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THE BACKGROUND - THE ENVIRONMENTAL PROBLEM

HEALTHCARE CENTRES:

- Use a lot of resources in their activities due its non-stop activity (24 hours/day):
 - Hospitals are large energy consumers. The energy consumption is related to heating (mainly), lighting, hot sanitary water and others
 - The water has different usage: HVAC, sanitary use, medical uses, laundry, cooking.
 - Different types of products to develop its day by day activity are needed.
- Produce an important amount of waste
- Generate emissions to air and water

Energy consumption

- Electricity
- Fuel-oil
- Natural gas
- Renewable resources

Water consumption

- Chemical products
- Medical clothes
- Medical devices
- Food and drink
- Medical gases
- Paper
- Cleaning products



Medical Waste generated

- Infectious waste
- Pathological waste
- Sharps waste
- Pharmaceutical waste
- Genotoxic waste
- Radiactive waste
- Pressurized containers
- Urban solid waste

Emissions to air from:

- Laboratory
- HVAC
- Transport

Wastewater

Many hospitals have already implemented an environmental management system based on international standards such as EMAS or ISO 14001. Other hospitals decide to apply their own system based on their experience.

Some difficulties are found on the definition and the implementation of the management system:

- to develop an action they need arguments to defend the viability of this action
- The person in charge of dealing with these aspects needs support on deciding the best environmental action to improve the environmental behaviour

THE PROJECT

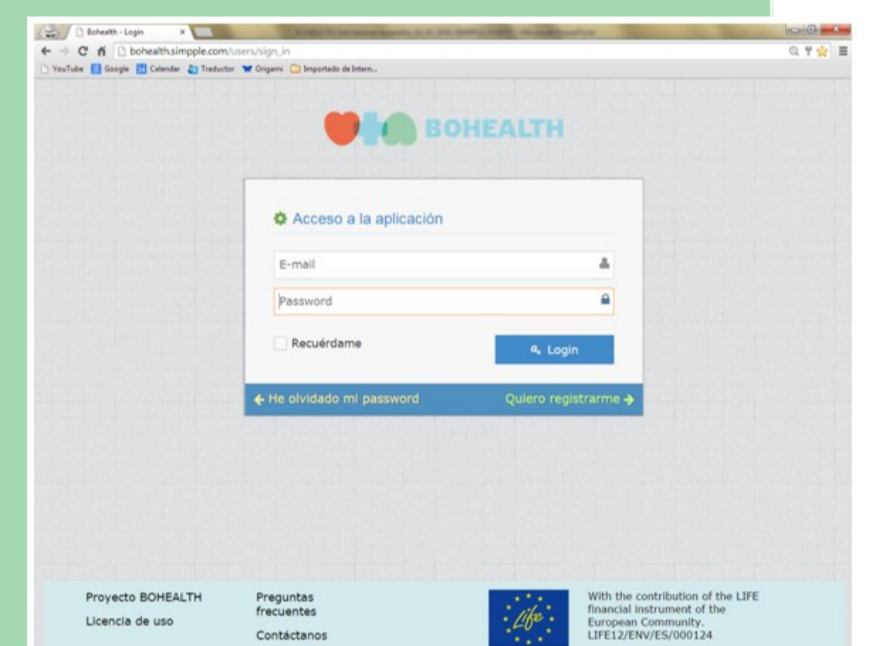
BOHEALTH is an acronym of "Boosting Health Sector to reduce its environmental impact using an innovative decision-making process based on Life Cycle Assessment (LCA)/ Life Cycle Cost (LCC)". BOHEALTH is a European project which started in July 2013 and it will last until July 2016 .



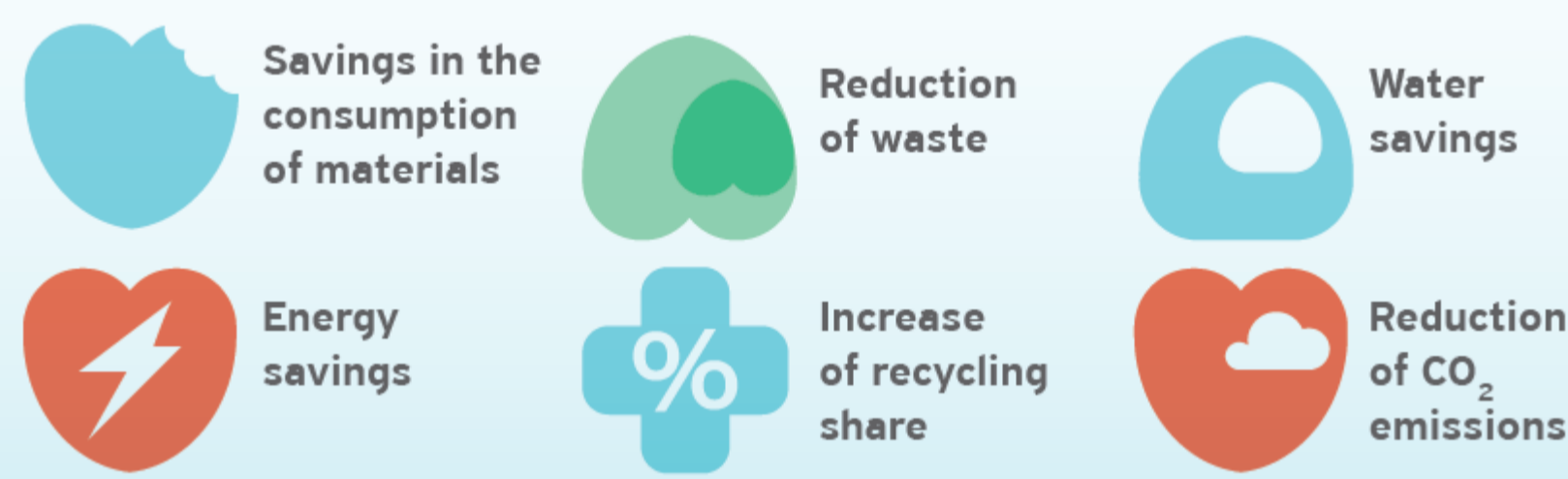
The main objective of the project is to reduce the environmental impact associated to the health sector by facilitating the decision making process of the management through the following actions:

- To show the environmental and economic impact of health centres, considering their entire life cycle.
- To identify the "key performance indicators" (KEPIs) and "functional units" to monitor and control the environmental and economic aspects.
- To identify the Best Available Techniques (BATs) for the health sector.
- To develop of a supporting web tool to define action plans that can be applied in health centres
- To allow a clear and quantitative comparison between environmental and economic improvements

BOHEALTH is working on the development of a web application in order to facilitate the establishment of an improvement action plan in the hospital . This will be implemented in two healthcare centres.



BENEFITS OF BOHEALT PROJECT:



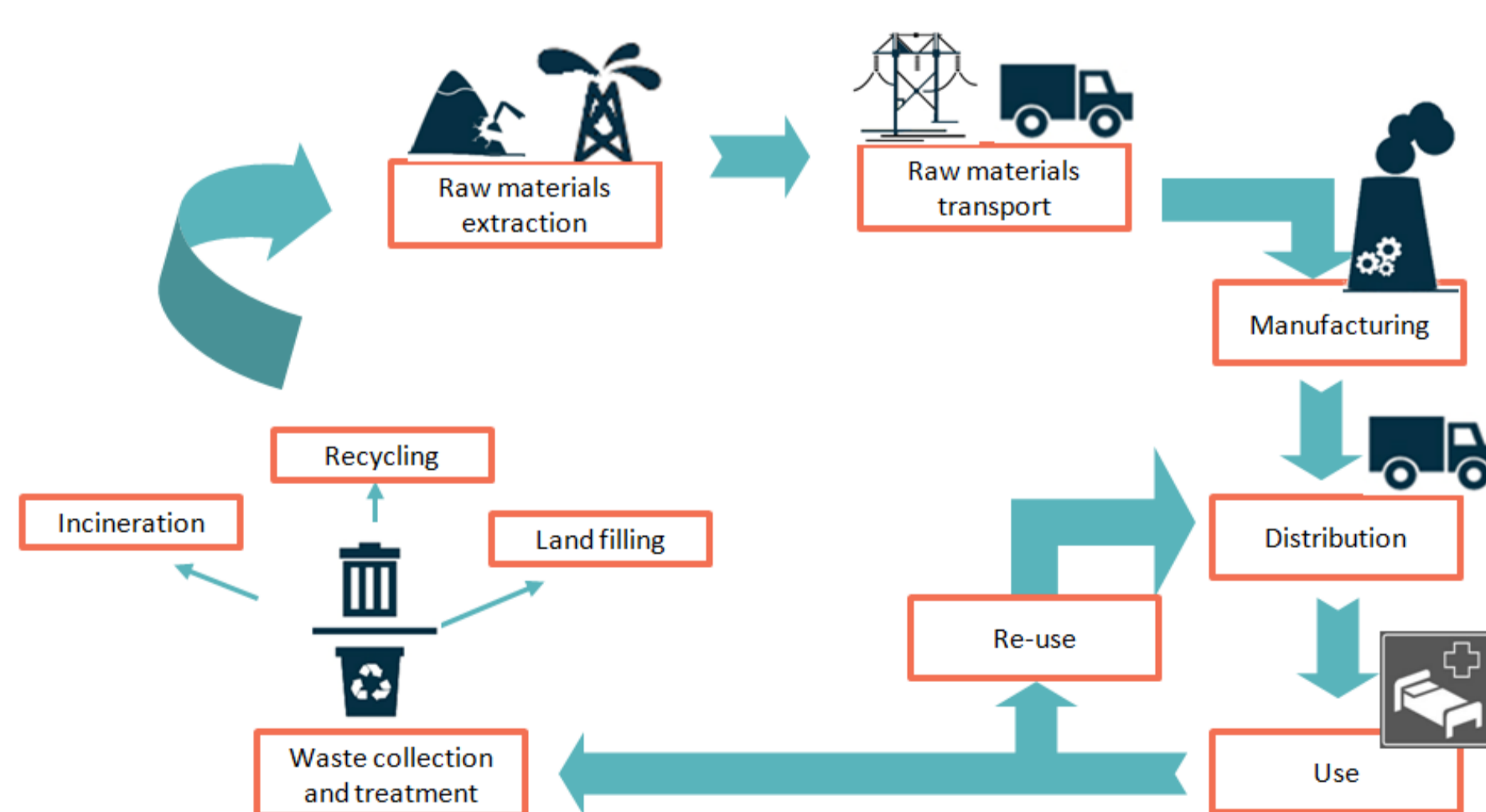
LIFE CYCLE ASSESSMENT APPLIED TO BOHEALTH PROJECT

The LCA methodology is applied to quantify the environmental improvement after the action plan implementation.

LCA is applied in order to quantify the environmental benefits obtained from the application of the action plan and for each BAT or good practises. These are related to:

- Inputs: energy, water, products
- Outputs: waste, wastewater, air emissions

The improvements reached by developing these specific actions previously established will be analyzed in a life cycle perspective .



Benefits of applying LCA :

- Taking into account not only the use phase
- Using a standard methodology to assess the environmental impact
- Comparing two scenarios: the baseline scenario and the scenario reach by the BAT implementation

Results:

LCA will provide useful information that will help to demonstrate the improvement reached by the application of the BATs or a good practise.

The improvement reached will be expressed by the impact categories selected (i.e. GWP reduction)

BOHEALTH is a project co-funded by the European Community under the LIFE financial instrument with the Grant Agreement number. LIFE2012 ENV/ES/000124

BOHEALTH is coordinated by THE HOSPITAL SANT PAU I SANTA TECLA FOUNDATION(FHSPST) leading a consortium formed by SIMPPLE , LEITAT TECHNOLOGICAL CENTRE and XARXA SANITARIA I SOCIAL SANTA TECLA