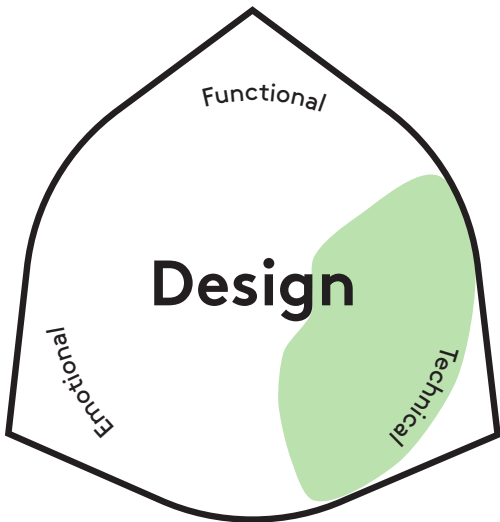


Technical Durability



Technical Durability

WHAT?

To align a material's durability with the intended product lifespan with respect to functional properties such as abrasion, tearing strength and ageing.

WHY?

By optimising or estimating the product lifespan, use of resources can be minimised. Furthermore this can ensure the right material choice. One example could be that for disposable products (like a paper plate) a criterion may not be long lasting but compostable.

CHALLENGES

- It can be difficult to estimate wear and tear in use contexts.
- It can be costly and troublesome to perform standardised tests.

EXAMPLES

- Waste management plastic bags made of **Mater-Bi** by **Novamont** are biodegradable and compostable.
- Product and material specifications that define performative properties, such as abrasion (e.g. ISO 12947-1:1998) and tearing resistance and dimension stability (e.g. ISO 6330:2012).

THIS CARD LINKS TO

/ Maintenance / Modularity / Re-Use

FURTHER READING

Annis (2012). *Understanding and Improving the Durability of Textiles*, Elsevier / Callister (2006). *Materials Science and Engineering*. Wiley and Sons / Fan & Hunters (2009). *Engineering Apparel Fabrics and Garments*. Woodhead Publishing / Hatch (1993). *Textile Science*. West Group .