

Hospital logistics relies on robotics

Since 2011, the University Hospital Sant Joan in Reus (Spain) has been using robotised transport for various hospital services.



Oppent mobile robots fleet circulate in the technical corridor.

During the IX CEL Congress on Healthcare Logistics, held in Salamanca in October 2022, Joan Gené Díaz (Director of General Services at the University Hospital Sant Joan in Reus, Spain), presented the numerous advantages of using mobile robots to transport materials and trolleys within the hospital.

The structure currently counts 274 beds for intensive care patients and 72 beds for socio-medical services, establishing itself as a reference centre for the whole south of Catalonia, since robotised transport was implemented in 2011.

The fleet of 7 mobile robots provided by Oppent, “has been running continuously” – adds Director Joan Gené Díaz – “carrying out robot transports for 15 hours a day, with a load capacity for each vehicle of 500 kg. Every day they circulate through the technical corridor and make 350 journeys, representing between 90 and 100 km of distance per day.” This technology has been implemented in all services that can use robot transport, i.e. general stores, kitchen, pharmacy, laundry and waste.

Concerning the **vehicles' operation**, explains the hospital's Director of General Services “the system is integrated with the building, meaning that the robots communicate via Wi-Fi with the lift [...]. They are also integrated into the fire-fighting system, so that if an accident occurs, knowing the exact position of the robot, you would have enough time to get through the doors before they automatically close.”

Instead, as far as **transport** is concerned, he explains that *“each mobile robot is assigned to five origin stations where the load to be transported is prepared; when the transport truck is ready, it enters a shipping station equipped with an RFID card, informing that a load is available. From there, the system receives the instruction and sends the nearest conveyor to the storage area, which arranges the load and takes it to the specified destination. Then, when the robotic platform arrives at the facility”* - explains Joan Gené Díaz - *“sensors alert the hospital staff of the arrival of the robotic transport, which goes to an arrival station to deliver the load. Once departed, the mobile robot returns to the lift in the direction of its point of origin.”*

In light of the many advantages provided by this robotic technology, **Oppent's mobile robots have recently been upgraded to a fleet of 9 vehicles, with new benefits as well.** In fact, Joan Gené Díaz points out that *“In terms of energy efficiency, battery recharging has improved, as well as mobility, since the vehicles can now rotate 360° on their axis. [...] This allows the new fleets to always move forward and continue the service, thus saving time. They are also equipped with perimeter scanners and sensors that detect any approaching objects.”*

Finally, with regard to **improvements in services**, the Director of General Services states that *“the risk of transmission of infections is reduced, as the trolleys transporting materials are not dragged around the hospital; instead, they travel on the automated robot trolleys so that dirt does not stick to the wheels.”* Another advantage *“is that the human resources that would have to be employed to push these trolleys - an estimated 15 people would be needed - with robot transport may be deployed to provide better patient care”* adds Joan Gené Díaz.



Joan Gené Díaz (Director of General Services at the University Hospital Sant Joan in Reus, Spain.

The full article by Sílvia Fornós is available at the following link [La logística hospitalaria en Reus apuesta por la robótica \(diaridetarragona.com\)](https://diaridetarragona.com)