

Jolly green giants

Pallet networks were created to reduce empty running, but what are they doing to cut carbon emissions now? **Carol Millett** reports

Pallet networks appear to be well ahead of the curve when it comes to sustainability. Launched around 25 years ago, when the world was largely oblivious to the looming climate crisis, the pallet network model introduced a collaborative form of road transport which has helped deliver big cuts to hauliers' fossil fuel emissions by cutting both mileage and empty running.

Paul Sanders, head of the Association of Pallet Networks (APN) is rightly proud of the pallet networks' contribution to sustainable road transport.

He says: "The collaboration which lies at the heart of the pallet network model is a crucial contribution to the sustainability of modern logistics – and could be a blueprint for far more sustainable methods of distribution and delivery going forwards."

The model also ticks the box when it comes to cost efficiencies, claims Sanders. "Carbon initiatives must also be commercially and operationally valuable in order to succeed and inspire wider change," he says. "The collaborative approach of the networks does that – it minimises mileage while giving network members a pay-as-you-go, profitable method for dealing with small freight consignments. It also gives customers an excellent, reliable and rapid method of delivery on the same pay-as-you-go basis."

Making a difference

Recent figures from the APN show how hub-and-spoke operations help consolidate freight, delivering an average fill of 76%, compared with an industry average of 54%, reducing the number of vehicles on the road by around 800 per day and helping members cut congestion, emissions and noise pollution.

Then there is the multi-hub model adopted by most pallet networks. Palletline MD Graham Leitch says this strategy plays a central role in cutting Palletline's emissions. "It is one of our biggest sustainable strategies," he says, pointing to the network's web of hubs in Glasgow, Manchester, Leicester and London, Birmingham and Coventry. "Last year, as volumes really increased, we found that members running to six multi-hubs saved around 4.5 million miles compared with operating into one central hub in Birmingham. That makes a real difference, equating to a saving of 7.5 tonnes of CO₂ over a 12-month period last year."

Pall-Ex group CEO Kevin Buchanan is another staunch believer in the sustainability of the multi-hub model. The network recently opened a 120,000sq ft Northern Hub in Rochdale within easy reach of its members across the North and Midlands.

The network has also added hub capacity by opening a 210,000sq ft facility at Watling Park, Northamptonshire – the Pall-Ex South Central Hub – which Buchanan says will help reduce mileage and driver journey times for members across the South.

Similarly, The Pallet Network (TPN) also strives to



The Palletforce Alliance Sense platform uses AI to maximise operator efficiencies



APN's Paul Sanders says the collaborative nature of pallet networks is the original 'green' initiative and could be a model for other sectors



Palletline has succeeded with a multi-hub model and hitting ISO 5001 energy standards, says MD Graham Leitch

help its members cut empty running miles under the mantra "optimal loading, minimal mileage".

Commercial director Allen Rees says: "We are very careful about selecting which partners we put into our regional hubs to maximise the efficiency of using those regional links. There's no point in someone bringing up 100 pallets and then taking half a trailer of fresh air on the way back."

Rees also believes that being commercially sustainable is central to being environmentally sustainable.

"We are careful to help support our members' commercial health," he says. "This may not seem an obvious sustainable strategy, but opening a depot and then having to close it – and the impact that has in terms of wasted assets – is environmentally unsustainable."

Appliance of science

Palletforce is using ground-breaking technology to help its members cut their carbon footprint. Its Alliance Sense platform, based on neural learning and artificial intelligence, has the ability to identify where delivery problems may occur and highlight the need for members to intervene, reducing failed deliveries and redeliveries.

It also runs bespoke software that provides a pallet space report to each member identifying the most efficient way trucks can be loaded to and from the Palletforce SuperHub, to help members reduce journeys.

Dave Holland, Palletforce sales and marketing director, says that, by leveraging the technology platforms, Palletforce "offers a number of initiatives to help our members reduce road miles, unnecessary deliveries, fuel and emissions – we are also incredibly proud to be the only network that offers artificial intelligence to help reduce the need for re-deliveries while enhancing service."

Some networks have signed up to the ISO 5001 energy management accreditation, which requires the holder to make incremental sustainable improvements to the business every year. This is no greenwashing, box ticking exercise, says Leitch, who is proud of what Palletline has achieved since becoming accredited in 2018.

"We have to show that we are reducing our energy usage every year to keep our accreditation. It isn't easy, but between 2018 and 2020 we have cumulatively reduced →

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the energy we use by just under 20%," he explains. "We have also cut the kilowatt hours of energy used to move each pallet, down from 2.76kWh in 2018 to 2.2kWh in 2020."

"One way we achieved this was to switch all our hubs to using hybrid forklift trucks with hydrostatic drive, which reduces floor spin and dramatically cut our gas consumption. We've also put full LED lighting inside the hubs linked to infrared sensors and replaced all of the heating within our hubs with smart temperature-related heaters."

The network is also trialling some electric forklift trucks ahead of contract renewal later this year. "These may be small wins, but these incremental gains really start to add up," Leitch explains.

A helping hand

But how sustainable are the pallet networks if their members fail to take any action on the environmental front? UPN MD David Brown says that members across the sector are largely free agents when it comes to their sustainability strategies, but believes networks can play an important role by leading by example and supporting members' green aspirations.

"With around 90 to 100 members in each network, there is bound to be a spread of focus on sustainability, according to the size, scale, professionalism of the organisation and the attitude of the leaders within those organisations, with some more committed than others. And network influence varies depending on how much pallet work is part of their overall portfolio," he says. "So, I think as networks, we have an ethical rather than a policing power. It has to be partnership where we guide, communicate and encourage our members to be more sustainable."

To this end, the network is currently backing UPN member F&G Transport's involvement in test driving the Volta Zero as part of Volta Trucks' Pioneer Programme.

The Sussex haulier, which has already cut carbon emissions by switching 80% of its forklift truck fleet to battery power and using 100% renewable energy, joined the trial in January this year.

Designed for inner-city freight deliveries, the Volta Zero has an operating range of up to 125 miles, which Emma Lindsley, MD of F&G Transport, says is ideally suited to the haulier's needs, "specifically for safety, distance, and weight capacities".

Lindsley adds that the trial will enable both F&G Transport and Volta Trucks to assess how the vehicle performs in the pallet distribution sector and is hoping it will help F&G Transport fast-forward its target of replacing the entire fleet as quickly as possible.



UPN member F&G Transport is trialling a Volta Zero for inner-city deliveries



Palletforce's Dave Holland (above) is backing new technology, though Pallet-Track CEO Caroline Green (below) is skeptical about a rapid switch to EVs



Brown comments: "It's really exciting news for UPN and I am really pleased to be working with F&G Transport on this ground-breaking evaluation."

Pallet-Track CEO Caroline Green, who took over from founder Nigel Parkes on 1 April this year, warns that any transition to electric vehicles needs to be carefully planned in partnership with government.

"The price point differential between fossil fuel and EV is nowhere near there yet, not to mention the re-charging infrastructure to make carbon-free distribution a viable reality," she says. "And, longer term, the industry and wider government have got to have a grown-up conversation about the environmental impact of mining and importation of lithium and the sustainable strategies required for the safe disposal of the batteries that we will need, so we don't sleep-walk out of one environmental crisis into another of our making."

Powering forward

Leitch also has reservations about the use of EVs, believing gas-powered trucks are the way to go.

"I am personally not convinced electric trucks are the solution for the transport industry. My view is HGVs will skip a generation and go straight to hydrogen," he says. "The interim solution is gas-fuelled trucks. However the lack of refuelling infrastructure is holding back operators from adopting this technology."

"We have a few members running gas trucks, including Gregory Distribution and, if we can get a critical mass of members prepared to operate gas-fuelled trucks, then we will look to invest in a refuelling facility at our Birmingham hub. But first we need more members to express an interest in this before we can commit."

Pall-Ex is also backing gas trucks. The network was considering switching its in-house fleet to gas and was involved in trialling a number of Volvo gas trucks last year – but plans are now on hold. Buchanan says: "Until February 2020, we were working with Volvo trialling their CNG trucks. We found their performance to be very good, both economically and environmentally."

"However, because of refuelling issues, caused by some providers closing down their refuelling stations, that trial has been suspended for the time being."

Despite this setback, Buchanan is confident the take-up rate by Pall-Ex members will be significant, once adequate refuelling infrastructure is rolled out.

"You will not see haulier reluctance, providing the infrastructure is there, because they make economic and environmental sense and because hauliers are open to innovation – they have to be given the margins in this industry," he goes on.

"We found the trucks several miles to the gallon cheaper in comparison with diesel so, once the infrastructure is there, I am sure we will see plenty of hauliers rallying to the opportunity." ■

TPN PALLET RECYCLING DELIVERS RESULTS

The Pallet Network (TPN) is helping members cut their emissions and costs through its free pallet recycling scheme.

Launched last year, the scheme encourages members to use spare trailer space to bring unwanted pallets to the network's hub in Minworth. From there, pallets are sorted then transported to a recycling centre and made into plywood or MDF. The service helps members avoid the cost of taking their old pallets to landfill, or worse still burning them. The pallets are also transported using spare trailer space, further reducing the scheme's carbon footprint.

TPN says the scheme has been a resounding success. By November last year it had recycled 144 tonnes of pallets, an average of 28 tonnes a month. By mid-February this hit 300 tonnes, with January alone contributing 78 tonnes.

"We're very proud of this scheme and of how wholeheartedly our partners have committed to ensuring that their end-of-life pallets do not meet unsustainable ends," says commercial director Allen Rees.

He adds that the scheme is a win-win solution for all. "We can provide a free solution for our partners, which saves them the cost of disposal," says Rees. "More importantly, we are also lowering the carbon footprint of the industry and removing the strain on local landfills all over the UK."