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# **Reconceptualizing Shadow IT in the Age of Generative AI: A Systematic Literature Review and Motivation Model of Shadow AI Usage**

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Exposé

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## **List of Abbreviations**

**AI** Artificial Intelligence

**IS** Information System

**IT** Information Technology

**SAI** Shadow AI

**SIT** Shadow IT

**SLR** Systematic Literature Review

## 1 Research Topic

The term Shadow IT (SIT) refers to the unauthorized use of hardware, software or cloud services within an organization without approval from the Information Technology (IT) department, potentially causing security risks, compliance issues or even data breaches (Rakovic et al., 2020, p. 145). With the rise of generative Artificial Intelligence (AI) technologies, such as large language models and AI-powered tools, a new category of SIT has emerged: Shadow AI (SAI). This term describes the use of generative AI applications by employees without formal approval or oversight from the organization's IT department (Silic et al., 2025, pp. 1–2). SAI can lead to similar risks as SIT, such as data privacy concerns, security vulnerabilities and compliance issues, but it also introduces unique challenges due to the nature of generative AI technologies.

## 2 Motivation

The motivation for this thesis arises from the increasing prevalence of generative AI technologies in the workplace and the potential risks associated with their unauthorized use. While there is a growing body of research on SIT, there is a lack of comprehensive understanding of SAI and its implications for organizations (Silic et al., 2025, p. 5). This thesis aims to fill this gap by conducting a systematic literature review to identify and analyze existing research on SAI, and by developing a conceptual framework that extends the traditional understanding of SIT to encompass the unique characteristics and implications of SAI.

## 3 Methodology

The research will follow a Systematic Literature Review (SLR) according to Okoli (2015). This method is used to identify, evaluate and interpret the available research relevant to a particular research question, topic area or domain of interest and is designed to be used in Information Systems (ISs) research (Okoli, 2015, p. 884).

A SLR is particularly suitable for this thesis as it allows to systematically gather and analyze existing knowledge on the topic of unauthorized use of IT tools and AI. With this approach, it is possible to identify research gaps and provide a solid foundation for future research directions.

Even though the methodology is designed mostly for research teams, but with some minor adjustments, it can also be used for individual research. Overall it simplifies the process of conducting a literature review due to the lack of risks associated with incorrect team communication and cooperation.

# 4 Preliminary Outline

Lastly the following outline should give an overview of the planned sections of the thesis. Changes may appear during the research process but as an entry point it should help to structure the work.

1. Introduction
2. Theoretical Foundations
  - 2.1. Shadow IT
  - 2.2. Motivational Theories
  - 2.3. From Shadow IT to Shadow AI
3. Methodology
4. Structured Literature Review Results
  - 4.1. Overview of Identified Literature
  - 4.2. Shadow IT Baseline
  - 4.3. Shadow AI in Existing Literature
5. Conceptual Development: Extending Shadow IT to Shadow AI
  - 5.1. Transferable Motivations
  - 5.2. Novel Motivational Dimensions
  - 5.3. Behavioural Shift in Knowledge Work
  - 5.4. Integrated Conceptual Framework
6. Comparative Analysis: Shadow IT vs. Shadow AI
7. Discussion
8. Limitations and Future Research Directions
9. Conclusion

With this outline, the thesis will first establish a theoretical foundation by discussing the concepts of SIT and motivational theories. Then, it will present the methodology of the systematic literature review and its results. Based on these results, the thesis will develop a conceptual framework that extends the traditional understanding of SIT to encompass the unique characteristics and implications of SAI. Finally, a comparative analysis will be conducted to highlight the differences and similarities between SIT and SAI, followed by a discussion of the findings, limitations, and future research directions.

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## References

- Okoli, C. (2015). A guide to conducting a standalone systematic literature review. *Communications of the Association for Information Systems*, 37, 879–910.
- Rakovic, L., Sakal, M., Matkovic, P., & Maric, M. (2020). Shadow it - a systematic literature review [Times Cited: 0 Cited Reference Count: 0 Rakovic, Lazar Sakal, Marton Matkovic, Predrag Maric, Mirjana Matkovic, Preag/J-5428-2016; Raković, Lazar/I-8566-2016; Maric, Mirjana/AAF-9901-2019 Matkovic, Preag/0000-0002-9956-0088; Raković, Lazar/0000-0002-1465-588X; Sakal, Marton/0000-0002-2014-4605]. *Information Technology and Control*, 49(1), 144–160. <https://doi.org/10.5755/j01.itc.49.1.23801>
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## **Eidesstattliche Erklärung**

Hiermit versichere ich, die vorliegende Arbeit selbstständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt sowie die Zitate deutlich kenntlich gemacht zu haben.

Ich erkläre weiterhin, dass die vorliegende Arbeit in gleicher oder ähnlicher Form noch nicht im Rahmen eines anderen Prüfungsverfahrens eingereicht wurde.

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