



# Net Zero Insight

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Life cycle thinking is the concept of considering the environmental impact of an organisation, product or service across all areas of its life cycle. In the example of a food product, life cycle thinking involves consideration of all impacts from the cultivation or extraction of raw materials through manufacture and use to final disposal. Using such an approach reduces the risk of “burden shifting”, the idea that making environmental improvements in one area of the life cycle can sometimes result in negative impacts on another area.

Life Cycle Assessment (LCA) calculations are often complex and should ideally be carried out by people who have been suitably trained to undertake the assessment. They use specialist software and adhere to guidance on undertaking and interpreting the data. A carbon footprint is a form of LCA in which the analysis is limited to assessing the impact of emissions that have an effect on climate change (the Greenhouse Gases). This simpler scope makes it easier to undertake such studies, because the scope of assessment can be kept focused. Guidance is also available for completing carbon footprints such as PAS2050 and the ISO standards. Note, that if an assessment is done on an organisation basis it uses different guidance to those completed on a product or service.

Climate change legislation is increasing with targets and requirements about understanding what our carbon footprints are (such as the Carbon Border Adjustment Mechanism etc.) and minimising the use of greenhouse gases. The use of carbon footprints helps identify what changes can be made to move towards Net Zero.

## Are you ready to start moving towards Net Zero?

We all need to start considering the move towards a Net Zero future and undertaking carbon footprints are an important first step. However, there are a few questions that you should ask yourself to ensure you get the most from any calculations and interpretation.

1. Do you need an assessment on your organisation or your product or service?  
Different data will be needed and guidance followed depending on how you answer this important first step. You may decide you need both in which case your data requirements will increase.
2. Do you have a defined process and clear data available? The data required will include aspects such as energy amount and type, raw material requirements, staff numbers, waste amounts, product or service numbers, transportation needs, packaging used. Utility bills are likely to be needed and if your process is still in development this can become more difficult if different “options” are needed to be considered.
3. Who is the audience for the calculation, will it be used for internal or external purposes? If you are going to need to benchmark your organisation, product or service against others it is a good idea to know early on to allow enough time to track down comparisons as not all businesses are sharing their data on this issue.

4. Are you able to do the calculation yourself or do you need consultant support? If you decide you need consultant support it can become confusing as to what support is best. Some consultancies use a software programme to calculate footprints using standard emission factors. Would this suit you or would you like to understand what data has been used?

### What should you ask when seeking Consultant support?

As with any consultant support on environmental issues it helps if the consultant has previous experience in your sector (or similar). This is particularly important with carbon footprints and life cycle thinking because you want to ensure your calculation is benchmarked against your competitors. Key questions to ask therefore are:

1. What experience do you have of undertaking carbon footprints in the sector? Do you have experience in organisation or product level assessments?
2. Do you have access to an emission factor database? And if so, which one(s). Ideally if you are likely to need or want things such as raw material inputs considered from external organisations in your assessment then you will want access to key databases such as Ecoinvent (licence basis).
3. What guidance do you follow for assessments (there can be a variety of responses to this but may help confirm they understand your intended audience).
4. The time and cost requirements obviously!

### What to think about when starting the assessment is underway

Congratulations if you have started the exciting process of calculating your carbon footprint of your organisation, product or service. It is a great first step and can help you comply with upcoming legislation and identify areas for improvement.

Once the calculation process has begun you might want to ask yourself if the data you are looking at will become your “baseline” or do you need to extend your assessment to look at previous years? If you have employed a consultant it would be a good idea to ask them for an indication as to an ideal baseline date for your assessment (it will depend on your audience and needs for the assessment).

Dr Bryony Turner has been completing carbon footprints and life cycle assessments for organisations, products and services for over 20 years. She uses OpenLCA for her assessments (and has experience of SimaPro) and has the Ecoinvent licence and other life cycle databases for use with her clients.

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#### Emission Factors

An activity will emit different greenhouses gases (GHG) and their global warming potential (GWP) represents their impact on the greenhouse effect by converting into a common measure that is CO<sub>2</sub> equivalent. An emission factor is a coefficient that allows conversion of activity data into GHG emissions. Carbon dioxide equivalent (CO<sub>2</sub>e) is the unit of measurement that allows different greenhouse gases to be compared on a like for like basis relative to one unit of CO<sub>2</sub>.

Emission Factor databases are available on a paid and free basis.