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*European Network for Additive Manufacturing in Industrial Design for Ukrainian Context*



# INDUSTRIAL DESIGN – 3 APPROACHES FOR A DEFINITION

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**What is industrial design or  
product aesthetics?**





## Misconceptions about the nature of industrial design



Industrial design would be:

- something like wrapping of a gift;
- something useless;
- something frivolous;
- a bait to catch more customers;
- a cover-up for quality failures.





## Origin of expression “Industrial Design”

The word “**design**” was first time mentioned in 17C in an Oxfordian dictionary. It’s meaning was purpose, intention. Today, **design** means plan, sketch or project.

The term “**Industrial Design**” was introduced to designate the appearance of artifacts mass-produced.

This is the reason why **Industrial Design** is considered to be born at the middle of 18C.





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## Other expressions for “Industrial Design”

- Technical aesthetics;
- Merchandise aesthetics;
- Esthetique Industrielle (French);
- Art Industriel (French);
- Produktgestaltung (German);
- Industrielle Formgebung (German);
- Diseño Industrial (Spanish);
- Dizajn (many languages).







## Industrial Design

### 3 approaches for a definition



textual definition



identifying what is outside



identifying what is inside



## Common elements in definitions of “Industrial Design” in literature

- refers to **serially produced** objects (65%);
- is a field of **aesthetics** (35%);
- is in direct relationship with **product engineering** (29%);
- contributes to improvement of **life quality** (29%);
- refers to **practical** products (24%);
- is about **designed significance** (18%);
- addresses to **all senses** (12%).

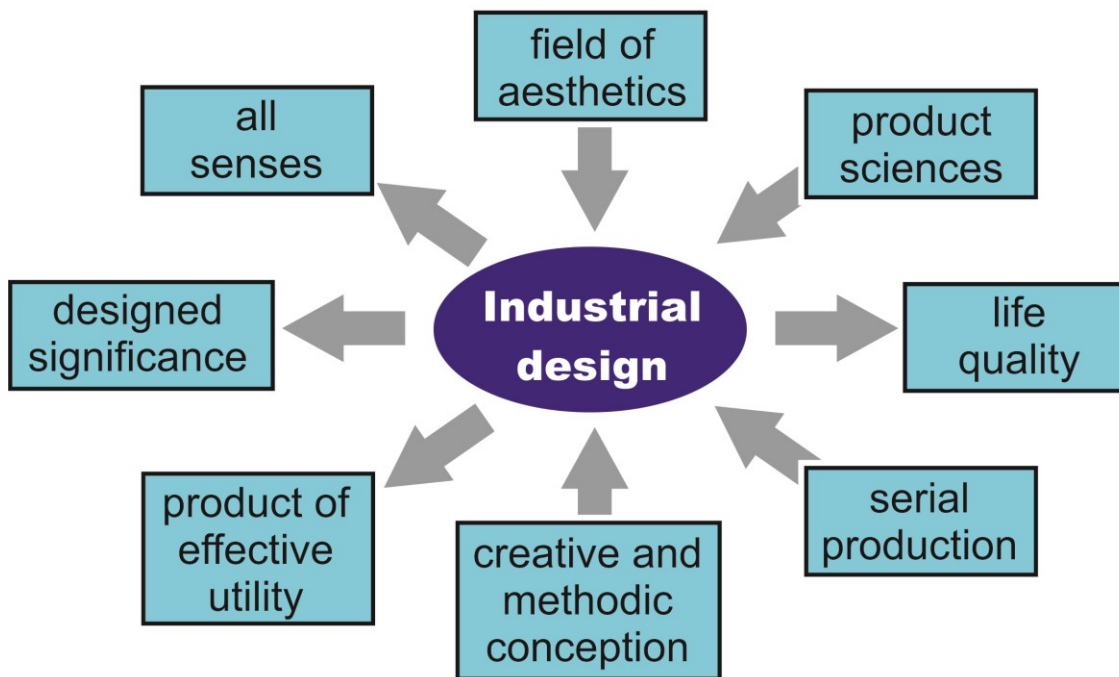
*\*Note that the percentage refers to the number of definitions that included the considered topic.*





## Textual definition of Industrial Design

**INDUSTRIAL DESIGN** is that field of aesthetics, whose subject is the product of effective utility, made by serial production, possessing a significance designed according to its contents and which addresses to all senses.







## Legal definition of (Industrial) Design

In legislation, a definition of (industrial) design appears in connection with the legal protection of copyright in Directive 98/71/EC of the European Parliament and Council of 1998.

“Design means the appearance of the whole or a part of a product resulting from the features of, in particular, the **lines, contours, colours, shape, texture** and/or **materials** of the product itself and/or its **ornamentation**.”

**But there is a catch!**





## The “catch” of law

The law refers only to the ***external appearance*** of a product. External appearance refers to the visible (to the user or viewer) parts of the product during "normal use".

The design of the bicycle saddle cannot be protected, because the saddle is not visible when a person pedals.





## What is outside Industrial Design?

The aesthetic domain contains several notions (besides classical arts):

- Decorative Arts;
- Artisanwork;
- Industrial Design;
- Antique;
- Styling;
- Kitsch; etc.





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## Decorative Arts

- practical objects;
- one-off products;
- highly original;
- often highly decorated;
- not necessary intended for use;
- high artistic value.







## Artisanwork

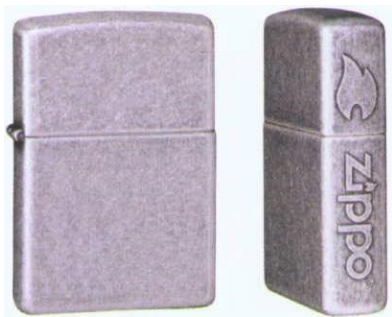
- practical objects;
- manually made;
- creator = user (usually);
- value given by its hand execution;
- minor mistakes in execution increases the value;
- expressive reduction to essence.





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industrial design objects



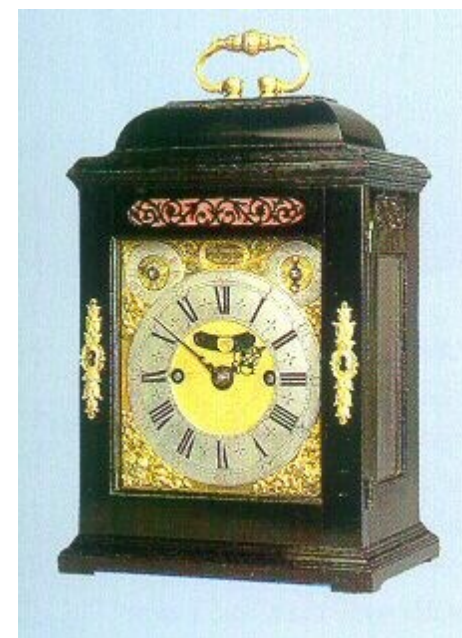


## Antique

- very old object (> 100 years);
- value given by its age, origin and aesthetics.

### *Related categories:*

- vintage (20 – 100 years old);
- retro (new objects that have stylistic elements of 15-50 years old).







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## Styling

- practical objects;
- non-functional decoration;
- “design for sale”.







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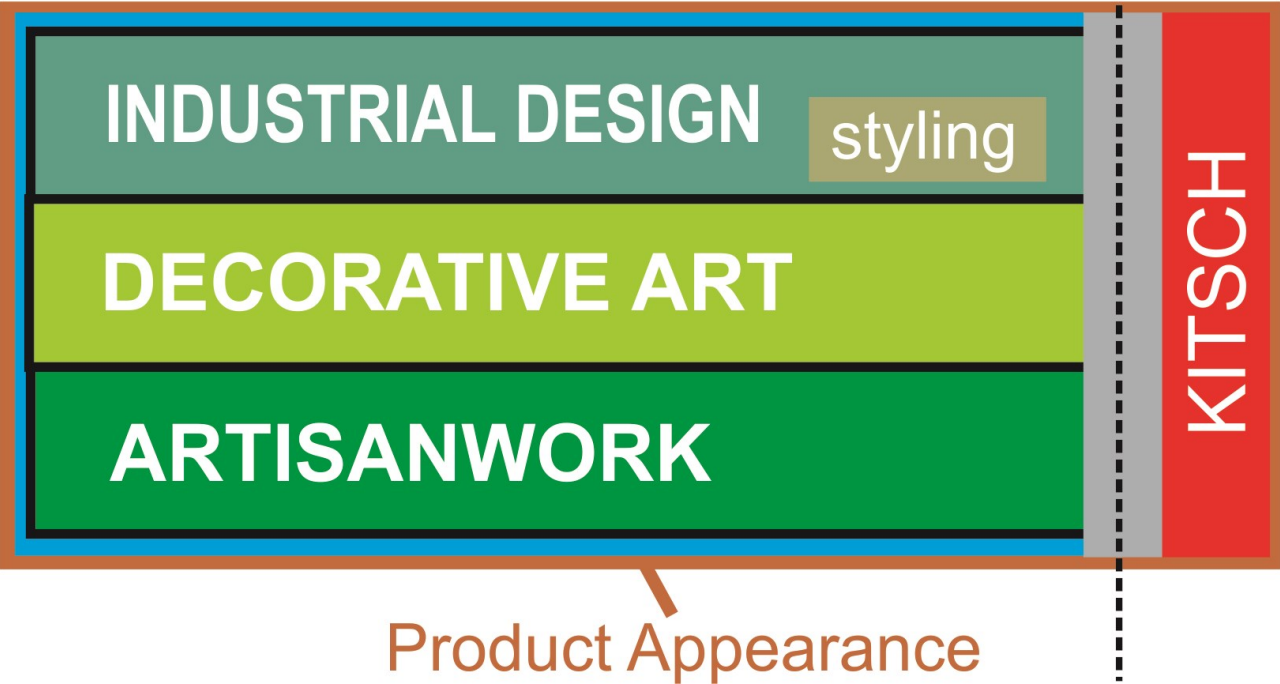
## Kitsch

- no originality;
- very cheap;
- low quality;
- vector of a dubious message;
- copy of a valued object.





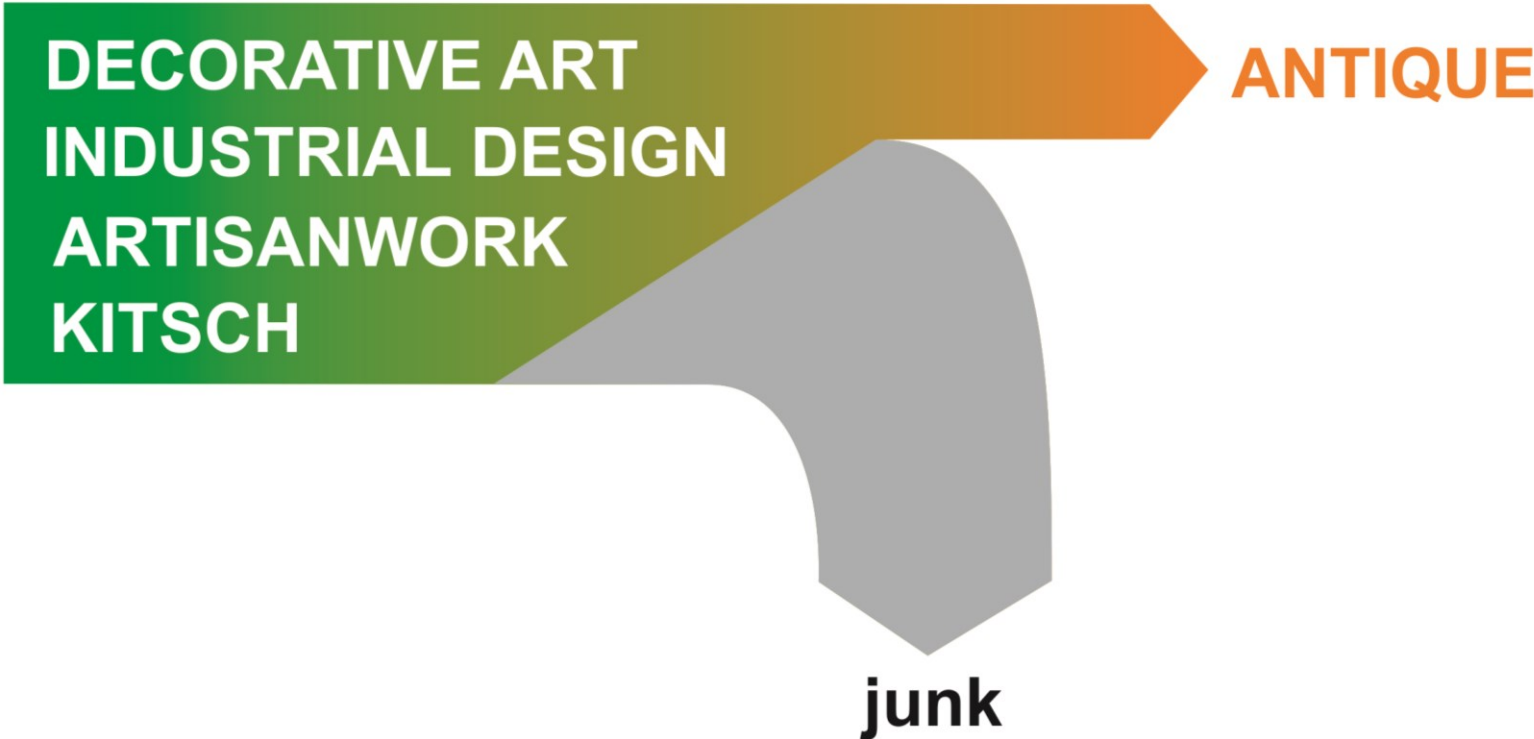
# AESTHETICS





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## What is inside Industrial Design?

Industrial Design has three main components, each of which retains the generic characteristics of industrial design:

- product design;
- ambient design;
- graphic design.

Some experts are discussing about a fourth component (fashion design), but the majority considers that this component belongs to product design.





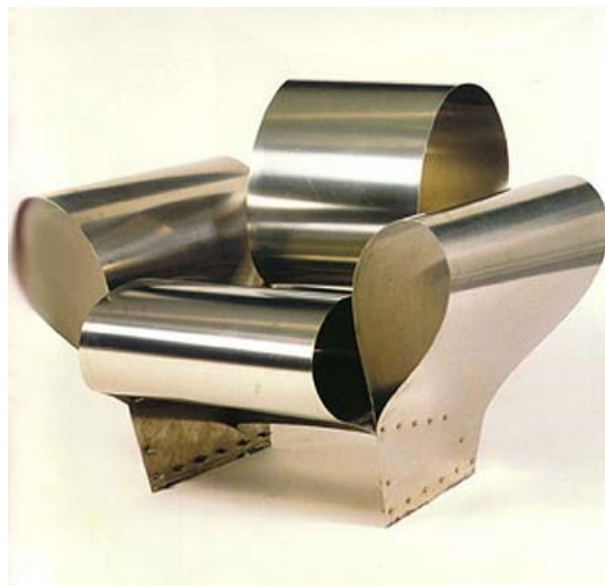
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## Product Design

Aesthetics of three-dimensional objects that satisfy a certain human need and that were designed and manufactured in accordance with the principles of mass production.





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## Ambient Design

Field of design whose object is the conscious transformation of the already built space (interior or exterior) into a functional and aesthetic environment, which improves the quality of life of the people who live in that space.







## Biophilic Design

Biophilic design is a branch of *interior design*, characterized by the large-scale integration of living nature (especially plants) in man-made spaces.





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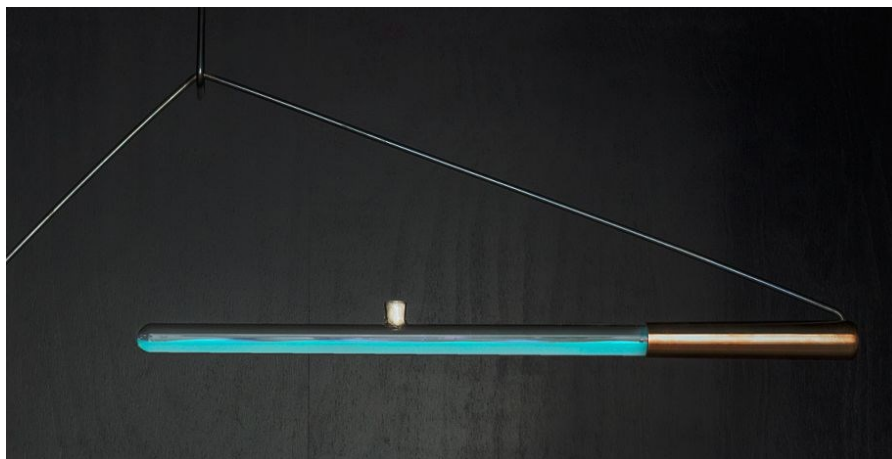
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## Biophilic Design



Algae lamp for  
recycling CO<sub>2</sub>, heat,  
and "light"



Lamp with luminescent  
bacteria



Bacteria on textiles that  
change colour when the air  
quality deteriorates







## Graphic Design

Graphic design designates two-dimensional productions intended for communication, which have paper as a generic support.

Graphic design has three components:

- book graphics (book or disk cover, text illustrations, binding aesthetics, etc.);
- advertising graphics (poster, label, banner, etc.);
- digital graphics (web pages and program-user interfaces).



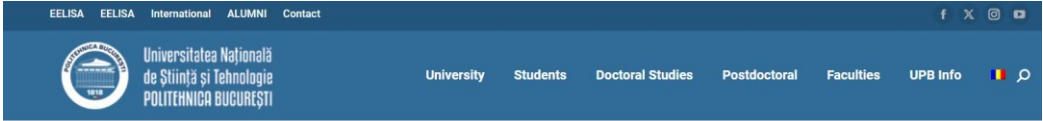
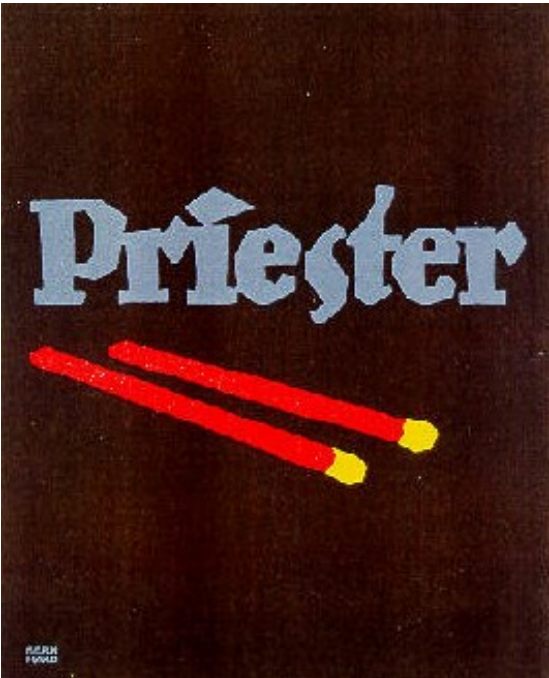


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# Graphic Design



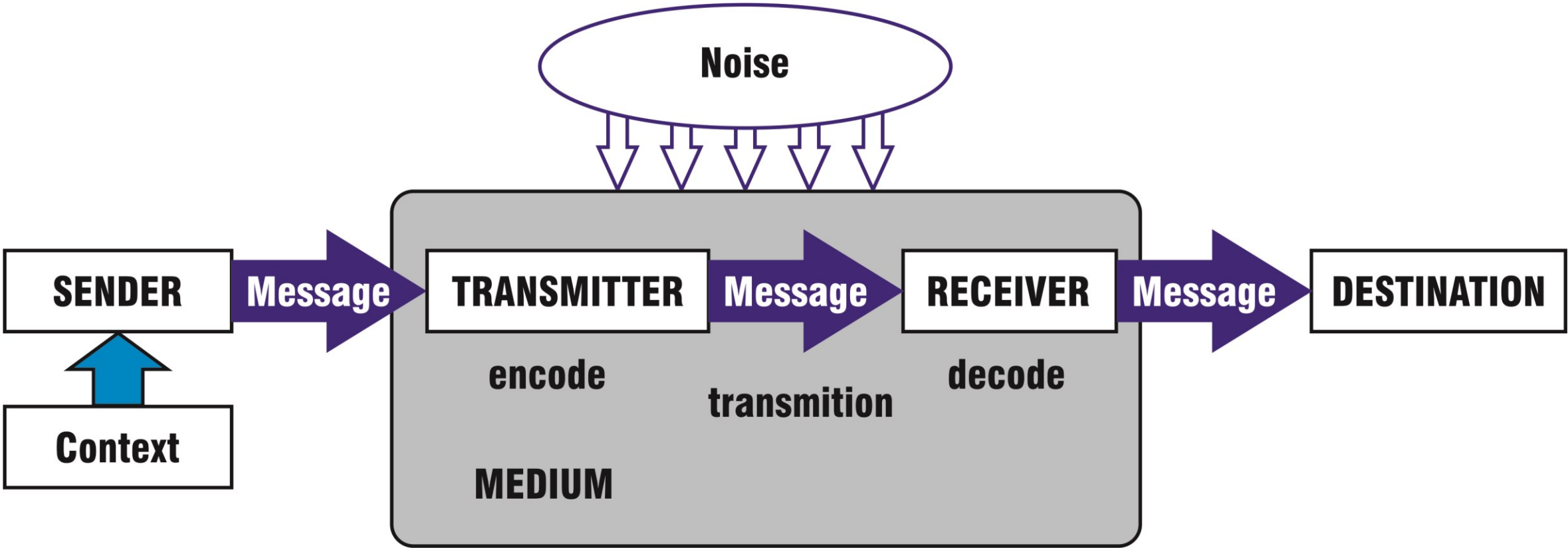


## Important clarification

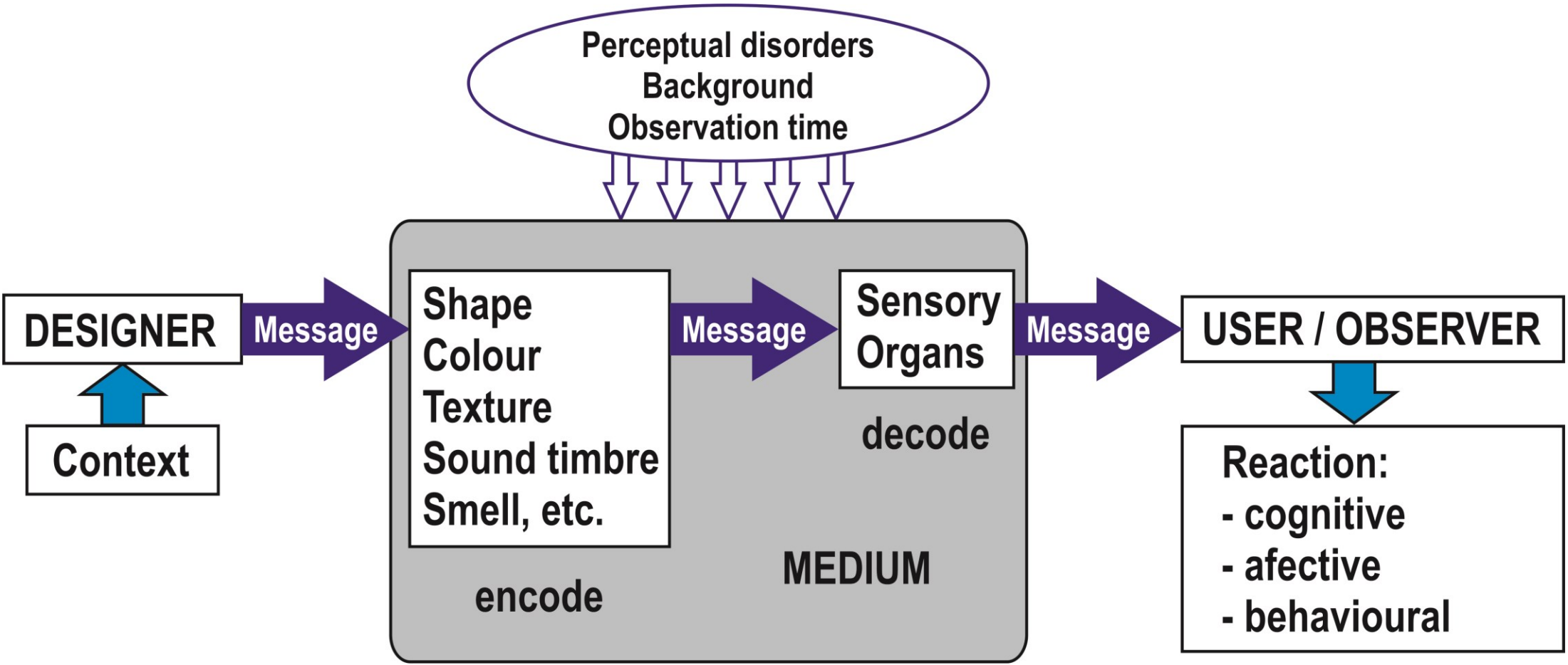
Industrial design is NOT about shape, colours, etc. PER SE,  
it is about employing them in conveying a message about:

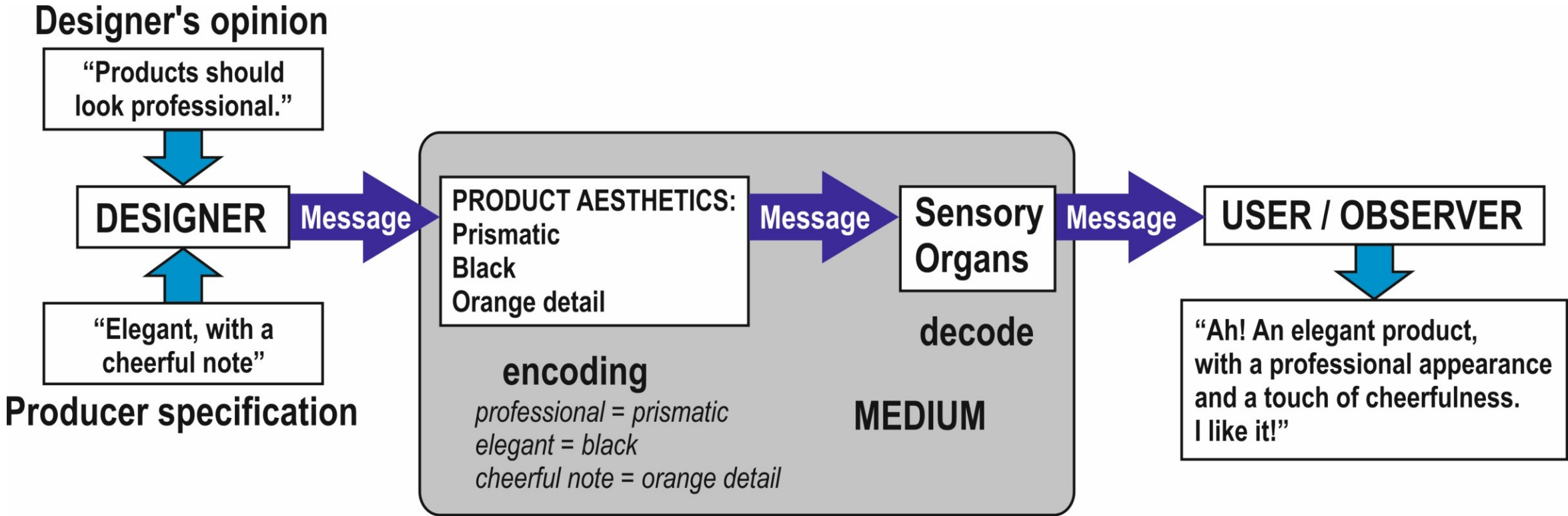
- product;
- owner;
- way of use;
- characteristics like quality, luxury, professionalism, etc.

So, ***theory of communication*** is applied to make the most of product aesthetics.











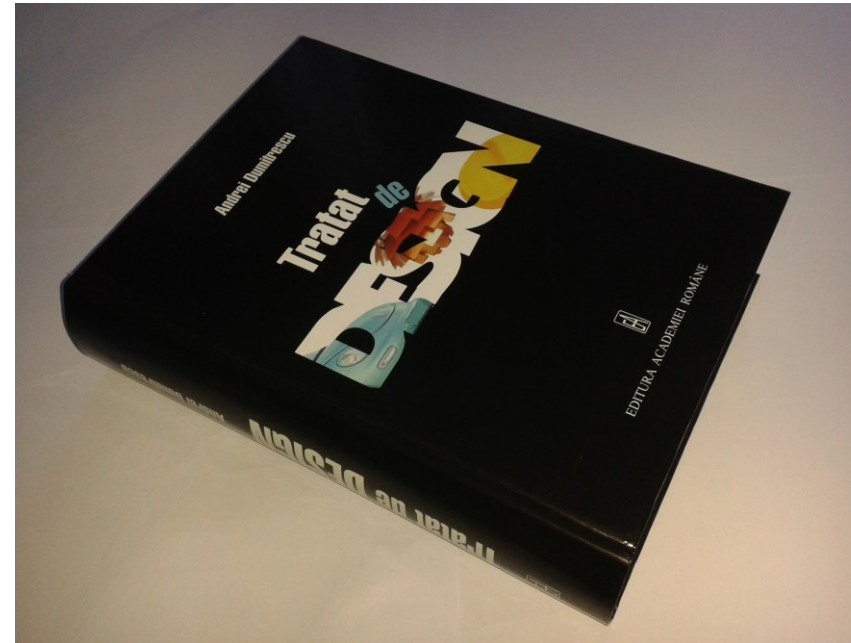
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Dumitrescu, Andrei (2013). *Industrial Design Treaty*, Romanian Academy Publishing House.





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*Thank you for  
your kind attention!*

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