Wouter Witzel is a growing organization that aims to increase its annual revenue by 40 percent in the coming years. To support this growth, the company is exploring different strategies for optimizing its warehousing and internal logistics.

GRADUATION INTERNSHIP

Master Industrial Engineering and Management

The current warehouse setup is fragmented across multiple locations, which may lead to inefficiencies in space usage, internal transport, and order picking processes. Wouter Witzel uses Microsoft Dynamics D365 including a fully integrated advanced Warehouse Management System (WMS) for controlling all movements and actions in the warehouse. This means that there is a huge set of data available that describes each movement and transaction done since June 2023. This data set is available for analysis.

Objective

The objective of this assignment is to analyze and compare different warehousing scenarios in terms of operational efficiency, costs, lead times, and overall feasibility. This includes taking into account all relevant operational aspects such as material flows, internal transport movements, forklift relocations, and other transition costs.

The goal is to provide the management team with a clear, data-driven recommendation for the most optimal warehouse configuration going forward. With the goal to reduce the time needed for Raw Material picking in order to be able to provide the production departments with new orders in the most efficient way with minimal resources and to optimize the number of resources required (Number of FTEs, number of forklifts etc.).

To support this, the student is expected to develop or use analytical or simulation models to quantify key performance indicators (KPIs) for several scenarios, enabling an objective and comprehensive comparison.

Scope of the Assignment

The student will conduct three feasibility studies, from options such as newbuild, relocation, etc. More in-dept information will be provided during the interview.

In addition to evaluating the scenarios, the student will consider a picking and storage methodology. The current (old) method stores all parts in a hallway, organized by assembly group (‘asgroep’). In this setup, components required for each specific product variant are stored together. Order pickers collect all parts belonging to one assembly group from a single location and then deliver them directly to the assembly department.

Read more >

WOUTER WITZEL® VALVE TECHNOLOGY

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The proposed new methodology involves grouping similar items at dedicated storage locations (e.g., all bodies together, all discs together). Order picking is initiated from these grouped areas, after which the picked items are consolidated at a central point before being transferred to the assembly department.

For each scenario, the student should assess the expected impact on warehouse operations, including material handling efficiency, lead times, space utilization, labor requirements, and cost implications. Special attention should be given to one-time and recurring costs, such as moving or acquiring forklifts, reorganizing infrastructure, and any temporary inefficiencies during the transition phase.

Where applicable, the student is encouraged to use warehouse simulation or optimization models to estimate KPIs (such as required employees) and to visualize or simulate operational flows. The final goal of assessing the different scenarios is to provide Wouter Witzel with an overview of the pros and cons, costs and effects of each scenario and a recommendation for the best scenario for Wouter Witzel.

Candidate Profile

This assignment is suitable for a **Master student in Industrial Engineering and Management (IEM)** with a strong interest in logistics and supply chain optimization. The student is expected to have prior knowledge of warehousing principles and methodologies, preferably demonstrated by having completed the course Warehousing or a similar course. Familiarity with quantitative analysis, process mapping, and warehouse design is highly recommended.

Application process

Do you recognize yourself in the above profile and are you ready for this great challenge? Then apply now by sending your **CV and cover letter to Gijs Jacobson, HR Officer, g.jacobson@wouterwitzel.nl**
We look forward to hearing from you!

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