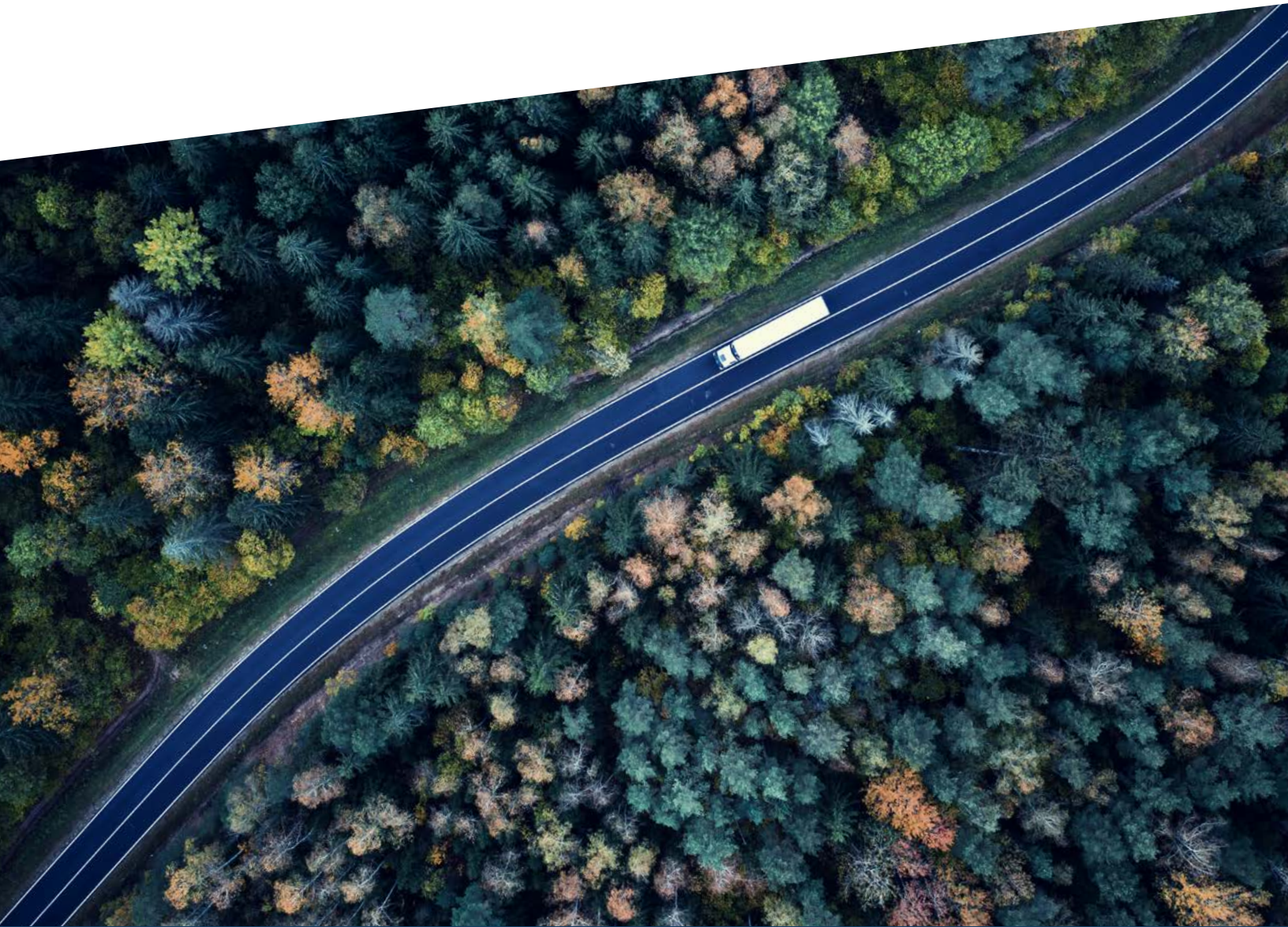


# Transition to a more sustainable supply chain

Why a TMS is crucial in the new Scope 3 emissions requirements



# Content

- 1 – Why a TMS is important for reporting emissions
- 2 – What regulations are looming for companies?
- 3 – How a TMS helps meet sustainability requirements
- 4 – Making the best choice
- 5 – Get started quickly with emissions reporting for supply chains



# 1 Why a TMS is important for reporting emissions

## Businesses must start reporting emissions

Pressure from consumers and the EU is forcing businesses to start reporting emissions. Several recent surveys show that consumers are now starting to place a real value on sustainability, both of the product itself and its delivery. What is more, the EU wants businesses with more than 500 employees to start reporting emissions in their logistics chain from 1 January 2024. This applies to CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions, from Scope 1 to Scope 3 both upstream and downstream. From 1 January 2025, the same rule will apply to smaller companies, those with at least €40 million in turnover or 250 employees.



## Penalties for non-compliance

Compliance with the new regulation is not optional. Indeed, the penalties for companies that fail to act in time can be quite severe. These penalties start with a public identification and move to mandatory adjustment/reporting. For companies that remain in breach, the penalty could rise to as much as five percent of annual turnover.

## Towards more sustainable operations

While sustainability has long remained a marketing term, it is now visibly transforming into an issue where companies need to make real progress. Companies can no longer escape that killer phrase 'to measure is to know', because although the EU regulations will not be set in stone from day one, verification points are definitely in the pipeline. In the process, consumers too are increasingly forcing businesses in the direction of more sustainable operations. This is not a punishment, but rather opens up opportunities for those who take a rigorous approach.

## The role of a Transport Management System (TMS)

A few things are necessary in order to report on emissions. First data, and second, an application that can properly store and process the emissions data derived from the supply chain and convert them into clear reports. A TMS seems ideal for this purpose. This is because a good TMS makes it significantly easier to process and reuse data from the transport chain.

## 2 What regulations are looming for companies?

### Action is required

Under pressure, many changes are under way. Consumers and the EU alike want more action to promote sustainability. The topic of sustainability seemed to fall off the radar for a while due to Covid-19 and Russia's invasion of Ukraine, but it is now firmly back in the spotlight. Whereas until recently, the main logistical concern for companies was to be sure that loads would get from A to B, they will now need to ask partners upstream in the chain, and logistics partners, about the associated emissions. For many companies, this means they have work to do.

### What is changing?

The key question for many of these businesses is: what lies ahead for us and how do we respond as efficiently as possible? Environmental zones drawn up by local authorities had already signalled that change was in the air. The EU is now also getting involved, with the Corporate Sustainability Reporting Directive (CSRD) in conjunction with the EU Emissions Trading System (ETS). This requires companies to map the emissions from transport operations within the supply chain.

### Introduction of regulations

The ETS is the European trading system for CO<sub>2</sub> allowances. It does not only affect European shipping companies; those outside the EU will also be forced to comply. Bulk and container ships, amongst others, will start paying for the emissions they produce from 2024.



*A TMS can consolidate shipments to reduce the distance and fuel consumption*

## Describing plans in the management report

The CSRD requires companies to begin to disclose a number of issues in a management report. For example, they are required to disclose:

- what plans a business has to make both its business model and its strategy fit for the transition to a sustainable economy
- how the company takes measures to avoid adverse business and value chain impacts
- what progress the company has made towards achieving the targets set

(Source: <https://executivefinance.nl/2023/01/corporate-sustainability-reporting-de-grote-europese-stap-naar-duurzaamheidsrapportage/>)

In practice, of course, there is more than just European regulation. In addition, consumers have made it clear that they want to be able to understand the carbon footprint of a delivery - to some extent already, but definitely in the near future. This has emerged from research conducted by Descartes (*Retailers: Sustainability is Not a Challenge, It's an Opportunity*).

## What exactly must businesses disclose?

There are three types of emissions for which companies are responsible and that they must disclose. In ascending order from easy to difficult they are as follows:

**Scope 1** – This refers to emissions caused directly by a company.

**Scope 2** – These are the emissions a company makes indirectly, for example due to its energy consumption.

**Scope 3** – This category contains all the other types of emissions caused by businesses in the value chain. Hence this includes the transport of products, raw materials and parts that external parties carry out on a company's behalf.

## Scope 3 accounts for the majority of emissions (typically 90 percent)

Scope 1 and scope 2 emissions are relatively easy to calculate. The EU has now announced regulations that include Scope 3 emissions for an important reason. In many cases, these emissions are among a company's largest emissions. Frequently as much as 90 percent of the total.

## Penalties for failure to report

Penalties are in the pipeline as a 'big stick' with which to push companies to disclose their emissions. Member States are themselves responsible for checking whether or not companies do indeed submit these reports, and subsequently for imposing sanctions. The penalties will be rolled out incrementally, starting with a public statement on a non-compliant company. Then a company is explicitly instructed to start reporting and lastly, there comes the big stick: fines. These can vary from country to country, but in the case of Germany, companies can be fined up to 10 million euro or five percent of annual turnover.

# 3 How a TMS helps meet sustainability requirements

## Determining emissions in a standardised manner

The requirement for sustainability reporting means that shippers in particular need to take action. This involves action in the form of collecting sustainability data from your organization, and an initiative to map emissions from the various transport operators. In many cases, these shipping companies are the directors of their logistics chains. As a result, they are also the parties in a position to determine emissions in a standardised manner. The TMS is able to do this using data such as distance and weight.

## *TMS as a centralised system*

A fair number of larger companies now work with a TMS. Yet there is still a world to be conquered here. For example, not every company uses a TMS yet, or uses an outdated system with limited capabilities.

A TMS is the central system for handling order flow and planning, executing and improving transport movements. In fact, the TMS provides visibility into every aspect of moving and even scheduling goods.

## Combining data from modes

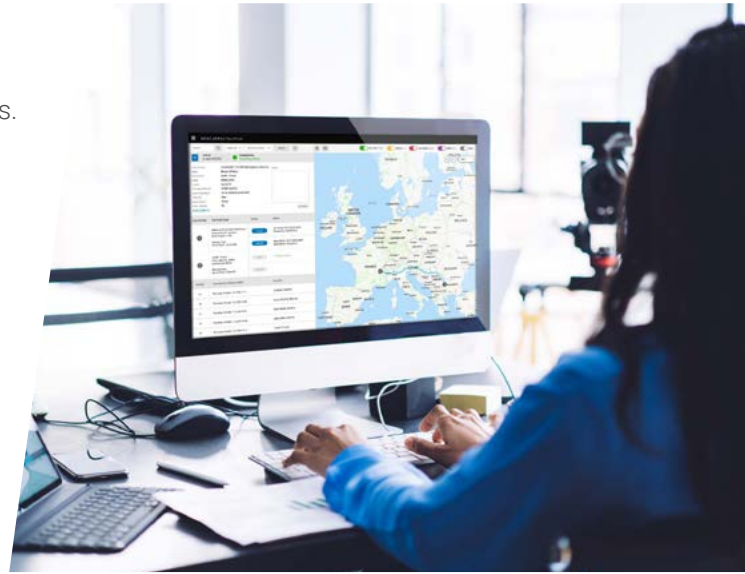
Yet, for many operators, there is still a 'but' when searching for an effective application, as not every TMS is capable of managing and planning for modes other than road transport. To maximise the visibility and control of the chain, it is immensely valuable to be able to combine data from road, sea, air and rail transport. For CSRD purposes, this may even be necessary in order to arrive at a faithful depiction of the emissions created in the chain.

## What can you do with a TMS relative to the Corporate Sustainability Reporting Directive (CSRD)?

Many businesses sit on a huge mountain of data, but do not make enough use of it, partly due to the absence of any overview. If a shipper uses a TMS, the question is whether the data it contains is accurate and complete. For example, in order to calculate the CO<sub>2</sub> emissions of a cargo, we need at least the basic data on distances to be covered and the weight of the goods. A transport company's TMS, if properly set up, can serve as an ideal application for collecting data on transport and goods and for performing calculations on that basis. As a transport business, you can estimate the expected costs of road transport because your TMS can determine your CO<sub>2</sub> emissions based on the data reported. Air and sea freight require more data, including information on ports, ships and legs (connection points).

## GLEC calculation method

The better the logistics chain data available to a transport company, the easier it is to comply with sustainability regulations. Furthermore, the data that companies collect and eventually disclose must comply with prevailing standards, including those established by the GLEC. GLEC stands for the Global Logistics Emissions Council, which has developed a framework. This is now established worldwide as the method for calculating and reporting emissions from the logistics chain. In fact, the GLEC Framework is the only globally recognized methodology for the harmonised calculation and reporting of the logistics footprint for the Greenhouse Gas Protocol. It can be used across multi-modal supply chains.



## Where do the greatest challenges lie?

Far and away the biggest challenge companies face is a lack of data and therefore of understanding. But there are other challenges. In no particular order of importance, these are the stumbling blocks between current reality and what governments will require from 1 January 2024:

### Challenges to obtaining sustainability insights and avoiding fines:

- Lack of data on distances, load weights, transport modes, ports and ships
- Working with average emissions is still the norm, rather than using accurate data
- Insufficient understanding of the mode or modes used
- The abundance of APIs for sending or retrieving data
- Lack of a modern TMS
- Quick action required with regulatory start date

## TMS: from basics to future calculations

A TMS is an application that organises and centralises transport data from different modes. For example, in the case of a container, you record the weight of the storage unit, the distance it travels and the type of vessel. This allows you to attribute a certain quantity of emissions to the container and its items. A good TMS can retrieve data from forwarders and/or carriers. Then, using clear logistics data, the system can perform calculations to establish CO<sub>2</sub> emissions, for example. With a TMS that is provided with the basic data from the logistics chain, it is relatively easy to create emissions reports. In the future, companies will then be able to calculate the costs associated with a shipment and make choices or present them to customers on that basis. Currently, freight costs are very significant, and CO<sub>2</sub> emissions may become an additional parameter.

## 4 Making the best choice

It is incumbent on companies to comply with the new sustainability regulations. That means nothing less than taking action, as there is now little time to lay the groundwork for creating and disseminating reports. Because selection and contracting take time, as does the implementation of a TMS. For a company with operations in multiple countries, more time is also usually needed for system rollout.

### A TMS is the starting point en route to a sustainable supply chain

Actively determining and, where possible, reducing CO<sub>2</sub> emissions from the supply chain is the new way forward for companies. This is still difficult now, for example because the shipper receives data from different corners of the chain and in different ways. But whether the pressure comes from laws and regulations or consumers, sustainability is in the spotlight. This becomes clear from the Descartes research touched upon earlier (Retailers: Sustainability is Not a Challenge, It's an Opportunity). Regardless of the method companies use to deliver consignments to consumers' homes, customers expect a clear statement of the CO<sub>2</sub> emissions involved. Currently, 23 percent of consumers already expect this to be the case, and this will rise to 51 percent within five years.



*Actively determining and, where possible, reducing CO<sub>2</sub> emissions from the supply chain is the new way forward for businesses*

## Measuring, understanding, improving and making choices

Responding to sustainability is something companies cannot ignore. A TMS can form the basis for success in effectively taking the necessary steps to reduce emissions. The TMS is able to clearly display the current state of affairs and measure future progress. Companies with a TMS can also set up carriers and services to make it clearer which type of transport and associated services lead to which type of emissions.

## Taking further steps towards sustainability

Requesting additional information from carriers can also further enrich the TMS. This can lead to greater visibility into the logistics chain, which has associated benefits: if you as a shipper know where you are underperforming, you can take steps to improve that aspect of your business. Naturally this applies to aspects of sustainability, too. For example, consolidating shipments when the opportunity arises, reducing fuel consumption by, say, five to 10 percent or reducing paper use by one to five documents per delivery. A TMS is the most appropriate application here, too. Additionally, you can choose to use carriers that demonstrably emit less CO<sub>2</sub>. Besides, the story is very simple: if you have no understanding of your CO<sub>2</sub> emissions, you run the risk of a fine. A TMS is the most obvious tool for acquiring this understanding. What's more, the date of 1 January 2024 is fast approaching.





### **Statistics: what is the state of play for sustainability planning?**

Research conducted by Sapio Research - on behalf of Descartes - suggests that among all the European companies surveyed, 46 percent have an Environmental, Social and Governance (ESG) strategy. Only 21 percent have actually drawn up an action plan and allocated the money to implement it.

### **Do IT tools help?**

The Sapio survey shows that 63 percent of companies surveyed see supply chain and logistics technologies as hugely valuable to business performance.

### **Need for integration**

Finally, the survey shows that companies are particularly in need of integration between different IT tools and transport tracking systems, which they see as enabling them to innovate. It is precisely in these two areas that a TMS can be of great value.

# 5 Get started quickly with emissions reporting for supply chains

Europe requires companies to start reporting on emissions from shipments. To this end, it has harnessed the Corporate Sustainability Reporting Directive (CSRD) to the EU Emissions Trading System (ETS). Companies must map the emissions from transport operations within their supply chains.

## Little time to lose

The announcement that the CSRD is about to take effect is more than a paper tiger. Businesses must work fast and hard to prepare. From 1 January 2024, it will first be up to larger companies to demonstrate the status of emissions in their supply chains. From 1 January 2025, this will also apply to smaller companies.

## Reporting emissions from the entire supply chain

The requirement to report emissions applies to a company's own emissions as well as those in the chain, including those of its partners. In practice this covers Scope 1 through to Scope 3. This can only be achieved if a sound, modern, logistics application is in use. A Transport Management System (TMS) is not the only, but is certainly the most appropriate, tool for this. This is because it already has the basic functionality to process transport orders and estimate the emissions associated with a shipment.

## Selecting and implementing

The pressure on businesses to comply with European regulations is increasing, if only for the simple reason that many companies have no TMS, or a TMS that is insufficiently up to date for reporting purposes. Furthermore, selecting and implementing a TMS also takes time. Solutions are available on the market, but quick action is imperative.





## About Descartes

Descartes is the world leader in providing on-demand software-as-a-service solutions aimed at improving the productivity, performance and security of logistics-intensive businesses. Customers use our modular software-as-a-service solutions to control, plan, track and measure delivery resources; plan, allocate and execute shipments; review, audit and pay transportation invoices; access global trade data; submit customs and security documents for imports and exports; and complete many other logistics processes by participating in the world's largest collaborative, multimodal logistics community. Our headquarters are in Waterloo, Ontario, Canada and we have partners all over the world.

Find out more at [www.descartes.com](http://www.descartes.com), and follow us on [LinkedIn](#).

---

**Uniting the People & Technology That Move the World.**