

The Realist's Guide to Sustainable Supply Chains

How to turn vision
into action, and drive
meaningful change



Under pressure

The current state of sustainability

Today, business performance is no longer solely defined by top line or bottom line performance – it's also about operating sustainably. This third dimension, often referred to as the 'green line', has, in recent years, gone from being a niche consideration to a business-critical imperative. The reason for this shift is a rise in pressure from all fronts.

Regulations

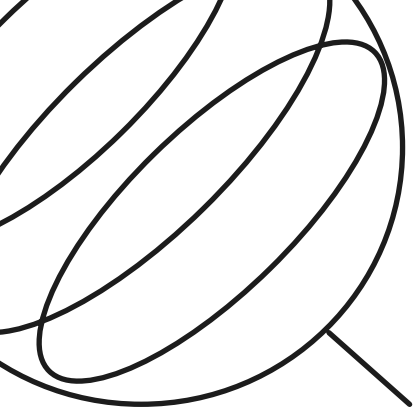
All across the globe, governments are outlining their sustainability visions – the UK's [Ten Point Plan](#), or the US's [2050 carbon neutrality plans](#) are perfect examples – and rolling out swathes of [new regulations](#) – like the [European CSRD](#) (Corporate Sustainability Reporting Directive) and the global ISSB (International Sustainability Standards Board) [Sustainability Disclosure](#) – that will affect the products and services organizations buy, the operations they run, and the emissions they generate.

Strict penalties will be imposed on those who fail to make the grade.

Inflation

With the cost of everything increasing, the perception that sustainability practices add cost puts these initiatives at risk – whereas sustainability transformation can actually help create more efficient and cost-effective processes.

Tackling inflation requires thoughtful business practices that are sustainable in both the short- and long-term. With the right plan, you see the long-term benefits of emissions and waste reduction, cost and time savings, and revenue increase, but also gain the short-term benefit of optimized processes that help you navigate macroeconomic turbulence and resource constraints.



Scarcity

This one is simple. We're using the resources of the planet at a rate that outstrips its ability to replenish them or, in some cases, to a point where we will soon deplete the entire supply. [Earth Overshoot Day](#) (the day when humanity has used all the biological resources that Earth regenerates during the entire year) has for the last 40 years (with some exceptions) come earlier and earlier in the year. In 2022, it fell on July 28th.

In the future, this level of overshoot won't be possible, which means companies need to become more efficient at using the resources we do have to operate at the levels they want to. This applies to everything from raw materials used to make products, to fuel used for transporting products, to the water used for data center cooling.

Internal and external expectations

Customers, employees, and investors are holding the organizations they work with to higher standards than ever before. And many companies now require their vendors to disclose sustainability metrics – and improve them if they aren't satisfactory – to continue the relationship.

In some instances people are resigning to work for companies that have a sustainability vision they can get behind, and customers are voting with their wallets.

1/3

of food produced goes to waste. And **80% of that food is wasted** in the supply chain.

1 in 3

garments end up in landfill. With the average t-shirt requiring **2,700 liters of water** to be produced.

At least

60M

containers (**25% of all shipping containers**) – are shipped empty every single year.

All talk, no walk Exploring the hurdles to hitting targets

Companies have responded to these pressures by setting ambitious goals: getting to net zero by 2030, sourcing 100% of their materials sustainably by 2025, reducing 50% of supply chain emissions by 2030.

Which is great, even if the roundness of those numbers points more towards finger-in-the-air figures than actual data. At least they're setting clear sustainability visions. The problem is, they're struggling to actually execute on these ambitions.

There are three primary reasons why it's hard to bridge the gap between vision and action:

1. People

The problem when thinking about people is twofold. In order to make any meaningful change, you need the buy-in of senior internal stakeholders that are able to drive business initiatives across siloed teams, systems, and processes.

And getting that buy-in means convincing those stakeholders there's business value to sustainability, and that green-line wins aren't going to come at the expense of bottom- or top-line wins.

Additionally, most companies are suffering from a scarcity of experts. Sustainability talent is currently in high demand and in low supply.

2. Data

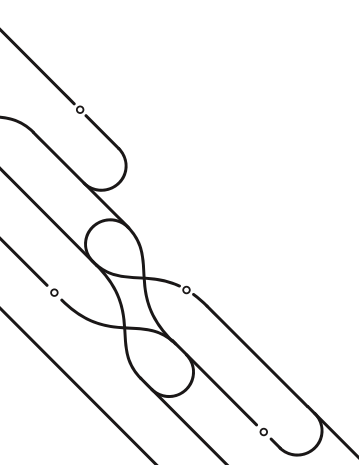
If you have managed to clear the first hurdle, and have alignment from internal stakeholders, you're almost certain to hit a data roadblock. The data you need to improve your sustainability performance is spread out across siloed systems and stored in spreadsheets, so you don't have a single source of truth for reporting, let alone taking action and measuring results.

To make matters worse, the manual, often retrospective ESG reports most people use are too high level, so you miss many of the roll-your-sleeves-up opportunities to actually improve sustainability. In the age of real-time reporting, we're still stuck with carbon reporting practices at the same stage as financial reporting was 40 years ago.

3. Action

The third – and most critical – element is actually creating and implementing an action plan. Without data-led insights, it's incredibly difficult to prioritize from your long list of sustainability initiatives. And because we're treading in uncharted territory, it's often unclear what the best course of action is in order to actually move the needle towards the target with your sustainability metrics.

Right now, only 36% of businesses have some sort of measurement in place for their sustainability efforts, and **only 17%** are using that measurement to optimize based on results. If we want to get to a point where sustainability is more than just a nice idea, we're going to have to get better at measuring, prioritizing, and acting.



It's 'roll your sleeves up' time Getting practical

Scope 1, 2, & 3 emissions

The secret to making the transition from vision to action starts with identifying the areas that can have the greatest impact on the scope of emissions you're targeting.

Scope 1 | Direct emissions

Any emissions produced by the creation or distribution of your products or services. Think of the fuel used by trucks, the gas burned to fuel on-site manufacturing.

Scope 2 | Indirect emissions from purchased energy

Any emissions created by purchased energy. Think of the coal burned to create the electricity used to power your office.

Scope 3 | Indirect emissions from the value chain

Any emissions created either upstream or downstream from your company. Think of products and services that your company pays for, or the emissions created once your products or services leave your ownership.

Many companies still focus their sustainability efforts on Scope 1 & 2 emissions and use traditional, laborious means to count them. There are two issues with this approach. Firstly, even if the reporting is accurate, the current carbon accounting approaches make it incredibly difficult to take operational action on these insights.

And secondly, 70–90% of an organization's emissions will come from Scope 3. Scope 3 is, without question, the hardest of the three to crack, but also provides the biggest opportunity. Make significant reductions to your Scope 3 emissions, and you're really moving the needle.

How to make tangible change

Here at Celonis, we've spent years developing a simple but powerful framework for optimizing core business processes, and have found that using the same approach for sustainability helps our customers move from vision to action. It's a three-step process.

1. Data

Everything you need to get a real-time view of your Scope 3 emissions is hiding in your transactional data. Step one is to extract the transactional data from all your relevant sources – from your Excel sheets to your ERP systems– then supplement it with sustainability data.

2. Intelligence

Once you've unified all your data, apply software like process mining to the data to conduct an MRI on your processes and reveal hidden opportunities to improve business performance and decrease carbon emissions. You can then quantify the associated sustainability impact, generate 'to be' process models, and compare them to your 'as is' processes to simulate the results from making any changes.

3. Action

Finally, you execute targeted actions against your sustainability goals to operate at your highest level of efficiency and sustainability. This can be manual action, or automated triggers based on business needs.

Then sit back and watch your sustainability KPIs improve, in real-time.

Let's get specific

What change looks like in supply chain

In our experience, the journey from vision to action usually happens in three phases.

Phase 1

When customers get started, they typically use Celonis to:

- Eliminate manual data collection
- Build continuous and automated measuring mechanisms
- Discover low-hanging, high-impact value opportunities

Let's look at a couple of real-life examples:

Shipping Emissions Reduction

One of the most practical areas to target are your outbound, inbound, and intercompany shipping emissions.

You can take advantage of real-time detection and quantification of emissions across all shipping practices, then drive process improvements to increase carbon efficiency, such as:

- Bundling orders to maximize capacity
- Reducing rush orders to avoid air freight or empty trucks
- Improving routes to avoid unnecessary freight

Returns and Cancellation Reduction

By reducing the risk of human error and improving order accuracy and cycle times, you can minimize returns and cancellations — reducing waste and transport emissions.

Sustainable supplier management

By combining process mining and external ratings, you can intelligently evaluate and prioritize your suppliers based on their sustainability metrics. This allows you to drive sustainable spend and lower your Scope 3 emissions.

Phase 2

Once customers have nailed the first phase, they tend to dig a little deeper:

Waste reduction

By getting insight into which of your raw materials and inventory are expiring, you're able to maximize asset efficiency, reduce obsolescence and cut down on scrap. Which not only makes a dent in food waste figures – depending on what your stock is, obviously – but also makes an impact on your working capital because of better asset utilization.

Material emissions

By measuring the emissions from the production of materials you use, you can source more environmentally-friendly options and build a more sustainable carbon profile for your products. This not only lowers your scope 3 emissions, but adds a sustainable edge to differentiate your products.

Phase 3

Once a customer has advanced beyond phase 2, not only do they get a massive sense of satisfaction, they also move into the realm of innovation. Which typically looks like this:

Process-level product footprint

By working together with Celonis to create custom reporting, you can accurately measure the carbon footprint of a specific product across the end-to-end value chain. With this insight, you can identify opportunities to improve the product, take action to enhance the product, and share your performance with external stakeholders like your customers.

This will help to meet future regulatory requirements, and helps with brand boosting.

Want to dive a little deeper and see what this looks like in action?

By using Celonis you can leapfrog a number of the hurdles that are currently holding you back from moving from vision to action. It becomes easier to get objective, accurate data, prioritize initiatives based on projected impact, and get buy-in due to lower barriers to entry and compelling business cases.

So you can actually get to work, while everyone else still has their finger in the air.

Value is hiding in and around your processes. Celonis' Process Intelligence platform safely takes the data from the systems you already use, and presents you with a living digital twin of your end-to-end processes. For the first time, everyone has a common language for how your business is running, visibility into where value is hiding, and the ability to capture it. So you get results in months, not years.



celonis