

CARBON FOOTPRINTING 1

A carbon footprint is a tool for understanding the contribution to climate change of a business, a product, a city, a country or an individual.

The term 'carbon' is used generically to encompass all the main greenhouse gas emissions. To make calculations easier, carbon dioxide is used as the reference point and counted as 1, with others multiplied according to their global warming potential over a set time period. As an example, a tonne of methane would be counted as 28 tonnes of 'carbon', based on it having around twenty-eight times the global warming potential of carbon dioxide over 100 years.

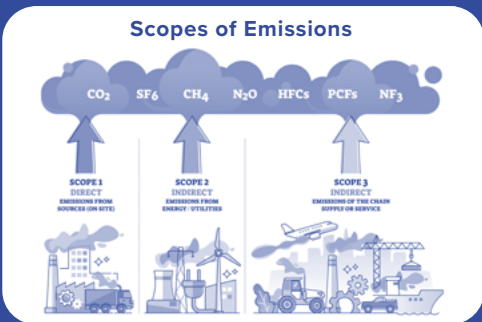
There are many tools available for doing the calculations and standards to give you a framework for working to. The [GHG Protocol](#) is a global set of standards and tools, probably the most widely used, and they are free to download and use.

Another option is to use external support – there are many consultancies who can help, ClimateCalc.eu and CarbonQuota are two with specific experience in printing. The United Nations [Climate Neutral Now website](#) has a useful list of resources.

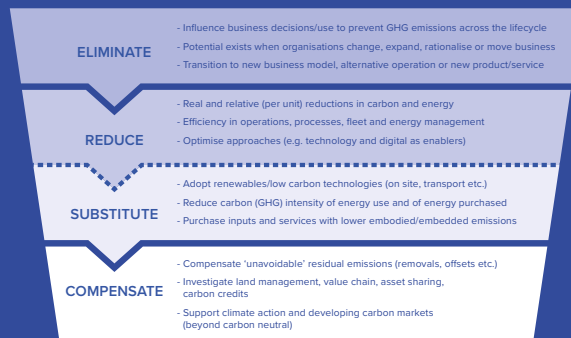
Once you know the footprint of your business, you can then set out your plan to reduce it. The carbon hierarchy diagram below offers a useful guide to the steps to take.

The more detail included in your footprint, the more useful it is for working out what to do first, so for a reduction plan it's best not to be tempted by the simplest approach. If you only have one meter for all your electricity, hiring data loggers can help.

The full footprint for a business will divide into three types, called 'Scopes'; it isn't necessary to tackle everything at once, and most organisations start with the two scopes that are easier to measure, 1 and 2.



IEMA Greenhouse Gas Management Hierarchy



[IEMA's Pathways to Net Zero report](#) gives a detailed explanation

Scope 3 is the most complex category, but where most business's emissions are generated. These are emissions created as a consequence of a business's activities, and can include staff travel to and from work, goods and services bought or supplied, emissions generated by treatment of recycling, waste and water, emissions created by products in use – it depends very much on the nature of a business. Because of the complexity and the difficulty in getting the data needed, it is common to work through these one category at a time.

Scope 1 is direct emissions from your business: gas, LPG, oil, diesel or petrol you own and burn, and any leakages of greenhouse gases from equipment such as chillers and air conditioning (these can be calculated from maintenance reports showing if they have been topped up, and although small volumes usually, they have very high global warming potentials) or other relevant emissions.

Scope 2 emissions are those generated by energy you purchase: electricity you buy is Scope 2 and can be worked out by using your electricity bills and calculators from bodies like the GHG Protocol.

CARBON FOOTPRINTING 2

It is because they are such a large part of a business's footprint that many brands are interested in their supply chain's footprints, and many report on them (see the Brands display for more).

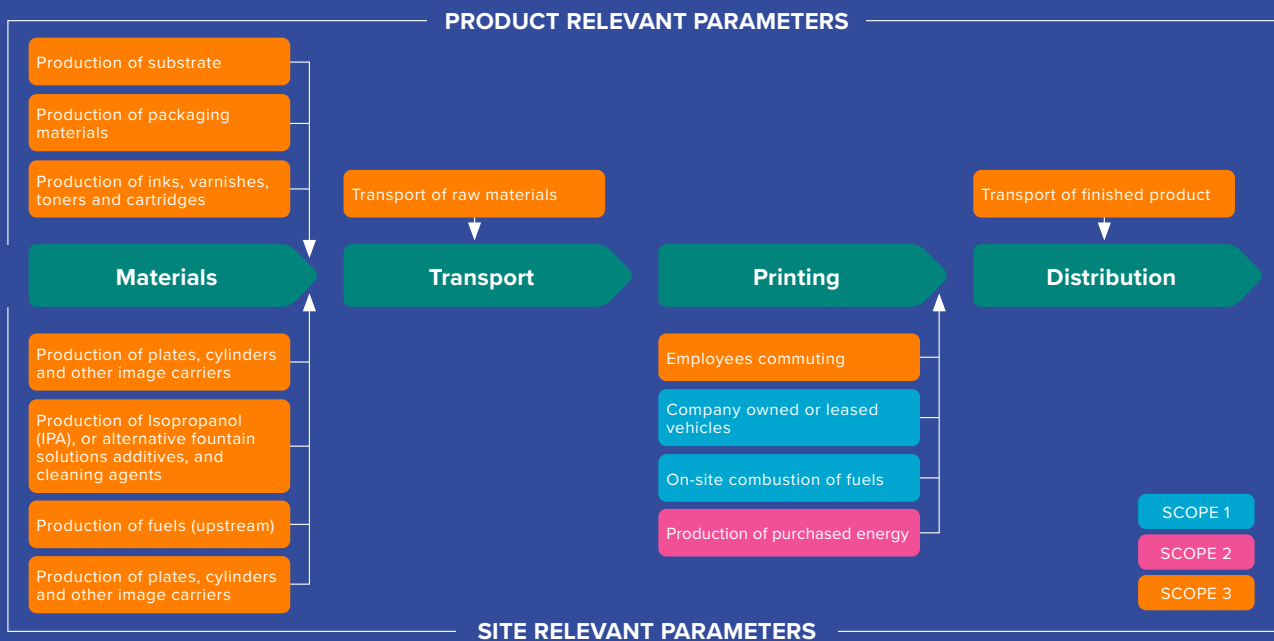
You may also be asked about 'embodied emissions' of products: this is another term used to describe the carbon footprint of a product. [The GHG Protocol](#) includes product footprint standards and tools.

There are also [ISO standards for greenhouse gas management](#).

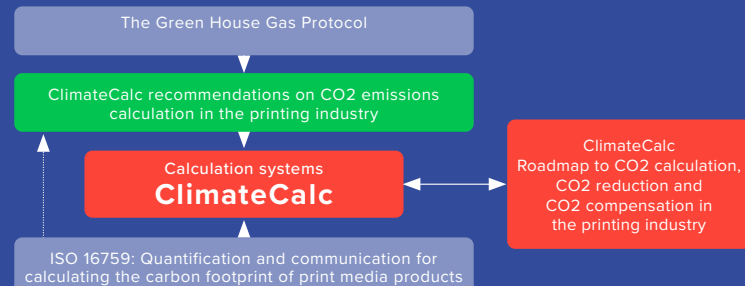
ClimateCalc.eu is based on the Intergraf recommendations on CO2 emissions calculation for the printing industry.

The graphic sector standard defines 13 relevant parameters along the production chain – covering 95 % of the scope as shown below.

The Intergraf recommendations on CO2 emissions calculation in the printing industry



ClimateCalc - the only international carbon calculator for print strictly in line with relevant standards



CarbonQuota is a technology-led carbon management business specialising in the packaging and print sector. Their science-first approach is blended with a deep understanding of productions, materials, and transport for the sector. They work with the value chain from the world's largest FMCG businesses through to manufacturers of product.

They have automated the product carbon footprint process via an API connection into many the sectors MIS applications including EFI, Tharstern and printIQ.