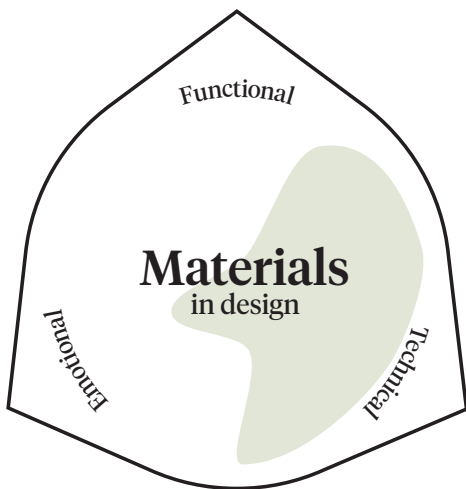


# Material Substitution



# Material Substitution

## What?

Materials that are developed or promoted to substitute another due to e.g. functional, environmental, ethical, legal, economic or cultural concerns and the possible changed practices due to material substitution. A common material substitute is that of vegan alternatives to animal-based products such as meat and leather.

## Why?

Material substitution is a result of an ever-changing dynamic society. Here the availability of different material substitutes can both challenge and stabilise markets.

## Challenges

- A material's technical, functional and emotional aspects can be compromised.
- Material substitutes can be more expensive and difficult to get hold of.
- Lack of transparency/information may contribute to 'green washing'.
- It is necessary to have a holistic approach to material substitution as other aspects may become problematic.

## Examples

- Piñatex, a leather alternative, is a by-product of the pineapple harvest that provides positive social and economic impact.
- With peace silk, the silkworm is allowed to emerge naturally from the cocoon before the leftover material resource is spun together.
- In a EU directive aiming to lower energy consumption for electronic household goods, the maximum Hoover engine power was lowered from 1600W (2014) to 900W (2017).

## This Card Links To

Bio-Synthetic Material / Material Biomimicry / Material Composite / Material Degradation / Material Origin / Material Perception / Material Plurality

## Further Reading

Bontempi (2017). Raw Materials Substitution Sustainability. Springer / Twine (2017). Materially Constituting a Sustainable Food Transition: The Case of Vegan Eating Practice. *Sociology* 52(1), pp. 166-81.