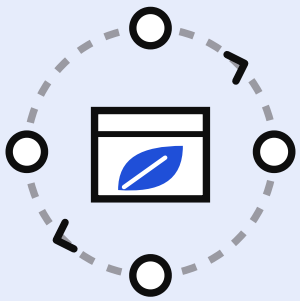
Specialty

Ecodesign

Integrates environmental aspects into the design and development of a product to reduce its impact across its whole life cycle, from materials and manufacturing to use and end of life.



In Spanish
Ecodiseño

Origin
Brezet and van Hemel (1997)

What problem it addresses

Many decisions that set a product's impact, such as the material, the energy it uses or whether it can be repaired, are made during design and are hard to change later.

Principles

The whole life cycle

Every stage is considered, so impact isn't just shifted from one to another.

Biggest impact first

Find where the largest impact is and act there before the details.

Several strategies at once

Less material or lower-impact material, less energy in use, more years of use and a good end of life.

Applications in design

✓ Use it like this

Review the impact of each stage of the product's life before settling materials and manufacturing, also when redesigning one.

✗ Avoid

Improving one stage by making another worse, like a lighter material that can't be recycled afterwards.

Don't fall for it

If you say a product is "eco-friendly," you have to be able to prove it.

Connections

Builds on

- Design for recycling
- Primary, secondary and tertiary packaging
- Planned obsolescence

Uses these methods

- Life cycle assessment (LCA)

Related to

- Circular design
- Color, material and finish (CMF) design
- Packaging design
- Industrial design

Authors and works

1997	**Han Brezet and Carolien van Hemel**	Wrote a manual for the United Nations Environment Programme that guides companies step by step through ecodesign, with a wheel of eight strategies.
2020	**ISO 14006**	Gives guidelines for incorporating ecodesign into an organization's environmental management system, without setting performance figures.
2024	**European Union**	Regulation (EU) 2024/1781 allows durability, repairability or recycled content to be required by law, creates the digital product passport and bans large companies from destroying unsold clothing and footwear from 19 July 2026.

Sources

Original sources

- Brezet, H., & van Hemel, C. (1997). Ecodesign: A promising approach to sustainable production and consumption. United Nations Environment Programme (UNEP), Rathenau Instituut & Delft University of Technology.
- International Organization for Standardization (2020). ISO 14006:2020. Environmental management systems — Guidelines for incorporating ecodesign. ISO. View source (https://www.iso.org/standard/72644.html)
- Reglamento (UE) 2024/1781 del Parlamento Europeo y del Consejo, de June 13, 2024, por el que se instaura un marco para el establecimiento de requisitos de diseño ecológico aplicables a los productos sostenibles. Diario Oficial de la Unión Europea, serie L, June 28, 2024. View source (https://eur-lex.europa.eu/eli/reg/2024/1781/oj)

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