Improving EcoDesign implementation at Philips: from compliance to innovation

Why EcoDesign implementation?

EcoDesign helps large manufacturing companies reduce the environmental impact of their products. This is important because a large share of a product's environmental impact is already determined during the design phase, often estimated at around **80%**. However, the actual impact of EcoDesign depends on more than the technical solutions alone. Organizations often struggle with embedding EcoDesign in their **strategy, structures, processes, and operational realities**. This project explored how EcoDesign can be implemented more effectively on an **organizational level**, using Philips as a case study.

Research approach

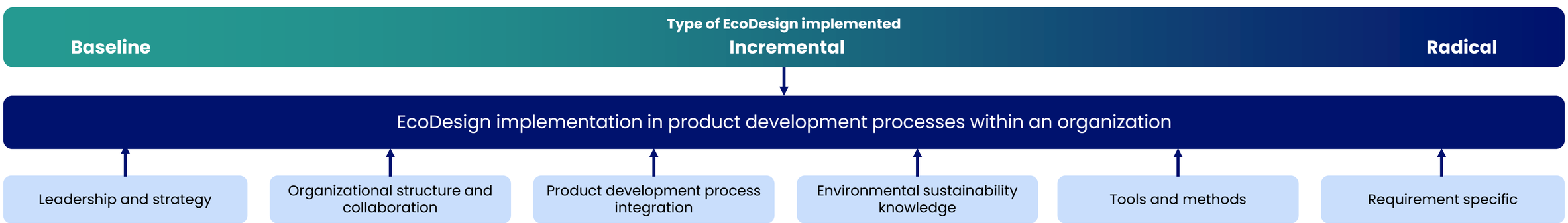
The focuses on the large Health Systems, such as MR or CT equipment designed by Philips. The project was carried out for Group Sustainability, the central sustainability body within Philips. The research and design process included:

- A literature review to develop a conceptual model on EcoDesign implementation
- 26 semi-structured interviews with internal and external stakeholders
- An iterative design and validation phase, including prototyping, co-creation sessions, and validation with senior Philips stakeholders.

KEY INSIGHT

EcoDesign takes different forms: from baseline EcoDesign, to incremental improvements, to radical eco-innovation. Each forms requires a **different yet complementary implementation approach**, in which strategic, tactical and operational levels need to be aligned.

The conceptual model to guide the research



Three main barriers found within Philips

1. Late process integration

EcoDesign is addressed to late in the product development process to make substantial impact.

2. Ambiguous requirements

Requirements are not clearly measurable, not aligned with internal processes and lack an explicit rationale.

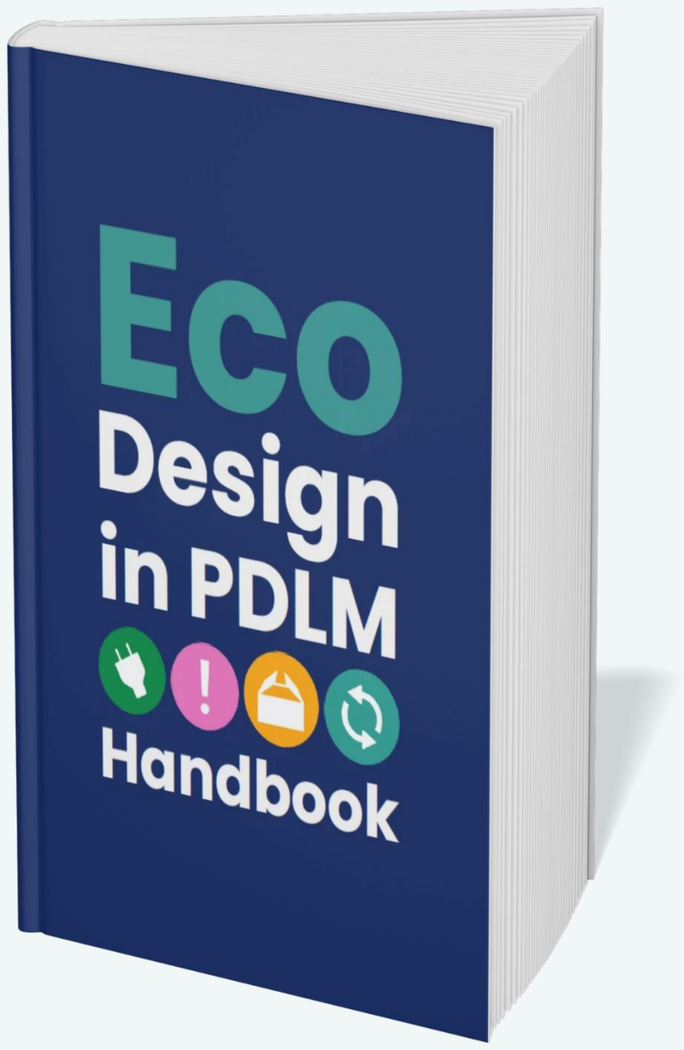
3. Limited collaboration

There is little cross-functional collaboration on the topic of EcoDesign while this is important for trade-offs.

The solution: a two-track implementation framework with design solutions

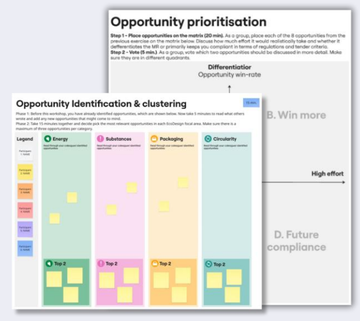
Track 1 EcoDesign in PDLM

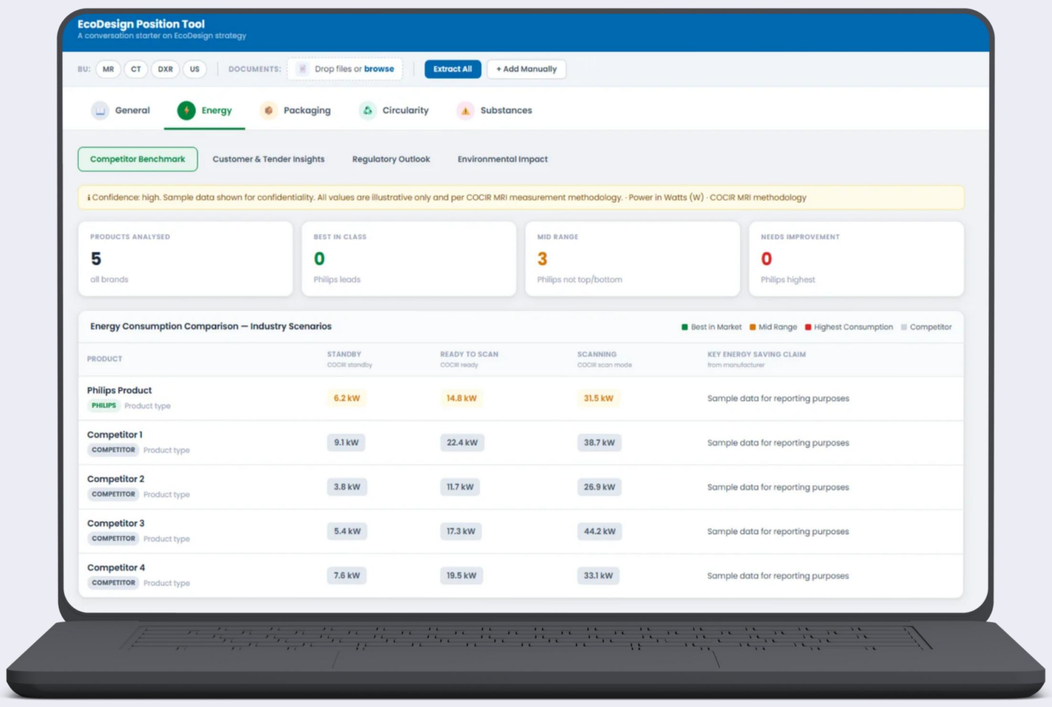
- Ensures auditability for KPIs and reporting
- Targets engineering teams later in the product development process
- Handbook explains six steps to do EcoDesign, including specific requirements and guidelines
- Improvement of current way of working in Philips



Track 2 Eco-Innovation

- Focus on the innovative and strategic side of EcoDesign in product roadmaps
- Eco-Innovation starter package, consisting of a digital tool and workshop, helps to start strategic EcoDesign discussions





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