



Advanced RoBOTic Technology for Handling SOFT Materials in MANufacturing Sectors

SOFTMANBOT solution

Our challenge

The use of robots for the automation of industrial processes is widely spread throughout many types of industries in the manufacturing sector. Robots are commonly used for the automation of tasks that present certain characteristics, either because the tasks are repetitive (i.e. continuous production processes) and dull, involve the handling of heavy and large objects; the work is hazardous and tough for the human.

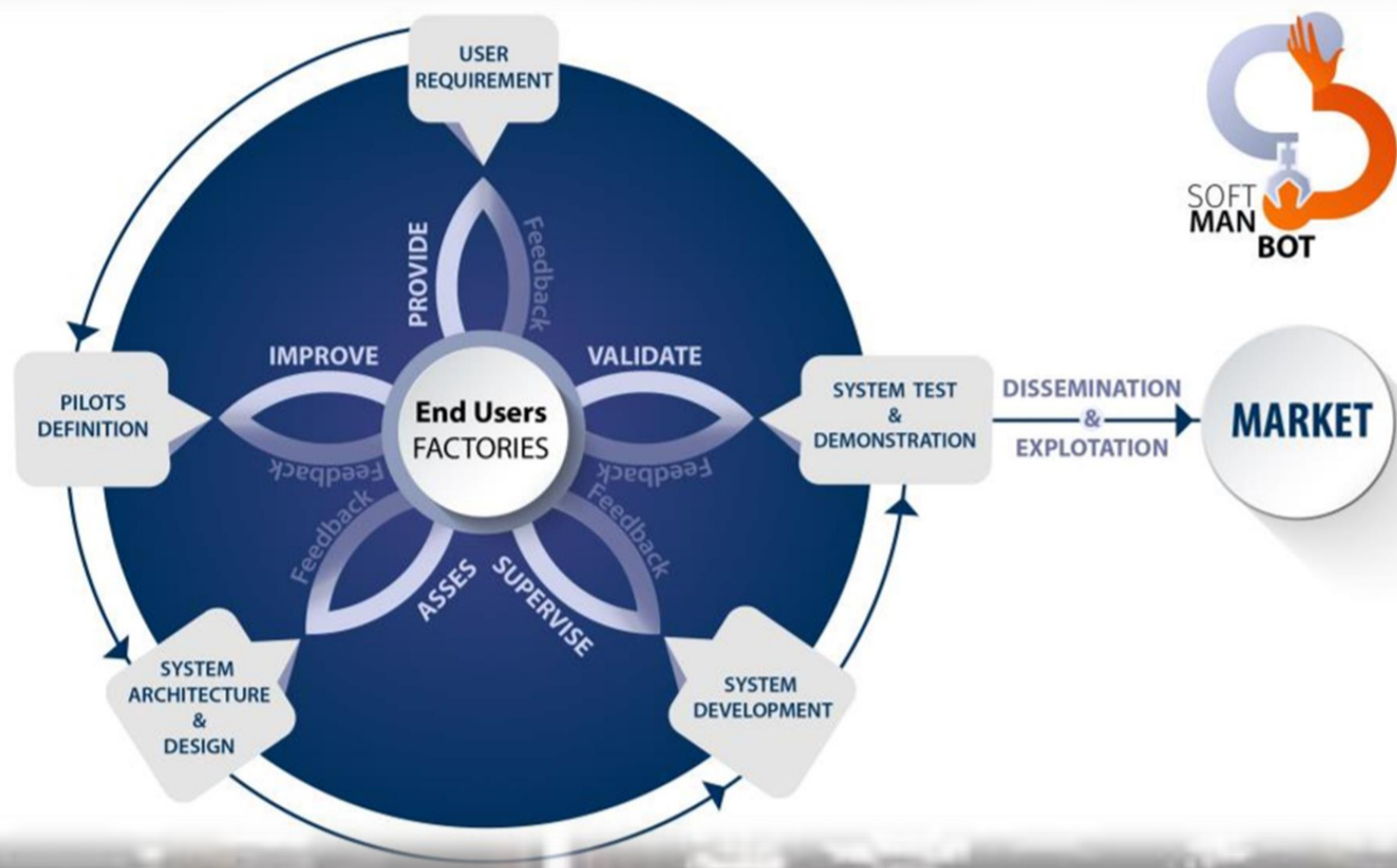
The overall objective of the project is to develop and demonstrate an innovative and universal approach to robotic handling of flexible and deformable materials based on the integration of advanced manufacturing technologies for the automation of contact-based tasks supported by a smart robotic perception system, a multi-sensor planning and control platform and the deployment of intelligent and universally dexterous grippers able to handle soft components with high levels of robustness and flexibility

11 Partners

from

Countries

4



The automation solution is aimed to work in close collaboration with human operators in order to help them in the execution of contact-based challenging tasks so that the productivity and job quality will be boosted which will highly contribute to bring back production to Europe. Special attention will be paid to the integration of novel robotic concepts based on aspects of safety, ergonomics, adaptability, acceptance and user experience.

4

Pilots

In order to facilitate the assessment of the performance, transferability, scalability and large scale deployment of these solutions, the demonstrations will be conducted under real industrially relevant environments in four pilot demonstrators involving four key manufacturing sectors – toy, textile, footwear and tyre –.

3

SOFTMANBOT is an industrial-end-user driven project that will provide an innovative and holistic robotic system for the handling of flexible and deformable materials within labour-intensive production processes. The robotic system will be composed by three main pillars including a generic robotic perception system, a multi-sensor control and planning platform and smart dexterous grippers able to handle soft components with high-levels of robustness and flexibility.

