

LEADING DIGITAL INNOVATION MASTERING THE DIGITAL CHALLENGE

Diploma Programme & Open Courses

University of Cologne
Business School

University of
Cologne
Business
School



LEADING DIGITAL INNOVATION

at the University of Cologne Business School

The University of Cologne is one of the oldest and most prestigious European universities. It has spawned several Nobel and Leibniz Prize winners and has been awarded "university of excellence" status by the German government. Founded in 1388, the University of Cologne is a leader in many disciplines and a member of many international networks.

Established in 2015, the University of Cologne Executive School is a business school that offers first-class, comprehensive management, leadership, and innovation development programmes at an easily accessible location right at the heart of Europe.



Academic Director

Prof. Dr. Jan Recker, Ph.D.
Institute for Information Systems
University of Cologne

Digital Innovation is one of the biggest challenges for today's corporate landscape. Increasing the digital capabilities of companies requires specialist knowledge and skills. Our thought leaders from the Faculty of Management, Economics and Social Sciences (WISO) have partnered with trusted external institutions and experienced experts to bring you a cutting-edge programme that will expand and deepen your knowledge and skills to cope with digital change.

Our renowned professors who research and teach at the institutes developed the **Leading Digital Innovation** programme by combining key theoretical concepts and their experience whilst working closely with practice.



Programme Director

Prof. Dr. Hans-Gerd Servatius
Managing Partner
Competivation Consulting

CONTENTS

The Digital Innovation Leadership Diploma Programme

- Module 1**
Innovation Strategy 6

- Module 2**
Business Model Innovation 7

- Module 3**
Digital Marketing 8

- Module 4**
Digital Operations 10

- Module 5**
Innovation Leadership 11

- Module 6**
Organising for Innovation 13

- Module 7**
Digital Innovation Capstone Project 14

- Your Faculty** 15



Leading Digital Innovation Diploma Programme

Digital Innovation is the lifeblood of any organisation, large or small. Digital Innovation is a crucial capability ensuring long-term sustainability of a business in that it allows continuous adaptation to changing environments. But it also is a capability that is hard to build, maintain or replicate in the face of changing and emergent new digital technologies that upend and disrupt organizations, sectors and entire markets. Anticipating, mastering and deploying novel digital technologies and understanding their impact on strategy, processes, organising and customers is a crucial competitive advantage to master and lead the digital innovation challenge.

The diploma programme **Leading Digital Innovation** improves your competence and excellence in Digital Innovation. Using a systemic and holistic approach, and building on established methodologies such as Agile, Lean, or Design Thinking, it updates your core competencies and capabilities across six key building blocks – innovation strategy, business model innovation, digital marketing, digital operations, innovation leadership and organising for innovation.

All modules teaching these building blocks will be infused by knowledge about relevant digital technologies core to all elements – be it Internet of Things, Artificial Intelligence or Blockchain. Drawing on the expertise of practitioners and industry thought leaders, each module will feature expert sessions to cover these and associated digital technologies as they relate to the building blocks.

The module overview

Innovation Strategy Learn to develop innovation strategies and portfolios that take advantage of disruptive digital technologies.	Business Model Innovation Understand digital business models, platforms and ecosystems and how you can use them to transform your company.	Digital Marketing Use analytics to understand your digital customers and utilise it in marketing.
Digital Operations Understand how you can use new technologies and data analytics to implement process innovations.	Innovation Leadership Learn to develop innovation capabilities and innovation courage and how to implement them in your workgroups and teams.	Organising for Innovation Use approaches, such as lean-start up, to make your organisation entrepreneurial and agile.
Digital Innovation Capstone Project Apply your newly acquired knowledge to a digital innovation challenge of your company. Develop a solution and a business case and pitch it to simulated prospective investors.		

Key Benefits

- Learn how to build an integrated approach to digital innovation
- Understand how to implement digital business model innovation
- Explore the latest digital technology trends from thought leaders and expert practitioners
- Gain hands-on experience in tools and techniques for creativity and innovation
- Obtain a University of Cologne Executive School Diploma in Leading Digital Innovation
- Put your new skills into practice immediately thanks to the Capstone project

Target Audience

Our diploma programme is specifically tailored to suit management teams in organisations faced with digital technology challenges and with a desire and capacity for tackling these challenges. Suitable participants include, but are not limited to team leaders, project managers and managers of business units in large organisations, or directors and executive staff in small to medium sized companies.

Programme Duration 3 months Ten days in three months 2018 September 27 - 29 October 25 - 27 November 23 - 24 Capstone project January 15 2019	Language English	Cost €9.750*
Attendance 9 days (1 day for presentation)	Work experience Minimum of 2 years postgraduate work experience	Registration To register, please email Jennifer.Biesenthal Jennifer.Biesenthal@uni-koeln.de

* This fee is tax deductible

Module 1 Innovation Strategy

Dates

27 - 28 September 2018

Thursday 09:30 – 16:30

Friday 09:30 – 12:30

Fees

Diploma programme: included

Short course: 1.375 €

Key Benefits

- Understanding the enabling role of digital technologies for innovation strategy
- Master disruption with new strategic patterns of behaviour
 - Learn how to structure an innovation portfolio and manage strategy sprints

In this module, you will develop a comprehensive understanding, why “Leading Digital Innovation” requires an integrated approach and which role digital technologies play. Often a trigger for creating a corporate innovation strategy is a disruptive challenge initiated by digital champions and startups. You will learn how these challenges can be mastered with new strategic patterns of behaviour. Practical examples help you to enhance your capabilities in dealing with disruption.

Contents

Integrated Approach and the Enabling Role of Digital Technologies

Our integrated approach connects the building blocks of a digital innovation system. You learn how to analyse the strengths and weaknesses of your corporate innovation system. Digital technologies like the Internet of Things and artificial intelligence have an enabling role for innovative products, services, processes and business models. Improving the capability of agile foresight helps your company understand the development and impact of digital technologies.

Disruption and New Strategic Patterns of Behaviour

Starting with the historical definition of the term disruption, you will understand the current meaning of disruptive business models. To master this type of disruption new strategic patterns of behaviour are needed. You will learn how to apply the agile pattern and the cooperative pattern in established companies and how to connect them with more traditional strategy approaches. Today successful innovation strategies are characterised by a combination of different strategy patterns. You will do a case study to implement such a pattern combination.

Managing the Innovation Portfolio and Strategy Sprints

You learn how to structure possible corporate innovation arenas using our improved innovation portfolio method and how to derive successful strategic directions as a starting point for strategy sprints. The challenge for established companies is to master this strategic change by adapting the lean startup approach to improve the innovation climate. In this programme you will develop the necessary leadership skills.



Photo: Lisa Bailer

“There is no branch which is not affected by digital transformation. This programme focuses on digitalisation from many different angles. It broadened my understanding of why digitalisation matters in today’s society and provided me with a valuable insight as to what digital disruption looks like in a real business setting.”
Anne Käufer, Head of Legal Proceedings

In this module, you will learn about the clash between existing and digitally enhanced business models emphasising platforms and ecosystems. You will learn to treat and exploit “information” as the core resource of modern value creation, and understand the economic and technological key trends that are at the heart of the digital transformation. You will also learn what “Data-Centricity” means for today’s companies, which role data play for innovating business models, and the fundamental difference of digital products and services compared to “traditional” physical goods. You will develop an agenda for how to meet challenges of digital innovation and how Business Model Innovation and business patterns can help firms transform themselves.

Dates

28 - 29 September 2018

Friday 13:30 – 16:30

Saturday 09:30 – 16:30

Fees

Diploma programme: included

Short course: 1.375 €

Contents

Digital Businesses

Information Technology is changing the business world in a variety of ways. The large majority of businesses are affected and may question whether they are adequately prepared as a “digital business”. We will analyse prominent examples like Uber, AirBnB, Nest, Tesla as well as astonishing innovation activities of well-known digital players including Google X Labs (Alphabet), Amazon and Microsoft in addition to more recent start-up initiatives, which are bound to further challenge and shake industries. We focus on extreme examples and will filter our discussions and cases for potentially disruptive innovations and business models.

Tools for Digital Business Model Innovation

We re-visit the “Business Canvas”. Not only will we recapitulate the de facto standard of discussing business models but we will also highlight more recent developments including a more detailed discussion on Value Proposition and data-based service provision. We add additional perspectives and tools, in particular Business Patterns. Case work will accompany the second content block; more specifically you will analyse your own business model in a first step. Subsequently, you will deploy Business Patterns in order to systematically derive variants of your business model.

Emerging Business Patterns

We introduce emerging patterns of doing business. In particular, we will focus on the Internet of Things and selected technology streams. You may ask yourself how your business model is or likely will be affected through modern IT. As a core team exercise in-class, you will weave together content, tools, and perspectives of all six content blocks of the course. We will discuss the ramification for your industry and your business model in a fast changing world through the deployment of modern IT. Along the way, we drill down into selected issues that traditional companies face once they embark on the digital transformation journey.

Key Benefits

➤ Identify your current business model and explore which approaches and tools to deploy in order to systematically innovate your business model

➤ Examine how business patterns help you radically transform your business model

➤ Understand what data-based Business Model Innovation means for your business

Module 3 Digital Marketing

Dates

25 - 26 October 2018
Thursday 09:30 – 16:30
Friday 09:30 – 12:30

Fees

Diploma programme: included
Short course: 1.375 €

Key Benefits

- Learn how customers make choices in the digital world
 - Understand how organisations communicate with, and learn from, customers through digital media
- Examine what can be learned from market and customer data

In this module, you will develop an integrated understanding on how the digitalisation of business and society poses challenges and opportunities related to the way your organisation communicates with and accesses customers. The module is organised based on three key pillars: Digital Customer, Digital Communications, and Digital Data.

Contents

Accessing the Digital Customer

The digital transformation has radically changed the way customers experience their relationships to organisations. What used to be a simple transaction through a channel partner, has become a complex set of interrelated interactions (i.e., “touchpoints”). Managing these touchpoints involves integrating the physical and digital world to provide a seamless experience, which should be tailored to each specific customer.

In this session, we will discuss fundamental questions of the customer choice process, which aspects have changed through digitalisation. We will discuss the concept of customer journey and omni-channel marketing.

Digital Communication and Branding

When we think about digital marketing, digital advertising comes to mind. In this session, we will engage in a broad discussion of what makes digital communications different, and what new possibilities are enabled by the ability to target individual customers.

We will develop important insights on questions such as what makes a message go “viral”; how do we *attribute* an advertising effect to a particular channel; how do we learn about customers from the content they themselves generate; and how should we think about word-of-mouth communication in digital channels.

The Challenges and Opportunities of Customer Data

Digital Transformation is, at its heart, digital data. One of the strongest transformative forces driving the digital transformation is the ability to collect, store, and communicate data with perfect fidelity and unprecedented reach and speed. How can we use these data to our advantage? What are the metrics that matter in the digital world? What can and cannot be learned from data? How can we think about dynamics and causality in business?

We cannot discuss data without touching upon issues of privacy and regulation. We are entering an era where regulation will play a role commensurate to that of technology in influencing how we use data and leverage digital opportunities. Part of this session will be an open discussion about the role of regulation and customer privacy concerns on the use of data.

A close-up photograph of a man with a beard and short brown hair, wearing a dark blue button-down shirt. He is smiling and looking down at a document held by someone's hand in the foreground. The background is bright and out of focus, suggesting an office or meeting environment. Two horizontal teal lines frame the text on the right side of the image.

The Digital Transformation has radically changed the way customers experience their relationships to organisations.

Module 4 Digital Operations

Dates

26 - 27 October 2018
Friday 13:30 – 16:30
Saturday 09:30 – 16:30

Fees

Diploma programme: included
Short course: 1.375 €

Key Benefits

- Learn the characteristics of effective “Industrie 4.0” implementations
- Understand how to use digital technologies in order to innovate operations and supply chain
- Explore how you can implement digital innovations in operations and supply chains

In this module, you will learn how a digitalisation strategy can be effectively implemented in operations and supply chain processes. This learning will draw from a framework that links market positioning with operational capabilities, ensuring that performance objectives are cascaded into and reinforced by operational configurations. You will also develop skills for leading digitalisation initiatives in operational contexts.

Contents

Competing based on “Industrie 4.0” Operations and Supply Chains

You will evaluate cases of “Industrie 4.0” implementations in order to characterise the effectiveness of digital strategy implementations in operations and supply chains. We adopt the lens of the unifying Operations Strategy Matrix framework to analyse coherence, correspondence, and consistency of “Industrie 4.0” implementations. You will gain skills to understand whether (or not) implementations can provide firms with a competitive edge.

Linking Digital Strategy to Shopfloor Operations and Employees

Now you will develop skills on the process of operations strategy implementation, that is, formation and implementation. We will study cases that reflect a top-down approach on strategy implementation. In turn, you will also learn how a digitalisation strategy can be reinforced, or even shaped, by tapping into frontline employees’ process knowledge and creativity. This reflects a bottom-up approach on digitalisation strategy and “Industrie 4.0” formation and implementation. Based on cross-case comparisons, you will learn when you should use a top-down or a bottom-approach (or both).

Leading Innovative Projects under Uncertainty and Ambiguity

In this session, we will discuss the management of novel digitalisation projects in an environment dominated by operational processes. We will discover the crucial mindset differences embedded in innovative digitalisation initiatives and operational processes, and what that implies for managing these simultaneously. Together we will develop a framework that links techniques to radical and incremental innovation contexts with different levels of uncertainty and ambiguity.



Photo: Lisa Beller

“This unique programme allowed me to enhance my skillset by providing me with the tools and knowledge necessary to convert data into strategy and recognise new and evolving digital trends. This enabled me to successfully support my organisation in order for us to be ahead of the digital evolution.”

Borja Martínez Pérez, Asset Integrity & Risk Engineer

In this module, you will learn to develop innovation capabilities in your teams and workforce in a systematic, reproducible and consistent way. Building on approaches such as Lean and Design Thinking, the approach builds on four different thinking styles around creative ideas and presents a holistic method for considering technological opportunities, organisational problems and strategic imperatives. You will learn a procedure model for creating, testing, implementing and exploiting digital innovations, growing your organisational ability to turn innovative ideas in measurable business results..

Dates

22 - 23 November 2018

Thursday 09:30 – 16:30

Friday 09:30- 12:30

Fees

Diploma programme: included

Short course: 1.375 €

Contents

Building Courage to Innovate

You will learn why innovation starts with leaders and their ability to create a fear-free, supportive environment to 'learn and fail fast'. Building on the understanding of innovation, analysis and decision latency, you will learn how you can speed up your ability to react to problems and opportunities in the digital world and how can you instil motivation, ability and courage in your teams.

A Structured, Systematic Method to Ideation

You will develop skills and confidence in different approaches to innovation. Blending classroom learning with real-life case studies, as well as, readings and videos. This will enable you to learn a developed and tested systematic approach to creating innovative ideas in a reliable and consistent manner. This is accomplished by combining an ability to reflect on current organisational problems, with an openness to learn from other innovation domains and practices, with a new way to utilise hidden assets and digital resources and an appreciation of novel strategic opportunities.

Turning Innovation into Action

You will learn how to manage the entire innovation process end-to-end, from creating innovative ideas, to incubating novel innovation concepts and analysing business cases, building and testing promising innovations, and finally exploiting and managing running innovations. You will learn essential techniques and helpful digital tools for innovation management, and learn how to increase your confidence of turning innovative ideas into measurable business success, using both theory and case studies as a learning tool.

Key Benefits

➤ Learn how to develop innovation courage in your workgroups and teams

➤ Identify how to increase the quality and consistency of creativity workshops

➤ Examine how to turn innovative ideas into results



Innovation is not just happening.
It must be structured, organised
and rooted in the organisation.

In this module, you will learn ways and methods in which you can create an innovation-ready organisational structure, with processes and rules designed to foster creativity, experimentation, responsibility and ambition to innovate. Using real-life case studies and the latest organisational theories such as Agile Project Management and Lean Start-Ups, you will learn to understand the benefits and disadvantages of organising, agile project management and flexible teams.

Dates

23 - 24 November 2018

Friday 13:30 – 16:30

Saturday 09:30 – 16:30

Fees

Diploma programme: included

Short course: 1.375 €

Contents

Cost versus Revenue-Resilient Organisations

You will learn how businesses that are successful in the digital age have become revenue resilient because they have understood how business models can be endangered through digital products, digital processes, digital consumers or digital services. You will learn how to build the digitally transformed organisation that can participate in, and facilitate, a digital life of their customers.

Reducing Innovation Latency

You will develop an ability to measure value-loss due to not reacting quickly enough to innovation problems or digital opportunities. You will learn how to control and improve data, analysis and implementation latency of digital innovations. You will learn how to differentiate problems from opportunity-driven innovation and to develop organisation forms to respond to both.

Building Agile and Lean Innovation Teams

You will learn how to create structured yet flexible team structures to provide an innovation-ready working environment. You will appreciate the essential concepts of agile management and lean organising, and learn how to employ the most beneficial ideas from both approaches to creating your own perfect structural mix for reliable yet successful innovation teams.

Digital Technology Stack

In each module an experienced technology expert will present the latest developments in important digital technologies like the Internet of Things, Machine Learning, Blockchain, and more. This Digital Technology Stacks impart a deeper understanding of the enabling role of digital technologies to the participants.

Key Benefits

➤ Learn how to use the lean-start up method

➤ Understand how to make your organisation more entrepreneurial and agile

➤ Identify the best structure to support innovation teams



Module 7 The Digital Innovation Capstone Project

To cap off your learning experience, the capstone project will enable you to apply your new knowledge to a real in-company digital innovation challenge. You will be tasked with identifying and analysing a digital innovation challenge or opportunity that faces your organisation. Your objective is then to design and deliver a digital innovation solution.

The capstone project will allow you to apply your newly acquired approaches and techniques. Your ultimate deliverable will be a pitch of your proposed digital innovation solution and business case. We will carry out the pitch in a simulation “Innovation Dragon’s Den” session where simulated prospective investors will scrutinise digital innovation problem solution, examine your idea development, business model and implementation plan, to make a decision whether to proceed and invest in your digital innovation solution.

The learning objective is to translate the learned concepts and theories of this programme into action in a systematic and holistic manner, focusing both on the digital innovation challenge and its potential solution.

The learning outcome of the capstone project is an implementable solution to a real-world digital innovation challenge in your own organisation. The project will also allow you to reflect on the experiences of becoming a leader in a digital innovation project.

Experts in the Science and Practice of Digital Innovation



Prof. Dr. Herman Bruno

Professor of Marketing and Digital Environment at the University of Cologne

Prof. Bruno was a Marketing Professor at INSEAD (2008-2015), Erasmus University in Rotterdam (2007-2008), and a consultant at McKinsey & Company (2000-2002). He holds a PhD from London Business School. Professor Bruno research focuses on statistical modelling to support marketing decision-making, or to generate insights into marketing phenomena. Prof. Bruno's teaching experience ranges from undergraduates to senior executives in a broad spectrum of industries (Consumer Goods, Banking, Consultants, Oil & Gas).



Prof. Dr. Jan Recker, Ph.D.

Professor for Information Systems and Systems Development at the University of Cologne

Prof. Recker is Alexander-von-Humboldt Fellow, Chaired Professor for Information Systems and Systems Development at the University of Cologne, and Adjunct Professor at the QUT Business School in Brisbane, Australia. His work focuses on digital innovation, systems analysis & design and the role of technology for environmental sustainability. He is one of the most published information systems academics of all time. He has worked with several of the largest and smallest organisations on how they respond to the digital innovation challenge.



Prof. Dr. Detlef Schoder

Professor for Information Systems and Information Management at the University of Cologne

Prof. Schoder focuses on data-centric product, process, and business model innovations. For the application of Artificial Intelligence, he won together with partner companies several awards including IATA Innovation Award 2016 and the German Innovation Prize (Finalist). He also won the "Innovation Award" by the German Gesellschaft für Informatik (GI) for individualised media. Considered the leading introductory book on "Information Systems", he received the VHB Text Book award 2017. Detlef Schoder has worked in Germany, USA, Republic of Kazakhstan, and Japan.



Prof. Dr. Hans-Gerd Servatius

Managing Partner of Competivation Consulting and Honorary Professor at the University of Stuttgart

Prof. Servatius is managing director of the innovation specialist Competivation and teaches digital innovation at the University of Stuttgart as an honorary professor. Prof. Servatius is a leading expert for technology and innovation management. He has more than 30 years of experience in international consulting companies. He is the author of ten management books and numerous articles. He holds Diploma degrees in chemical engineering and business administration as well as a Ph.D. and a post doc degree (Dr. rer. pol. habil.) in technology and innovation management. His key areas are: innovation systems, digital strategy and change and consulting.



Prof. Dr. Fabian Sting

Professor of Supply Chain Management, Strategy and Innovation at the University of Cologne

Prof Sting's research and teaching interests are in Operations and Technology Strategy. He studies and teaches effective implementations of strategy and innovation in projects and processes. His practice-driven research was published in leading academic and managerial journals such as Harvard Business Review and MIT Sloan Management Review.

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