



Quantifying the benefits of a generic product architecture

Challenge

The case company has recently started a journey towards true industrialization. During the journey, a number of challenges have been recorded:

- Increasing complexity of products and processes
- Pressure on development lead-time for the introduction of new upgrades
- Pressure on ability to customize products to individual customers
- Quickly changing market trends

With a product program consisting of several different product platforms designed independently, the case company did not meet these challenges. The current product platforms demonstrated very little reuse making product upgrades for one platform incompatible with other platforms and solutions too dedicated to support the broad span of future requirements. Therefore, the natural consequence was to move in the direction of defining a generic product architecture capable of reducing complexity, meet customer requirements, and enabling to quickly adapt to the changing customer needs. A first step of this journey was to quantify the benefits of such an architecture, in order to set the stage for the following development of the architecture.

Approach

CPC was employed to quantify the benefits of having a generic architecture across different product platforms. The work was kicked off with a round of interviews of stakeholders throughout the product life cycle in order to develop a valid business case model anchored across the entire organization.

CPC performed a top-down analysis of the existing product platforms from a full product life-cycle point of view, collecting inputs to identify synergy potentials. CPC consulted each step of the value chain in a series of interviews with all stakeholders across sales, product management, production, sourcing, logistics, installation, service, engineering, and management.

Results

Stakeholders from across the entire product value chain were enthusiastic about the initiative and put a large effort into quantifying benefits, synergies, and saving potentials. The main project outcome was:

- A cost model with key financial figures summarizing the saving potentials across the value chain
- A list of qualitative statements derived the full potential of a generic modular architecture
- Full alignment and commitment across the value chain on a management level

The final result showed a positive business case for the initiative of creating the generic modular architecture.

The case company

The case company is one of the world's largest manufacturers of products within the energy sector, with products installed in more than 70 countries throughout the world. The company covers the entire product life cycle from design, sourcing, manufacturing, sales, and installation, including monitoring and service of the products.