Roboquimia

Cognitive robotics and Artificial Intelligence for safe handling of hazardous industrial waste.

The Challenge

The objective of the ROBOQUIMIA project is the research of robotics and artificial intelligence technologies applied to the handling of hazardous waste managed by TRADEBE. These handling corresponds to operations required in the treatment and recovery of hazardous waste.

These operations are complex activities in hazardous environments. Given the great heterogeneity of waste received, automation of these processes implies a lot of challenge.

The Solution

The solution proposed by the project represents an innovation with respect to the state of the art in the following technological disciplines:

- Cognitive or intelligent mechatronics
- Non-destructive inspection systems.
- Artificial intelligence applied to waste management.
- Robotic manipulation for dexterous tasks.



Benefits

Thanks to the application of the project, some tasks of waste management could be simulated by robotic arms, which is an advancement in skill and complex tasks of manipulating hazardous waste. This is going to represent considerable increase in health and safety in the work environment of hazardous substances management, with is corresponding positive impact on the work environment. On the other hand, the application of the project could considerably increase the efficiency and effectiveness of waste management operations. Finally, the application of the project will increase the company's business opportunities through the development of a automation strategy, giving an important competitive advantage.









