Looking at the big picture

(Clockwise from bottom right) John Pattullo, Ceva; Jürgen Henschel, Tyco Electronics Logistics; Kai Kraass, WWL; BMW's Ralf Hattler; Michael Berger, Maersk Line; Tony Humphreys, Delphi; Andrea Eck of VW; Bruno Van Damme; Volvo Logistics; Michael Robinet, CSM Worldwide; Maria-Paz Millån, MAN; John Canvin, Odette

While the global car industry was showing its latest products at the nearby Geneva Motor Show, 240 of its top logistics specialists met in Montreux for the 6th annual Automotive Logistics Europe conference, held from March 4th to 6th, 2008.

Global challenges were top of the agenda, including carmakers struggling to meet the exploding demand for their vehicles in Russia and elsewhere, and the LSPs who are helping them build robust and flexible connections with emerging markets.

Unprecedented changes in the structure of the world's car markets and the location of car-making plants and supply bases are creating novel challenges for those charged with managing the flow of components and finished vehicles. In the words of one delegate: "We all underestimated the effects of globalisation."

New thinking

Cleaning the supply chain

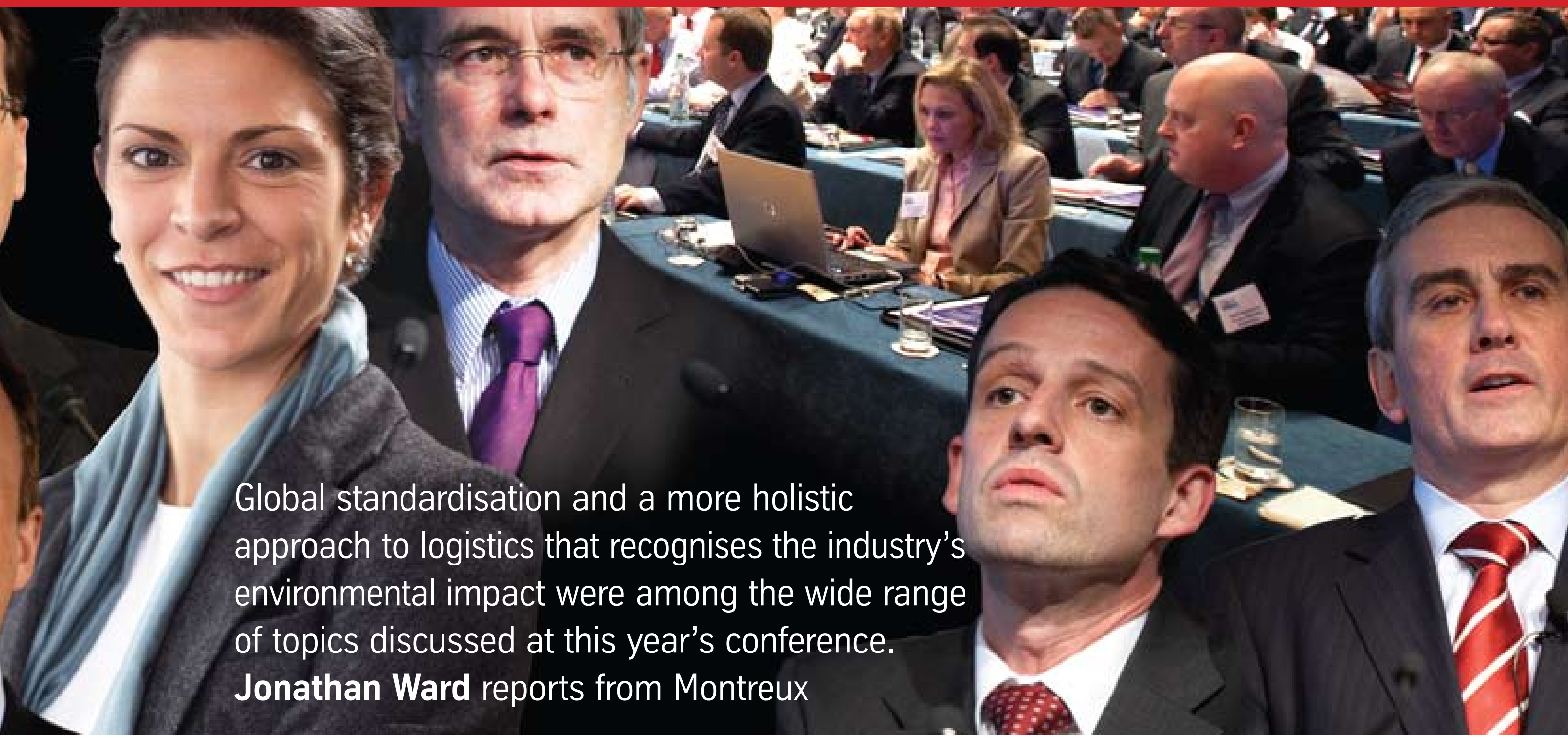
The industry has proved to be flexible and innovative in its response to the new economic environment. However, with shipping capacity stretched to the limit, particularly in transporting finished vehicles, the exploration of alternatives, including long-range rail links between Europe and the Far East was of major interest to delegates in the dedicated Finished Vehicle Logistics stream.

While capacity constraints may be a big concern today, the environmental impact of logistics operations is a looming challenge for the future. Transport produces nearly as much CO_2 as automotive manufacturing operations. As carmakers respond to customer pressure and seek to stay ahead of increasingly likely environmental legislation, many are now turning their attention to ways of cutting emissions from the supply chain. Increased efficiency promises to be a key part of the solution here, and progress on collaboration designed to exploit supply-chain assets were discussed in several sessions.

Holistic logistics

John Berry, Principal Administrator at the European Commission's Directorate General for Energy and Transports, discussed the EC's growing interest in logistics as an industry. The term "logistics", he admitted, has only been in widespread use within the EC for the past 18 months or so. Before then, the commission had thought about separate transport modes and about policies aimed at shifting users from one mode to another.

Today, said Berry, there is a growing realisation that logistics needs to be considered as a holistic enterprise, using multiple modes to shift goods from place to place. Freight transport in the EU will grow by 50 per cent by the year 2020, he said, accounting for 13.5 per cent of GDP in the region and up to 16 per cent in some Scandinavian countries. Among the raft of initiatives to emerge from this new attitude are programmes for the development of 'e-freight' standards – single



Global standardisation and a more holistic approach to logistics that recognises the industry's environmental impact were among the wide range of topics discussed at this year's conference. **Jonathan Ward** reports from Montreux

documentation standards for all types of transport used in the logistics chain. Larger truck standards are also under discussion as one way to balance demand growth with the need for 20 per cent or greater cuts in CO_2 emissions.

Standardisation in information architectures is one area where the EC feels it can bring benefits. Standardised technology for road charging systems will be a reality within a year, said Berry, allowing trucks to use the same hardware to operate the road pricing schemes in several countries. Further developments of the scheme could include a single standard on board electronics unit to fulfil road pricing, tracking and tachometer functionality in European vehicles.

Lean practices

Streamlining the process

John Patullo, CEO of CEVA Logistics, was one of several speakers at the conference to emphasise the increasing importance of lean practices in logistics operations. CEVA, he said, has hired expertise in the form of ex-Toyota personnel to drive the growth of lean skills in the organisation. So far, the company's lean programme has produced 57 specialists and trained more than 2,000 other staff members. Benefits of the programme so far include €17m ($26.8m) in savings.

Improving performance in the automotive sector, which forms a third of CEVA's business, is extremely challenging, said Patullo, as the sector is already highly sophisticated compared to other industries. In addition to the lean programme, CEVA is hoping to drive better performance for its automotive customers by investing in a very sophisticated database and data-mining capability, and by improving its in-house engineering expertise to improve the quality of dialogue with carmakers.

Leaning too far?

Lean approaches were not universally popular among conference speakers, however. Several attendees expressed concerns that too much focus on inventory reduction had reduced flexibility and increased exposure to supply-chain risks, particularly in long-distance sourcing arrangements.

Dr Jurgen Henschel, CEO Distribution and Logistics at Tyco Electronics Logistics, described his own organisation's restructuring of its production planning in order to maximise flexibility. New sequencing approaches at Tyco have actually increased inventory levels, but the company and its customers have been rewarded by better capacity utilisation and a 50 per cent reduction in production lead times.

Bruce Arlinghaus Director, European Supply Chain Solutions at Ryder also expressed concerns about taking inventory reduction too far. He saw the problem as one of "lean versus anorexic supply chains." Loss of flexibility and robustness, might be too high a price to pay of the cost savings delivered by low-inventory supply chains. "Even if you build the perfect solution, you execute it in the real world, and real world execution is a very sloppy, very human kind of process."


Logistics needs a holistic approach said the EC's John Berry


Ceva's John Patullo used the conference to talk about developing expertise in lean


Jürgen Henschel said new sequencing has brought better capacity utilisation at Tyco

Data standardisation

The EC certainly believes that improved data exchange standards may be a key driver of efficiency in the logistics sector, but the automotive industry has already achieved much in the development and promotion of such standards.

John Canvin, Managing Director of Odette, the European automotive industry-owned standards body, emphasised that the changing structure of the industry is putting increasing emphasis on the development and adoption of global standards for information exchange. He said Odette is helping in this area through joint activities with organisations representing the US and Japanese car industries, and by reaching out directly to the emerging industry in the countries "at the borders of Europe". In these countries, including Romania, Turkey, Slovakia, Poland and Morocco, work by Odette has revealed a need for training in standard processes and their application. The organisation has developed a basic standards training package for these regions to help new entrants to the industry get up to speed.

Container shipping

Shipping capacity

Capacity constraints are a perennial challenge and they were an important topic of debate at the conference. Michael Berger, key client director at Maersk Line, the world's largest container shipping organisation, gave his firm's view on current and future capacity challenges. Container shipping has grown extremely rapidly on the back of rapid global economic expansion, he noted, and is expected to continue, albeit at a slightly slower rate in the immediate future given the US economic slowdown.

While shipping lines are investing in increased capacity – overall capacity in the container sector is forecast to grow faster than demand by three per cent – other factors will continue to put a strain on available resources. Among these, said Berger, are increasing trade imbalances, which reduce capacity utilisation, and slower streaming in an attempt to overcome high fuel prices.

Fuel costs today, he noted, represent around 50 per cent of the cost of container transport, up from 25 per cent a few years ago. Demand on shipyards for the production of other vessel types, particularly tankers, may also affect the amount of new container capacity reaching the market.

However, the availability of ships will probably not be the primary bottleneck in the next few years according to Berger. Congestion at ports and limited inland infrastructure may have as significant an impact on supply chains. The biggest limits in Europe, according to Maersk, are likely to be Rotterdam, which will remain congested until 2015, and St Petersburg, which will present significant challenges for the automotive sector.

Carriers such as Maersk are likely to invest more in inland infrastructure in order maximise the efficiency of their end-to-end offerings. Improved flexibility in operations – such as overnight collection from ports – will be as important in many cases as additional land transport capacity, according to Berger.

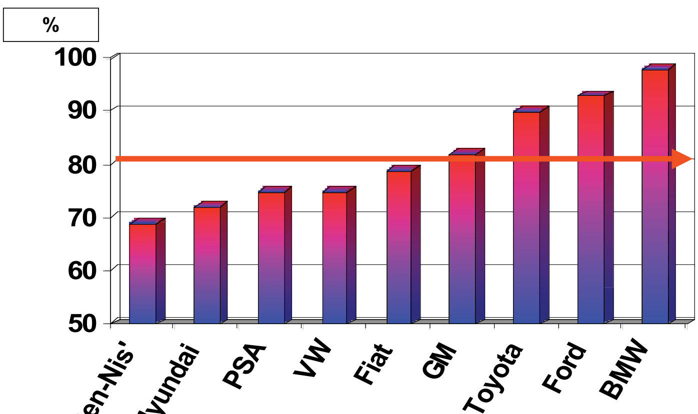
High and heavy

One part of the automotive logistics industry that feels capacity constraints particularly acutely is the world of trucks, buses and construction equipment. These high and heavy cargoes are, by their nature, even less flexible than conventional automotive cargoes. For the first time this year, the conference included a session dedicated to high and heavy logistics issues.

According to Joannes Van Osta, Group Transport and Logistics Manager at JCB, many logistics providers, particularly in the ro-ro sector, consider heavy product to be "the icing on the cake" of their core automotive offerings. As a result, he said, they often find capacity used up by conventional automotive cargoes.

Different market structures also create problems for heavy vehicle makers. Demand for trucks and construction

2007 Capacity utilisation



Source: JD Power


Peter Reinshagen of Gefco talks business with ICO's Marc Adriensens


Ryder's Bruce Arlinghaus outlined the problem of lean versus "anorexic" supply chains


Arnaud Cauchy of GEFCO described the increasing popularity of post-production operations

equipment typically precedes demand for private cars in emerging economies. JCB, for example has an 80 per cent market share in India, but according to Van Osta, the region has been "largely ignored by ro-ro carriers"

Logistics in Russia

Regional development

According to Andrea Eck, General Manager Multi Brand Functions at Volkswagen Logistics, Russia presents the most pressing current logistical challenge for the German group. VW imports finished cars into Russia through Finland and has a new CKD plant in Russia producing vehicles domestically. The company's sales in the region have doubled in the past two years, a rate that "astonished" VW at the time, according to Eck.

The drive today, she said, is for better inland infrastructure, primarily truck transport links, but also rail. VW is also planning inland consolidation centres. As the Russian market moves east and the vast areas beyond Moscow open up, they too will need to be accessed. This, she suggested, will require "new concepts" in logistics.

The vulnerable process of getting cars into Russia was emphasised by Kai Kraass, COO of Wallenius Wilhelmsen Logistics. It was only an exceptionally mild winter last year, he said, and that allowed the import route via Finland to operate as successfully as it did. "We were all wrong when we looked at globalisation a few years ago," said Kraass. "We underestimated the dynamics, we underestimated the trends and we now face shortages of capacity."

Sustained growth

Konstantin Skovoroda, General Director of Russia Transport Lines, described his own organisation's efforts to build a finished vehicle transport infrastructure in Russia. As the Russian economy evolves, growing car ownership will be an important part of the country's economic transformation, he said. As a result the Russian automotive sector should see several years of sustained growth, despite tough economic conditions elsewhere in the world.

Business conditions in Russia are stabilising, said Skovoroda. It used to be very difficult for companies to take the "cooperative steps" required to build effective logistics systems. Today, it is still difficult, but becoming easier. "There was ignorance and fear. We need to move away from that and a

On the grapevine...

"Passenger cars are paying their way in terms of environmental and social costs. Except for Germany and the UK, tucks are not." **– John Berry, Principal Administrator, European Commission – Directorate General for Energy and Transports**

"We need better IT infrastructure for real time decision making – developing economies want their systems to be at least as good as those used elsewhere." **– John Patullo, CEO, CEVA Logistics**

'When we surveyed logistics companies in one Eastern European country, we found a low level of knowledge and capabilities." **– John Canvin, Managing Director, Odette International**

"Container traffic at St Petersburg is growing fast, but there are big constraints there. I'm a little concerned about how the automotive industry is going to cope." **– Michael Berger, Key Client Director, Maersk Line**

"Globalisation is a dynamic and irreversible process that will require us to reorganise all our logistics processes." **– Andrea Eck, General Manager, Volkswagen Logistics**

"It is hard to become a Toyota carrier, but its probably even harder to get fired." **- Michael Nelson, National Manager, Highway Transportation Logistics, Toyota Logistics Services, Toyota Motor Sales**

"The car is an important part of Russia's economic transformation."
– Konstantin Skovoroda, General Director, RTL

"Russia may overtake Germany as the most important automotive market in Europe by 2011." **– Kai Kraass, COO, Wallenius Wilhelmsen Logistics**

"In total landed cost calculations that include transport risks, India becomes more appealing than China, and in same cases Eastern Europe." **– Bruce Arlinghaus, Director, European Supply Chain Solutions, Ryder Deutschland**


High and heavy is 'the icing on the cake' for many LSPs said JCB's Van Osta


Ford's Bert Bong talks to GM's Elliot Smith during one of the coffee breaks


Global challenges were top of the agenda across the conference sessions

new generation of managers is going to help us do this."

Russian consumers, said Skovoroda, will expect the same levels of service as their counterparts in the West, but slow infrastructure development and skills shortages will make this difficult to provide. Overcoming these limitations will be the region's biggest challenge in the next few years, he said, and went onto suggest that cooperation, both between domestic firms and with foreign companies and education establishments would be essential in order to fill the gaps.

Rolling stock in Russia

Rail transport promises to be a key part of the solution to the challenge of moving vehicles around Russia. Rene Varek, Commercial Director at RailTrans Auto, the new automotive transport group owned jointly by the Russian state rail company and private investors, described the company's investment in car carrying rolling stock. It plans to have 1,000 Russian-designed wagons available by the end of the year and aims to expand its current services in the West to support the expansion of markets east of Moscow in coming years. According to Varek, the trans-Siberian rail route from the Far East is also likely to be an increasingly important link in the future. His company is scheduling a service that will go from ports on Russia's eastern seaboard to Moscow in just over ten days.

GM's Elliot Swiss, expressed concerns that rail transport through Russia, while it proved to be effective, is still too expensive to be a competitive alternative to other routes. GM uses the route today but only for emergency shipments he said.

Varek noted that new pricing policies are now coming into effect, with discounts of up to 50 per cent on many rail routes designed to encourage carmakers to adopt the new services.

Logistics in China

Problems with the People's Republic

The logistics implications of sourcing from China are becoming an important issue for many delegates. According to Maersk's Berger, many of the shipping line's customers are "shocked" when they discover the financial implications of placing "low-cost parts on high-cost vessel slots."

For VW's Eck, too, increasing transport costs are having an impact on the carmaker's strategy. While the organisation operates a global sourcing strategy today, shipping parts long distances to assembly sites world wide, she suggested that it was likely that a regional strategy would evolve in the future, with components produced for consumption on the same continent.

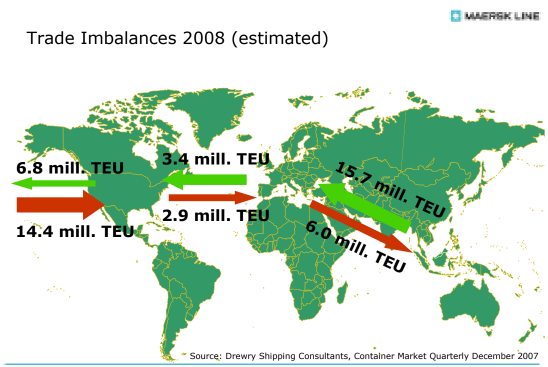
Getting the most out of the China has been difficult for LSPs. Peter Reinshagen, Coordination and Development Manager at Gefco, described how the company became the first LSP to operate independently there following the removal of joint-venture regulations last year. Today, it runs inbound, service parts and imported finished vehicle logistics operations in China. According to Reinshagen, operating in a low-cost environment has been particularly challenging, as has recruiting and retaining suitable qualified personnel. "You work hard to train people, then your competitors come and poach them," he reported.

The company is working hard to build its local talent base to provide a sophisticated logistics engineering capability at Chinese costs. Reinshagen remains convinced that foreign LSPs like Gefco have a compelling offering for the Chinese market thanks to its knowledge of international best practices and ability to optimise processes across internationally.

Kai Kraass of Wallenius Wilhelmsen Logistics described the unexpected effects that growth in China was having on his company's operations. While demand for ro-ro capacity from China to Europe had not yet expanded, as much Chinese vehicle production is for local markets today, demand in China has hit fuel prices, raw material costs and shipyard capacity. As a result, new ships cost nearly twice what they did five years ago. This and other factors will raise the cost of shipping for everybody.

IT take up

Several organisations active in China today expressed enthusiasm about the rapid development, growing technological sophistication and willingness to embrace changes that



characterises many indigenous Chinese firms. David Read of RFID specialist Intellident, described his own organisation's recent implementation of an RFI-enabled, returnable asset tagging system for a Chinese customer. Not only the was the company happily using state-of-the-art IT infrastructure, he reported, but it was also capable of conducting the demanding process of physically tagging hundreds of thousands of returnable containers in less than a quarter of the time Intellident originally expected. It achieved this thanks to an ability to deploy large amounts of relatively low-cost labour very quickly – one of the original Chinese advantages that remains compelling to this day.

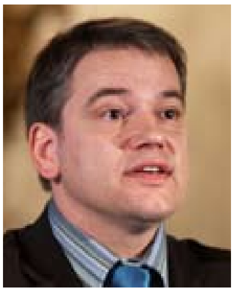
Environment

Green lines?

The looming prospect of significant pressure to improve the environmental performance of automotive supply chains was everywhere at this year's conference. Record-breaking fuel prices aside, few providers today have made significant changes to their practices on environmental grounds, but several speakers made it clear that demand for better environmental performance was just over the horizon.

Joannes Van Osta of JCB said that his organisation expects to pay a CO_2 price of €80 to €100 per tonne and is planning for the future accordingly. Dr Bert Bong of Ford noted that the CO_2 emissions from transport are equivalent to those produced in manufacturing, but far less easily eliminated. Ford's Cologne plant has recently switched to an energy supplier that uses hydroelectric power. He said the plant had reduced its CO_2 emissions to zero at a stroke, making the emissions from transport seem all the more important.

Several delegates pointed out that conventional good practices are often good for the environment, regional sourcing rather than long distance trans-continental supply for example. Other changes that could have a big impact on transport efficiency include the adoption of larger truck standards, although these may be contentious for other reasons in many regions.

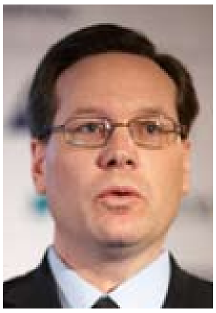

K-Line's Peter Menzel

Ocean freight is a significant contributor to the CO_2 produced in the supply chain. Peter Menzel, General Manager, Car Carrier Group at K-Line Europe, discussed some the technologies now being employed by the shipping lines to reduce their environmental impact. These range from better cleaning regimes and improved anti-fouling paints to keep ships slipping easily through the water, to the use of better fuels, new additives and particle traps to reduce a variety of unpleasant emissions.

Forecasting

Forewarned is forearmed

More accurate forecasting would make many manufacturing and logistics processes easier but it is notoriously difficult to do. Two forecasters, Michael Robinet of CSM Worldwide and Arthur Mayer, Head of European Forecasting at JD Power, gave insight into the processes they use, and the predictions that their sophisticated models have produced for the industry. In the US, said Robinet, the largest vehicle categories are likely to decline substantially as US customers increasingly turn to European-style mid-sized vehicles. In Europe meanwhile, the trend to smaller vehicles will continue, although the shift will not be so pronounced as in the US.


CSM's Michael Robinet

By far the biggest changes will occur in India where increasing domestic incomes and a new generation of low-cost vehicles is likely to drive a mass transition from two- to four-wheeled transport. Emerging market manufacturers are expected to be the fastest growing car companies too, with India's Tata and China's Chery both expected to grow hugely in the US market. In logistics terms, Robinet's forecasts echo the statements of several of the carmakers present. As regional sourcing strategies come into effect, regional short-haul transport routes are likely to see the largest growth.

Supply chain-centric car making

Discussion of a move away from a manufacturing-centred to a supply-chain centred approach to car production was supported by examples from several delegates.

Ralph Hattler, Vice President Supply Chain Structures at BMW explained how his organisation has "a new orientation" which has been designed to facilitate a much smoother and lower cost supply chain. By combining purchasing, quality and inbound logistics into a single function, BMW hopes to take a more holistic view of its supply chain, one that will allow it to optimise the flow of parts into its final assembly facilities. The long-term objective, said Hattler, is to reduce throughput time by 50 to 70 per cent.


BMW's Ralf Hattler

Careful thought about supply chain organisation from end to end was echoed by Dr Bert Bong, vehicle logistics manager at Ford. He used outbound rail to illustrate the opportunity for huge improvements in efficiency and delivery time to the customer. Efficient supply chains commonly produce vehicles that then sit for extended periods on rail cars, waiting for the train to be filled, or for the crew to arrive "when we are bearing all the material and labour costs," he noted. So why not move from a situation where factories pushed product onto outbound transport to one where the downstream logistics processes acted as a pull signal to the factory? "The train could arrive and the factory could spend that morning producing the 250 cars to fill it," he said.

While there was general agreement that the benefits of modifications close to the customer are real, some delegates questioned whether LSPs were the most logical supplier of such services when specialist contractors operate in so many markets.