

## ***FUTURE FASHION***

### **Original Green Fashion Made in Italy: high tech nanomaterials and new generation eco-sustainable chemical products for the FASHION sector, guarantee of authenticity and safety for people and environment**

FUTURE FASHION intends to innovate the world of materials available to the fashion sector by developing innovative nano-structured materials and solvent free ecological products to make Made in Italy world-class excellence not only for style and creativity, but also for technology and innovation.

Innovative products will be applied in the tannery and textile sector and will supply the leading fashion designers in Tuscany who seek textile and leather products for leather, footwear and clothing. Innovating this production sector involves combining product innovation with a system that protects and protects this innovation, the result of great economic and intellectual efforts.

The first objective of innovation is to develop innovative finishing / functionalizing products for leather and textiles such as water-based, environmentally-friendly products, without the use of hazardous chemicals and chemicals (for people and environment ), which will be used to confer properties normally lacking in leather and fabrics: resistance to dirt and water, antibacterial and anti-mold properties, innovative treatments (eg antistatic properties, thermosensitive chromatic effects, slow release scents, thermoregulating properties ...) to meet the demands of functionality and originality of the fashion world and to surprise the end customer with ever-new effects, following the continued research of the fashion of Made in Italy. The research focuses on the development of original products without solvents and without dangerous substances, drawing on green chemistry and using innovative nanomaterials. Particular attention is paid to polyurethanes, typically solvent-based chemical compounds used in the finishing of skins, which do not currently have a viable alternative in the water phase and have a negative impact on the environment and health of workers and end customers.

The second objective is to develop innovative high-security anti-counterfeiting systems based on new generation nanomaterials, which will serve to "protect" the originality of the highest quality and quality products. In particular, it is aimed at the development of innovative systems based on 2 different nanotechnologies: fluorescent and thermochromous inks (nanometric additives based on metallic alloys, capable of activating at different wavelengths of ultraviolet light) and nanoparticles and magnetic nanorods (to obtain anti-counterfeiting magnetic labels). The further development of marking (visible and / or invisible) marking tools made on leather and fabric supports will not only provide a new product to the end customer, but a truly innovative service to protect the uniqueness of their own products