HOW TO BANISH CARBON

FROM YOUR BUSINESS WITH TECH

JERA

WHAT IS YOUR BUSINESS DOING TO COMBAT THE CLIMATE CRISIS?

Climate change is one of the most pressing challenges we've faced as a species. But what can you do about it, and how can we as an IT service provider help you out?

In this eBook, we'll walk you through some things you can do as a business to conquer climate change. As a business leader it is your responsibility to help combat climate change, and as Scotland's leading MSP, it's our responsibility to help you do it.

LET'S DO IT!

OLIVIA WILSON

WORKBOOK

A practical guide

FOR ECO-CONSCIOUS BUSINESSES

According to the 2021 Intergovernmental panel on Climate Change (IPCC), human activities have caused the global average temperature to rise beyond 1.1°C since the pre-industrial era. Some more recent reports suggest that 1.5°C has already been surpassed today. If like us you're sitting in the endless rain, wind and sleet of Scotland, you might be picturing sipping pina coladas by Loch Lomond and thinking this isn't too bad, but ask any climate scientist and they'll quickly let you know how unbelievably catastrophic this is for the planet and all of us living on it.

If you are a business leader, it's your responsibility to contribute to the global fight against global warming. Reducing your carbon footprint can not only help protect the environment, but also improve your reputation, save money and increase efficiency.
But how do you get started?

This eBook is designed to help you achieve your eco goals. You'll learn tools and practices to build and implement a low-carbon strategy in your business.
Whether you run a small startup or a massive multinational, we're sure to have tips to give you the knowledge, skills and confidence to transform your business into a force for good in the world. Let's get started.

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CHAPTER 1

CARBON ACCOUNTING

Just what is carbon accounting, what does it mean to you, and how can you use it to save money and the planet

CARBON ACCOUNTING

Before you can start reducing your carbon emissions, it makes sense that you know how much you are actually emitting and where they come from.

this is where carbon accounting comes in. Carbon accounting is the process of measuring, reporting and verifying the emissions of your organisation. It's a great help in identifying the sources and levels of your emissions and can also highlight some potential areas of improvement. It can also help you to keep track of your performance.

That's all well and good, but how do you actually go about starting. Carbon accounting is based on a set of standards and methodologies that define how to calculate and report emissions. The most commonly used of these standards is the Greenhouse Gas Protocol. The GHG Protocol provides a comprehensive framework for carbon accounting and splits emissions into 3 scopes:

- Direct emissions from sources owned or controlled by the organisation (fuel combustion, refrigeration etc.)
- Indirect emissions of consumable resources purchased (heating, electricity etc.)
- Indirect emissions from sources not owned by the company (flights, employee commuting etc.)

Carbon Accounting is not just a technical exercise. It's also a strategic one. It helps you understand your strengths and weaknesses. On the next page you will find links to four essential resources to start you off

CARBON ACCOUNTING RESOURCES

01

GHG PROTOCOL WEBSITE, OFFERING FREE WORKSHEETS AND CALCULATORS FOR DIFFERENT SECTORS

CLICK HERE >

02

THE CARBON FOOTPRINT CALCULATOR. ESTIMATE YOUR CARBON FOOTPRINT AND OFFSET IT

CLICK HERE >

03

THE COOLCLIMATE NETWORK. PROVIDES INTERACTIVE TOOLS AND MAPS TO REDUCE EMISSIONS

CLICK HERE >

04

THE CARBON TRUST, WHICH OFFERS SOLUTIONS TO HELP ORGANISATIONS MANAGE THEIR EMISSIONS

CLICK HERE >

SHAMELESS PLUG

If you've read this far, you clearly care about the environment, and we'd like the chance to get to know you a bit better.

If you're a Scottish business with 20 or more staff, we'd love to make you an offer too good to refuse.

CHAPTER 2

BENEFITS

What are the benefits of going Carbon Neutral or Negative... Is saving the planet not enough? Well lucky for you there are loads of tangible business benefits to going Carbon Neutral.



BENEFITS OF GOING CARBON NEUTRAL OR NEGATIVE

It's one thing to know what emissions your business is putting out into the world. It's another to know what to do with that information.

How much should you reduce them? How fast? Why should we bother to put so much time, effort and finances into improving when the situation is so dire and there seem to be so many who don't care?

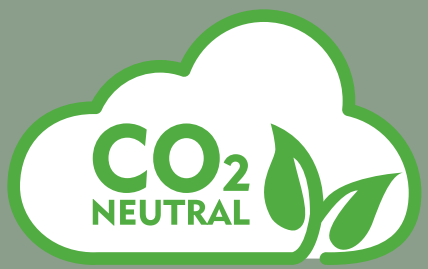
The answers depend on your ambition, your tenacity and the vision of your business. The more you reduce, the better for the planet and your business.

One of the most common and popular goals that many organisations adopt is to become carbon neutral or negative. But what does that mean?

Carbon Neutrality means that your net greenhouse gas emissions are zero. This means that you either eliminate or offset all your emissions by investing in projects that offset or eliminate emissions elsewhere, for example reforestation or renewable energy.

Carbon negativity therefore imeans that you are eliminating more emissions than you are producing.

Going Carbon Neutral or Negative is an incredible goal you can set for your business for ethical reasons, but there are also some massive benefits you can enjoy.



THE BENEFITS

REDUCED COST, INCREASED PRODUCTIVITY

By cutting down on your emissions, you can also cut your energy and fuel costs as well as your waste disposal costs. there also exist tax incentives to become a more green company. Productivity and operations will also be improved by optimising your processes and materials

ENHANCE YOUR REPUTATION

By going carbon neutral or nagative, you can show your customers, employees, investors and prospects tat you care about the environment and society. You can also stand out from the crowd and attract/retain customers and cients who share your vision and values

INNOVATION AND EXPANSION

By going carbon neutral or negative, you can also create new opportunities for innovation and growth, by developing and offering new products and services that are low-carbon or carbon-negative, and by reaching new markets and segments that are looking for green and sustainable solutions.

WE ARE THE FIRST GENERATION TO FEEL THE IMPACT OF CLIMATE CHANGE AND THE LAST GENERATION THAT CAN DO SOMETHING ABOUT IT

-BARACK OBAMA

CHAPTER 3

USING TECH TO REDUCE EMISSIONS

We've discussed how to measure emissions and why you should consider reducing them. But how does tech help in actually doing this?

USING TECH TO REDUCE EMISSIONS

There are many ways to reduce your emissions in your business, depending on your sector, size, and scope. But in general, you can follow these four steps:

- Analyse your emissions sources and identify the most significant and feasible ones to target.
- Set your reduction goals and plan your actions, based on your baseline, your budget, and your timeline.
- Implement your actions and monitor your results, using the appropriate tools and methods.
- Review your performance and adjust your actions, based on your feedback and learning.

In each of these steps, tech can play a key role in helping you reduce your emissions. Tech can help you collect, process, and visualize your emissions data, and provide you with insights and recommendations.

Tech can also help you implement, manage, and optimize your emission reduction actions, and provide you with feedback and evaluation. Tech can also help you communicate, collaborate, and coordinate with your stakeholders, and provide you with support and recognition.

There are many types of tech that can help you reduce your emissions in your business, such as:

- **Internet of Things (IoT):** IoT refers to the network of devices, sensors, and software that can collect, transmit, and analyse data from physical objects and environments. IoT can help you monitor and control your energy consumption, your waste generation, your transportation modes, and your supply chain activities, and provide you with real-time and accurate information and alerts.
- **Artificial Intelligence (AI):** AI refers to the ability of machines and software to perform tasks that normally require human intelligence, such as reasoning, learning, and decision making. AI can help you optimize your processes and operations, your product design and development, and your customer service and engagement, and provide you with smart and personalized solutions and recommendations.

- **Blockchain:** Blockchain refers to the system of distributed and encrypted records that can store and verify transactions and data without intermediaries or central authorities. Blockchain can help you track and verify your emissions reduction actions and outcomes, your carbon credits and offsets, and your stakeholder interactions, and provide you with transparency and trust.

These are just some examples of the tech that can help you reduce your emissions in your business. There are many more, and new ones are emerging every day. The key is to find the tech that suits your needs, your goals, and your context, and to use it wisely and responsibly. It can help you, but it cannot replace you. You are still the one who must make the decisions and take the actions.

SPECIFIC IDEAS

The previous chapter gave you an indication of the ways in which tech can be used to help businesses at large, let's take a look at specific examples for businesses. We'll break it down into a few different sections and make suggestions based on each one.

If none of these jump out as relevant to your business, don't hesitate to give us a call and here some others!

ENERGY

Energy is one of the main sources of greenhouse gas emissions for most businesses. It includes the electricity you use to power your devices, lights, and appliances, the heating and cooling you use to regulate your indoor temperature, and the fuel you use to run your generators, boilers, or furnaces. Reducing your energy consumption and switching to renewable or low-carbon sources of energy can help you lower your emissions significantly.

SMART METERS & SENSORS

Smart Devices can automate your energy management and adjust your settings according to things such as weather or occupancy. Smart thermostats to control your heating and cooling systems, smart lighting to dim or switch off your lights when not needed, and smart plugs to turn off your devices when not used.

ENERGY MANAGEMENT SOFTWARE

This software can analyze your energy data and provide you with insights and recommendations on how to optimize your energy performance and reduce your costs. It can also help you track your progress and measure your impact, generating reports and dashboards to communicate your results.

RENEWABLE ENERGY

These systems can generate electricity from renewable or low-carbon sources, such as solar, wind, hydro, biomass, or geothermal. They can help you reduce your reliance on fossil fuels and lower your carbon footprint. Depending on the size and type of the system, you can either install it on your premises, such as rooftop solar panels or connect to a larger grid-scale system

TRANSPORTATION

Transportation is another major source of greenhouse gas emissions for most businesses. It includes the vehicles you use to transport your goods, services, or people, such as cars, trucks, buses, trains, planes, or ships, and the fuel you use to run them. Reducing your transportation needs and switching to low-carbon or zero-emission modes of transportation can help you lower your emissions substantially.

FLEET MANAGEMENT SOFTWARE

Manage your fleet of vehicles and optimise your transportation operations and logistics. It can provide you with real-time data and feedback on your vehicle location, speed, route, fuel consumption, emissions, and maintenance. It can also help you schedule routes, and deliveries, and reduce idle time, mileage, and fuel costs.

TRANSPORTATION ELECTRIFICATION

This refers to the process of replacing fossil fuel-powered vehicles with electric vehicles (EVs), such as electric cars, trucks, buses, bikes, or scooters. EVs can reduce your emissions by using electricity instead of gasoline or diesel, and by using renewable or low-carbon sources of electricity.

RENEWABLE ENERGY

These systems can generate electricity from renewable or low-carbon sources, such as solar, wind, hydro, biomass, or geothermal. They can help you reduce your reliance on fossil fuels and lower your carbon footprint. Depending on the size and type of the system, you can either install it on your premises, such as rooftop solar panels or connect to a larger grid-scale system

WASTE

Waste is another significant source of greenhouse gas emissions for most businesses. It includes the materials and resources you discard or dispose of, such as paper, plastic, metal, food, or water, and the processes and facilities you use to manage them, such as recycling, composting, landfilling, or incinerating. Reducing your waste generation and switching to circular or zero-waste models of production and consumption can help you lower your emissions considerably.

WASTE MANAGEMENT SOFTWARE

This software can help you optimise your waste operations and logistics. It can provide you with real-time data and feedback on your waste generation, composition, diversion, and disposal. For example, you can use software to monitor your waste segregation and recycling rates, find the best waste service providers and generate waste audits.

WASTE REDUCTION & PREVENTION DEVICES

By transforming, reusing, or recovering your materials and resources you can improve the quality and efficiency of your products and services, and reduce your resource consumption and emissions. For example, you can use 3D printers to create customized and on-demand products or smart packaging to extend the shelf life and reduce the spoilage of your goods.

WASTE VALORIZATION & UPCYCLING

Tech can help, by converting waste materials into new and valuable products, services, or energy. It can also help you create new revenue streams and markets, and reduce your dependence on virgin materials and fossil fuels. For example, you can use biogas digesters to convert your organic waste into biogas and fertilizer, pyrolysis plants to convert your plastic waste into fuel.

PRODUCT DESIGN

Product design is another key source of greenhouse gas emissions for most businesses. It includes the process of creating and developing your goods and services, and the features and functions that define them, such as shape, size, color, material, quality, or functionality. Reducing your product design complexity and switching to eco-friendly or low-carbon modes of product design can help you lower your emissions considerably.

PRODUCT DESIGN SOFTWARE

This software helps you design, create, and improve your products and processes. It also helps you organize and manage your product tasks, such as brainstorming, prototyping, testing, or launching, and lower your cost, time, and emissions. You can use it to make and change your models and drawings, simulate your features and user-friendliness, or produce documentation

PRODUCT DESIGN ANALYTICS

These are the tools and techniques that can help you analyse your product design data and provide you with insights and recommendations on how to improve your product design efficiency and eco-friendliness. They can also help you predict and respond to your product design demand and supply, generating reports and dashboards to communicate your results.

WASTE VALORIZATION & UPCYCLING

Tech can help, by converting waste materials into new and valuable products, services, or energy. It can also help you create new revenue streams and markets, and reduce your dependence on virgin materials and fossil fuels. For example, you can use biogas digesters to convert your organic waste into biogas and fertilizer, pyrolysis plants to convert your plastic waste into fuel.

CHAPTER 4

POTENTIAL PIT FALLS TO TECH

We aren't going to try and convince you there are absolutely no downfalls to using tech. From the dangers of AI (looking at you Skynet) to the initial expenditure of implementing green practices.

POTENTIAL PITFALLS OF USING TECH

Using tech to reduce your carbon footprint can bring many benefits, such as saving costs, increasing efficiency, enhancing reputation, and creating new opportunities.overcome them.

TECH ISN'T A ONE FITS ALL SOLUTION.

However, it can also pose some challenges and risks that you need to be aware of and prepared for. In this chapter, we will discuss some of the potential pitfalls of using tech to reduce carbon footprint.

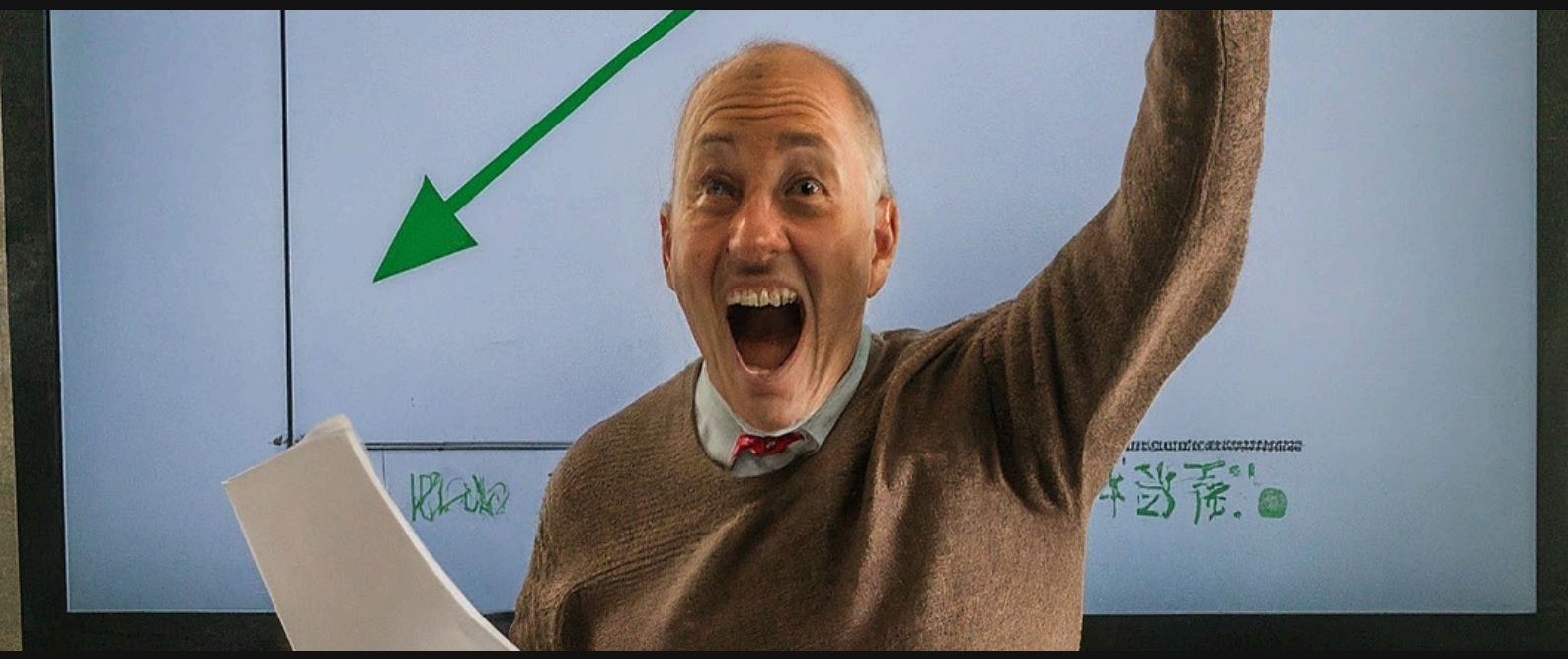
Tech creates its own carbon footprint. While tech can help you reduce your emissions from other sources, such as energy, transportation, or waste, it can also generate its own emissions from the production, operation, and disposal of the devices

Tech can be expensive and complex. Implementing tech to reduce your carbon footprint can involve a lot of upfront investment, maintenance, and training costs, especially if you need to upgrade or replace your existing systems, equipment, or processes. It can also require a lot of technical expertise, which may not be readily on the market.

Tech can be unreliable or insecure. Depending on the type, quality, and availability of the tech you use, it can sometimes malfunction, break down, or become obsolete, which can disrupt your operations, cause delays, or result in losses.

Adoption of tech can face cultural resistance. New systems take time to learn, and some employees will likely prefer things "just the way they are", perhaps with a "if it's not broken, don't fix it" attitude.

CHAPTER 5



COMMUNICATING YOUR SUCCESS

What’s the use in doing good things for the planet if you’re not shouting about it! Be proud of your achievements and dedication to a better planet! But there’s a fine line between bragging and communicating

COMMUNICATING YOUR SUCCESS

Sharing your carbon achievements can boost your reputation, attract more customers and investors, and inspire others to follow your example. Furthermore, the work you are doing in this department is important. You have a good opportunity to inspire other businesses to do the same, making the ripple-effects of your impact exponentially bigger. Here are some tips to consider in your communication strategy:

- Define your purpose and goals. What do you want to achieve and how will you measure it?
- Know your audience. Who are you talking to and what do they care about?
- Choose your channels. What are the best ways to reach and engage your audience?
- Tell your story. How did you start, what did you do, and what is your vision?
- Be transparent and honest. How do you back up your claims and avoid misleading or exaggerating?
- Seek feedback and improvement. How do you monitor, evaluate, and update your communication?

Two well-known examples of effective communication in carbon achievements are Shopify and Patagonia.

Shopify: Shopify is an e-commerce platform that enables merchants to sell their products online. Shopify has committed to achieving net-zero emissions across its operations, supply chain, and merchant base by 2030. To communicate its carbon achievements, Shopify uses various channels, such as its website, blog, newsletter, social media, reports, and events. Shopify tells its story of how it became a global leader in carbon removal, and how it uses tech to help its merchants reduce their emissions and go carbon neutral. Shopify provides clear and detailed data on its emissions, reduction and offsetting strategies, and verification and reporting methods. Shopify seeks feedback and improvement from its stakeholders and updates its communication regularly.

Patagonia: Patagonia is an outdoor clothing and gear company that has a strong environmental and social mission. Patagonia has been carbon neutral since 2019 and aims to be carbon positive by 2025. To communicate its carbon achievements, Patagonia uses various channels, such as its website, catalog, film, podcast, and activism. Patagonia tells its story of how it became a pioneer in environmental and social responsibility, and how it uses tech to help its customers and partners reduce their emissions and support climate action. Patagonia also provides transparent and honest data on its emissions, reduction and offsetting strategies, and verification and reporting methods. Patagonia also seeks feedback and improvement from its stakeholders and updates its communication regularly.

Thank you

FOR READING

CONGRATULATIONS ON TAKING THE FIRST STEP TOWARDS BUSTING CARBON EMISSIONS IN YOUR BUSINESS. WHAT'S NEXT?

JERA

CALL OUR TEAM OF MEAN GREEN, IT SERVICE MACHINES TO GET THE BALL ROLLING WITH YOUR CARBON EMISSION DRIVE

CALL US TODAY ON 0131 5100 100

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