DESIGN AND OPTIMIZATION OF THE WAREHOUSE SPACE WITH CONSIDERATION FOR GROWING PRODUCTION

Customer:
BALIARNE OBCHODU, A. S. POPRAD

Industry: Food industry

Focus: Production and processing of coffee and tea

Location: Production plant Poprad, Slovakia

Baliarne obchodu, a. s. Poprad is the largest producer and processor of coffee and tea on the Slovak market today and employs around 270 employees in two production plants. The annual production is 2,500 tons of coffee and 600 tons of tea.

NEW STORAGE PREMISES IN ACCORDANCE WITH PLANNED EXPANSION OF PRODUCTION

"Our existing warehouse premises were no longer sufficient for the growing volume of production. We felt the need to expand, so the innovation of logistics processes arose as an internal demand. Thanks to the cooperation with Asseco CEIT, we managed to achieve the desired goal in planning and the newly designed premises and logistics processes offer the maximum utilization of possibilities."

Peter Paciga, Production Director,
Baliarne obchodu

Insufficient storage spaces

The company's management plans to invest in expanding production and improving storage facilities in the future. The existing warehouse space is already insufficient in capacity, and therefore the company decided to implement an extension of the warehouse. The main goal of the project was to create new warehouses for the production plant in Slovakia with an emphasis on the maintenance and planned development of the company in the coming years. At the same time, it was necessary to innovate logistics processes in connection with the new arrangement of production and distribution of warehouses for finished products and coffee. The company has set as a requirement for the maximum storage volume utilization in the warehouse extension. At the same time, they needed to adhere to the FIFO operating system with maximum use of the volume of designated storage space.

Drawing documentation analysis

In the pilot phase of the project, an analysis of the drawing documentation of the plant premises and the identification of limiting parameters for the location of the new warehouse building was performed. After defining and approving the space requirements, drawing documentation was prepared for the purpose of designing new entry-exit warehouses.

Steps taken

- Analysis of the product portfolio with regard to the history of volume of sales of finished products, the need to store the input raw material, the expected increase in sales volume, or with respect to selected characteristics of the stored range
- Defining a suitable storage technology for individual groups of finished production, selection of a suitable handling techniques for operating the storage system and work zones and subsequent processing of the CAD concept of new warehouses
- Proposal for the location of new warehouses within the general of the production plant Baliarne obchodu, a.s. Poprad with regard to the existing premises and infrastructure in the area, material flows, or the possibility of future increase in production and storage capacity
- Design of road infrastructure for freight transport with respect to the location of the warehouse and verification of the permeability of the area using dynamic simulation
- 3D digitization of production premises and workplaces using CAD solutions, which will be supplied from new warehouses
- 3D visualization of the overall general layout of the plant, warehouse and production facilities using virtual reality technology and rendered images and video

Project in numbers:

capacity of static shelving systems

1,600

palette spaces

storage system capacity Radioshuttle

704

palette spaces

total warehouse area

2,400 m²

project duration

60 days

3D digitization

of a new warehouse and production

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