Amsterdam Business Research Institute
Research on Digital Innovation
Course Manual
Academic year 2024-2025

Course title	**"Research on Digital Innovation"**

Coordinator(s)	Prof. dr. Marleen Huysman and dr. Philipp Tuertscher
Lecturer(s)	Prof. dr. Marleen Huysman and dr. Philipp Tuertscher
Study period	April 2025 – May 2025 (Period 5)
ECTS	5 ECTS
Tuition	€1.250 20% discount on early bird registration: €1.000

Course objectives	Upon completion of this course, students will have: - Developed the ability to synthesize the literature and integrate knowledge in the field of technology and innovation and formulate possible research directions based on that; - Developed reflective and critical skills in understanding the role of (digital) technology in organizations; - Developed an understanding of how the nature of digital technologies affects innovation processes and collaboration; - Developed an understanding of the value of a socio-technical perspective and practice/process approaches in studying the development and use of technology; - Developed the ability to communicate (present and discuss) with other scholars about the current theories and research on digital innovation;
Course Content	The core theme of this course is organizing around digital innovation. It will introduce students to contemporary theories and empirical studies addressing various aspects of digital innovation, but also some classics on technological innovations in organizations. Students will develop a thorough understanding of theories explaining how technological innovations come about and how technologies influence ways of working and organizing. Such understanding is needed to overcome the limitations of deterministic perspectives on the role of technology in organizations and society at large. Specifically, students will learn to appreciate that technology is not a given; rather it is being shaped by organizational and institutional actors on a micro, meso, and macro level. the course will introduce students to practice- and process research approaches, and demonstrate the power of these approaches for understanding the nature, role and influence of technology on organizing around digital innovation. The course places a special emphasis on understanding the "digital" nature of emerging technologies, discussing cases of digital innovation in sectors such as healthcare, agriculture, high-tech industry, creative industry, and science. A critical engagement with these readings will provide students with a thorough grounding in various theoretical perspectives and in-depth empirical studies on technology development and use.

Form of Tuition   Weekly seminars (on-campus)

The main purpose of the seminars is to explore important, contemporary issues at the intersection of organization theory, innovation and technology studies from a number of theoretical, methodological, and topic-oriented perspectives. Given that research articles can be understood in different ways and evaluated on a variety of dimensions, the most important part of a doctoral course is the collective sensemaking and social construction of meaning that takes place during class discussion. Accordingly, class discussion is probably the most valuable part of a doctoral course and must be taken extremely seriously.

Reading preparations

Effective participation cannot be achieved without a thorough reading and deep reflection on the assigned readings. A good analysis means that students think about the "big picture" (e.g., what are the core research problems or questions addressed by the paper?) as well as the details (e.g., how convincing is the empirical evidence?) of each article. Also, students should be able to relate each paper to the other readings assigned for the week as well as the overall course readings. A thorough reading preparation will meet two objectives. First, it will ensure that students attend class fully prepared to discuss all readings and make most productive use of the valuable discussion time. Second, they can practice a variety of skills, such as synthesizing research, understanding research designs, and developing research questions that should prove useful in students' academic careers.

At the end of the seminar, students will be given a take-home assignment. More information on this will be given during class.

Readings   This course has a heavy reading load. Students will be required to read and prepare four papers a week. In addition, students will be offered a number of recommended readings.

Grading   The final grade consists of the following elements:
- Class participation (20%)
- Individual assignment (80%)

Conditions to pass the course:
- Attendance is mandatory, and students come prepared.

Schedule: Note the dates are still tentative
Time each day: 13:00 – 16:00, rooms TBA

Tue April 1, 13:00-16:30
Tue April 8, 13:00-16:30
Tue April 15, 13:00-16:30
Tue May 6, 13:00-16:30
Tue May 13, 13:00-16:30
Tue May 20, 13:00-16:30

Readings

Session 1

- Barley, S. R., & Kunda, G. (2001). Bringing work back in. ***Organization Science***, *12*(1), 76-95.
- Nicolini, D. (2011). Practice as the site of knowing: Insights from the field of telemedicine. ***Organization Science***, 22(3), 602-620.
- Huising, R. (2015). To hive or to hold? Producing professional authority through scut work. ***Administrative Science Quarterly***, 60(2), 263-299.
- Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. ***Organization Science***, *2*(1), 40-57.

Session 2

- Barley, S. R. (1986). Technology as an occasion for structuring: Evidence from observations of CT scanners and the social order of radiology departments. ***Administrative Science Quarterly***, 31(1): 78-108.
- Leonardi, P. M., & Barley, S. R. (2010). What's under construction here? Social action, materiality, and power in constructivist studies of technology and organizing. ***The Academy of Management Annals***, *4*(1), 1-51.
- Orlikowski, W. J. & Scott, S. V. (2014). What happens when evaluation goes online? Exploring apparatuses of valuation in the travel sector. ***Organization Science***, 25(3), 868-891.
- Sergeeva, A. V., Faraj, S., & Huysman, M. (2020). Losing touch: An embodiment perspective on coordination in robotic surgery. ***Organization Science***, *31*(5), 1248-1271.

Session 3

- van den Broek, E., Sergeeva, A., & Huysman, M. (2021). When the machine meets the expert: An ethnography of developing AI for hiring. ***MIS Quarterly,*** 45(3): 1557-1580.
- Karacic T., Sergeeva A., Huysman M. (2022). From menial workers to knowledge producers: an apparatus perspective on AI in Agriculture. Paper submitted to ***Academy of Management Meeting.***
- Stella Pachidi, Hans Berends, Samer Faraj and Marleen Huysman (2020). Make way for the algorithms: Symbolic actions and change in a regime of knowing. ***Organization Science***, 32(2), 18-41.
- Waardenburg, L., Huysman, M., & Sergeeva, A. V. (2022). In the land of the blind, the one-eyed man is king: Knowledge brokerage in the age of learning algorithms. ***Organization Science***, *33*(1), 59-82.

Session 4

- Arthur, W. B. (2009). ***The nature of technology: What it is and how it evolves***. New York: Free Press. (Chapter 2: Combination and structure)
- Garud, R., Tuertscher, P., & Van de Ven, A. H. (2013). Perspectives on innovation processes. ***Academy of Management Annals***, *7*(1): 775-819.
- Von Hippel, E., & Von Krogh, G. (2016). Crossroads—Identifying viable "need–solution pairs": Problem solving without problem formulation. ***Organization Science***, *27*(1): 207-221.
- Yoo, Y., Boland, R. J., Lyytinen, K., & Majchrzak, A. (2012). Organizing for innovation in the digitized world. ***Organization Science***, *23*(5): 1398–1408.

Session 5

- Borner, K., Berends, H., Deken, F., & Feldberg, F. (2023). Another pathway to complementarity: How users and intermediaries identify and create new combinations in innovation ecosystems. *Research Policy*, *52*(7), 104788.
- Gawer, A. (2014). Bridging differing perspectives on technological platforms: Toward an integrative framework. *Research Policy*, *43*(7): 1239-1249.
- Hilbolling, S., Berends, H., Deken, F., & Tuertscher, P. (2021). Sustaining complement quality for digital product platforms: A case study of the Philips Hue ecosystem. *Journal of Product Innovation Management*, *38*(1): 21-48.
- Hummel, J., Berends, H., & Tuertscher, P. (2023). From Boundary Objects to Boundary Infrastructure: A Process Study of Collaboration between Big Science and Big Business. Working Paper.

Session 6

- Bauer, J., Franke, N., & Tuertscher, P. (2016). Intellectual property norms in online communities: How user-organized intellectual property regulation supports innovation. *Information Systems Research*, *27*(4): 724-750.
- Deken, F., Berends, H., Gemser, G., & Lauche, K. (2018). Strategizing and the initiation of interorganizational collaboration through prospective resourcing. *Academy of Management Journal*, *61*(5), 1920-1950.
- Porter, A. J., Tuertscher, P., & Huysman, M. (2020). Saving our oceans: Scaling the impact of robust action through crowdsourcing. *Journal of Management Studies*, *57*(2), 246-286.
- Tuertscher, P., Garud, R., & Kumaraswamy, A. (2014). Justification and interlaced knowledge at ATLAS, CERN. *Organization Science*, *25*(6): 1579-1608.