



foresight

MANAGEMENT

Life Cycle Assessment

WHY

A Life Cycle Assessment (LCA) is a framework to evaluate the environmental impact of a product. An LCA considers the effects of extraction, manufacturing, processing, distribution, use, and end of life of a product. In the same way an energy model can influence a building's design, completing an LCA allows product designers to weigh the pros and cons of various materials, elements, and supply chains based on their potential impact on the environment. It can be a tool for making strategic, informed choices before manufacturing a product.

In other cases, an LCA acts as an external tool for marketing, reporting, or certifications. If intentional decisions were made to reduce carbon emissions or remove a particular chemical from a product, a third party must verify these claims before a company markets them. An LCA will provide the data necessary to complete an Environmental Product Declaration (EPD), allowing a company to celebrate those design decisions in an impact report or the marketplace. Whether you are looking to make more informed decisions on your next project or verify your claims for an existing one, our sustainability experts are available to collect, assess, and analyze your product's impact.

HOW

Foresight focuses on making LCAs usable and actionable. We prioritize primary data over datasets and begin by understanding the exact materials of a product and manufacturing steps. Our team will assist in generating a process flow map to outline supply chains and components down to raw material extraction. From this information, we will create a bill of materials for the product. Once we understand each piece of the product's progression and stages, we collect data from every level. We work through a hierarchy to gather as much reliable data as possible, from water consumption to energy usage to factory emissions. With this information, we can predict your product's overall environmental impact. If you are in the design stage of a product, we can compare the environmental impact of different components or materials to help guide your design decisions toward more eco-friendly materials. If your product is complete, we can compile the information into an LCA to seek an EPD from a third party.

BENEFITS

- Informed design decisions
- Transparency for stakeholders
- Benefits marketing efforts

DON'T TAKE OUR WORD FOR IT...

A GUIDE TO LIFE CYCLE THINKING

FREQUENTLY ASKED QUESTIONS

How long does it take to complete?

This depends on the number of levels in your supply chain and their responsiveness. On average, it takes six months to complete a Life Cycle Assessment if we start from scratch with data collection.

What does it cost?

This price for an LCA depends on the project's scope, but ranges from \$10,000-\$50,000.

Do we have to complete an LCA for all of our products or can we select a representative sample?

Based on your goals, we can create a representative sample of your products and complete an LCA on the sample instead of a specific product.

How far back into the supply chain do we need to go for data?

We will collect data as deep into your supply chain as possible, preferably to raw material extraction.

Do we have to obtain data from the supply chain?

Our team will engage with your supply chain by identifying personnel at each location, contacting them, and sourcing the data we need for your assessment.

How do we collect the data from the supply chain?

With our framework, we know the type of data needed to complete the assessment, where to find it, and who to ask. Collecting data is our specialty!

SAMPLE ENVIRONMENTAL PRODUCT DECLARATION

CASE STUDY

Client Profile

Commercial Retrofitting Company

Before Foresight

When retrofitting buildings into offices or medical suites, assuring privacy can be an issue. This company developed an environmentally conscious sound barrier for curtain walls in commercial retrofitting projects. To market the renewable aspects of their product, they needed an Environmental Product Declaration. Faced with the need to engage several supply chain levels to retrieve or estimate complex data, they reached out to Foresight's sustainability team.

After Foresight

Our team of sustainability experts worked with them to map out the product's genesis from extraction to end of use. From there, we created a bill of materials for the product and systematically collected environmental impact data from each step of their supply chain, including internal manufacturing operations, transportation, use, and ultimately, disposal. We synthesized this data to give them a holistic view of their product's footprint throughout its lifetime. With their team, we organized and presented the information for third-party verification, allowing them to market their product's renewability.



To learn more about how your business could benefit from a Life Cycle Assessment, contact:

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