

# Printing the future

A practical guide to become  
a sustainable printing company



**Included:**  
A self-assessment  
of your Net-Zero  
progress!

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# Introduction

Sustainability is no longer optional for the printing and packaging industry — it has become a key requirement. Where environmental responsibility was once seen as a niche concern, it is now a driving force behind industry regulations, customer expectations, and long-term business viability. The shift from voluntary sustainability efforts to mandatory compliance is reshaping the way printing companies operate. This guide aims to provide a practical approach to sustainability, helping you navigate the changes and make informed decisions for the future of your business.

However, sustainability is about more than just compliance. It's not just another box to check or a report to submit — it represents a larger goal. At its core, sustainability in the printing industry is about reducing environmental impact, optimizing resource use, and creating a business model that remains competitive in an increasingly eco-conscious world. Companies that embrace sustainability strategically will not only meet regulatory demands but also gain a competitive edge, attract new customers, and contribute to a healthier planet.

## Why sustainability matters for the printing industry

The printing industry plays a crucial role in shaping a more sustainable future. Energy-intensive production, chemical usage, and resource consumption contribute to waste, carbon emissions, and resource depletion. Addressing these challenges is not just about compliance — it's about leading the way toward a greener industry. By embracing sustainability, printing companies can reduce costs, enhance efficiency, and ensure long-term resilience in an evolving market.

Paper-based products, despite coming from renewable sources, generate carbon emissions by using fossil fuels to power multiple processes throughout their lifecycle — from tree harvesting and mill operations to transportation, production, and recycling. The impact intensifies with plastic-based materials. Acknowledging this reality allows us to drive meaningful change and create a more circular economy within the printing industry.

The printing industry has a unique opportunity to redefine sustainability by integrating smarter processes, reducing waste, and leveraging data-driven insights to measure and minimize environmental impact. By setting ambitious carbon reduction goals and implementing transparent reporting, we can position print as a leader in responsible industry practices. With the right mindset and commitment, sustainability becomes not just a requirement, but a strategic advantage.

Sustainability is no longer a choice reserved for large corporations. Small and medium-sized print businesses are increasingly impacted by customer expectations, supplier requirements, and shifting market dynamics. Many companies now demand environmental accountability from their partners, making sustainability a competitive advantage. Businesses that take proactive steps today will be the preferred partners of tomorrow.

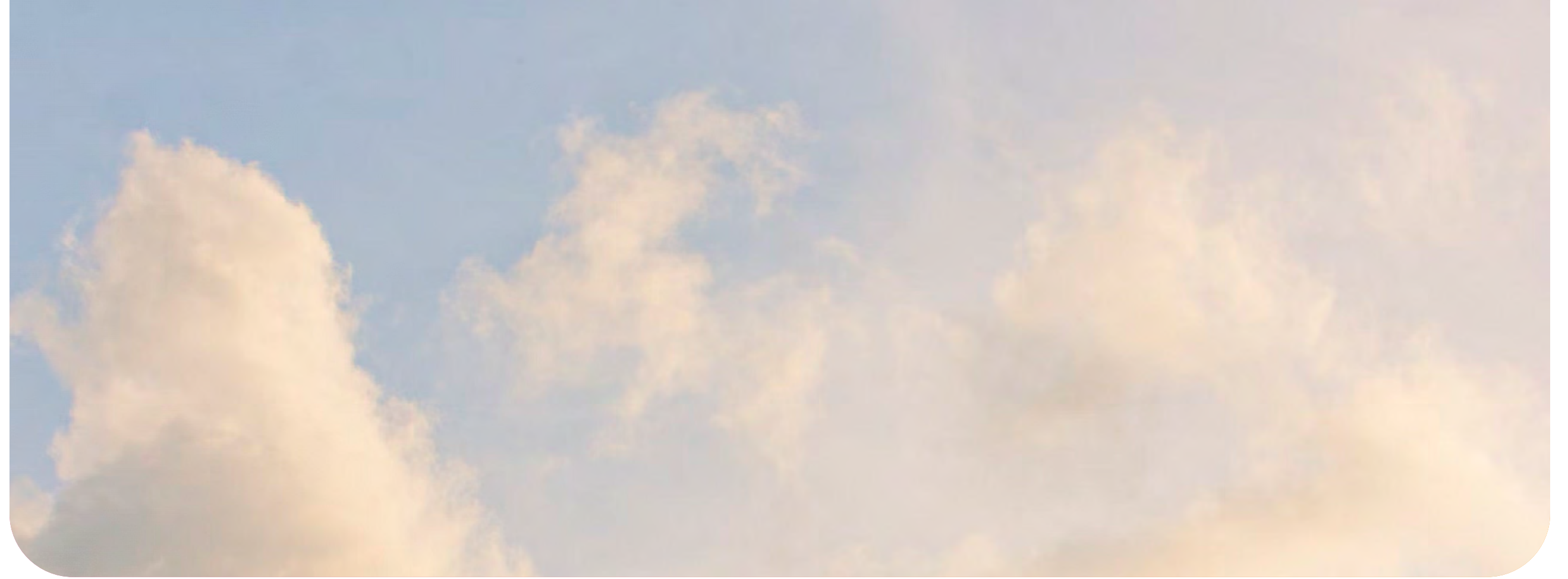
Beyond external pressures, many print businesses are intrinsically motivated to reduce their environmental impact — whether for ethical reasons, corporate responsibility, or long-term business success. The future of print is not just about reducing harm — it's about creating a lasting, positive impact. By rethinking processes, materials, and energy use, we can drive real progress and ensure that print remains an essential and sustainable part of the global economy.



# Why CO2e is the universal measure of sustainability

One of the most critical aspects of sustainability is understanding how to measure environmental impact. CO2e (carbon dioxide equivalent) has become the universal metric for this purpose because it provides a unified approach that helps decision-makers, businesses, and individuals better understand and address their environmental footprint.

CO2e combines all types of greenhouse gases into a single, comparable unit, accounting for the different impact each of them has on global warming. This makes it possible to track emissions across different activities and industries in a standardized way. It enables consistent comparison between industries, specifications, countries, and time periods while simplifying complex environmental impact assessments into an understandable metric.



This is important because it is greenhouse gases that drive global warming by acting as a blanket around the planet – and they are mostly released as a result of burning fossil fuels to create energy for processes including the manufacturing supply chain.

Additionally, CO2e provides a standardized basis for setting carbon reduction goals and policies. It allows companies to measure the total climate impact of their operations comprehensively and ensures that sustainability initiatives are based on clear, measurable data. By using CO2e as a benchmark, the printing industry can effectively track, monitor, and report emissions, making it easier to set reduction targets and implement meaningful sustainability strategies.

This eBook will guide you through the steps to becoming a more sustainable printing company. From understanding stakeholder expectations to implementing effective sustainability strategies, we will provide you with practical insights to help you navigate the future of sustainable printing.





# Demystifying sustainability

Sustainability is often seen as a complex and overwhelming topic, particularly when it comes to understanding the vast amount of terminology and frameworks associated with it. For printing companies taking their first steps towards sustainability, it's essential to clarify what sustainability means and what all the jargon refers to. Let's take a moment to simplify the key terms and concepts that will guide you on your sustainability journey.

## GHG Protocol

The GHG Protocol (Greenhouse Gas Protocol) is the most widely used international standard for measuring and managing greenhouse gas emissions. It defines three key carbon scopes to assess emissions:

- **Scope 1:** Emissions from buildings and vehicles created by burning fossil fuels such as gas, diesel and oil, as well as leakage of harmful gases like refrigerants.
- **Scope 2:** Emissions related to grid electricity which is created by burning fossil fuels, as well as using collective sources of energy ( steam, heating and cooling).
- **Scope 3:** All other indirect emissions from the value chain, including raw materials, transportation, waste disposal, as well as employee commuting and business travel.

# The three carbon lenses

When assessing a company’s carbon footprint, it’s helpful to view emissions through three distinct but interconnected lenses. These lenses align with the GHG Protocol’s scope framework, which helps classify and measure emissions in a consistent way. Importantly, all these lenses are measured using CO2e.

## 1. Operational carbon assessment

Operational carbon refers to the direct emissions resulting from your company’s operations and facilities. This includes energy use in buildings, fuel consumption for company vehicles, and emissions from on-site processes. These are the most straightforward emissions to track, as they relate to activities you directly control.

Operational carbon primarily corresponds to scope 1 and scope 2 as defined by the GHG Protocol. Focussing on your operational carbon means people in your organisation can quickly do something about your carbon footprint.

## 2. Supply chain carbon assessment

This lens expands the view to include emissions from your entire supply chain, such as raw material sourcing, transportation, distribution, and even how your customers use your products. The supply chain can often contribute the largest share to your company’s overall carbon footprint, though it can be more challenging to measure. Supply chain carbon falls under scope 3 as outlined in the GHG Protocol. Focussing on your supply chain carbon means you will need to work with your suppliers to reduce your impact. For example, identifying raw materials that use less fossil fuels to make them.

## 3. Product Carbon Assessment

Product carbon tracks the environmental impact of specific items from the raw material extraction phase through manufacturing, use, and disposal. This assessment helps identify the carbon footprint of individual products, offering valuable insight into opportunities for eco-conscious design and production. It’s often what your customers will be most interested in. Product carbon cuts across all three scopes (1, 2, and 3), but focuses on the emissions linked to each product rather than the company’s overall emissions. The GHG Protocol provides guidelines on how to allocate emissions to specific products.

These three perspectives are interconnected. For instance, improving operational efficiency could help reduce your scope 1 and 2, as well as the carbon footprint of your products. By addressing all three areas, printing companies can take a more holistic approach to sustainability, maximising the benefits across their operations.

# What does CO2e mean?

As mentioned in the introduction, CO2e (carbon dioxide equivalent) is the standard unit for measuring carbon emissions. It simplifies the understanding of carbon footprints by consolidating all greenhouse gases into one comparable unit. The “e” stands for ‘equivalent’, representing the conversion of all greenhouse gases into the equivalent amount of CO2 in terms of how they contribute to global warming.

For example, a unit of methane has a significantly higher impact on global warming than a unit of carbon dioxide, so its emissions are converted to their carbon dioxide equivalent to make comparisons easier. This approach allows you to evaluate and track emissions from various activities, whether it’s your company’s operations, supply chain, or individual products.

The ‘kg’ represents kilograms of CO2e, indicating the amount of CO2e produced throughout the lifecycle of a product — covering everything from raw material extraction to manufacturing, printing, distribution, and disposal. By using CO2e, companies can track their emissions consistently across various processes and ensure they’re accounting for the full environmental impact of their products.

## Relevant laws & regulations

Printing companies operating in the European Union (EU) and the United Kingdom (UK) are going to need to navigate a complex landscape of incoming sustainability laws and regulations designed to minimize environmental impact and promote sustainable practices. Below is an overview of key regulations relevant to the printing industry in these regions:

### European Union regulations:

- **Corporate Sustainability Reporting Directive (CSRD):** this will start to affect large organisations in the next 1-2 years as they will need to gather information from their suppliers to report on their environmental, social and governance (ESG) efforts in their annual reports. This directive aims to enhance transparency and encourage sustainable business practices.
- **Ecodesign for Sustainable Products Regulation (ESPR):** finalized in May 2024, the ESPR seeks to improve the sustainability of products by setting requirements related to energy efficiency, recyclability, and durability. While primarily targeting product design in areas such as textiles and electronics, it has implications for printing equipment and materials, encouraging the adoption of eco-friendly technologies and processes.



- **European Union Deforestation Regulation (EUDR):** expected to come into force by December 2025, the EUDR aims to combat global deforestation by ensuring that products linked to deforestation are not placed on the EU market. Printing companies utilizing paper and related materials must ensure their supply chains are free from deforestation practices, necessitating thorough due diligence and traceability measures.

Different countries have different requirements for reporting their scope 1 & 2 emissions in their annual reports.



### United Kingdom regulations:

- **Streamlined Energy and Carbon Reporting:** large companies are required to report on their verified scope 1 & 2 emissions, alongside some scope 3 categories, in their annual report.
- **Procurement Policy Note 06/21 (PPN06):** requires companies to integrate environmental, social, and economic criteria into their procurement processes for large public sector contracts. This means firms must now adopt responsible practices and ensure that their supply chains and procurement decisions contribute to broader sustainable development goals.
- **Environmental regulations for printing businesses:** the UK imposes various environmental regulations on printing companies, focusing on areas such as waste management, energy consumption, and emissions. Compliance with these regulations is essential to minimize environmental impact and ensure legal adherence.
- **Climate Change Levy (CCL):** the CCL is a tax on energy delivered to non-domestic users in the UK, including printing companies. Businesses can claim discounts from government levies on energy bills in return for commitments to improve energy efficiency.

Compliance with these regulations not only ensures legal adherence but also positions printing companies as responsible and sustainable partners in the industry. Staying informed and proactive in implementing sustainable practices is crucial for navigating the evolving regulatory landscape in both the EU and the UK.

# Sustainability terminology

As the printing industry increasingly embraces sustainability, it's essential to familiarize yourself with the key terminology and frameworks that are guiding the shift. Here's a concise guide to the most common terms, designed to help you understand the regulations and measures driving sustainable practices:

- **ISO 14001** is an international standard for Environmental Management Systems (EMS). It provides a framework for companies to manage and reduce their environmental impacts, improve sustainability, and comply with regulatory requirements. This standard helps printing companies develop and implement effective sustainability strategies.
- A **carbon footprint** refers to the total greenhouse gas emissions (in CO<sub>2</sub>e) produced throughout the lifecycle of a product or activity. For printing companies, this includes everything from material sourcing and production to distribution and disposal.

- The **EU Emissions Trading System** (EU ETS) is a cap-and-trade system that sets limits on the amount of greenhouse gases that companies can emit. Companies receive or buy emission allowances, which they can trade based on their needs. Printing companies within the EU need to monitor their emissions and may be subject to this system, especially if they generate their own energy (excluding renewables such as solar).
- **The Science-Based Targets Initiative** (SBTi) helps businesses set carbon reduction goals based on the latest climate science, in line with the Paris Agreement to limit global warming. By adopting SBTi-aligned targets, printing companies can ensure their emissions reduction strategies contribute to global efforts.
- **REACH** stands for Registration, Evaluation, Authorisation, and Restriction of Chemicals. This EU regulation controls the use of chemicals, ensuring that hazardous substances used in production processes do not harm human health or the environment. Printing companies must comply with REACH when sourcing materials like inks, solvents, and coatings.
- **Extended Producer Responsibility** (EPR) holds companies accountable for the entire lifecycle of their products, including post-consumer waste management. In the printing industry, this could involve recycling paper, ink cartridges, or packaging materials, and ensuring they are disposed of sustainably.



# Understanding the sustainability landscape: who's asking what?

In the world of printing, sustainability isn't just about being eco-friendly; it's about responding to a wide array of external pressures and internal motivations. There are three key drivers pushing the industry toward sustainability: regulations, customers, and intrinsic motivation. Understanding these forces and how they play out in the market will help you navigate what's ahead and implement effective sustainability practices.

## 1. Regulatory authorities: the laws you need to follow

When it comes to sustainability, regulatory requirements can't be ignored. These laws are only increasing, both in number and stringency, across different regions, and they're pushing companies to take measurable action on carbon emissions, waste management, and overall environmental impact.

What's coming your way? Governments, particularly in Europe, are introducing laws such as the EU Green Deal, Corporate Sustainability Reporting Directive (CSRD), and other country-specific regulations, all of which demand more rigorous environmental reporting and transparency.

These laws are meant to drive a reduction in emissions and ensure that businesses have clear data on their sustainability practices.

Examples to watch out for:

- Carbon reporting is becoming mandatory across the board in many regions. For example, the UK's Streamlined Energy and Carbon Reporting (SECR) will require detailed carbon footprints to be reported for all large companies.
- Laws around greenwashing are tightening. Countries around the world are cracking down on misleading environmental claims. Companies that fail to accurately report or who misrepresent their environmental impact could face significant penalties.

The next wave of laws could come as a 'tidal wave' — with strict reporting requirements, penalty systems for non-compliance, and even regulations on carbon offsets and environmental claims.

## 2. Your customers: what they really want

Your customers are increasingly asking for proof of your sustainability practices. It's not just about reporting carbon emissions anymore; it's about being transparent, accurate, and proactive. Customers, particularly the larger brands, want high-quality data to help them meet their own sustainability goals. This includes carbon footprint data—but not just any data; they want detailed breakdowns of carbon footprints for each product, including raw materials, production, transport, and end-of-life impact.

Major brands like Lego, L'Oréal, and Walmart are setting ambitious carbon reduction goals, and they want their suppliers to be part of that journey. These brands will only work with companies that can show a genuine commitment to reducing their environmental footprint. And not just in a vague, general sense—these companies want product-level carbon footprint data.

Customers increasingly require high-quality carbon data to support their net-zero strategies, but they often are not willing to pay much extra for it. For printing companies, this creates a dual challenge: managing tight budget constraints while dealing with inconsistent data formats from supply chains and delivering that information in varied customer-specified formats, which complicates efforts to automate and standardize the process. At the same time, the ability to do this well is becoming a key competitive advantage in the market.

# Your operational carbon footprint

Reporting company:

Reporting company number:

Reporting years:

Facilities included:

ARC UK Technologies Limited

4799773

1st Jan – 31st Dec 2021 & 2022

Arches 181-182 Hercules Road  
SE1 7LD (2021 only)

Unit 5 Woodlands Court Business  
Road, Bridgewater TA6 4FJ

Unit 5, Dartford Trading Estate  
Dartford DA1 5XS (2022 only)

50126

CarbonQuota project no:

## Example:

Arc-UK, a printing company, managed to win significant contracts with brands like GSK and Landsec in 2024 by offering detailed carbon footprint data. This success story shows that sustainability, when executed well, can give you a competitive edge and open new business opportunities.

## 3. Intrinsic motivation: making sustainability part of your DNA

While the regulatory push and customer demands are powerful drivers, the third motivator is just as important. Many printing companies are starting to realize that sustainability isn't just about complying with laws or meeting customer demands; it's about embedding sustainability into the company's core values and strategy. For some companies, this motivation is driven by a genuine desire to 'do better' for the environment and future generations.

Some printing companies are therefore increasingly integrating sustainability into everything from production processes to material sourcing. It's not just about being reactive—it's about proactively identifying opportunities for improvement and taking the necessary steps to reduce environmental impact. This could mean switching to renewable energy sources, reducing waste, or finding alternative materials that are less harmful to the environment.

## ROI and carbon reporting: a new value proposition

With all these increasing demands, a common challenge in the printing sector is calculating the ROI for sustainability efforts, and the need for tools that automate and streamline this process. There are many standalone carbon calculators that help measure emissions, but many of these tools require significant manual input and can be prone to error. Moreover, these tools can only generate simple, aggregated information. Whereas tools that are integrated in your core business systems automate complex carbon footprint calculations in less than a second, saving time and reducing the risk of human error. In the past, calculating the carbon footprint for a single print job might take a lot of time and effort. With integrated solutions, the process is streamlined, and the data is immediately available for reporting.

For example, consider a scenario where two printing companies are competing for a contract. Both are asked to provide pricing and carbon footprint data for a specific job. The first company provides carbon data in a simple format or perhaps makes a claim about carbon offsetting, while the second company integrates carbon footprint alongside its pricing, showing a direct comparison of carbon emissions for slightly adjusted specifications. This kind of transparency not only helps customers make more sustainable choices but also demonstrates the company's commitment to sustainability.

### **Conclusion: the growing need for sustainable practices**

Sustainability in the printing industry is no longer a choice — it's becoming a necessity. Whether driven by regulatory pressure, customer demands, or intrinsic motivation, companies must start to think seriously about their environmental impact. The key is to stay ahead of the curve by embracing transparency, adopting automated solutions, and embedding sustainability into every facet of your business. The companies that adapt now will be the ones leading the charge toward a more sustainable, profitable future.





# Greenwashing and accountability

As businesses in the printing and packaging sectors strive to meet growing sustainability demands, the temptation to present themselves as environmentally responsible can sometimes lead to greenwashing — the practice of making misleading or exaggerated claims about the environmental benefits of a product, service, or company. With regulations tightening around the world, greenwashing is no longer a viable option. In fact, businesses must be more transparent, accurate, and substantiated in their environmental claims than ever before. The Green Claims Code, which is now enshrined in law, mandates that companies ensure any environmental claims are not just vague buzzwords but are backed by measurable, verifiable data.

## The green claims code: setting new standards

The Green Claims Code establishes that businesses must provide solid evidence to back up their environmental claims. General phrases like ‘eco-friendly’ or ‘green’ are no longer sufficient. Instead, companies must supply measurable proof of their sustainability efforts. Carbon footprint data plays a crucial role in this, providing tangible evidence of a product’s or service’s environmental impact. As regulations around environmental claims become stricter, businesses must be prepared to substantiate their statements with hard data and measurable progress. This is not just a matter of regulatory compliance; it’s about maintaining credibility and consumer trust.

# What does It mean for your business?

If your company claims that a product, service, or facility is 'green' or 'sustainable', you must be able to prove it. The days of vague claims are over. Businesses must ask themselves:

- How do we back up the environmental claims we make about our products or services?
- If we claim to be making progress toward sustainability, can we demonstrate real, measurable change?

Measuring and reporting carbon emissions in a detailed, transparent way is the only way to truly substantiate sustainability claims. This process requires commitment, proper resources, and often, investment in the right tools for accurate data collection and reporting. The more detailed and consistent your data, the better you can position your business as genuinely committed to sustainability.

# Notable cases of greenwashing

Several major companies have faced public backlash for greenwashing, and their cases highlight the importance of regulatory enforcement. These examples underline the need for businesses to take their environmental claims seriously:

- **McDonald's (UK):** in 2022, the UK Advertising Standards Authority (ASA) ruled that McDonald's could not claim their paper straws were recyclable. While technically recyclable, most waste-processing facilities couldn't process them due to their thickness and contamination from food waste.
- **Coca-Cola:** the company promoted its PlantBottle as an eco-friendly alternative, despite it still containing significant amounts of conventional plastic. The claim that the bottles were '100% recyclable' was also questioned, as global recycling infrastructure couldn't fully support this in practice.
- **Nestlé:** the company was criticized for claiming that certain chocolate product packaging was recyclable when it was laminated with plastic, making recycling difficult.
- **Pringles (Kellogg's):** the redesigned 'recyclable' tube was criticized due to its complex composition (paper tube, metal bottom, and plastic cap), requiring specialized recycling streams that most consumers cannot access.
- **Innocent Drinks:** Innocent's advertising for their bottles being 'good for the planet' was banned by the ASA. While some recycled plastic was used, the overall environmental impact of producing and distributing single-use plastic bottles remained significant.

- **Tesco:** Tesco faced backlash when they labelled packaging a 'biodegradable', but it required industrial composting conditions that were unavailable in most standard waste disposal systems, misleading consumers about its environmental impact.

These cases illustrate the potential risks of misleading environmental claims. Businesses that engage in greenwashing risk legal action, loss of consumer trust, and significant reputational damage.

## The path forward: holding businesses accountable

To avoid greenwashing and build long-term sustainability credibility, businesses must focus on transparency and evidence-based sustainability. The enforcement of the Green Claims Code marks a significant shift towards holding print and packaging companies accountable for their environmental statements.

Moving forward, companies must:

- **Use clear, specific, and verifiable claims:** be precise about the environmental benefits of your products and services, providing data to back up every claim.
- **Invest in carbon measurement and reporting:** regularly measure your carbon footprint and ensure your sustainability progress is accurately tracked and reported.
- **Avoid misleading buzzwords:** terms like 'eco-friendly' or 'green' are no longer acceptable without measurable proof. Stay away from vague claims and focus on demonstrable achievements.

## Transparency and Trust

The road to sustainability is a long one, and the journey must be backed by transparent and credible actions. By prioritizing real, verifiable progress over marketing green ideals, businesses can genuinely contribute to environmental progress. This not only helps avoid the legal and reputational consequences of greenwashing but also positions your business as a true leader in sustainability, which is crucial as consumer expectations evolve and regulations become stricter.

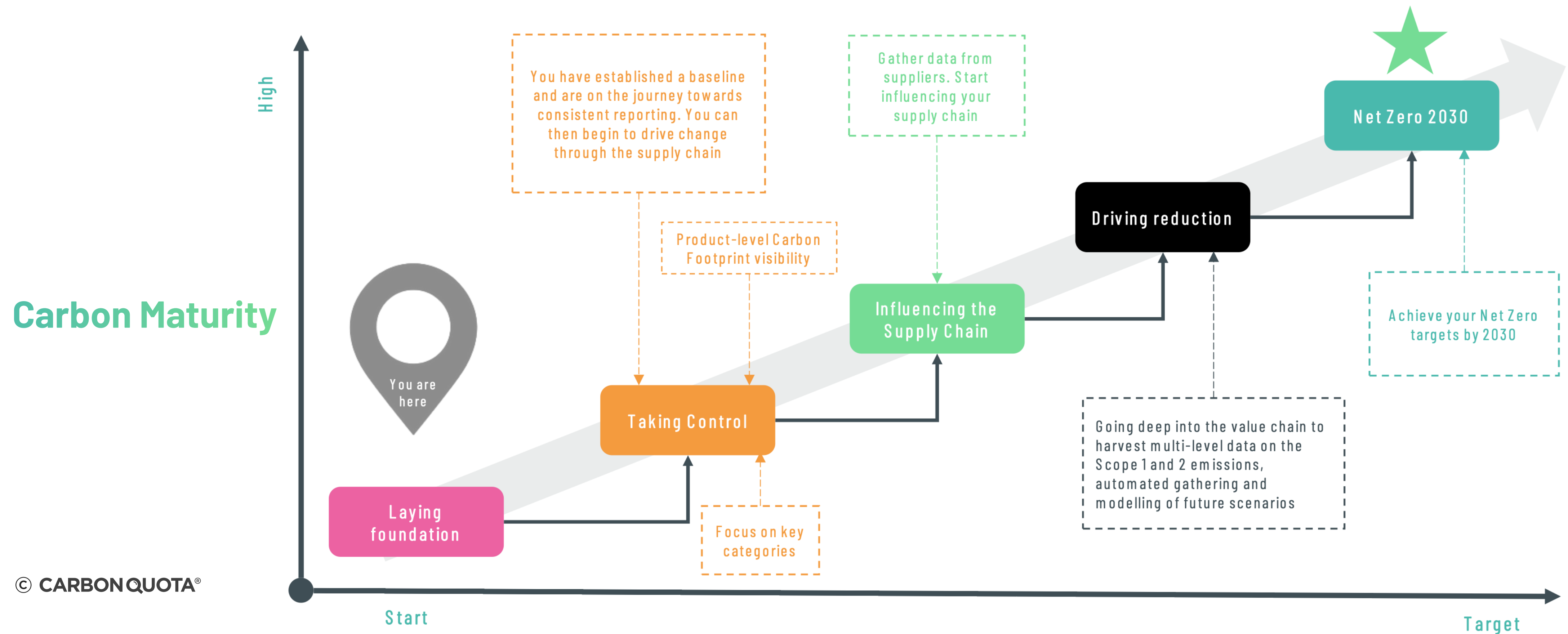
As businesses strive to meet sustainability goals, there's no room for ambiguity or empty promises. Greenwashing isn't just about avoiding regulatory backlash — it's about earning and maintaining the trust of your customers, stakeholders, and the wider public by backing your environmental claims with data, commitment, and continuous improvement.



## A sustainable approach: from foundation to Net-Zero by 2030

Most print businesses are just beginning their carbon journey, and progress needs to accelerate. The simple principle of establishing an accurate baseline, implementing positive changes, and measuring the success (carbon reduction) of these initiatives means that a carbon strategy represents a long-term, ongoing commitment. This isn't a temporary project but rather a continuous improvement process without a definitive endpoint.

Taking a sustainable approach to carbon management means integrating sustainability into your company's processes, people, and technology. To truly make a difference, companies must set clear long-term goals and approach the journey in distinct, measurable stages. CarbonQuota's maturity model outlines this journey from laying the foundation to achieving Net-Zero carbon emissions by 2030, broken down into five critical steps.



This step-by-step model guides print businesses on their sustainability journey. It emphasizes the need for continuous improvement, regular measurement, and transparency throughout the entire process. At each stage, you'll drive measurable actions that incrementally reduce your carbon footprint, with the final goal of achieving net zero emissions.



# The Five Stages of Sustainable Maturity

## 1. Laying the Foundation

Laying the foundation is the first critical step towards carbon reduction. In this stage, you focus on establishing a clear carbon baseline — understanding your current emissions across all areas of your business. This could include energy usage, transportation, raw material sourcing, and other factors contributing to your carbon footprint. Establishing a baseline gives you a solid understanding of where you are, helping you to identify high-impact areas for improvement.

Starting to understand your carbon footprint is essential in this phase, as it sets the groundwork for reporting, monitoring, and improvement in the future. At the same time, begin to invest in the systems that will enable consistent data gathering and tracking, as well as the technology that will support long-term sustainability goals.

This stage is about learning where your emissions come from and understanding how your operations contribute to global warming. Once you have a solid baseline, you can start making decisions that will shape your carbon strategy.

## 2. Taking Control

By this stage, you've established your carbon baseline and are on your way to consistent, accurate reporting. This is where you begin taking full control over your carbon emissions. With carbon footprint visibility at the product level, you can see how each product contributes to your overall emissions. This insight enables you to focus on key categories where carbon reduction is most feasible and impactful.

Key categories like energy use, transportation, and waste should be prioritized. You'll also begin to integrate carbon footprint data into decision-making at every level of your business, from product design to procurement and distribution. The focus here is on transparency and consistent measurement, ensuring you have the data to support informed decisions that drive change.

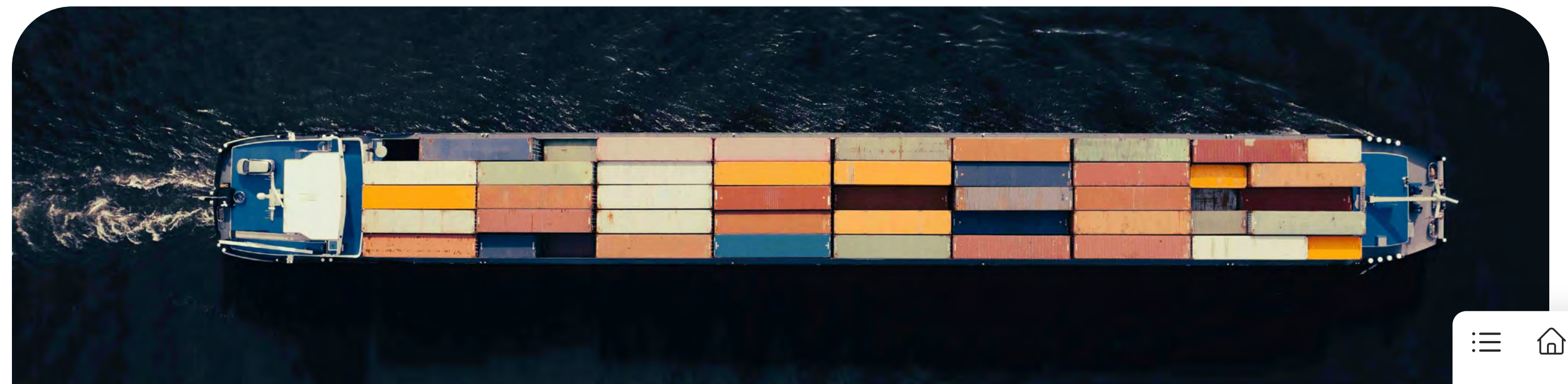
As you develop a clearer picture of your emissions, you can start implementing internal policies that promote carbon reduction across departments. It's also time to lay the groundwork for influencing your supply chain in the following stage.

## 3. Influencing the Supply Chain

At this stage, you've gathered the essential data and are now ready to extend your influence beyond your own operations. One of the largest sources of carbon emissions for most businesses comes from the supply chain, referred to as Scope 3 emissions. This is the moment where your company can start taking action to influence and collaborate with suppliers to reduce their emissions.

Begin by gathering carbon data from your suppliers. Request transparency around their emissions, just as you are doing within your own company. Encourage them to report their emissions and set targets to improve their carbon footprints. By creating a transparent supply chain, you will be better equipped to identify areas of opportunity for carbon reduction and work collaboratively with suppliers to drive down emissions across the entire value chain.

Supplier engagement is key to success in this stage. Look for opportunities to foster long-term relationships based on shared sustainability goals and ensure that these are integrated into your procurement processes. By influencing your supply chain, you will extend your carbon reduction efforts beyond your own operations, driving greater impact.



## 4. Driving Reduction

Once you've gained visibility into both your internal operations and your supply chain, it's time to go deeper. This stage focuses on collecting and analysing multi-level data from your supply chain – for example how your suppliers are using fossil fuels in their processes. To drive reductions, you must be equipped with granular data across all levels of your value chain.

You should look for ways to optimize operations to reduce carbon emissions and identify areas where innovative solutions or improvements could make a significant difference. Automated data gathering tools, combined with predictive modelling of future scenarios, will allow you to simulate different strategies for emissions reduction and determine which strategies are most effective.

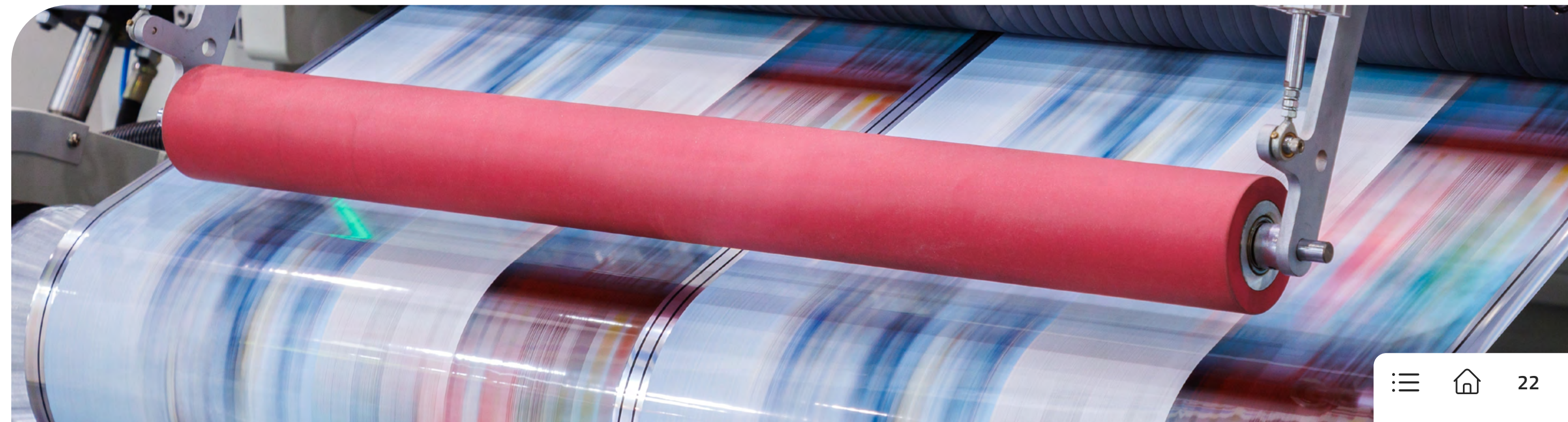
This stage will also involve making long-term strategic decisions, such as investing in more sustainable technologies or shifting to renewable energy sources. It's about making real, measurable changes that will lead to tangible reductions in your carbon footprint.

## 5. Net-Zero

The final goal of the maturity model is to achieve Net-Zero carbon emissions. At this stage, your company should be fully aligned with the goal of decarbonizing your operations. All efforts so far — tracking, reporting, influencing the supply chain, and reducing emissions — have led to this moment where your business is operating with a minimal or zero carbon footprint. Simply, this means you and your suppliers have removed fossil fuels from almost all parts of the value chain.

By this point, carbon reduction will be embedded in your operations, and the systems you've developed for tracking, measuring, and improving will allow for continuous monitoring and adaptation. Sustainability will be integrated into every aspect of your business, and your company will be recognized as a leader in environmental responsibility within the industry.

This is not the end but a new beginning. Net-Zero is an ongoing commitment to improving and finding new ways to reduce emissions, ensuring that your company remains at the forefront of sustainability leadership.



# Carbon footprint reporting – a critical step

Following the maturity model's framework, where businesses start their carbon journey and move toward Net-Zero, the next logical step is implementing robust carbon footprint reporting. Without accurate, structured, and reliable data, reaching the higher stages of the maturity model becomes increasingly difficult. Reporting isn't just about compliance; it's about turning complex environmental data into actionable insights that guide decision-making and enable businesses to track progress.

## The importance of structured reporting

A data-driven approach to carbon footprint reporting is the cornerstone of any sustainability effort. Just as financial data is crucial for business decision-making, carbon data must be treated with the same level of importance. Carbon footprint reporting transforms raw emissions data into measurable, actionable insights that can guide strategic decisions at all levels of the organization.

- **Compliance:** the global landscape of carbon-related legislation is evolving rapidly. Jurisdictions like the EU, the UK, and Canada are enacting increasingly stringent regulations requiring businesses to accurately report carbon emissions. As businesses mature in their carbon journey, reporting becomes essential for demonstrating compliance with both regional and international laws.

- **Actionable information:** reporting is not just about ticking boxes; it's about providing the data businesses need to take real action. Without accurate measurement and reporting, businesses cannot effectively identify where reductions are most needed or track the effectiveness of their sustainability efforts.
- **Continuous Improvement:** in line with the maturity model, the journey to Net Zero isn't a one-time project, but rather an ongoing process. Continuous measurement, monitoring, and reporting allow businesses to assess their progress, adjust, and refine their strategies over time.



## Key challenges in carbon footprint reporting

While the need for accurate carbon footprint data is clear, printing companies face several challenges when it comes to tracking, monitoring, and reporting their emissions.

- **Growing customer demands for data:** customers are increasingly requesting detailed carbon data, including product carbon footprints, Scope 1, 2, and 3 emissions, and Net-Zero roadmaps. Meeting these demands requires precise data and reporting capabilities, adding complexity to the process.
- **Staffing constraints:** while some businesses initially attempted to manage carbon footprint measurement in-house, many have found this approach to be resource-intensive and unsustainable. Partnering with carbon measurement experts can help companies scale their reporting capabilities while ensuring accuracy.
- **Technical complexity:** carbon footprint reporting is not as straightforward as it may seem. It requires adherence to international standards, high-quality input data, and advanced algorithms to calculate emissions accurately. The precision required in carbon accounting is like that of financial accounting, demanding expertise and attention to detail.
- **Expanding regulatory requirements:** as legislation on carbon emissions tightens, businesses need to be ready to comply with more comprehensive regulations. This means having a robust system in place to track and report emissions accurately, covering everything from materials and processes to energy consumption.
- **Competitive pressure:** many businesses have already embraced carbon measurement and reporting, reaping the benefits of early adoption. However, it's not too late to get started.

As competition in the industry intensifies, those that fail to report accurately risk losing market share to more proactive organizations.

- **Inefficient tools:** carbon calculators and reporting tools vary in quality, and many on the market are inefficient or lack the precision needed for accurate reporting. Some calculations can take up a long time to process, making them cost-ineffective and time-consuming.

## What does the ‘ultimate dashboard’ look like?

To tackle these challenges, companies need an integrated solution that streamlines carbon footprint reporting. The ‘ultimate dashboard’ would enable businesses to:

**Track carbon footprints in real-time:** real-time emissions tracking allows businesses to monitor their carbon impact continuously, making it easier to assess the effectiveness of sustainability measures.

- **Automate data collection and calculation:** by automating carbon footprint calculations, businesses can eliminate manual errors and reduce the time spent on data processing. With tools that seamlessly integrate into existing systems, companies can receive accurate carbon data in seconds.
- **Seamless integration with existing systems:** the dashboard should integrate with your existing MIS or ERP software, supply chain, and production management systems to pull in data from various sources (materials, processes, energy use) for a comprehensive view of the carbon footprint.
- **Provide clear, actionable insights:** the dashboard should not just present data but provide insights that allow businesses to make informed decisions about carbon reduction strategies, identify areas of improvement, and track progress over time.
- **Ensure transparency and accountability:** with growing scrutiny on green claims, having a transparent and verifiable reporting system is essential for maintaining credibility. The dashboard should provide independent verification and certification of data to ensure the accuracy and reliability of emissions reporting.



## The path forward: solving reporting challenges

Solving the challenges around carbon footprint reporting requires a combination of technology, expertise, and strategy.

- **Leverage advanced technology:** using tools that automate carbon calculations and integrate seamlessly into existing business workflows is essential. These tools should be built on advanced algorithms that ensure precise, real-time emissions data.
- **Invest in expertise:** partnering with carbon measurement experts can help ensure that reporting meets international standards and that the data is reliable, actionable, and aligned with business goals.
- **Make reporting a core business function:** reporting should be as important as any other business function, such as financial reporting or customer satisfaction tracking. By making it a core part of the business, companies can ensure that sustainability remains at the forefront of decision-making and progress.



## Practical steps to start

Incorporating carbon footprint measurement and sustainability into your operations may seem daunting, but by following these key steps, you can simplify the process and take an actionable approach toward achieving your sustainability goals. This checklist provides a clear path forward, ensuring that you're not just compliant with current regulations, but also driving meaningful change in your organization.

### Talk with your customers

Understand what your customers are looking for. Start by having open conversations about their sustainability goals, timelines, and reporting requirements. Ask what kind of carbon data or certifications they need, how they plan to use the information, and what challenges they face in their own reporting. This helps you not only understand their expectations but also identify where you can add value—whether by simplifying data delivery, aligning formats, or supporting their internal reporting efforts. By positioning yourself as a proactive partner rather than just a supplier, you strengthen the relationship and open the door to more strategic collaboration.

# 1. Collaborate with specialists

As carbon footprint measurement can be complex, working with specialists and adopting the right tools will help simplify the process and ensure accuracy.

- **Research tools:** invest in platforms and software that provide reliable, product-level carbon footprint reporting. Ensure these tools align with international standards and fit your business needs.
- **Partner with experts:** collaborate with carbon footprint assessment professionals who understand the unique challenges of your industry. They can guide you in calculating your footprint accurately and identify areas for improvement.

# 2. Stay informed about regulations

The regulatory landscape is rapidly evolving, and staying updated is critical to ensuring compliance.

- **Monitor regulatory changes:** regularly check for regional and international updates related to carbon emissions, sustainability, and product-specific regulations.
- **Understand reporting requirements:** familiarize yourself with the specific reporting standards, including Scope 1, 2, and 3 emissions, and any required disclosure practices for your region and industry.

# 3. Assess current practices and carbon impact

Before making any changes, it's essential to assess your starting point. Knowing where you stand in terms of carbon emissions will help you prioritize efforts for the most significant impact.

- **Evaluate existing practices:** conduct a thorough review of your operations. Focus on materials, processes, energy use, and transportation methods to identify emission hotspots.
- **Calculate your carbon footprint:** using specialized tools, calculate your carbon footprint for the key aspects of your operations. This will serve as a baseline for future improvements.



## 4. Establish clear sustainability goals

Without clear goals, it can be difficult to measure success. Set goals that provide direction for your sustainability efforts and keep your team motivated.

- **Define specific goals:** set clear, measurable, and time-bound sustainability targets. This might include reducing your carbon footprint by a specific percentage over the next five years or achieving Net Zero by 2030.
- **Prioritize key initiatives:** identify initiatives that align with your company's values, regulatory requirements, and customer expectations. Focus on high-impact areas for maximum results.

## 5. Adopt lower carbon practices in your supply chain

Small changes can lead to significant reductions in your carbon footprint.

- **Collaborate with suppliers:** work with suppliers who are also committed to sustainability and offer more sustainable materials or processes that can help reduce your overall footprint.

## 6. Communicate transparently

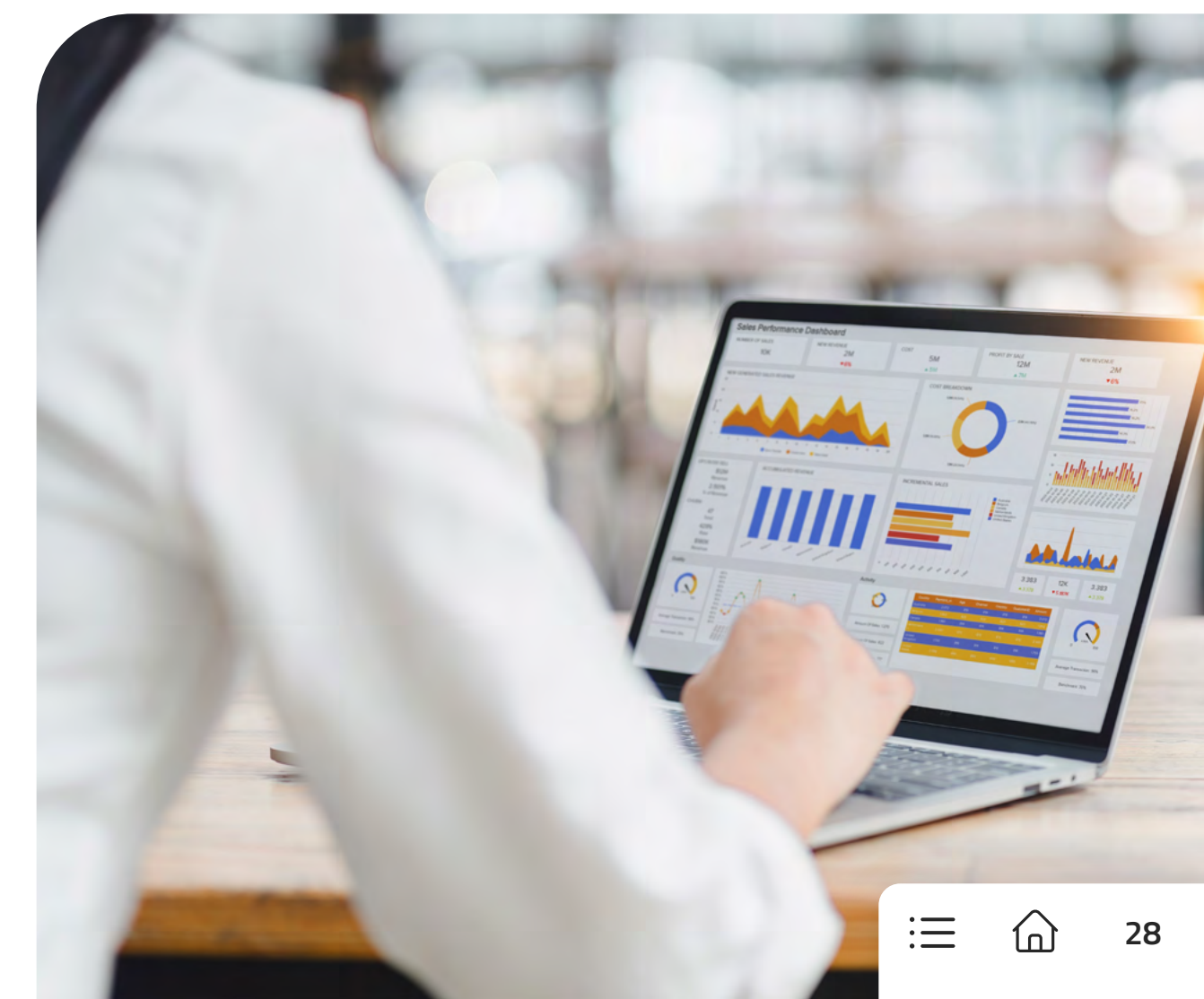
Clear and honest communication fosters trust and strengthens relationships with clients, employees, and other stakeholders.

- **Craft transparent messaging:** develop communication that accurately reflects your sustainability initiatives. Be specific about the steps you are taking and the results you aim to achieve.
- **Educate Clients:** let your clients know the measures you're taking to reduce your carbon footprint and why it matters. Help them understand the importance of sustainability in your products and services.

## 7. Track progress and report

Ongoing monitoring and reporting are essential for demonstrating commitment to transparency and continuous improvement.

- **Track sustainability progress:** continuously monitor key metrics, including emissions reductions, energy savings, and waste reduction. Use tools that automatically track and report on these metrics.
- **Report regularly:** share progress reports with stakeholders, demonstrating how your organization is meeting sustainability goals. Transparency in reporting builds credibility and trust.



## 8. Engage clients in environmentally conscious choices

Finally, involving clients in your sustainability journey can create a shared commitment to reducing the carbon footprint.

- **Educate clients on environmental impact:** provide clients with information on the carbon impact of their purchasing decisions. Offer guidance on how they can reduce their own footprints through smarter choices.
- **Offer sustainable alternatives:** provide clients with options to choose more sustainable products and services. Collaborate on eco-design projects and offer lower-carbon alternatives where possible.

By following this checklist, you will have a clear roadmap to becoming carbon confident. Each step builds toward not only meeting regulatory requirements but also taking meaningful action to reduce your environmental impact. Sustainability doesn't just benefit the planet; it can drive efficiencies, improve customer satisfaction, and ultimately enhance your business's reputation and success.

## The time is now!

In conclusion, the urgency of addressing sustainability and carbon reduction is clear — the time is now for businesses to act. Throughout this eBook, we've highlighted the essential steps for achieving sustainability, with a particular focus on the pivotal role of carbon footprint reporting. Accurate, transparent reporting is not just a compliance requirement, but a critical tool for businesses to monitor progress, make informed decisions, and continually improve their sustainability efforts.

To succeed, companies must move beyond vague environmental claims and embrace structured, data-driven approaches to measuring, reporting, and reducing their carbon footprints. The maturity model offers a roadmap, guiding businesses from initial carbon measurement to achieving Net-Zero. This journey requires collaboration with specialists, the adoption of energy-efficient practices, and, crucially, regular and detailed reporting on carbon emissions.

By making carbon footprint reporting a central component of their sustainability strategy, businesses can enhance transparency, build trust with customers, and ultimately contribute to the global effort against global warming and climate change. The time to act is now, and with the right tools, expertise, and commitment, organizations can take meaningful steps toward a greener future.

# Appendix:

## sustainability self-assessment

As sustainability becomes increasingly integral to the printing and packaging industries, understanding your company’s current carbon footprint and sustainability practices is essential to improving and staying competitive. This self-assessment is designed to help you evaluate where your organization stands today in terms of sustainability and carbon footprint reporting. It serves as a practical tool to measure your progress, highlight areas of improvement, and guide your next steps toward becoming more environmentally responsible.

By completing this assessment, you can identify both your strengths and gaps, and use the insights gained to prioritize actions that will make a real difference. Whether you’re just starting your sustainability journey or are looking to enhance existing efforts, this self-assessment offers a clear and structured approach to track your growth.

The results of this assessment will empower you to set actionable, measurable goals and help you determine the steps needed to improve your carbon footprint reporting, align with regulatory requirements, and meet growing customer demands for sustainability. This is a vital first step toward achieving meaningful progress and making sustainability an integral part of your company’s operations.

Evaluate your company’s sustainability practices and carbon footprint reporting using this practical self-assessment. Rate each question on a scale of 1 (not at all) to 10 (fully implemented).

| Category                     | Practical question                                                                                                                                                  | Rating scale (1-10)                                               | Score                |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------|
| Sustainability strategy      | Do you have specific sustainability goals (e.g., net zero, carbon reduction targets) for this year and beyond?                                                      | 1: No goals,<br>10: Clear, measurable goals in place              | <input type="text"/> |
| Carbon footprint measurement | Do you track your company’s carbon emissions (scope 1, 2, and 3) regularly and know where your largest emissions come from (e.g., energy, transport)?               | 1: No tracking,<br>10: Regularly track and identify main sources  | <input type="text"/> |
| Data collection & tools      | Do you use a carbon measurement tool or software to collect data on emissions from your energy use, transport, and materials?                                       | 1: No tools,<br>10: Automated tools integrated with operations    | <input type="text"/> |
| Carbon reporting             | How often do you create a carbon footprint report?<br>Do you share the report with key stakeholders (e.g., customers, suppliers, regulatory bodies)?                | 1: Never,<br>10: Monthly reports shared with stakeholders         | <input type="text"/> |
| Regulatory compliance        | Are you aware of and compliant with carbon-related regulations in your country and/or regions where you operate (e.g., carbon tax, carbon disclosures)?             | 1: Not aware,<br>10: Fully compliant with all regulations         | <input type="text"/> |
| Supplier data collection     | Do you ask your suppliers to share their carbon footprint data or provide information on how they reduce emissions in their operations?                             | 1: No,<br>10: All key suppliers share emissions data              | <input type="text"/> |
| Sustainable practices        | Have you taken specific actions to reduce emissions in your operations, like using energy-efficient machinery, optimizing transportation routes, or reducing waste? | 1: No actions,<br>10: Multiple actions in place across operations | <input type="text"/> |

# How to use the self-assessment:

- Score each question:  
Rate your company on a scale of 1 (Not at all) to 10 (Fully implemented).
- Total Score: Add up your scores for all questions.
- Interpret the Results:

## 90-100

Leading the way in sustainability and carbon reporting.  
You're well on track toward your sustainability goals.

## 70-89

Solid performance, but there's room to improve.  
Prioritize the areas where you scored lower.

## 50-69

You're on the right path, but substantial efforts are needed  
in specific areas.

## Below 50

There are critical gaps in your sustainability practices.  
Start acting now to build a more sustainable future.

| Category                               | Practical question                                                                                                                                                                                  | Rating scale (1-10)                                                 | Score                |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------|
| Customer communication                 | Do you inform your customers about the environmental impact of your products or services, such as product carbon footprints or eco-friendly certifications?                                         | 1: No goals,<br>10: Clear, measurable goals in place                | <input type="text"/> |
| Use of carbon data for decision-making | Do you use carbon data to make purchasing decisions (e.g., selecting suppliers based on their carbon emissions), or in design processes (e.g., selecting materials with lower carbon footprints)?   | 1: No,<br>10: Carbon data is central to purchasing/design decisions | <input type="text"/> |
| Continuous improvement                 | Do you review and improve your sustainability practices and reporting annually? Do you adjust your targets based on previous results and new challenges (e.g., energy use, supply chain emissions)? | 1: Never review,<br>10: Regular annual reviews and adjustments      | <input type="text"/> |

Total score

# About

## Rainbow Solutions

We are Rainbow Solutions, specialists in business software for the printing industry. Since 1986, we've helped printing businesses streamline their processes from quote to invoice. Using Microsoft Dynamics 365 Business Central and PrintVis, we deliver tailored, future-proof solutions that improve efficiency, insight, and control across the entire production chain..



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Trusted specialist in carbon management and reduction for the print, packaging, media and logistics, empowering businesses and their supply chains measure, manage, reduce, and track their environmental impact. Our market-leading SaaS technology and expert consultancy provide tailored solutions to meet regulatory requirements, address customer demands and drive sustainability goals.



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