

➔ Consortium

The ROBOFOOT consortium consists of research institutions in field of footwear, robot manufacturers and technology providers, end users and system integrators.



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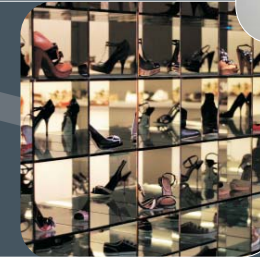
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Smart robotics for high added value footwear industry



ROBOFOOT

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ROBOFOOT



→ Concept

Footwear production is currently mainly **handcrafted** especially in the case of **high added value shoes** production, where Europe maintains its leadership.

The introduction of intelligent robotics **will contribute to overcome the complexity in the automation of the processes of this industry** that accounts for some of the shortest production runs to be found.

→ Industrial objective

- Enhance final product quality
- More flexible production lines to answer small production batches.
- Full traceability and 100% inspection of final product
- Reduce assembly costs
- Mass customization

→ Scientific and technological objectives

→ Manipulation

The objective is to develop grasping and handling algorithms and devices able to manipulate shoes of different shapes, sizes, colours and material properties, firmly and reliably but avoiding surface damage.

→ Sensor based Robot control

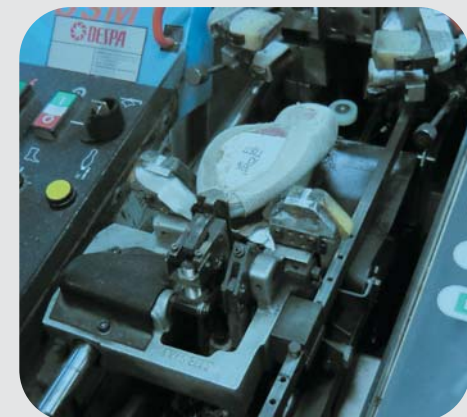
With target 3D model available, the objective is to identify the pose of the shoe and the best position to grasp and manipulate it, and to support in manufacturing and packaging processes

→ Robot programming

Development of new methodologies and ICT tools for programming effective process oriented Robots, whose particular feature is the combination of off-line automatic robot program generation from digital data (CAD) with on-line intuitive information from end-users and/or sensors.

→ Footwear manufacturing re-engineering

The integration of robotics in the manufacturing/packaging process requires a deep revision of the process itself and especially heat setting process, the last clamping system and the packaging process.



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