

bsi.



● Quantifying the carbon footprint of products with ISO 14067





What is a carbon footprint, and how is it used?

Products, whether goods or services, have an environmental impact in a world facing resource depletion, pollution, and climate change. To create a sustainable future, it is crucial to reduce these impacts, particularly by measuring and mitigating carbon intensity.

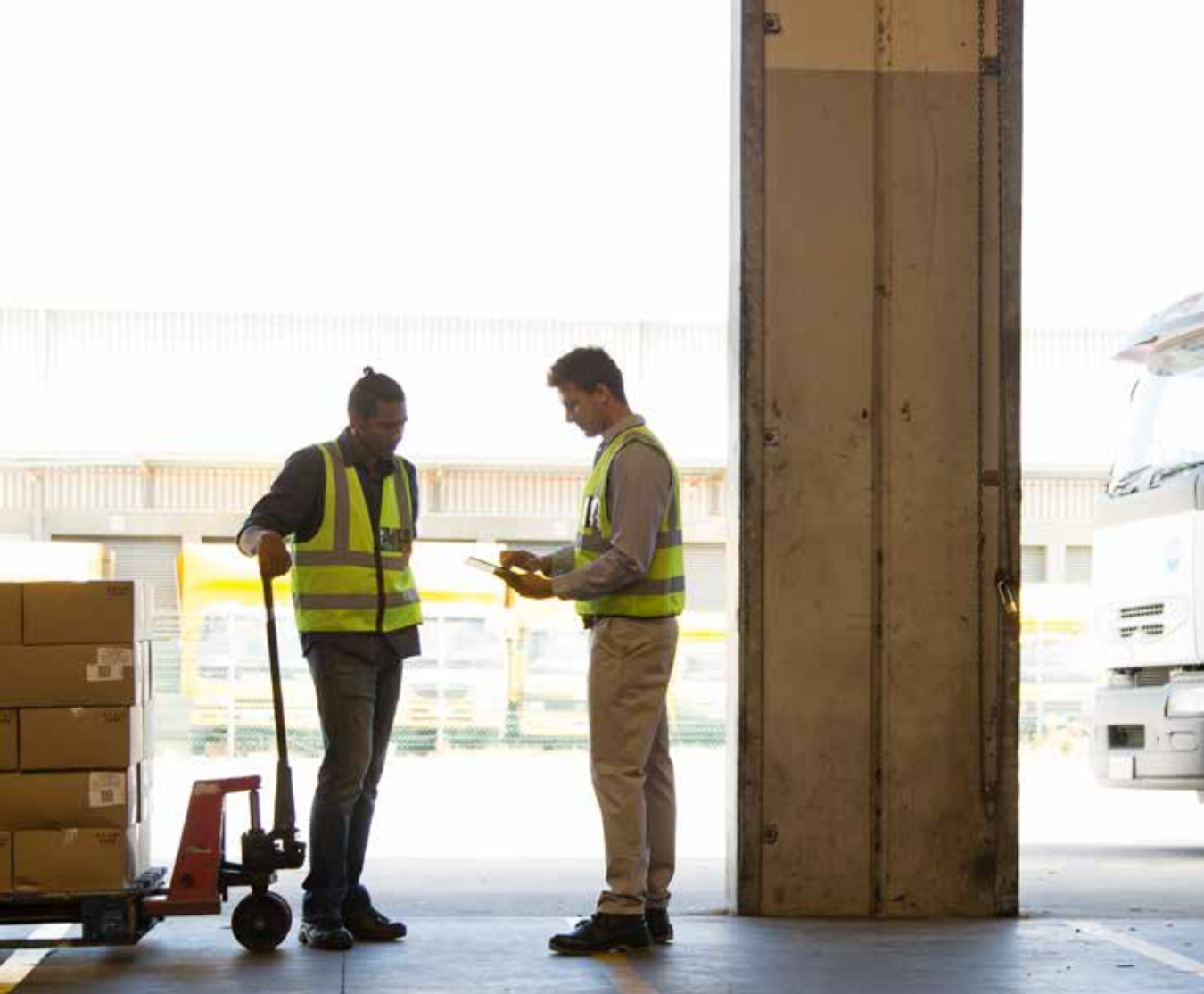
Greenhouse gas (GHG) emissions, which contribute to climate change, can come from various processes. A product's

carbon footprint quantifies the amount of GHG emissions generated or consumed throughout its life cycle. This footprint can be expressed annually or per usage, such as per kilometer traveled for a car or per typical shower for a personal care product. It's important to note that footprint studies are estimations based on available data at a specific time and are not perfect measures.



Why do we need to measure product carbon footprint?

- **Environmental impact:** Understanding the carbon footprint allows us to assess the environmental impact of a product throughout its entire life cycle. It provides insights into the amount of GHG emissions generated during production, transportation, use, and disposal.
- **Climate change mitigation:** By measuring the carbon footprint, we can identify the major GHG emission sources and take targeted actions to reduce them.
- **Sustainability assessments:** Carbon footprint measurement is a crucial aspect of sustainability assessments. It provides a standardized metric for comparing the environmental performance of different products, enabling informed decisions about resource use, energy efficiency, and overall sustainability.
- **Consumer awareness and choices:** Consumers are increasingly concerned about the environmental impact of the products they purchase. Providing carbon footprint information empowers consumers to make informed choices, supporting sustainable consumption patterns and encouraging businesses to adopt greener practices.
- **Policy development and regulation:** Carbon footprint measurement serves as a basis for policy development and environmental regulations. Governments and organizations can use this information to set emission reduction targets, establish carbon pricing mechanisms, and promote environmentally friendly practices within industries.



Calculating the carbon footprint of products (CFP) involves assessing the entire life cycle of the product, from raw material extraction, manufacturing, transportation, use, and disposal.

This comprehensive approach enables organizations to identify areas where they can reduce emissions and make more sustainable choices.

To calculate the CFP, organizations need to gather data on energy consumption, resource input, and other active data, and the life cycle assessment method is used to assess the impact of each unit process within the product system boundary on climate change. This data can then be used to calculate the total GHG emissions associated with the product, expressed in CO₂ equivalent.

Once an organization has quantified the CFP of its products, it can use this information to make informed decisions about how to reduce emissions. For example, it may choose:

- to invest in renewable energy sources or energy-efficient manufacturing processes
- redesign the product to use less energy or fewer materials
- optimize transportation routes to reduce emissions from logistics

In addition to demonstrating a commitment to sustainability, calculating the CFP of products can also provide organizations with a competitive advantage. Consumers are becoming increasingly aware of the environmental impact of the products they consume and are more likely to choose products that have a lower carbon footprint.



ISO 14067 provides a standardized methodology for calculating the CFP, ensuring consistency and comparability between products and organizations.

The specification clearly states that it falls within the framework of “climate change” and most importantly, it also states that GHG emissions offsetting is outside the scope of the specification. ISO 14067 provides guidelines and requirements to:

- Assess the product life cycle.
- Facilitate the monitoring of performance in reducing GHG emissions.
- Have effective procedures in place to report the carbon footprint of a product to stakeholders.
- Better understand the product life cycle and identify GHG emission reduction opportunities.
- Provide product carbon footprint information in a way that promotes changes in consumer behaviour and purchasing decisions.
- Provide correct and consistent information on the carbon footprint of products, and allow for comparison in a free and open market.
- Increase the credibility, consistency and transparency of product carbon footprint quantification, reporting and communication processes.
- Facilitate the evaluation of different design options, raw materials, production and manufacturing methods, recycling, etc., throughout the product life cycle.
- Facilitate the development and implementation of strategies related to GHG emissions during the product life cycle, as well as the identification of improvements in the efficiency of the supply chain.



At BSI, we could support you in your journey of quantifying the carbon footprint of products with ISO 14067 starting with training, verification and reporting.





Quantifying the Carbon footprint of products (ISO 14067:2018) training course

This two-day course will help enable your organization to calculate the carbon footprint of its products.

How will I benefit?

By the end of the course, you will be able to:

- Comprehend the key principles, requirements, terms, and guidelines of ISO 14067 and where it sits within the broader family of ISO standards addressing GHG emissions.
- Develop a process map to calculate a product's carbon footprint.

- Calculate the in-use product carbon footprint for a range of products and the allocated carbon footprint of products.
- Recognize the life cycle assessment process, including the difference between 'cradle to gate' and 'cradle to grave'.

Who should attend?

Anyone involved in quantifying the carbon footprint of products for their organization.

What is included?

- Detailed course notes.
- On completion, you'll be awarded an internationally recognized BSI Training Academy certificate.



Assessment and verification: What is the process?

1. Define business aim and goals.
2. Define project scope and boundary – this includes identifying the relevant life cycle stages, such as raw material extraction, manufacturing, distribution, use, and end-of-life.
3. Data sourcing – to collect data on the energy consumption, material inputs, and emissions associated with each life cycle stage of the product.
4. Calculation of Product Carbon Footprint (PCF) throughout the product life cycle for examples, “cradle to grave”, “cradle to gate”, even “gate to gate”.
5. Reducing your impact – identification of key hotspots and reduction improvement.
6. Communication and reporting.



Reporting on the Carbon footprint of products based on ISO 14067

The carbon footprint survey report

The aim of this report is that the carbon footprint of the product is documented, and therefore, all the considerations made, and procedures used are detailed as indicated in the quantification methodology described above. This ensures that confidence in the carbon footprint results obtained is maximised and compliance with the requirements of ISO 14067 is evidenced.

The carbon footprint disclosure report

This report contains all the relevant information, so that the stakeholders (customers and investors) can unambiguously understand the carbon footprint calculated for the product. The aim is that the information communicated is reliable and understandable.

Carbon footprint communication

The communication of a product's carbon footprint can take various forms:

- external communication report
- monitoring report
- label, or
- statement.

ISO 14067 identifies requirements for each of these four ways of communicating the carbon footprint. Although not mandatory, requirements are identified to establish an accurate, clear and verified Communication Programme.



Using carbon footprints to differentiate from competition

Belu: Sustainability as part of the brand identity

Company

Belu is a mineral water company which differentiates itself through reducing environmental impacts, using all profits to fund clean water projects and promoting and supporting various social initiatives.

Project

Belu has always looked to understand and reduce the carbon impacts of its products and the most recent stage of this journey was to footprint their operations for 2012 and categorize the footprint by their three key product groups, which are bottle material: clear glass, green glass and rPet. These three key product groups allowed the company to understand where the material impacts were without going into too much detail that would drown out the main messages. The project succeeded in:

- Identifying the effectiveness of implemented carbon reduction actions;
- Providing the confidence and support to continue to effectively promote their sustainable performance;
- Identifying the best strategy and methodology for carbon reduction for 2014 and beyond.

Walking the talk – evidence base for sustainability communications

Belu's sustainability credentials are prominently promoted on all communications, whether it is product labels, the company website or press releases. As carbon is a significant part of their sustainability story, it is imperative that their carbon management can withstand the highest scrutiny. Therefore there is a clear and compelling case for the company to invest appropriate resources into the calculation of their footprint, identification of reduction opportunities and effective promotion of their aims and achievements.

Based on Belu's 2021 Impact Report, their sustainability achievements include 69% reduction in carbon intensity since 2010, in line with PAS 2060 (compared to 68% in 2020), successful engagement with both suppliers and customers on the issue of carbon (and associated resource efficiency) to make Belu the customer/ supplier of choice, and various press coverage. Belu continues to minimise the environmental impact by following the principles of a circular economy, maximising use of recycled materials, does not export their packaged drinks, and are 100% carbon neutral to PAS 2060.



Why certify to BSI?

- For more than 100 years, we have led the way in standards. By certifying with BSI you'll demonstrate to your customers, competitors, suppliers, staff and investors that you not only use industry-respected best practices but also choose to work with the organization that developed many of these standards.
- With more than 65,000 certified clients and more full-time assessors than any other certification body worldwide, we are one of the largest and most experienced certification bodies you could ever find. This means you'll get the most out of your assessment and certification with the least disruption and cost to your operations.
- Once you've been certified, we'll visit you on a regular basis to assess whether you continue to conform and are still working to the best practice specifications laid out in the standard

or scheme. We carefully match our assessors' industry experience to your particular needs, so they have exactly the right in-depth knowledge.

The benefits of BSI certification

- It helps manage your social, environmental and financial risks.
- It protects your brand and reputation.
- It helps you demonstrate to stakeholders that your business is run effectively.
- The process of achieving and maintaining the certification helps ensure that you are continually improving.
- The regular assessment process improves staff responsibility, commitment and motivation.
- You'll achieve better overall performance and reduce costs.
- You'll widen your market opportunities and attract more investors.

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