

# LCA – Life Cycle Assessment

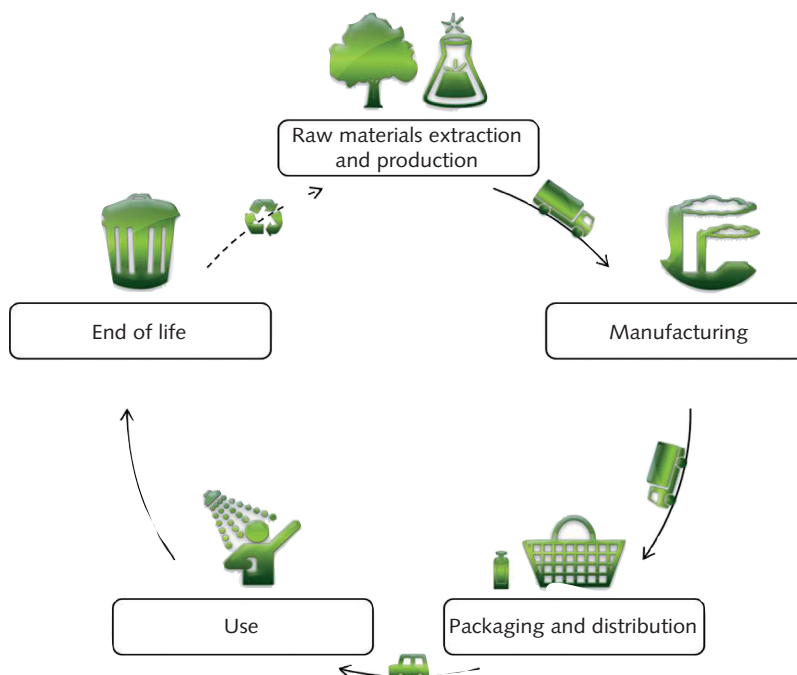
**Life Cycle Assessment** is an **approach**, a procedure **to assess** environmental impact associated with all the steps of a product's life, from processing, manufacture, distribution, use, repair and maintenance to disposal or recycling. Necessary steps are: compiling a list of relevant energy and material **inputs** and environmental **releases**, evaluating the potential environmental impacts associated with identified inputs and interpreting the results that could help people to take a more **up-to-date** decision. It involves a **cradle-to-grave** analysis of production systems; the “cradle” refers to the **source** of the product and the “grave” to the end of life. LCA takes into account input and **output** factors, including energy, waste and recyclability. **Product Lifecycle Management (PLM)** is the process of handling the whole lifecycle of a product from its conception, through design and manufacture, to service and disposal. PLM **joins** people, data, processes and business systems and provides a product information **backbone** for companies and their extended **enterprises**. The term Life Cycle refers to the notion that the assessment requires the analysis of packaging design first and of the raw material afterwards, including

all shipping steps necessary or caused by the product's existence. The Life Cycle design is the **outline** not only of the product itself, as a result of a process of transformation, but of the whole system lifecycle of the product. The five design **guidelines** are:

1. minimizing the resources used;
2. choice of **low** environmental impact resources;
3. optimization of the life of the product, designing systems for the reuse and **return**;
4. **extending** the life of materials, through effective recycling systems and packages easily handled by consumers;
5. easy **disassembly** for a proper recovery.

**approach:** *approccio*  
**to assess:** *valutare*  
**backbone:** *struttura portante*  
**cradle:** *culla*  
**disassembly:** *smontaggio*  
**enterprise:** *impresa*  
**to extend:** *estendere*  
**grave:** *tomba*


**guideline:** *linea guida*  
**input:** *ingresso*  
**to join:** *unire*  
**low:** *basso*  
**outline:** *schema*  
**output:** *uscita*  
**return:** *restituzione*  
**release:** *emissione*  
**source:** *origine*  
**up-to-date:** *aggiornato*



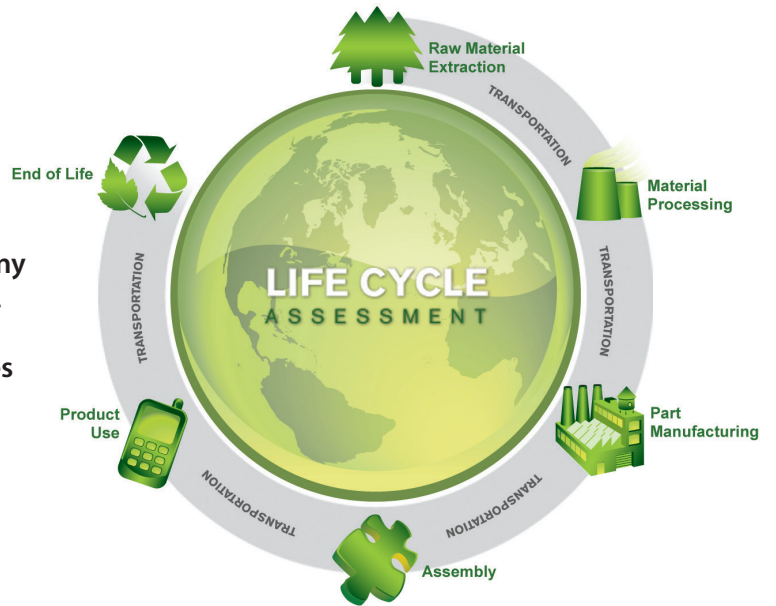
**1**  **Decide if the following sentences are true or false.**

- |                                                                                              |                          |                          |
|----------------------------------------------------------------------------------------------|--------------------------|--------------------------|
|                                                                                              | <b>T</b>                 | <b>F</b>                 |
| a. "LCA" evaluates risks and the impact of packaging on the environment.                     | <input type="checkbox"/> | <input type="checkbox"/> |
| b. "Grave" is the starting point of the life of a product.                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| c. PLM is the method of management of the whole lifecycle of the product up to its disposal. | <input type="checkbox"/> | <input type="checkbox"/> |
| d. The term lifecycle refers to the analysis of all the steps involved in packaging.         | <input type="checkbox"/> | <input type="checkbox"/> |
| e. The Life Cycle Design is structured into five guidelines.                                 | <input type="checkbox"/> | <input type="checkbox"/> |

**2**  **Now correct the false sentences.**

**3**  **The reading passage includes acronyms – that is, words formed by the initials of a group of words – used by packaging experts, but there are many acronyms which we use in everyday life. Try to write out in full the acronyms in the grid picking the words from the ones below.**

and • as (2) • bed • breakfast • factor • flying • important • intelligence • object • our • pay • per • person • possible • protection • public • quotient • relations • save • soon (2) • souls • sun • unidentified • very view • you



ACRONYM	FULL NAME
ASAP	
B&B	
CUS	
IQ	
PPV	
PR	
SOS	
SPF	
UFO	
VIP	