Electronics
Case study Daisalux

DAISALUX is dedicated to the design, manufacture and commercialization of emergency luminaires, beacon lighting and signaling, always using the latest technology.

Daisalux firmly bets on design and innovation, expressed in a solid R&D&I department. Fully aware of their importance, they have developed their own protocols for assuring quality and for the environmental management, certified by the standards ISO 9001 and ISO 14001, respectively. Every quality requirement is guaranteed by accredited laboratories, which has allowed them to get certificates such as N and ENEC, from AENOR; NF, from AFNOR (France), GOST (Russia) or RETILAP (Colombia).

Supported by Gaia, the Association of Electronic and Information Technologies of the Basque Country, Daisalux benefitted from a training provided by Fraunhofer technicians on how to use the LCA to go tool and therefore, how to apply life cycle thinking to their businesses model and how to improve the environmental performance in new products and new projects.

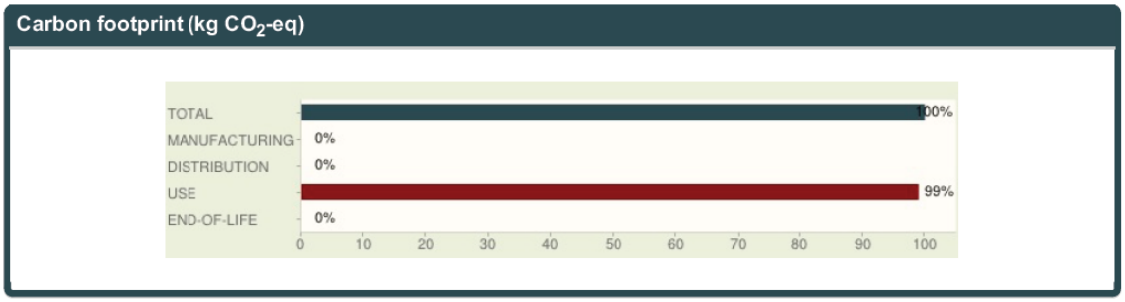
In a basis of a ten years use lifetime, Daisalux developed the environmental assessment through the LCA to go tool for a lighting product.

As the LCA to go tool was not primarily designed for lighting products, some background data is not provided in the tool, which is particularly relevant for Daisalux' range of products: Due to the lack of several components and materials contained in lighting products such as, fluorescent lamps, NiCd and NiMH batteries, plastics (PC-ASA, PA, PC, ABAS, PMMA), several electronic components (transformers, capacitors, resistors, etc.), and metals (copper, brass), the results obtained did not meet the current needs of Daisalux.

A table with the data entered in the tool is shown in the table below. Some of the components are available in the tool, such as aluminium, steel and PCB, calculated through the specific LCAtogo tool for PCBs. Nevertheless, the battery and all plastics carbon footprint were calculated through other commercial tools.

Part	Material/Component	Quantity	Unit	Age (y)	Total lifetime (y)	
Housing & internal structural elements	MC-PCB	180.00	g	0.0	9.26	✖
Housing & internal structural elements	Battery Ni-Cd	184.00	g	0.0	9.26	✖
Housing & internal structural elements	aluminium	22.00	g	0.0	9.26	✖
Housing & internal structural elements	steel	8.23	g	0.0	9.26	✖
Housing & internal structural elements	Plastico ABS Antic	50.17	g	0.0	9.26	✖
Housing & internal structural elements	Plastico Policarb	22.00	g	0.0	9.26	✖
Housing & internal structural elements	Plastico metac	3.00	g	0.0	9.26	✖

Besides, in the table below, the results of the assessment are shown. As observed, the highest carbon footprint belongs to the use stage, habitual result for a lighting product.



To conclude, and after the assessment, the need of a commercial tool for lighting products must be noted. However, since their particular goal is to implement the necessary improvements to their products for future certification under the eco-design directive, they are interested in the approach and in future developments of the tool.