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Value Chain Management Through Cloud-based Platforms

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Abstract

The transformation of traditional value chain processes towards a digital value chain management enables companies to sustainably establish and retain a competitive market position. Digitisation offers the opportunity to design and operate expansive process chains with efficient process operations via co-operative platforms. Increased customer loyalty („lock-in") via integrated measures at the front-end raises utilization and planning certainty for the technological recovery systems.

Keywords: Value Chain Management, cloud-based platform, digitization

1. Introduction

Shorter product life cycles, continuous changes and further development of business processes lead to changes in business models and the everyday work life. Customers expect faster business transactions, one- stop- shop solutions and transparency in the value chain. This is only possible, if companies are able to digitalise information and data concerning products, customers, processes and services and thereby transform their business procedures digitally. With this new working method, a high amount of data is collected about all processes, as well as data about internal and external communication, requiring a high amount of management and data analysis. In addition, the quality of the data is very important to ensure consistency and correctness. (Baumeier 2016)

The following paper will elaborate how to digitalise processes, the role of digital platforms and its influence on the value chain, as well as a case study about the digitalization of a traditional business in the electronic waste (e-waste) recycling business

2. A concept on how to digitalize business models

Digitalization of production processes, administration procedures and communication usually results in faster transactions and more reliability in means of quality and security. This leads to higher customer satisfaction.

In order to digitally transform one's business, it is essential to have a strategic plan and a clear goal set. Before implementing the new business model or making company modifications, it is recommended to have a change management plan in place. (Barsh 2016) The reason for this is, that often the culture and employees of a company can be large obstacles when exposed to major changes. Companies, who's culture is driven by entrepreneurship, creativity and innovation are more likely to successfully digitally transform their business model, rather than companies with a traditional and closed-minded mentality. A study of McKinsey form 2008 with top managers and executives showed that a company's culture can be the biggest obstacle and at the same time the main driver of innovation and change. (Kohne 2016 & Mervelskemper 2017)

The digital transformation can be achieved in 5 steps:

1. As-Is Analysis
2. To-Be Definition and goal setting
3. Best Practises and potentails
4. Digital Fit
5. Execution

Step 1 includes an analysis of the current state of the company and its value proposition. The value chain should be analysed as well as the stakeholders. Through this analysis a first indication is given, on what processes, products or services can be digitalized and which can't.

Step 2 is the goal setting process. The company should ask its self where it would like to be positioned in the market, what their priorities are and where it should stand in 5 years. In this manor, the framework for the business development direction is set.

Step 3, Best Practises, involves the potentials of a company. The best practises are analysed, on how these could be integrated in the new digitalized business model. In this phase, the business model is further defined and different alternatives and scenarios of it can be examined.

Step 4 assesses and evaluates the various business model alternatives regarding goals, customer and market demand, investment and the digital feasibility.

Step 5, the final phase, is the implementation phase. This is where the selected business model is implemented. However, this step is recommended to be fulfilled with suitable partners like IT service companies and also change management experts. (Kreutzner 2017 & Schallmo et al. 2017 & Niemann 2016 &Niemann et al. 2016)

3. Platforms as a solution for holistic value chain management

The digitalization of processes, products, transactions and machines leads to a high amount of data and information. A network of customers, service provider and OEMs is laid out that needs to be managed. The amount of data and all communication processes require a high amount of management and analysis to ensure correct interpretation of the data. A solution to the high maintenance of data quality and the management of all digitalized processes, services, machines, products and the network of partners and customers is a cloud platform. This would allow a constant exchange of process data and its automated analysis throughout the whole supply chain as well as full value chain management through the platform provider.

Cloud and IT- service provider can help with the setup of a suitable platform. Typical functions of a cloud platform are multiclient capability, scalability, availability and integration possibilities of external databases with and integrated development environment that supports different programming languages (e.g. Python, Java). A core aspect during the development of a platform, is to make sure that the data that is collected is done in a correct and exact manor to ensure high data quality. All automated decisions and analysis are based on this raw data. Furthermore, new value adding services can be created and offered, like for example automated transaction procedures, invoice creation and download, monitoring services of products, machines and processes and even external services, offered by service provider integrated into the platform. (Hahn 2016)