

Mod.No.: MA-UFÜ 10(D)

Title: Advanced Topics in Technology and Innovation Management

Overview

Firms find themselves at the crossroads between digital innovation and transformation. New and emergent digital technologies, such as artificial intelligence, IoT, or blockchain offer new opportunities for the creation of new products, processes, and business models, and they reshape traditional ways of organizing and working. The fusion of digital technology within firms' environments produces ongoing changes in customer expectations, the competitive landscapes, and regulation. Windows of opportunities are created for new ventures and new ways of working. At the same time, the lowering of entry barriers and proliferation of new digital ventures that have the potential to disrupt existing industries, puts large established firms under significant competitive pressure to transform their legacy systems and reshape their business strategies and processes. But it is not only startups who innovate digitally and who leverage the new opportunities provided by digital technologies. Large and small incumbents across different industries and geographies are embracing digital innovation activities, embrace new ways of working, and transform their entire organization. Firms are moving from stand-alone organizations to open, collaborative ecosystems in which multi-firms' networks collaboratively innovate with partners, suppliers, customers, and even competitors.

This unit will explore advanced topics and emerging scientific knowledge about digital innovation, digital transformation, and digital entrepreneurship as modern forms of technology and innovation management. This knowledge is relevant to organizational leaders, directors, and other roles about managing technology-infused organizing.

Course Objectives and Learning outcomes

This unit pursues three aims:

1. to offer students who completed the basic module “Technology and Innovation Management” an opportunity to explore selected topics in much more detail.
2. to offer students an opportunity to meet, identify, explore, and critically discuss latest world-class research on digital innovation, digital transformation, and digital entrepreneurship.
3. to expand students’ scientific method and content competencies about digital innovation, digital transformation, and digital entrepreneurship, which they can utilize for their master theses and their future scientific or professional careers.

Students learn to...

- ... analyse current issues in specific topic areas of technology and innovation management
- ... describe and apply fundamental theories about digital innovation, digital transformation, and digital entrepreneurship
- ... acquaint themselves with the scholarship of world class research faculty in the areas of digital innovation, transformation, and entrepreneurship.
- ... learn some of the leading issues, theories and methodologies that characterize research in in the areas of digital innovation, transformation, and entrepreneurship.
- ... learn new oral and written competencies about how they approach, critique and construct research papers.

Schedule

The course will be held in the form of seven sessions slotted between 4 and 8pm, with teaching commencing 16:15 and finishing after 180 minutes. Breaks will be taken as needed. Each session will have a dedicated topic area. Additionally, seven practical sessions of 2h length (90 minutes plus breaks) will assist you in writing your own topical essay.

Date	Topic (Room)	Lecture session	Practical session, Group I	Practical session, Group II
Di, 22.04.25	Lecture Session 1 (ESA H)	16.15-19.15h		
29.04.25	Practical Session		10:15-11:45	12:15-13:45
06.5.25	Lecture Session 2 (ESA H)	16.15-19.15h		
13.5.25	Practical Session		10:15-11:45	12:15-13:45
20.5.25	Lecture Session 3 (ESA H)	16.15-19.15h		
03.6.25	Practical Session		10:15-11:45	12:15-13:45
03.6.25	Lecture Session 4 (ESA H)	16.15-19.15h		
17.6.25	Practical Session		10:15-11:45	12:15-13:45
17.6.25	Lecture Session 5 (ESA H)	16.15-19.15h		
17.6.25	Practical Session		10:15-11:45	12:15-13:45
24.6.25	Lecture Session 6 (ESA H)	16.15-19.15h		
24.6.25	Practical Session		10:15-11:45	12:15-13:45
01.7.25	Lecture Session 7 (ESA H)	16.15-19.15h		
01.7.25	Practical Session		10:15-11:45	12:15-13:45

Mode of Teaching

While this unit formally follows the traditional separation of "lecture" and "practicals", it does not actually have traditional lectures or practicals.

In the lecture sessions, instead of the lecturer presenting content, the content will be student-driven: In teams we will allocate at the start of the course, we will jointly discuss, assess, and critique latest research studies for each topic area. The guiding principle for each "lecture" session is to minimize the use of slides and maximize interaction and discussion.

Specifically, in each lecture session, we will discuss 3 selected studies on the topic area of the session (45-60min each). The studies will be made available in advance and be assigned to student teams. The student teams need to review, synthesize, present, and lead a discussion of these papers in class.

Student teams should deliver a presentation that does not only summarize the paper but also acts as a provocative "**conversation starter**". This means student teams need to integrate their assigned reading with their own experience and personal views on the topic and the research. The goal of each presentation should be to start a lively discussion. For example, students could raise ethical questions, take a particular side in an argument, disagree with some argument(s), or otherwise spark a debate.

In the practical sessions, instead of the tutor giving you exercises to complete, we will use the time to guide you in learning how to construct your own essays on research related to advanced topics in technology and innovation management. You will learn how to pick a topic, structure your analysis, work in a team, structure your essay, and write the different paper sections. This way, we help you construct your own essay over the course of this course.

Required Readings

Studying literature relevant to selected topics of technology and innovation management will be key in this course. Relevant papers and other reading materials will be announced and made available in due time.

Assessment

Grading in this course is on three main components:

1. **Student team presentations and discussions (30%):** This is a *group* assignment. In each of six topic sessions (except for the first session), the lecturer will grade each student team on their *presentation* and *moderation of a discussion*. Five grading criteria will be used:
 - a. **Correctness:** do you correctly portray the study, its procedures, and findings?
 - b. **Clarity:** how well do you communicate about the study and its findings?
 - c. **Critique:** What are your own critical views about the study and its findings? What implications do you see and what limitations do you identify?
 - d. **Discussion lead:** how effective are you in igniting and moderating a broader discussion with the class?
 - e. **Interaction:** how well are you delivering our presentation and discussion? How effective are your aids if any? How do you handle questions and feedback?

For each grading criterion we will use a simple scoring scheme from 0 (criterion not at all met) to 6 (criterion fully met), totaling a score from 0 to 30 points (5x6).

2. **Group written essay (60%):** This is a *group* assignment. In groups of 4-6 members, all students must prepare and hand in a concise essay paper after the lecture sessions have finished. We will circulate a detailed list of potential topics in the form of research questions to choose from. In the student papers, we expect student groups to (1) give a concise introduction into the topic and state why it is relevant, (2) describe the state-of-the-literature in this field, (3) develop a sound but concise line of arguments to answer the chosen research question and (4) give an outlook of potential further research to be done in the chosen area. Students are meant to learn how to structure their thoughts and to write as concise as possible. The essays should not be longer than 10 pages (single-line spacing, 11pt font size, references and appendices excluded from the page count). This will challenge students to really think through what they want to communicate. The submission will be due at the end of the semester, to provide students sufficient time to develop the paper. A grading rubric will be provided to help students understand how their essays will be graded.
3. **Classroom participation (10%):** This is an *individual* assignment. Because this course rests upon participation and interaction, we will grade student attendance and participation in each of six topic sessions (except for the first session). We will use an online tool for students to participate by raising questions, debating, answering, or commenting on the topic of the session. A total of 10 points can be achieved across five sessions (5x2).

About your lecturer

Jan Recker joined the University of Hamburg in 2021 as Nucleus Professor and holder of the chair for Information Systems and Digital Innovation, funded through the Excellence Strategy of the Federal and State Governments.

Previously, he was Professor for Information Systems and Systems Development at the University of Cologne from 2018-2021, Full Professor for Digital Innovation at the School of Management at the QUT Business School in Brisbane, Australia, from 2016-2017, and inaugural holder of the Woolworths Chair of Retail Innovation and Full Professor of Information Systems in the School for Information Systems at QUT in 2012. Since 2012, he is an Honorary Guest Professor at the International School of Software at Wuhan University, China. Jan Recker holds bachelor's and master's degrees in information systems from the University of Münster and a PhD in Information Systems from the Queensland University of Technology.

In his research, Jan Recker explores how organizations with the opportunities and challenges of digitalization and artificial intelligence. He has worked with companies such as Apple, SAP, Volkswagen, Deutsche Bahn, Lufthansa, Olympus, Cognigy.AI, Vytal, Woolworths, Clipchamp, Edeka, Bertelsmann, Ultimaker, Auticon, and others.

Jan is one of the [top 2% scientists](#) on the planet. In Germany, he was named #1 business researcher under 40 years of age by the German Magazine [Wirtschaftswoche](#) in 2019, and he is [the only researcher featuring in the top 100 rankings](#) for both business and computer science. He was the youngest academic ever to be named a Fellow of the Association for Information Systems in 2018. His studies have been published in leading information systems, management science, organization science, computer science, entrepreneurship, project management, and sociology journals. He has written popular textbooks on scientific research and data analysis, which are in use by over 500 institutions in over 60 countries.

His research is featured widely in media outlets, including [Süddeutsche Zeitung](#), [WDR](#), [Die Zeit](#), [Harvard Business Review](#), [MIT Sloan Management Review](#), and others.

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