

RE[↻]SHOES

BY **SCARPA**

INNOVATION FOR CIRCULAR FOOTWEAR

Tiziano Giordano

 **SCARPA®**

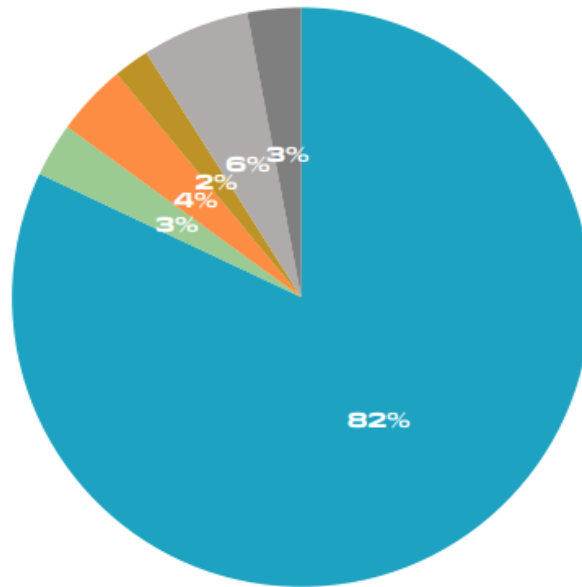
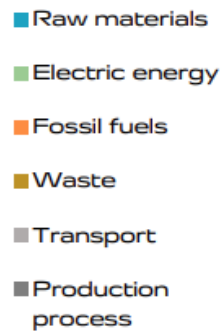


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LIFE RE-SHOES – ID:101074529

OUR CARBON FOOTPRINT

GHG emissions



THE MAIN KEYS TO REDUCING OUR EMISSIONS ARE:

- MORE RENEWABLE ENERGY
- USE OF RECYCLED MATERIALS (WHERE POSSIBLE)
- COLLABORATION WITH THE SUPPLY CHAIN
- CIRCULAR ECONOMY PROJECTS

CASE HISTORY 1: MAESTRALE



2010



2015



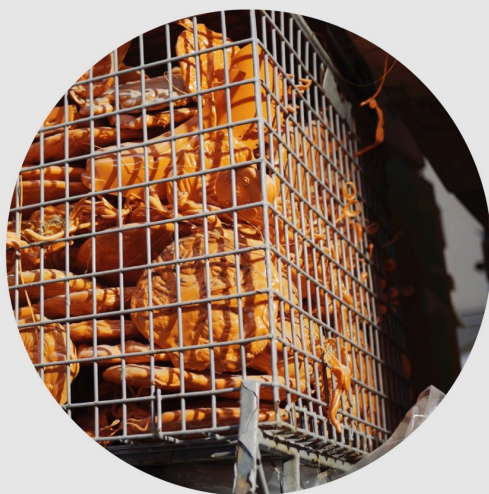
2017



2019



2021



PRODUCTION
SCRAPS



MATERIAL **RE-MADE**
by **SCARPA**



MAESTRALE
RE-MADE

5

MAESTRALE REMADE

The first
100%
recycled boot,
using production
waste polymers.

-27% CO₂ emissions
compared to the
MAESTRALE model.



CASE HISTORY 2: MOJITO

We have selected **recycled materials** in order to reduce the environmental impact of MOJITO footwear production. This choice allows us to produce high-quality footwear **without compromising on the performance.**

MODELLO STANDARD



MOJITO

MODELLI PLANET



MOJITO PLANET
SUEDE

-23,5%
kgCO₂e/paio



MOJITO PLANET
FABRIC

-57%
kgCO₂e/paio



MOJITO PLANET
DENIM

-56%
kgCO₂e/paio

THE CHALLENGE

- **Every year over 24 billion new shoes are produced**
- **Less than 5%** are recycled or reused
- **95% goes to landfill** or is stocked in wardrobes



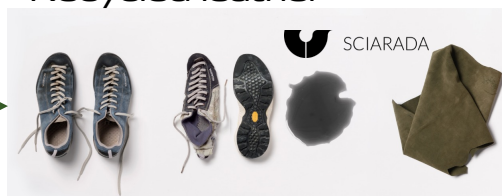
RE SHOES

PROJECT OVERVIEW



Each single part of the used shoe can be recycled to produce secondary raw materials.

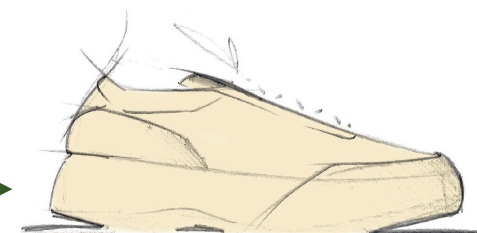
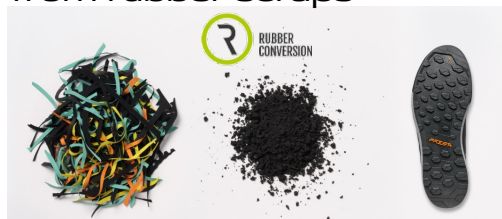
Recycled leather



The rest of the shoes after hydrolysis is grinded and mixed with virgin PU foam and film to make new midsole



The outsoles are made with devulcanized material from rubber scraps



New **SCARPA** shoe made of:

- recycled leather
- recycled midsole
- recycled rubber for sole and toe cap

THE PROJECT

STEP 1

COLLECTING.



STEP 2

REGENERATING.



STEP 3

THE NEW SHOE.



REGENERATING

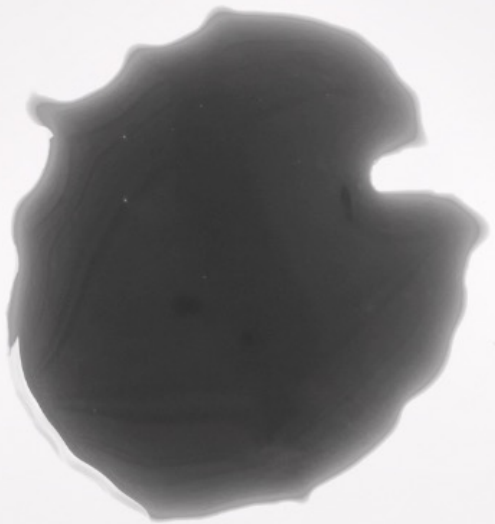
HYDROLYSIS PROCESS: through hydrolysis process we separate the upper from the sole.



HYDROLYSIS PLANT

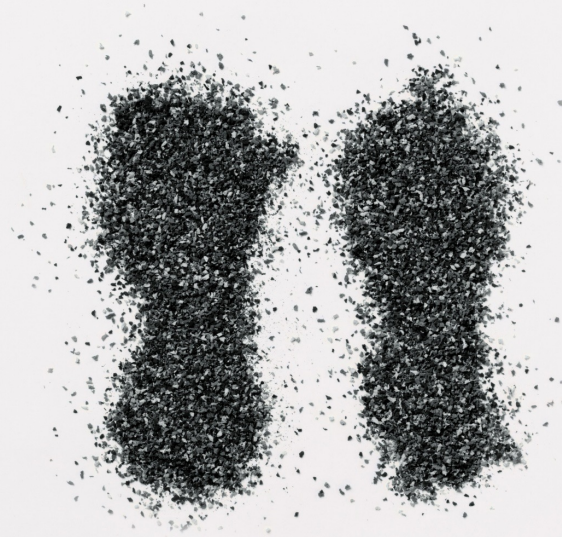


FROM COLLAGEN/FILLER TO NEW LEATHER



REGENERATING

FROM SOLE TO MIDSOLE



MIDSOLE MADE WITH WORN SOLES



WORN SOLE



3 mm GRINDED
EVA-RUBBER
INSIDE THE
SCREW PUMP



RECYCLED
PU FOAM



PU MIDSOLE



REGENERATING

**FROM PRE-CONSUMER SCRAPS TO RUBBER
REINFORCEMENTS AND OUTSOLE**



REGENERATING

FROM UPPER TO RECYCLED FOOTBED

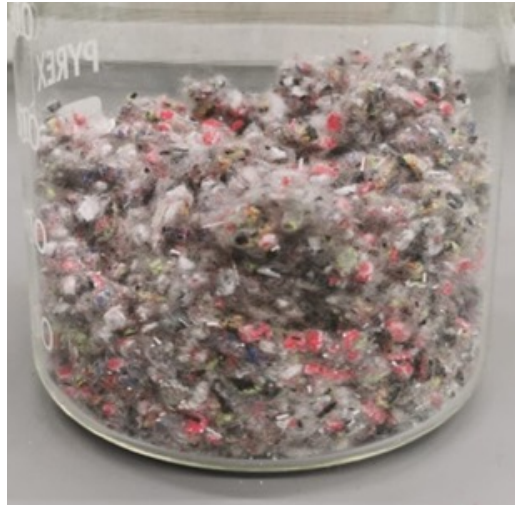


REGENERATING

UPPER RECYCLING PROCESS TEST #1



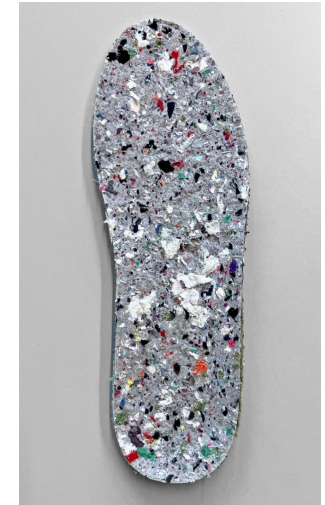
UPPER TEXTILES
THAT REMAIN
AFTER THE
HYDROLYSIS OF
OLD MOJITOS



GRINDED TEXTILE



BI-COMPONENT
FIBERS USED



RECYCLED
FOOTBED

REGENERATING

UPPER RECYCLING PROCESS TEST #2

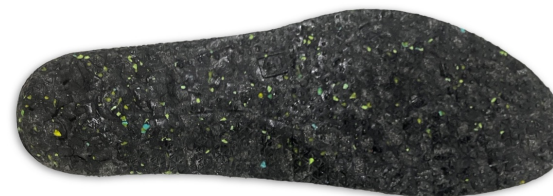


UPPER TEXTILES
THAT REMAIN
AFTER THE
HYDROLYSIS OF
OLD MOJITOS



GRINDED TEXTILE
WITHOUT METAL
EYELETS AND
PLASTIC TOE

RECYCLED FOOTBED



THE CURRENT MOJITO RE-SHOES
HAS A FOOTBED WITH 88%
RECYCLED CONTENT IN IT, COMING
FROM PRE-INDUSTRIAL WASTE AND
NOT THE TEXTILES OF OLD MOJITOS.

REGENERATING: COMPLETE!
SECONDARY RAW MATERIALS



MOJITO RE-SHOES

THE ORIGINAL, RE-MADE.



MOJITO RE-SHOES

PROJECT RESULTS

UPPER: SUEDE
LEATHER
TANNED FROM
OLD MOJITOS

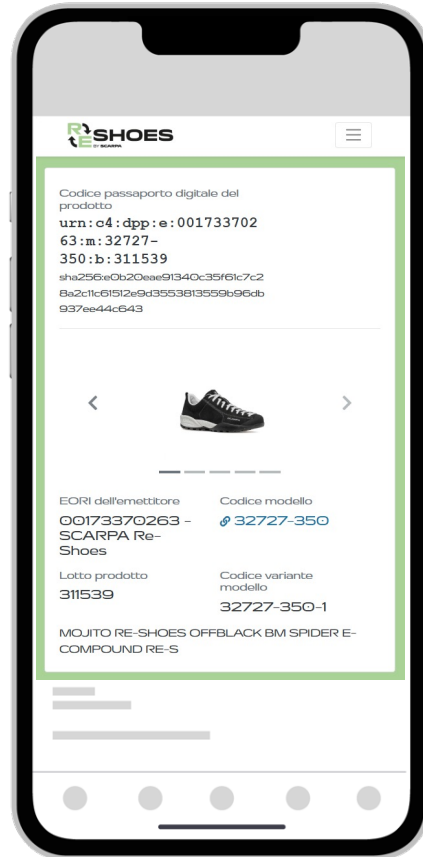
RUBBER CAP: 35%
DE-VULCANIZED
RUBBER

MIDSOLE:
UP TO 35% VOLUME
OF GROUND SOLES
FROM OLD MOJITO

OUTSOLE:
50% DE-VULCANIZED
RUBBER COMING
FROM SCARPA
PRODUCTION SCRAPS



MOJITO RE-SHOES IN-DEPTH INFORMATION



A complete **LCA** is available starting from the batch number.

with the analysis of impacts and emissions of the full life cycle of the MOJITO RE-SHOES.



LIFE RE-SHOES: PARTNERS

SCARPA's partners in the various development phases of the Re-Shoes project.



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Alma Mater Studiorum Università di Bologna

In this project, its role will be developing Design for recycling, Testing and characterization of materials and shoes, Life Cycle Assessment study Assessment.



SCIARADA

Sciarada Industria Conciaria

Separation of materials and hydrolysis of leather, Evolo process for the production of regenerated leather.



RUBBERMAC®

Rubbermac

Production of rubber sheets from secondary raw materials, separation of textile components and soles and conversion into components for new soles.



innovando

Innovando

Logistical campaign to collect used shoes.



RUBBER
CONVERSION

Rubber Conversion

Devulcanization of industrial rubber waste to regenerate new rubber.



**European Platform
for Sports and
Innovation**
Networking
and promotion.



THANK YOU!



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