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about the topic

Digital Process Governance: Development of a model through the integration of IT and Business Process Governance

submitted by

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1. Introduction

1.1 Motivation

If you want to manage companies successfully, you need to be aware of the importance of process governance. Since the 1990s, this topic has developed into a central component of process management, which not only aims to ensure that processes run smoothly, but also that they are consistently aligned with the company's objectives and are in line with applicable guidelines and risk management. Companies that neglect digital process governance risk facing problems such as inefficient processes, suboptimal use of resources or a lack of employee engagement.

Digital transformation through the development of new technologies opens up numerous new opportunities for companies. To effectively exploit this potential, digital process governance is more important than ever. Compared to traditional process governance, the focus is shifting towards enhanced data analytics and automation that enable greater flexibility. Digital process governance is an advancement and modernization of process and IT governance that leverages the benefits of digitalization and creates a modern framework for tasks such as compliance or data protection.

However, rapid technological developments also bring new challenges. In the past, IT governance was often limited to specialized departments of technology experts. Today, however, a company-wide integration of IT and business governance is required. This development means that not all employees have the needed IT skills to use new technologies effectively. Therefore, courses and workshops are necessary to close these knowledge gaps. In addition, the flexibility of digitized processes requires structural adjustments to ensure clear goals and improved responsiveness.

Given the rapid pace of technological change, the task of digital process governance is to turn these challenges into opportunities by creating a balance between innovation and control.

1.1.1 Research Gap

Despite the increasing importance of digital process governance, there is a clear research gap in the academic literature. There is a lack of comprehensive studies that transfer IT and business governance to the process level in a holistic approach. Even though IT/business alignment is a central aspect that has become increasingly important in recent years, traditional structures and ways of thinking are often still too deeply rooted. IT/business alignment is seen as the next step in development, whereas in reality companies have already made changes and are prepared for further research. One example of this is the implementation or optimization of process-driven governance. Depending on the company's level of maturity, companies with a certain market presence already have structures that are no longer based on departments but on processes, while some researchers see this development as a future step.

Existing models are either too theoretical and offer little benefit in practice or they are too specific and can therefore only be applied to specific contexts. This research gap underlines the need for a model on digital process governance that is adaptable to different industries and company sizes and can contribute measures for specific processes. Such a model could provide

a solid foundation for overcoming the challenges of digital transformation through successful digital process governance.

1.1.2 Research Need

This research aims to fill a gap in the theoretical landscape by integrating IT and business governance and applying it to the process level. Such integration enables deeper theoretical insight and creates a foundation for future theoretical developments in digital process governance. There is a need to bring together the different approaches and definitions of governance into a consistent framework. This research helps to clarify the existing concepts and thus enrich the theoretical debate. Although research already exists, such as that of Kirchmer (2021), which also deals with digital process governance, it focuses mainly on structural changes and not on the explicit merging of IT and business governance.

The development of a model that is both theoretically sound and practically applicable represents an important contribution to science. The literature shows potential for further research, as existing models are often not both adaptable and concretely applicable to cover all relevant aspects of digital process governance. This model could serve as a basis for further theoretical work dealing with adaptability and generalizability in different environments.

In practice, there is a need for a model that comprehensively combines all relevant aspects into a single framework. The interdependence between IT and business governance can only be adequately represented in a holistic model. This research aims to develop such a model that can be used in practice to enable successful governance at the process level. Although existing approaches explore IT/business alignment theoretically, there is a lack of practical validation in the context of digital transformation in the literature. This model aims to demonstrate that IT and business governance can be united in an integrated approach by incorporating expert opinions and testing the model against a specific use case.

In today's digital era, companies face the challenge of redesigning and optimizing their business processes in the course of digital transformation. The relevance of effective digital process governance cannot be overestimated. A well-thought-out governance strategy enables companies to fully exploit the potential of digitalization while at the same time meeting the complex requirements of compliance and data protection. A key component of this potential lies in optimizing the use of resources. The ability to better analyze data and use automated processes makes a significant contribution to avoiding bottlenecks and improving the value chain. The insights gained through advanced data analysis enable an optimized distribution of resources. The holistic and flexible digital process governance enabled by the model helps companies to make the best possible use of their resources while adapting to rapidly changing market conditions with great agility.

Regardless of their size, both small and large companies must overcome the challenges of digital transformation in order to remain competitive. While large corporations often have the necessary resources to implement comprehensive IT and business governance structures, smaller companies and specific industries face their own unique challenges. This requires a flexible governance model that can adapt to company sizes or industries. This research addresses the need for organizations, regardless of size or industry, to be able to effectively

manage digital processes and take full advantage of digital transformation.

1.2 Aim and Research Question

To address the challenges and gaps in the literature, this research develops a model that is both theoretically sound, practically applicable, and adaptable. A comprehensive analysis of the key aspects of IT and business governance plays a central role in ensuring that the model takes all relevant risks and opportunities into account. The approach will therefore be based on the following research question:

Which elements are important for a model for implementing digital process governance?

This central research question aims to close a clear gap in the existing literature, where previous models for process governance are either too specialized or too theoretical. To ensure that the model also meets practical requirements, it is evaluated by experts in a focus group discussion and tested in an application. The work is aimed to provide valuable insights into the crucial aspects of digital process governance covered in the existing literature and how these aspects can be applied in a specific process. These applications should provide further insights into the comparison between theoretical approaches and practical experiences.

1.3 Structure of this Thesis

This thesis is divided into six chapters. After the introductory chapter, which sets out the relevance for the research, the second chapter presents the content of the subject. The theoretical background is examined, providing a comprehensive basis for an understanding of the following chapters. The third chapter explains in detail the important methodologies that are of significance in the further course of the work. These theoretical and methodological foundations enable a structured and well-founded research process to be carried out in the fourth chapter, which is based on the principles of design science research. The Baustein principle according to Schoormann (2024) provides a structured and meaningful approach. After the research objects and the methodological approach are defined in the first part of the chapter, an intelligent literature review is carried out. The data is evaluated using a Webster-Watson matrix, in which the aspects of digital process governance can be analyzed systematically and transparently. The results of this review will reflect the current state of the literature and will serve as the basis for the development of a theoretically sound model proposal.

In order to enrich the model with practical aspects, a focus group discussion is held with experts whose personal experiences are incorporated into the model. After revising the model based on the findings from the focus group discussion, it will be applied in a P2P process to determine its practical use. The results and developments from the research process are then summarized and the research process concluded. The results are critically evaluated in a discussion in order to highlight the key findings and their implications for theory and practice. At last, limitations of the work and opportunities for future research are highlighted before the work is summarized in a conclusion.

multinational corporations. In addition, further research could focus on whether the model offers comparable benefits in the retail sector as in the financial industry or healthcare.

To further strengthen the validity of the model, additional validation should be conducted in a wider range of applications. Qualitative methods such as the Delphi method or case studies could provide valuable insights to validate the model. In addition to qualitative case studies, quantitative research would also be valuable to validate the robustness of the model. Larger, quantitative case studies could be used to gain statistically significant insights into how well the model works in practice. By analyzing more applications, useful best practices could be identified, which could serve as a guide for companies wishing to integrate the model into their own digital process governance.

Future research could investigate the long-term effects of the model. On the one hand, long-term studies offer the opportunity to evaluate the effectiveness of the model based on evolving company KPIs. An interesting research approach would be to compare companies that use the model with those that do not. Researchers could additionally use long-term studies to identify whether and how the relevance of certain aspects of the model changes over time and which adjustments may be necessary.

A key strength of the model lies in the comprehensiveness of its aspects, which currently cover all important areas of digital process governance. To ensure that this continues to be the case, the model should be continually developed to take account of new trends and developments in digital transformation. Further research could investigate the aspect of sustainability, in particular how important the sustainability is in the context of digital process governance and whether this aspect should be integrated into the model. The extension of the model could include how companies incorporate sustainable practices into their digital processes and how governance structures for environmental and social responsibility would need to be adapted. Another interesting aspect that could be integrated into the model is AI. Future studies could look at the opportunities and challenges created by AI in companies and investigate how these technologies can be implemented effectively. AI, which in the future may be able to take over entire task areas independently, could be a separate aspect to technologies used by humans.

6. Conclusion

In this thesis, a model for digital process governance was developed and evaluated in order to successfully overcome the challenges of digital transformation. The central goal of this research was to create a model that provides companies with a sound and practice-oriented basis for designing their governance processes in a digitalized world. The relevance of this topic is demonstrated by the need for companies to continuously optimize their processes through proactively making company-wide adjustments to meet the challenges of digitalization. This thesis has closed an existing research gap by developing a model for implementing such adaptations in company processes.

A key outcome of the systematic analysis of existing literature was the identification and integration of all key aspects of digital process governance, which are visualized in the model.

In summary, the central topics can be reduced to structural changes, risk management and more efficient process control, in addition to other aspects. It became clear that companies should develop process-oriented structures to make communication channels and data flows more efficient, which enables a faster response to changes brought about by external factors. In addition, new technologies bring with them unknown risks that require risk management to be adapted. This is associated with changes to compliance and data security. Technologies offer better opportunities for resource utilization in the processes, as increased data volumes and more precise analyses lead to more precise decision-making.

The application of the model to specific use cases made it clear that the aspects of the model developed are valid in practice. The focus group discussion provided valuable insights into the practical feasibility and validation of the model. The complexity of the interactions that became clear during the focus group discussion was directly incorporated into the model design. The application to the P2P process also showed how a concrete use of the model in a process takes place. This application serves as further confirmation of the model's ability to create effective digital process governance.

On a theoretical level, this work contributes significantly to the understanding and further development of digital process governance. The identification of the essential aspects not only provides a comprehensive representation of digital process governance, but also captures the complexity of modern business processes. The developed model deepens the scientific discourse on the alignment of IT and business governance and expands the existing literature.

From a practical perspective, the model is a valuable resource for companies looking to optimize their governance structures in a rapidly changing digital environment. The model's adaptability makes it suitable for different company sizes as well as different industries. Companies can use the model to increase efficiency, minimize risk and build a sustainable governance structure that gives them a long-term competitive advantage.

With its comprehensive theoretical basis and practical applicability, the developed model for digital process governance represents a decisive step that supports companies in effectively managing and permanently optimizing their digital transformation processes.