

DEVELOPING SMART GARMENTS AND FUNCTIONAL SAFETY SHOES

New highly flexible production methodologies and processes were the focus of EU-backed scientists in a recent project on customising safety shoes, work wear and sportswear for elderly, diabetic, overweight and disabled people. Efforts resulted in the development of new integrated sensors and software systems able to interactively monitor health parameters at work and during sports activities.

European manufacturers have advanced new approaches to serve changing markets, with innovation necessary due to growing environmental awareness and various social phenomena. These phenomena include ageing, increased obesity and increased sensitivity towards disabled people.

The EU-funded MYWEAR (Customised green, safe, healthy and smart work and sports wear) project investigated these new market needs and potential solutions. Specifically, scientists researched high-tech production processes, smart textiles and personalised green clothing and footwear.

Initial efforts focused on creating a platform to gather client data as a basis for customer-driven production. The platform integrated information from a wide range of health and biometric sensors within clothing products.

These sensors were contained in a textile-intrinsic communication layer using textile-based circuitry. For this part of the project, the team had to balance technical performance, technological constraints and environmental aspects.

Other work was dedicated to better usage of light, biodegradable textiles in sports and work garments. For



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SPECIAL FEATURE

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example, researchers investigated new polymeric materials for protective inserts and customised shoe soles.

In order to produce these smart, eco-friendly materials, MYWEAR developed new production systems and processes. The processes had to adapt to customer requirements, with innovative automated manufacturing approaches continuing to be explored.

Ongoing research in this area is available on the project website and on the Mass Customisation Knowledge Network site. MYWEAR has completed its mission of sustainably developing a new generation of work clothing and sportswear goods.

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MYWEAR

- ★ Coordinated by Base Protection in Italy.
- ★ Funded under FP7-NMP.
- ★ http://cordis.europa.eu/result/rcn/147164_en.html
- ★ Project website: <http://www.mywearproject.info/>