

# Case Study



# GAIN & CO

Automation of an assembly line for a high-end furniture company

## Background



The client is a high-end furniture company founded in Denmark that needs a redesign of their existing assembly line to cope with the introduction of a new high-runner product.

The client was investigating the best possible ways to produce this high-runner product without disturbing the existing product lines. Particular emphasis was placed on improving the operation in terms of both production flow design and application of automation equipment.

In order to release more space in the assembly area to enable expansion of the capacity in the pressing and drilling processes, the client was looking into the possibility of automating within these areas. This would enable a more dedicated and efficient production flow without significant disturbance to the current operation.

## Gain & Co's Role



- Gain & Co's senior engineering team visited the client's factory in Denmark and thoroughly analyzed and mapped out the current process flows.
- The dependencies and possible parallel processes were clarified, and a waste analysis of the current process was carried out. For each process, the potential benefits were analyzed with respect to productivity, quality, and working environment.
- Potential solutions were conceived on different automation levels to simulate the improvements and business cases that could be realized by automation.
- Gain & Co then conducted market research and listed the potential suppliers which had the best prerequisites and experience to provide suitable solutions, and prepared functional requirement specifications.

## Value Delivered



- Our work identified strong benefits achieved by automating the current assembly line.
- The final delivery offered the client a list of 7 capable and suitable suppliers with clear reference projects supplying automation solutions, similar to the requested solutions.
- The calculation of the potential savings revealed that the estimated headcount savings would be 8 FTEs (from the original 17 FTEs) and that the number of monthly consumables and quality-related issues could be decreased by 50% by automating.
- The combined benefits of a reconfigured layout design and applying automation in the assembly could realize a positive business case within ~3 years.