

Service robots conquer the healthcare market

Labour shortages are boosting the use of service robots. In the past year under review alone global sales were up by almost 50%. Some 158,000 sold units were registered by IFR, the International Federation of Robotics headquartered in Frankfurt.

They are called Greta, Paro or Garmi – service robots that are already deployed or in trial operation today providing valuable support in medicine and nursing care - precisely where skilled staff are missing or would like to focus on other important care activities. "Greta", for instance, now already helps keep seniors fit with motion activities, anti-dementia training and physiotherapy exercises in Schleswig-Holstein.

Under the roof of the Munich Institute of Robotics and Machine Intelligence a humanoid robot called Garmi is currently being developed. The robot runs personalised exercise routines with patients, empties the dishwasher, serves food and beverages and can be deployed for telemedical examinations.

Greta and her colleagues could soon be joined by a bigger team. After all, according to estimates by the "Institut der deutschen Wirtschaft" (German Economic Institute) in Cologne, Germany will be short of half a million nurses by 2035. Service robots in nursing care are an innovative answer to the growing challenges in the healthcare sector. While they cannot replace skilled staff, they can take on tasks to relieve the burden on nursing staff and improve the quality of life of people in need of care.

Helmut Schmid, Chairman of the German Robotics Association (Deutscher Robotik Verband) (DRV), also underlines the versatile potential of robotics in medicine and nursing care: "Nursing staff spend 40-50% of their time on administrative jobs rather than on people. This is precisely where robotics come into play. Furthermore, there are many other approaches such as robotic prostheses, tele-



Messe Düsseldorf GmbH P.O. Box 101006 40001 Düsseldorf Messeplatz 40474 Düsseldorf Germany

Phone +49 211 4560 01 +49 211 4560 668 www.messe-duesseldorf.de info@messe-duesseldorf.de

Board of Managing Directors: Wolfram N. Diener (CEO) Marius Berlemann Bernhard J. Stempfle Chairman of Supervisory Board: Dr. Stephan Keller

County Court Düsseldorf HRB 63 VAT ID number DE 119 360 948 Tax ID number 105/5830/0663

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presence robots that assist medical professionals in patient monitoring, disinfection robots, robot-assisted therapy devices or **XPONENTIAL** nursing beds with robotics that assist nursing staff in repositioning or lifting patients."



Robot 'Navel', which is equipped with artificial intelligence (AI), has also recently been deployed. The Clinic in Frankfurt (Oder) is the first German hospital to use this "social robot". Navel answers questions, boasts a wealth of knowledge, cheers patients up, tells them jokes and listens patiently.

'Workerbot9 Care-home', the care-assisting robot developed by the German company pi4 robotics, welcomes patients by means of face recognition, reminds them to take their meds and takes care of carrying heavy trays and beverage bottles. Assistance jobs that save necessary resources.

Basically, the challenge for the use of service robots lies in the acceptance by patients and nursing staff. User-friendly design and intuitive use are just as important here as ethical and data privacy aspects, especially when robots collect and process personal data.



Transport robots perform logistics tasks

On top of this, hospitals and nursing care operations require substantial resources for their intra-company logistics. Here transport robots perform many tasks. For instance, the Hamburg manufacturer and system integrator 'ek robotics' implements automation projects using uncrewed transport systems in hospitals worldwide with their MEDI MOVE series of transport robots. They allow hospital wards, care units or sterile areas to be supplied with drugs, meals and laundry 24/7/365. Skilled staff capacity is freed up by automatic goods transport so they can focus on other important jobs in hospital operations. The MEDI MOVE transport robots are already deployed in large hospitals in Denmark, the Czech Republic, Australia and Italy.

Germany leading on the European market

"Germany is leading on the European market for service robots," reports Malte Seifert, Director Metals & Autonomous Technologies at Messe Düsseldorf. He is in charge of XPONENTIAL Europe to be held in Düsseldorf for the first time next year. Globally, Germany with its 85 companies ranks in the top tier together with the USA (218 XPONENTIALcompanies) and China (106 companies). The trade fair for uncrewed systems and robotics focuses on showcasing forward-looking technologies.



XPONENTIAL Europe, whose official partners include the German Robotics Association to name but one, will host leading international enterprises in the segment of robotics. Visitors to the trade fair will be able to gather information here on latest innovations, components and sensors in the field of autonomous systems and robot technologies from 18 to 20 February 2025 in Düsseldorf.

Press contact:

Messe Düsseldorf Larissa Browa, Senior MarCom Manager (Press & PR) Lisa Gobien, MarCom Manager (Support) Tel: +49 (0)211-4560-549, -547 BrowaL@messe-duesseldorf.de GobienL@messe-duesseldorf.de

