



Basic Concepts on Ecodesign

UNIT 1: Introduction to Ecodesign.



Objectives of the unit

- To understand the general concepts of Ecodesign.
- To Know the benefits of Ecodesign in the social and economic concepts.



1.1 General Concepts of Ecodesign.

- There is a continuous growth in awareness and commitment to sustainability.
- The number of consumers showing environment responsibility is growing.
- The consumer seeks a reciprocal feeling in companies.
- Companies need to demonstrate their respect and commitment to the environment and natural resources:
 - With actions that demonstrate such commitment
 - ❖ The most outstanding action is Ecodesign

Ecodesign: Systemic incorporation of environmental aspects in the design of a product with the aim at reducing its impact all along its life cycle.

Ecodesign claims the need of incorporating environmental and sustainability criteria into basic design (costs, function, utility, aesthetics, ...)

1.1 General Concepts of Ecodesign.

- The criteria range from the struggle to minimize consumption to the reduction of emissions throughout the life cycle.

LIFE CYCLE: all stages through which a product passes, from the purchase of raw materials until its final disposal (or disposal), through: supply; manufacturing; packaging; distribution; sale; maintenance; and even reuse

- Those companies incorporating Ecodesign in their product development process increase their competitiveness by having:
 - Better designed products,
 - Better manufactured products,
 - Products differentiated from the competition

1.1 General Concepts of Ecodesign.

Those companies promoting their “Ecodesign” must demonstrate a balance between economic, environmental and social growth

In short, Ecodesign is:

- An action that considers environmental impacts at all stages of the design and development process to achieve products that generate the least possible environmental impact throughout their entire life cycle
- An agent that seeks to prevent possible contamination associated with a product throughout all phases through which it passes (from conception to disposal)

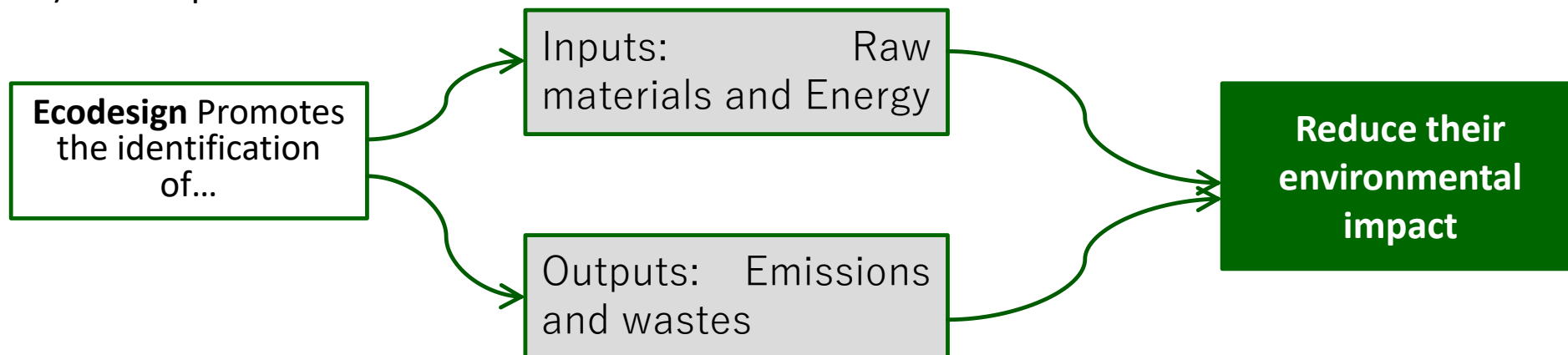
Ecodesign aims to implement a global environmental concept, ensuring that it is systematically taken into account through a pre-established system of compliance with requirements, through the maximum involvement of the company, through the implementation of a methodology for identification, control and continuous improvement



1.1.1 Life Cycle concepts.

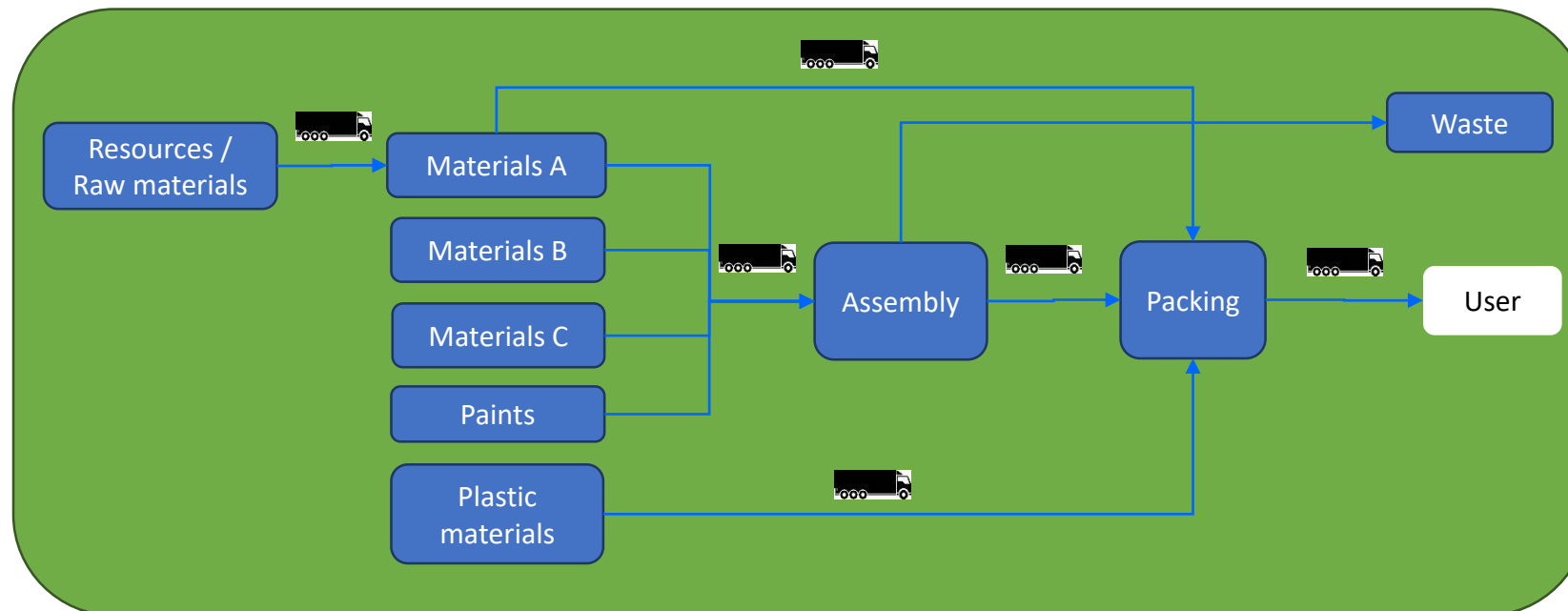
LIFE CYCLE: Set of consecutive and interrelated stages of a product system, from the acquisition of raw materials (or their generation from natural resources) to their final disposal.

- It includes all stages of design, development and manufacturing, until the product no longer has utility / function.
- It considers: raw materials; production; packaging; distribution; sale; use; Maintenance required; Reuse (if applicable) and disposal



1.1.2 Product System

PRODUCT SYSTEM: Set of unitary processes with elementary flows and product flows, which performs one or more defined functions, and serves as a model for the life cycle of a product.



1.1.3 Functional unit.

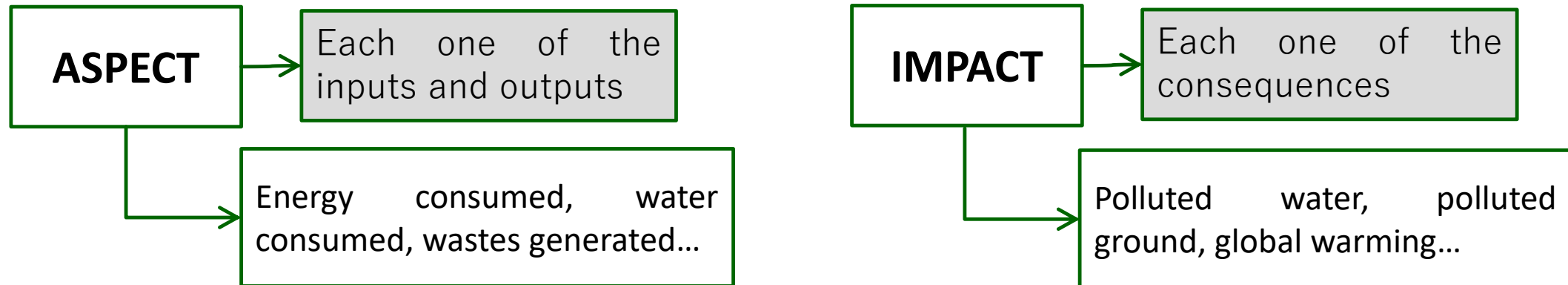
FUNCTIONAL UNIT: Quantified performance of a product system for use as a reference unit.

- It is the product system that will be taken as reference
- In furniture, for example, the unit will be defined by choosing the most representative size and finish
 - Functional unit: "seating seat".
- In other sector, for example "milk or wood panel production plant", the unit will be defined by choosing the sale unit of the final product.
 - Functional unit: "A liter of milk" or "A squared meter of wood panel", respectively.

1.1.4 Environmental Aspect, environmental impact

ENVIRONMENTAL ASPECT: Any element of the activities, products or services from an organization that can interact with the environment

ENVIRONMENTAL Impact: Any change in the environment, whether good or bad, as a result (totally or partially) of environmental aspects.



1.2 Benefits of Ecodesign

With its implementation, **products** prove to:

- ✓ Be more environmentally respectful
- ✓ Have an increased environmental awareness
- ✓ While still performing its main function
- ✓ No need to have a higher price

For the **company**, it means competitive advantages:

- ✓ Better designed products (at lower cost)
- ✓ Differentiated products compared with the conventional ones.
- ✓ "Green" image

Besides not carrying any disadvantage, it provides **ADVANTAGES** with respect to the conventionally designed products.

1.2.1 Environmental Benefits

- ✓ Lower environmental impact of the developed products:
 - Decrease in: water and soil pollutants, emissions to air, raw material and energy consumption.
- ✓ Bigger and better fulfillment of the environmental legislation.

1.2.2 Economic Benefits

- ✓ Optimization of resources:
 - Raw Materials
 - Energy resources (light, water, etc.)
- ✓ Optimization of the production factors:
 - Decrease in: Transformation processes, movements and time.
- ✓ Optimizing the impact of transport: Lower fuel consumption and Lower emissions

1.2.3 Social Benefits

- ✓ Better Image of the company...
 - ... against stakeholders
 - ... against markets
- ✓ Better response to the needs of a society with a bigger ecological sensibility.

1.2.4 Benefits for a biggest market share

- Increase sales
 - Opening to new markets
 - Opening to new business niches
- Certifications:
- Demonstrating the environmental commitment
- Demonstrating a sustainable development strategy
- Recognition of the green aspect by the user.
- Eco Publicity.

1.2.5 Ecodesign Barriers.

- ✓ There may be possible difficulties that arising, for instance, during decision making and during implementation.
- ✓ These can be solved with the participation of experts and changes in mentality towards a more innovative character, considering:
 - Lack of experts
 - Consider cost without considering profit (in the medium term)
 - Difficulty to access information
 - Lack of training
 - Low Innovative character

Thank you

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