

## **BWL-MA-UFÜ7(C)**

# **Selected Issues in Digital Innovation, Transformation, and Entrepreneurship - Twin Transformation: Digital and Sustainable Organizing**

## **Overview**

While most companies are still busy finding their place in an increasingly digitalized world, seeking ways to master their digital transformation journey, the pressure on companies to also and above all act sustainable is growing as well. In light of current social and environmental developments, which find their expression in events such as the energy crisis and supply chain problems, sustainable business practices become a necessity in order to secure a company's long-term competitiveness.

The term “twin transformation” coins this new challenge for firms to operate simultaneously in a digital and in a sustainable world. Up to this point, either issue has been tackled in isolation, if at all. Now companies must meet both challenges at once. Digitalization and sustainability goals may seem contradictory at first glance, but the combination of goals, the twin transformation, contains unimaginable potential.

This seminar will explore the potentials and challenges of the joint digital and sustainable – twin – transformation. Together, we will examine a variety of foundational as well as technology-specific topics related to the digital and sustainable transformation of organizations – such as how do companies organize for digital and sustainable transformation? How can digital technologies support a company's sustainability transformation? Which roles, processes and structures does it take to successfully master the twin transformation?

## **Contents**

Students can select a topic of their choice from a list of available questions and explore a question related to the twin transformation of firms of their own choosing.

Our seminar will include:

- An introduction to the foundations, essential aspects and specific cases of the twin transformation challenges for firms.
- Refresher workshops on how to design and write a seminar paper:
  - How to do a literature review
  - How to design, structure and write a scientific paper
- Presentations of the student seminar papers
- Presentations and critical discussions of seminal scientific articles on digital technologies for sustainable transformation

## **Exemplary Seminar Topics**

Topic 1	The digital Transformation of firms
	<p>E.g.,</p> <p>Sebastian, I. M., Ross, J. W., Beath, C. M., Mocker, M., Moloney, K. G., &amp; Fonstad, N. O. (2017). How Big Old Companies Navigate Digital Transformation. <i>MIS Quarterly Executive</i>, 16(3), 197-213.</p> <p>Wessel, L., Baiyere, A., Ologeanu-Taddei, R., Cha, J., &amp; Blegind-Jensen, T. (2021). Unpacking the Difference between Digital Transformation and IT-enabled Organizational Transformation. <i>Journal of the Association for Information Systems</i>, 22(1), 102-129. <a href="https://doi.org/10.17705/1jais.00655">https://doi.org/10.17705/1jais.00655</a></p>
Topic 2	Sustainability Transformation of Firms
	<p>E.g.,</p> <p>Sharma, S. (2000). Managerial Interpretations and Organizational Context as Predictors of Corporate Choice of Environmental Strategy. <i>Academy of Management Journal</i>, 43(4), 681-697.</p> <p>Thomas, M., &amp; McElroy, M. W. (2015). A Better Scorecard for Your Company's Sustainability Efforts. <i>Harvard Business Review</i>(December).</p> <p>Ramus, C. A., &amp; Steger, U. (2000). The Roles of Supervisory Support Behaviors and Environmental Policy in Employee "Ecoinitiatives" at Leading-Edge European Companies. <i>Academy of Management Journal</i>, 43(4), 605-626.</p>
Topic 3	The advantages of digital technologies to support the sustainability transformation of firms
	<p>E.g.,</p> <p>Sebastian, I. M., Ross, J. W., Beath, C. M., Mocker, M., Moloney, K. G., &amp; Fonstad, N. O. (2017). How Big Old Companies Navigate Digital Transformation. <i>MIS Quarterly Executive</i>, 16(3), 197-213.</p> <p>Wessel, L., Baiyere, A., Ologeanu-Taddei, R., Cha, J., &amp; Blegind-Jensen, T. (2021). Unpacking the Difference between Digital Transformation and IT-enabled Organizational Transformation. <i>Journal of the Association for Information Systems</i>, 22(1), 102-129. <a href="https://doi.org/10.17705/1jais.00655">https://doi.org/10.17705/1jais.00655</a></p> <p>○</p>
Topic 4	The disadvantages of digital technologies to support the sustainability transformation of firms
	<p>E.g.,</p> <p>Bieser, J. C. T., Hintermann, R., Hilty, L. M., &amp; Beucker, S. (2023). A Review of Assessments of the Greenhouse Gas Footprint and Abatement Potential of Information and Communication Technology. <i>Environmental Impact Assessment Review</i>, 99(March), 107033. <a href="https://doi.org/10.1016/j.eiar.2022.107033">https://doi.org/10.1016/j.eiar.2022.107033</a></p> <p>Belkhir, L., &amp; Elmeligi, A. (2018). Assessing ICT Global Emissions Footprint: Trends to 2040 &amp; Recommendations. <i>Journal of Cleaner Production</i>, 177, 448-463. <a href="https://doi.org/10.1016/j.jclepro.2017.12.239">https://doi.org/10.1016/j.jclepro.2017.12.239</a></p>
Topic 5	The role of digital technologies in establishing a circular economy

	<p>E.g.,  Berg, H., &amp; Wilts, H. (2019). Digital Platforms as Market Places for the Circular Economy—Requirements and Challenges. <i>Sustainability Management Forum</i>, 27(1), 1-9.</p> <p>Ixmeier, A., Kranz, J., Recker, J., &amp; Zeiss, R. (2023). How to Unlock the Potential of Information Systems for a Circular Economy. In V. Cooper, J. Kranz, R. T. Watson, &amp; S. Matthew (Eds.), <i>Research Handbook on Information Systems and the Environment</i> (pp. 74-99). Edward Elgar Publishing.</p>
Topic 6	The role of digital technologies in building smart cities
	<p>E.g.,  Fridgen, G., Häfner, L., König, C., &amp; Sachs, T. (2016). Providing Utility to Utilities: The Value of Information Systems Enabled Flexibility in Electricity Consumption. <i>Journal of the Association for Information Systems</i>, 17(8), 537-563. <a href="https://doi.org/10.17705/1jais.00434">https://doi.org/10.17705/1jais.00434</a></p> <p>Xu, L., Du, W., Pan, S. L., Send, H., &amp; Grosse, M. (2024). Information Systems-enabled Sustainability Transformation: A Study of an Energy Self-Sufficient Village in Germany. <i>Information Systems Journal</i>, forthcoming. <a href="https://doi.org/10.1111/isj.12489">https://doi.org/10.1111/isj.12489</a></p>
Topic 7	The role of digital technologies for sustainable consumption
	<p>E.g.,  Tiefenbeck, V., Goette, L., Degen, K., Tasic, V., Fleisch, E., Lalive, R., &amp; Staake, T. (2018). Overcoming Saliency Bias: How Real-Time Feedback Fosters Resource Conservation. <i>Management Science</i>, 64(3), 1458-1476.</p> <p>Degirmenci, K., &amp; Recker, J. (2023). Breaking Bad Habits: A Field Experiment About How Routinized Work Practices Can Be Made More Eco-efficient Through IS for Sensemaking. <i>Information &amp; Management</i>, 60(4), 103778. <a href="https://doi.org/10.1016/j.im.2023.103778">https://doi.org/10.1016/j.im.2023.103778</a></p>

## Tasks

Students will be assigned to one of the topic areas above and will be asked to:

1. Deal with the corresponding research areas and prepare a presentation introducing their topic.
2. Write an essay about a selected aspect within their topic area but going beyond the introduction associated with that topic. Students can choose to
  - a. explore additional relevant scientific literature on the topic and synthesize that literature to present a comprehensive, balanced, and informed consideration of the topic, or
  - b. find a specific use case referring to their topic and describing and explaining the way in which issues concerning the twin transformation are managed in real-life business practice.

3. Give a short presentation summarizing their essays.

## Learning outcomes

### Students learn to...

- find and select relevant literature on a given problem or question independently.
- apply discipline and technical knowledge and skills to analyze and evaluate technological influences on a range of managerial questions about innovation, transformation, and entrepreneurship, in particular the challenge of managing both the digital and sustainability transformation challenge for firms.
- acquaint themselves with the scholarship of world class research faculty in the areas of digital innovation, transformation, and entrepreneurship, in particular the digital and sustainability transformation of firms.
- understanding some of the leading issues, theories, and methodologies that characterize research in in the areas of digital innovation, transformation, and entrepreneurship, in particular the digital and sustainability transformation of firms.
- apply discipline and technical knowledge to analyze and evaluate scientific processes and outcomes.
- develop written communication skills to structure, explain and defend scientific thinking.
- develop presentation skills to present and discuss research processes and outcomes.

## Schedule

1. Kick-Off: Introduction and topic assignment (**3 hours + break**): **10.04., 10:00**
2. Refresher workshops on how to design and write a seminar paper (**2 days / 2 hours**): **17.04. & 24.04., 10:00**
3. Topic presentations based on given research papers and discussion (**2 days/ 3.5 hours + break**): **08.05. & 15.05., 10:00**
4. Paper development workshop (**1 day/ 7 hours + break**) **15.06., 09:00**

## Relevant Readings

- George, G., Merrill, R. K., & Schillebeeckx, S. J. D. (2021). Digital Sustainability and Entrepreneurship: How Digital Innovations Are Helping Tackle Climate Change and Sustainable Development. *Entrepreneurship Theory and Practice*, 45(5), 999-1027. <https://doi.org/10.1177/1042258719899425>
- Seidel, S., Recker, J., & vom Brocke, J. (2023). Digital Technology Affordances for Sustainable Business Practices. In V. Cooper, J. Kranz, R. T. Watson, & S. Matthew (Eds.), *Research Handbook on Information Systems and the Environment* (pp. 149-164). Edward Elgar Publishing.

- Boh, W., Constantinides, P., Padmanabhan, B., & Viswanathan, S. (2023). Building Digital Resilience Against Major Shocks. *MIS Quarterly*, 47(1), 343-360.
- Zeiss, R., Ixmeier, A., Recker, J., & Kranz, J. (2021). Mobilising Information Systems Scholarship For a Circular Economy: Review, Synthesis, and Directions For Future Research. *Information Systems Journal*, 31(1), 148-183.  
<https://doi.org/10.1111/isj.12305>
- Bockelmann, T., & Recker, J. (2022). How One Company Used Data to Create Sustainable Take-out Food Packaging. *Harvard Business Review*(November).  
<https://hbr.org/2022/11/how-one-company-used-data-to-create-sustainable-fast-food-packaging>

Further readings will be announced in due time.

## **Assessment**

Grading in this course is on three main components. Grading rubrics will be used and made accessible to the students in advance. In order to pass the seminar, all three partial examinations must be passed.

1. Presentation of Seminal Scientific Paper (20% of final grade)
2. Submission of Seminar Essay (60% of final grade)
3. Presentation of lessons learned from paper development workshop (20% of final grade).

## Teaching Team

**Imke Grashoff** completed her master's degree in the field of Social Economics and is working as a research assistant at the Chair for Information Systems and Digital Innovation. With a strong interest in topics involving the influence of digital technologies on organizations, collaboration and (the future of) work in general, she is currently pursuing her doctoral studies dealing with ethical issues in the context of AI design, development and deployment.

**Jan Recker** is Alexander-von-Humboldt Fellow, Nucleus Professor for Information Systems and Digital Innovation at the University of Hamburg, and Adjunct Professor at the QUT Business School, Australia.

In his research he explores the intersection of technology, people and work. He works with particularly large organizations, such as Woolworths, SAP, Hilti, Commonwealth Bank, Lufthansa, Ubisoft, Esri, federal and state governments, and with particularly small organizations ("start-ups") in the consumer goods, hardware, and financial sectors. He tackles questions in the areas of

- systems analysis and design practices in the digital age
- digital entrepreneurship
- digital innovation and transformation in large organizations
- digitalization of products, services, and processes
- digital solutions for a sustainable future

Jan's research in these areas draws on quantitative, qualitative, and computational methods. He has also written popular textbooks on scientific research and data analysis, which are in use in over 500 institutions in over 60 countries. He was Editor-in-Chief of the Communications of the Association for Information Systems from 2015-2020. He is Senior Editor for the MIS Quarterly. In 2019, he was named #1 business researcher under 40 years of age by the German Magazine Wirtschaftswoche. He was the youngest academic ever to be named an AIS fellow in 2018. In 2019, he received an "Outstanding Associate Editor Award" from MIS Quarterly. He publishes a podcast called "this IS research".

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