

Managing innovation in the era of Artificial Intelligence (AI)

AI is fundamentally changing the way companies work – how they operate and how they compete (Lakhani and Lansiti, 2020). At the same time, AI is challenging and transforming the core axioms and assumptions underlying the innovation process and its management (Benner and Tushman, 2015; Cockburn et al., 2018; Haefner et al., 2021; Nambisan et al., 2017, Verganti et al., 2020). The central proposition is that AI has the potential to transform the innovation management practice by enabling a much more effective and efficient innovation process and so herald a new innovation era. However, our knowledge on how companies should staff, organize, and strategize their innovation in the era of AI is still sparse, and managers are still struggling to find the most appropriate approach for applying AI in their innovation efforts. In parallel, a growing number of scholars sees existing theories of innovation uncoupled from the phenomena and the complex context within which it emerges (Benner & Tushman, 2015; Greenstein et al., 2013; Nambisan et al., 2017; Nylén & Holmström, 2015; Yoo et al., 2012), calling for new and alternative conceptualizations of innovation management (Nambisan et al., 2017).

Starting from overall research question **How is AI changing the way companies manage their innovation process?** we are interested in understanding how innovation management changes and how companies should staff, organize, and strategize to profit from that change. Many research perspectives and questions are open. For example:

- How AI may be seen and considered in the innovation context? What generic new technology affordances are enabled by AI and how do they influence innovation trajectories and outcomes?
- How innovation managers evaluate the future importance of AI applications at various innovation tasks along the idea-to-launch process?
- What are preferred implementation patterns of AI-based innovation management relative to organizational context such as company size, degree of maturity, skill sets, and AI affinity?
- What are different “recipes” for successful AI innovation management, assuming that there is more than one pathway to it? What are best and worst practices? What are critical success factors?
- What is impact of AI-based innovation management on innovation output?
- What are the changes in strategy, structure, functions, workforce, alignment, processes, and control that flow from management of AI?
- What are AI-enabled changes to business strategy, business models, and value creation processes?

For full overview of relevant questions, please see the above cited papers and recent special issues of, for example: MISQ (Sep 2021), Technological Forecasting and Social Change (work in progress), Journal of Business Research (Jan 2021), California Management Review (Dec 2019) and Business Horizons (Mar 2020).

Project Leader: Associate Professor Zeljko Tekic, in collaboration with **Prof. Dr. Johann Füller** (University of Innsbruck and HYVE AG). Opportunities for research visits to Munich / Innsbruck (Professor Johann Füller).

Candidates are expected to have strong interest in innovation management and basic understanding how AI and machine learning “work”. Mathematical / quantitative background and programming skills (e.g., Python and/or R) are an advantage. This research may be ideal for candidates with strong (business) informatics / information systems backgrounds.

Organization and Set-Up:

Expected duration: 3 years including coursework.

Expected outcome: at least 3 publications, of which at least 2 in Q1/Q2 journals, and at least one in the leading role, all covering topic of the PhD research

Place of work is Graduate School of Business, HSE University, Moscow.

In all cases students will work as a part of a team, within specific project.

Those accepted into HSE’s PhD program will conduct research in challenging environment, under the supervision of international faculty in brand new facility at Shabolovka.

Next to available state and competitive stipends (from the HSE Graduate School of Business), **students are eligible for (additional) project stipend up to 30k RUB per month, subject to performance and results.**

Working language is English.

To apply, visit: <https://aspirantura.hse.ru/management/about>

For all questions mail to Associate Professor Zeljko Tekic, ztekic@hse.ru (it is highly recommended to contact the Project Leader **BEFORE** applying for the position).