

## Robotic applied to advance medical services

### What need was solved?

Advanced medical services for the design and evaluation of new devices. Current medical devices require the contribution of multidisciplinary teams. Robotics researchers are crucial in the integration of the latest technologies that allow a better patient customization and a higher level of automation.

### What services were provided?

Medical applications focused on rehabilitation and assistance (design of prosthetic and orthotic devices) continuously require the inclusion of new advances in robotics such as gait analysis systems, exoskeletons, natural human robotic interfaces, neuro-signal processing, and so on. UPM researchers are currently working on all these techniques in order to provide better solutions for companies that are developing new medical equipment and devices. Our services include the design and development of new prototypes, the evaluation of current technologies, and support in patient testing and certifications.

The institution has also several established collaboration with hospitals placed in Madrid for the validation and clinical assessment of the prototypes developed.

### The relation with digitization

UPM developments in medical applications are in line with current open systems that are connected to patient and clinical environment. It allows achieving maximum connectivity of all systems in the medical process.

### Customer

The most relevant examples of success stories are the 3 spin-offs related to medical field developed by researchers from UPM, which are:

Marisi Bionics. More than 20 years of know-how on robot locomotion have been transferred to this SME, which now exploits and brings to the market research results on robotic aids to human locomotion and gait rehabilitation.

[www.marsibionics.com](http://www.marsibionics.com)

Spain

Wearium Solutions. Specialized on emerging technologies offer great opportunities to create innovative, low-cost and user-friendly solutions to serve as a tool to support the clinical staff or anyone who needs an objective and reliable system.

[www.weriumsolutions.com](http://www.weriumsolutions.com)

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AURA Innovative Robotics. Focused on innovative and affordable medical robotic solutions that are efficient, straightforward and doctor-friendly. Based on Robotics and Artificial Intelligence concepts, AURA develops novel medical technology for diagnosis and prognosis neurodegenerative diseases.

[aurarobotix.com](http://aurarobotix.com)

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