

# Carbon copy



THERE IS A GROWING CONSENSUS THAT CLIMATE CHANGE REQUIRES ACTION IN THE SUPPLY CHAIN. **DAVE BERRIDGE**, SECRETARY OF THE AUTOMATED MATERIAL HANDLING SYSTEMS ASSOCIATION (AMHSA), EXPLAINS THAT LEADING CORPORATIONS ARE BEING URGED TO SET AN EXAMPLE FOR OTHERS TO COPY.

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The fact that the Paris Agreement – which sets out a plan to limit global warming to well below 2°C above pre-industrial levels – is now in force demonstrates that there is international agreement on the need for action on climate change.

Alongside the framework of the United Nations' Sustainable Development Goals (SDGs), there is the potential to secure a sustainable and low-carbon future for our planet. With the agenda in place, all that remains is actually achieving it!

#### INTERESTING READING

The latest annual supply chain report from CDP – formerly the Carbon Disclosure Project – makes interesting reading. The international NGO has partnered with the Carbon Trust and BSR (Business for Social Responsibility) to publish the report, entitled 'Missing link: Harnessing the power of purchasing for a sustainable future'. The missing link in tackling climate change, according to CDP, is the supply chain and the report finds that the sector's progress in reducing carbon emissions is too slow.

CDP's disclosure system enables companies, cities, states and regions worldwide to measure and manage their environmental impact. Its latest report involved 89 of the world's largest public and private organisations, which have between them a procurement spend of US\$ 2.7 trillion. These major players – including BMW, Coca-Cola, Dell, Johnson & Johnson, L'Oréal, Microsoft, Philips and Walmart – asked for data on emissions and water usage from their suppliers, and over 4,300 companies responded to the disclosure request.

#### AUTOMATION AND ENERGY EFFICIENCY

Much of the potential for carbon reduction in the supply chain has its source in technology. Outside of the warehouse, sophisticated software can plan the correct drop sequence for the most efficient delivery route. UPS, for example,



has transformed its operations through its On-Road Integrated Optimization and Navigation (Orion) system, which combines fleet telematics, algorithms and customised map data to provide drivers with optimal routes. Orion is expected to reduce greenhouse gas emissions by 100,000 tonnes every year and cut fuel usage by 10 million gallons once fully deployed this year.

Inside distribution centres, warehouse automation can have a huge impact on energy consumption, especially since automated handling systems can be easily controlled in ways that save power. A conveyor system, for example, only needs to run when there is a load in transit – in fact, only the specific section where the load is located needs to be live. Lighting can be controlled so that it is only illuminated when required – for example, when people enter a specific area. Paperless picking processes increase order accuracy and result in fewer returns, meaning more green benefits. Dynamic slotting – where loads are allocated locations within the store according to their mass and order frequency – can also result in significant reductions in energy consumption. Software can accumulate handling tasks for release in efficient batches, as well as organising the loading of vehicles to ensure optimum space utilisation.

#### SUPPLY CHAIN IS KEY

In the CDP report, companies with projects to lower emissions disclosed reductions

equivalent to 434 million tonnes of carbon dioxide – an amount greater than the annual emissions of France! This resulted in cost savings of \$12.4 billion, which is double the figure reported in 2015 but the full total – including unreported savings – may well be much higher. What is more, given that around half of the 4,300 companies surveyed reported no carbon-reducing activities at all, it is clear that the impact on climate change from action in the supply chain could be immense. In fact, greenhouse gas emissions within the supply chain are often at least four times greater than those from direct operations.

In the words of Tom Delay, chief executive of The Carbon Trust: "With very few exceptions, the supply chain represents the biggest area of sustainability impact and opportunity for a business. But like many of the most rewarding large-scale opportunities, it is not easy to turn the principle into a reality. It requires an ability to understand complex systems, a clear strategy, good management of resources and relationships, and above all a willingness to invest and patience. But those organizations that master the art will find it can be a profitable pursuit."

In case profit proves to be insufficient incentive, CDP has – for the first time this year – rated companies on their efforts to manage carbon in their supply chain and, from next year, the organisation will 'name and shame' those companies lagging behind. ■

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