

Abstract

Overcoming the service paradox in manufacturing companies with IoT solutions

Brief summary

Manufacturers strive to grow and improve margins by investing in the extension of the service business. However, practice shows that these investments often result in poor returns, due to, for instance, missing service cultures and no clear focus on the value proposition to customers. Thanks to the IoT manufacturers are given promising opportunities to redefine their service approach with new business models and deeper customer relationships; prerequisites for a successful service business. In the short term they may encounter customers' reluctance to invest in IoT solutions. Though, the IoT will likely be embraced by all industry stakeholders in the near future.

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Starting position

In the past decade the Internet of Things (IoT) has disrupted many industries, including the machinery and equipment production industry. The rapid spread of the IoT and the business potential that this disruption imply seems to be phenomenal. Researchers and practitioners are trying to outdo each other with ever new superlatives. With IoT solutions it seems that manufacturing companies are given a promising opportunity to potentially extend their service business profitably and thus successfully overcome the adverse situation that substantial investments in the extension of service offerings do not result in higher returns - “the service paradox in manufacturing companies”, a term coined by Gebauer, Fleisch, and Friedli in 2005. However, finding the right business model to seize the opportunities provided by the IoT is only one of the challenges that manufacturers are confronted with. They need to undergo profound changes in the way they behave, think and approach customers. The “We have always done it that way”-approach is definitely consigned to the past in an ever faster changing business environment, super-charged by the connection of literally everything, anytime and anywhere.

Target

Target of the thesis was to answer two fundamental questions:

1. Will IoT solutions combined with suitable business models have the potential to help manufacturers overcoming the service paradox?
2. What preconditions need to be fulfilled by the manufacturing companies to make a decisive step forward to embrace the full potential of the service business and the IoT in a more and more digitized world?

Approach

Based on the findings from studying state of the art literature, two online surveys with manufacturers and their customers were performed. The findings of the surveys helped to support or disapprove – at least partially – the conclusions drawn in the foregoing chapters.

Findings

The findings from the surveys and conclusions drawn from related work can be summarized as follows:

- Growing the service business is a key priority of a majority of manufacturers.
- There will be a switch from one-off transaction based selling to product-as-a-service business. Hybrid business models seem to be a promising option for manufacturers introducing digital services.

- Approximately 20 business models have been identified by Gassmann, Frankenberger, and Csik in 2017 as being most suitable for IoT solutions.
- Simultaneously, the importance of business model innovation is stressed by many authors, culminating in the statement that in future, competition will not be between products or processes, but between business models.
- Access to customer data is crucial for every IoT-based business model, however data security is one of customers' central anxieties. Manufacturers need to address this and there are indications that customers are becoming more and more willing to share data.
- Generally speaking, many customers are still reluctant to embrace the possibilities of IoT services; a compelling and easily understandable value proposition from manufacturer's side is essential for success. It is likely that manufacturers will have to absorb a share of customers' operational risk to succeed with their IoT service portfolio.
- The IoT breakthrough appears to have happened in the farming industry, known as being the "ultimate see it to believe it group". It has yet to be demonstrated that other industry sectors, e.g. the food processors, will follow that showcase example.

Bibliography (selection)

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