

EPD explained: Turning environmental data into business value

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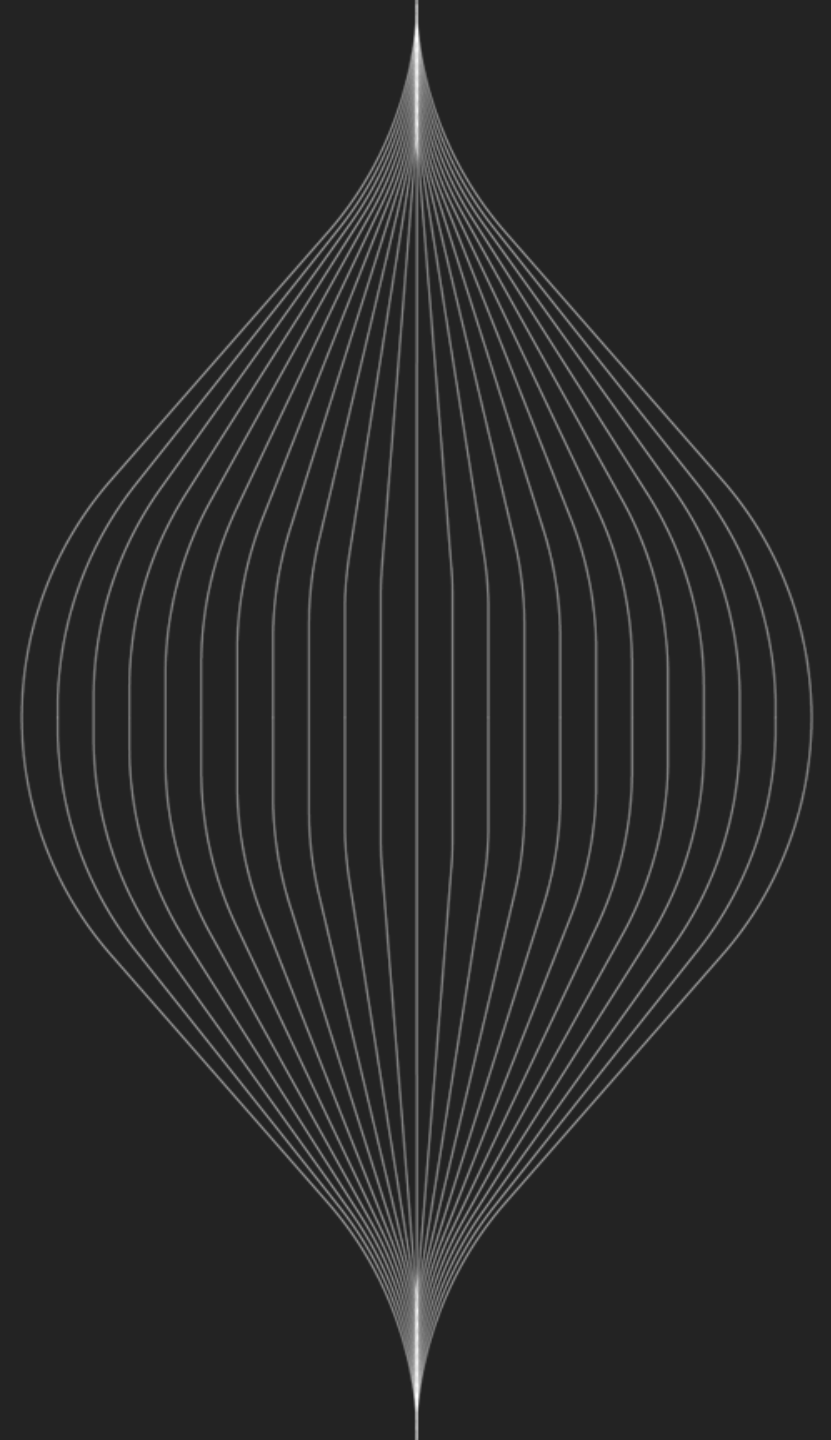
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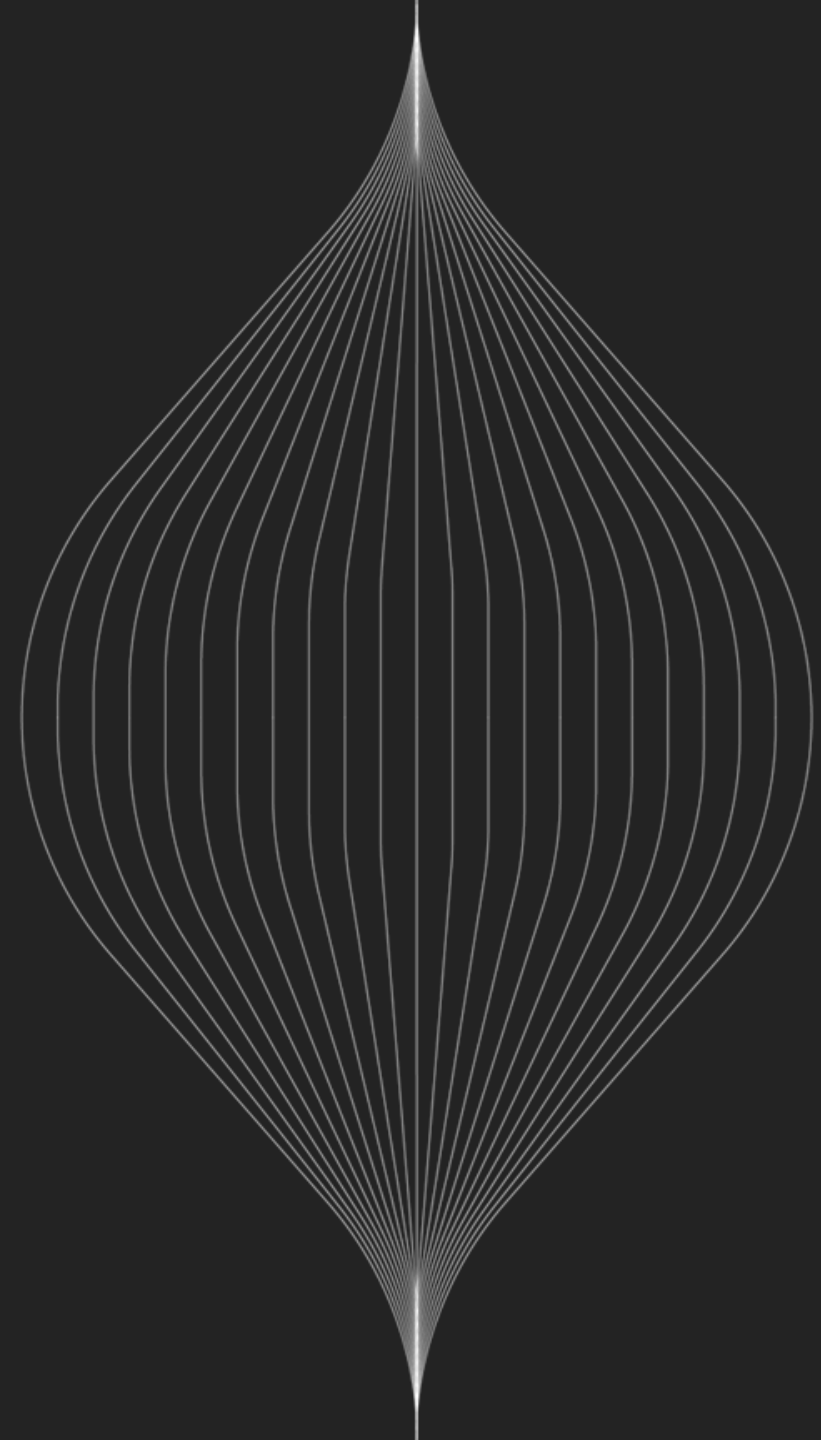
28th May 2025

civitta



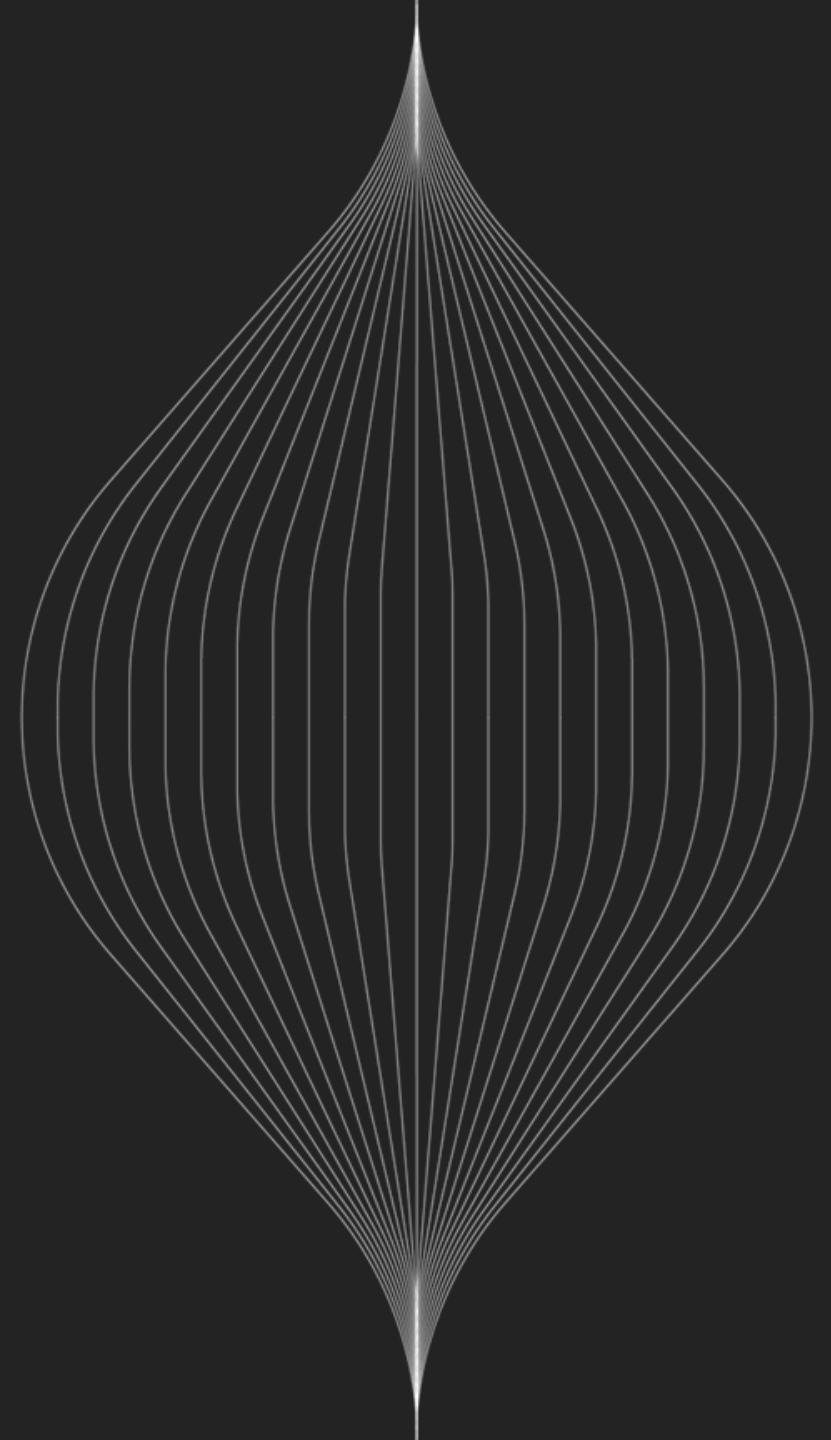
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- 1 About Civitta
- 2 What are EPDs and LCAs?
- 3 How do EPDs differ from organizational carbon footprints?
- 4 Results and interpretation
- 5 Business value of EPDs

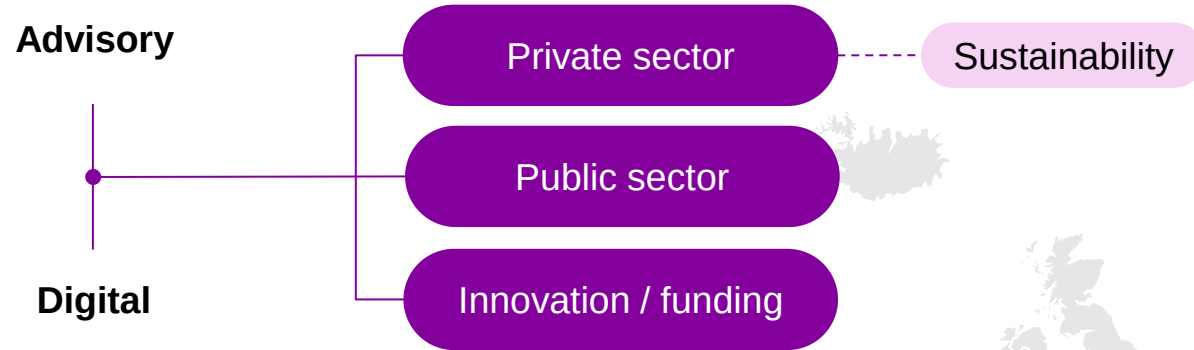


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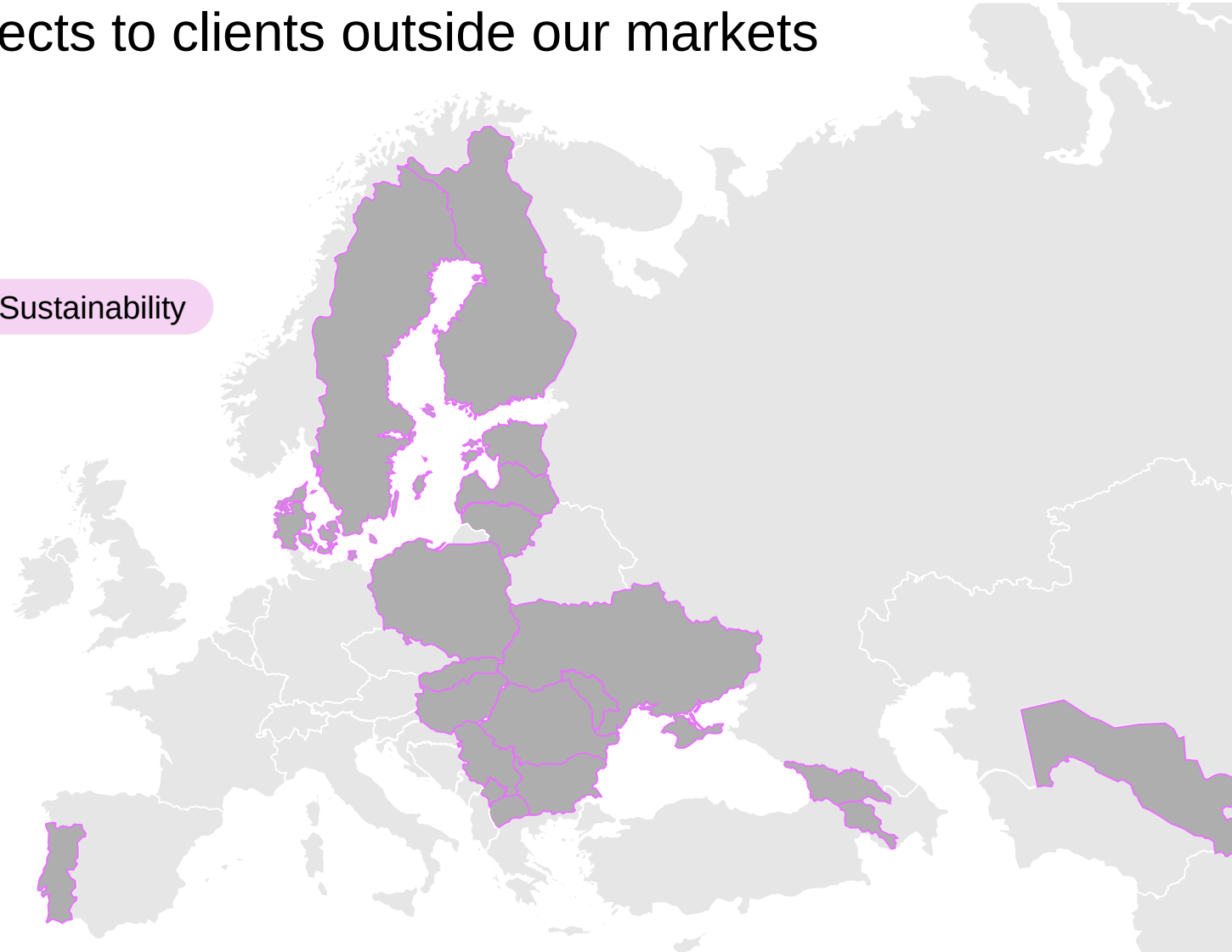
With its inclusive and collaborative approach, Civitta currently covers 21 markets in EU and beyond, delivering many projects to clients outside our markets



21
Countries

30+
Offices

750+
Employees



Our Sustainability Advisory team is a trusted partner for companies across a broad range of industries

Non-exhaustive

Manufacturing



Materials



Forestry, agriculture & food



Logistics & transport



Wood processing



Public



Energy and utilities



Finance



Smart infrastructure



Technology



Other industries



Our experience in environmental analysis covers diverse sectors, with the strongest LCA and EPD references in the building materials sector

Client		LCA	EPD	Organizational carbon footprint	Description	
 Primostar	Manufacturing (<i>metal</i>)	✓	✓		Life Cycle Assessment followed by Environmental Product Declaration for metal sheet water stop	2024 Estonia
 RAITWOOD	Manufacturing (<i>wood</i>)	✓	✓	✓	Life Cycle Assessment followed by Environmental Product Declaration for softwood products, carbon footprint	2024, 2025 Estonia
 ECOBIRCH	Manufacturing (<i>wood</i>)	✓	✓		Life Cycle Assessment followed by Environmental Product Declaration for glulam timber boards	2023 Estonia
 ETS NORD	Manufacturing (<i>steel</i>)	✓	✓		Life Cycle Assessment followed by Environmental Product Declaration for steel ventilation ducts	2023 Estonia
 Voller	Manufacturing	✓			Life Cycle Assessment for wooden acoustic panels	2025 Estonia
 omniva	Logistics			✓	Organizational carbon footprint analysis in scope 1, 2 and 3, compliance with EU ESG reporting regulations	2023 Estonia
 CSUB	Manufacturing			✓	Organizational carbon footprint analysis in scope 1, 2 and 3 for a subsea composite constructions manufacturer	2023, 2024, 2025 Norway



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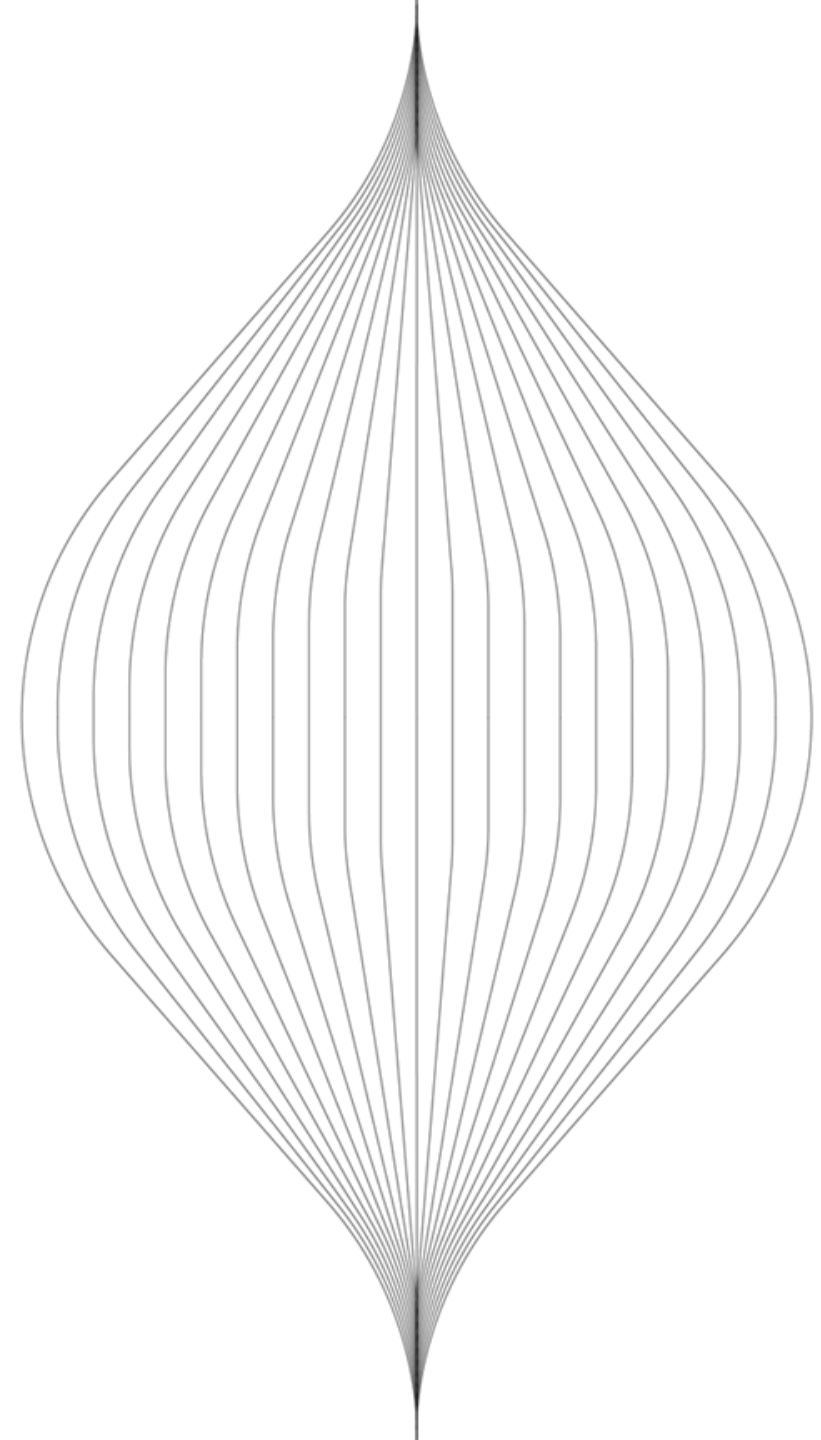
More than 7 years of professional experience within sustainability, carbon calculations (EPDs, LCAs, GHG calculations) and climate proofing assessments.

Selected project experience:

- Primostar EPD for metal sheet water stop product
- Combiwood EPD for the wooden mouldings
- VNK (Novotrade Invest) LCA for the hydrocarbon resins
- Numerous Climate Proofing, GHG assessments and DNSH assessments
- In total, ~50 projects delivered

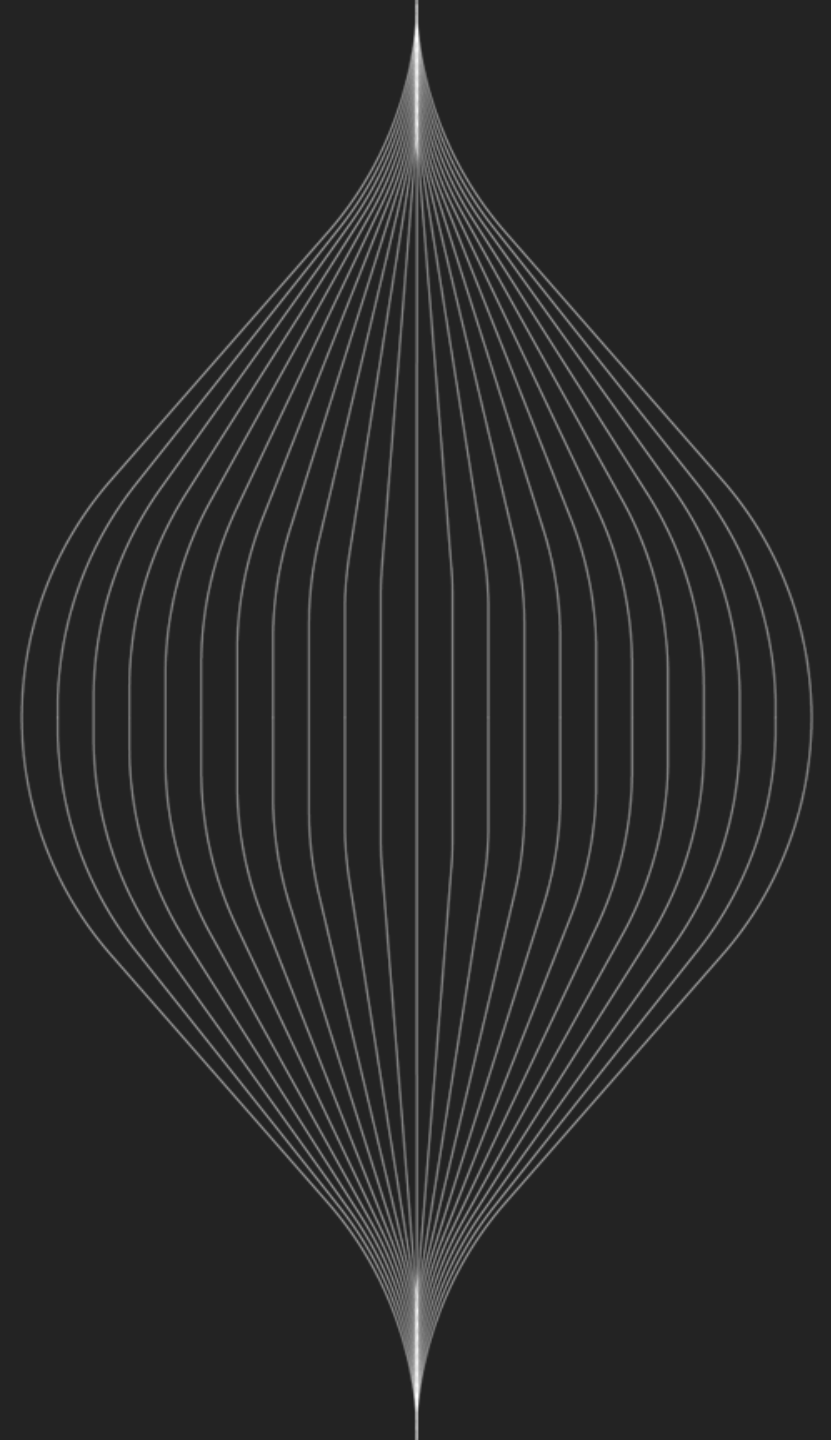
Previous experience and education:

- BSc and MA in Environmental Technology, University of Tartu in Estonia
- Life Cycle Assessment course, Tallinn University of Technology

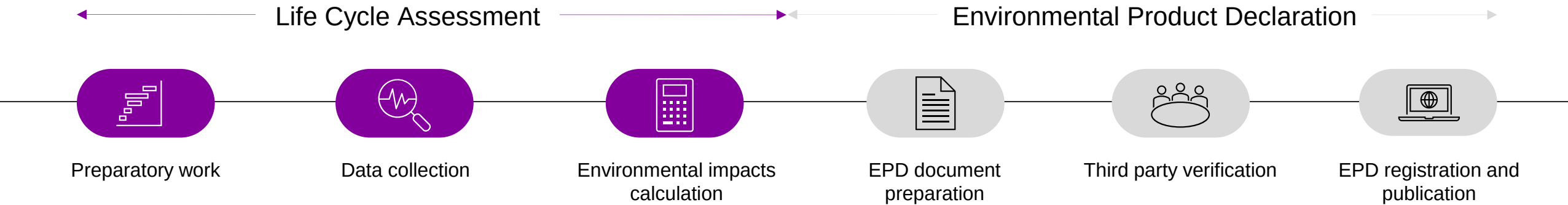


Agenda

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LCA is an analysis of a product's environmental impacts, while EPD is a verified documentation of the results



A analysis of a product's environmental impact, taking into account the entire life cycle (from raw materials -> manufacturing of final product -> end-of-life)

In-depth analysis calculating product impacts

For internal use, can contain sensitive information

A document, verified by a third party, presenting the results of the LCA

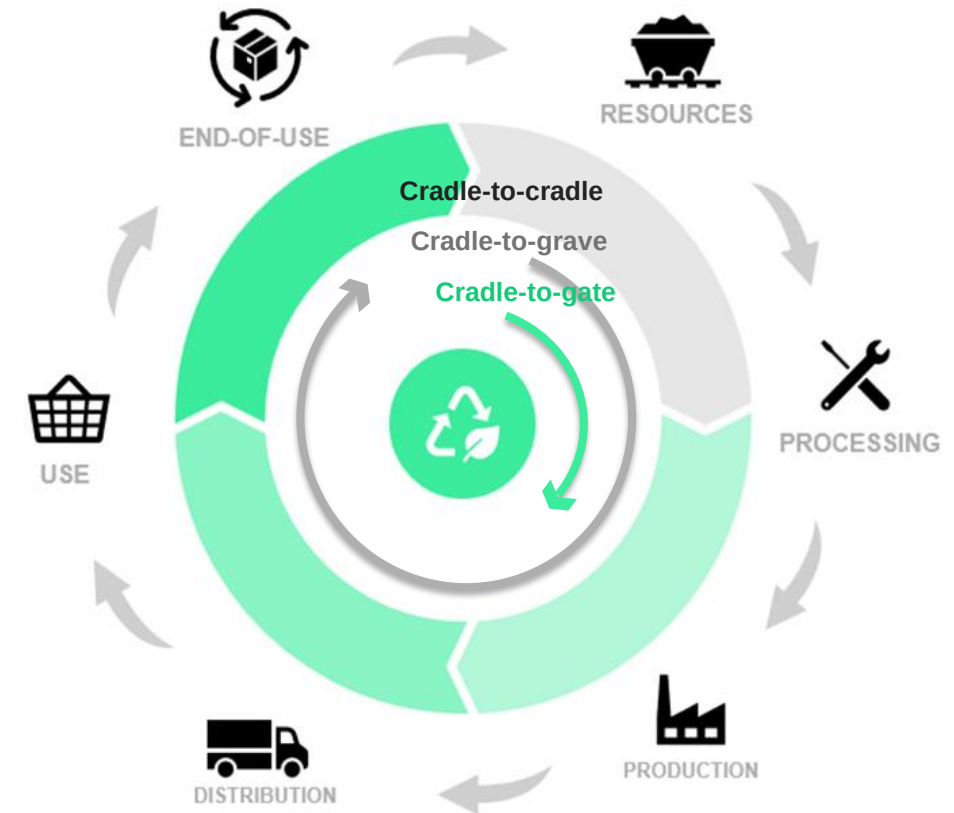
Clear documentation to communicate impacts with results and assumptions

For external use, public information

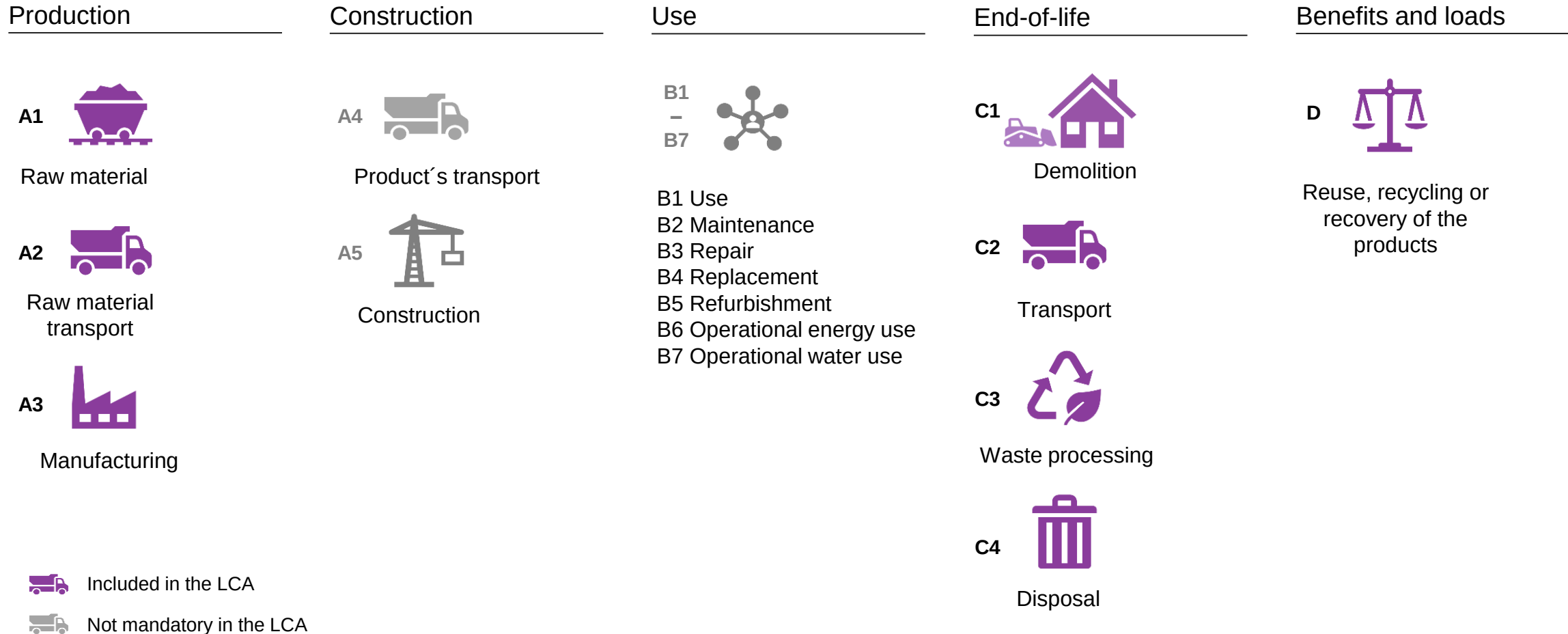
There are different ways to conduct the life cycle assessment, depending on the scope of the value chain included

In brief, EPD information:

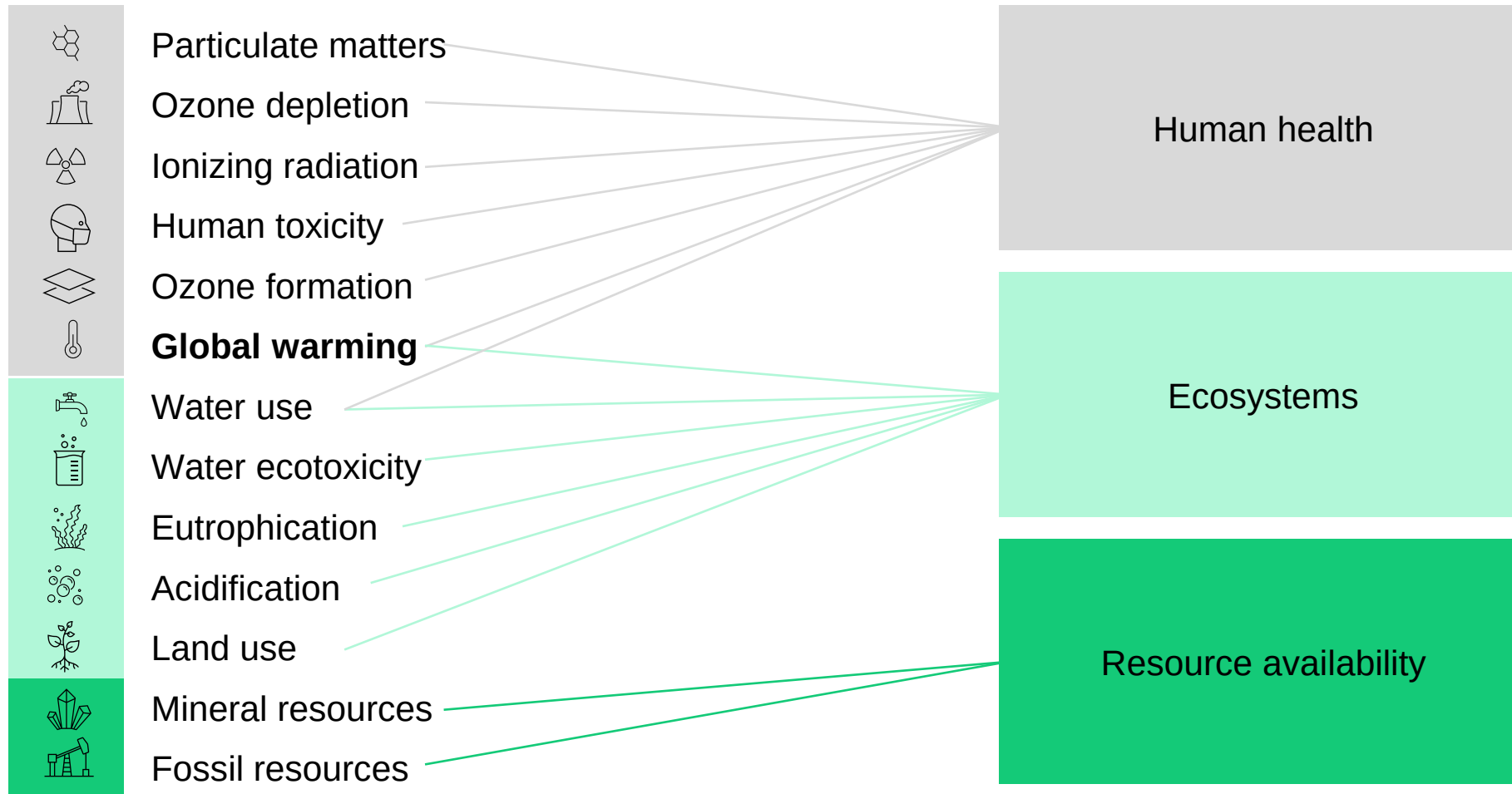
- EPD certificate is valid for 5 years.
- Standards: ISO 14040/14044 (LCA) and ISO 14025 and EN 15804+A2 (construction product EPDs).
- Software: SimaPro and One Click LCA.
- Data sources: Ecoinvent database, scientific articles and relevant reports as needed.
- EPD library at programme operator's page:
EPD international: <https://www.environdec.com/library>
RTS: <https://cer.rts.fi/en/rts-epd/search-for-rts-epds>
- Results are numerical, allowing similar products to be compared with each other by declared unit (e.g., m2, m3, t, kg).
- Mandatory scope for EPD is "cradle-to-gate" with options
→ A1-A3; C1-C4; D.



Life cycle assessment for EPD must involve modules from the production, construction, end-of-life and disposal stages



During life cycle assessment numerous indicators impacting human health, ecosystems and resource availability are analyzed



To better contextualize, imagine assessment inputs as food components that each consume resources

A1-A3 Data collection



Shopping List

- ☒ Flour
- ☒ Eggs
- ☒ Butter
- ☒ Sugar

Bill of Materials

- ☒ Scrap steel
- ☒ Raw steel
- ☒ Hot rolling
- ☒ Cold rolling

A1



Transport

A2

One
Click 

Resources

- ☒ Electricity
- ☒ Water & spray for cleaning

Resources

- ☒ Electricity
- ☒ Water & spray for cleaning
- ☒ Gas for heating

A3

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Organizational carbon footprint assesses greenhouse gas (GHG) emissions from company operations and activities from its upstream and downstream value chain

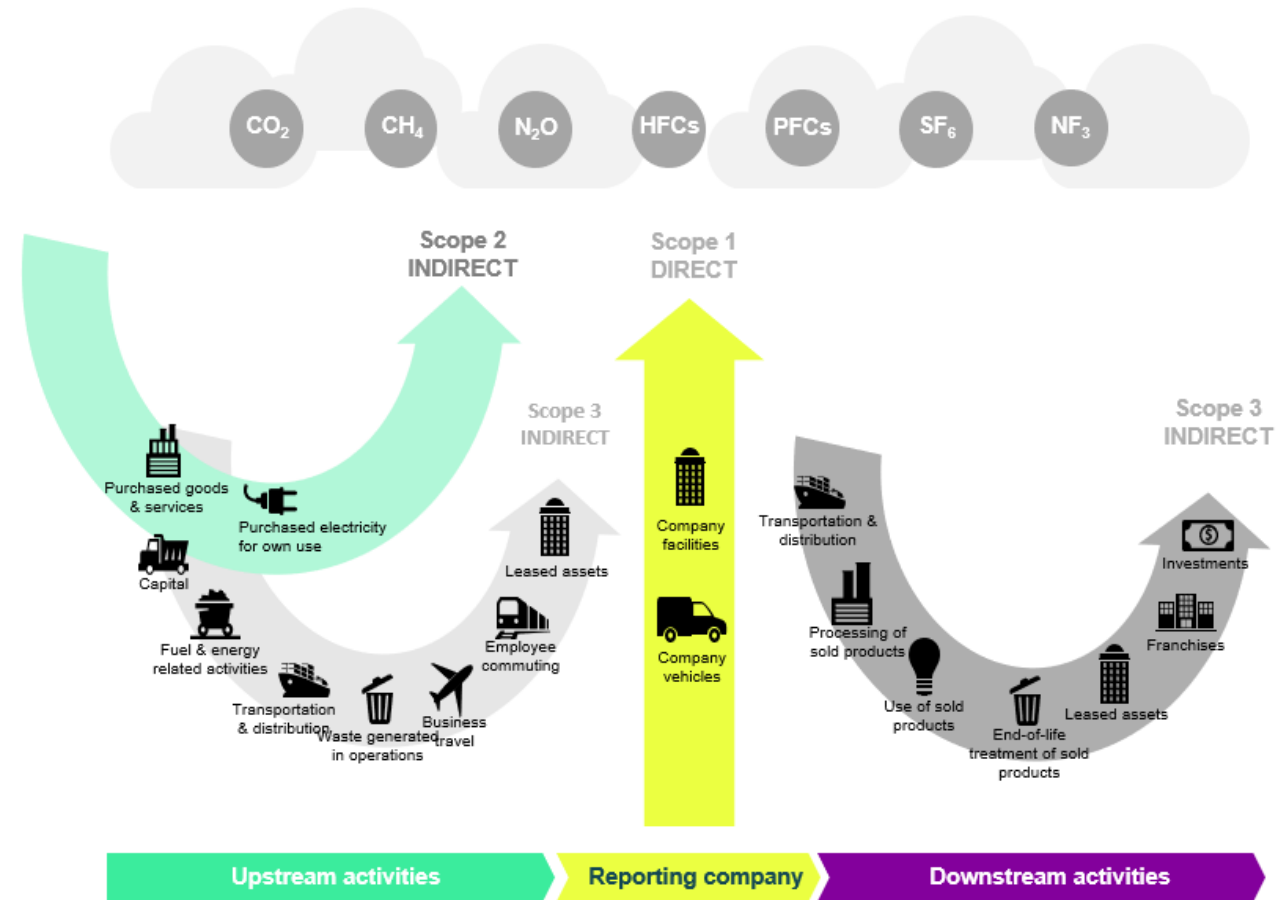
The impact of an organization's activities is divided into 3 scopes:

SCOPE 1 includes direct GHG emissions from sources under the company's control (e.g., producing electricity/heat at company territory, company cars).

SCOPE 2 includes GHG emissions from purchased electricity, heat, steam and cooling.

SCOPE 3 includes the remaining indirect GHG emissions that occur in the organization's value chain.

We evaluate the carbon footprint of the organization's activities following Greenhouse Gas Protocol standards.



EPD and organizational carbon footprint measure the same type of impact – GHG emissions – but consider different assessment boundaries

EPD

- 01** Measures **product** footprint throughout its **life cycle**
- 02** Follows the ISO 14040, ISO 14044 (LCA) and EN 15804 standards and calculates emissions per unit of product
- 03** Shows the information and environmental impacts of a specific product
- 04** Required by different European countries and green certificates (buildings)

Organizational carbon footprint

- 01** Measures total **company** footprint in one year
- 02** Follows GHG Protocol standard and includes 3 scopes: direct emissions, indirect emissions from energy purchase, and indirect emissions from the value chain
- 03** Accounts for all processes involved with the organization, thus shows the overall GHG emissions performance of a company
- 04** Required for ESG disclosures within annual reports, e.g. CSRD

Organizational carbon footprint, LCA and EPD are all interrelated – creating a holistic set of environmental analyses, when making informed business decision

01

Organizational carbon footprint calculation

is an analysis of the amount of **greenhouse gases** released to the air directly by an organization and indirectly through its value chain.

They are categorized into scope 1, 2 and 3 emissions, which is a way to show where the organization's emissions are coming from.

02

Life Cycle Assessment (LCA)

is the scientific method to measure the **environmental impacts** of the product's life cycle stages.

It allows a company to analyze the impacts of a product/service considering all the processes from raw material acquisition to the end of life.

03

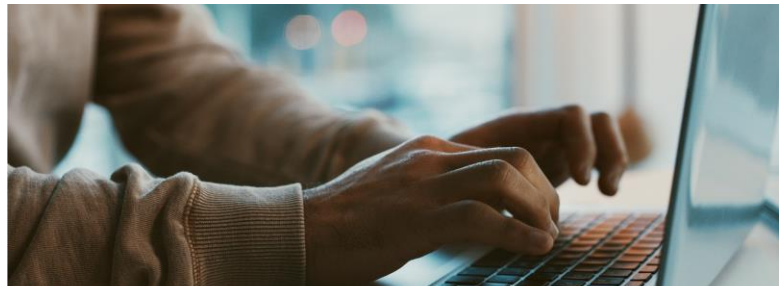
Environmental Product Declaration (EPD)

is based on the LCA calculations of a product and it provides information on **its environmental impacts**. EPD is in accordance with the ISO and other standards.

EPD documentation is verified by an independent party to ensure data reliability.

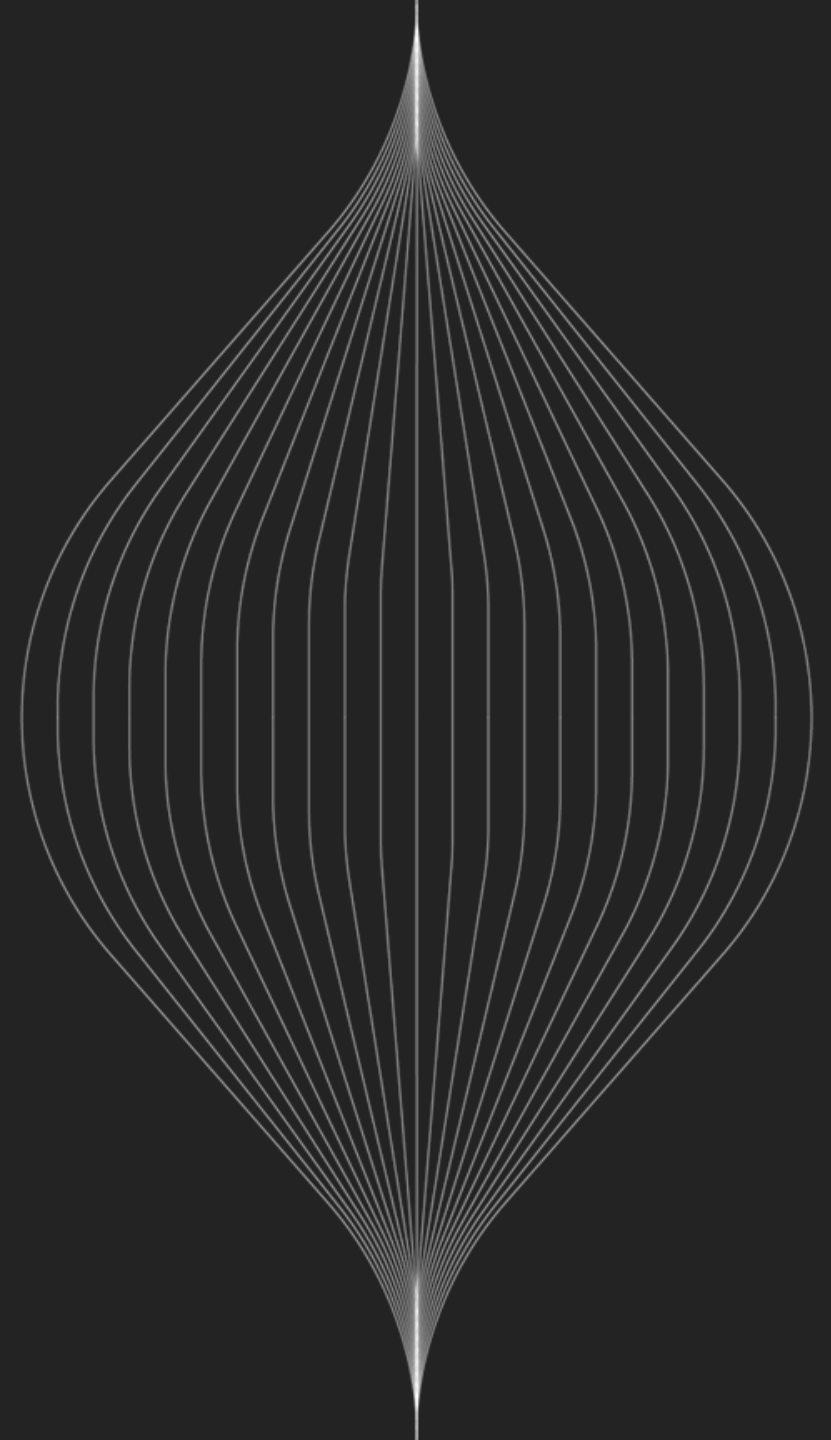
Carbon footprint is one of the indicators of the LCA

EPD is a certified document of the findings of the LCA



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LCA and EPD results can be compared to a food product label:

Table 14. The results from the LCA showing the environmental impacts for 1 m natural wooden mouldings

NATURAL MOULDINGS					
Indicator	Unit	A1	A2	A3	Tot.A1-A3
GWP-fossil	kg CO ₂ eq.	7,00E-02	4,43E-02	8,55E-02	2,00E-01
GWP-biogenic	kg CO ₂ eq.	-9,01E-01	2,84E-05	3,76E-01	-5,24E-01
GWP-luluc	kg CO ₂ eq.	1,02E-03	2,01E-05	6,51E-05	1,11E-03
GWP-total	kg CO ₂ eq.	-8,29E-01	4,44E-02	4,62E-01	-3,23E-01
ODP	kg CFC 11 eq.	2,00E-09	9,93E-09	1,57E-08	4,57E-08
AP	mol H ⁺ eq.	5,82E-04	4,71E-04	9,06E-04	1,96E-03
EP-freshwater	kg PO ₄ ³⁻ eq.	1,98E-04	5,40E-05	1,02E-04	3,54E-04
EP-freshwater	kg P eq.	3,42E-05	2,51E-06	8,64E-06	4,54E-05
EP-marine	kg N eq.	2,11E-04	1,25E-04	1,81E-04	5,17E-04
EP-terrestrial	mol N eq.	2,25E-03	1,39E-03	1,99E-03	5,62E-03
POCP	kg NMVOC eq.	8,18E-04	3,79E-04	5,71E-04	1,77E-03
ADP-minerals&metals*	kg Sb eq.	2,39E-07	1,32E-07	1,28E-07	4,98E-07
ADP-fossil*	MJ	1,17E+00	6,47E-01	1,20E+00	3,02E+00
WDP	m ³	1,70E-02	1,75E-03	7,06E-03	2,58E-02
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, fraction of nutrients reaching terrestrial end compartment; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion potential for fossil resources; WDP = Water depletion potential				

1. Serving Information

2. Calories

3. Nutrients

Nutrition Facts	
4 servings per container	
Serving size	1 cup (227g)
Amount per serving	
Calories	280
% Daily Value*	
Total Fat 9g	12%
Saturated Fat 4.5g	23%
Trans Fat 0g	
Cholesterol 35mg	12%
Sodium 850mg	37%
Total Carbohydrate 34g	12%
Dietary Fiber 4g	14%
Total Sugars 6g	
Includes 0g Added Sugars	0%
Protein 15g	
Vitamin D 0mcg	0%
Calcium 320mg	25%
Iron 1.6mg	8%
Potassium 510mg	10%
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

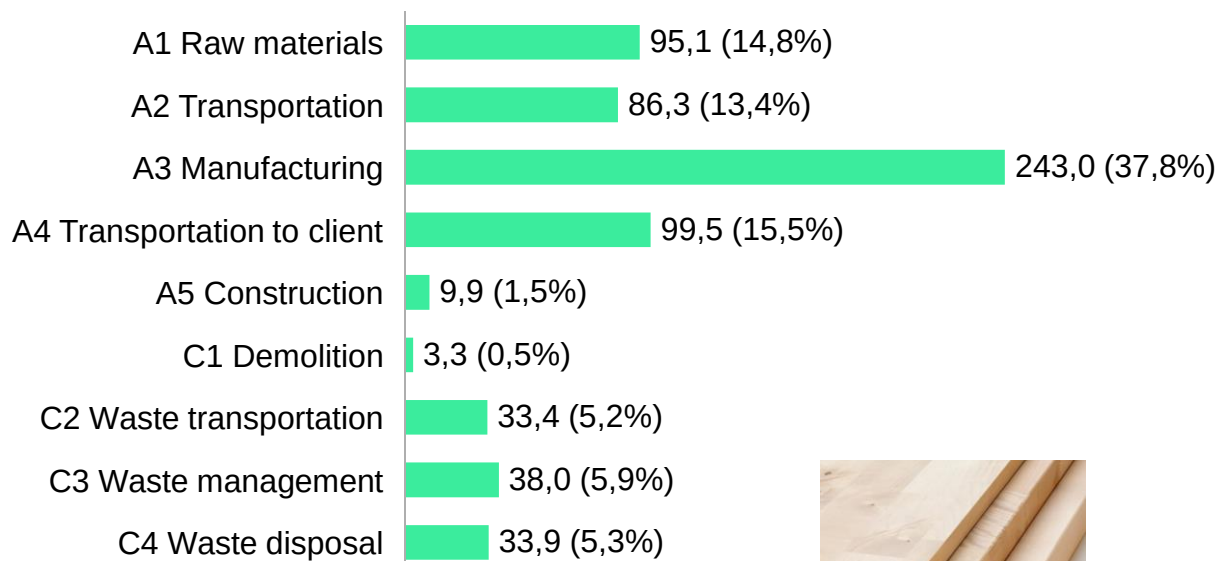
*In EPD you need to write results in a scientific way:

7.00E-02 → decimal point moves to the left 2x → 0.07 kg CO₂e

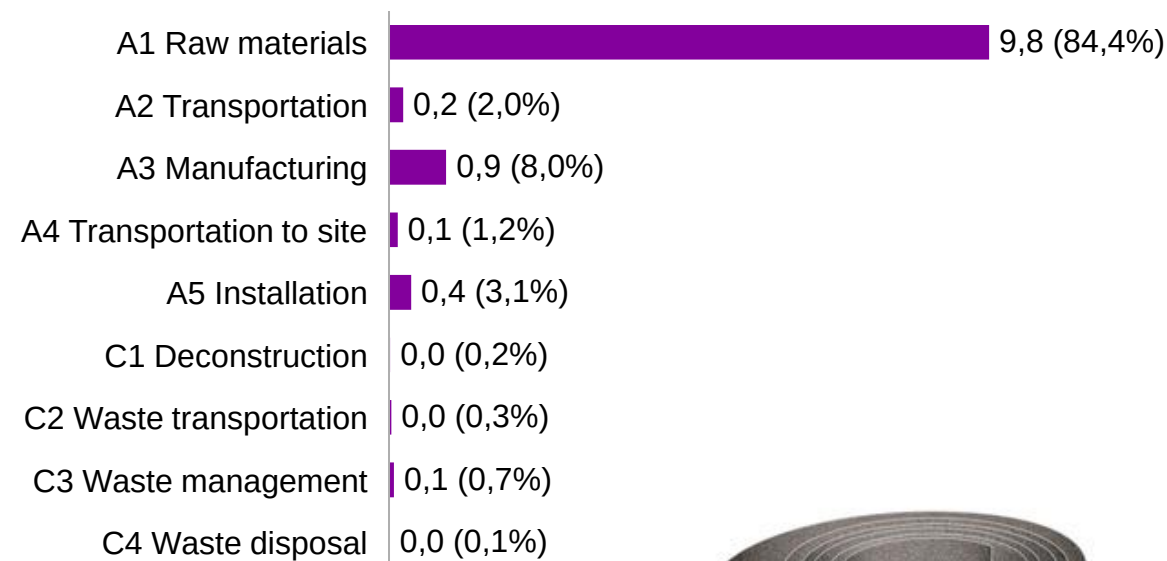
1.00E+01 → decimal point moves to the right 1x → 10 kg CO₂e

EPDs can clearly point out which aspects contribute the most regarding the product's carbon footprint

Ecobirch EPD: Glulam Timber Boards environmental impact (GWP-total), [EPD report link here](#)

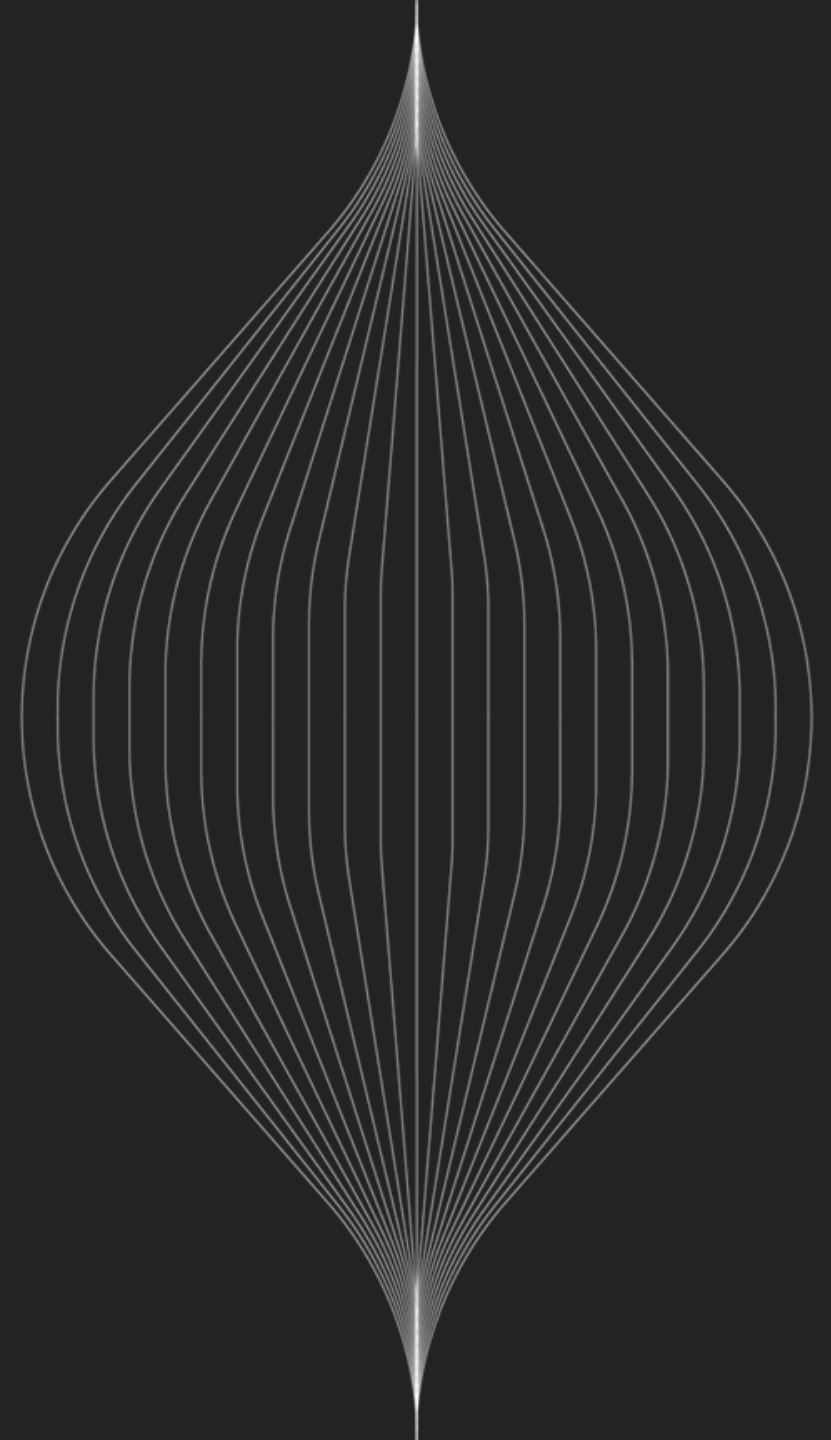


Primostar EPD: WPM® Metal sheet environmental impact (GWP-total), [EPD report link here](#)



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Conducting an environmental assessment of your product can bring numerous strategic, operational and marketing-related benefits

What are the benefits to your company?

Use cases:

- ✓ **Strategic** | Support long-term positioning, compliance, innovation, risk management and access to finance
- ✓ **Operational** | Improve management of value chain, production processes and ESG reporting
- ✓ **Marketing** | Gain market access and product differentiation

Enhanced access to EU public procurement



EPDs enable the comparison of the environmental impacts of different products. They can be a door opener to certain public tenders in the EU, as the requirements for green procurement are growing. The recently announced Clean Industrial Deal will substantially redirect public investments towards products certified against environmental criteria.

Competitive advantage and market access



A certified product is a market differentiator that constitutes a strong competitive advantage and may enable you to access new markets or customer segments.

Increased visibility and credible marketing



Potential clients will be able to find your company in the EPD database and your environmental claims will be supported by third-party verified data.

Value chain management



Strengthen relationships by proactively providing customers with your product's environmental data.

Sustainable product strategy and innovation



Data from the LCA can help your organization make better product design choices and improve production processes.

EPD obligations for construction products in the EU and EEA countries vary but are expected to increase

01

Mandatory EPD requirements

- France
- Germany
- Netherlands
- Denmark
- Sweden
- Finland
- Iceland

02

EPD integrated in public procurement

- Italy
- Spain
- Belgium
- Norway

03

EPD encouraged on voluntary basis

- Austria
- Ireland
- Portugal
- Luxembourg

04

Limited/no formal adoption of EPD*

- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Estonia
- Greece
- Hungary
- Latvia
- Lithuania
- Malta
- Poland
- Romania
- Slovakia
- Slovenia
- Liechtenstein

*While these countries may not have formal EPD requirements, some industries or companies within them may adopt EPDs voluntarily or as part of international supply chains.

LCA news in Estonia and Finland – in Estonia from 2025 you must conduct LCA for new buildings



Hannamary Seli • 2nd

Head of Sustainable Construction | Former Thermal Power E...
1yr • Edited •

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At Nordic Climate Forum for Construction I gave an overview about Estonia's exciting journey toward a more sustainable future. [Kliimaministeerium / Ministry of Climate of Estonia](#) and the forthcoming [#climate](#) law are clear indicators of our commitment to [#sustainability](#). 🌍

Estonia is taking significant steps to address the climate impact of [#buildings](#). Specifically for [#construction](#), Estonia will introduce a carbon footprint calculation requirement for new buildings in 2025. 🏗️ 🏠

[Estonian LinkedIn post](#)



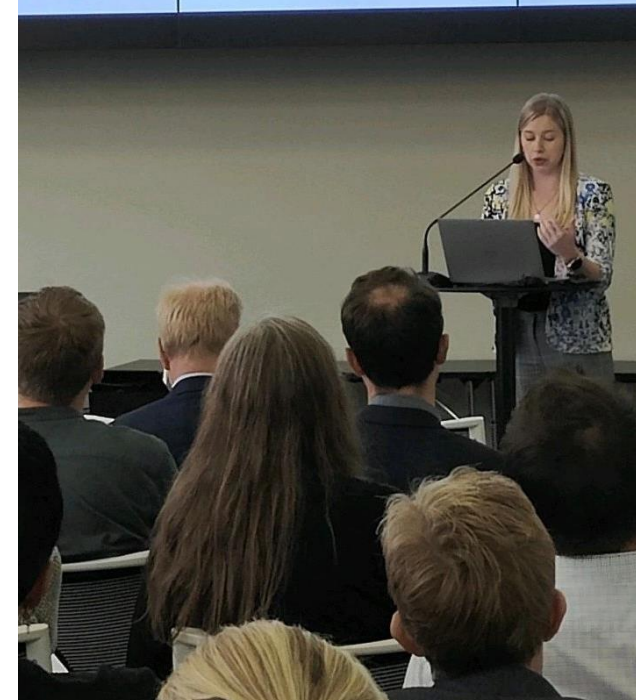
Maria Tiainen • 3rd+

Special Advisor, Ministry of the Environment
2mo • Edited •

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The regulation on the carbon footprint limit for new buildings is now open for comments. Comments can be submitted until 5 May 2025. ✨ Carbon footprint limits can be used to reduce greenhouse gas emissions during the life cycle of new construction and are therefore an effective tool in mitigating climate change. <https://lnkd.in/d4-7vfNA> [Finnish LinkedIn post](#)

Updates from Estonia	
STUDIES	2022: Initial carbon footprint calculation methodology published 2023: 'Estonian Construction Roadmap 2040' introduced by the industry
POLITICAL CHANGES	2023: New government's action programme for 2023-2027 approved 2023: Ministry of Climate was founded on July 1
POLICY UPDATES	2023: Climate Law is being developed 2024: Climate Law presented to the Parliament in Sept 2024 2024: Revision of regulations
POLITICAL DECISIONS	2025: Introducing mandatory LCA calculation for new buildings 2030: Achieving 100% renewable electricity target 2050: National Goal of Climate neutral Estonia



Let's sum up

Key takeaways

- LCA is an analysis of a product's environmental impacts, while EPD is a 3rd party verified documentation of the results
- Global warming is a key indicator from the LCA which will allow you to communicate the carbon footprint of your product in an EPD
- An EPD communicates the carbon footprint of your product, while organizational carbon footprints are broader in scope and consider GHG emissions related to a company's operations and activities in the value chain
- Increasing sustainability expectations from society, governments and investors are increasing demand for product-level environmental data from companies and creating new business opportunities
- Conducting an environmental analysis of your product can bring numerous strategic and financial benefits to your business

Reflection questions

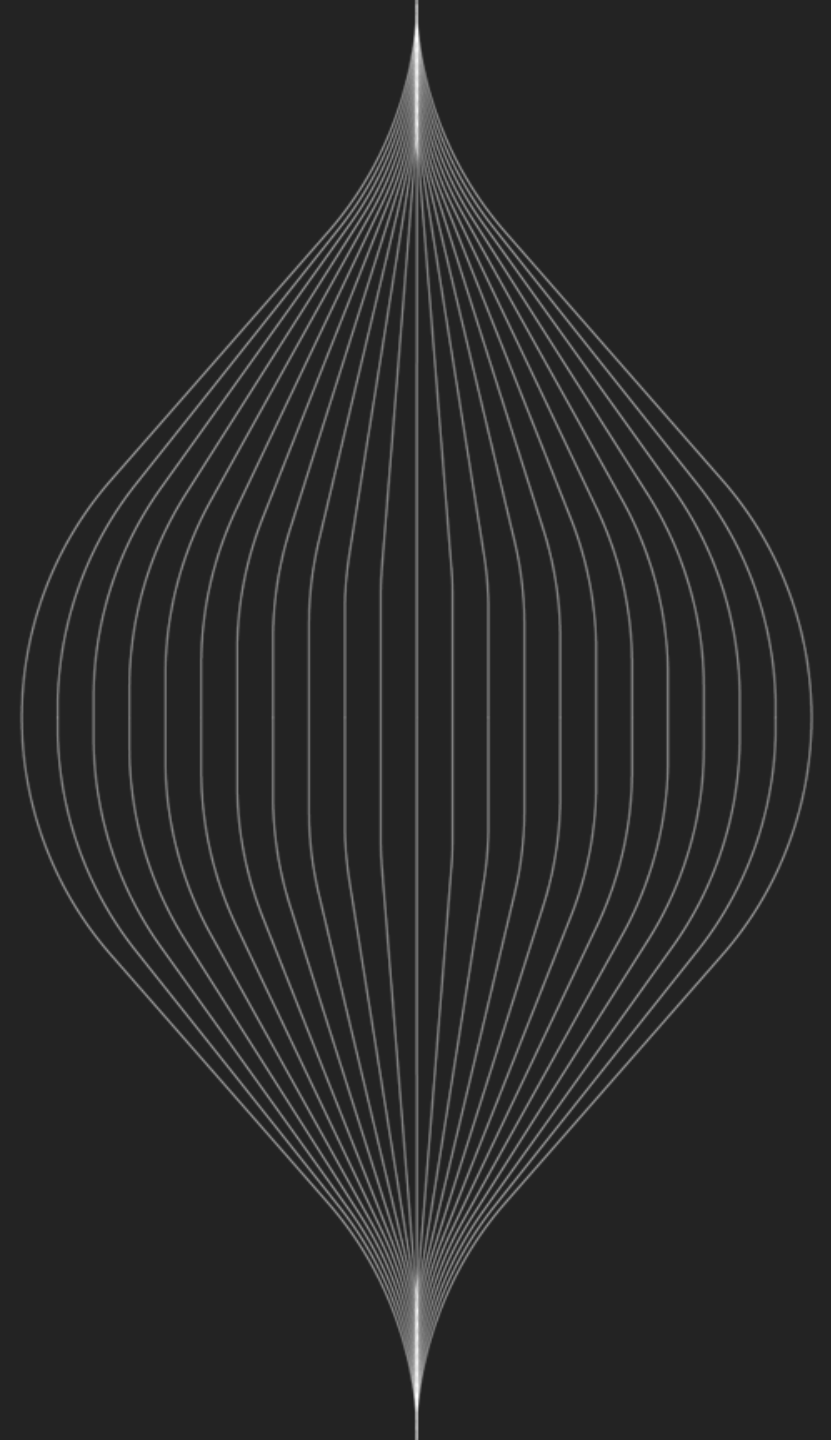
- How prepared is your business to meet growing regulatory / investor / customer demands for product-level sustainability data?
- Could EPDs help you win more bids, qualify for certifications, or meet green procurement criteria?
- Are you considering expanding sales to markets where there are stricter environmental requirements for products?
- What would be the first product in your portfolio that could benefit from an EPD?

Find out your product's environmental impact and build on your competitive advantage with an EPD certified product!

Our experts are happy to answer your questions and give you appropriate advice.

Contact us: Riin Kaldma
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Question **the answer**

