

Introduction to the Minitrack “IT Governance and its Mechanisms” HICSS 57 (2024)

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In many organizations, information technology has become crucial in the support, sustainability and growth of their businesses. The pervasive use of technology has created a critical dependency on IT that calls for a specific focus on IT Governance (or Enterprise Governance of IT).

Enterprise Governance of IT (EGIT) is “an integral part of enterprise governance exercised by the Board overseeing the definition and implementation of processes, structures and relational mechanism in the organization enabling both business and IT people to execute their responsibilities in support of business/IT alignment and the creation of business value from IT-enabled business investments.” [1, p. 3]

The minitrack “IT Governance and its Mechanisms” welcomes papers on theories, models and practices in the IT governance domain and aims to contribute to the understanding of IT governance and its structures, processes and relational mechanisms. The minitrack was first introduced at HICSS 35 in 2002. For its 23rd edition at HICSS 57, the following papers are included in the minitrack.

1. “Data Governance for Data Sharing: Why Is It So Hard?”, by Richard Howey. Efficient firm-wide allocation of data resources is a key goal of data governance. One way enterprise assets are often allocated is by an internal market wherein the internal organizational units inside the firm sell resources to each other. However, not all resources are efficiently allocated through free markets. Computerized data possess economic characteristics that may make an internal market for data fail. This research uses a literature review to hypothesize a structural cause/effect model of how this market failure may occur and then analyzes the validity and quantitative implications of that model using exploratory partial least squares structural equation modeling. The research concludes that the market failure is

occurring in practice and that enterprise management and data governance are not effectively recognizing or dealing with the market failure. The paper concludes with recommendations for improving data governance practices and for additional research.

2. “Governing security in a digital world is not a “one size fits all” solution: A multiple case study about security governance modes and their effectiveness”, by Stef Schinagl, Bart Van Den Hooff, Abbas Shahim, and Svetlana Khapova. Governing digital security is crucial for anticipating the ever-increasing impact of cyberattacks. However, persistent failures and breaches indicate that both research and practice do not provide sufficient guidance on how digital security governance (DSG) can become effective. There is a strong focus on finding the “silver bullet” or applying a “one size fits all” approach in DSG models. The central finding of this paper indicates that organizations can operate different DSG modes. We discuss four DSG modes and their benefits and drawbacks based on case study data, interviewing 33 stakeholders across 5 unique cases (large organizations). With our findings, organizations can reflect on their current DSG approaches and render them more effective.
3. “Chief Information Officer and Organizational Agility: Exploring CIO Power and Demand-Side Leadership”, by Yanlin Zhang, Xuwei Zhang, Daniel Chen, Jinghua Xiao, and Kang Xie. Understanding how Chief Information Officers (CIOs) may help businesses to achieve information technologies (IT) enabled organizational agility has become increasingly important in the digital era. Previous research has emphasized the role of CIO in leading business transformation (i.e., CIO demand-side leadership), but little research has been performed to examine how CIOs can leverage IT to enable

business transformation and promote organizational agility. This study develops a theoretical model by integrating literatures on IS leadership and executive power. Specifically, we conjecture that CIO demand-side leadership can promote organizational agility, and top management team's (TMT) strategic IS knowledge can enhance the positive impact of CIO demand-side leadership on organizational agility. Additionally, we emphasize that three sources of CIO executive power (structural power, expert power, and prestige power) are key factors that enhance CIO demand-side leadership. The empirical results of analyzing matched-pair CIO/TMT survey data from 321 organizations largely support our research hypotheses.

4. *"IS Alignment in Dynamic Environments: A Comprehensive Framework"*, by Lukas Grütznér, Oliver Werth, and Michael H. Breitner. In increasingly volatile environments, organizations face unprecedented challenges from events such as the Covid-19 pandemic and the rising impacts of the climate crisis. Establishing effective alignment between Information Systems (IS) and the business is critical. Recognizing the substantial environment effect on alignment, we combine a literature review and expert interviews. Following design science research (DSR), we develop a conceptual framework to describe IS alignment as a dynamic process across strategic and structural levels in the context of pluralistic ecosystems affected by micro- and macro-environmental factors. We discuss our results and provide recommendations for further research. We enable insights both for researchers and practitioners to effectively address key environmental factors that affect IS alignment.
5. *"Business Strategy and Agile Software Development Methods Alignment in Startup Companies: Cases of Five Swedish Startups"*, by Parisa Aasi, Leslie Berggren-Lagercrantz, and Huseyin Kökmen. Startup companies, by nature, operate under extreme uncertainty and tremendous time constraints to offer a marketable product or service. With limited resources, lack of organizational and operational structures and high competition, it is not surprising that not all startups survive. Startups need to advance their business strategies to guarantee viability. Agile software development methods act as an enabler for startups to quickly respond to changes with their iterative work cycles and continuous feedback loops. This paper aims to answer this question: How to align agile software development method with business strategy in startup companies? Five case studies were done in Swedish startups through semi-structured interviews. The results demonstrated that selecting an agile software development method usually occurs implicitly and most startup companies use innovation to distinguish their products. Finally, we present a list of guidelines on how to align agile software development method with the business strategy in startups.
6. *"Formative Archetypes in Enterprise Blockchain Governance: Exploring the Dynamics of Participant Dominance and Platform Openness"*, by Christophe Viguerie, Raffaele Ciriello, and Liudmila Zavolokina. It is widely assumed that blockchain should, in principle, lead to decentralization. Yet, in practice, many enterprise blockchains are highly centralized. To explain this conundrum, we conduct a multi-case study of four enterprise blockchains: Walmart DL Freight, Contour, Chronicled MediLedger, and Cardossier. Exploring the dynamics of participant dominance and platform openness during their formative stages, we theorize that these blockchains correspond to the distinct archetypes of Chief, Clan, Custodian, and Consortium, respectively. Importantly, these archetypes shape the subsequent evolution of the governance approach, thus explaining why and how enterprise blockchains with dominant participants and limited openness later exhibit more centralized governance.
7. *"Implementing Value Stream Management: A Pathway to Operational Alignment in Value Streams"*, by Justin Harvey, Anna Wiedemann, and Philipp Matter. This study investigates how value stream management enables operational alignment between business and software development. The present paper employs a single-case study design within a Swiss-based bank and its IT subsidiary. Qualitative data were collected, analyzed, and synthesized, offering comprehensive insights into an organization operating under the value stream paradigm. Expanding on operational alignment theory, this research introduces a revised model for the operational alignment of software value streams. The derived model includes three aggregated dimensions: Seek Value, Foster Transparency, and Enable Proximity. The findings suggest that software value streams require product-centric teams, featuring designated roles at the interface between business and development. Moreover, value streams and the product team strive for transparency to disclose the actions and decisions of driving companies' value. This study provides

insights into the complex landscape of software development to align the operational dynamics between business and IT to pave the way for success.

8. *“The Impact of Strategic Orientation on Digital Transformation: Empirical Evidence Based on Chinese Listed Manufacturing Firms”*, by Tingxuan Liu, Yishu Dai, and Mengling Yan. In examining the antecedents of digital transformation, few studies have focused on how a firm’s extant strategic orientation influences its digital transformation intensity, and how this relationship is affected by strategic leaders and the firm’s life cycle. This work empirically tested these relationships based on the panel data of Chinese-listed manufacturing firms from 2007 to 2021. The findings suggest that a prospector orientation enhances, while a defender orientation weakens digital transformation intensity, and that the match between CEO background and strategic orientation amplifies the effects of both strategic orientations. Moreover, the relationships between the two strategic orientations and digital transformation intensity differ significantly at different stages of the firm's life cycle. This work enriches research on the driving factors of digital transformation at the strategic level. It inspires firms to understand the impact of their existing strategic orientation on new strategic change, choosing strategic leaders, and timing the transition.
9. *“Cyber Capabilities as Dynamic Capabilities: Meeting the Demands of the Ever-Evolving Cybersecurity Environment”*, by Nico Abbatemarco. Despite the growing importance of cybersecurity, a lack of theoretical studies hampers a comprehensive understanding of this field. This gap becomes particularly evident when attempting to investigate the impacts of cybersecurity on organizational performance. To address this gap, this paper conducts a Systematic Literature Review (SLR) to identify a series of core cybersecurity capabilities and applies the dynamic capabilities framework to analyze them. The study categorizes the 17 identified capabilities into sense, seize, and transform clusters, exploring their contributions to organizational performance and their interrelationships. While many of these capabilities align with established cybersecurity standards such as ISO 27001 and NIST CSF, the findings emphasize specifically the critical role played by less technical and more strategic-oriented capabilities. This research represents an initial step in bridging the existing knowledge gap

and offers valuable insights for future investigations into the microfoundations and evolving nature of dynamic cyber capabilities.

References

- [1] S. De Haes, W. Van Grembergen, A. Joshi, and T. Huygh, *Enterprise Governance of Information Technology: Achieving Alignment and Value in Digital Organizations, Third Edition*. Cham, Switzerland: Springer, 2020.