

# SUSTAINABLE PRODUCT DEVELOPMENT GUIDE

Kaleidoscope is your expert in Design for Environment (DfE).  
Here is a glimpse at our process.

1

**Identify** — estimate what aspects of product will have the highest impact on sustainability.

- Consider the full product lifecycle (below).
- Consider energy consumption, CO2e emissions, resource depletion, pollution, etc. during each stage.
- Prioritize minimizing areas of high impact throughout design and development.



2

**Brainstorm** — include prompts related to you key aspects of sustainability. I.e.:

- *How might we reduce plastic usage in this component?*
- *How might we make this assembly easier to repair?*
- *How might we reduce energy consumption?*

3

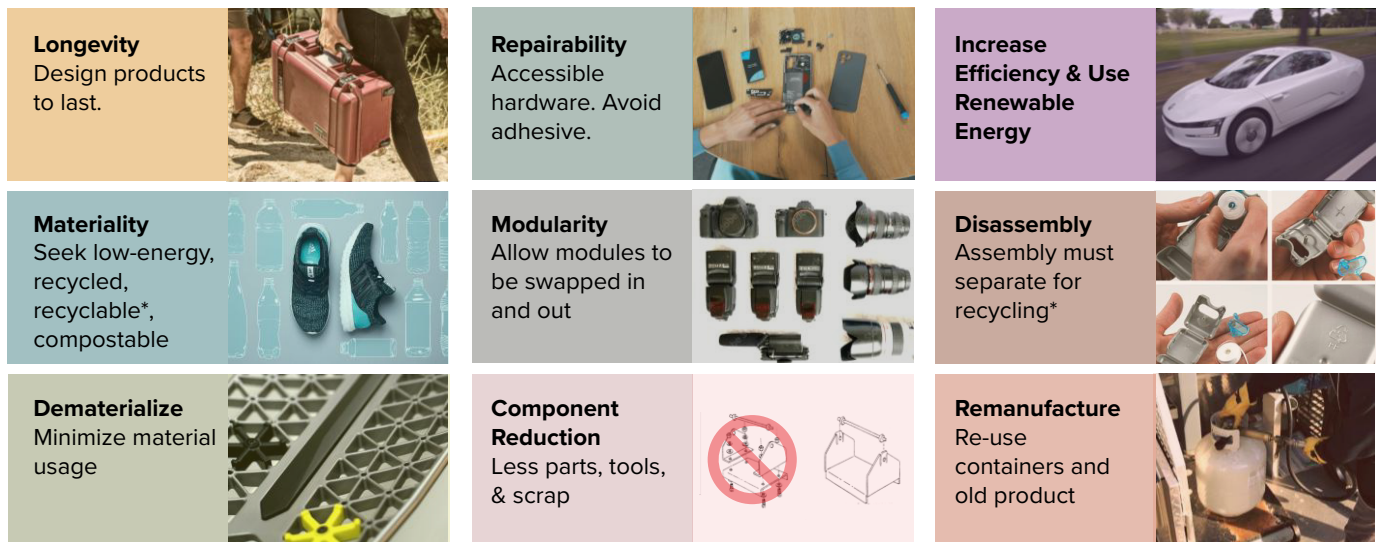
**Concept Generation & Selection** — intentionally include and call out features with sustainability benefits. Include environmental impact (qualitative or quantitative) in concept selection.

4

**Define Requirements** — set quantifiable requirements that affect key environmental impacts such as allowable materials, max weight, recyclability, etc.

5

**Prototype & Design** — focus on areas of high impact. Utilize these 9 principles where appropriate:



*\*Don't assume your product will be recycled by the average user.*

6

**Test** — simulate where appropriate. Use worst-case scenarios and engineering rationale to reduce sample size. Re-use test samples where appropriate.