pierre Diernaz, Director of Electric Vehicles at Nissan explains: "Our current refuelling infrastructure model is outdated and faces an uncertain future unless it rapidly adapts to support the changing needs of consumers."

David Nelson, Head of Design at Foster + Partners states: "It seems to be clear that electric vehicles will be a major feature of the urban landscape and, as a result, this presents an exciting opportunity to rethink the fuel station for future generations: a new approach to design will create a more integrated and communal role within our towns and cities. As the leaders in the electric vehicle market, Nissan has been critical in providing insight on how the motorists of the future will interact with the built environment."

Initial plans for the fuel station were presented via a 20 second video teaser on Foster+Partners website; however the completed design will be presented in March this year.

To watch the teaser video please click here



MARSEILLE – THE UK'S PORT OF CHOICE?

Madame Christine Cabue, CEO of Marseille's Fos port; the biggest French port and the second biggest Mediterranean port, is hoping that the UK and North West Europe chooses the Fos as a means of effective shipping like many others.

She states: "We very strongly see the port of Marseille Fos as a very efficient alternative hub for UK and North West Europe for container flows. The combination of multimodal shuttle relay and a growing short sea and deep sea shipping line coverage in Marseilles provide competitive and transit-time efficient logistics solutions via Marseilles."

This is due to the effectiveness of its transportation of fresh produce. It offers a day A to day C service from the UK which could also be used for dry goods too. In fact, a container can take a 56 hour trip from Ludwigshafen to Algiers via Marseilles which is unlikely via any other Northern European port.

Cabue explains their relationship with Algerian ports: "We provide all types of services, ro ro, container, LCL and FCL. Algeria is our number one market whilst Tunisia is our biggest partner for ro ro traffic with a very high frequency. We offer three sailings per day to Algerian ports. This is especially convenient for groupage operations and some carriers are taking a growing interest in this operation."

Marseille Fos Port has showed positive growth in 2015 despite the difficult situations in North Africa.

CEO Christine Cabue states: "In 2015, some shipping lines are starting to use Fos as a transshipment hub to North Africa, taking advantage of a very strong local market and enjoying a nice combination of volumes with transshipment. This is an encouraging sign, showing that our gateway strategy combining the local market, maritime regional hub position, multimodal offer and gateway vision is gaining momentum and support."

The past year has seen an increase in six new container shipping services in Marseilles of which five are involved in the Mediterranean, confirming the ports leading position within this area. Six new train shuttles were also opened in 2015.

More big changes included, shipping lanes deploying larger ships and CSCL as well as UASC have deploying 14-16000teu ships in June to replace the 9,000teu vessels.

DHL EXPANDING THEIR SERVICES



DHL Global Forwarding, formerly known as DHL Danzas Air & Ocean is adding another string to its bow and offering a new sea-road service between the points of Europe and Asia as well as Northern Africa and the Middle East via a new transit home in Piraeus, Greece.

DHL are claiming that they can offer shorter transit times, daily-definite full-truckload and daily smaller, less than truckload departures. These will be distributed from Piraeus within two to five days to key markets within Europe via the DHL Freight network.

This new service hopes to save over nine days of transit time compared to traditional ocean freight destinations such as Hamburg or Rotterdam. It hopes to deliver within 22-26 days compared to 31-35 days.

The port of Piraeus is a free trade zone which allows for faster customs clearance and will therefore reduce the waiting time of traditional freight processes. The cargo will then be transported via DHL Freight's road freight network to its gateways in Munich or Milan and then onto its final destination.

Containers arriving in Greece immediately go through customs clearance, with full container shipments being unloaded in the port and directly transferred onto trucks and dispatched via DHL Freight's full-truckload service.

The Cross Docking Station close to the port also allows the less-than-container shipments to be unloaded and connected to the DHL Freight's road network, meaning no matter what size the load; it will be quickly and effectively transported to DHL's road network.

Shipments depart daily from the Greek port and are picked up at Munich or Milan with 72 hours and 48 hours respectively.

This is not the only freight improvement DHL are looking into, in fact they are hoping to add air and rail transport from the Piraeus port in the future.



INVESTMENT IN LIVERPOOL'S PORT

Liverpool aims to become the UK's number two box port due to major developments. Peel Ports new deep water container terminal will be able to accommodate 95% of the global container vessel fleet and will enable the Port of Liverpool to house two 13,500 TEU post-Panamax vessels simultaneously.

This will allow the port to house the next generation of container ships and develop the port of Liverpool to become the UK's national gateway and transshipment hub for Ireland.

Liverpool 2 is ideally placed within the central gateway for the UK and Ireland with over half of the UK's population living closer to Liverpool than ports in the South East of England. This equates to 35 million consumers living within 150 miles of the port.

It is also situated in the heart of the supply chain with the largest density of large warehousing over 9,000 sqm in the UK and is at the centre of a significant multimodal network with 10 motorways within 10 miles of the port, which means this development is big business for Liverpool.

Liverpool is currently the third busiest box port handling around 75,000 containers a year due to a large number of North West traffic that moves from the region via this route. Port Director, David Huck explains one of the reasons for the expansion: "The UK has traditionally had two major ports-Liverpool and London. We're keen to regain our natural market share."

WHAT THE FUTURE HOLDS

The port is confident that once the enlargement of the Panama Canal succeeds in late April 2016 that the port will attract new services and that shipping lines could develop existing transatlantic services into new routes from Asia to Europe via the widened canal and the US East Coast, providing Liverpool with key links to major markets such as China.

The port is also hoping that due to its ideal positioning, it could benefit from new feeder services from Mediterranean hub ports via the Iberian Peninsula and Western France.

New gate systems are already installed and in use at the port to book in trucks whilst simultaneously reading the container number and checking the driver's credentials via fingerprint scans, making for a more efficient process.

PHASE ONE OPENED

Phase one of the £100m terminal opened at the end of 2015 with the first rail shipment, taking a 99 mile journey to Drax Power Station near Selby in North Yorkshire.

The shipment provided the power station; which provides more than 12% of the UK's renewable electricity with 1,600 tonnes of pellets via a freight train.

All of the pellets arriving at the Port of Liverpool will be sent to Drax by rail, with four trains per day however this is expected to increase to ten trains per day later this year.

Gary Hodgson, chief operating officer at Peel Ports Group said: "East-west connectivity is crucial for driving growth across the entire of the North of England. This is a landmark moment for both the Port of Liverpool and Drax as we provide tangible evidence of how businesses across the North can work together to fuel the Northern Powerhouse."

In response to the opening, Andy Koss, Chief Executive of Drax Power Ltd stated: "This new Liverpool terminal adds to facilities on the east coast, bolstering our network still further. A robust supply chain is crucial as we continue to use the latest technology to transform Drax power station to generate electricity using sustainable biomass, providing the UK with reliable, affordable, low-carbon energy."

ENVIRONMENTAL IMPACT

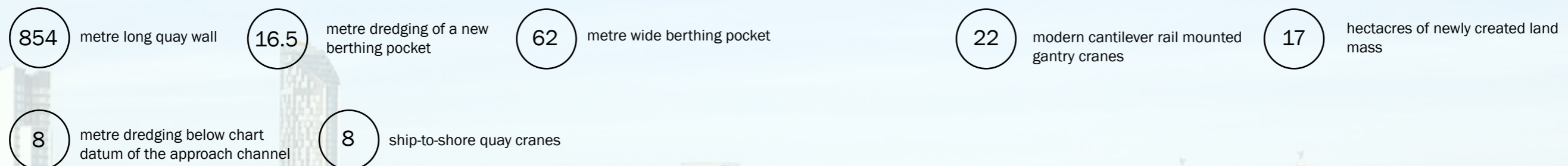
With large construction projects come big concerns for the environmental impact; however Peel Ports has taken various measures to ensure that their impact is as low as possible.

They have used a number of innovative measures in the construction process and have informed stakeholders and the local community throughout the process.

In addition, they have had regular consultations with bodies including; Marine Management Organisation, the Environment Agency and Natural England to ensure that the process has as minimal impact on the environment as possible.

Liverpool 2 is also registered with the Considerate Constructor Scheme which holds key themes such as; enhancing the appearance, respecting the community, protecting the environment, securing everyone's safety and caring for the workforce.

BUILDING MILESTONES



NEW CONTAINER WEIGHING REGULATIONS

The amendment to the SOLAS (Safety of Life at Sea) convention has led to many questions by those affected by the new changes which take effect globally on July 1st 2016.

In fact, the World Shipping Council Today, TT Club, The International Cargo Handling Coordination Association have jointly released a frequently asked questions document to guide those affected by the upcoming changes.

The amendments to the SOLAS convention requires packed shipping containers to have a verified gross mass (VGM) before they can be loaded onto a ship for export.

The amendments were adopted by the IMO (International Maritime Organisation) to provide further safety to maritime services and to reduce the dangers to containerships, their crew and others involved in container transport throughout the supply chain.

These frequently asked questions have been devised in response to numerous questions from shippers, carriers, forwarders and terminal operators to inform them of the steps they must take to implement the new regulations correctly.

The document seeks to clarify how the SOLAS container weight verification requirements will be applied depending on the situation. It addresses commercial and operational arrangements and flags issues that must be managed by national governments.

The FAQ's are based on genuine questions from affected stakeholders and will be expanded as new issues and updates emerge. Stakeholders are invited to approach any of the collaborating organisations mentioned above with any additional questions they may see appropriate.

EXAMPLES OF THE FAQ'S

Is there a deadline for when the information must be received by the carrier and the terminal operator?

This is a commercial issue.

Verified gross mass is required in order to prepare the stowage plan of the ship prior to loading. Deadlines will differ according to a number of factors; shippers should obtain information on documentary cut-off times from their carriers in advance of shipment.

It is recognised that 'just in time' shipments will need specific coordination between the shipper and carrier to ensure that the objectives of SOLAS are met and the verified gross mass for such shipments is communicated and used in the ship stowage plan.

If goods are out onto a feeder ship from, for example, Grangemouth (UK) that proceeds to Rotterdam (Netherlands), will verified gross mass have to be established in Grangemouth or Rotterdam or both places?

This is an International issue.

Verified gross mass is required before loading the packed container on board a ship covered by the SOLAS requirements at its initial port of loading, unless driven onto a ro-ro ship on a chassis or trailer. Thus, in this question, the verified gross mass must be determined prior to loading aboard ship at Grangemouth.

Given there is no single international approval for weighing equipment, does this mean that different standards will be applied around the world, making it uncertain whether equipment can be approved internationally or whether values given will be accepted globally?

This is a National issue.

Within the scope of SOLAS, this is a matter for determination by signatory States. It is the case, however, that all equipment used (whether for method 1 or method 2) will need to meet the applicable accuracy standards and requirements of the State in which the equipment is being used.

How will this be enforced and what will be the level of penalties imposed by an Administration if a container is delivered by a shipper to a carrier with a mis-declared gross mass or if a shipper does not provide the verified gross mass for a packed container?

As a National issue, fines and other penalties will be imposed under national legislation. Enforcement agencies may implement measures to satisfy themselves that compliance is achieved, which might be expected to include documentation checks, auditing or random weighing.

As a Commercial issue, the penalties may involve repacking costs, administration fees for amending documents, demurrage charges, delayed or cancelled shipments etc. It should be noted that SOLAS imposes an obligation on the carrier and the terminal operator not to load a packed container aboard ship for which no verified gross mass has been provided or obtained.

Compliance with this obligation by the carrier and terminal operator may result in commercial and operational penalties, such as delayed shipment and additional costs if the shipper has not provided the verified gross mass for the packed container.

(Note: The new SOLAS requirements apply equally to both under and overweight containers.)

*FAQ answers and questions provided by <http://www.worldshipping.org/>

THE ORGANISATIONS INVOLVED

The World Shipping Council (WSC) represents the global liner industry on regulatory, environmental, safety and security policy issues. The WSC was actively involved in the development of the SOLAS requirements.

More information is available at <http://www.worldshipping.org>

The TT Club is the international transport and logistics industry's leading provider of insurance and risk management. The TT Club participated throughout the IMO consultation process which led to the amendments of the guidelines.

More information is available at www.ttclub.com

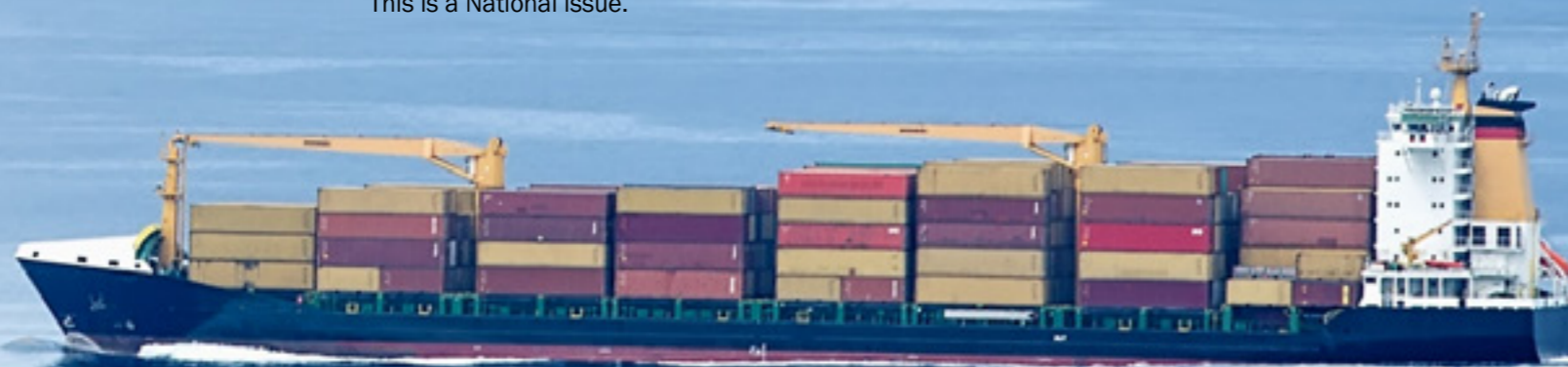
The international Cargo Handling Coordination Association is an independent, non for profit organisation dedicated to improving safety, security, sustainability, productivity and efficiency of cargo handling and goods movement throughout national and international supply chains. The ICHCA participated in the debates regarding to the amendments.

For more information visit www.ichcs.com

The Global Shipper's Forum (GSF) is the world's leading global trade association representing shippers who are engaged in international trade if moving goods by various means of transport. The GSF was actively involved in the debates leading to the amendments.

For more information please visit www.globalshippersforum.com

To read the full document please visit <http://www.worldshipping.org/>



NEW COMBI STACKER TO BE UNVEILED

Jungheinrich, one of the world's leading companies in material handling equipment, warehousing and material flow engineering sectors will be officially unveiled at this year's LogiMAT exhibition in Stuttgart.

The EKX514-516 narrow-aisle forklift, electric order picker and trilateral is a combination stacker and due to its intelligent light weight design and use of high strength steels, has resulted in a weight reduction of 150kg.

The truck is powered by new motor technology consisting of a synchronous reluctance motor which combines the high performance and energy efficiency of synchronous motors with the cost advantages of low maintenance requirements of three-phase AC asynchronous motors.

This new motor technology converts around 93% of the energy consumed into actual output, cutting energy loss by half and according to Dr Rosenbach from Jungheinrich, the motor's efficiency is the highest achievable in forklift operations and has reduced its energy consumption by 15% compared to its previous model.

This not only eliminates the need for extra batteries but also for charging stations and other expensive equipment whilst reducing the need for more manpower over the space of two full shifts.

Dr Klaus-Dieter Rosenbach, Jungheinrich Board of management member and in charge of logistics and system business states: "This is not a mere promise of two-shift operation without charging the battery – we also back up this claim vis-à-vis the customer." Therefore, if the battery fails to last for the two full shifts, Jungheinrich will replace it free of charge.

For the first time Jungheinrich are equipping this model with a patented vibration dampening system to provide the driver with a smoother ride. The optional Floor Pro model reduces lateral oscillations of the mast and driver's cab which are caused by uneven floor surfaces and by floors which are not designed for narrow aisle forklifts. Rosenbach states: "This system provides the user with the opportunity to travel more smoothly and up to 30 percent faster on substandard surfaces."

The new EKX 514-516 is fitted with various different modules for process integration, including RFID technology (Radio Frequency Identification), redundant height and distance measurement and the Jungheinrich Logistics Interface.

It was stated that if the optional Jungheinrich warehouse navigation system with semi-automatic target approach is added, output could be enhanced by up to 25%.

Dr Rosenbach states: "By combining intelligent assistance systems with high performance synchronous reluctance motors, Jungheinrich has made great strides in further optimising energy-putting us in great shape to meet the future challenges of Intralogistics 4.0".

The overall goal is to allow narrow-aisle trucks to work safely and efficiently even on floors which were originally designed for reach trucks and at lift heights of 10 metres.

For more information about Jungheinrich please visit www.jungheinrich.com

 **JUNGHEINRICH**

FACTORIES WELCOME THE CLAAW

Meggitt Modular Modifiable Manufacturing (M4) is leading the revolution in future technology for factories. It's backed by the Aerospace Technology Institute, IBM, AMRC (Advanced Manufacturing Research Centre) and the Manufacturing Technology Centre in Coventry and their three year initiative is making great progress.

The project hopes to combine existing and future technologies to form creative, intelligent and responsive working environments whilst revolutionising component assembly and transforming operator's working conditions.

It also aims to address the challenges faced by many, to deal with the assembly of low volume, high value products that don't lend themselves to automation.

Ultimately, it hopes to transform a traditional factory environment into an efficient system which optimises the flow of productivity.

A crucial part of this vision is the intelligent workbench, also known as the CLAAW (Closed Loop Adaptive Assembly Workbench) which is a major first step towards bringing the M4 project to life. This pioneering smart workbench will enable operators to build a wider variety of products, in

a more efficient and simpler way, by using laser projection to identify assembling steps and data capture which allows CLAAW to switch between different products and batch sizes.

Tom Newman, Graduate Programme Engineer who is working on the project explains: "We use one of the smallest, lightest off-the-shelves lasers as part of the intelligent workbench, to guide operators through operations; highlighting where components need to be placed, verifying its orientation using machine vision, and showing where bolts for example, need to be inserted and using two devices allows us to work in three dimensions."

The team have also been exploring the gains of using smart tooling such as, an intelligent torque wrench which can be wirelessly programmed to tighten a bolt to a specific torque.

George Hovakimyan, a graduate programme engineer states: "Having to report that a bolt has been accurately tightened represents an unnecessary step in an operator's workflow. If the smart tool could automatically detect that, the system could move to the next step itself, allowing the operator to concentrate on more complex dexterous operations."

Hovakimyan states there are further advantages to using smart tools such as, feeding back operational data into CLAAW and data analysis which detects any issues in the products tools, assembly process or the CLAAW itself at the earliest point. "The more contextual information you have surrounding the use of CLAAW and its tools, the more you can learn and improve operations," He adds.

The response generated by the prototype of the CLAAW; which is hoping to tour Meggitt's UK factories, shows that many are keen to see it installed throughout Meggitt's national and global assembly lines.

This has led to the production of CLAAW II which brings the workbench into Meggitt's factory environment and develops further technologies to work alongside it. Keith Jackson, Chief Technical Officer states: "We are being very careful from a technological perspective because you can fustoon something with technology which isn't actually useful."

CLAAW also offers the opportunity to advance worker development, especially in regards to operators gaining experience with a particular product. New, unskilled operators are provided with detailed, rigid commands supported by frequent directions via a laser pointer.

Laser and video guides show operators which parts to pick, place and fit in sequence via built-in-cameras connecting operators to experts for training and problem solving.

Real time cameras keep detailed records throughout assembly, which provides ideas for improvement and research for future technologies. As the operators developed their skills the instructions are scaled back and their progress is monitored more discreetly.

Jackson states: "Written messages can easily be discarded or go unread, bringing process changes directly to operator screens is far more beneficial."

It's clear to see that this technology has many benefits, not only for worker development and training but for productivity. It's a long process; hoping to be perfected by 2017 but it seems as if Jackson and his team are on track.



THE IMPORTANCE OF PEDESTRIAN LIGHTS

Yale introduced a Pedestrian Awareness Light (PAL) option to their forklift trucks back in May 2015 but why are these safety lights so vital to warehouse operations and how have they evolved over time?

A major contributing factor to accidents and near misses in warehouses are due to blind spots where forklifts and pedestrians work alongside each other. This is especially true when loading and unloading trailers as many operators are on a tight schedule and perform this task quickly in order to increase their productivity.

Forklift warning devices such as, strobe lights and back up alarms have been around for decades and many forklift manufacturers consider including them as part of their forklift safety package. However in general industry they are not required by the Occupational Safety and Health Administration (OSHA).

Back up alarms may be required by OSHA depending on the type of construction equipment; however it has been suggested that many forklift operators may dislike this safety addition hearing the noise on a daily basis.

The problem arises when they are ignored to a large degree due to the regularity of the noise and the fact that pedestrians become immune to the sound of the warning over time, which ultimately defeats the object of installing the alarms in the first place.

Another unwelcomed addition is strobe lights which may distract and annoy operators when flashing into their eyes throughout the day. Its common practice to see operators trying to sabotage such systems by disconnecting them, breaking them or covering them but this could lead to legal action. Safety devices which are displayed on forklifts but are not functional are an OSHA violation.

However, it seems that the new blue light system has been universally accepted by all and a great alternative to the above. This is because these lights allow operators to see their distance clearly, what direction they are travelling and how fast they are moving within a limited visibility warehouse.

Pedestrians also get a clear warning light informing them that danger is on its way and will begin to associate this light with danger.

The blue spot light was introduced in the US around 2013 and now many blue lights are produced overseas in China and Taiwan, as it's more cost effective to produce LED lights outside of the US. But it is important to note that like buying a forklift, buying a blue light needs to be tested thoroughly to ensure it works correctly and ultimately has the potential to save lives.

One such company which has introduced Pedestrian Awareness Lights (PAL's) onto their trucks is Spanish manufacturer, Borges. Jochen

Harmeling, Director of Logistics explains how the lights have improved efficiency in their warehouse: "Pedestrian Awareness Lights have allowed us to increase efficiency of the working environment in the plant without affecting noise levels, thanks to the higher visibility of trucks moving inside the warehouse."

Most companies decide to mount their blue lights onto the rear of their trucks, since the majority of the time forklifts are in reverse and this is when most accidents occurs.

Some also decide to mount them onto the front of their truck, which at times may block the light beam during forward travel, however it is possible to avoid this by adding a blue light in one direction and a red in another to inform pedestrians and other forklifts that they are approaching.

Matthew Allen, Yale engineering manager states: "Offering a choice of colours means that the Yale solution can be used on different types of floors, for example the red spotlight may be suited to grey or blue surfaces, while the blue light offers better visibility on red or brown floors."

When the lights are mounted near the rear of the truck they should be wired in such a way that they only work when the truck is moving in reverse; however many companies are being instructed to wire the lights so that they are always. This again, defeats the object of using the lights as a warning to pedestrians.

The new Yale 'Blue Point' projects a highly visible pattern onto the floor which creates a warning sign to pedestrians that danger is approaching and will be especially useful in noisy environments where audible warnings may be missed and at blind spots when direct visibility is limited.

Mr Allen, states the benefits it can bring to operators too: "As well as providing visual notice to pedestrians in the warehouse, the lights can warn operators of other mobile equipment, preventing damage to goods and equipment."

The 'blue point' is available as either a factory-fitted option or can be fitted to existing equipment from any manufacturer.

For more information please visit www.yale.com



NOMADPOWER: A SUSTAINABLE FUTURE FOR TEMPERATURE CONTROLLED VEHICLES

A report by environmental research organisation CE-Delft demonstrates that it is possible to make rest stops more environmentally friendly. It suggests that by refrigerating the load during driver's rest breaks and overnight stops, it reduces tonnes of CO2, NOx and other particulate matter being released into the environment.

The research also found that there are over 230,000 refrigerated trailers currently on Europe's roads which will no doubt increase in the coming years and that a 20%-30% saving on refrigeration costs during rests and overnight stops is achievable.

Perhaps the biggest claimed was that with a limited investment, it is possible to save 260 million litres of diesel annually, as well as 600 kilo tonnes of CO2, 4,700 tonnes of NOx and 560 tonnes of particulate emissions by simply installing sustainable connection points along Europe's main motorways.

Sustainability and cost savings on road transportation are main concerns for all transport operators within Europe. However one Dutch company is aiming to address these issues into one unique concept: NomadPower.

NomadPower is a cost saving, electrical power supply system which specialises in power supplies for temperature controlled vehicles in parking areas. By using NomadPower the driver refrigerates the load in a more sustainable way during rest breaks by 'plugging in' to NomadPower.

This reduces the noise and smell which is common from diesel generators, as well as reducing the fuel costs for the company involved.

Once a driver has registered with NomadPower, they will connect their refrigerator units to a power source via a 5-pin plug and start the supply of power in the following ways; via a telephone call, by logging into My NomadPower and by using the NomadPower app.

If they choose to plug in via the app or NomadPower log in platform, they will be given access to various pieces of information such as; insights into their present consumption, costs, CO2 reductions and the status of connection.

After disconnecting from the app, mobile device or website they will then receive a personalised invoice.

NomadPower also offers supplies at other locations where refrigerated transportation takes place such as; distribution centres, cold stores and where drivers are prone to taking longer breaks.

The EU's TENT-T policy aims to produce a more sustainable transportation network by reducing carbon dioxide emissions and nitrogen oxides, which is great news for NomadPower.

It also aims to connect Europe's major road networks in the best possible way by connecting the continent from East and West, North and South, which also high on NomadPower's agenda.

NomadPower currently has a network of points in up to 40 locations and approximately 240 connection points and they are aiming to reach 5,000 points by 2020.

They are certainly on their way to achieving their goal with construction under way in Germany. However before we see a big difference, more EU companies may need to get on board and take direction from NomadPower.



CURRENT LOCATIONS

The Netherlands

- Bergen op Zoom, Partner Logistics
- Rotterdam Albrandswaard, Routiers Distripark Eemhaven
- Roosendaal, Secured Truckparking Borchwerf Zevenbergschen Hoek, Wegrestaurant De Gouden Leeuw
- Rogat, Wegrestaurant De Raket
- Waalwijk, Trucksafe Waalwijk
- Emmen, Truck Centrum Emmen

Belgium

- Ieper, Partner Logistics
- Meer, IDS Truckstop Joost
- Heusden-Zolder, Truckstop 26bis

Italy

- Bologna, Interporto Bologna
- Vipiteno, Autoparco Sadobre
- Trento, Interporto Trento
- Truckvillage Colleferro

Germany

- Rheinböllen, Aral Autohof Elbert
- Geiselwind, Autohof Strohofer
- Lauenau, Maxi Autohof
- Bad Rappenau, 24 Autohof
- Neuberg, 24 Autohof
- Neuhaus, Autohof Bergler
- Regensburg-Ost, Euro Rastpark
- Lippetal, Euro Rastpark
- Guxhagen, Euro Rastpark
- Schweitenkirchen, Euro Rastpark
- Crailsheim-Satteldorf, Euro Rastpark
- Werneck, Euro Rastpark
- Hengersberg, Euro Rastpark

UK

- Moto Cherwell Valley
- Moto Toddington Northbound
- Moto Toddington Southbound
- Moto Lymm Lorry Park
- Moto Thurrock
- Moto Donington
- Moto Doncaster North

Spain

- La Jonquera, Red Tortuga
- Burgos, Castillo El Burgo
- Figueres, Parking Padrosa

<https://www.nomadpower.eu/en/home/>

INNOVATIVE VEHICLE RACKING

CFR Rinkens, an automotive logistics specialist has warned that unless automotive handlers don't move away from the temporary wooden racking solutions, they could be left behind.

CFR Rinkens have made the move from traditional wooden racking to the fully certified steel alternative, engineered to be more cost effective and sustainable. The use of R-Raks to move cars into containers, has effectively doubled CFR's business and they are currently underway expanding their export operations on the East Coast of America.

The versatile, reusable racking system developed by Trans-rak, has allowed the automotive company to increase the loading of vehicles by 33%. The R-Raks have also substantially reduced their loading times, virtually eliminating damage and reducing their overall freight costs.

As a result of evolving from the wooden racks to steel, CFR Rinkens has secured a number of impressive new contracts and formed a joint venture with global logistics provider APL Logistics to transport used cars across the US, Canada, Mexico and is hoping to move a total of 40,000 cars domestically by the end of 2016.

CFR Rinken's have also renewed their contract with Tesla Motor's, securing CFR as the manufacturer's premier shipper of thousands of its exports until the end of 2017. They have even worked with The Pasha Group shipping 12,000 brand new cars for Chrysler and Honda via California and Hawaii since using the new racking system.

Paul Donaldson, MD of Trans-Rak Internationals states: "Moving away from wooden racks clearly served as a powerful boost to CFR Rinken's business, enabling them to optimise loads, protect

valuable classic cars, as well as luxury marques and deliver them in perfect condition to discerning customers within the US and on a global basis."

He adds: "By comparison with R-Raks, wooden racks are expensive in the long run and have a much greater negative impact on the environment.

They can only be used once and must then be dismantled and disposed of. In contrast, steel racking can be reused multiple times over a number of years and has less impact on the environment, even taking into consideration manufacturing processes."

Not only have R-Raks made a lasting impression on CFT, but they were also used as part of an exhibition to demonstrate their capabilities in China.

Tianjin Binhani TEDA Logistis Group (TBLT) loaded 4 large cars into a container (Changan CS35, Lifa 530, Changan Eado and Ford Mustang) to demonstrate the benefits of the steel structure.

They reported that this made a big impression on visitors including members of the Chongqing government and a number of OEM's (Original Equipment Manufacturer).

The exhibition aimed to promote Chongqing Freight Container station as the largest in-land container station in the world.

Yoa Lui of TBLT stated: "We were met with great success in Chongqing with the R-Raks, which we know to be reliable equipment for transporting cars in containers and which have been proven to decrease costs."

Even Chilean automotive logistics provider KLA, have noticed the benefits of the re-usable and versatile racking system.

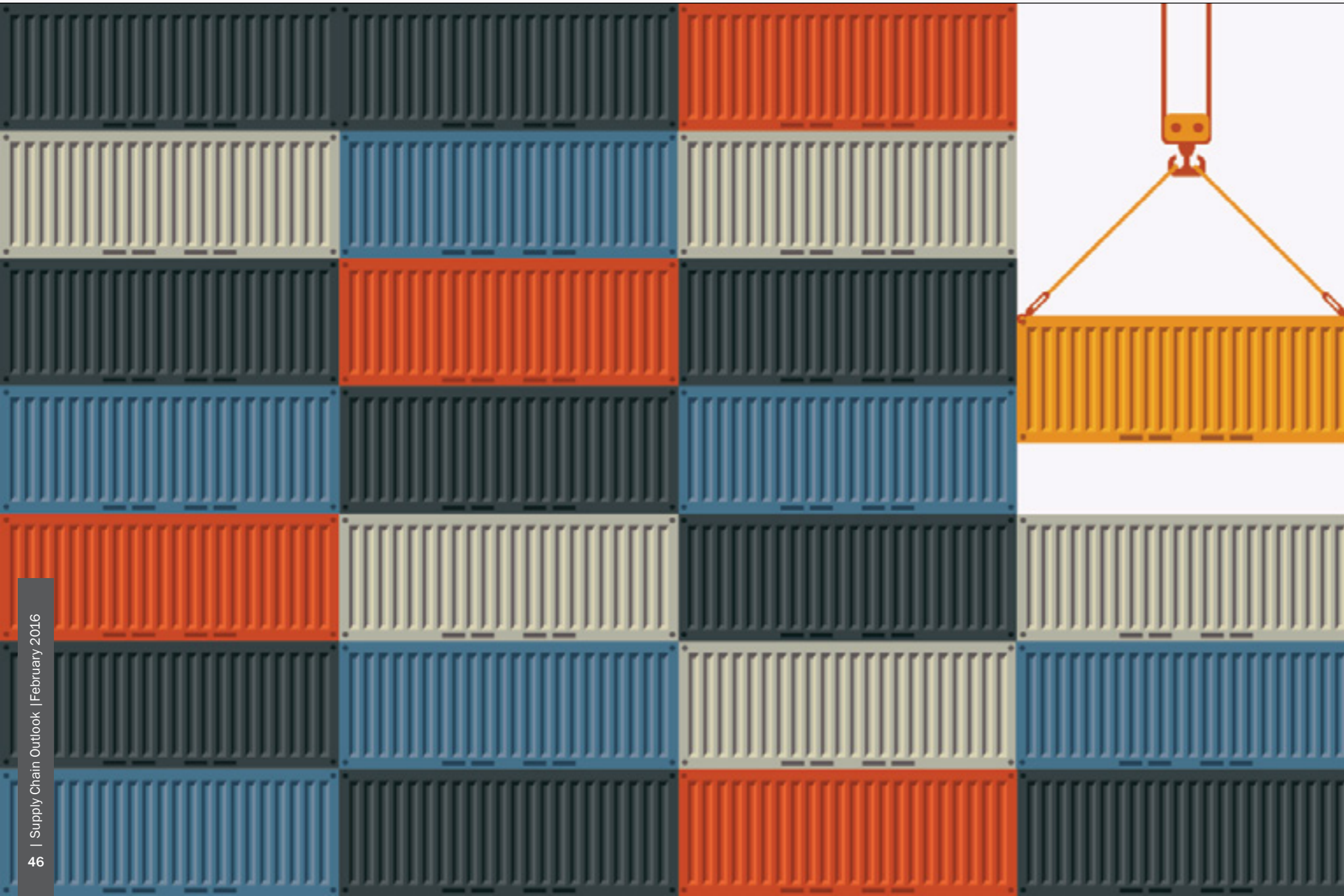
When looking for an alternative of shipping and handling, KLA discovered that the steel racks allowed them to load a wider variety of models into each container. In fact, they found that they could load 3 to 4 vehicles per container depending on the model, compared to only 2 to 3 previously, in turn reducing shipping costs.

Javier Kuhlmann, general Manager of KLA commented: "We were looking for a sustainable solution to supply every single port in our long and narrow country, and an alternative to being over-reliant on the RoRo vessels and terminals.

R-Raks helped us to get the most out of containerization to make it more cost effective and to give us the flexibility to move more cars more often from more locations. I can confirm that Toyota's feedback to our improved service has been very positive indeed!"

Before KLA discovered the R-RAK solutions, they transported cars by truck and coastal shipping lines, which by comparison was a very large and restrictive way of stacking a limited number of vehicles per container.

Many companies seem to be acknowledging the fact that steel, re-usable racks are more cost effective and sustainable to their wooden counterpart; therefore we could be seeing this new system implemented sooner rather than later.



IS BITCOIN THE FUTURE CURRENCY FOR BUSINESSES?

The increasing use of virtual currencies, especially Bitcoin has prompted businesses to accept them as a valid method of payment.

Established in 2009 by software developer Satoshi Nakamoto after proposing an electrical payment system based on mathematical proof, by the middle of 2013 the value of all bitcoins in circulation exceeded \$1.5bn.

His idea was to provide a currency independent of any central authority which was transferrable electronically and with a very low transaction fee.

Bitcoin is created digitally, by a community of people that anyone can join online. They are 'mined' by an online community who send each other coins. It's one person's role to collect these transactions and write them in a ledger.

However, there is a limit; only 21 million bitcoins can ever be created by miners but there is a loophole; they can be divided into smaller parts, to one millionth of a bitcoin.

If you're thinking that this could be the currency of choice for your business in the future, take a look at our guide to the advantages and disadvantages of the digital currency.

ADVANTAGES

- Cheaper transactions - It's cheaper than the usual card and cheque transactions. These transactions are high due to minimum fees. Bitcoin involves a very low transaction cost, providing a cost-effective means of accepting micropayments.
- Novelty Value - BitCoin can be used for a variety of products but is still a novelty, which allows businesses to offer a more unique experience for customers. It also provides a 'buzz' for those active within the BitCoin community due to the nature of being part of a unique community.
- International business is cheaper - If parties conduct cross-border business entirely in BitCoin the transactions are typically lower when compared to using the lowest currency available to large institutional clients.
- Transactions can't be reversed – Once the ownership address of a BitCoin has been changed to the new owner it cannot be reversed. This means that recipients are guaranteed 'ownership' once the transaction has been completed.
- No fraud – Organisations receiving payments in BitCoin are protected from payment card fraud as there are no larger authorities operating the system which has the potential to be hacked.
- Bitcoins cannot be stolen – Once BitCoins have been transferred they cannot be stolen from the new owner unless someone has physical access to the new owner's computer. Unlike traditional currency systems where only a few authentication details are required to gain access to finances, this system requires physical access, making it harder to steal.

DISADVANTAGES

- Anonymous – Due to its anonymous nature of BitCoin it could easily become the currency of choice used by criminals. It provides a way of laundering money and evading taxes. In fact, only Brazil and China have specific regulations around its use.
- It's a new currency – There are risks of technical flaws as it's still relatively new and the cryptographic process which provides BitCoin with its security could potentially be exploited by more sophisticated computer systems.
- It's much riskier than traditional currencies – As BitCoins are not supported by a central bank or national government it has no valuation guarantee, therefore it's much riskier than traditional currencies.
- Exchange Rate – Similarly when transacting in foreign currency organisations using BitCoin could face great deal of variation. However, as it's still a new system there is a shortage of financial instruments that organisations traditionally use to manage these risks.
- They are not yet widely accepted – There's still only a small group of online merchants which accept this currency and there is the possibility that governments may deter these businesses from using the digital currency to ensure that user's transactions can be tracked.
- Files can be lost – As the currency is not in a physical form the risks of losing the currency is higher due to any potential technical issues. If a hard drive crashes or if a wallet file becomes corrupted Bitcoins can be 'lost' and can never be recovered. This could potentially bankrupt a Bitcoin investor within seconds.



VOICE TECHNOLOGY HELPS BOOST PRODUCTIVITY

A study by Warwick University found that happy workers were 12% more productive than their counterparts. But how can employers within the logistics sector ensure they have happy workers?

The logistics sector employs over 1.7 million workers in the UK where the warehouse is a key component of everyday working life. Therefore, boosting morale is a focus for many warehousing managers and there could now be a solution in the form of voice technology.

Voice technology has been found to have positive effects on workers' work-life balance and overall well-being due to clear guidance and direction during their shift.

In the case of warehouse pickers, employees are asked to wear a portable device on their belt and headset, leaving them hands-free and eyes-free on the task at hand. Instructions are delivered via a headset from the warehouse management system one task at a time. The picker confirms each instruction verbally and the system is updated in real time.

A benefit of this technology is that instructions are given on a need-to-know basis, meaning pickers can concentrate on tasks without distractions or delays, in turn reducing errors.

The results say it all. Businesses who have adopted voice technology have seen an average increase of 20% in worker productivity compared to previous systems. Accuracy rates also rose to 99.98% which is crucial when the cost of returning incorrect items is up to five times higher than processing a new sale.

INCENTIVES

The technology is all well and good and shows great promise due to the results above, however if managers do not reward a 'good job' well done, worker morale and productivity will see a big slump and this is where incentives come into play.

The voice technology allows and encourages healthy competition between colleagues by offering rewards for completing additional tasks or set meeting targets. It also protects management

from being seen as biased towards certain employees, as the warehouse management system relays the instructions, eliminating human involvement.

By viewing workflows and monitoring progress in real time, employers can adopt a more flexible and relaxed model by re-directing staff to particularly busy tasks in order to help colleagues and complete work quicker. This in turn, allows for less overtime, creating a better work-life balance for workers.

Rewarding and retaining workers makes for a smoother ran warehouse and a happier workforce. By having a more attractive workplace, companies are more likely to attract the best individuals ensuring a better experience for all.

HEALTH AND SAFETY

Health and safety can be a real issue in many workplaces, especially in a warehouse environment, due to the many hazards they incur such as; heavy lifting, fork lift trucks and intense noise.

Therefore, this means that health and safety is top of many managers' agendas and finding a solution to any potential hazards is great news.

Voice technology can be used by freezer pickers for example by wearing headsets, which eliminates the need to remove their gloves to type information into a mobile device. Therefore, by using this technology the picker reduces their risks dramatically of exposing their hands to the harsh and hazardous environment.

MEETING DEMANDS

Skilled and motivated workers are crucial at all times but especially during peak times such as, Christmas and the growing phenomenon that is Black Friday.

Voice technology can be used to tackle such peaks without negatively impacting on workers. This is due to being able to plan ahead and use the technology to train new workers quicker and more effectively to meet the demands of the business and their customers.

HAPPY WORKERS

Happy workers ultimately mean happy managers and a happy workplace which is the goal for all involved.

The use of voice technology allows companies to ensure the process of picking is being carried out in the correct way and therefore allows managers to focus on the important 'human elements' such as employee morale and well-being.

One company that is leading the way in voice technology is Honeywell, who produced Vocollect Voice Solutions. Ron Kuneram, Vice President and general manager of Vocollect Solutions states: "Our success globally is measured by our ability to provide quantifiable business value to help customers address changing business requirements with the industry's most agile voice solutions."

VoCollect voice solutions have impressive statistics such as; helping businesses increase worker productivity up to 35%, reducing errors up to 25% and training time by 50%.*

In conclusion, voice technology could be seen as an effective way of maintaining and enhancing productive workers within a warehouse environment, and as the logistics industry is currently worth around £55 billion in the UK alone, this is an important lesson that many may have to learn rather quickly.

*source: <http://www.vocollectvoice.com>



SUPPLY CHAIN IN THE SPOTLIGHT

In this issue we are examining one of our most popular courses; Supply Chain and the reasons behind the growing number of students choosing this field.

As you are aware, IoSCM allows students to submit evidence of previous knowledge and experience to achieve certain elements of the course without studying, which is great for those already working within the supply chain due to their diverse skills set.

The supply chain covers a variety of sectors including: manufacturing, retail, engineering, energy, healthcare and the public sector meaning an internationally recognised qualification allows you fantastic career progression within a variety of sectors - the sky's the limit!

Our IoSCM supply chain qualifications are available to anyone from a beginner to a professional, allowing every individual the chance to progress their career within the sector no matter what their level of knowledge.

So we've covered the benefits of studying a supply chain qualification with IoSCM but how can this qualification open doors into the supply chain world and why should you start a career in the industry?

DID YOU KNOW?

71% of warehouse employees are qualified.

93% of purchasing employees are qualified.

75% of transport employees are qualified.

SUPPLY CHAIN

INDUSTRY GROWTH

Due to global connections, new and diverse opportunities are on the horizon and as there are many more supply chain roles than ever before and with more expected to come, there's no better time to get qualified and develop your knowledge within this ever expanding sector.

There is also an unlimited number of job roles. You could use your qualification within the public sector; manufacturing or engineering amongst others; there's no stopping you!

ATTRACTIVE SALARIES

The average salary of a supply chain Middle Manager is £42,000* and there is the potential to rise above £100,000 for higher roles. But it's not only great salaries that appeal to the masses. Those working within the supply chain have high job satisfaction due to growth, diversity and travel opportunities.

CAREER DEVELOPMENT

There are many opportunities for career development that you simply won't get in other roles unless you look for them. The structured tiers offer opportunities to advance your skills and more opportunities to reward hard work.

Also, due to the wide variety of sectors within the supply chain you will develop an array of industry skills and transferable experience which will benefit you in the future, no matter what your sector.

MORE OPPORTUNITIES FOR WOMEN

No longer is the Supply Chain dominated by warehousing roles, in fact problem solving and creative skills are in high demand and historically suited to female workers.

There are also groups such as, Women in Logistics and Women in supply chain who are dedicated to attracting, retaining and supporting women in the industry.

As you can see there are many factors which make this one of our most popular IoSCM courses, so if you're thinking about a career in the supply chain or simply wish to enhance your current skills, we have the course for you.

* Source: reed.co.uk 2016



FURTHER BUSINESS INSIGHTS FROM THE ABERDEEN GROUP

The Aberdeen Group has released research reports from its business intelligence, networking and application performance research practices.

The Aberdeen Group has been publishing reports which educates and helps business people around the world to improve their performance since 1988.

Previous research concerning enterprise performance management (EPM) found that senior executives implementing performance management initiatives had an overall better understanding of their business and were able to use this to better define their business strategy.

The report named 'Culture, Collaboration and Coordination: Driving High Performance with EPM' prepared by David White, senior research analysts at Aberdeen's Business Intelligence practice and Nick Castellina, research analyst in Aberdeen's Enterprise Application practice reveals performance management told can benefit employees by providing access to and the ability to share data, which allows for better informed decisions throughout the organisation.

It also discovered that the way in which they were implemented via software or process improvements did not have an effect.

Another report prepared by Peter Krensky, research associate in Aberdeen's Enterprise Applications and Business Intelligence practices and Kevin Prouty, service vice president of research 'ERP in Industrial Equipment Manufacturing: Rise of the Machinery' discovers the complex manufacturing projects for a range of products. It found that products from air purifiers to high speed drivers, required intelligent structures supported by powerful technology.

ERP serves as the infrastructure and transactional device for every element of the business, from product design to logistics and sales.

This report examines how top performing organisations utilize ERP solutions to enhance and integrates processes across their organisation by reducing costs and allowing for decisions to be made efficiently.

Krensky prepared another report named 'Coffee and BI are for closers: Mixing Analytics with Customer-Facing Activity' states that customers base their first impressions and to make a decision on whether or not to establish a business relationship on interactions with customer facing employees.

Due to this factor, Krensky found that top performing organisations equip their customer facing employees prior to engaging with potential customers. He states that by using BI (Business Intelligence) to help sales, marketing and service employees manage relationships and drive new business via detailed knowledge of their products and services.

This analysis gives insight into how top performance businesses manage and develop business savvy employees and utilize their findings to meet the needs of their customer facing employees.

For more reports by The Aberdeen Group please click here: <http://www.aberdeen.com/>

ABERDEEN
GROUP

FREIGHT

Job Title Ocean Export Clerk**Location:** Derbyshire, United Kingdom**Salary:** £20,000 - £30,000**Brief Job Description:** You will be responsible for the complete import of LCL and FCL shipments processes for a portfolio of customers.

In co-operation with the team you will ensure that all shipments are handled smoothly and the customer's needs are taken into account. You will also be responsible for coordinating and arranging transport and all documents needed such as; customs documents, issuing Bills of Lading, arranging buying rates and issues invoices, as well as making offer and quotations to customers and agents worldwide.

This is a permanent position and asks for a minimum of 3-5 years work experience within ocean export.

More Information: <http://www.freightpersonnel.co.uk/vacancy-detail?VacancyId=5102>**Job Title** Assistant Traffic Manager**Location:** Knutsford, Manchester, United Kingdom**Salary:** £20,000**Brief Job Description:** The successful candidate will help to build a comprehensive book of owner drivers which could be called upon at short notice. They will implement and maintain service levels, dispatching drivers and liaising with customers on a daily basis to ensure that a professional service is being maintained at all times.

They will report directly to the Traffic Manager, working alongside other Controllers and Customer Service Executives.

Candidates will ideally come from a sameday courier background however candidates from an Express Parcels/ Next Day Parcel Controlling background will also be considered.

Benefits include 20 days holiday, excellent career prospects and £5,000 bonus.

More Information: <http://www.freightpersonnel.co.uk/vacancy-detail?VacancyId=5303>

PURCHASING

Job Title Procurement Innovation Lead**Location:** Worldwide (preference UK or US), Sweden or Asia**Salary:** £75,000 - £85,000 + associated benefits**Brief Job Description:** This is a newly created role focusing on global procurement Innovation & Excellence within the pharmaceutical industry.

You will be engaging with the global sourcing community (circa 350 people) and deploying innovation work streams and adding value to the global sourcing function. You will need pace and drive to succeed in this role.

This is a permanent role which can be based anywhere in the world although the preference is either the UK or US. There will be some degree of home working plus regular global travel (25% - 50%)

The ability to demonstrate that you can successfully influence others to accomplish individual, team and organisational objectives across working groups and teams is desirable.

More Information: <http://www.beselect.co.uk/careers/23479/index0/Procurement-Innovation-Lead-Worldwide-Jo-03673>

WAREHOUSING

Job Title Warehousing Operative**Location:** Didcot, Oxfordshire, United Kingdom**Salary:** £14,000 - £15,000**Brief Job Description:** The role requires you to operate according to the companies policies and procedures to book stock into the warehouse and to fulfil customer's orders and sample requests in the most efficient and cost effective manner.

Working hours are 08.00 – 16.30 Monday to Friday but staff are able to work flexibly within these hours whilst always ensuring adequate cover.

The role involves lifting rolls of material, using appropriate equipment as defined in the company's health and safety policies.

You will be responsible for your own health and safety and that of those who may be affected by what you do or fail to do. This in mind, you are required to wear appropriate safety clothing within the warehouse when operating fork-lifts.

More Information: <http://www.reed.co.uk/jobs/warehouse-operative/28825694#/jobs/transport-logistics/warehouse-operative>

SUPPLY CHAIN

Job Title Various Roles**Location:** Hertfordshire, United Kingdom**Salary:** Various salaries**Brief Job Description:** MBDA have various opportunities across their procurement and supply chain teams such as:

- Category Manager – RF (P6260)
- Category Procurement Manager – New Bids (P6265)
- Lead Buyer – Mechanical (P6206)
- Senior Buyer – Mechanical (P6145)
- Senior Buyer – Electronics (P6236)
- Senior Supply Chain Manager (P6238)
- Commercial Procurement Manager (P6141)
- Sub-Contracts Officer (P6142)

MBDA offer flexible working hours, excellent training and development opportunities and a world-class facility with restaurant and state of the art gym.

More Information: For more information please visit their careers website www.mbdacareers.co.uk**Job Title** Lead Category Specialist FM**Location:** Coventry, United Kingdom**Salary:** £35,000 - £45,000**Brief Job Description:** You will be responsible for the strategic management and ownership of facilities management, buildings maintenance and estates services with a portfolio circa £15m per annum.

The purpose of the role is to deliver a sustainable supply chain to ensure Severn Trent's external expenditure delivers the highest standards at the lowest cost.

You will research supply markets and suppliers, assessing trends, risks and opportunities and overtime will develop an expert knowledge of the FM category area.

You will develop and implement category strategies which fulfil business requirements in regards to cost and performance, as well as recommending strategic sourcing options and implementing plans to ensure compliance with legislative requirements.

Finally, you will help develop SLA's and KIP's whilst monitoring the usage of contracts implemented and to put in place actions which maximise contract compliance.

More Information: <http://jobs.supplymanagement.com/job/120589/lead-category-specialist-fm/>

SHIPPING

Job Title: Shipping Clerk**Location:** Cricklewood, London, United Kingdom**Salary:** £23,000 + Pension + Bonus**Brief Job Description:** This position is ideal for a shipping clerk looking for a long-term role. Duties will include, handling incoming and outgoing shipments ensuring quality and quantity is correct and that documentation is in place.

You will also be responsible for ensuring that serial and batch numbers match the product and that packaging procedures are adhered to, as well as all transactions are recorded on the company's database and tracked through to the delivery date.

Finally, you will be dealing with queries and any possible problems that may occur whilst goods are in transit to ensure the client's full satisfaction.

More Information: <http://www.burtonboltonrose.co.uk/job/shipping-clerk-2/>**Job Title** Fleet Superintendent**Location:** Hong Kong, China**Salary:** Competitive + incentive scheme**Brief Job Description:** You will responsible for planning and controlling all activities connected with the safe and efficient operation of assigned vessels. You will ensure that the maintenance planning, execution and control is carried out according to company standards.

You must have 1-2 years' experience as a Superintendent and sailing experience as a Chief Engineer on board either Bulk carriers or Oil Tankers.

More Information: <http://www.redtheconsultancy.com/jobs/fleet-superintendent-tankersbulk-2776>

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up & coming events



Middle East Pharma Cold Chain Congress

March 14th - 17th 2016 | Crowne Plaza, Dubai

About: The Middle East Pharma Cold Chain Congress is the key platform for the pharmaceutical industry in the MENA region as it brings together industry stakeholders to discuss any ongoing and future challenges and how to overcome these issues with solutions.

This year's congress will have an emphasis on overcoming challenges in the following ways: regulatory compliance, integrating cold chain management, selecting the appropriate partners, maintaining supply chain integrity, achieving real time traceability and many more.

What's new in 2016? There will be a greater focus on local manufacturers and regional drug distributions in the MENA region, new case studies and interactive workshops.

The aim is to create solutions and strategies that will ensure safe shipments of pharmaceuticals throughout the MENA region.

More Information: For more information: <http://www.pharmacoldchainme.com>

4th Annual Smart Manufacturing Summit

April 4th - 7th 2016 | Milwaukee, Wisconsin, USA

About: Manufacturing CEO's will be discussing key strategies, tactics and opportunities in the 21st manufacturing industry.

It will focus on the following key opportunities available to manufacturing CEO's: lean manufacturing in the digital age, the impact of the Internet of Things, recruiting and managing talent, smart design for shorter time-to-market and how to evaluate and integrate digital technology into current operations.

The event is to be co-hosted by Harley-Davidson, CEO Matthew S Levatich and will also be a featured speaker and participants will enjoy a tour of Harley Davidson's Pilgrim Road production facility.

More Information & Booking: For more information & booking <http://smartmanufacturingsummit.com/>

Multimodal 2016

May 10th - May 12th | NEC Birmingham, UK

About: In its ninth year, Multimodal is quickly becoming the UK & Ireland's biggest and best logistics event and one for the annual calendar.

Exhibitors at Multimodal represent every sector of logistics including: rail, aviation, maritime, warehousing, and storage services. It is this that makes the annual event one of the best within the logistics industry, as it allows the entire freight transport and logistics supply chain industry to merge together under one roof.

It is the go to event for shippers, importers, exporters, manufacturers, wholesalers and retailers who are looking for a more efficient way to run a supply chain organisation.

More Information & Booking: For more information & booking: <http://www.multimodal.org.uk>

15th Intermodal Africa 2016

April 7th - 8th 2016 | Accra, Ghana, Africa

About: This two day conference will feature world-class speakers addressing topical issues and challenges on global transportation and logistics.

The event will be attended by a mixture of senior executive harbour masters, harbour engineers, port engineers, maintenance supervisors and procurement decision makers together with the region's leading shippers, cargo owners and logistics companies plus many more from countries throughout West and Central Africa.

There is also the opportunity for exhibitors and sponsors to network directly with delegates at this major maritime transport event.

More Information: For more information & booking: www.transportevents.com/ForthcomingEvents.aspx

TransRussia

April 19th - 22nd July | Crocus Expo, Moscow, Russia

About: TransRussia is the leading transport and logistics exhibition annually and attracts national and global leaders in transport, logistics, services, transport machinery, railway equipment and transport technology.

The event allows for new information systems to be developed and for interaction between different modes of transport to resolve issues on global transportation and the logistics service markets.

TransRussia is the only intermodal exhibition in the country covering the entirety of the industry and presents companies who specialise in transport services by road, rail, sea and air.

More Information & Booking: www.sclsummit.com

HARLEY DAVIDSON TO CO-HOST SMART MANUFACTURING SUMMIT 2016

The fourth annual Smart Manufacturing Summit is to be co-hosted by Harley Davison. Harley Davidson CEO Matt Levatich and his executive team will share strategies for adjusting to new opportunities in manufacturing, as well as issues they've encountered and demonstrate the techniques they've learned to overcome such challenges.

The conference will focus on the following five key opportunities for manufacturing CEO's who will be attending:

1. Lean manufacturing in the digital age
2. The impact of the Internet of Things
3. Recruiting and managing talent
4. Smart design for shorter time-to-market
5. How to evaluate and integrate digital technology into current operations

Wisconsin Economic Development Corporation is a platinum sponsor for the event, partnering with the Chief Executive Magazine to showcase the state's advanced manufacturing leadership: "Wisconsin has a strong concentration of both makers and users of smart manufacturing technology, as well as proven history of adoption among Wisconsin's major manufacturers."*

Other speakers include: Barnes Group President and CEO Patrick Dempsey, MillerCoors Chief Integrated Supply Chain Officer Fernando Palacios, Joy Global President and CEO Ted Doheny, Snap-On Chairman and CEO Nicholas T. Pinchuk, Briggs & Stratton President and CEO Todd Teske, GE Aviation Sourcing General Manager Chuck Nugent, Newport News Shipbuilding President Matthew J. Mulherin, the Design and Manufacturing Innovation Institute Executive Director Dean Bartles and The Additive Manufacturing Council President Rick Smith.

The event is limited to 150 mid-market manufacturing CEO's and other top executives. Those who attend will have the opportunity to tour the Harley-Davidson Museum, historic Miller Caves and many more informative sites including:

Harley Davidson's Pilgrim road Plant

There will be the opportunity to view state of the art manufacturing at work in the company's 912,000 square foot Pilgrim Road Powertrain Operations facility. The plant manufactures 69

variations of powertrains, including the legendary 'Big twin' engines and transmissions which are crucial to Harley's Touring model families.

Harley Davidson Museum

This 20 acre campus houses more than 450 motorcycles and artefacts including, Serial Number one, the oldest known Harley-Davidson motorcycle. Enjoy tales of the past, products and the people behind the brand.

Pfister Hotel

Built in 1893, the Psifer hotel has been a Milwaukee icon for over a century and is one of the Midwest's premier luxury hotels. It will also serve as the base and host for most of the Summit's general and breakout sessions.

Miller Inn & Historic Miller Caves

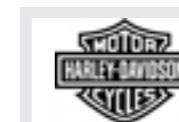
A guided beer tasting experience will begin in the caves which will then move on to the Miller Inn adjacent to the caves for dinner and networking.

GE Healthcare Electric Avenue Manufacturing Facility

A tour will allow attendees to explore the facility which was a 2015 Industry Week Best Plant finalist and demonstrates practices and programs which excel in continuous improvement and customer satisfaction. It employs more than 52,000 people worldwide and serves healthcare professionals in more than 100 countries.

*Chief Executive Magazine

For more information: <http://smartmanufacturingsummit.com/>



www.smartmanufacturingsummit.com

Supply Chain Outlook



www.ioscmmembers.com