

The new era of rehabilitation is now

Are you looking to improve your rehab process?

Would you like to measure the outcome and trace the rehabilitation progress?

Do you value to involve the patients more during the session?

Would you like to present the exercises as a game?

The robotic rehabilitation system that supports doctors, physiotherapists, and patients throughout the course of treatment.

What is hunova

hunova is a robotic system designed in response to a clinical need for objective evaluation and rehabilitation treatment tools that support doctors, physiotherapists, and patients throughout the course of treatment and recovery.

"In the last five years, advances in technology have opened up opportunities to develop new robotic systems dedicated to people - systems that have the potential to revolutionize the world of rehabilitation and scientific wellness." III IIIII



Simone Ungaro

CEO and Co-founder of Movendo Technology

"I have invested the last ten years of my professional life to building and developing the Istituto Italiano di Tecnologia (IIT), a leading global center for applied technology. Humanoid robotics is the most important area where IIT has proved its excellence, recognized by the top research institutes and consortia around the globe.

In the last five years, advances in technology have opened up opportunities to develop new robotic systems dedicated to people - systems that have the potential to revolutionize the world of rehabilitation and scientific wellness.

A group of directors at IIT decided to take on a stimulating new challenge: to bring this technology to market. They decided to found an innovative medical company with help from an investor in the world of biopharmaceuticals. We've named this company Movendo Technology."



The origins of Movendo Technology

IIT and Dompé Farmaceutici

The Istituto Italiano di Tecnologia (www.iit.it) IIT - the leading Italian institute in the field of robotics and many other areas, such as nanotechnology, neurosciences, drug research and development, renewable energy, graphene, and computation - strives to promote excellence in basic and applied research and to improve human quality of life.



total staff

50+

represented countries

44%

scientific staff from abroad

8569 publications 150

European projects

active patent applications

500+



ERC



Movendo Technology was founded through financing from Sergio Dompé of the Dompé Farmaceutici group, one of the leading Italian pharmaceutical companies. Dompé Farmaceutici focuses on innovation, where a long tradition in the field of healthcare goes hand in hand with a commitment to research and development to meet hitherto unsatisfied therapeutic needs.

A challenge that the Company has pursued with passion, skill and courage, to make a difference to the lives of people around the globe.

The objective is to develop Made in Italy innovative technologies, ranging from the excellence in research and a new way to conceive rehabilitation.



Movendo Technology

The development of clinical technology

Movendo Technology develops medical devices that use the most advanced technologies and are, at the same time, effective, simple to use, and easy to interact with. They are created in Italy with the taste for aesthetics, design and functionality that is characteristic of our country.

Movendo Technology puts the patient and the clinician at the center of technological development, to understand the actual rehabilitation needs. It is only thanks to close collaboration and synergy with excellent clinical partners that we are able to combine ease of use with immediate inclusion in everyday clinical activity. The meeting between Movendo Technology and the clinical network led to the creation of the first robotic aid for physiotherapy: **hunova**.

hunova

Robotic rehabilitation system

hunova is a robotic aid for physiotherapists that is intuitive and easy to use, dedicated to rehabilitation in orthopedics, neurology, geriatrics, and reathletization.









Orthopedics applications

In the orthopedic sector, **hunova** is used for rehabilitation of the **ankle**, the **knee**, the **hip** and the **lumbar region** of the spine, making the patient carry out exercises of passive mobilization, strengthening of the muscles, proprioceptive exercises, control of the posture and balance. The device is also used for sports rehabilitation.

Geriatric applications

In the geriatric field, **hunova** enables the physiotherapist to work on postural control, proprioception and balance, and it is used to prevent and evaluate the risk of falls in the elderly and in the recovery of cognitive aspects.





Neurology









Neurology applications

In the neurological field, **hunova** is used for after-stroke functional re-education, for the treatment of degenerative diseases of the central nervous system and lesions of the peripheral nervous system, making the patient carry out exercises of postural control, balance, core stability and proprioceptive exercises.



hunova integrates evaluation and rehabilitation in an homogeneous path to be able to monitor improvements in real time during the therapy.

Rehabilitation path

Protocols

hunova allows for:

- The use standardized protocols developed from international guidelines, combining more than 200 exercises from various applications (orthopedics, geriatrics, neurology).
- The modification of standard protocols to be adapted to specific applications
- The creation of personalized protocols for the needs of each facility

Personalized rehabilitation

hunova allows to select allows you to select, in an accurate and simple way, the level of difficulty of the protocol in order to adapt it to each patient's abilities.





Report

The **rehabilitation process** is integrated with an **evaluation path** that allows to record and monitor the clinical situation of the patient, thus supplying objective reports all through the therapy.

"If you can't measure it, you can't improve it"

Reaction time measurement

Robotic seat's force sensor

Robotic platform's force sensor



1. Adjustable touch screen

2. Tablet for remote control and operation of hunova



4. Wireless position sensor

5. Adjustable and removable armrests, removable backrest

6. Sensorized robotic seat

7. Sensorized robotic platform

8. 3D seat position adjustment

(!) Characteristics subject to change without notice.



"It measures what can be measured and makes it measurable what's not"



Scan the QR code to know more about **hunova**





Hunova configurations

The accessories allow the physiotherapist to isolate the individual districts of the body and to work with exercises of active, passive or assisted mobilization, strengthening and stretching. With **hunova** it is possible to perform exercises standing in mono - or bipodalic mode, with precise load control.

Monopodalic and bipodalic platform

The monopodalic platforms allows to reach a range of motion suitable for the ankle articulation. The bipodalic platform allows for a wider working space suitable for he double support which improves the postural attitude and encourage overall muscular recruitment.





Gaming

Within the rehabilitation process, depending on the exercise, the patient controls with the different parts of his or her body (ankle, pelvis, torso) the avatars generated on the screen in different gaming modes and versions. This makes rehabilitation an entertaining activity which motivates and amuses the patient.







Biofeedback and dual task

The biofeedback, generated at visual, auditory and proprioceptive level, allows the processing of a highly training voluntary motor response. By using gaming exercises, **hunova** encourages patients to beat their previous goals and scores, accelerating their recovery and turning therapy into a playful activity.

Z What they say about us

"Patients have highly appreciated the device's simplicity and usability."

Doct. Giovanni Antonio Checchia. Head of Recovery and Functional Re-education Pietra Ligure

"hunova represents an innovation and revolutionizes rehabilitation [...]. Finally physiotherapists can use an instrument [...] which makes rehabilitation more objective and measurable, thus allowing to personalize the intervention and make the rehabilitation more effective."

Dr. Mariuccia Rossini, Head of Korian Group, Italian division

"Rehabilitation with hunova makes it possible for the physiotherapist to personalize protocols for the patient thus quickening and improving the reeducation results and maintaining the same relationship between physiotherapist and patient which is crucial in our center as we put the patient at the center of the humanization of care."

Dr. Alessandra Mellano, CEO of Chiros Centro Fisioterapeutico e riabilitativo s.r.l.

"Time is precious! The first sensation I have had, which was then confirmed after using hunova, is the possibility to obtain maximum rehabilitation results in a very short period of time, thanks to the high compliance of the device. The robot versatility in regards to the patients allows to treat everybody from the professional athlete to the geriatric patient, all in an entertaining circumstance, very pleasing to the users. "

Dr. Giovanni Bei, Head of Rehabilitation of Korian Villa delle Terme

"It is an exceptional device that makes it possible to rehabilitate the patient also from a seated position. Another characteristic is the informatic precision which allows to set up an objective profile of the patient. It's an amazing integration between technology and the doctor's clinical eye."

Dr. Giovanni Pietro Salvi. Head of Rehabiliation Operational Unit of the Istituto Clinico Quarenghi

"An efficient ally of our rehabilitation équipe for a faster and complete achievement of the results ser, but also a valid instrument for the evaluation of results and the rehabilitation of each patient, which can then be monitored by the medical and physiotherapy staff."

Team le Terrazze



Istituto Italiano di Tecnologia and Movendo Technology launch Hunova, the first rehabilitative robot

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THROUGH TECHNOLOGY

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Movendo Technology Srl Calata Cattaneo, 15 - Edificio Millo - Porto Antico - 16128 Genova, Italy Email: info@movendo.technology Tel: +39 010 0995700



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