

eureka

Issue 16

Spring
2012

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THE MAGAZINE FOR THE MATERIALS HANDLING PROFESSIONAL

Less Waste, More Haste

*What logistics can learn
from Lean Manufacturing.*



An Impact on logistics

*Improved fleet availability helps
Cat® Logistics boost performance.*



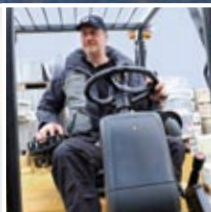
Risk-Free Savings

*Using risk assessments to boost
safety and cost-effectiveness.*



Sitting Pretty

The importance of ergonomics.



eureka issue 16

The magazine for the materials handling professional

Spring will soon be with us again – so welcome to 2012's first edition of eureka!

Markets are under pressure and the regulatory burden continues to grow. In this issue, we focus on some important technical and organisational aspects of the business.

What can Lean Manufacturing offer logistics? In our lead article, starting on **page 4**, *Gian Schiava* guides us through the maze of acronyms and unfamiliar terms to the underlying simplicity of the idea: that a business that cuts waste is more profitable, more effective and serves its customers better.

We are very proud that the latest Cat® High Level Order Picker was recognised for its contribution to driver safety and comfort with the *Forklift Truck Association (FLTA)* Ergonomics award. *Gay Sutton* discusses how both truck design and warehouse layout and construction can help to keep drivers healthy and productive. (**page 14**)

Our two-part study of risk assessment starts on **page 11** – part two will appear in the next edition. *Gay Sutton* has been talking to safety experts, professional associations, industry bodies, warehouse operators and logistics professionals in the quest to turn Risk Assessment from chore to productive tool.

Impact Handling won and now operates the fleet contract at *Cat® Logistics'* huge facility near Leicester, England. This edition's case study is about meticulous planning, effective data collection, agility and responsiveness, which helped cut costs and greatly improve fleet availability. (**page 8**)

Gay Sutton will be taking over as editor from the next edition of eureka. I'm sure you join me in wishing her well, and in thanking *Ruari McCallion* for his efforts over the past three years. He will continue to contribute to the magazine and to inform, entertain and provoke.

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



Monica Escutia
Commissioning Editor

Issue 16 - Spring 2012

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eureka's commissioning editor is Monica Escutia, a Bachelor of Communications – Journalism. She is a Spanish national and fluent also in Dutch, English and Italian. Having previously edited a variety of international media she has spent the last nine years in the materials handling industry – the first four as a parts sales representative for several European countries, before becoming the EAME Senior Marketing Communications Coordinator for Cat Lift Trucks, based in the Netherlands.

Don't forget to visit the eureka website www.eurekapub.eu where you have access to the archive of useful articles and features. You can also post comments and suggestions about the magazine and future articles you'd like to see covered.

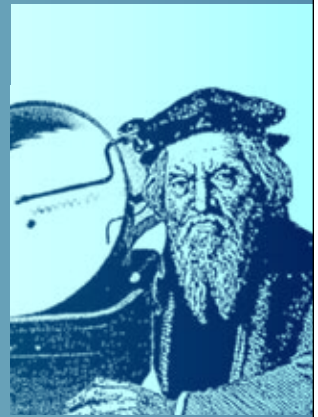


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<p><i>Lean Enterprise</i> Leaning Towards Success</p> <p>5S, Sensei, Kaizen, OEE may be unfamiliar terms, but <i>Gian Schiava</i> finds that lessons from Lean Manufacturing can help logistics companies to operate more effectively.</p>	<p><i>Case Study</i> An Impact on Logistics</p> <p>Case study: Impact Handling won the contract to supply and support Cat® Logistics' materials handling fleet with a commitment to reduce costs and improve availability. Meticulous planning and attention to detail enabled it to exceed expectations.</p>	<p><i>Risk Assessment</i> Reducing the Burden of Risk</p> <p>In the first of a two part series, <i>Gay Sutton</i> finds out how to take the difficulty out of Risk Assessment and turn it into a useful tool for safety and productivity.</p>	<p><i>Ergonomics</i> Are you Sitting Comfortably?</p> <p>The effective warehouse needs a full complement of fit, well-trained forklift truck operators. <i>Gay Sutton</i> checks out whole body vibration, whiplash, sleeping policemen and other hazards that can affect driver health – and how to eliminate them.</p>

"It was Archimedes who observed that the power of levers could be used to move the entire world." This publication is named after his famous exclamation of 'eureka!', literally, 'I've found it.'



Events Calendar

Date, Event, Location, Website	Overview
1 - 3 May 2012 Multimodal 2012 NEC, Birmingham, UK. www.multimodal.org.uk	<i>Multimodal</i> is the UK and Ireland's leading freight transport and logistics exhibition. Now entering its fifth year, the event has evolved into an annual one stop shop for shippers looking to find ways of optimising their supply chain and transportation flows. Attending <i>Multimodal</i> provides you with the opportunity to compare your suppliers, strategies and modes and network with cargo owners.
13 - 16 May 2012 International Federation of Warehousing and Logistics Association - Annual Convention in Italy Palazzo Dei Congressi, Rome, Italy www.ifwla-rome2012.com	For the first time the annual convention <i>IFWLA 2012</i> is supported by an exhibition area, where professionals have the opportunity to meet the key players of the national and international scientific field, for a comparison of solutions, innovations and new models of business. The objective of the event is promoting new international markets, as well as encouraging study and exploration of issues in the areas of mobility, technology, logistics and research.
5 - 7 June 2012 SIL 2012 - The International Logistics and Material Handling Exhibition Barcelona, Spain www.silbcn.com	<i>The International Logistics and Material Handling Exhibition (SIL)</i> is the meeting point for all logistics activity in Southern Europe. After eight editions, it has become the greatest Logistics and Transport event in Spain and one of the most important in Southern Europe.
13 - 14 June 2012 Logistics Link Live NEC, Birmingham, UK. www.logisticslink.co.uk	The show is a unique opportunity to see live demonstrations of products, systems and services for your logistics network. Located in the heart of the UK and in the heart of logistics at NEC National Exhibition Center, & Organized by Centaur Media PLC.

CAPABILITY

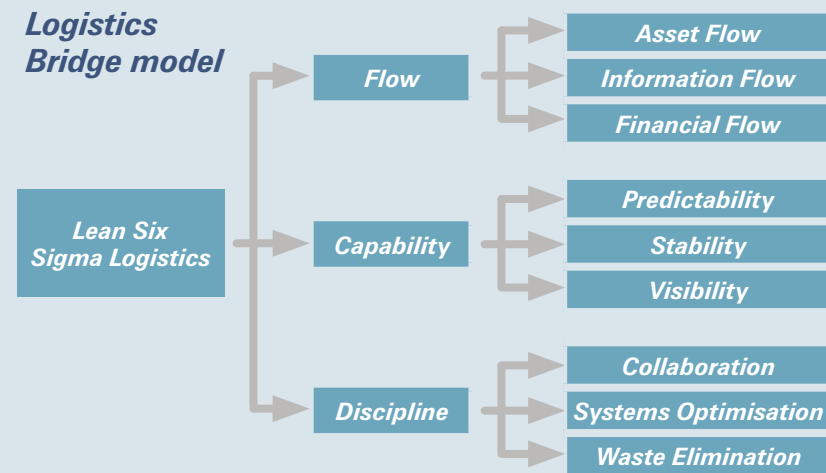
DISCIPLINE

FLOW

Leaning towards success

Companies that will survive the current harsh environment will be those that strive to the utmost to survive and improve – and sometimes, it pays to look at others' successful practices and adopt them. Several logistics companies are now looking at Lean Manufacturing in the quest to improve their processes.

Gian Schiava considers how logistics is getting Lean and has a closer look at 5S methodology.



Above. Lean production systems are often depicted as a house on firm foundations.

- 1) Improved Profits by eliminating waste
- 2) Just In Time (JIT)
- 3) 7 Wastes
 - 5S
 - Continuous improvement (Kaizen)
 - SMED (Single Minute Exchange of Dies)
 - Visual Management
 - Mistake Proofing
 - TPM (Total Productivity Management)
 - Standardised Work
- 4) Preventing Reoccurrence (Jidoka) Quality and Productivity
- 5) Production Levelling

First, we need to have an understanding of what Lean Manufacturing is. Essentially, it is a management approach that endeavours to eliminate or reduce all activities that do not add value. The core idea is that, by making production 'leaner', product quality will improve and manufacturing costs should decrease. There is a strong focus on current activities and ways in which they can be made as efficient as possible. While the Lean approach and its various techniques are best known from Japanese examples, its origins can actually be traced back to British and American principles, as conceived by people like W. Edwards Deming and Henry Ford. However, it took decades before Western companies started to re-learn and implement the techniques and disciplines involved.

"The core idea is that, by making production 'leaner', product quality will improve and manufacturing costs should decrease."

In any business area, a new thought process will be embraced by many new 'gurus' who will put their own spin on a concept. In some cases, this is merely a quest to become an opinion leader but, sometimes, a bright thinker will add new insights, which lead to a new management approach. Among the methods developed in the second half of the last century were **Kaizen, Throughput reduction, Pull production, Line balancing, 5S, TQM, Quality Circles, SPC, PDCA (also called PDSA) and OEE**. New ideas are quite possibly being added right now.

The Big Guns

We will have a closer look at 5S later, but we can safely say that all these approaches seek to identify problems, eliminate superfluous activity, reduce the total number of process steps or redesign the problem areas. Word of

the success of these discipline-based methods soon spread and led to their wide adoption.

Six Sigma has become one of the best-known quality management methods. It is about much more than just improving manufacturing; it shines a light on all business processes. It is founded on statistical process control (SPC), which calculates sigma (standard deviation) from three to six units, in 0.5 unit steps. It incorporates elements from Quality Circle programs and Deming-derived sampling methods. Deming's approach contrasted focus on quality, which leads to rise in quality and fall in costs, with focus on costs, which leads to decline in quality and rise in costs. Fixed procedures, which are founded on data collection, are used to solve problems. *Six Sigma* has a particular focus on customers and client satisfaction and the term is often heard within project teams. Large companies like General Electric, Motorola, Siemens, Caterpillar, Microsoft and Xerox have implemented *Six Sigma*.

"Deming's approach contrasted focus on quality, which leads to rise in quality and fall in costs, with focus on costs, which leads to decline in quality and rise in costs."

Most methods use multi-functional teams, which investigate designated problem areas. Process steps are analysed and their costs are may also be determined – which is why financial representatives are often involved in the teams. Ultimately, recommendations will be made on the elimination, reduction or enforcement of the steps.

Lean logistics

Logistic professionals have thoroughly looked at these methods in the quest to improve logistic processes and the term 'lean logistics' →

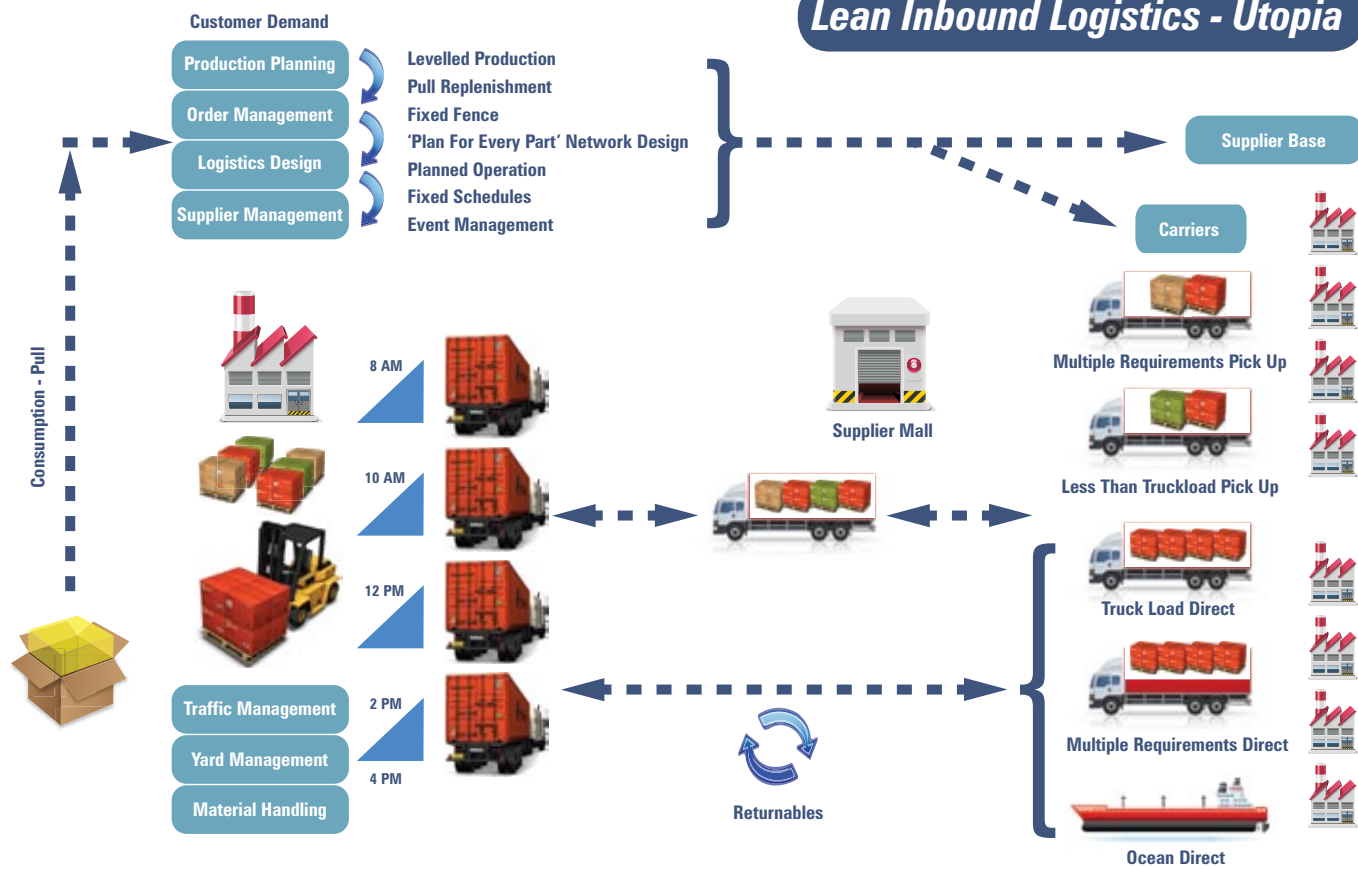


Several short articles and descriptions on 5S.

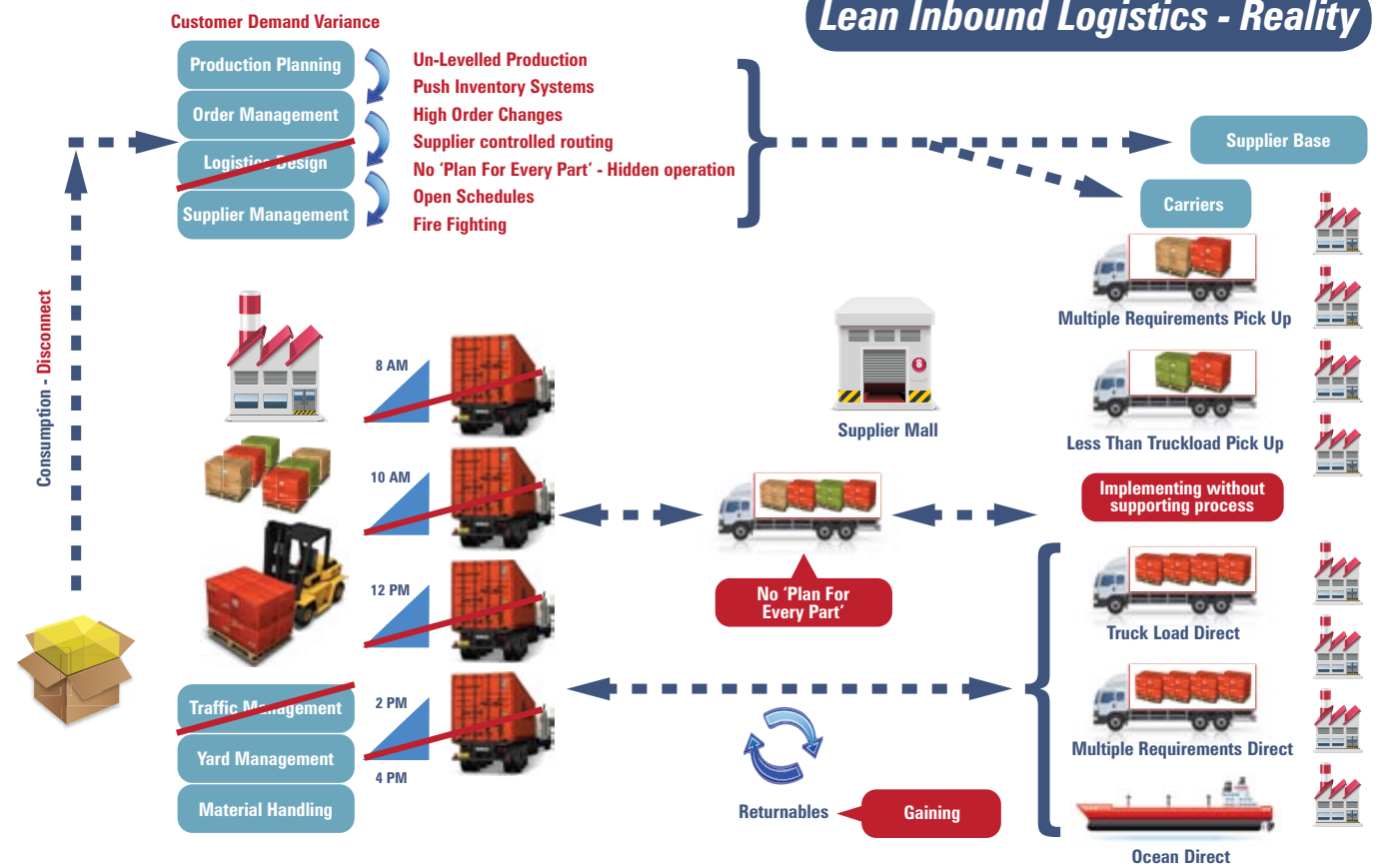


Clear explanation video from Gemba Academy.

Lean Inbound Logistics - Utopia



Lean Inbound Logistics - Reality



→ began to be heard from the beginning of this millennium. It seeks to reduce stock as much as possible, to reduce the time taken in getting products from A to B and, in the meantime, to save as much costs as possible. The results vary from case to case. Working in a very disciplined manner, based on the sharing of all kinds of statistics and data, is something employees have to get used to. Whatever method is adopted, management has to lead by example. If they start getting sloppy, lessen the drive and seem to be losing interest, then everyone else will soon follow suit.

Some outstanding results have been achieved with the implementation of Kaizen, Visual Management and the 5S method. The panel alongside this article goes into detail about 5S, which aimed at the improvement of the work environment. By optimising the surroundings of the employees, waste can be reduced and a foundation is made for improved quality. A well-organized workplace has many advantages, including improvements in safety and better work, flowing from better organisation. It does not end: it is about continuous improvement, as is the case with Kaizen – which actually means 'continuous improvement'. The system is actually based on a major clean-up. Sloppiness and lack of cleanliness lead to accidents. 5S demands a clean, well-organized and clear

workplace. Safety will increase and the quality of the work will benefit accordingly.

All-round benefits

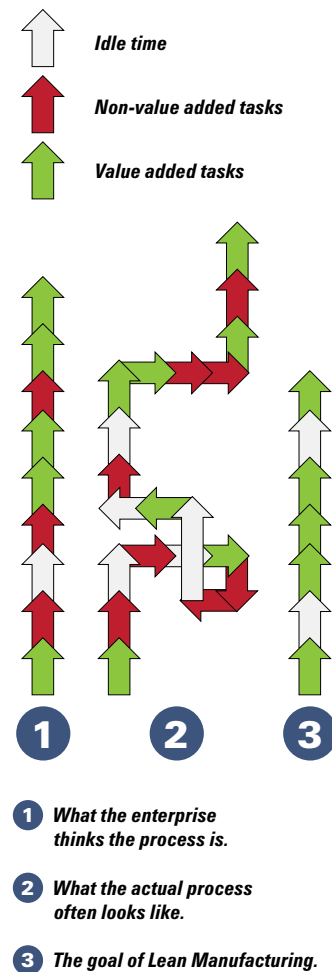
All of the above should lead to reduced set-up times, reduced cycle times, increased floor space, lower safety incident/accident rates, less wasted labour and/or better equipment reliability. It sounds really good, doesn't it?

It certainly can be too good to be true and there have been failures. Lack of leadership or management support leads to failure to sustain. An excess of ambition can lead to businesses trying to run before they can walk. Trying to go from a messy workplace to a LeanSigma enterprise in one leap is like trying to jump onto an express train as it thunders through a station at 100mph. It cannot be done, and disappointment leads to abandonment. Start with 5S and build from there.

Conclusion

Logistics professionals can learn from proven management methods in Lean Manufacturing. The rate of success will depend on adapting the ideas for the particular working area, and on persevering to ensure they are implemented. Nothing is impossible, but it only comes with hard work. ■

Article feedback is welcome: editor@eurekapub.eu



5S in detail

S1 - Seiri: Cleaning the work area

The key is to differentiate between what is necessary and what is superfluous. Eliminate all the objects that are not used or are just lying around. Keep everything you frequently use for doing the job. Usage frequency data are used to categorise objects on the shopfloor.

S2 - Seiton: Set in order

The systematic storage of objects, in such a way that everybody can have access to them quickly when needed. Ergonomics and hygiene are key words here.

S3 - Seis: Cleanliness and inspection

Clean all the floors, walls and objects (machines, tools, racking). Eliminate causes of incidents, disruptions or failures. Instigate methods of regular cleaning. Design responsibilities, rules and regulations.

S4 - Seiketsu: Standardise

Standardisation gives durability to the first three steps. Visual aids (graphs, signs) are often used to give quick insight into performance. Surprises, leading to unexpected reduction in performance, must be eliminated.

S5 - Shitsuke: Sustain

Probably the most difficult step. It is about ensuring that everything keeps on being implemented as intended. In this step audits, check lists and suchlike are developed. Regular evaluations or team meetings are necessary.

The real world: Examples of 5S methodology in logistics operations:

1. DHL

The program adopted by the freight and packages forwarder in the Netherlands saw employees redesigning the work floor and rethinking existing methods of working. The focus in quality gained them the awards of 'Safest Warehouse' (in the Netherlands) and "Recognised for Excellence" from the European Foundation for Quality Management. The company also aimed at achieving ISO 9001, 14001 and 18001 quality standards.

2. Nedtrain

Nedtrain deals with all spare parts for the Dutch railroads and was one of three contenders for the Dutch title of 'The Safest Warehouse' for 2010. The jury report describes how the company strives to ensure the mechanics have nothing to worry about other than doing their jobs. In the previous three years, safety was made the priority in the warehouse and led to a reduction of 80% in accident rate. At the core of this achievement is the perfect execution of the 5S methodology. The 13 employees in the warehouse are very much involved in both day-to-day matters and longer-term decisions, and have achieved a very low absentee rate, of just 2.5%. The staff designed most of the workspace's safety features themselves, right up to specially-designed load carriers. Nedtrain scores very well in personnel satisfaction surveys.

3. Boston Scientific

As a distributor of medical supplies, the sight of a very clean environment is not a surprise. The work floor is very well-lit – something often missing in warehouse environments. The company has very short communication lines, publishes KPIs on boards on the shopfloor, and provides the opportunity to come forward with ideas for improvement. The company closely monitors the ways employees work with their materials handling equipment. The motto is that you want to leave the workplace at the end of the shift the way it was when you came in. Each day, drivers complete check forms and have achieved a complete absence of lift truck accidents in the last few years.

4. Cat Lift Trucks

It will be no surprise to see the 5S method in action at the Cat Lift Trucks factory in Almere, the Netherlands, resulting in very tidy work areas and several certifications. We have given an in-depth profile of the build-in quality of this facility in an earlier issue of **eureka**:

See the Wikipedia article on 5S methodology.

In depth profile of the Cat® Lift Trucks factory.



An Impact on Logistics



When Impact Handling won the contract to supply Cat Logistics' UK materials handling fleet it overcame several challenges with a combination of planning, attention to detail and agility.

Ruari McCallion

Caterpillar Logistics Services (Cat Logistics) is a 3PL (third party logistics) company that provides fully-integrated supply chain solutions both to its parent, Caterpillar Inc., and to more than 50 other leading corporations across the world. Its UK operation is the largest outside the USA and employs around 2000 people. The main UK facility is a 200,000 sq m site at Desford, near Leicester, England, from where it serves five client businesses. The fleet at Desford accumulates around 270,000 hours annually, working pretty much round-the-clock and handling almost seven million consignments a year.

Day-One Challenge

Impact Handling acquired the supply and maintenance contract for Cat Logistics' fleet in April 2011. While Cat Logistics is part of the Caterpillar family of companies, it has to run all aspects of its operations profitably and, even as the UK's Cat Lift Trucks dealer, Impact did not get a free pass – they had to demonstrate their ability meet the challenges such a huge operation throws at them. The hurdles began immediately, when the changeover period was cut from three months to a matter of days.

"The fleet at Desford accumulates around 270,000 hours annually, working pretty much round-the-clock and handling almost seven million consignments a year."

"Some of the vehicles were on short-term rental and the first thing we had to do was to re-populate the fleet, at short notice," said Geoff Newbery, Impact Handling's contract manager. "We did it over the weekend." Having dealt with that particular issue, Impact began to implement the plan it had developed after carrying out a site survey, beginning with improved fleet co-ordination.

"We zoned the fleet into customer business units and families of vehicles, and introduced reporting by site and business unit," said Newbery. The workshop was rewired, eliminating a 'spaghetti bolognese' of extension leads, and remapped to improve workflow. Reporting and data management underwent a step-change, to improve frequency, quality and accuracy. Digipens, which use GPRS radio technology, immediately transmit job sheet information to the central server. The data, collected and collated on Excel spreadsheets, enables Impact to identify the 'Top 10' problem trucks at any time and to provide the customer with a clearer picture of how the fleet is performing and where it is costing money. The two parties can then determine strategies to boost availability and control costs.



Get up, get on the floor

"Our target is 97 per cent uptime," said Newbery. "We use several KPIs to achieve that. The data enables us to monitor all the work we are doing on the fleet and to report costs – including damage – every month. We could see, for example, that some older vehicles were incurring high maintenance costs and profile those that needed to be replaced. The more time they spend off the road, the stronger the case is for replacement."

"Our target is 97 per cent uptime... We use several KPIs to achieve that. The data enables us to monitor all the work we are doing on the fleet and to report costs."

Cat Logistics' fleet amounts to 155 units, including a few that are customer-owned, 18 on short-term rental and the bulk on all-in maintenance (AIM) contract hire. The fleet extends from low-level order pickers to reach trucks and everything in between. The vehicles cover every aspect of warehouse management and operations and include electric, LPG and diesel power; some of them are 15 years old. There are standard trucks but also vehicles equipped with long forks, rotators, fork positioners and shorter masts for use in containers. The wide range of ages and mix of ownership require detailed analysis and support.

Damage control

Having clarified the customer's needs, from both initial survey and experience, Impact has identified the right equipment for the right applications and made some changes →



Main Image. A wide mix of trucks make up Cat Logistics' 'indoor' fleet. **2.** They handle almost 7 million consignments annually. **3.** Cat Logistics' materials handling fleet accumulates over 270,000 hrs pa. **4.** The work never stops.

→ to specifications. The short-term rental component is now much smaller than that it inherited and damage is under better control.

Vehicle availability is paramount and one of the greatest challenges with a forklift fleet is downtime due to accidental damage; incidents involving forklift trucks remain the largest source of industrial and workplace accidents in the UK. Cat Logistics has embraced a system called FTC (fork truck control), a system that is used to monitor and control damage. Each driver has his own fob, which identifies who is driving the truck at any time. FTC has helped to reduce the number of incidents, identify training needs and modify driver behaviour.

“Cat Logistics has embraced a system called FTC, a system that is used to monitor and control damage.”

“We have achieved fewer breakdowns and got the fleet availability level up, over the 97 per cent target,” said Newbery. “Damage costs are down, too. We have been able to drive out the expensive older equipment, which had been kept as back-up stock, because our maintenance program is working effectively.” Impact has three people on site but constantly reviews staff availability, in order to provide the required cover and optimum service levels cost-efficiently. Its VLR system, which gives notice of the vehicles that will be off the road at the end of each day, means that it knows the areas that need attention.

Right first time

“Last night, we had two trucks off the road. Previously, we were advised, there were as many as 10 and they could be down for up to two to three weeks,” he explained. The effectiveness of intervention – dealing with damage and breakdowns – is measured by ‘first-time fix’; Impact is achieving 85 per cent on that measure. “We are ‘planning against usage’ of the trucks and scheduling three services a day. The rest of the work is breakdowns but as we reduce the number of those, the time can be used to ensure we meet availability standards through effective maintenance activity.”

Impact Handling was awarded the contract because of its commitment to improve support in Cat Logistics’ three key areas: technical support, cost, and responsiveness. It demonstrated its agility by achieving turnaround over the previous contract in just three days. Its management, support and control system has helped to reduce costs dramatically and to meet all customer needs, at a higher standard.

“Impact started by demonstrating fantastic responsiveness,” said Cat Logistics’ Paul Morris. “It effectively manages and operates the fleet on-site and has been making continuous improvements. They have exceeded our expectations at every level. Every part of the service, from truck supply to keeping them running, from providing service and maintenance to data collection and reports, is better than ever.” ■

Article feedback is welcome: ruari@eurekapub.eu



Read case studies on the Impact Handling website.

Reducing the burden of risk



Making sure the warehouse is a safe place to work has very serious moral, legal and business implications. This can turn the risk assessment into a daunting prospect for management.

Gay Sutton finds out how to take the difficulty out of the process and make it truly effective, turning an onerous task into an informative element in continuous improvement.

With increasing volumes of safety regulation, and the rise of compensation cases brought against employers for injury in the workplace, the pressure to perform extensive and highly detailed risk assessments has never been so great. And the pressure is most onerous for small and medium sized businesses where health & safety (H&S) is often just one of the many responsibilities resting on the shoulders of the operations manager or chief executive.

“The pressure to perform extensive and highly detailed risk assessments has never been so great.”

By separating the truth from the myth and identifying the best methods for managing the risk assessment process, this burden can be greatly reduced. In essence, a risk assessment should be a careful examination of what, in your specific workplace, could harm your workforce so that you can weigh up whether you have

taken enough precautions or should do more to prevent harm. It doesn’t require you to eliminate all risks, but to do what is practicable. And then continue fine tuning the systems in your workplace. “It’s continuous improvement really, and that’s what people tend to miss,” explained Roger Bibbings, occupational safety adviser at RoSPA (Royal Society for the Prevention of Accidents).

The European Agency for Safety and Health at Work recommends a five step approach to the risk assessment and this is applicable across all EU member states. How you manage this, however, makes all the difference to its effectiveness and the level of difficulty experienced.

“The European Agency for Safety and Health at Work recommends a five step approach to the risk assessment.”

Bibbings recommends taking a step back and considering the general hazards and risks →

EU’s 5 steps to risk assessment

- ▶ Identify hazards and those at risk
- ▶ Evaluate and prioritise risks
- ▶ Decide on preventive action
- ▶ Take action
- ▶ Monitor and review

5. Left to Right - John Davies (Impact Handling), Geoff Newbery (Impact Handling), Paul Morris (Cat Logistics), Sean Tanner (Impact Handling), Martin Penn (Cat Logistics), Graham Richards (Cat Logistics).



Client: Cat Logistics UK

Location: 200,000 square metre logistics centre at Desford, Leicestershire.

Fleet: large fleet ranging from counterbalance gas and diesel trucks to order-pickers and reach trucks. Mixture of tenure.

Challenge: to improve technical support, responsiveness and reduce costs.

Support: 3 on-site plus off-site personnel.

Outcome: improved availability, reduced downtime, less damage, lower costs.

→ for the business - levels of training and competence, materials brought in and stored or despatched from the facility, emergency risks such as fire or equipment failure, slips, trips and falls, ease of access and so on.

Next, focus-in by department or work area. This involves going into the workplace accompanied by a supervisor or team leader, talking with those on the shopfloor, and identifying the hazards, who is at risk and the level of risk posed. Look at this from the perspective of routine every day activity and also for unexpected or emergency events, but be sensible about the depth of analysis. "It's very important to relate the level of detail in the risk assessment to the level of risk," said Terry Woolmer, H&S adviser for the EEF. "It's got to be a practical document at the end of the day. So it should only record significant risks."

"If senior managers actually go out onto the floor with their hard hats and goggles on, taking a team leader with them and talking to employees as they go, this sends a strong message to the workforce, and has a huge influence."

It's no good delegating responsibility lower down the organisation, either. It has to be managed and endorsed from the top. "This is visible leadership," Bibbings continued. "If senior managers actually go out onto the floor with their hard hats and goggles on, taking a team leader with them and talking to employees as they go, this sends a strong message to the workforce, and has a huge influence."

At the Crepa warehouse in the Netherlands, there is a culture of safety, and each member of staff is involved in addressing unsafe behaviour. "For example, we have a tunnel connecting the warehouse to the workshop," said operations manager Cep Van Haeften. "In the warehouse you only wear safety shoes if you're operating machines and equipment, however they must be worn at all times in the workshop. Now, if I were to walk from warehouse to workshop without safety shoes, one of my employees is likely to say: 'you haven't got safety shoes on. Go out of my area and put them on'. You can only create that level of safety if your people trust you."

The next step is to list the precautions the business has already taken to reduce the risks and then decide whether the continuing risk is so significant that more should be done about it. And here, input from all those who enter the warehouse environment will result in the best outcome. "Everybody should be involved," said David Ellison, CEO of the FLTA.

"Very often it's only the person on the ground who can recognise the extent of a risk or see the implications of proposed safety changes," he continued. "For example, if we put a mirror on the wall for the forklift drivers, they may look at that mirror as they approach the junction resulting in a new risk, that they won't see someone coming from the other direction. The operator would pick up on that but someone looking at the problem from a clinical perspective wouldn't."

"In my experience," Woolmer said, "where



1



Visit the RoSPA website Risk Assessment page.



2



FLTA website: Virtual Risk Manager.

you've involved those who will be impacted - the forklift operatives and warehouse staff as well as the production and logistics managers - then the resulting changes will meet both needs, and you will have a much more efficient and productive environment." And those staff are far more likely to take ownership of safe working practices rather than disregard them.

To fulfil its function, the risk assessment should not be a dry thing that's completed and thrown in a drawer as just another job done. "It should be a living document, as easy as possible for people to understand and something that is constantly reviewed," Bibbings said. He recommends revisiting elements of it every time a change or event happens within the organisation. If new contracts are signed or new materials and new products are introduced into the warehouse, then analyse those changes for risk, and update the relevant part of the risk assessment. The formal company-wide reappraisal then becomes a far less onerous task.

"where you've involved those who will be impacted - the forklift operatives and warehouse staff as well as the production and logistics managers - then the resulting changes will meet both needs, and you will have a much more efficient and productive environment."

In a similar way, internal safety monitoring systems are there as a warning of risk, and they should feed into the risk assessment process. In the warehouse, for example, a forklift near miss

or minor damage inflicted on racking or trucks warrants investigation and a review of risk assessment for that specific area of the facility.

Larger companies are likely to have full-time H&S personnel, monitoring safety and regularly updating the risk assessment. If smaller companies also continue updating the document as change happens, and management monitor its progress and evolution, it becomes a vital part of company culture. "I would then recommend that you review the entire risk assessment and make sure it's fit for purpose every couple of years," Woolmer said. "If nothing has changed since the latest update, then you can sign it off with a new date."

There is a wealth of information readily available on regulations and best practice for all aspects of warehouse operation and risk assessment. A good starting point is equipment manufacturers and safety-related Government organisations, and industry-specific associations and organisations who can also provide access to H&S advisors.

"If you get the process right, involve people and get participation, they're more likely to adopt the safe systems of work," Bibbings said. "They're more likely to come up with suggestions, and you're more likely to spot opportunities for smarter working and improving quality and skills and so on. So instead of an add-on burden the risk assessment is a means of improving the operational effectiveness of the business, and improving its culture as well." ■

Article feedback is welcome: editor@eurekapub.eu

1. Roger Bibbings, occupational safety adviser at RoSPA.
2. David Ellison, CEO, FLTA.
3. Visible leadership - Senior managers visiting the floor with their hard hats and goggles on, taking a team leader with them and talking to employees as they go, sends a strong message to the workforce, and has a huge influence.
4. Involving those who will be impacted - the forklift operatives, warehouse staff as well as the production and logistics managers results in changes that give a more efficient and productive environment.



The European Agency for Safety and Health at Work.



3



4



Ten top tips for risk assessment

- ▶ Should be carried out systematically
- ▶ Keep it simple and practical
- ▶ Only look at significant risks
- ▶ Level of detail should reflect level of risk
- ▶ Review both routine and non routine activities
- ▶ Examine all foreseeable risks
- ▶ Check accident reports and inspection & maintenance records
- ▶ Consider everyone who could be affected: contractors, visitors etc
- ▶ Involve and consult your workforce
- ▶ Seek information and competent advice



1. The latest Cat® High Level Order Picker was recently awarded the Forklift Truck Association (FLTA) Ergonomics award for its active sway control mechanism.
2. Sleeping policemen or speed humps are a nightmare for forklifts.

Are you sitting comfortably?

To function efficiently the busy warehouse requires a full complement of fit, well trained forklift truck operators.

Gay Sutton looks at the ergonomic hazards of the work and some of the key steps companies can take to protect their valuable operators.

Look beneath the surface of a busy warehouse and docking area and you'll find lift truck operators performing under pressure. It's a skilled job. But the work can exert any number of physical strains from stretching and twisting, through to vibration and jolting on uneven surfaces. If unchecked, musculoskeletal strain can result in serious occupational injury. And when a driver goes sick or is absent through injury, productivity falls, pressure increases on co-workers, and it becomes a vicious circle that can impact profitability.

Forklift truck manufacturers have invested considerable effort in recent years improving the ergonomics of the forklift truck, and those boundaries are still being pushed. For example, the latest Cat® High Level Order Picker was recently awarded the Forklift Truck Association (FLTA) Ergonomics award for its active sway control mechanism.

Truck design, however, is just one tool for improving the health of the truck operator. Identifying and tackling the root causes of the disorder will yield long-term results. And some of the causes are simple to spot.

Whole body vibration and jolting, for example, can result in musculoskeletal disorder and debilitating pain. Sudden acceleration and hard braking can cause mini whiplash type injuries while cold temperatures only serve to increase muscle and joint stiffness. Old and ridged floor surfaces are easy to spot and repair. "Sleeping policemen or speed humps too are a nightmare for forklifts and they're not designed for that," warned David Ellison, CEO of the FLTA.

Close inspection of the facility in conjunction with the forklift operators can help identify other problems that exacerbate physical discomfort, but operator involvement is essential. If the

ramps between loading docks and trailers do not fit properly, for example, there is likely to be significant jolting on the forklift and the driver may need to accelerate hard to mount the ramp and then brake hard.

"Whole body vibration and jolting, for example, can result in musculoskeletal disorder and debilitating pain."

"We also see quite a high incidence of trailer floor collapse," explained Melissa Sweeney, ergonomics and physiotherapy adviser at the EEF Occupational Health, "particularly if the usual checks aren't properly done because of the pressure to achieve target KPIs."

All of these issues can be addressed quickly by an efficient reporting system that enables drivers to go directly to Health & Safety if the hazards are not dealt with due to time pressures in the workplace.

There are many common tools and gadgets that can be mounted on the truck, racking or the warehouse, to reduce the need for constant or extreme twisting, turning, neck craning and hard braking. For example, mirrors and CCTV cameras can provide good all round visibility of the work area, while sensors can be mounted on the truck or racking to lift the forks to exactly the right height without extreme neck craning. Man-up systems, while expensive to install, are ergonomically much safer and can yield efficiency gains.

"However," Sweeney warned, highlighting another serious cause of musculoskeletal problems, "I would advise you to be mindful of how you reduce levels of movement in the workplace." Unrelieved static posture is a serious risk to health, a problem long recognised in office workers. For forklift drivers confined to the controls with little or no movement, the solution is just the same. They should be taught to take micro-breaks, get out of their trucks and stretch appropriately.

"They (forklift drivers) should be taught to take micro-breaks, get out of their trucks and stretch appropriately."

"What you don't then want is a supervisor saying 'Oi, get back in your truck. What are you doing?'" Sweeney continued. "It's critical to have top-down agreement, and this has to be backed up by good communications through the organisation, so that everyone is singing from the same hymn sheet."

In many large warehouse environments, systems are in place to monitor and actively manage musculoskeletal disorders, in conjunction with occupational health and ergonomics experts. Sweeney is occupational health physiotherapist working with BLG Logistics, which handles the warehouse and distribution services for IKEA among others. One of the key factors in occupational health is engaging with the workforce

and communicating.

"BLG have a robust changeover briefing for all staff, updating them on how the morning has been, in preparation for the afternoon shift. We've also introduced a new concept, manual handling and driver champions, and it's rather like the Jamie Oliver effect," she said. "We've trained a nucleus of keen workers. Now, if they spot co-workers jumping out of a forklift rather than stepping down, or perhaps driving too fast on uneven ground, they can filter that knowledge through to them. They're not policing the workplace or reporting behaviour, it's purely a training mechanism."

Workers at all levels are trained in good posture and behaviour. But it's essential for managers in particular to understand that productivity is markedly increased by addressing rather than ignoring the issues. It then becomes a matter of good people management: "Learning how to work your team better," she said. For example, the 'star' worker who operates far harder and faster than anyone else is much more likely to be injured through, so it's a matter of encouraging a more consistent workload throughout the team, reduce the stress of conflict and encourage positive attitudes.

"...productivity is markedly increased by addressing rather than ignoring the issues. It then becomes a matter of good people management."

Distribution centres are well known for a variety of musculoskeletal problems, and they don't all have a purely a physical cause. Some workers thrive in a team environment and are very unhappy when working in isolation. Bumping on and off a trailer all day, small symptoms can seem very serious and fear then enters the equation. "A low cost solution is to review how work is organised and encourage team working wherever you can," Sweeney said. "If people have to work at a distance from each other, then perhaps rotate their jobs so they get variety. Above all, ensure there is good communication at all times."

A systemic approach, managed in conjunction with occupational health experts, is the best option for the large warehouse, while smaller operations can buy in the appropriate advice as required. "However the really small business is unlikely to have a fork truck operating throughout the day, so the ergonomic issues won't be as severe," Ellison said. And he had one final word of advice for the small concern. "Get the right truck for the job and if one won't do the variety of work you need, then consider investing in two. If you're using compromises all the time, the operator will always be craning their necks, looking over their shoulders and taking up awkward positions and that will take a toll over time." ■

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