Enhancing the Business Environment Efficiency Through Data Sharing in Product Lifecycle Management

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In the constantly changing environment in which companies operate, it is important to be able to optimize various activities throughout the product lifecycle. This places great demands on companies and their value chain, where information exchanges are central to activities. Even though Supply Chain Collaboration is not rare, and the benefits are real, the number of failures is imminent (Benavides et al., 2012).

Background

One of the most treasured assets for a company is their product know-how in form of data. However, since the majority of product data is stored electronically and global competition is increasing, it is important to carefully consider the exposure of product data (Stark, 2022). Otherwise, there is a risk that the operating company will lose its intellectual property. Despite these concerns, sharing product data can be crucial. Collaboration and information exchange can lead to powerful synergy effects, driving innovation and progress.

The study

The purpose of this study is to identify how data sharing in Product Lifecycle Management can enhance the business environment efficiency of a company. The foundation of the empirics is qualitative data that was collected through fourteen interviews conducted with employees at the case company Tetra Pak. Additionally, one externally held interview was conducted with the purpose of testing the transferability of the findings. The empirics were then analysed with an abductive approach with the aim of exploring the findings. This was achieved by applying the concept of digital debt, along with Hill's model, which outlines how a company can strengthen its market position through manufacturing (Hill & Hill, 2017).

Concept of Product Lifecycle Management

The goal of Product Lifecycle Management (PLM) is to oversee a company's products throughout the whole lifecycle. This spans from activities such as conceptualization all the way to disposal. By doing so efficiently, it is possible to optimize the value of the product portfolio and minimize expenses related to the products. When trying to extract

value from product data, it is important to have a robust PLM architecture. This involves seamlessly integrating data from diverse sources, ensuring smooth information flow, and enhancing the compatibility between different systems.

Results

The benefit of sharing product data throughout the business ecosystem, is that new opportunities arise to the surface. To reach this, it is important that the organization harmonizes the practice of CAD-tools with how they define product data. It is also important that employees have a systemic understanding of their work, as many activities depend on mutual information exchange. Partnerships with long-term customers and suppliers are also of great value when seeking synergy-effects when sharing product data.

Once you have this product data at your disposal, you can create value from it. For instance, it is possible to accelerate the concurrent engineering capability of the organization. The after-sales support is also favoured by a harmonized spread of product data, since it enables the organization to have even better control over the installed base of said products.

In summary, it can thus be concluded that business cases from increased product data sharing have the power to promote a company's Operations Strategy. Consequently, they can support corporate objectives such as profitability, which in turn enables them to win orders over competitors in the market. This is displayed in figure 1.

Simultaneously, it is of urgency to spread the product data in a safe manner with the aim of minimizing the potential risk of losing intellectual property. Companies can for example, achieve this by using encryption and secure platforms, which help to ensure this security.

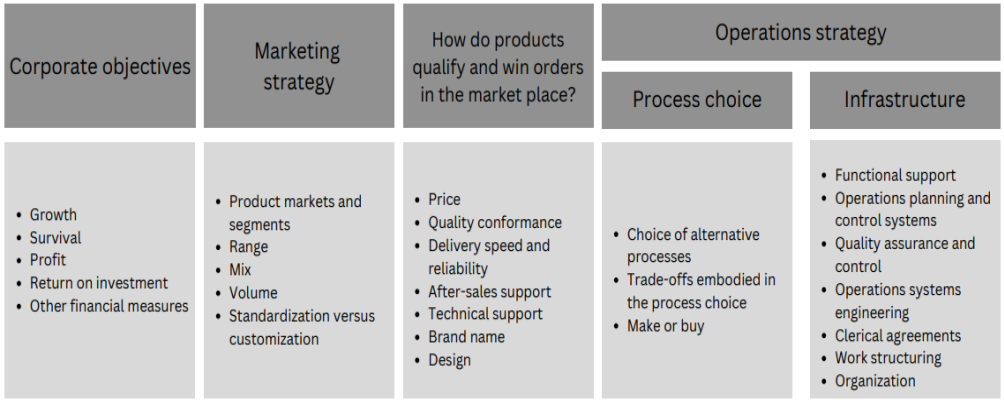

Figure 1: Hill's model (Hill & Hill, 2017)

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