

Case Study



Furniture &
Lighting

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.

Case Study



GAIN & CO

Automation potential for a leading ventilation company

Background



The client is a leading ventilation company with operations in 54 countries worldwide.

The client reached out to Gain & Co in order to gain an overview of their automation opportunities and how they may best proceed in achieving their strategic objectives through automation.

These strategic objectives included:

- Reduced labor costs connected to the assembly processes
- Improved productivity
- Maintained competitiveness

Furthermore, the client was investigating the best possible ways to fix their fleet of malfunctioning AGVs at one of their European sites.

Gain & Co's Role



Gain & Co's senior engineering team visited the client's facility and conducted a thorough analysis of the processes, in order to describe their benefits and complexities with respect to automation.

This enabled the management team to further prioritize and sequence the automation opportunities according to key strategic considerations, thus enabling the client to protect and develop further competitive advantages.

It became apparent that the client's fleet of AGVs were not performing to their satisfaction. The Gain & Co team has therefore conducted an in-depth analysis in order to get a full overview of the solution issues - to understand the extent of the problem, mitigation options, as well as a functional requirement specification describing the functionality and efficiency required.

Value Delivered



Gain & Co's provided the client with an overview of several automation potentials including observations on the assembly processes.

If the suggested automation opportunities are implemented, the potential for reducing labor costs was calculated to be more than 50%.

Furthermore, our team provided step-by-step guidance on how to proceed in order to re-achieve the functionality of the current malfunctioning logistic solution.

This combined would result in having a performance level of 98 % for all AGVs.

Case Study



GAIN & CO

Automation potential for a manufacturer of electronic controls

Background



The client is a manufacturer of electronic controls for electric underfloor heating who sought Gain & Co's advice on whether an increased capacity on the current assembly line for motor controls can be achieved, either via optimization of current assembly processes and/or via further automation of the line.

The client's strategic ambitions to be achieved by automation were:

- Increased capacity
- Improved safety
- Maintained competitiveness in order to prepare for future growth

Gain & Co's Role



Gain & Co visited the client for a 2-day screening of the assembly line for motor controls. Gain & Co used 80 hours of our senior engineering team in order to thoroughly analyze the line and prepare a list of observations of processes or methods that have the potential for further automation.

For each observation, an explanation for why the observed task has automation potential was given, which was scored based on multiple parameters – in order to improve productivity, increase and make more consistent quality as well as to improve safety by reducing repetitive tasks and heavy lifting.

This enabled the management team to further prioritize and sequence the automation opportunities according to key strategic considerations.

Value Delivered



In Gain & Co's assessment, there are good opportunities to achieve higher capacity on the assembly line by implementing a number of the identified projects.

Gain & Co's provided the client a report with nine (9) observations along with a broad plan on how to proceed in order to achieve the benefits found in the production by automating the specific subtasks providing the highest efficiency increase and productivity improvements.

The key relevant processes in this specific case were primarily focused on current bottlenecks in the final product testing and opportunities for automated dispensing of thermal paste.

If all the suggested automation opportunities are implemented, the throughput of the assembly line could be almost doubled without increasing the number of staff needed to operate the line, with an average expected payback period of ~3 years.

Case Study



GAIN & CO

Strategic plan for a leader in the renewable energy industry

Background



A leader in the renewable energy industry reached out to Gain & Co in order to support their strategic ambition and automation motivation.

The client's biggest challenges were:

- A lot of manual processes with low productivity and a poor working environment
- High time consumption and risk of inconsistent quality for some of the tasks
- Finalization of blades assembly

Gain & Co's Role



Gain & Co visited client's sites in Denmark & Germany and conducted a thorough analysis of the manufacturing processes in each site to describe their benefits and complexities with respect to automation.

Our team created an Automation Index, which helped the client to assess relevant automation projects according to the estimated payback period, the range of solutions available, and estimated overall efficiency improvement potential. Qualitative insights were delivered alongside each key automation project covered in the index offering contextual analysis. This enabled the management team to further prioritize and sequence the automation opportunities according to key strategic considerations, thus enabling the client to protect and develop further competitive advantages.

For the Danish site, Gain & Co identified a concept on how to automate the process of part assembly of blades, while for the German site, Gain & Co identified and described a concept to automate the manual process of preparing parts for the assembly of the Nacelle.

Value Delivered



Our work identified significant potential in automating several core manufacturing processes at the client.

The final delivery offered the client a report with 41 automation observations across the two sites. Each site has received an overview of its key specific automation opportunities.

Based on the process analysis and further potential calculation on the manual process of preparing parts for the assembly at the German site, by fully automating this process, Gain & Co estimated that the client would achieve a possible reduction in labor cost by 30%.

Furthermore, the client has started several automation projects on the bases of Gain & Co's recommendations and inputs and the other project is part of the client's investment pipeline.