



## Footwear environmental footprint category rules implementation and innovative green shoes ecodesign and recycling.

### LIFE GreenShoes4All: an opportunity for strengthening the resilience of a sustainable footwear industry

When the LIFE GreenShoes4All started in late 2018, the social, economic and political context in which the project was conceived was completely different from the current reality. Although we were already aware of the global threat represented by climate change and environmental degradation, the Covid-19 pandemic first, the still ongoing, unjustified Russian invasion of Ukraine, and the increased consumer behaviour to contribute to a better planet, have further exacerbated the emergency to transform our businesses into more sustainable and socially responsible. It is now clearer than ever that the transition to a green economy is no longer an option.

At political level, the European Union has defined a clear pathway for the future of the “Textiles ecosystem”, which includes footwear, by launching the EU Strategy for Sustainable and Circular Textiles on 30th March 2022. The EC Communication, based on the EU Green Deal, the Circular Economy Action Plan, and the EU Industrial strategy offers an overview of what footwear companies shall address in the near future:

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- Consider eco-design requirements to increase durability, repairability, and recyclability, as well as the use of recycled materials;
- Introduction of the Digital Product Passport that will include information linked to the identification, traceability and sustainability of the product (the precise data per each product will be defined in a second stage).
- Fight greenwashing;
- Limit the destruction of unsold or returned textiles;
- Mandatory Extended Producer Responsibility (environmental and social rights) with eco-modulation of fees;
- Avoid unintentional release of microplastics from synthetic materials;



- Restrictions to the export of waste and promotion of sustainable products globally;
- Support circular business models, including reuse and repair sectors;
- Contribute to the Single Market for Green Products and Green Deal Package by demonstrating the great added value of the European Product Environmental Footprint methodology, Ecodesign and Circular Business Models.



Engaging with companies at MICAM, September 2022

As you already know, the main project outcomes include:

- Methods to measure and reduce materials, soles, and shoe products' environmental footprint between 10 % and 30 %.
- Practical eco-design guidelines for shoe design, distribution, and use phase.
- New recycling routes to obtain high-quality recycled thermoplastics, EVA, and vulcanised rubber incorporating between 60 % to 100 % of discarded material thus reducing the virgin materials needed and wastes.
- Innovative sustainable fashion and safety green shoes based on new design approaches, recycled materials, and manufacturing methodologies.

The good news is that LIFE GreenShoes4All project has helped and will continue helping companies address their environmental transformation!

## Our partners' stories: Greenshoes4All delivering tangible results

### AMF Safety Shoes, PORTUGAL



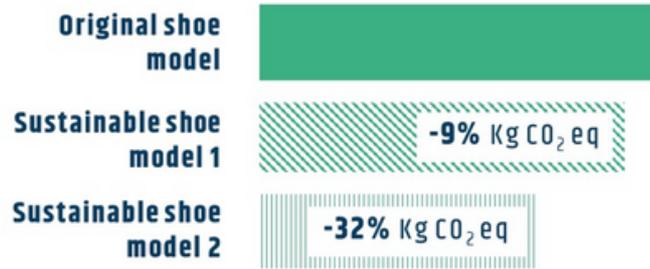
“Since 1999, our mission has been to offer all workers the best technical footwear solution in terms of comfort, protection, and technology. Today, AMF SAFETY SHOES is a reference in the international safety footwear industry market, for the most innovative, attractive, and functional solutions. For this reason, major international footwear brands, including TOWORKFOR, seek AMF SAFETY SHOES to develop their collections, either for their experience in design and development or for the production capacity and polyvalence of the glued and injection lines.

The LIFE GreenShoes4All project was impactful for us and made us look for better ways of producing new footwear models with less impact on our environment. In the graph below, you will see how we decreased the environmental footprint of our products thanks to the project outcomes.

By creating and analysing several versions of our models, we were able to conclude that, by implementing ecodesign strategies, we could maximise the available resources available generating lower quantities of waste/residues. With an optimised design comes also an easier and optimised productions, that leads to reduce consumption of resources like water and electricity. Planning plays also a big role: the more fluid the planning system is, the easiest will be to avoid issues with disruption of production lines generating waste of resources.

Another important aspect of this evaluation was the need to reduce the use of resources during transport operations across our whole process. In this regard, we are moving towards a more local and national production that will ultimately create less waste and less consumption of resources during these operations.





Courtesy by AMF Safety Shoes

Finally, with all the extensive work done around materials and viable alternatives to the ones that we are currently using, we have now a solid base to work in terms of sustainable materials aligned to the safety standards in place. This remains as one of our biggest issues: because of the strictness of the European safety standards, a lot of materials are not fit to be used in safety shoes, especially if we are talking of upper materials. Therefore, we will continue working together with our partners to keep finding viable solutions for our industry”.

## IL PASSO – Pestos Production, ROMANIA

“We are a 23-year-old Romanian company that produces women shoes. We have 13 stores in the most important 8 cities of the country, and we are well-known for producing fashion shoes. Our company is very interested in reducing the environmental footprint. As climate change has invasive and lasting consequences, we think the need of becoming “green” is very strong. Our goal is to minimise the impact on the environment while continuing to produce fashion articles

Our first step in this direction was to create 3 prototypes of organic articles that we presented at MICAM international trade fair in Milan; Then we created a few series of shoes for customers to test and get their feedback. We made a series of 200 pairs of a sport boot that we called “LENNIE ECO” (see photo). We used for it the following materials:

- Lining: vegetal tanned leather and ecological fur;
- Eco soles that have 30% recycled rubber;
- Ecological piping;
- Zip was made from recyclable plastic;
- Ecological laces, made from 100% recycled polyester;
- Insoles, made by cardboard and recycled leather;
- Ecological backdrops, made from 93% renewable products and water-based paints and adhesives.



Courtesy by IL PASSO - Pestos Production

We put them to sale and asked costumers to give us feedback. About 70% of the testers was familiar with our brand; the same percentage declared an interest in environmental protection and the materials that footwear is made of, as well as their impact on human health. However, in Romania, only 44% of the testers were willing to increase their budget by 10-20% for these “eco shoes”, while 28% were not willing to change their budget at all.

Concluding, we can see that most of the people are concerned about the environment and their health, but more work is needed when it comes to make costumer accept higher prices for ecological products”.

## Atlanta, PORTUGAL **atlanta**

“During the project LIFE Greenshoes4All, Atlanta Componentes Para Calçado, Lda., a company specialised in the development and production of components for the footwear industry located in Portugal, was quite engaged and very interested in improving the sustainability of their production. Our goal was to implement real solutions towards real actions to have a very interesting circular economy in our organisation, in line with the principal objectives that our organisation commits to comply with since many years.

Here are some of the main results we achieved during the project:

We developed a TR (SBS), reformulated and recycled in our extruder lines. We created a thermoplastic material, with a dark colour, to use internally in our injection process, by using 80% of our TR waste. The product has very good mechanical-physical properties and is suitable for very demanding sole models.



We reformulated and recycled in our extruder lines a TPU. We created a thermoplastic material, with a dark colour, to use internally in our injection process, by using 98% of our TPU waste. Also in this case, the product has very good mechanical-physical properties and is suitable for very demanding sole models.

We also developed a TPR (styrene-butadiene-styrene based Thermoplastic elastomer) incorporating 5% of micronized residues from the prefabricated soles process. Similarly, we formulated another TR incorporating 5% micronized rubber from the residues of the sole vulcanization process.

Finally, on the vulcanizing rubber process, we developed 3 SBRs (Styrene-butadiene rubber), incorporating respectively:

- 25% multicoloured crushed rubber from the sole vulcanization process;
- 40% micronized rubber residues from the sole vulcanization process;
- 30% micronized residues from the prefabricated soles process.

The final product is visible in the photos below:





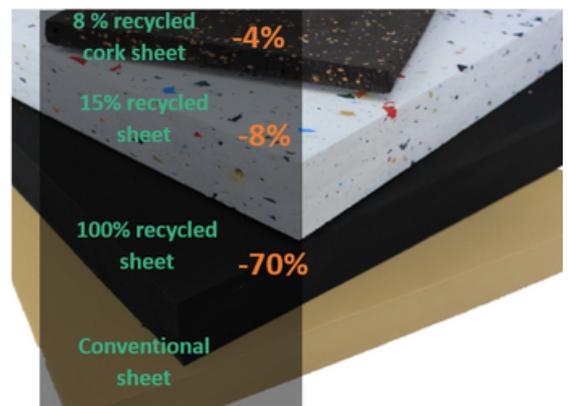
To conclude, we are very satisfied with the results achieved, and we will continue investing and working on this direction in our company".



Jose. E. García, General Director of EVATHINK, shares the achievements reached during the project. EVATHINK is a company dedicated to the manufacture of expanded EVA sheets for different purposes, including footwear, with more than 25 years of experience.

“Thanks to the EC LIFE Program, we can say that being a company committed to the environment has allowed us to be resilient today, face to the current crises.

The developments obtained during the project have made possible to commercialise new sustainable and high-quality products while reducing waste. Specifically, new lines have been developed, such as sheets made from 100% devulcanized EVA, sheets with up to 20% vulcanized EVA, biobased EVA sheets and sheets with waste from other industries”.



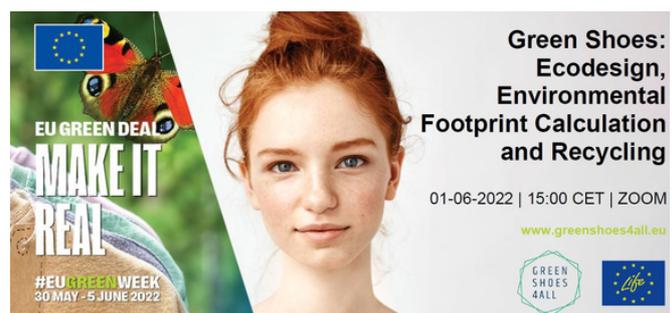
All the new products developed comply with the highest quality standards; the optimum between environmental commitment and performance has been validated in laboratories. Due to this commitment, EVATHINK has been recognised by the Spanish government through a seal that reflects the reduction of the organisation's carbon footprint since the beginning of the project.

## Engaging other footwear companies

In the last phase of the project, the consortium got in contact with footwear companies in several occasions, among them:

### LIFE GreenShoes4All at the EU Green Week

On 1st June 2022, the project leader CTCP organised an online conference in the framework of the EU Green Week. The event was a valuable opportunity to share with more than 100 participants, mainly companies, the most concrete results of the project, as well as the project alignment with the ongoing EU green transition.



The main themes addressed by the speakers, representing project partners, were related to the European legislative framework, ecodesign solutions and testing. Of course, the experience from the companies' partners that you have just read attracted the highest attention of the audience.

The LIFE GreenShoes4All team thanks again the EU Green Week for hosting and supporting the event.

### LIFE GreenShoes4All in Milan



CEC, APICCAPS and FICE were present during MICAM, MIPEL and Lineapelle, the trade fairs held in Milan (FieraMilano Rho) between 18th and 22nd September 2022. During this occasion, the partners informed the expositors and visitors about the project, its activities and achievements by distributing informative materials and encouraging committed companies to contribute to the still ongoing project activities. Ms Carmen Arias from the CEC was also given the opportunity to expose the project during informative sessions.

The overall impression was that companies are progressively putting sustainability at the core of their business strategy. Not only were they interested in the project, but many of them are already preparing themselves for the upcoming legislative changes envisaged by the EU, without distinction between well-established businesses and emerging designers.



### End of the project? Beginning of the journey!

The LIFE GreenShoes4All project activities are about to finish, but the outcomes will continue supporting your green transition. You can now request advice from any of the partners on how to measure your products' environmental footprint and identify in which manufacturing phase action should be taken. Moreover, the eco-design guidelines are publicly available and remain at your disposal on the multilingual website [www.greenshoes4all.eu](http://www.greenshoes4all.eu), where you will find as well other relevant information.

Last but not least, the consortium is still collecting your insights on green production through the dedicated survey [Is your company producing green goods in an eco-friendly way?](http://www.greenshoes4all.eu) Your contribution will help the consortium further support the footwear industry to decide on the interest and way forward for a sustainable manufacturing strategy.



**Project Life GreenShoes4All results are ready to be used by you.**  
We invite you to know more and benefit from our: Innovative methods to measure and reduce materials and shoes environmental footprint; High quality recycled thermoplastics, EVA and vulcanized rubber materials; and Green fashion and safety shoes with lower environmental footprint.

**We look forward to hearing your success stories!**



## Partners



LIFE GREEN SHOES 4 ALL · LIFE17 ENV/PT/000337

Footwear environmental footprint category rules  
implementation and innovative green shoes ecodesign  
and recycling

<https://www.greenshoes4all.eu/>

### Contacts

**Lead partner: CTCP – Centro Tecnológico do Calçado de Portugal**

<https://www.ctcp.pt/>

**Communication: European Footwear Confederation**

[www.cec-footwearindustry.eu](http://www.cec-footwearindustry.eu)



The LIFE programme is the EU's funding instrument for the environment and climate action created in 1992. The current funding period 2014-2020 has a budget of €3.4 billion.