

ESAB Welding Equipment: Case Story

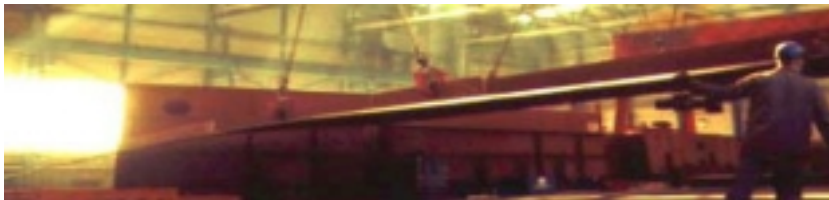
“A wide range of customer requirements and a multitude of viable technologies have kept our market highly fragmented. Going for new customer applications or expanding into new regions has always seemed to entail prohibitive complexity.”

“The unique tools offered by Modular Management have given us the ability to finally cut through this complexity and take advantage of our size and global presence with modular product platforms. We are now realizing economies of scale in development, manufacturing and sourcing, while being more responsive to individual customer requirements than ever before.”

Mart Tiismann
Vice President, ESAB

Company

ESAB is the world's largest manufacturer and supplier of welding and cutting equipment, welding filler metals and welding technology. The ESAB Group, owned by Charter plc, has annual sales of \$1 billion and 7 600 employees.



Challenge

ESAB Welding Equipment is active on a market characterised by a high degree of fragmentation, with very few global players and many small local manufacturers. Over the years, ESAB has bought a number of small and medium-sized companies to supply local regions with local products. Today, product development is carried out in three different locations.

As a result, ESAB has seen an increase in internal complexity over time, as indicated by their high part number count. The resulting

indirect cost for handling this complexity made it difficult to show an increase in profits. In addition, with development units in Sweden, the US and Poland, ESAB was running too many overlapping projects, which further added to the part number count and limited their profit potential.

ESAB's essential problem was how to increase the number of product variants and improve quality to meet the demands of relatively small local market segments while at the same time reducing complexity, lead-times in production and time-to-market. ESAB also wanted to be able to offer customers quick and cost-effective after-sales service by providing modules that can be easily added or replaced.



How Modular Management helped

The development of a new modularised product platform for advanced inverter-based welding equipment was used as a pilot to prove the strength of modularity. The work was conducted by a cross-functional group using Modular Management's unique methodology. The result was a 40% reduction in the part number count, a 90% reduction in lead-time in production and an increase of 50% in the number of product variants.

The successful results encouraged the management of ESAB Welding Equipment to proceed with implementing modularity in the whole division, i.e. in all functions from sales and marketing to production.

Modular Management helped to identify the number of modular platforms needed to meet global needs as well as how and where to develop these different platforms. A modular design process was implemented to utilize platforms in the design process.

A business case model was used to establish a business plan for each platform to manage the investments, follow-up, control and

profitability of the platform over time. Platform managers were appointed to run the platforms and monitor profits.

Modular Management's financial tools provided valuable support in assessing the financial potential of the modular concept, giving the platform managers a tool to simulate and steer according to both indirect and direct future costs. These tools also helped to guide the management of ESAB in organisational matters and the design engineers when selecting cost-effective solutions.

To ensure that the processes, tools, expertise and culture would be transmitted to ESAB and used in the long term in the company, Modular Management also created a support function.



Results

- By introducing modularisation, ESAB was able to decrease the part number count by 40% and reduce overlapping technologies by 60%.
- Assembly time was cut by 50%.
- Production lead-times were decreased by 8 days to only 1 day.
- The number of suppliers was reduced by 50%.
- Product variants were increased by 50%.
- Time-to-market was cut by 40%.

About Modular Management AB

Modular Management is a Swedish-based company that helps companies define, create and implement modular platforms.

Modular Management has developed its own complete methodology to define modular product structures, called *Modular Function Deployment*, or MFD™. MFD™ is supported by software for creating and maintaining modularised product platforms and financial tools for calculating complexity costs and estimating modularisation potential.

The company was formed in 1995 and today works with some of the largest companies in Sweden in industries ranging from manufacturing to services. For more information, please contact us at the address below or visit us at www.modular.se.



Modular Management AB
Kungsgatan 37
SE-111 56 Stockholm, Sweden
Tel: +46 (0)8 456 35 00