

ENGAGE.EU Certificate
Joint Programme in Digital Transformation
Digital Strategy

Organizational Transformation through AI

Course Syllabus | Academic Year 2027

Lecturer: Stefan Kluge | University of Mannheim

14-15 May 2027 & 21-22 May 2027

Course Abstract

How should organizations adapt their strategy and ways of working as artificial intelligence becomes capable of supporting decisions and taking actions? This course examines digital transformation through the opportunities and challenges of AI, with particular attention to AI agents, business processes, and the organization of human–AI work.

Starting from contemporary industry developments and business cases, students investigate where AI can create value, what limits successful implementation, and which organizational changes are required. Selected academic concepts in digital strategy, organizational capabilities, and human–AI collaboration help explain these observations and assess their wider relevance. Throughout the course, students distinguish temporary technological developments from more durable strategic principles. By tracing how AI developments have challenged earlier predictions and shifted organizational bottlenecks, students learn to identify and reassess strategic principles as the technology continues to evolve.

Discussions and practical workshops connect strategic analysis with experience in designing, testing, and improving AI-enabled workflows.

Learning Objectives

Upon completion of this course, students should be able to:

- Analyze how developments in AI affect value creation, business processes, and competitive advantage.
- Critically assess industry claims and distinguish changing technical capabilities from enduring organizational constraints.
- Identify valuable opportunities for process redesign and justify an appropriate division of work between people, automation, and AI agents.
- Explain how data, context, tools, human oversight, and organizational capabilities shape the performance of AI-enabled systems.
- Design and evaluate a simple AI-enabled workflow, including its limitations, risks, and control requirements.
- Formulate and communicate a credible roadmap from experimentation to organizational implementation and scaling.

Evaluation and Grading

The course combines interactive lectures, case discussions, team exercises, and guided workshops. Students work from business problems to possible solutions, then test and revise their assumptions. Industry examples provide the starting point; selected research supports critical interpretation and generalization. Workshops use accessible workflow tools, with guidance for students from both business and technical backgrounds.

Participants' grades will be composed of:

- 40% Team project and presentation
- 40% Individual strategy memo
- 20% Active participation in discussions and workshops

Team Transformation Project (40%)

Teams develop a proposal for a realistic organization. They identify a consequential business process, diagnose its constraints, and propose an appropriate human–AI workflow. A simple prototype and its evaluation support the proposal. The presentation should explain the expected value, required capabilities, governance arrangements, and implementation priorities.

Evaluation considers the quality of the diagnosis, evidence and strategic reasoning, fit of the proposed design, critical assessment of limitations, and clarity of communication.

Individual Strategy Memo (40%)

Students individually analyze an organizational problem and recommend an AI transformation strategy. The memo should apply course concepts, weigh alternatives, and justify choices about process design, autonomy, organizational change, and implementation. Assessment emphasizes independent judgment, sound argumentation, and practical feasibility.

Active Participation (20%)

Assessment considers preparation, constructive contributions to case discussions, collaboration in workshops, and thoughtful feedback on other teams' work. Detailed assignment requirements, assessment criteria, and submission deadlines will be provided at the beginning of the course.

Sessions

The following outline sets out the main themes across four course days. Specific cases, technologies, exercises, and the allocation of topics may be adjusted while retaining the learning objectives.

FIRST SESSION: Digital Strategy in a Changing AI Landscape

Unit 1: From digital transformation to AI-enabled organizations

- Developments in generative and agentic AI; implications for value creation, business models, and the organization of work.

Unit 2: Reasoning strategically under rapid technological change

- Comparing industry developments and predictions; identifying shifting bottlenecks; distinguishing temporary capabilities from durable constraints.

Case discussion: Critically assess an AI development and its strategic implications.

SECOND SESSION: From Business Problems to AI-Enabled Workflows

Unit 3: Identifying value and redesigning work

- Business objectives, workflow analysis, and constraints; automation and augmentation; build, buy, and integration choices.

Unit 4: Designing human–AI collaboration

- Appropriate levels of autonomy; information and tool requirements; decision rights, human oversight, and organizational readiness.

Workshop I: Design and build a simple workflow addressing a business problem.

THIRD SESSION: From Prototype to Reliable Implementation

Unit 5: Understanding the wider AI system

- How models, context, data, memory, tools, and people work together; integration challenges and operational ownership.

Unit 6: Evaluation, governance, and control

- Assessing task performance, errors, human effort, and costs; permissions, monitoring, escalation, and responsible use.

Workshop II: Test failure scenarios, diagnose limitations, and improve the workflow.

FOURTH SESSION: Organizational Transformation and Strategy

Unit 7: Capabilities, organizational change, and competitive advantage

- Changing roles, skills, incentives, and coordination; organizational learning; sources of advantage when AI technologies are widely accessible.

Unit 8: Developing an AI transformation roadmap

- Prioritization, economics, and implementation sequencing; moving from pilots to wider adoption; aligning strategy, people, technology, and governance.

Team presentations, peer feedback, and integration of the course's main insights.

About the Lecturer

Stefan Kluge holds a master's degree in computer science and a Ph.D. in business administration. He has supported research projects at universities across the United States and Europe since 2008 as a data engineer, building data pipelines and processing large-scale datasets for empirical research.

He joined the Chair of Quantitative Marketing & Consumer Analytics at the University of Mannheim in 2020. His research focuses on the analysis of large-scale longitudinal datasets using generative AI and machine learning, as well as advanced time-series analysis methods. He is currently a postdoctoral researcher, working at the intersection of quantitative marketing and computational social science.

Outside his research, Stefan is passionate about ocean sailing.