



PRESS RELEASE

San Giovanni Rotondo (Foggia, Italy), 22 January 2019

ROBOTS THAT CARE: KONICA MINOLTA, ISTITUTO ITALIANO DI TECNOLOGIA ARE GOING TO START ON FIELD EXPERIMENTATION IN THE HOSPITAL CASA SOLLIEVO DELLA SOFFERENZA

Thanks to a collaboration with the scientific research centre IIT - Istituto Italiano di Tecnologia, in October 2018 Konica Minolta has started a study with robots in the “Casa Sollievo della Sofferenza” hospital in San Giovanni Rotondo, Foggia. Konica Minolta is one of the leading companies to drive forward research activities in robots that offer assistance in the healthcare domain.

Konica Minolta, Inc. (Konica Minolta) continues its investment in research and development within the field of **Distributed Robotics** and **Artificial Intelligence (AI) within the care sector**. After the opening of most recent research centre in Rome, the company’s commitment moves forward with an important partnership with [IIT - Istituto Italiano di Tecnologia](#) and the hospital [Casa Sollievo della Sofferenza](#) in San Giovanni Rotondo, Foggia, Italy.

The goal is to study the introduction of assistive robotics in the healthcare domain, employing robots that can assist patients, support the work of nurses and doctors and carry out basic monitoring activities.

The global medical robotics market is continually increasing. According to a [MARKETSANDMARKETS report](#), it is forecasted to reach USD 16.7 billion by the year 2023, from an estimated USD 6.5 billion in 2018. The scope that can be covered by medical robots is vast and it includes surgical robots, rehabilitation robots, non-invasive radiosurgery robots and pharmacy dispensing robots. Konica Minolta is one of a few companies within Europe that are tackling the challenge of using robots for patient assistance.

The ‘Casa Sollievo della Sofferenza’ hospital, with its 900 beds, 206 residential elderly care beds, 2,900 employees, 60,000 yearly admissions and 9,500 surgeries per year, is one of the most renowned in Italy and in partnership with Konica Minolta and IIT are initiating activities into assistive robotics. As part of a collaboration between the two research institutions, IIT has provided its ‘R1’ humanoid robot, developed to be able to assist people in different scenarios; and [Konica Minolta Laboratory Europe](#) brought its expertise in AI and Distributed Robotics.

R1 has an innovative structure, 50% of its body is composed of plastic materials; the customized Artificial Intelligence embedded within the robot is inspired by both human learning and human interaction capabilities. R1 is today able to recognize people and objects and as part of the collaboration with Konica Minolta it will have a more sophisticated interaction with doctors and patients by better understanding their activities and responding to their requests accordingly.

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*“At the Hospital Casa Sollievo della Sofferenza, we have welcomed Konica Minolta Laboratory Europe, to deploy robotic systems within the hospital,” says **Francesco Giuliani**, ICT, Innovation & Research Manager at IRCCS Casa Sollievo della Sofferenza. “In the current setup we are starting to use the R1 robot of IIT - Istituto Italiano di Tecnologia, to accompany a patient during their daily routines. This experience is part of our current projects aimed at optimizing health care professionals’ time”.*

Francesco Puja, Research Specialist for Distributed Robotics at Konica Minolta, explains more: *“Our solutions enhance robots with increased cognitive abilities. Activity and object recognition, emotion and behaviour analysis enable robots to perceive the environment, understand it and behave properly.”*

*“We are only at the beginning of a wider research collaboration with medical institutions that in a few years could make assistive robotics become a widespread asset in hospitals and nursing homes,” says **Filippo Silva**, R&D Strategy and Technology Manager of Konica Minolta Laboratory Europe in Rome. “The ultimate goal is to orchestrate multiple robots and to leverage on the IoT to extend the perception to support the business of the future.”*

“The R1 robot was conceived to operate in many different professional contexts, from retail to surveillance, with rehabilitation and assistive capabilities for domestic and hospital environments”, says Giorgio Metta, Scientific Deputy Director of IIT and responsible for the R1 project. “The collaboration with Konica Minolta and with the hospital Casa Sollievo della Sofferenza represents one of the steps that IIT is following to further develop this research prototype into a fully operational system for everyday use.”

In close collaboration with clinical users, in its four R&D laboratories throughout Europe, Konica Minolta is exploring how digital technologies shape the future of healthcare. Beyond assistive robotics, Konica Minolta conducts research into applications of its semantic technologies to medical documents. In the field of precision medicine, the dedicated lab in Munich develops advanced image and data analytics solutions.

--- Images and video----

[Navigation of R1 in the hospital robot in the hospital](#)

[Video of the interaction of the R1 robot with a patient](#)

[Pictures from the demo activities](#)

[More images about R1 robot](#)

--- Projects and whitepaper ----

- [Current projects of Konica Minolta Laboratory Europe](#)
- [Whitepapers Distributed Robotics: Building an environment for digital cooperation](#)

About Konica Minolta Laboratory Europe

Since its establishment in 1873, Konica Minolta has had a long history of innovation. In 2015,

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Konica Minolta Laboratory Europe established its headquarters in London, and subsequently opened R&D laboratories in Brno, Czech Republic, in Munich, Germany, and a third one in Rome, Italy. Konica Minolta Laboratory Europe is the hub where innovative solutions in the field of information and communications technology come to life to transform the next generation of platforms and services from Konica Minolta.

Konica Minolta Laboratory Europe takes advantage of the most advanced technologies to support new business opportunities that are driven by innovation and our customers' needs, with innovative applications for digital workplace, sensors information and automation, digital healthcare and smart data systems.

<https://research.konicaminolta.eu/>

About Konica Minolta

Konica Minolta, Inc. is a global technology company that provides innovative solutions to businesses and society. With its strengths in the combination of its core technologies in advanced imaging, optics, sensing, materials and nano-processing, Konica Minolta is committed to create new values that help customers address challenges in their operations and work processes. Advancing its expertise in digital technologies, the company has been going through business transformation into a digital company with insight into implicit challenges across the board as One Konica Minolta in the era of Internet of the Things (IoT). Konica Minolta is also active in open innovation through various collaborations and alliances with academic, industrial and entrepreneurial partners.

Headquartered in Tokyo, Konica Minolta has its Group companies in 50 countries with over 43,000 employees and offers products and services in 150 countries around the world.

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About Ospedale Casa Sollievo della Sofferenza

Known all over the world as the Hospital of Saint Padre Pio, the Casa Sollievo della Sofferenza Research Hospital hosts nearly all medical specialties providing cutting-edge diagnostic and treatment options thanks to its highly qualified professionals and medical equipment. It has been recognized since 1991 by the Ministry of Health as a Research Hospital for the subject "genetic diseases, innovative therapies and regenerative medicine", carrying out scientific and clinical activities in collaboration with the most important Italian and international research centers. It has nearly 900 hospital beds, 206 residential elderly care beds, 2.900 employees, 60,000 yearly admissions and 9,500 surgeries per year.

Its researchers publish nearly 200 scientific articles each year on the most acknowledged scientific journals (e.g. Science, the New England Journal of Medicine, Nature Genetics). It is the clinical partner in two consortia for EU H2020 funded projects in the field of assistive robotics, namely MARIO (Managing active and healthy aging with use of caring service robots) and ACCRA (Agile Co-Creation of Robots for Ageing). The EU included the MARIO project in the "Top 25 most influential ICT for Active and Healthy Ageing projects" and one of its main results is included in the EU Innovation Radar. A new research center ISBReMIT (Institute for Stem-Cell



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Biology, Regenerative Medicine and Innovative Therapies) has been inaugurated in 2015 to produce cell therapies, gene therapies and prostheses made of biomaterials.

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