



An innovation revolution

Technology and customer demands are changing rapidly in the spare parts market. Leading professionals discussed how these changes are impacting the industry at our round table sponsored by Flex.

The spare parts market is calling out for an innovation revolution. New technologies are piquing the industry's interest, and a move towards understanding the 'people dimension' of a business and its customer base is on the horizon.

Our panel of supply chain professionals seized on these issues when we asked: "Where is spare parts logistics going in the 21st Century and what do we foresee the challenges to be," at our round table sponsored by flex.

Many of the panel felt that telematics is, and will continue to be, a significant trend in the spare parts industry. Chairman Richard Hunt asked whether providing diagnostics and communication for a customer to pre-warn them about the need for a part was something that is in development.

"It has been around in certain industries, maybe higher value industries, for a long time where you can afford to put those predictive analytics in," said John Dalton, business development director, Flex. "Going

forward, I think two or three things are changing that bring it almost to everything.

"So things like the cloud and the ability to get IT costs really low, big data analytics and then as we go into machine to machine communication there's huge opportunity there to have very low cost analytics and low cost diagnosis."

MAN Truck and Bus is using telematics in its business now, said Karl-Heinz Meister, head of UK parts, pointing out that these days, you can find out anything about a vehicle – not just driver behaviour.

"You also can identify certain failure codes," he said. "You can inform the customer there is something wrong before they even recognise it.

"When I look, for example, at Shell, we're not talking about trucks off the road for days.

"We have agreements with suppliers about minutes, and hours – so the pressure is completely different when it comes to the supply chain."

Carrie Parker, business improvement and continuous improvement consultant at BT

Supply Chain, said telematics is key to predictability.

"That predictability is what we need to be able to predict how we shift things through our warehousing - how we can be more effective with our logistics and our geographic locations," she said, highlighting the importance of understanding changes in customer demand. "We're not always up to speed to deal with that demand as it moves as quickly."

Robotics

Tiptoeing its way into the supply chain and logistics markets, robotics is a phenomenon that appears to be on everybody's mind at the moment. And this was not an exception around the table.

"We use a lot of Eastern European locations and we use those because of low cost labours typically," said Richard O'Mahoney. "With the transient nature of the labour rates that are current in those locations, I have a view that robotics stabilises the cost base for activities within some of those operations.

PANELLISTS



Kim Hunt,
Customer Services
Manager, Flex



Karl-Heinz Meister,
Head of UK Parts,
MAN Truck and
Bus UK



**Kristie Scott-
Woodham,** Supply
Chain Manager,
Sharp Electronics



Graham Young,
Logistics
Performance and
Imp, Manager, Shell



**Richard
O'Mahoney,**
Operations
Director, Flex

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“Today, we see a lot of businesses, and ours is the same, chasing the labour rates through different locations in that eastern European block to provide logistics services.”

The main issue with automated processes for the group was the “unthinkable impact” a fault in the system can have – if one part goes down, it all fails.

O’Mahoney gave the example of a company that had an impressive system that failed when it became out-of-date for the business model.

“There’s a company that’s big in the managed services sector in computing – it invested £10 million in an automated warehouse...”

“And effectively it’s redundant because of the nature of the business that has transpired since then - it’s not suitable for that. So if you incorporate automation, not only do you need reliability, you need flexibility within the solution.”

The general consensus was that automation doesn’t always provide a sufficient level of flexibility, and that this can result in big costs.

“That’s risky isn’t it if you need to change something, the impact and the cost,” said Kristie Scott-Woodham, supply chain manager at Sharp Electronics.

The ‘people dimension’

The ‘people dimension’ as described by Richard Hunt, whether that be customers, or the people that work for the companies, seemed to be at the core of every discussion.

The constantly changing technological landscape, influenced by expanding customer demands, is an intimidating

prospect to the group and wider industry. ‘Generation Z’, those born between the early 90s and 2000s, was identified as the key age bracket pushing these demands.

“They’re caught in this whirlwind of innovation – technological transformation is happening rapidly, so they’re part of this culture where products are coming and going so rapidly,” said Flex’s Richard O’Mahoney.

“Before you know it, their expectations are increasing and increasing. I think what’s happening is that there is more focus on services and accessibility in the digital world that people are interested in, and maybe not so much about the asset.

“We already see it in a commercial space – managed services in the printing world, IBM, Dell etc - consumers whose expectations are moving so rapidly, they’ll get more attuned to it. We’re already leasing phones and things like that. Generation Z is changing expectation.”

Carl Polak, logistics program manager at Ford Motor Company, predicted that this is where the “next seismic change” is going to happen, with consumers becoming intolerant to failure.

Mark Hennessy, chief development officer for Pelipod, reckoned that there are going to be a range of approaches to purchasing in the near future. “I think the world is going to have many different colours going forward; there will be a lot of ownership,” he said. “In

any technology area, you will have a lot of obsolescence as the product moves forward.

“There will be a great deal of sharing – cars are a prime example. You will have a world of ownership, you’ll have one with sharing, you’ll have a world with peer to peer relationships where it’s a completely informal economy. It’s a big challenge for business and for technology to try and stay ahead of that.”

Polak said this moves the whole replacement serviceability and durability back into the company rather than the consumer, and that this is one of the challenges the industry is facing.

Hennessy suggested that if this happened,

Ford would “become a travel company”.

Polak agreed: “We will, that’s the scary thing. From a pure manufacturer service provider to a mobility provider.”

BT is trying to ensure that it is “being intelligent” when it

comes to understanding its customers, said Parker.

“We have a net promoter score, it’s a set of measures that we have inherited and polished. We’re trying to bring in more of a customer measure – go out to our customers and say, ‘what works? What doesn’t work?’”

She said that millions of pounds can be invested into trying to improve a business and its operations, but customers might say it is not working.

“Many businesses will pat themselves on their backs at the end of the financial year ▶

“They’re caught in this whirlwind of innovation - technological transformation is happening rapidly...”

Richard O’Mahoney



Carrie Parker,
Business Improvement Consultant, BT



Carl Polak, MP&L Logistics Program Manager, Ford Motor Company



John Dalton,
Business Development Director, Flex



Mark Hennessy,
Chief Development Officer, Pelipod



Mike Meades,
General Manager, Flex



Richard Hunt,
Chairman

and say, haven't we done well?" she said. "We've improved X amount of processes and brought in 100 new staff, and then our customers say 'no'.

"So it's about now saying, how are you going to measure me being successful? And as a business, how do we get that message from the bottom up? Because we have to empower people and have the right culture."

Parker emphasised the importance of looking at the people within the organisation, as well as consumers, customers and operations.

"It's our three-legged stool," she said. "We've got our cost, quality, delivery – but the seat on top is our people."

She said that companies push to satisfy demands, push to please the customer, and push to giving great quality. But, she asked: "How do we ensure our people, who are at

Around the table there was caution about 3D printing, and where it fits into the current spare parts market.

"We wouldn't take any risks at the moment," said Sharp's Kristie Scott-Woodham. "I'm sure in research and development there's a lot going on, but nothing in parts.

"We are very traditional, we get the part from our main supplier, who quality checks everything to make sure it all works well."

The technology itself, and what it has to offer, was admired by the group – that isn't what is holding it back in the market. Concern about strength, durability and experience, as well as legalities and confidence in processes, appear to be the dominant barriers.

"It's not quite yet a customer product – as you can imagine the product liability side of

the upstream side of things there are big challenges on inventories and spare part inventories – and that this is where an opportunity for 3D printing lies in his business.

"I've seen internally that this is getting some headlines – in the downstream piece I wouldn't see too much applicability," he said. "I don't think the benefits of transport from third party versus printing in house would be there.

"The cost levers aren't there in terms of the demands we get from the automotive industry – they're continually increasing.

"That's our biggest headache at the moment, or our opportunity, whichever way you look at it in terms of quality standards."

But Mark Hennessy believes that 3D Printing is in full swing. He recently visited a manufacturing technology centre in Warwick, where he saw what he described as 'mind boggling' 3D printing.

"They're creating very complex, extremely durable parts that are going into the aerospace industry. For instance an airbus is taking 3D manufacturing parts and putting them straight onto aircraft.

"They also showed some lorry turbines which were being refurbished – they get worn and they can go through a process and literally 3D print the repairs onto the existing part," said Hennessy.

Chairman Richard Hunt asked whether this process was still at a "very much prototype, experimental stage".

The answer from Hennessy was quick and definitive: "No. For high value parts it is now going into production. What's happening in 3D printing is, the materials science is going forward quite fast.

"The capabilities are growing, and the cost is plummeting. It's going to be one of these transformational technologies that we're just beginning to see the glimmer of what it can do."

Sometime in the future, he said, whether that be in ten or fifteen years, there will be a market for people to have their own 3D printers in their homes, and instead of ordering physical goods, they'll download software. ■



the heart of our businesses, actually are effective, are happy, are growing in what they do?"

A difficult question. But with new demands imminent – perhaps its time the industry endeavours to answer. This, balanced with efficient technology and happy customers, may just inspire the innovation revolution the industry needs.

The impact of 3D printing technology was raised by Mike Meades, general manager of Flex. "We're working on 3D printing of spare parts with one of our key customers," he said. "We see huge potential – there are lots of challenges with it, but that is certainly a real live project that we have going."

3D printing isn't strictly a new technology – but, for a number of reasons, it just hasn't seemed to find its way to the forefront of the market.

"We've been using the technology for years now," said Ford's Carl Polak, "more in the production of prototypes.

"I think where we are going with the soft tool process, we will go into a 3D process," he said. "For example, for short run specialist customised vehicle spare parts."

Polak thought that the next big jump will be moving on from prototypes to selling to the public. But when 3D printing will actually get to the stage of replacing past processes, is rather ambiguous.

this, the warranty, and ten year life if you've got to get it onto the makes material selection, and obviously the methodology and processes are very, very crucial," said Polak.

"With a brand like Ford Motor Company you can't just go doing things that are experimental or rash, they've got to go through a very rigorous testing process and need to be fully vetted."

Pressure from regulators can also act as a deterrent from choosing a technology, especially if it's considered 'experimental'.

Graham Young, logistics performance and improvement manager at Shell, said that on

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