

# The HospiBot: a robot offering kindness and care in the health sector

21. feb. 2025 , Interreg Deutschland-Danmark



*Photo: HospiBot greets visitors at the entrance to the University of Southern Denmark in Odense*

Imagine a world where robots do not just handle practical tasks, but also create heart-warming moments. This is not the vision of a distant future. With a serious shortage of medical staff and more and more people requiring care, there is an obvious need for innovative solutions.

This is where the HospiBot comes in, a mobile robot designed to be both functional and friendly. From its beginnings as a simple hand sanitiser robot, HospiBot has evolved into a versatile, interactive assistant which is capable of lending a hand in the often hectic daily routine of a hospital.

## **From hand sanitiser to helper**

The HospiBot's predecessor started as a simple, static hand sanitiser robot. But the robot's developers quickly realised that it could be upgraded to a mobile service unit that was capable of moving around.

During the testing of the robot at hospitals in Denmark and Germany, staff came forward with new requests for the functionality of the robot.

The Hans Christian Andersen Children's Hospital in Odense became one of the first hospitals to show an interest in the robot and its potential.

But the hospital's requirements went much further than just the dispensing of hand sanitiser. They wanted a solution that could also entertain the children and assist parents – which meant that a whole new range of applications was explored.

*"I have coordinated and observed several tests of the HospiBot at the Children's Hospital. We've provided feedback on the functions and design of the robot to ensure that it was safe and acceptable in a hospital environment.*

*Most people are very curious and have shown great interest in the HospiBot,” says Mette Sorang Kjær, social worker and welfare coordinator at the Hans Christian Andersen Children’s Hospital.*

## **A once-in-a-lifetime experience**

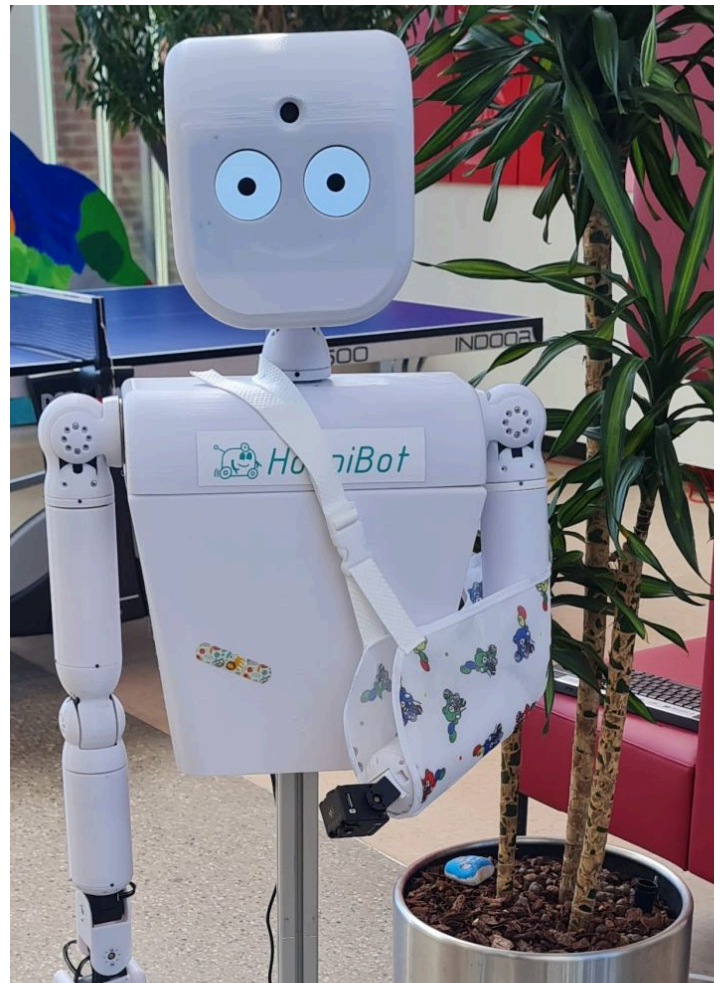
The HospiBot greets visitors and will in future help them to navigate through the hospital as well as undertake small logistical tasks. The robot arouses interest among both the old and the young and works as an icebreaker in an environment that may often feel overwhelming.

One of the most moving situations involving the HospiBot took place at the Children’s Hospital. Imagine a hospital clown entertaining the children with funny stories and music. Suddenly the HospiBot is introduced into their play. The clown notices the robot and acts out a scene in which the robot needs a plaster. The children eagerly participate, and a child places a plaster on the robot as if it had a real injury.

*“I have observed many interactions with our robot, but I remember this one as something really special. This unexpected interaction between the children, the hospital clown and our robot was a heart-warming moment for me,” says Oskar Palinko, project manager and lecturer at the University of Southern Denmark.*

## **The robot makes time for kindness and care**

The shortage of nurses and doctors is a very real challenge for society. Technological and digital solutions such as the HospiBot are not a replacement for healthcare staff in hospitals, but an aid that can free up valuable time.



*Photo: HospiBot with plasters on*

*“The HospiBot is able to take over monotonous and time-consuming tasks which frees up the nurses’ time for more patient-centred care. The robot can be used to transport medicine and equipment, for example. This means that the nurses avoid having to walk the miles and miles that they would otherwise have to during a normal working day. This is an important help as it allows time for more hands-on care,” says Janina Thöns, healthcare and nursing professional at University Hospital Schleswig-Holstein in Kiel.*

The HospiBot was also tested at University Hospital Schleswig-Holstein where it was used to greet and guide patients and was generally met with positive reactions.

“

*Many hospital employees look forward to the HospiBot taking on tasks such as giving directions and running errands as this means that they'll have more time for actual patient care*

*– Felix Prell, UKSH Kiel*

”

*“Many visitors and patients showed great interest in the HospiBot which was also received well by the older target group. Some people wanted the HospiBot not only to give them directions, but also to take them directly to their appointment location. The project group has looked at this proposal and will be testing it in a future version of the HospiBot,”* explains Felix Prell, project manager at the University Hospital in Kiel. Felix describes his observations during an ordinary working day at the University Hospital.

## **Danish-German know-how develops the HospiBot**

The HospiBot has been developed and tested in a Danish-German collaboration. Both the Danish and German partners bring their unique skills and experience to the table – to create a strong project group.

The project partners from both sides of the Danish-German border contribute their enormous expertise in the field of robot design and development of new user interfaces. The Danish and German project skills supplement each other very well which is something that advances the HospiBot's functionality and operational reliability. The partners have many years of experience in robot interaction and optimisation of robots which ensures that the HospiBot is intuitive and easy to use.

*“The collaboration between the Danish and German partners is important because it brings together different, but complementary project resources and skills.*

*We're expanding our horizon, and this makes it possible to identify a more universal solution that takes different market needs into account. By understanding and learning from each other's approaches and experiences, we can ensure that the HospiBot becomes an advanced and user-friendly solution,”* says Leon Bodenhagen, project coordinator and lecturer at the University of Southern Denmark.

The project receives approx. EUR 1.7 million in subsidy from the European Commission's Interreg Deutschland-Danmark programme and the European Union. On the Danish side, partners comprise the University of Southern Denmark, Robotics, Mærsk Mc-Kinney Møller Institute, South Jutland Hospital Aabenraa, Zealand University Hospital, Roskilde and Odense University Hospital. From Germany, the partners include University Hospital Schleswig-Holstein, Fraunhofer Research Institution for Individualized and Cell-Based Medical Engineering, University of Lübeck and Kiel University of Applied Sciences.



Photo: HospiBot development



## The future of the HospiBot

German and Danish partners work together on the HospiBot project to overcome the challenges that have so far prevented the use of robots in the healthcare sector. Robots still face a range of limitations such as limited interactive ability and clumsy designs that do not fit easily into narrow hospital corridors. The aim of the HospiBot project is therefore to develop and test a mobile, interactive service robot in a compact design for use in hospitals.

The project also draws up political recommendations that include guidelines for the use of mobile service robots in hospital environments.

*"We believe that with current technological, digital and demographic trends, robots will increasingly be used to provide support in the future. The use of robots such as the HospiBot requires a positive attitude to technology, open communication and specific guidelines to ensure that everyone is able to participate. The HospiBot isn't just a piece of technology. It's a helping hand,"* says Oskar Palink



Photo: HospiBot Team

Interreg



Co-funded by  
the European Union

Deutschland – Danmark



WIR FÖRDERN ZUSAMMENHALT  
VI STØTTER SAMHØRIGHED