



Leibniz Universität Hannover
Wirtschaftswissenschaftliche Fakultät
Institut für Wirtschaftsinformatik

Do Business and IT know each other? A qualitative assessment of the connection between strategy and the productiveness of IT capabilities.

Masterarbeit

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vorgelegt von

Name: Stoffregen

Vorname: Madeline

Geb. am:

in:

Prüfer: Prof. Dr. M. H. Breitner

Betreuer: Felix Bäßmann

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1 Introduction

Digital transformation (DT) has emerged as a focal point within the field of Information Systems Research (ISR) in recent years. The emergence of new digital technologies is leading to changed customer expectations and behaviours. Thus, the market landscape is evolving, giving rise to new business opportunities but also causing the downfall of old business models. Companies are required to undergo DT to tackle these challenges and also use the potential of emerging technologies. The great emphasis on DT can be explained by two factors. Firstly, DT affects all industries and business sectors as well as individuals and entire societies. Therefore, the circle of those affected or involved is extensive. Secondly, companies face the challenge that DT is an enterprise-wide endeavour, encompassing all areas of the organization. Therefore, it is not sufficient to just digitize individual processes or introduce new digital technologies; instead, the company's structure, culture, and products must also be adapted. Due to this heightened focus, most companies have initiated DT efforts in recent years, with many encountering challenges or even failures. Consequently, the emphasis has shifted towards the question of how to execute a DT sustainably and successfully. Accordingly, the strategic approach within the context of DT is becoming increasingly crucial.

DT, as an enterprise-wide approach, addresses both the business and information technology (IT) side of the company. So far, IT strategy and business strategy were seen as separate aspects within a company. The purpose of IT strategy was to efficiently utilize IT to support operational business activities. This meant that companies established a business strategy and objectives and then adjusted the IT strategy to best support it. IT thus played a subordinate role and was utilized as an instrument to ensure efficiency and productivity within the company. A new concept is a digital business strategy (DBS). In contrast to previous concepts, it advocates for the integration of business strategy and IT strategy into one DBS. The goal is to redefine the role of IT, shifting it away from technical support and towards being a factor for strategic differentiation and innovation. Furthermore, this concept aims to better address the enterprise-wide impact of DT, considering not only changes in the IT sector but encompassing all aspects of the organization. This is because companies may introduce digital technologies, but if they are lacking the corresponding processes and practices to leverage them, they are unable to fully take advantage of the opportunities.

Appropriately, the novel "The Unicorn Project" by Gene Kim (2019) has become increasingly popular among professionals from various industries in recent years. The book explores the connection of IT and business through the lens of a struggling fictional company called Parts Unlimited. Thereby, it highlights common problems companies face when trying to achieve a DT. As an answer to these problems, the book presents "the five ideals" as a set of guiding principles helping businesses to

create a vision of how their digitally transformed company should look like. Thereby, they also provide guidance for developing and executing a successful DBS.

Based on this current situation, the alignment within companies between their goals and strategies for business and IT has been recognised as a significant unsolved business problem. Thus, further research is needed. This has led to the formulation of the first research question:

- 1) *Do companies align their goals and strategies for business and IT and how successful are they with it?*

Kahre et al. (2017) call attention to the fact that current research primarily addresses why a company implements a DBS and what it entails in theory. However, they suggest future research to focus more on how a DBS is implemented. This includes an exploration of which organisational structures, processes and practices are suited to achieve DBS implementation. Similarly, this problem is also addressed in “The Unicorn Project”: “All of the ideals sound nice, but how in the world are they supposed to use them to change the trajectory of the [...] project?” (Kim, 2019, p. 111). This perspective is represented in the second research question:

- 2) *What are key factors that facilitate or hinder the achievement of digital transformation goals?*

To answer the two research questions, this study applies a design science research (DSR) approach. This entails the conduction of a literature review as well as interviews. Then, a framework is developed to represent the research contributions of this study. To this end, chapter two first provides theoretical background on the relevant concepts of DT, DBS and the five Ideals from Gene Kim’s book “The Unicorn Project”. Chapter three explains the applied methodology, which entails the overarching DSR approach as well as the research procedure concerning the literature review and the interviews. The results of the literature review as well as the interviews are presented in chapter four. For the literature review this encompasses a flowchart of the database search, a concept matrix, and the description of the seven identified concepts. The results of the interviews are also organized according to these concepts and thereby complement the prior findings. Based on the combined results a framework is developed and presented in chapter five. The framework is divided into two iterations. While the first iteration is only based on the results of the literature analysis, the second iteration also incorporates the results of the interviews. The chapter ends with some concluding thoughts to answer the research questions, comment on the difference between literature and practice and outline future research needs. Finally, chapter six concludes this paper with a summary of the main results, limitations, and future research opportunities.

6 Conclusion, Limitations and Further Research

DT continues to pose challenges for companies, making it a topic of high interest both for practitioners and researchers. Many organizations have embarked on their DT journeys and encountered difficulties or failures. Consequently, the focus for practitioners has shifted from initiating DT to executing it successfully and long term. As a result, the strategic approach to DT has become increasingly crucial. The book "The Unicorn Project" by Gene Kim has become popular among industry professionals, as it explores the challenges faced by a fictional company in achieving DT. The book also introduces "the five ideals" as guiding principles for businesses to envision their digitally transformed future. Simultaneously, the concept of a DBS has gained increasing attention for researchers as a way to achieve DT goals. DT requires an enterprise-wide approach, not limited to digitizing processes but also adapting the company's structure and culture. This new concept embodies this holistic perspective by suggesting the integration of business and IT strategy into one unified DBS. Also, it redefines the role of IT from technical support to a critical driver of strategic differentiation and innovation. Overall, this situation creates a research need concerning the state of alignment within companies between their goals and strategies for business and IT, their success rate with it and the identification of key factors influencing the achievement of DT goals.

After providing theoretical background on the relevant concepts of DT, DBS and the five Ideals from Gene Kim's book "The Unicorn Project", the research procedure starts with a literature analysis targeting publications on DBS and its implementation. Conducting an extensive literature research resulted in the identification of a large number of papers, of which 38 were included in the final set for full-text analysis. Within this set of literature, seven relevant concepts are identified. They are captured in a concept matrix and described in detail. To complement these findings with experience from practice ten interviews are conducted with employees from the IT domain. In accordance with the overarching DSR approach of this study, both results are used to develop a framework that represents the research contribution. The framework is divided into two iterations to show the results from literature in a first iteration and subsequently a further development by incorporating the results from interviews.

The first framework iteration consists of the seven identified concepts from literature. Six of those represent success factors for DBS implementation, while one concept covered all the challenges. The challenges were contrasted against the success factors, resulting in six key factors for achieving DT goals. These include a vision that integrates business and IT for the company's digital future, a supporting culture and governance framework, being able to utilize the digital ecosystem as an innovation source, having a digital resource foundation enabling the exploitation of new digital business opportunities as well as leadership that guides the organisation towards realising its strategic objectives.

Adding the results from the interviews and therefore a practitioners perspective led to the identification of four overarching categories of challenges which are particularly relevant in practice regarding DBS implementation and achieving DT goals. The second iteration of the framework presents these four categories of challenges as well as matching possible solutions from literature. The first category of challenges is a lack of vision since most companies struggle to identify and leverage new sources of value creation, limiting their ability to define a digital business model and vision. Also, a greater focus on collaborating with partners and customers is needed. Solution concepts include creating MIC, engaging in multisided business models as well as Gene Kim's fifth ideal of customer centricity. Next is a lack of shared vision due to business and IT areas having separate strategies, visions, and priorities, which are also reinforced by organizational structures. In cases of conflicting priorities, business goals take priority, designating IT to a support role. This category also illustrates the current state of alignment within companies between business and IT. Solutions include creating a unified DBS as well as supporting organisational structures and leadership roles, such as a CDO. Missing communication of the shared vision also yields challenges since many employees in the IT sector don't know their company's specific vision or how their work contributes to it. For this, leaders and their managerial actions are needed to translate strategic decisions into action by communicating the vision behind them. Lastly, a lack of supporting conditions is identified. While many companies have built a digital resource base, and a range of progress exists regarding organizational agility and flexibility, companies don't utilize them optimally due to the lack of overall vision, which therefore should be addressed first. Also, concepts like the first three ideals from Gene Kim as well as DC are identified as beneficial.

Finally, this work is not without limitations. Regarding the literature search, the search string was set very specifically to exclude publications on similar-sounding terms, such as "digital strategy". A broader search term would have increased the number of publications found. However, in this field many concepts exist that sound similar, are unclearly defined, used synonymously, and have also turned into buzzwords in recent years. Thus, including these concepts would significantly increase the volume of results, which causes relevant information to be overlooked and exceeds the scope of this work. Regarding the interviews, all participants were employees within Germany, creating country-specific results. Moreover, all interviewees were relatively young, with a maximum of twelve years of professional experience. This could mean that they may be more open to change compared to individuals who are accustomed to a certain approach or who fear that their expertise may become irrelevant in the future. Lastly, regarding the DSR approach, after developing the framework the next steps would be the demonstration and evaluation of it. However, due to the timeframe this is out of scope of this research paper.

Thereby, all these limitations point out further research opportunities. First, the presented framework requires demonstration and evaluation on its ability to solve the

underlying business problem, for example through additional interviews. One approach would be to compare the perception of employees and people in leadership positions to inquire whether a lack of vision or a lack of communication prevails. Also, including interview participants from other countries enables an international comparison. Another opportunity is to focus on related concepts that influence DBS implementation, which became very present during this research. This includes the influence of leadership in form of managerial actions and the CDO position. Overall, there are still many questions to be answered, which implies the need for future research on this topic.