



THE PROJECT

The **repair service** provided for [Save The Duck S.p.A.](#) by [PRISM SRL Società Benefit](#) offers a smart solution to extend the lifespan of products. In 2025, a Life Cycle Assessment (LCA) was conducted on the repair of a **zipper in a DAISY/DONALD jacket**. This study, carried out in collaboration with Save The Duck S.p.A. and PRISM SRL Società Benefit, followed the Environmental Footprint (EF) 3.1 methodology and adopted a cradle-to-grave system boundary. The **climate change impact** resulting from the repair was calculated at **0.41 kg CO<sub>2</sub>-equivalents per one year of use**, based on an **extended product lifetime of 15 years** due to the repair. Of the total impact, **73.8%** is attributed to the **jacket's manufacturing phase**, while **14.1%** is related to its **use phase, primarily due to washing**. Notably, **64.4%** of the overall environmental impact stems from **raw material production**, and **11.1%** is due to **electricity consumption**. This pilot is part of the circular projects featured in SDA Bocconi's Monitor for Circular Fashion 2025. In this project MUSA Spoke 5 Bocconi researchers was a knowledge partner.

METHODOLOGICAL ELEMENTS



**HOW MUCH**  
0,54 Kg

**HOW WELL**  
The product is designed for insulation and for keeping body heat

**HOW LONG**  
15 years

**Functional Unit:**  
1 DONALD/DAISY jacket with repaired zipper  
**Composition:**  
100% polyamide shell and lining  
100% polyester for padding  
**System Boundary:**  
From cradle to grave  
**Impact Categories:**  
Climate Change  
**Methods:**  
EF 3.1  
**Background Datasets:**  
Ecoinvent ver 3.10

LCA RESULTS (KIMPI - KEY IMPACT INDICATORS) AND HOTSPOTS

KIMPI	UOM	JACKET MANUFACTURING	USE PHASE (WASHING)	USE PHASE (REPAIR HUB)	END OF LIFE	TOTAL
RAW MATERIALS	%	63,6%		0,8%		64,4%
CHEMICALS	%		6,9%			6,9%
PACKAGING	%	6,4%				6,4%
ALLOCATED WATER	%	0,5%	1,1%			1,6%
THERMAL ENERGY	%					
ELECTRIC ENERGY	%	3,7%	3,3%	4,1%		11,1%
TRANSPORTS	%		2,2%	0,1%	2,2%	4,5%
EMISSIONS TO AIR	%					
EMISSIONS TO WATER	%					
WASTE PRODUCED	%			0,2%	4,7%	4,9%
WASTEWATER	%		0,3%			0,3%
TOTAL	%	73,8%	14,1%	5,3%	6,8%	100%

This impact distribution is based on the assumption that the entire use phase spans 15 years.

POSSIBLE IMPROVEMENTS

**MATERIAL QUANTITY**  
Reduce the total quantity of materials employed for the production of the jacket

**TYPE OF MATERIAL**  
Use of less impactful material (if durability performances are equal) and the use of primary data in LCA studies is beneficial

**ELECTRIC ENERGY**  
Optimize processes to reduce the use of electric energy (efficiency). Use of certified renewable energy mix.

**CUSTOMIZATION**  
Offer a personalization service can help extend the lifespan of garments.

**UPCYCLING**  
Upcycling services help extend product lifespans while reducing their environmental impact on a per-year-of-use basis.

**TAKE-BACK PROGRAM**  
Establish a take-back program to support the transition to circular business models and enable more effective material recovery

**USE PHASE: WASHING**  
Educate consumers to wash less and using low temperature programs

**GLOSSARY**  
**Environmental impact**  
Environmental impact: any modification of the environment, adverse or beneficial, total or partial, caused in whole or in part by the environmental aspects of an organization. *ISO 14040:2006*  
**Climate change**  
Climate change: change in climate that persists for an extended period, typically decades or longer. *ISO 14050:2020*

0,41  
KgCO<sub>2</sub>eq/unit  
per year of  
use

A 3rd party has not reviewed this result according to ISO 14040 and 14044 standards. It should therefore not be used for public disclosure of comparative assertions