Carbon Roadmap

Planning for a Zero Carbon Future

An ESP eGuide

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Introduction – Your Guide to Navigating Your Organisation’s Carbon Roadmap

Now more than ever, there’s a growing concern over the impact of human activities on the environment, particularly on climate change. As a result, many organisations are now taking steps to reduce their carbon footprint, developing emission reduction goals, strategies and carbon reporting methods and aggregating them into a single carbon roadmap.

However, navigating this complex topic can be challenging, especially for those who are not well-versed in sustainability. To help you get started on your journey, we’ve put together this guide with practical tips and strategies that you can use to better understand and reduce your organisation’s carbon footprint. Whether you’re an executive or a sustainability manager, this guide is for you.

What's a carbon roadmap?

A carbon roadmap is a strategic plan that outlines the steps and milestones required to achieve a specific goal related to reducing carbon emissions. Typically, it includes a set of targets, a timeline for achieving those targets, and a detailed plan for how to reach them. It may also include an analysis of potential barriers and opportunities, as well as strategies for engaging stakeholders and tracking progress over time. Carbon roadmaps are often developed by governments, businesses, or other organisations that are committed to reducing their carbon footprint and contributing to the global effort to mitigate climate change.

What are the benefits of carbon roadmaps?

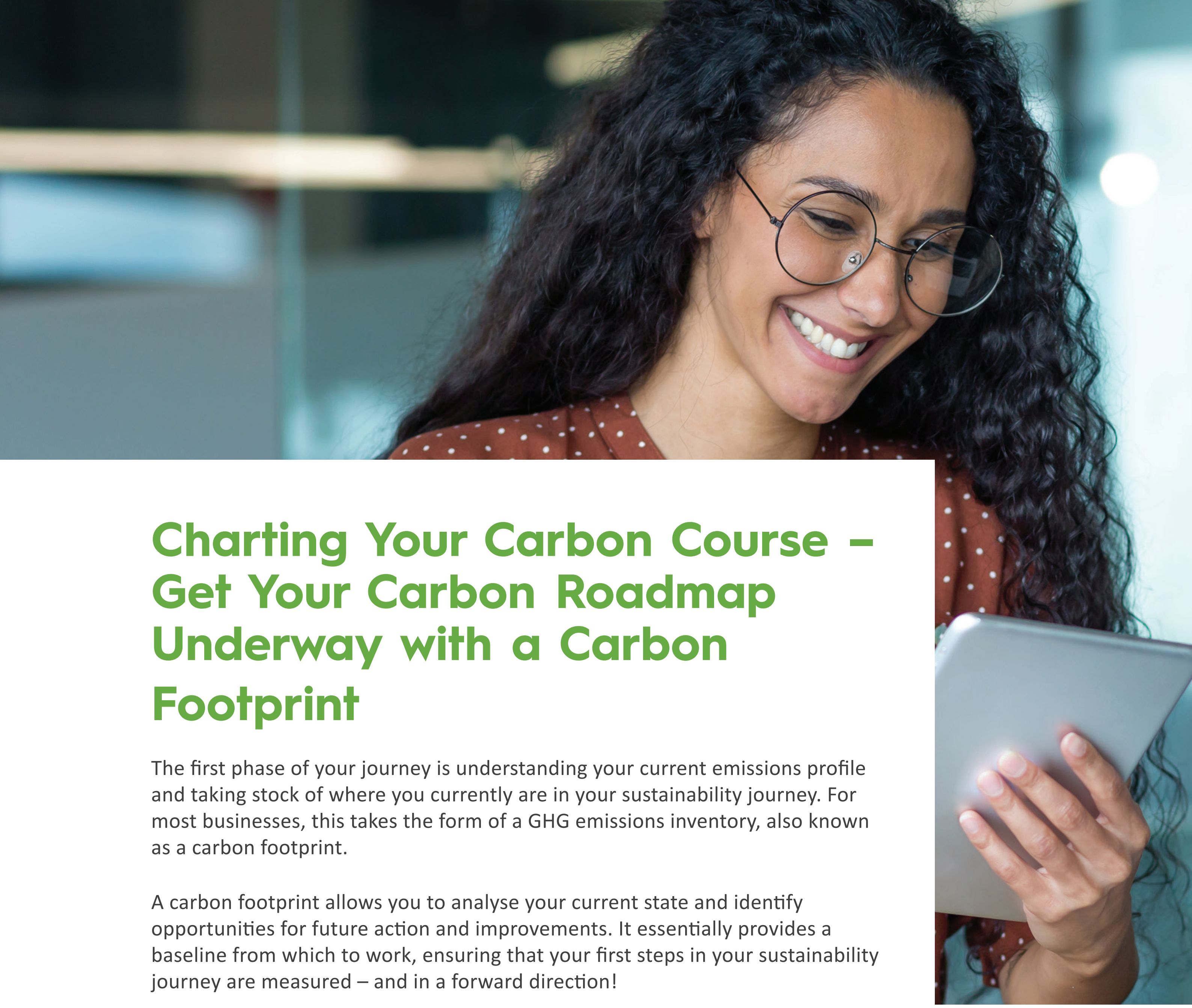
A carbon roadmap provides a clear and achievable plan for reducing carbon emissions and mitigating climate change. It helps to reduce uncertainty in goals, activities, and desired outcomes, and foster long-term sustainability integration into a business' performance. By setting targets and timelines, you can prioritise investments and initiatives, allocate resources more effectively, and reduce the overall cost of achieving your carbon reduction goals.

Not only that, but it can also promote innovation and collaboration by bringing together stakeholders from various sectors and disciplines to identify new opportunities in reducing emissions.

How to get the most value from your carbon roadmap

1. It's important to understand that the process is both collaborative and iterative. In order for a carbon roadmap to be effective, it should be reviewed on an annual basis to take into account advancements in technology, changes in the business, and progress in reducing carbon.

2. You need buy-in from all levels of your organisation, from the board to the leadership team to the sustainability council to the operational staff. A carbon roadmap's success is predicated by cross-business support.



Charting Your Carbon Course – Get Your Carbon Roadmap Underway with a Carbon Footprint

The first phase of your journey is understanding your current emissions profile and taking stock of where you currently are in your sustainability journey. For most businesses, this takes the form of a GHG emissions inventory, also known as a carbon footprint.

A carbon footprint allows you to analyse your current state and identify opportunities for future action and improvements. It essentially provides a baseline from which to work, ensuring that your first steps in your sustainability journey are measured – and in a forward direction!

Carbon footprints begin with gathering data. For example, you might start by identifying how much electricity the organisation used over a 12-month period, or how many flights employees took. You'd look at where they stayed, and what kind of transport they used when they were there.

Once you've collated all that data, you need to analyse it by converting those activity pieces of data into actual tonnes of CO2. That's where you need an understanding of the different scopes. Scopes and categories allow you to apply emissions factors that translate multiple different types of emissions into CO2 equivalents. That's why you need to categorise in order to produce a carbon footprint that follow the GHG Protocol. This is a widely used accounting tool to help organisations measure, manage and report their greenhouse gas (GHG) emissions. The protocol provides a standardised methodology for calculating and reporting emissions from different sources, including energy use, transportation, waste, and industrial processes.

Scope 1, 2, and 3 Emissions

- **Scope 1** – direct emissions from sources you own or control, such as fuel combustion or gas leakage from equipment you directly own and operate
- **Scope 2** – indirect emissions from the generation of purchased electricity, steam, heating, and cooling
- **Scope 3** - indirect emissions that are not included in Scope 2, such as the emissions from purchased goods and services, employee commuting and business travel, and waste disposal. Your supply chain (often the largest part of your carbon footprint) is included in Scope 3.

Determining your emissions scope also helps you identify what you need to do to reduce your carbon footprint. Scope 1 and 2 emissions are usually within your direct control; just turn the lights off when you leave, swap out a coal boiler, that sort of thing. Scope 3 is harder because these emissions are from within your businesses value chain. You will have to work with (or consider changing) your suppliers.

Carbon QuickStart Makes Carbon Footprints Easy

If you want to swiftly generate an accurate, meaningful carbon footprint, Carbon QuickStart is the tool for you. We'll help you build a full profile of your current emissions, untangling the complexity of what and where to target first. And we have a free emissions calculator to complete your first emission report for stakeholders.

Learn more

How to report your carbon footprint

The reporting of your carbon footprint is an essential part of a carbon roadmap. Companies are often public about their emissions as this sends a powerful statement that will influence your organisation's reputation and demonstrate your carbon reduction commitment to customers, investors, and other stakeholders. There are a number of different reporting frameworks available:

- **Task Force on Climate-Related Financial Disclosures (TCFD** - this is a framework for consistent climate-related financial risk disclosures, and is much broader than a carbon footprint. It aims to increase transparency between companies, banks, and investors about what companies are doing to mitigate the risks of climate change. It provides recommendations for organisations on how to disclose this information and how it may affect their financial performance. Disclosing to TCFD is mandatory for some large financial institutions in NZ due to climate-related disclosure regulation.

  By understanding and implementing the TCFD framework, you can improve your organisation's climate risk management, enhance your transparency and credibility, and better inform investors and stakeholders.

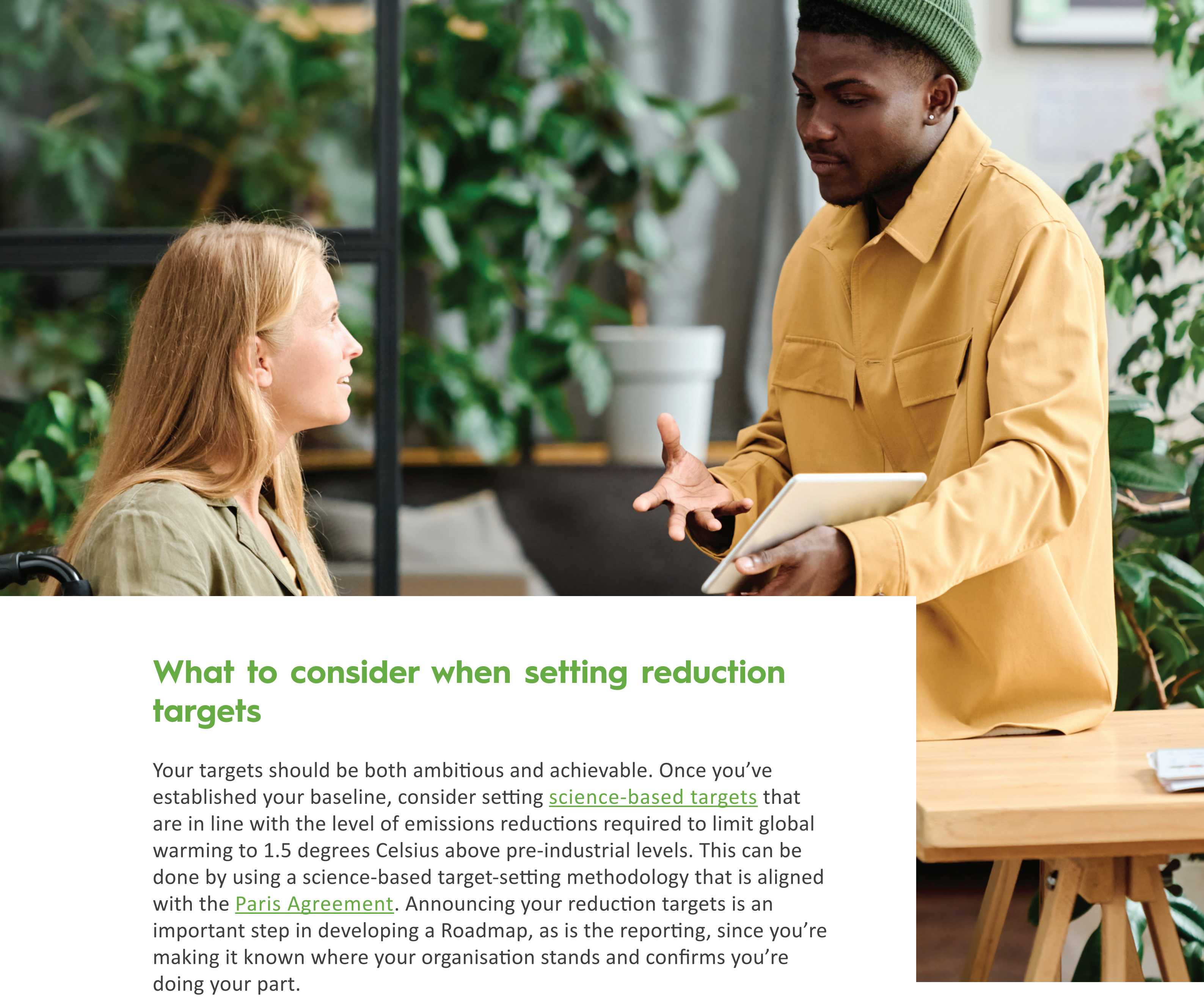
- **Global Reporting Initiative (GRI)** - this is an independent, international organisation that helps companies take responsibility for their impacts, by providing them with the global common language to communicate those impacts. They provide widely used sustainability reporting standards, and they offer online courses including a certified training program.

- **Sustainability Accounting Standards Board (SASB)** - directs organisations to reveal sustainability information that is financially significant to their investors. With coverage of 77 industries, these standards highlight the specific environmental, social, and governance concerns that are most pertinent to financial outcomes within each industry.

- **Climate Disclosure Standards Board (CDSB)** - this framework sets out an approach for reporting environmental and social information in mainstream reports, such as annual reports, 10-K filing, or integrated reports. It provides material information for investors and financial markets through the integration of climate change-related information into mainstream financial reporting.

- **International Integrated Reporting Council (IIRC)** - this is an international cross section of leaders from the corporate, investment, accounting, securities, regulatory, academic and standard-setting sectors as well as civil society. Integrated Reporting is about linking an organisation's social, environmental and economic context within which it operates.

- **Carbon Disclosure Project (CDP)** – this is a non-profit organisation that operates a worldwide reporting platform for investors, corporations, cities, and regional governments to oversee their environmental footprints.



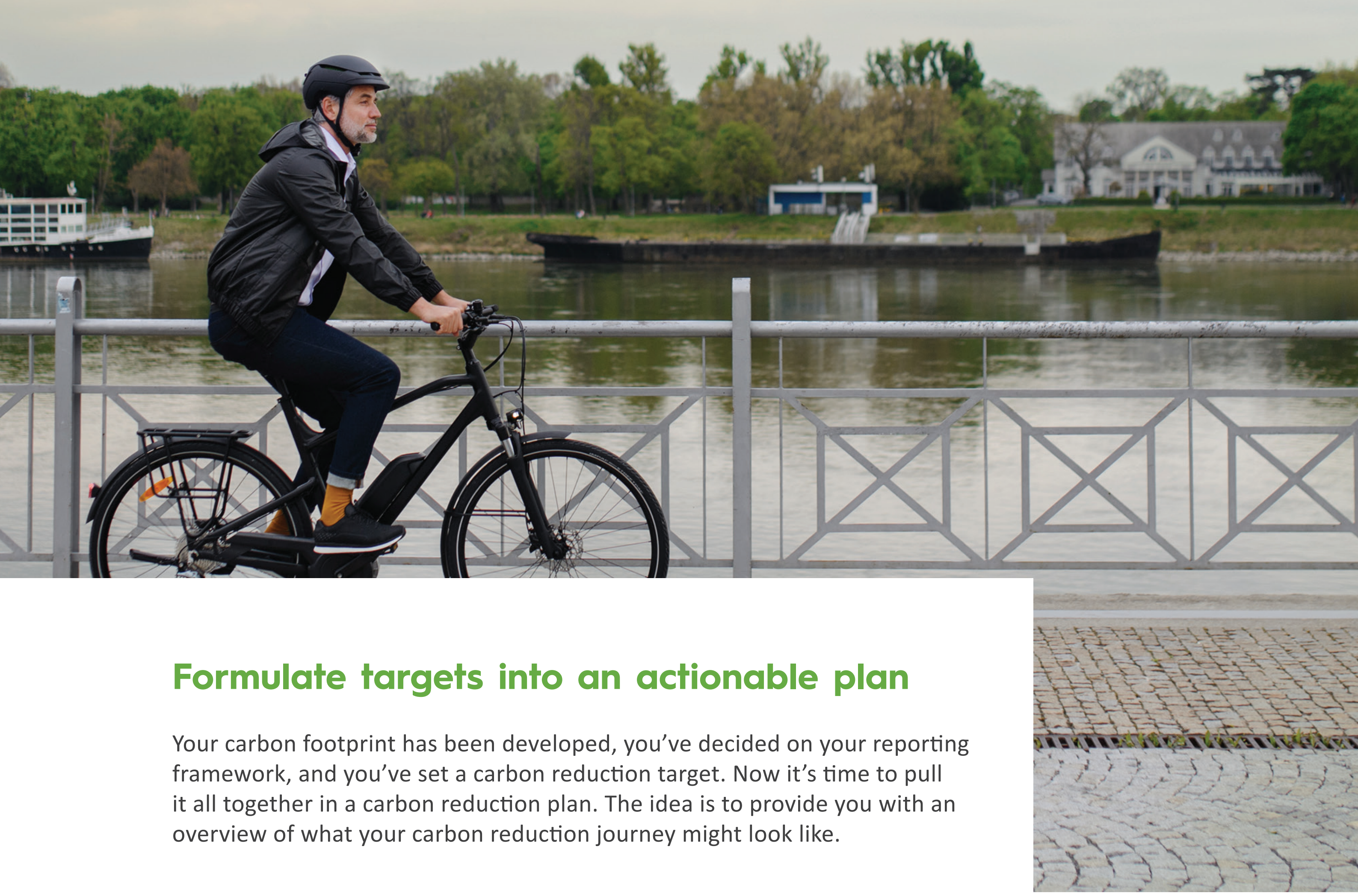
What to consider when setting reduction targets

Your targets should be both ambitious and achievable. Once you've established your baseline, consider setting science-based targets that are in line with the level of emissions reductions required to limit global warming to 1.5 degrees Celsius above pre-industrial levels. This can be done by using a science-based target-setting methodology that is aligned with the Paris Agreement. Announcing your reduction targets is an important step in developing a Roadmap, as is the reporting, since you're making it known where your organisation stands and confirms you're doing your part.

Get it Right with Carbon QuickStart

Carbon QuickStart will make sure you set targets that adhere to the correct standards, with an improved chance of success. It's a multi-staged process and can be adjusted to whatever goal or measurement you want to work towards.

Find out more



Formulate targets into an actionable plan

Your carbon footprint has been developed, you've decided on your reporting framework, and you've set a carbon reduction target. Now it's time to pull it all together in a carbon reduction plan. The idea is to provide you with an overview of what your carbon reduction journey might look like.

1. Identify the biggest impacts

A good way is to go through your most significant emissions sources and generate an initial list of ideas. Then use a matrix to rank the ideas according to size of potential reductions (x axis) and ease/cost of making the change (y axis). This should help you identify the low hanging fruit.

Ask yourself if you're going after something that represents 2% of the pie, or 20%. Identify what value you'll get from the sources you want to chase. Reducing electricity usage or electrification of assets (including transport) is a common starting point because of the double advantage quick cost savings. Ask yourself:

- What's the upfront investment needed to do something?
- How easy or difficult is it to do?
- What's the complexity level of doing it?

When you're just starting out, it's better to go with the low-hanging fruit for quick and easy wins. As you become more proficient, you can start to tackle more complex sources of carbon emissions.

2. Develop a long term strategy

Your carbon reduction journey is a continuous one; if you rest on your laurels, you risk drifting away from your core goals. That's why it's essential to develop a long-term strategy that keeps everyone in the organisation working towards its carbon reduction goals. A longer term plan is also essential for the potential significant reductions that might be more challenging. Keep a few of the easier but smaller reduction opportunities as projects to pick up along the way to maintain momentum.

Carbon QuickStart will Help You Plan

We'll help provide you with a clear linear line from your baseline to your end goal. We'll help you identify everything you need to do for the quick wins and the tough stuff. QuickStart is a process designed to help you kick things into gear without being overwhelming. Simple tools, strong results and a good foundation for future success.

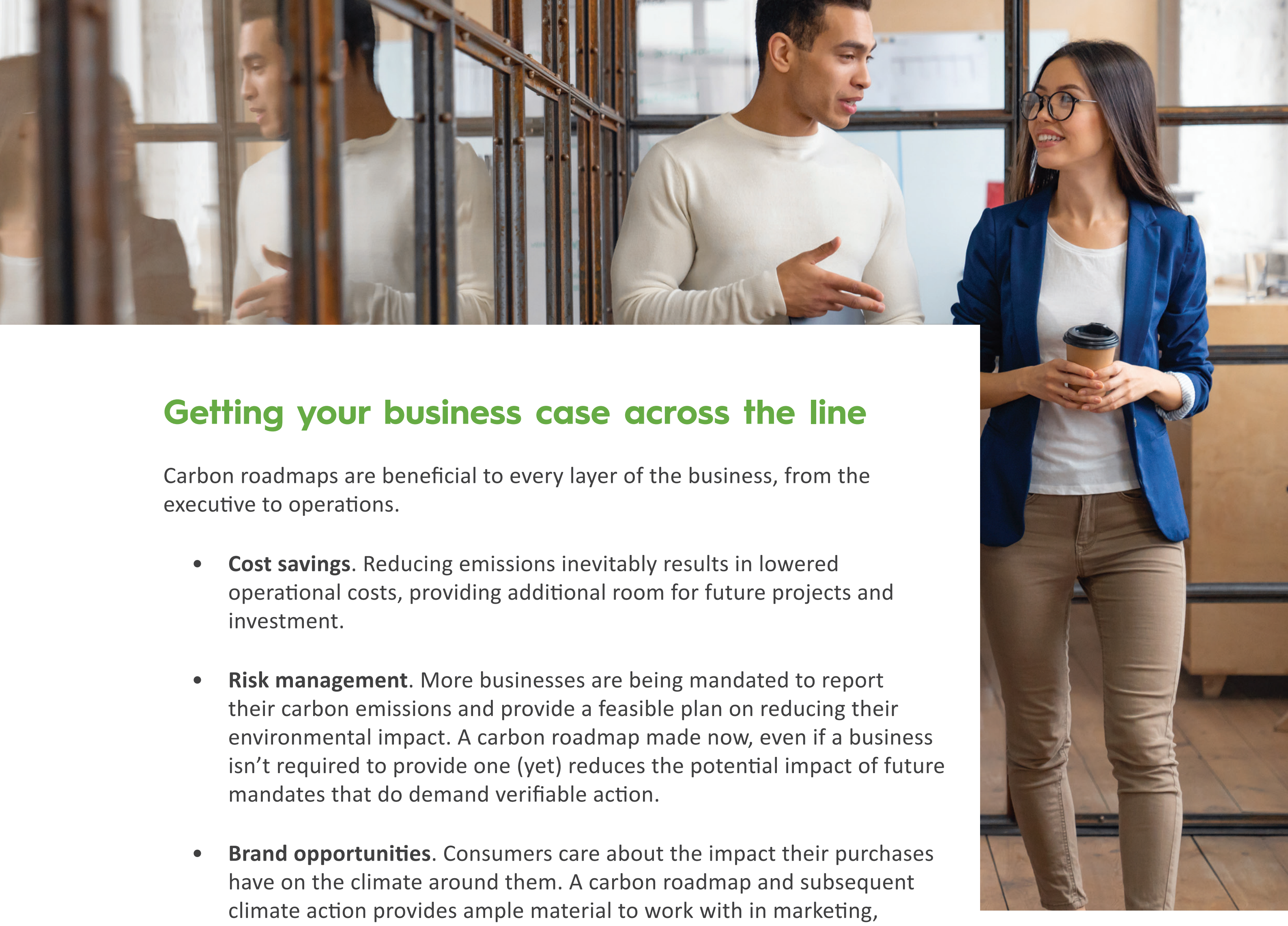
Learn more

Roadmap to Zero – Implementing Your Carbon Roadmap

Often the toughest part of your carbon reduction journey is getting started. To make it easier, your key focus areas in the beginning should be about quick wins.

These are easily implemented without significant cost or disruption to your business, such as switching to energy-efficient lighting or implementing a recycling program. By prioritising quick wins, you can build momentum and show early progress towards your carbon reduction targets. This can help to build employee and stakeholder support for further action.

Not only that, but quick wins can often provide cost savings in the short term, which can help to justify the investment in longer-term carbon reduction initiatives.



Getting your business case across the line

Carbon roadmaps are beneficial to every layer of the business, from the executive to operations.

- **Cost savings**. Reducing emissions inevitably results in lowered operational costs, providing additional room for future projects and investment.

- **Risk management**. More businesses are being mandated to report their carbon emissions and provide a feasible plan on reducing their environmental impact. A carbon roadmap made now, even if a business isn’t required to provide one (yet) reduces the potential impact of future mandates that do demand verifiable action.

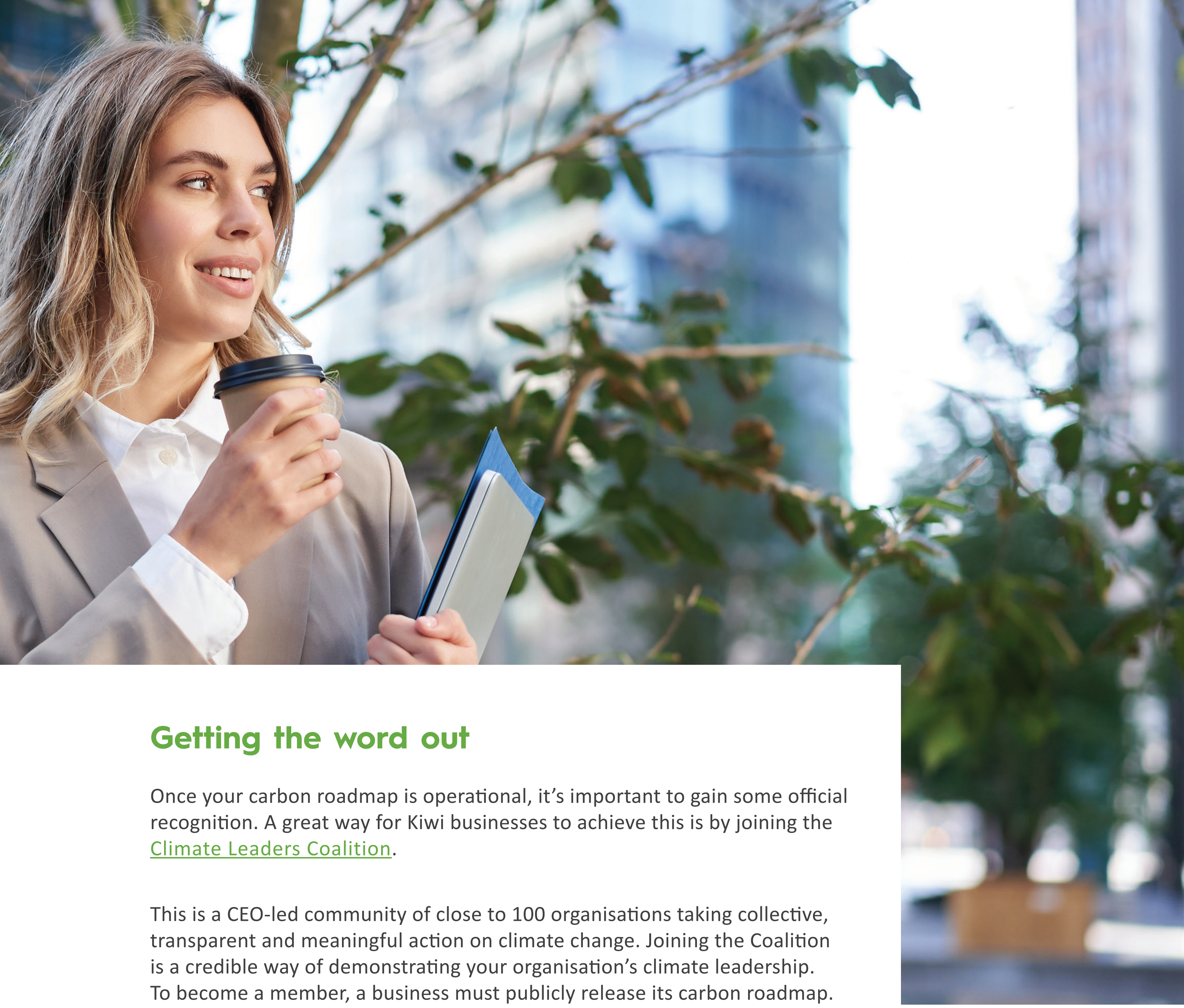
- **Brand opportunities**. Consumers care about the impact their purchases have on the climate around them. A carbon roadmap and subsequent climate action provides ample material to work with in marketing, branding and partnership activities.

- **Investment and financing**. Investors are increasingly interested in the sustainability of the businesses they entrust with their capital. Sustainable businesses have been shown to be more successful than their non-sustainable counterparts, and offering a carbon roadmap as part of an investor information packet is an easy way to capture attention and secure new funding avenues.

Individual sustainability projects can benefit from feasibility studies. These studies can provide objective, clear and accurate predictions of the cost & benefit of a sustainability project, including the sensitivity of a project to carbon price escalation, full life cycle costs, and the cost of abatement.

Although these considerations should have been integrated into the business processes during the initial stage of developing a carbon reduction strategy, they can still be adjusted during this step to ensure the most suitable projects are selected.

Always keep in mind that while these evaluations may follow established business practices, special attention should be given to the unique aspects of carbon reduction projects.



Getting the word out

Once your carbon roadmap is operational, it's important to gain some official recognition. A great way for Kiwi businesses to achieve this is by joining the Climate Leaders Coalition.

This is a CEO-led community of close to 100 organisations taking collective, transparent and meaningful action on climate change. Joining the Coalition is a credible way of demonstrating your organisation's climate leadership. To become a member, a business must publicly release its carbon roadmap. There are other requirements laid out in its Statement of Ambition, one of which is that a business needs to meet them by September 2025. In other words, there's little time to waste.

Official recognition is also beneficial from a brand perspective. You're talking openly and honestly about the challenges in reducing emissions, and being transparent about what you're trying to achieve. In short, you aren't greenwashing.

The journey is evergreen – why you need to focus on continual improvement

Getting started in building a carbon roadmap is often the hardest part. By this point, you've overcome this hurdle. The journey – or rather the roadmap – doesn't end there, however. Your next focus needs to be around continual and incremental improvements.

While every business will have their own unique roadmap and set of opportunities around continual improvements to their emissions reductions, there are some global standards that provide insight into next steps.

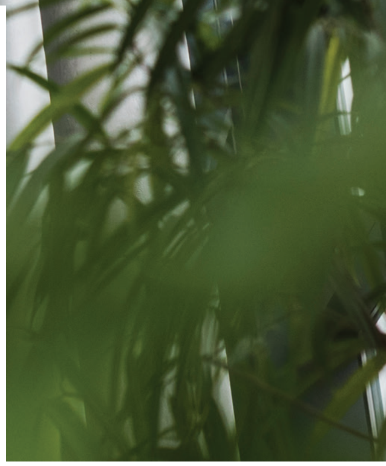
For example, the ISO 50001 energy management standard provides a framework for organisations to establish, implement, maintain and improve an energy management system. This standard aims to help organisations to reduce energy costs, greenhouse gas emissions and improve energy efficiency. It sets out requirements for an energy management system that can be integrated with other management systems, such as quality management and environmental management.

By implementing ISO 50001, you can identify and prioritise energy saving opportunities, measure and monitor energy performance, and continually improve energy management practices.

The Need for Monitoring

When you're first starting out, simple carbon accounting tools are sufficient, but if yours is a complex organisation, investing in a dedicated carbon accounting tool can be worthwhile. Our enterprise carbon accounting software addresses the complex sustainability management needs of your industry. Monitor and manage your emissions in the ever-changing sustainability landscape on a single, trusted, world-class platform that is ideal for complex operational organisations with strict reporting and review requirements.

Learn more

Why you need to repeat the reporting process

Climate disclosures are becoming more expected from investors, customers, and industry bodies, even for businesses not under a mandate. Carbon emissions are not static and can change over time due to various factors such as changes in production processes, energy sources, or in the supply chain. By repeating the carbon reduction reporting process, you can track your progress in reducing carbon emissions, identify areas where additional efforts are required, and set new targets. Additionally, regular reporting will help you identify and address discrepancies in data and ensure that you're complying with any regulations or reporting requirements.

One final, but important point. Many businesses beginning their first carbon roadmap will be concerned about the accuracy of the data they're gathering and the resource required to achieve a robust reporting process. Over time, as your business repeats this process and continues down the plan laid out by the roadmap, the accuracy, completeness and speed of carbon reporting will naturally improve. The key is to start – and start early – so the business is up to speed before legislative pressure begins to apply.

ESP - Your Partner on the Carbon Roadmap

To really leverage your carbon roadmap to its full potential, you need experts along for the ride. Whether you're calculating your first footprint or working to meet science-based targets, our carbon management and accounting platforms will help you achieve your climate goals. Our award-winning team of engineers, climate consultants and software developers work with you to continually identify ways to get your organisation to Net Zero, using the best-in-class services and technology.

Learn more

Summary

By now, you'll have gained some insights into the importance of carbon roadmaps in reducing your organisation's carbon footprint and mitigating climate change. Key points to note are:

- **Creating a carbon roadmap** gives you a long-term, easily understandable plan for reducing carbon emissions, prioritising investments, and reducing overall costs. Success is predicated on collaboration across the business, from a variety of stakeholders from every layer of the organisation. From the executive to operations, there must be a shared vision for sustainability.

- **Developing a carbon footprint** or emissions inventory offers a complete overview of your current emissions profile that can act as a benchmark for future success and demonstrate areas of the businesses with the most risk and opportunity.

- **Setting emission reduction goals**, tracking progress and generating a carbon report is not only increasingly mandated for businesses across the globe, but also increasingly expected even for voluntary reporters. Starting the journey and building an initial carbon roadmap before doing so is required by law allows the opportunity to refine the process before mistakes become risks.

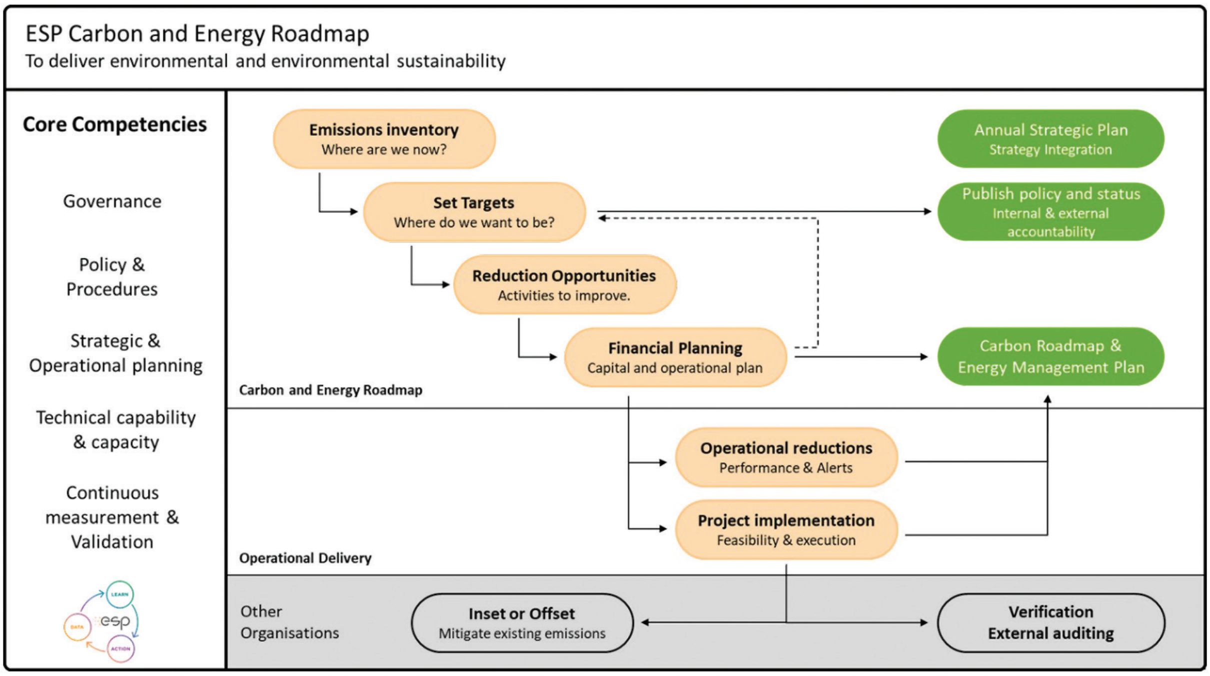
- **Actioning your emissions reductions plan** in accordance with your carbon roadmap begins with the quick wins – those areas with a combination of the largest impact and lowest required resource. However, it's imperative to set up a long-term action plan as well, to ensure that initial improvements become continual, and sustainability becomes integrated into the long term performance of your business.

- **Reporting your carbon emissions** regularly provides continual insights into your progress towards your targets and ensures you fulfil your climate obligations, mandated reporting or otherwise. It also gives you access to membership in multiple highly regarded industry bodies, made up of sustainability leaders and providing excellent opportunities for shared growth.

Looking Ahead

Keep this guide handy. It's your strategic plan to generate a carbon roadmap that will help you measure, monitor, manage and reduce your business's carbon emissions, reduce risk, improving the bottom line and offering a variety of reputational and branding benefits.

Standing beside you at the starting gate is Carbon QuickStart. We understand how getting started on your carbon reduction journey is the toughest hurdle to overcome. QuickStart provides a collaborative process with experienced consultants to establish your carbon footprint, set realistic targets, identify initiatives to reduce emissions, and develop an integrated plan. QuickStart gives you the foundation you need to build on your carbon reduction journey - we'll set you on your way!



Book a meeting

You have a vision.
We have a way to
get you there.

LET'S TALK

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