

heilife®

DISPOSABLE USE
OF COMPOSTABLE
BIOCOMPOSITE
PRODUCTS FOR
PERSONAL AND
HOME CARE



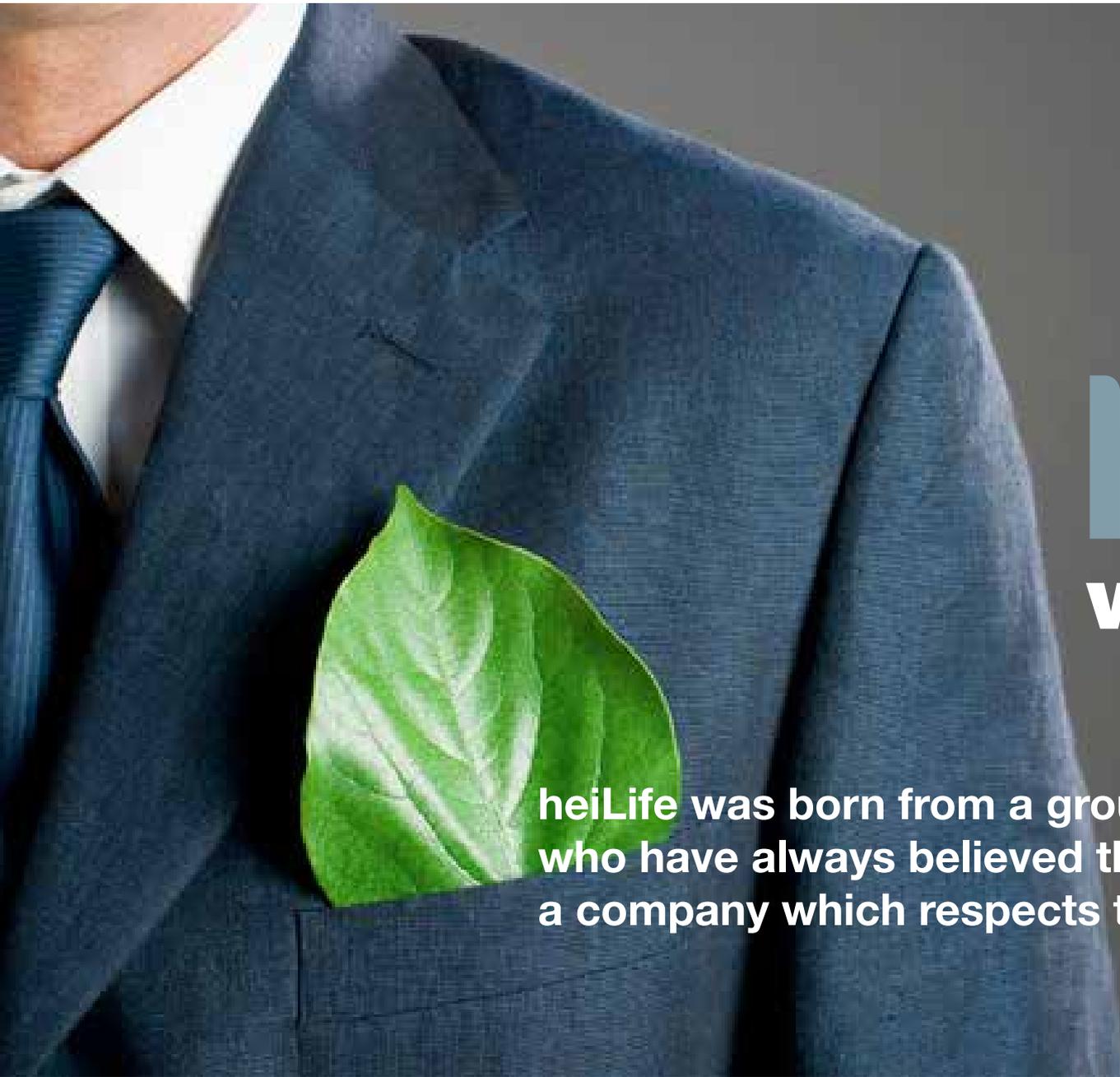


heilife®

HEALTH
ENVIRONMENT
INNOVATION

Developed in

ITALY



heilife®

who we are

heilife was born from a group of young entrepreneurs who have always believed that the future is to create a company which respects the environment.





heilife® balance

Health and environment
comes first



We have studied the dynamics of interaction of the products with the health of the consumer as well the application of the new discoveries in the field of innovative materials and technological processes with the following characteristics:

- SUSTAINABILITY
- BIODEGRADABILITY
- TRACEABILITY
- HEALTH



- The use of natural polymers obtained from renewable resources, complex sugars extracted from the fermentation process of vegetable starch, plastic alternatives acquired from petroleum as well as other natural materials with fibers obtained from agricultural fields or from forests of biological diversity with a sustainability criteria.
- Respecting the true nature of raw materials by verifying the absence of the use of chemical additives.
- Adoption of an innovative protection system from possible contamination during the production and assembly phase of the products.
- The adoption of virtuous practices for energy saving and the reduction of waste.

We picked Bioplastics.



Why should we use Bioplastics?

There are 2 principal advantages compared to the conventional plastics:

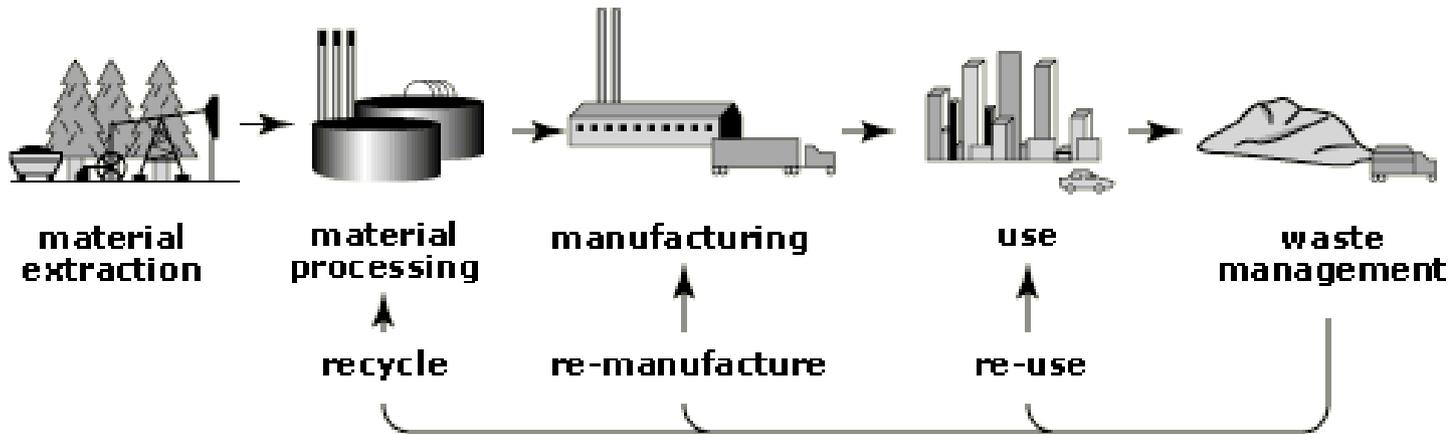
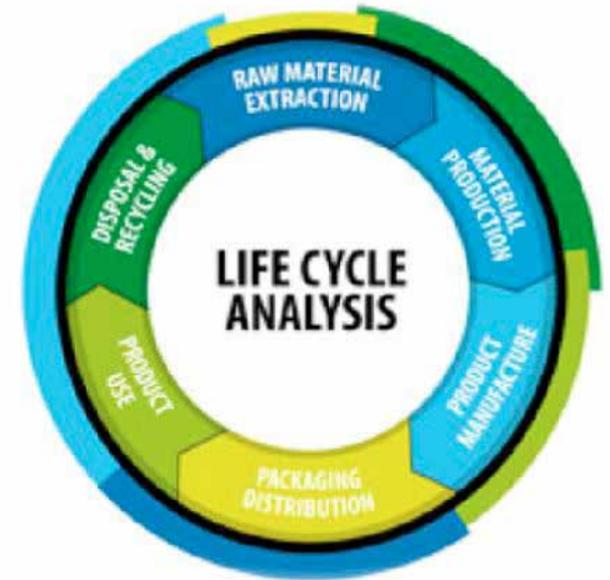
- Reduction of greenhouse gas emissions
- Saving fossil fuels for the future generations

How to measure those benefits?



Life Cycle Assessment (LCA)

A methodology to measure the environmental impact associated with the whole life cycle of a product, from the extraction of the material to the final treatment and disposal.



Global warming potential 100 (GWP 100)

A measure of the “greenhouse gas effect” (global warming) calculated on a base of 100 years.

Associated consequences:

- Ice melting
- Desertification
- Change of seasons
- Deforestation
- Change of the winds and of the oceans



Life Cycle Assessment

In accordance with the LCA based on ISO 14040-14043: 2006



The intensity of the greenhouse gas emissions (Global Warming Potential) GWP



The consumption of non-renewable energies (Abiotic Deletion Potential) ADP



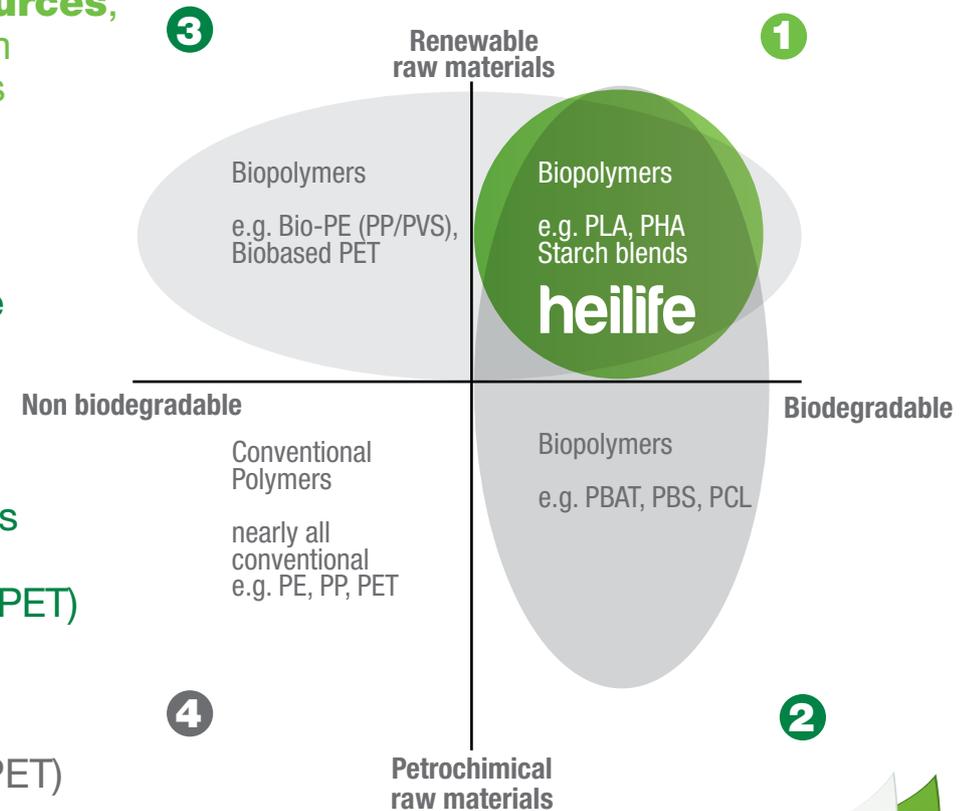
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Bioplastics are not a single type of polymer but a family of materials with different properties.



Within the family of Bioplastics we can identify 4 groups of materials each with its own characteristics.

- **Biodegradable plastics from natural sources**, cioè plastiche namely plastics originating from biomass and having biodegradable properties (eg. PLA, PHA, starch derivatives).
- **Biodegradable plastics with petrochemical origin**, namely plastics which can biodegrade but are produced from fossil fuels (Ex. PBAT, PBS, PCL)
- **Non-biodegradable plastics derived from renewable resources** namely plastics produced from biomass but do not possess biodegradable properties (eg bio-PE, Biobased PET)
- **Non-biodegradable plastics from petrochemicals**, including the traditional plastics (eg. PE, PP, PET)





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Transform waste
into a resource



The problem with disposables.

Disposable products have always been used in international consumer markets. Due to the fact of their disposal method they have a high impact on the environment.



Waste in Italy.

In Italy 32 million tonnes of waste are produced each year, of which approximately 3% (900 thousand tonnes/year) are sanitary napkins of which 74% is disposed in landfills and 26% goes in the incinerators.



Some numbers

500.000 babies

are born in Italy each year.

3796 diapers

on average are used by a European child within the period from 0 to 3 years.

2 billion diapers

are on average consumed in Italy each year.

25 billion diapers

are used each year within EU.

91 kg of diapers

The weight of each diaper is approximately 50 gr. (when empty). This means that each year consuming an average of 1825 diapers, each child produces 91 kg of diapers. When calculated for full diapers the waste produced can reach nearly 1 tonne.

10 million km

If the diapers of the EU are lined up will occupy an area of 20 cm x 10 million of km which correspond to the average distance between the Earth and the Moon (384.403 km) to the average distance between the Earth and the Moon (384.403 km)



Raw material is biodegradable /compostable

BIODEGRADABLE

The bioplastic has to be biodegradable, which means that the polymers are able to decompose into carbon dioxide, methane, water and inorganic compounds or biomass. The process must occur with the enzymatic action of microorganisms.

COMPOSTABLE

Most plastics nowadays can be designed to be composited into specific structures, of which a subgroup of biodegradable plastics. This definition can be deceptive, since a bottle defined as compostable brings to mind the compost pile in our garden or terrace, but that's not how it is.

This category of bioplastics are able to biodegrade either in an industrial composting site or in anaerobic digestion conditions where the decomposition and transformation into humus or compost takes place through the joint action of water, heat and microbial activity.

To be defined compostable, the plastic must decompose into carbon dioxide, water and inorganic compounds or biomass at a comparable rate to that of other known compostable materials, such as cellulose.





heilife[®]

All products of heilife[®] are realized with biodegradable and compostable raw materials and can therefore, where possible, be disposed of as organic waste and transformed into a resource.







heilife®
balance

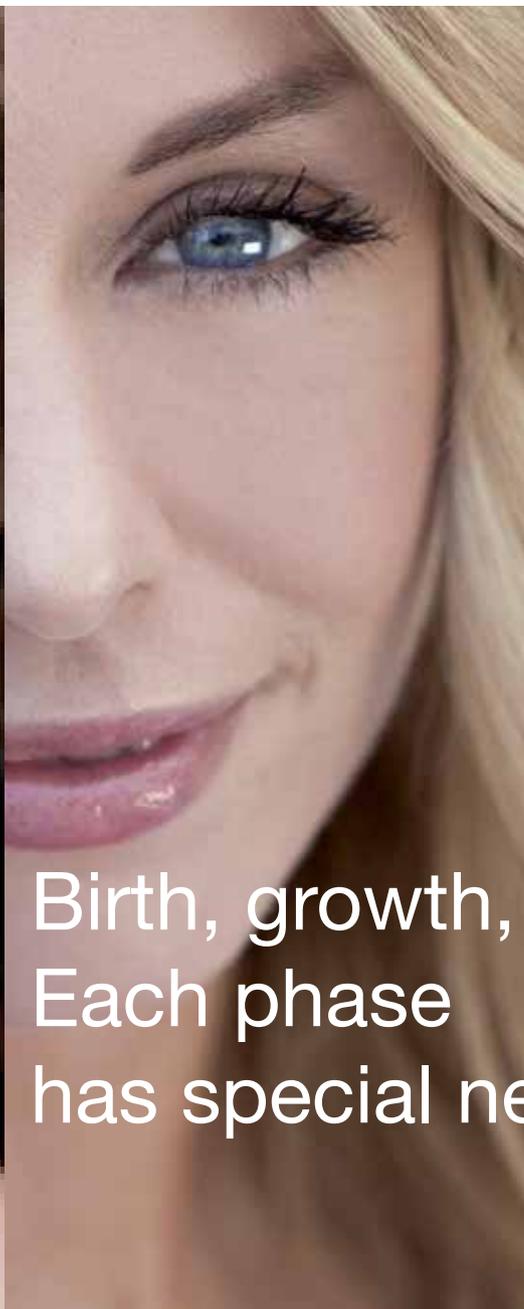
Health and
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naturaè
MADE WITH LOVE IN ITALY





Birth, growth, maturity
Each phase
has special needs

naturaē®
MADE WITH LOVE



The delicacy is feminine.

- SPONGE
- TOWEL WIPES
- BANDAGES FOR MINOR WOUNDS
- DELICATE CLEANSING
- SANITARY LINE
- PANTYLINERS
- INTERNAL TAMPONS



S.O.S. mom.

- BREAST PADS
- TOWELS AFTER CHILDBIRTH
- TOWEL WIPES
- DELICATE DETERGENTS



Third Age. The challenge of wellbeing and efficiency.

- DIAPERS
- SPONGES - DAILY HYGIENE
- DISPOSABLE WIPES
- BED UNDERPADS
- RESTORATIVE CLEANSING GEL
- BANDAGES





A close-up photograph of a fountain pen with a silver nib writing a signature in black ink on a light-colored document. The signature is written in a cursive style and is positioned above a horizontal line. Below the line, the word "(signature)" is printed in a smaller, sans-serif font. The pen is positioned diagonally across the frame, with the nib pointing towards the bottom right.

The certification is the best guarancy.





Thank you for your attention.