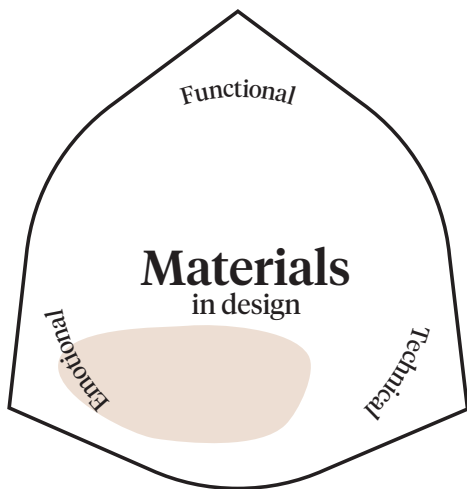


# Material Ageing



# Material Ageing

## What?

Material ageing describes how a material reacts to its surrounding environment and use over time. Material ageing can be of both technical (e.g. fatigue) and sensorial (e.g. patina) character.

## Why?

Materials that age 'gracefully' can increase a product's emotional and functional longevity. Also, how a material age will impact relevant circular design strategies.

## Challenges

- The social and cultural values and meanings incorporated in the ageing of materials can be difficult to comprehend.
- Changes in certain materials (e.g. novel materials or composites) might be challenging to predict.
- It can require time to test material ageing and testing methods might be inadequate or have to be developed.
- Data on users' physical interaction with objects and their responses to materials' ageing may be limited.

## Examples

- Hazal Ertürkan's Chronomaterials explores the way materials can evoke positive experiences through their temporal qualities.
- Copper's changing visual appearance due to surface oxidation is often used as a beautiful ageing element in architecture.
- Wabi-sabi is a Japanese philosophy that embraces the aesthetics of material and/or object imperfection and ageing.

## This Card Links To

Material Degradation / Material Perception / Material Sensing

## Further Reading

Chapman (2005). *Emotionally Durable Design*. Taylor & Francis / Cooper (2010). *Longer Lasting Products*. Gower Publishing, pp. 83-85 / Lilley, Bridgens, Davies & Holstov (2019). *Ageing (dis)gracefully: enabling designers to understand material change*. *Journal of Cleaner Production* 220, pp. 417-430.