KEDGE
BUSINESS SCHOOL

Creating Customer Value with Innovative Technologies
Kedge Winter School 2020
Course Code: WIN-XX-MKT-01-E-L-PRS

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OFFICE HOURS	Upon Appointment
CLASSROOM(S)	Kedge Paris Campus – Room 8D
COURSE HOURS	See Course Timetable

COURSE DELIVERABLE	DUE DATE	WEIGHT ON FINAL GRADE
Multiple Choice Exam (Individual exam)	Session 4	40%
Case Study (Group presentation)	Session 7	40%
Multiple Choice Exam (Individual exam)	Session 7	20%

INTRODUCTION AND OBJECTIVES

Course Purpose & Objectives

Technological progress allows for the recording and saving of enormous amounts of data, generated by an increasing and often real-time based usage of social media, smartphones or loyalty cards in brick and mortar businesses. However, the mere increase of online and offline generated data does not necessarily imply an increase in relevant knowledge that supports managerial decision processes and customer value creation. In order to transform the obtained data into valuable knowledge, they need to be analysed precisely, purposefully, and in line with the pre-existing go-to-market strategy. Especially the field of marketing can profit from big data as it facilitates a shift from an isolated view of consumer behavior to a holistic understanding of customer needs.

Artificial intelligence, machine learning and predictive analytics are currently turning everything upside down. The use of new technologies enables a quick, individualized and resource saving form of customer management. In particular, repetitive tasks and standardized processes have a high potential of automation. Targeted automation of touch points not only facilitates the interaction for the customer, but in the ideal case also elevates the customer experience as a whole. Still, combining "high tech" and "high touch" is one of the major challenges in marketing. Are machines equaling out human performance deficiencies or are they largely replacing human performance? Everything depends on the extent of harmony between human and machine, how intuitive operations are designed, and how simple interactions are.

The Internet of Things facilitates the connection between physical and virtual objects. Through sensors as well as recent information and communication techniques, these two worlds are enabled to collaborate. However, this functionality does not only allow for effective interaction between humans and objects, but also empowers the interaction between any number of connected objects without human interaction. Questions addressed in this course include: How is it possible to strategically apply the connectivity of things in marketing? Which chances and which challenges evolve from ubiquitous computing? How can sensors be effectively integrated in the customer journey? How will communication with customers change when single products become part of an ecosystem?

Course contribution to program objectives

By the end of this course, students should be able:
- To understand how big data, artificial intelligence, and connected devices / the Internet of Things impact marketing strategies
- To apply the learned concepts on practical examples and real life cases and
- To develop strategies on how to create customer value with innovative technologies
- To critically reflect on the opportunities and challenges of innovative technologies

Course description

The course "Creating Customer Value with Innovative Technologies" addresses a recent and important strategic imperative in an integrative way: Using big data, artificial intelligence, and

connected devices to serve customers. Today, almost all companies agree they have to become more customer-centric, and technological advances can help them to do so. The goal of the course is to discuss the key elements and challenges of bringing customer centricity to life with innovative technologies, incorporating practical examples and real life cases.

COURSE MATERIAL

Referenced Course Readings

1) Bruce Sinclaire, IoT Inc: How Your Company Can Use the Internet of Things to Win in the Outcome Economy.
2) Cathy O'Neil, Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy.
3) Chintagunta, P., Hanssens, D. M., & Hauser, J. R. (2016). Marketing Science and Big Data. *Special Issue of Marketing Science*.
4) Dirk Slama, Frank Phlmann, Enterprise IoT: Strategies and Best Practices for Connected Products & Services.
5) John Medicine, Artificial Intelligence and Machine Learning for Business: Approach for Beginners to AI and Machine Learning and Their Revolution of Modern Life, Health Care, Business and Marketing.
6) Katie King, Using Artificial Intelligence in Marketing: How to Harness AI to Retain the Competitive Edge.
7) Kumar, V., & Reinartz, W. (2016). Creating enduring customer value. *Journal of Marketing*, 80(6), 36-68.
8) Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69-96.
9) Martin, K. D., Borah, A., & Palmatier, R. W. (2017). Data privacy: Effects on customer and firm performance. *Journal of Marketing*, 81(1), 36-58.
10) Nguyen, B., Simkin, L., Balaji, M. S., & Roy, S. K. (2017). The Internet of Things and Marketing: The State of Play, Future Trends and the Implications for Marketing. *Journal of Marketing Management*, 33(1-2).
11) Porter, M. E., & Heppelmann, J. E. (2015). How smart, connected products are transforming companies. *Harvard Business Review*, 93(10), 96-114.
12) Scott Stawski, Inflection Point: How the Convergence of Cloud, Mobility Apps, and Data will Shape The Future of Business.
13) Troilo, G., De Luca, L. M., & Guenzi, P. (2017). Linking data-rich environments with service innovation in incumbent firms: A conceptual framework and research propositions. *Journal of Product Innovation Management*, 34(5), 617-639.
14) Wortmann et al. (2019). Capturing Value in the Internet of Things. *Marketing Review St.Gallen*, forthcoming.
15) Wünderlich, N. V., Wangenheim, F. V., & Bitner, M. J. (2013). High tech and high touch: a framework for understanding user attitudes and behaviors related to smart interactive services. *Journal of Service Research*, 16(1), 3-20.

Additional articles will be provided in advance and during the course.

COURSE CONTENTS AND TIMETABLE

The following table presents the "typical" agenda for each session. The order of the studied topics as well as the time allowed for each topic may vary according to the needs and background of the participants. Consequently, eventual shifts of time allocation will not prevent participants from achieving course objectives. All course sessions will be delivered in Kedge Paris Campus – Room 8D.

Session	Date	Time	Topic	Referenced Readings
1	13/01/2020	09:00 - 12:00	Introduction - Organization of the course - Customer value creation and value appropriation - Creating customer value with innovative technologies	Kumar, V., & Reinartz, W. (2016). Creating enduring customer value. *Journal of Marketing*, 80(6), 36-68.
2	13/01/2020	13:00 - 16:00	IoT value creation - Ubiquitous computing - Sensors in the customer journey - Product vs. ecosystem experience	Porter, M. E., & Heppelmann, J. E. (2015). How smart, connected products are transforming companies. *Harvard Business Review*, 93(10), 96-114.
3	14/01/2020	09:00 - 12:00	Capturing value with IoT - IoT business model - Smart services with connected devices	Wortmann et al. (2019). Capturing Value in the Internet of Things. *Marketing Review St.Gallen*, forthcoming.
4	14/01/2020	13:00 - 16:00	IoT and big data - Connected devices - Data privacy **Multiple choice exam**	Martin, K. D., Borah, A., & Palmatier, R. W. (2017). Data privacy: Effects on customer and firm performance. *Journal of Marketing*, 81(1), 36-58.
5	15/01/2020	09:00 - 12:00	Analyzing the impacts of Data science - Data Science & Big Data in use - Data visualization - Analyzing opportunities and threats arising from Deep learning & neural networks	Cathy O'Neil, Weapons of Math Destruction
6	15/01/2020	13:00 - 16:00	AI value creation : - AI applications - AI in marketing - AI's impact on corporate strategy	Katie King, Using Artificial Intelligence in Marketing: How to Harness AI to Retain the Competitive Edge.
7	16/01/2020	09:00 - 12:00	**Multiple choice exam** **Case Study Group Presentations**	.
8	16/01/2020	13:00 - 16:00	Wrap Up: - Deep tech investment: evaluating opportunities - Quantum Computing	

TEACHING APPROACH/ INSTRUCTIONAL METHODS

A Word of Advice

This course is based on active learning/teaching principles. This approach markedly improves student knowledge acquisition by shifting the traditional teaching and learning roles. In this class students will be expected to have completed the reading and preparation prior to each class session. In class students will be responsible for teaching others what they have learned via small group interactions and in team-based projects. The classes are designed to be highly interactive, with learning enhanced through discussion and interactions amongst members.

EVALUATION OF STUDENT PERFORMANCE:

DELIVERABLE	*Weight on final Grade*	*Assessment Criteria*
Multiple Choice Exam (1)	40%	Correctly answer the questions on the core concepts introduced in sessions 1-4. The exam must be completed individually.
Case Study (Group Presentation)	40%	Participants will be evaluated based on their contribution to the group throughout the course, as well as the presentation given on the final day.
Multiple Choice Exam (2)	20%	Correctly answer the questions on the core concepts introduced in sessions 5-7. The exam must be completed individually.

Multiple Choice Exams (1 & 2 – 40% & 20% Respectively)

Students have forty-five minutes to complete the exam at the end of a session. For each question, there are three to four answers proposed. Only one answer is correct. Students are expected to read the questions carefully and choose the appropriate answer, demonstrating acquisition of the knowledge and understanding of concepts expanded upon during the classes.

Case Study Group Presentation (40%)

The course will emphasize collaboration and teamwork. Participation is absolutely required. Teamwork in a classroom teaches students the fundamental skills associated with working as a collective unit toward a common goal. This type of teamwork introduces a variety of skills that will be valuable for students later in the workforce, such as communication, compromise and collective effort. Students will work together to develop a presentation summarizing the key learning points of the case studies conducted in class.

PROFESSOR BIOGRAPHIES

Dennis Herhausen is Associate Professor of Marketing at KEDGE Business School. Previously, he was a Visiting Professor at the St.Gallen Institute of Management in Singapore and an Assistant Professor at St.Gallen University, where he obtained his PhD in Business Administration. Before joining academia, he worked as a marketing manager and consultant. His main research interests include social media management, customer journeys and customer experience, multichannel management, and digital transformation. His work has won several awards and been published in top-ranking scientific journals, including the Journal of Marketing, the Journal of Retailing, and the Journal of Service Research.

Edward RYALL is a Visiting Professor of Entrepreneurship at KEDGE Business School and has been delivering courses since 2014. He graduated in Aerospace Engineering, is a Chartered Engineer, holds an MBA from SDA Bocconi, Italy, and has a Diploma in Corporate Governance from the Institute of Directors in London. Edward has held a number of Director level roles in Engineering, Finance, and Sales; he currently runs the Ryall Energy Family office in Bordeaux and is an active business angel, non-executive director and mentor for deep tech companies in Nouvelle Aquitaine. Edward is also CEO of a molecular engineering company currently being incubated by Airbus.

ACADEMIC FRAUD

Definition

Academic fraud is a breach of ethics.

"Is achieved using unfair means or deception, to obtain material or undue moral advantage, or with the intent to avoid the enforcement of laws". (Translated from the original source: Dictionnaire Juridique des Lois, 2010, available at: www.dictionnaire-juridique.com/definition/fraude/php)

Plagiarism consists of attributing authorship by (partial or total) copying, imitation or misappropriation.

The act of fraud is committed by one or more students/participants when they:

- appropriate written or oral work to themselves when they are not the author (in whole or in part) of the work, by omitting any references or quotations to the author or to the owner of the work;
- present any data that has been falsified or invented in any way;
- use the identity of the author, attributing the contents of and/or a resource to him/her, but without explicitly mentioning that they are not the author;
- appropriate the creative work of someone else and present it as their own;

- acquire excerpts of texts, images, results etc. from external sources by including them in their own work without mentioning the origins of the exerts;
- summarise the original idea of an author by expressing it in their own words but omit quoting the source;
- cheat in an academic evaluation;

Plagiarism can occur in:

- an academic article or book;
- an exercise or a case study;
- a study or a report;
- a dissertation or a thesis;
- any document of which the student/participant is not, but purports to be the author.

Sanctions

Any student/participant having committed academic fraud, or having participated in it, will be sanctioned by the professor in charge of the course. The professor can apply 1st and 2nd level sanctions (detailed below). The professor will send a copy of the sanction to the student's/participant's programme. The student/participant will be informed/and or convoked by the programme director (or his/her representative) to a hearing prior to the possible convening of the Euromed Management Disciplinary Council. In the case of a hearing of the Disciplinary Council, they can decide to apply 3rd and 4th level of sanctions.

Any student/participant guilty of academic fraud will receive one of the following sanctions:

- Applied by the professor in charge of the course, Euromed Management faculty member (1st and 2nd level):
  - A grade of zero for the work concerned and a formal warning;
  - A grade of zero for the course or module concerned and a formal warning.
- Applied by Euromed Management Disciplinary Council (3rd and 4th level):
  - Suspension from the programme for one or two semesters;
  - Exclusion from the programme.

N.B.: Plagiarism within a partner institution can result in these sanctions being applied by Euromed-Management, notwithstanding partner's decision.