

REDUCING THE IMPACT OF *CARBON EMISSIONS*

How can data help reduce the impact of carbon emissions from the supply chain?

.....

Environmental regulations have been making more headlines in recent years as countries around the world begin to look to curb and ultimately eliminate their carbon emissions. Unfortunately, one of the biggest contributors to the global carbon emissions in the supply chain. 50% of greenhouse gas emissions can be directly traced to eight global supply chains. However, final manufacturing only accounts for a small partition of this overall contribution. Most of the emissions are due to the supply chain itself, such as raw material acquisition, agriculture, and transportation.

“Supply chain emissions are, on average, 11.4 times higher than operational emissions, which equates to approximately 92% of an organisation’s total GHG (greenhouse gas) emissions,” according to the US Environmental Protection Agency.



End-to-end supply chain emissions are decidedly higher than direct operational emissions, especially for companies that work directly with consumers. By working towards building a net-zero supply chain, companies will ensure regulatory compliance and negate their overall impact on the global climate. Interestingly enough, the costs associated with reaching a net-zero state for carbon emissions are lower than one might expect, resulting in a nominal price increase of 1% to 4% on consumer products.

WHY IS THERE LITTLE PROGRESS TOWARDS NET ZERO SUPPLY CHAINS?

Despite it being a relatively nominal cost passed on to the consumer to decarbonise the supply chain, relatively little progress has been made in making that a reality. If low cost wasn’t incentive enough, there’s also the matter of regulatory compliance, which could cost companies harsh fines, penalties, fees and delayed movements within the supply chain.

The problem is, while most companies can calculate the amount of greenhouse gas emissions generated from day-to-day operations, getting the overall big picture view is decidedly more complex and intricate, especially when operating on a global scale. This is made even more complicated when considering that some organisations don’t fully understand who their suppliers are in the first place. The lack of visibility makes it all but impossible to track down sources of carbon emissions created by the end-to-end supply chain.

In order to fully understand both the nature of the problem as well as finding a workable solution requires a deep and comprehensive view of the supply chain as a whole. Fortunately, there are steps that every organisation, regardless of size, can begin to take now, and it all begins with data.

ROOTING OUT INEFFICIENCIES WITH OPERATIONS

Perhaps the biggest benefit of increasing visibility is the insights gained from the big picture view of the supply chain. The data collected allows logistics and C-Suite team members to zero in on various operations and understand what is working well and what isn't. Unfortunately, there is no such thing as a perfect supply chain. Somewhere along the lines, there are going to be inefficiencies.

Transportation, in particular, is rife with empty miles, repetitive movements, and wasted time and energy. Shoring up these weaknesses not only curbs extra emissions generated. As 30% of all carbon emissions are generated by trucking, every bit counts.

Consider the yard around a warehouse or a distribution centre, for example. Trucks are typically parked and then tracked through a manual process. A single data entry error could result in a time-consuming search to find the missing trailer and multiple moves to get it to the dock. These problems could be easily eliminated by working with a yard management system that automates tracking and data entry processes, reducing the opportunities for human error.

Streamlining operations so that drivers are able to get the most optimised routes in a timely manner allows drivers to move more efficiently, hitting the road when traffic is at its lowest volume, rather than getting stuck in the mid-day bumper-to-bumper. Even going so far as creating a paperless system can create a tremendous, positive impact on reducing climate change.

MAKING A DIFFERENCE BEGINS TODAY

Decarbonising the supply chain could go a considerable distance to defeating climate change on a global level. Even smaller companies that don't otherwise contribute via direct emissions can have an impact on a global scale simply by



improving their operations. The best part is that these solutions have other direct benefits in improving efficiency and even realising a return on investment, ROI, on new data collection and visibility systems.

Unfortunately, the manufacturing and transportation industries are slow to turn around, and affecting something as complex as decarbonising the entire global supply chain is going to take a considerable amount of time and effort. Companies will have to change the way they think in addition to changing how they operate. Fortunately, there are many systems currently available that will allow companies to begin taking matters into their own hands and start to make a positive change today.

HOW C3 HIVE CHANGES THE GAME

Unfortunately, the way modern warehouses are set up is not at all conducive to running an efficient operation. One of the biggest issues is how drivers are received. There is a lack

of communication between the driver and the warehouse, leaving receiving up to a first-come-first-served basis. Drivers who are late could be turned away because the warehouse is simply overrun with other trucks looking to unload. This means a driver now has to pull away, drive to a rest area and come back later, or sit idle and wait for a bay to open. These delays are all too common and are contributing more to the carbon emissions created by the trucking industry.

On a sustainability level alone, C3 Hive changes the way drivers and warehouses communicate with each other. Drivers are able to check in ahead of time when they arrive, which lets the warehouse know which loads are on time and which are late. This optimises the gate-in/gate/out times, meaning the driver is back on the road faster, with no wasted miles due to warehouse reroutes. This is the type of real-time data that will bring supply chains to net-zero. 🌍



Hive