

Striving for Cold Chain Sustainability

Achieving sustainability within cold chain logistics is an increasing priority for organisations operating throughout the industry.

Pharmaceutical companies, transportation providers, clinical customers and packaging vendors are increasingly focusing on the environmental impact associated with conducting clinical trials or the transportation or globalisation of pharma products.

With sustainability so high on the agenda, emerging innovation in the cold chain industry is focused on developing future products that will be 100 per cent reusable and recyclable, with a drive towards achieving a zero waste stream.

The goal is to ensure packaging products, utilised for clinical trials transportation, can be returned directly to the original thermal packaging vendor, not to go back into the clinical space, but to be reused to make new products in a lower risk industry.

Alongside product innovation, organisations operating within the cold chain space are seeking ways they can streamline further and create processes which make it easier for the customer to get products into a zero waste opportunity.

In the longer term, within the industry and other sectors, there's a focus on engineering products which will increasingly incorporate recycled materials, including recycled plastics from the ocean.

Achieving such sustainability goals requires engagement between global suppliers within the cold chain network, who collectively can support such emerging environmentally-friendly product innovation. This could enable the transition of such initiatives to become a clinical or temperature-controlled product for use in the pharmaceutical space, provided the raw materials utilised meet the necessary compliance requirements.

Clinical trials transportation products often require the use of virgin materials, which is a challenge for the industry. Sourcing such virgin products, which can be recycled or originate from recycled product, is a current challenge thermal packaging vendors are trying to overcome.

Another aspect also in the sustainability spotlight is transportation and how it's utilised within the clinical space, given most clinical trial shipments are transported worldwide. Considerations include how often air freight is utilised, what type of sea freight is used, and a greater focus on transport suppliers within the entire cold chain logistics network.

The industry is also looking at ways of using innovative technology, such as software applications, which could be utilised to highlight the environmental impact of clinical trial shipments.

Such new technology could calculate the carbon footprint of a clinical trial which, for example, may require hundreds of shippers, providing specific thermal protection of a particular payload capacity.

Many pharmaceutical customers conducting clinical and commercial trials are more diligent when it comes to sustainability, and want a better understanding of what their environmental impact is.

Unless the industry is putting forward options to support pharmaceutical customers in their vision for improving their environmental impact we are going to struggle, and that's where the cold chain packaging suppliers need to step up their game.

Beyond any profitable perspective, the industry needs to work on sustainability collaboratively, not only from a packaging perspective but components within the packaging.

For example, phase change materials (PCM) are used within cold chain operations as a reliable coolant and the PCM waste from that thermal packaging is being transformed into kiln fuel used to make cement, which is helping the industrial industry.

When collectively striving for a zero waste stream, organisations need to be exploring ways to engage locally and globally with environmental firms who can take cold chain waste products and transform them into something reusable within another sector. This can be achieved by enlisting environmentally-friendly suppliers who are looking to reuse clinical components in raw materials.

Increasingly, questions are being asked with greater focus on defining an organisation's carbon footprint. There's a growing emphasis on demonstrating ways to measure carbon footprint, which helps with decisions on what measures can be improved.

Whether it is a focus on water, energy usage or waste, by calculating and measuring its impact, businesses can better understand how much they can improve in the sustainability stakes.

Organisations need to be accountable when it comes to sustainability; it should not all be about cost saving. Beyond focusing on product development, it is important to build an infrastructure in supplier management and transportation management within the cold chain network, end to end.

The industry needs to be constantly challenged on its environmental impact. Overall, businesses are becoming more conscious and many do not want to be a part of supply chains which are environmentally unaware. Therefore, more questions are being asked about environmental impact implications.

Cold chain customers are increasingly asking their suppliers what their sustainability objectives are and how they are measuring their carbon footprint.

Ultimately, the industry needs a worldwide sustainability standard to work to in a collaborative way across the sector on a global scale; something that will hold everyone accountable.

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Lynaye Reynolds is the Worldwide Director of Quality at Peli BioThermal. Lynaye has been with the business for more than five years and has become a key contributor to the company's ongoing success. Lynaye's expertise and enthusiasm has made her a valuable member of the BioThermal senior management team and she plays a pivotal part in the company's global quality operations. Her role within the company's worldwide quality processes includes leading the site certification to the latest ISO standards of the company's Plymouth site in the US. Lynaye has also proved to be a primary customer-facing representative in the global rollout of the company's Crêdo™ on Demand rental program.



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