

Module 10 “Innovation Methods”

Supervisor	Prof. Dr. Cornelius Herstatt
Inputs	Prof. Dr. Hans Koller (HSU, Germany), Dr. Iris Lorscheid (TUHH, Germany), Viktoria Drabe (TUHH, Germany) Prof. Dr. Tugrul Daim (Portland State Univ., USA) Prof. Dr. Michael Rosemann (QUT, Australia)
Learning path	Workload: 6 ECTS / 180 hours Attendance: 80 hours (10 dates) in 15 weeks
Recommended semester	1st + 2nd semester
Exam / grading	Presentation; graded

Contents

The focus is on tools and processes of modern technology and innovation management such as stage gate processes, technology roadmaps, foresight tools, large data analysis or simulation. At the same time, current trends such as the “Circular Economy,” “Big Data” and “Digitization” will be discussed.

Current Challenges and Trends in Technology Management

These inputs address current issues that are relevant in the context of changing workplaces and increasingly digitized forms of work:

- Disruptive Innovation and Disruptive Opportunities for Frugal Innovation
- Technology foresight – Challenges and solutions
- Circular Economy, Cradle2Cradle Innovation (C2C) and Business Model Innovation Opportunities
- Complexity management with large data analysis and simulation

Technology Assessment and Acquisition

This input introduces a concept and methodology for the development of technology strategies and their combination with business strategies and/or policy decisions. Concepts and applications of a range of integrated tools are presented, including technology assessment and hierarchical decision modeling.

Innovation Process

This input includes an introduction to the basic concepts of innovation management, the framework conditions of the innovation process, the management of idea generation and selection and the management of alternative generation and implementation (technical problem solving).

Learning objectives

Current Challenges and Trends in Technology Management

- Get to know important trends and current developments in technology management
- Develop an understanding of the complex challenges facing the industry and the companies involved in technology and innovation
- Combine already acquired knowledge and skills with the problems of the future

Technology Assessment and Acquisition

Develop an understanding of approaches and tools that help organizations and governments align their strategies and policies with the direction in which new technologies are moving.

Innovation Process

- Know the basic activities and process steps along the phases of the innovation process
- Know sources of resistance and obstacles in the innovation process and identify and apply appropriate methods to overcome them
- Know important concepts and approaches from theory and gain an insight into empirical research work in this thematic field