Digital Transformation and Innovation

Series Editors

Thomas Thiessen, Berlin, Germany

Kristina Bodrožić-Brnić, Potsdam, Germany

Volker Schulte, Berlin, Germany

This book series is an in-depth exploration of the multifaceted nature of modern business and societal transformations driven by digital technologies. It delves into the complex interactions among technological advancements, process innovations, infrastructural requirements, and the evolving roles and skills of participants in the digital marketplace. It is a pioneering series that integrates the 'soft factors' of digitization with technological advancements in the context of structured change management. The series emphasizes the human aspect at the center of digitalization and innovation, highlighting the roles of change management, leadership, innovation, and communication as key factors for successful corporate innovation management. Covering all socially relevant fields and sectors, this series serves as a comprehensive guide for effective digitization and innovation processes.

Key Focus Areas

Technological and Process Innovations: The series examines how cutting-edge technological innovations and evolving processes are reshaping industries and organizations. It provides insights into the integration of new technologies in various business processes and how these adaptations are driving efficiency, productivity, and growth.

Infrastructural Prerequisites: A critical examination of the infrastructure needed to support the digital transformation is also a focus. This includes an exploration of both the physical (like hardware and network capabilities) and the intangible (such as digital literacy and policy frameworks) infrastructures that underpin successful digital transitions.

Media and Communication Skills: Understanding the transformation in media and the requisite communication skills in the digital age is vital. The series delves into how digital media has altered communication channels and strategies, impacting everything from customer engagement to internal corporate communications.

Business Innovation: Central to the proposed series is our focus on business innovation. This encompasses a study of how traditional business models are being reinvented through digital means, leading to new market opportunities, and competitive advantages.

Networked Management: The book series explores the concept of networked management, highlighting how digital networks facilitate new forms of collaboration, decision-making, and organizational structures. It addresses the challenges and opportunities of managing in an interconnected world where boundaries between industries, markets, and geographies are increasingly blurred.

Digital Transformation of the Media: A closer look at how the media industry is evolving in response to digital technologies. This includes changes in content creation, distribution, consumption, and monetization models, as well as the implications for privacy, ethics, and regulation.

Customer Behavior in the Digital Age: The series provides an analysis of how digital technologies have transformed customer behaviors, expectations, and engagement patterns. It offers insights into creating customer-centric strategies and experiences in a digitally-driven marketplace.

Kristina Bodrožić-Brnić • Volker Schulte
Thomas Thiessen

Editors

Digital Transformation in Knowledge Transfer

Shaping the Future

Springer

Editors
Kristina Bodrožić-Brnić
Programm Management Creative AI
Mittelstand-Digital Zentrum Zukunftskultur
Potsdam, Germany

Volker Schulte
Professor of Leadership
Human Resources and Health Management
Fachhochschule Nordwestschweiz
Wallbach, Switzerland

Thomas Thiessen
Head of Institute for Digital Transformation
Innovation of BSP Business and Law
School Berlin
Berlin, Germany

If disposing of this product, please recycle the paper.

Preface

In times of digital change, we face plenty of new opportunities but also very specific challenges: What skills do we need to use tools based on Artificial Intelligence (AI) responsibly? How do working and learning models adapt when immersive technologies such as virtual and augmented reality find their way into everyday life? There is often a lack of guidance—be it when it comes to selecting suitable software solutions, finding suitable training programmes for users, or trying to answer fundamental questions about data and privacy protection. There is also a palpable concern about losing our influence on results through AI automation and complex algorithms or about neglecting the human factor at all. Added to this is the need to share knowledge across generations and remain competent in the long term due to the rapid pace of technological change.

This second book of our series *Digital Transformation and Innovation* takes you on a journey that focuses on precisely these issues. Practical case studies and scientific analyses show how digital tools and applications can be helpful without neglecting human guidance and creativity in both business and education. It is crucial to design learning and working environments in a way that everyone—from junior staff to managers—can handle the new technologies with confidence and at the same time promote their own initiative and know-how.

All of us—companies, universities, research organisations, and individuals—are part of a very dynamic process with a relatively open outcome. *Digital Transformation in Knowledge Transfer: Shaping the Future* offers suggestions, tried-and-tested concepts, and encouraging examples and also invites a critical debate. We would like to encourage you to enter new pathways of thought and action in which AI, extended reality, and other cutting-edge technologies could become valuable allies. At the same time, we hope that you will find your own ways to pass on what you've learned through your own interactions with such digital tools and further utilise them beneficially and responsibly.

We look forward to accompanying you on this journey and invite you to join us in exploring the opportunities and challenges of the digital age in the field of

knowledge management and learning processes. May this publication give you new impetus to shape digital change in a human-centred way—step by step and always in the spirit of a society learning and developing sustainably.

The Editors

Potsdam, Germany   Kristina Bodrožić-Brnić
Wallbach, Switzerland   Volker Schulte
Berlin, Germany   Thomas Thiessen

Digital Transformation in Knowledge Transfer: Shaping the Future

Digital Transformation in Knowledge Transfer: Shaping the Future is the second volume in the "Digital Transformation & Innovation" series. Led by the Institute for Digital Transformation and Innovation (IDTI) at BSP Business and Law School in Germany, this collaborative effort offers an innovative approach to knowledge transfer and prepares readers for emerging shifts in business and education. Because knowledge transfer is fundamental to humanity—shaping cultures and driving social and structural developments—this vital topic was chosen to continue the conversation from the first volume, *Leadership for Digital Transformation: Navigating the Journey*.

As in the first book, the editorial team for this publication consists of Thomas Thiessen, head of the Institute for Digital Transformation and Innovation; Kristina Bodrožić-Brnić, who leads transfer projects related to Artificial Intelligence (AI) at the IDTI; and Volker Schulte, a scholar, author, and management coach affiliated with the School of Business at the University of Applied Sciences Northwestern Switzerland. All three have extensive experience in education and business management. Thomas Thiessen is a communication and media scientist who served as rector of BSP Business and Law School from 2010 to 2023, playing a pivotal role in establishing and expanding the university from its inception. Kristina Bodrožić-Brnić is an experienced lecturer, AI trainer, and entrepreneur specialising in digital transformation. She is actively involved in research and training, helping organisations and educational institutions navigate the challenges and opportunities of AI-driven innovation. Lastly, Volker Schulte is a leadership coach with a rich academic background, who works in higher education and organisational development.

The editorial team has crafted an interdisciplinary approach that blends theoretical depth with practical applications by integrating knowledge from the education sector and business perspectives. This publication is structured into two main sections: Part I, "Evolving Knowledge Transfer in Businesses", and Part II, "The Future of Learning".

Part I focuses on the application of digital tools in business. It begins with the chapter "Selected or Rejected by Bots? Musings on AI Literacy in Human Resource Management, Upskilling of HR Experts, and a Call for Applied Research" by

Lothar Bildat and Tim Brouns. The authors provide an up-to-date review of AI's role in human resource management, particularly in recruiting, personnel selection, and training. They emphasise the urgent need for AI literacy and digital skills training among HR professionals to ensure the responsible and effective use of AI tools.

The book continues with a practical case study, building on systematic applied research. In "Case Study: Digital Transformation of IT-Supported Knowledge Transfer at Fast-Growing SME", Adrian Thiessen and Michael Müller examine a real-world business scenario that can be used as a model to other digital transformation experiences. Their contribution highlights the importance of achieving early successes and managing expectations realistically to sustain engagement in digital transformation initiatives. They offer practical guidance on how SMEs can develop a proactive knowledge management culture, fostering continuous learning and competitiveness.

The third chapter, "Integrating Competence Development and Knowledge Management on the Strategic and Operational Level: A Holistic Approach Towards the New Learning Organisation", is authored by a research team from the Fraunhofer Institute for Production Systems and Design Technology (IPK), Berlin, namely Katrin Singer-Coudoux, Maria Kretschmer, Markus Will, Ronald Orth, and Henry Nicolai Buxmann. This study presents an example of a "New Learning Organisation" aiming to integrate key elements necessary for organisations to adapt effectively to digital transformation. Based on the findings of the Fraunhofer IPK's Digital Transformation Assessment (DTA) study (2020–2022), the study revealed significant gaps, with 66% of companies reporting weak or only moderate performance in digital transformation. The chapter provides practical insights into how organisations can transition into resilient, future-ready learning environments by integrating competence development with knowledge management.

The following chapter in the first part of our volume, written by Anne-Liese Lammich (a member of the IDTI), brings a better understanding of how virtual and augmented reality can foster more sustainable strategies for industries. Under the title "Immersive Technologies and New Work: New, Collaborative Working Environments Based on the XR Demonstrator *Build Green—Data & Practice*", the text introduces the demonstrator *Build Green*, which serves as a case study showcasing the integration of digital and immersive technologies in the construction sector. The project draws on the *Kreativ Quartier Potsdam*, a large-scale construction initiative in Potsdam, Germany, scheduled for completion in 2026. The author discusses the potential of digital tools to improve efficiency, sustainability, and real-time knowledge transfer in complex projects.

The subsequent chapter also examines the use of immersive digital tools in large industries. "Virtual Reality Tool to Improve Ship Mooring Winch Inspection Training" proposes creating a virtual reality application to train maintenance teams in the shipping and logistics sector. The authors, Adrielle de Carvalho Santana, Davi Silva, Saul Emanuel Delabrida Silva, and Wagner Aparecido de Oliveira, analyse ship mooring operations to research how virtual and augmented reality can enhance training. Their study shows how these technologies allow teams to engage with equipment functionalities and information in a simulated, risk-free environment.

This approach ensures that operators gain hands-on experience with procedures and fault diagnosis through interactive problem-solving simulations in a virtual setting.

The last three chapters in this section are based on empirical research and surveys. In "Learning in Loops: Designing Knowledge Management in SMEs and Its Impact on Digital Transformation", Ninette Florschütz combines empirical observation, interdisciplinary literature review, and a qualitative survey to map out how knowledge management is structured in practice. Her study examines the timely and iterative provision of information and considers the role of fears and uncertainties as obstacles to organisational learning. She unfolds questions about the design of knowledge management systems and their impact on an organisation's capacity to learn and adapt.

In turn, Heidi Vähänikkilä, in her chapter, also took advantage of an extensive survey to reveal how digitalisation has opened up new possibilities for co-creation and digital knowledge transfer in the hospitality sector in a post-pandemic business environment. In "Digitalisation Enhancing Ecosystem Thinking and Business Model Innovation Through Co-Creation", the author collected the results of almost 200 survey participants and undertook around 20 individual interviews, and through the results from her analysis Vähänikkilä delineated a path to create a business platform tailored for organisations dealing with Business Model Innovation.

The first section of the book ends with the chapter "Integrating Artificial Intelligence in Innovation Processes: A Systematic Approach for Enhanced Competitive Advantage", authored by IDTI member Andreas Braun and BSP's researcher Patrick Montenegro Costa. It presents a comprehensive framework for incorporating Artificial Intelligence into structured innovation processes, with a particular focus on Open Innovation and New Product Development. Their research offers a data-driven perspective on AI's role in innovation, grounded in a systematic literature review and an extensive secondary analysis of around 200 AI models and techniques. It then highlights AI's growing presence across all stages of innovation, from idea generation to post-launch analysis, from acting as a creative originator to serving as a facilitator.

The second part of this book shifts its debate to digital strategy for knowledge in education—a highly sensitive topic that the editorial team approached with great care and a commitment to responsible discussion. Opening this section, editor Kristina Bodrožić-Brnić addresses a particularly controversial issue: the role of Artificial Intelligence in higher and further education. In her chapter, "Evaluating AI Readiness Among Higher and Further Education Lecturers: A Mixed-Methods Approach", she focuses on the teaching staff and assesses educators' current state of AI competency. Her analysis is supported by a combination of surveys and interviews with lecturers from different disciplines, offering valuable insights into how AI is perceived and integrated into academic environments.

Narrowing down the discussion started by Kristina Bodrožić-Brnić, BSP Business and Law School professors Susan Hinterding and Sünje Lorenzen present a case study from BSP Campus Hamburg, underlining that the opportunities and challenges of using AI in education are central to comprehend the future of knowledge transfer. Their chapter "Knowledge Transfer in Transition: Do We Need a New

Debate on the Concept of Knowledge in Teaching and Continuing Education in the Age of AI and ChatGPT?" revolves around how knowledge is generated, conveyed, and acquired within AI-supported tools like ChatGPT. They imply that the concept of knowledge may be redefined.

Adding the students' perspective to this theme, Johanna Hodde wrote "Science in the Darkroom? The Use of ChatGPT in the Mirror of the Platonic Allegory of the Cave and the Fairy Tale of Rumpelstiltskin", which reflects on the implications of using ChatGPT in academic contexts through a philosophical and metaphorical lens. Drawing on Plato's allegory of the cave and the fairy tale of Rumpelstiltskin, the chapter advocates for the transparent and reflective use of AI in learning. It considers how students can benefit from tools such as ChatGPT when its use is openly discussed, and its limitations are clearly understood.

Continuing the critical dialogue on ChatGPT—OpenAI's most popular chatbot—and its role in education, Jennifer Fritz's contribution, "Improved Learner Motivation with ChatGPT-Based Learning Games", reframes the agenda to measure the practical and motivational potential of generative AI. Fritz delves into how AI—when intentionally configured—can foster engagement and support autonomous learning. Her experimental study presents a gamified language-learning buddy powered by ChatGPT, which leverages point systems, motivational feedback, and customisable rewards to sustain learner motivation. The study contemplates how prompt design transforms ChatGPT into an effective, playful conversation partner.

Still on using digital tools in the academic context, this time centred on the general structure of university teaching, this section of the book presents the research conducted by IDTI members Markus Langenfurth and Rainer Zeichhardt. In "Three Learning Spaces Model—A Hybrid Approach to Redesigning the Transfer of Knowledge in Universities", the authors shed light on how knowledge transfer in higher education can be enhanced through a hybrid teaching approach. Their findings emerged from the transformations in teaching practices brought about by the rapid digitalisation during the COVID-19 pandemic. They introduce the three learning spaces model, which builds on traditional face-to-face and self-study formats by adding a "digital space" that supports guided self-learning and blended learning under the lecturer's supervision. The model emphasises the lecturer's role as a transformative leader who cultivates a learning culture centred on reflection, critical thinking, and self-organisation. The authors argue that embracing technology also requires a shift in mindset and active student participation.

Addressing another key aspect of digitalisation in education, Stefania Fachina, Caroindes Julia Corrêa Gomes, Evelyn Araripe, and Vânia Gomes Zuin Zeidler direct attention to the challenges and potentials of digital literacy through YouTube video platform and social media. In their chapter "Digital Literacies: Reflections on its Challenges and Potentials Through YouTube", they draw on the concepts of cultural industry and *Halbbildung* to frame their analysis. The authors reflect on how educators have used YouTube to share knowledge and foster learning in virtual environments. However, they also stress worrying issues such as the dominance of

consumerist content, primarily aimed at children, which blurs the lines between education and entertainment.

The chapter that follows aims at strengthening collaboration between higher education and the business sector. Written by Miia-Maija Vakkuri from Laurea University of Applied Sciences, Finland (Laurea UAS), *"A Contemporary Business Model for Integrating Company Needs Through Education-Company Collaboration"* presents the Right Away Ready Deal, a project developed at Laurea UAS. It features a platform-based approach within a virtual learning environment. The chapter conveys meaningful information on how platform design can support sustainable cooperation between students and companies and bridge the managerial skills gap between academia and the business world.

To complete this section, the last chapter looks at the importance of building a robust IT infrastructure to support a digital ecosystem capable of meeting the evolving needs of learners. The chapter "Towards a Software Platform supporting Qualification-Based Learning" by Simon Wetzel and Matthias Hemmje introduces the Qualifications-Based Learning (QBL) framework and its underlying model, the Qualifications-Based Learning Model (QBLM), which proposes a service-oriented architecture to manage educational content and learner qualifications. The authors propose the establishment of the QBLM Platform, a modular and extensible software solution to overcome limitations in the scalability and adaptability of earlier implementations.

While acknowledging that new media and digital tools have profoundly reshaped how we learn and acquire information, the editors remain aware that the traditional book format brings together the expertise of authors and a thoughtful editorial review of written content. The act of reading continues to play a fundamental role in knowledge transfer—being accessible, enduring, and among the most reliable means for learning. With this understanding, the editorial team has carefully curated and assembled a collection of contributions embodying innovation and continuity. This work resulted in *Digital Transformation in Knowledge Transfer: Shaping the Future,* aimed at readers eager to understand transformation and engage critically with its implications. We wish you an insightful reading experience!

Project and Publication Management   Caroline Menezes
BSP Business and Law School
Berlin, Germany

Contents

The Future of Learning

About the Editors

Kristina Bodrožić-Brnić is an AI trainer, researcher, and university lecturer specialising in the convergence of creativity and Artificial Intelligence, focusing on how AI can nurture creative processes and expand human potential in SMEs while boosting technology acceptance and catalysing interdisciplinary co-creation. As the managing director of WorldTribe and through her collaborations with BSP Business and Law School and the Mittelstand-Digital Zentrum Zukunftskultur, she plays a pivotal role in advancing digital transformation and fostering innovation across diverse sectors.

Volker Schulte is a leadership coach and a resilience trainer. He studied law, history, social sciences, and education at the Universities of Tübingen, Bochum, and Göttingen in Germany, as well as in New York under a Fulbright Scholarship. He also holds a doctorate in Political Science and serves as Professor for Health Management, Human Resources Management, and Leadership at the Swiss University of Applied Sciences. Schulte served several years as Vice Director of Health Promotion Switzerland and as a lecturer at various universities.

Thomas Thiessen is Chair of the Scientific Advisory Board at BSP Business and Law School, Head of the Institute for Digital Transformation and Innovation, and a member of the university's Senate. He further heads the consortium of the Mittelstand-Digital Zentrum Zukunftskultur, funded by the German Federal Ministry for Economic Affairs and Energy, supporting small and medium-sized enterprises in navigating digital transformation. Thiessen holds a professorship of Communication and Media Management and served from 2010 to 2023 as rector of BSP, playing a pivotal role in the university's establishment and development.