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Agentic Information Systems
A Structured Literature Review and Taxonomy

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Type	Bachelor's / Master's Thesis
Language	German / English

Motivation

Agentic information systems represent an emerging class of information systems that autonomously solve tasks and assume responsibility for their outcomes. Examples include personal AI assistants like *OpenClaw* or AI browsers like *comet* by Perplexity. Unlike traditional information systems they exhibit agency by making decisions, adapting to changes, and executing tasks independently. Agentic information systems hold significant relevance for a range of research areas, including artificial intelligence, human-computer interaction, business process automation, and autonomous robotics. Despite their growing importance, the current literature lacks a structured classification of agentic information systems, hindering systematic analysis and theoretical grounding.

This thesis addresses the research gap by conducting a structured literature review of the information systems literature to synthesise existing knowledge on agentic information systems and identify key characteristics. Building on these insights, the thesis develops a comprehensive taxonomy to categorise agentic systems. By providing a conceptual framework, it aims to advance understanding of agentic information systems and provide a foundation for future research in information systems and related domains.

Objectives

- Summarise the information systems literature on agentic information systems with a structured literature review
- **Master's Thesis only:** Develop a taxonomy to structure the different types of agentic information systems

Literature

- Baird, A., & Maruping, L. M. (2021). The next generation of research on IS use: A theoretical framework of delegation to and from agentic IS artifacts. *MIS Quarterly, 45*(1), 315–341. https://doi.org/10.25300/MISQ/2021/15882
- Leonardi, P. M. (2025). Homo agenticus in the age of agentic AI: Agency loops, power displacement, and the circulation of responsibility. *Information and Organization, 35*(3), 100582. https://doi.org/10.1016/j.infoandorg.2025.100582