



"The cheese factory of Friesland Campina, there is always a solution!"

About FrieslandCampina

Royal FrieslandCampina plays an important role in providing food for hundreds of millions of people on a daily basis in more than a hundred countries. Products include dairy-based beverages, infant & toddler nutrition, cheese, butter, cream, desserts and functional dairy-based ingredients. This multinational dairy company is a cooperative company with 14,800 member dairy farms in the Netherlands, Germany and Belgium. The company employs 19,000 people in 25 countries.

Challenge

In the cheese production storage, an automated crane and truck combination moves a stack of 416 cheeses at one go from the production storage to a warehouse, where cheeses ripe and get coated every three days. The robot truck rolls over a wagon transverse of about fifty meters. Left and right lanes, piled with cheeses up to five meter high. A small crane is send in to the lane and takes out the designated pack from the shelves, returns it to the cheese truck which transports the pack to the warehouse. No people are allowed during operation. The fully automated system suffered regularly from broken glass fibre cables interconnecting a truck, a crane system and the operator. The cracking of the cable stops the communication of controlling data: the system goes down. Repairing this type of flexible glass fibre cable cannot be done by fixing the crack but requires a change of the whole cable. Moreover, it may take a couple of hours, or more depending whether the expensive flexible glass fibre cable is in stock or not. The challenge is to reduce this expensive down time in a on-going production process.

Solution

Opinion Process Engine provided a solution to replace all glass fibre components by an industrial wireless network. In this case we used products from Siemens Scalance line. Wireless communication in a warehouse can be difficult. The metal used in the warehouse construction creates 'black spots'. Signal reception may be difficult in some remote corners or in particular warehouse lanes. Loss of signal makes communication between the interconnected machinery impossible. Opinion Process Engine implemented a Wireless Distribution System, which allows the communication data to be routed from one to another wireless access point in the storage.

Even in the most hard to reach places the controlling communication data is guaranteed between the parts of this fully automated storage system.

Advantages

The major advantages for FrieslandCampina of this wireless solution are the decrease of down-time and maintenance costs. The crane parts are no longer interconnected by cables that break and that wireless system does not require scheduled maintenance at all. Another advantage is that the crane's control systems can also be monitored from a remote location. During times of operation, no people are allowed to, for example, check the status of the crane system. This wireless solution allows service the installation anytime without physically going near the machines.

In the future, the data or system control panel could even be integrated in a overall production control dashboard.

Quotation

Thanks to the experts of Opinion Process Engine the reliability of our crane control system has improved: no jams or break downs since the four months of operation. This significantly contributes to the efficiency in the production process of cheese.

Contact

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