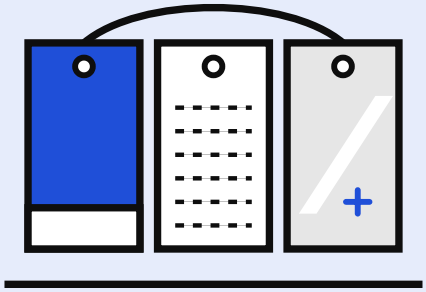
Specialty

Color, material and finish (CMF) design

Chooses, designs and specifies a product's colors, materials, textures and finishes so it looks, feels to the touch and ages as intended, and can be mass-produced.



In Spanish

Diseño de color, material y acabado

Origin

A long-standing practice in industrial design; Ashby and Johnson (2002); the CMF label is recent: Becerra (2016)

What problem it addresses

Two products with the same shape can look cheap or valuable depending on their color, material and finish. A surface that convinces as a sample may scratch, fade or make manufacturing more expensive.

Principles

Three decisions together

Color, material and finish are decided at the same time, because each one changes how the others are perceived.

Seen and touched

A material conveys warmth, quality or toughness before anyone uses the product.

From sample to production

Each finish is tested with real samples and specified so it comes out the same across the whole run.

Applications in design

Use it like this

Decide color, material and finish together and compare them with physical samples under different lights.

Avoid

Choosing a finish only by how it looks on screen or by the trend of the moment.

Don't fall for it

Check how the surface ages with use, cleaning and sunlight before manufacturing it.

Connections

Builds on

- Emotional design
- Design for recycling
- Design for manufacture and assembly
- Interaction of color
- Product semantics
- Sensation transference

Related to

- Multisensory design
- Textile design
- Ecodesign

Authors and works

2002	**Mike Ashby and Kara Johnson**	In their book on choosing materials for product design, with a third edition in 2014, they treat materials by their technical properties and also by how they are perceived through the senses and the personality they give an object.
2014	**Elvin Karana, Owain Pedgley and Valentina Rognoli**	They edited a book on how materials shape the way people appreciate and experience products, and what designers need to know to guide that response.
2016	**Liliana Becerra**	She published a handbook that presents CMF design as a young discipline and explains its process step by step, including how color is perceived across cultures and a selection of materials and finishes.

Sources

Original sources

- Becerra, L. (2016). CMF design: The fundamental principles of colour, material and finish design. Frame Publishers. View source (https://www.issuu.com/framepublishers/docs/cmf_webbook_150dpi_issuu)
- Karana, E., Pedgley, O., y Rognoli, V. (Eds.). (2014). Materials experience: Fundamentals of materials and design. Butterworth-Heinemann. View source (https://search.worldcat.org/oclc/862961523)
- Ashby, M. F., y Johnson, K. (2014). Materials and design: The art and science of material selection in product design (3rd ed.). Butterworth-Heinemann. (Obra original publicada en 2002). View source (https://shop.elsevier.com/books/materials-and-design/ashby/978-0-08-098205-2)

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