



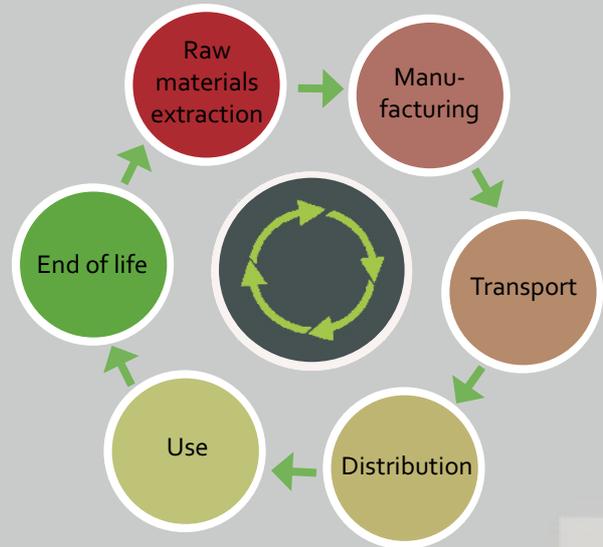
EMBODIED ENERGY

WHAT IS IT ?

It is the quantity of **energy invested in an object** during its lifetime.

This could be energy that is used to: extract raw materials, manufacture, transport, store, or sell it and then manage its end of life, i.e., recycling or disposal.

These embodied energy assessments are «cradle to grave» (from beginning to end of the product life). The amount of energy used is calculated on the average lifetime of the object in question.



BENCHMARKS

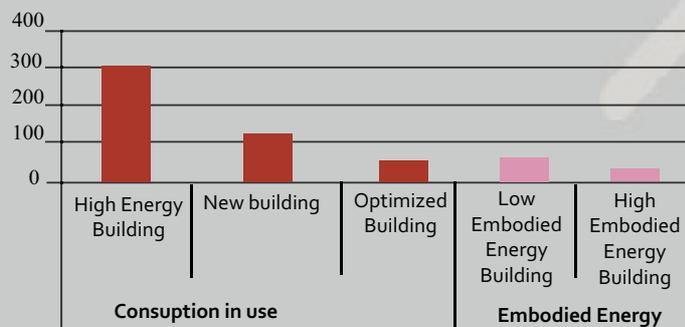
Consumption of a high performance building in Lower Normandy :

60 kWh/m².year

Embodied energy of a building over the year:

20 to 70 kWh/m².year

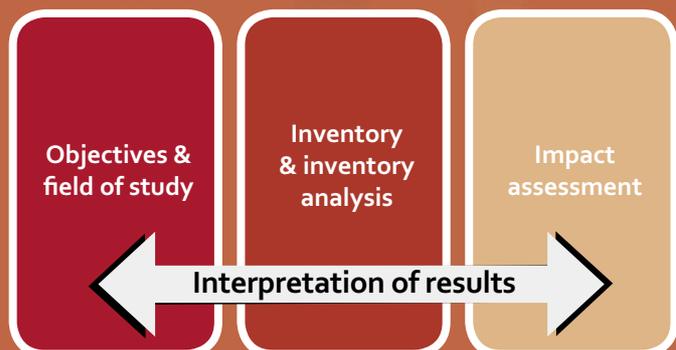
(kWh/m²)



HOW TO EVALUATE ?

The **Life Cycle Analysis (LCA)** is a scientific tool to assess and quantify the environmental impacts at each stage of the life cycle of a product or service from extraction of raw materials to recycling.

The **carbon footprint** and **environmental footprint** are the most familiar methods to the general public.



CONNECTION WITH SHADOW ?

SHADOW partners want to demonstrate the feasibility of the most effective solutions by acting on all energy consumption.

The goal is **to reduce energy consumption throughout the entire life cycle on both demonstration buildings.**

HQE* performance in France and BREEAM** in England are the environmental impact of buildings assessment methods.

The partnership between CSBT and "Les 7 Vents" enables work on the high performance buildings design using each of the approaches used in each country.

*Haute Qualité Environnementale

** Building Research Establishment Environmental Assessment Method



PARTNERS' FEEDBACK

Les 7 Vents **organized** a workshop on the embodied energy theme that attracted a hundred participants. The team also monitored twenty homes that use bio-based materials and **supported** several architects on their environmental quality approaches.

CSBT, leading by example is convinced that a safe and comfortable place to live should be available to all. That is why **eco-building** is at the heart of its activities.

The partners, through their experience, make the possible **link between theory and practice** of embodied energy.



Workshop on embodied energy held by Les 7 Vents

FOR FURTHER INFO...

Feel free to send us your questions, comments, interests. Our organisations have links with experts, and can give you access to reference documents, advice and training.

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