

Success Story

Automated machine tending for chamfer grinding and insertion of slot insulation in the production of electrical motor stators

Gijbels



Optimisation of internal logistics processes of a warehouse

Company description

The first fruits and vegetables were sold by the Gijbels family in 1948. In the meantime, the company has grown to become an international player that distributes more than 100 million tonnes of fruits and vegetables every year. Gijbels grows its own products in their fields in Catalonia and distributes them throughout Belgium, the Netherlands, France and Germany.

Motivation and challenges

To reduce search times and optimise the internal traffic, Euro Gijbels needed a clear vision on the trajectory and efficiency of the internal goods transport flow.

An analyse was needed of not only the internal goods flow done by forklift drivers, but also the pallet positions within the warehouse based on the fast- & slow-moving pallets. The expected outcome was to know exactly where internal transport vehicles are positioned and to reduce the search time from more than 10 minutes per vehicle.

Euro Gijbels applied to the SME support programme with the aim of optimizing their warehouse lay-out and to increase the efficiency of their processes.

Analysis

First of all, the goal setting was to reduce search times for the logistic vehicles within the warehouse and secondly measure their movements to verify if the internal logistic traffic is efficient enough.

The refrigerated warehouses were specifically challenging due to the installation of the WiFi based RTLS sensors. The different temperatures and the metal walls created a sort of shield that affected the wireless signals during the integration & testing phase.

Technical Realization

The proposed solution was based on a technology that was already implemented within healthcare. It uses RTLS sensors only connected to the wireless network of the customer to locate objects.

Within the specific needs of this project, an optimised RTLS sensor was created that could not only locate objects within the warehouse but also measure the trajectory done by the forklift drivers and other internal used vehicles.

The RTLS sensors were connected to the wireless network and measured the wireless signals. Within the background based on a SaaS solution the result were visualised by

heatmaps and spaghetti diagrams. The speed and shocks of the vehicles were also measured and reported.

Within this project 5 vehicles were tracked to verify the efficiency and trajectory. Also, insights were created on safety elements concerning human and machine interaction.

Result

Together with the customer, the output of the results was validated. Not only did the study show an optimised way of working for internal transport, but also the most efficient localisation of goods within the warehouse was calculated to reduce the distances from the warehouse to the drop-off location at the order picking zone.

View from the employee perspective

By implementing the internal tracking sensors, the operator can verify the position of the vehicle within seconds and go directly to the vehicle without walking unnecessarily large distances in the premises of Euro-Gijbels.

Also, the risk zones where human and machine interaction was detected, were highlighted within the trajectory reports. This created the first steps into efficiency and safety.

Interview

How could COTEMACO support you?

“The results of the COTEMACO study helps us to make the first steps towards a more automated warehouse. At first, we like to focus on the smaller steps in the automation process that can help us in our daily operations. We look forward to implementing those quick gains and making our first steps into automating our warehouse.” – Tim Huybreckx, Manager at Euro-Gijbels

What was implemented and what are the benefits?

“At this moment, nothing has been implemented yet. With the use of WIFI trackers we now have a better overview of where our order pickers drive during the order picking process. We are looking into changing and optimising the layout of the warehouse using this information and maybe implementing these trackers to keep track of where our trucks are located within the warehouse.

Based on the study results, we are also considering to use autonomous pallet robots to move goods from our storage area to the picking area in our warehouse and changing our LIFO racks into more appropriate FIFO racks.” – *Tim Huybreckx, Manager at Euro-Gijbels*

Were your expectations fulfilled – technical implementation?

“Yes, all suggestions were made according to our needs. At this point, the step to full automation is too big for us, but we will start with the small steps in the automation process.” – *Tim Huybreckx, Manager at Euro-Gijbels*

Were your expectations fulfilled – Support through COTEMACO?

“Yes, we want to thank COTEMACO for this opportunity to help us take our first steps into automation and learn about what is already possible for companies in our industry.” – *Tim Huybreckx, Manager at Euro-Gijbels*



What is COTEMACO?

The project, which is an initiative of Interreg North-West Europe, aims to support around 60 SMEs in the automotive and food manufacturing industries with so-called „test environments“ and to encourage them to integrate collaborative robotic systems and digital technologies into their business. Accordingly, in addition to increasing production flexibility, the relocation of production abroad will be curbed and the number of jobs in manufacturing increased, which will generally lead to an improvement in the competitiveness of the companies involved.

In the project new technologies are implemented in application examples - the aim is to move from the prototype in the laboratory environment to the transfer to production, taking into account the legal situation and certifications.

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