



## Master Thesis

### “Managing the Dynamic Nature of Artificial Intelligence - A Case Study Approach”

#### Background

Strategic AI adoption can systematically transform a company and its industry. More specifically, while AI is already mature enough to be applied in various business contexts, it has the power to change business models completely. Whereas successful AI adoption enables many business opportunities for gaining competitive advantage, the technology's research field is very complex and dynamically progressing. For instance, the explosive rise of generative AI has impacted the business landscape significantly and further technological breakthroughs are very likely to occur. Consequently, firms have to proactively manage potential change e.g., to create first-mover advantages, drive business strategies, or even for staying competitive. Therefore, this thesis project targets to find appropriate measures that firms can use to handle potential technological change.

#### Introductory Readings

- Benbya, H., Davenport, T. H., & Pachidi, S. 2020. Artificial intelligence in organizations: Current state and future opportunities. *MIS Quarterly Executive*, 19: 9–21.
- Berente, N.; Gu, B.; Recker, J.; & Santhanam, R. (2021). Managing Artificial Intelligence. *MIS Quarterly*, 45(3): 1433-1450
- Borges, A.; Laurindo, F.; Spinola, M.; Goncalves, R. & Mattos, C. (2021). The strategic use of artificial intelligence in the digital era: Systematic literature review and future research. *International Journal of Information Management*, 57.
- Enholm, I.; Papagiannidis, E.; Mikalef, P.; & Krogstie, J. (2021). Artificial Intelligence and Business Value: A Literature Review. *Information Systems Frontier*, 24: 1709-1734.
- Krakowski, S., Luger, J., & Raisch, S. 2022. Artificial intelligence and the changing sources of competitive advantage. *Strategic Management Journal*, 44: 1425–1452.

#### Tasks and Goals

This master thesis is closely related to the current research of the chair, and you will conduct your analyses in close collaboration with our doctoral students. The thesis will be based on a qualitative case study methodology to examine approaches to handle AI's dynamic nature and technological change. For this, you will review relevant scientific literature and conduct interviews with self-selected companies.

#### Requirements

- Good English skills as well as previous experience with strategic topics and/or AI
- Independent, reliable, and diligent working style with an eye for detail and high motivation
- Successful participation (min. grade of 2.3) in one of our offered modules (see company webpage)

#### Details

- Supervisors Prof. Dr. Thomas Hutzschenreuter and Tim Lämmermann
- Timing Flexible / As of now for a duration of 6 months after the research exposé is accepted

#### Contact

If you are interested in writing your thesis at our chair or have questions to this topic, please contact Tim Lämmermann ([tim.laemmermann@tum.de](mailto:tim.laemmermann@tum.de)). Please send an email, including a tabular CV and your current transcript of records (one PDF file), to apply for a master thesis. We are looking forward to hearing from you!