



Neo<sup>®</sup> project

3



# NEO<sup>3</sup> project

Nexia  
Ozone  
Engineering



Denim is one of the most widely used textiles globally thanks to its comfort and overall resistance. With the wide variety of techniques and processes used in producing fashion that meets client needs, it is unfortunately well recognised the large amount of chemicals and water that are required in the production cycle. Conventional finishing treatments of denim must therefore be replaced, phased out with other technologies that transition toward ecological and sustainable procedures. To that end, new finishing processes which produce

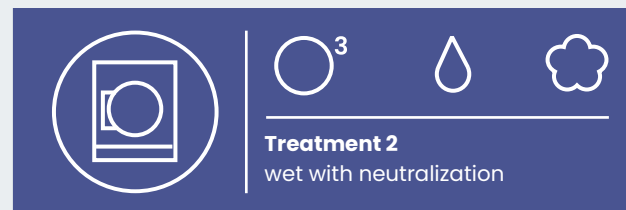
specific effects on denim have been introduced. We are, of course, talking about ozone, one of the latest, state-of-the-art techniques which reduce both water and chemicals, considered one of the best technologies for substituting traditional, environmentally damaging whitening and aging processes often carried out on denim. Textile performance and the health of clients must, however, be central to production and facilitate, in turn, an improved, objective and transparent communication with the buyer him/herself.

For this very reason, Neo Project 3 is based on the study of possible short and long-term damaging effects regarding the mechanical properties of denim material as well as verifying the possible presence of ozone upon termination of the washing process

The first verification phase is as follows:

■ **Material observation:**  
possible fibre damage

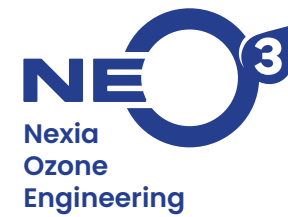
■ **Treatment observation**  
comparison between traditional wash and complete elimination of ozone from textile after neutralization





**This first analytical phase is of fundamental importance as in 2030 a Digital Passport for all textiles will be obligatory.**

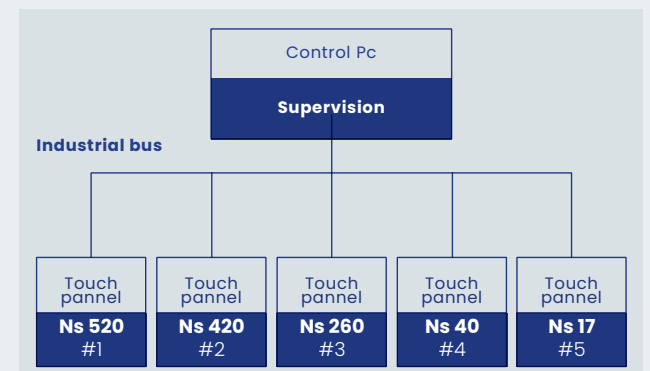
**This passport** will contain information that promotes re-usage and recycling possibilities. The European Community is demanding that products last longer so as to slow down the consumption of raw materials and reduce water consumption, recognising that product waste too is increasingly unmanageable. Amongst the first industrial sectors to use this Digital Passport are the electronics, battery and automobile and textiles-clothing industries.



After every treatment, Nexia's avantgarde machines compile all data regarding water, vapour, energy and process-time consumption thanks to its software "Supervision". Insofar as it is automatically generated without any possibility of human, manual intervention, the data produced is completely irrefutable. The advantage here is that consumer communication, often obfuscated by "greenwashing" (a practice which additionally damages the ima-



ge and credibility of companies) is transparent and direct, additionally protecting consumers from disloyal practices and baseless marketing messages.





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# Innovative and sustainable laundry solutions

**Nexia Italia** srl, collaborating with fashion/textile expert **Dalia Benefatto** regarding development strategies and communication (Benefatto herself is founder of Devalia, a company with a scientific approach toward circular economy), communicates updates and innovative practices as regards ozone-based technology partnering with **STIMA-CNR** in Biella. STIMA, as Istituto del CNR (National Research Council (publicly owned)) has the institutional task of conducting, promoting, disseminating and valorizing research activities for scientific, technological, economical and social develop-

ment within Italy. STIMA Biella is dedicated to the research and innovation of manufacturing technologies and materials of the textile industry. It is deeply involved in the innovation and sustainability of industrial transformations and functionality of textile fibres for conventional applications (clothing, furniture) as well as for technical applications, areas which are currently damaging the image and credibility of companies. Indirectly then, STIMA helps in protecting consumers from disloyal practices and baseless marketing messages.

**NEXIA**



**STIIMA CNR**