

Advanced Marketing Strategy Through Artificial Intelligence and Analytics / Electives / 2026

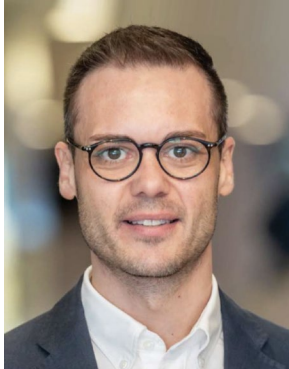
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FACULTY INFORMATION

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FACULTY BIO



Sebastian Gabel ([e-mail](#), [LinkedIn](#), [personal website](#)) is an Assistant Professor of Marketing at the Rotterdam School of Management, Erasmus University. He teaches in the school's MBA and executive programs and co-directs the Erasmus Centre for Optimization of Digital Experiments. He is also part of the Erasmus Centre for Data Analytics, where he contributes to the Retail Analytics practice. His teaching and research connect marketing strategy, AI, and large-scale experimentation.

Before joining RSM, Sebastian founded three AI and analytics startups. These ventures developed machine learning systems for personalized promotions, dynamic pricing, and retail media. All three were acquired by multinational firms in retail, fintech, and consulting. His second company helped launch one of the first retail media networks in Europe, which became part of the Schwarz Group (Lidl, Kaufland). He later joined Schwarz Media Platform as Chief Product Officer and scientific advisor. His article on the transformation of retail into an advertising platform was published in the *Harvard Business Review* and widely shared among marketing professionals. Today, he continues to advise technology firms, including Verve Retail Media and several early-stage ventures in the AI and data space.

Sebastian's academic research focuses on developing deep machine learning and causal inference methods for marketing applications. He is working on a Large Consumer Model (LCM)—a foundation model designed to predict consumer behavior across domains such as retail, finance, and media. His articles have appeared in leading marketing journals, including *Marketing Science*, *Management Science*, and the *Journal of Marketing Research*. He is a finalist for several research awards, including the Frank M. Bass Dissertation Paper Award, and a recipient of the ERIM Award for Outstanding Performance by a Young Researcher. His projects are supported by industry partners and competitive research grants, including an NWO VENI grant.

His teaching integrates this research with real-world experience, drawing on current projects and prior ventures to illustrate how AI can shape modern marketing strategy. In evaluations, his courses receive top marks for clarity, engagement, and practical value.

ABSTRACT

As future business leaders, consultants, and entrepreneurs, you will regularly face high-stakes marketing decisions that involve large-scale data, fast-changing consumer behavior, and the growing influence of artificial intelligence. Which customers should you target? How should you position your product? Can content, offers, and prices be personalized effectively—and ethically? This course explores how AI and analytics are transforming how firms think about marketing strategy and execution.

This course introduces a structured, applied approach to marketing in data-intensive environments. We begin with foundational topics such as segmentation, targeting, and positioning, and then expand toward advanced

applications, including customer journey analytics, user-generated content, personalization systems, foundation models, and business model innovation. Each session combines analytical methods with real-world decision-making, drawing on case studies, academic research, and industry experience.

We will discuss three case studies—McDonald's, The Gap, and WeWork—each exploring different applications of AI and analytics in marketing and strategy. These cases provide a framework for evaluating when AI and analytics add value, how to implement it, and when alternative approaches may be more appropriate. A final session on the dark side of analytics encourages critical reflection on fairness, privacy, and trust in AI-driven systems.

Two guest lectures provide complementary perspectives. A senior product lead from Google discusses how Generative AI is being deployed across Google Search and advertising, illustrating how large language models are reshaping user interaction, content ranking, and ad delivery at platform scale. In a second session, the Data Science Director of a German analytics startup explains how competitive intelligence is built from digital traces and used to inform product and market strategies. These guest sessions expose students to both corporate and startup applications of AI in marketing.

To deepen your learning, the course includes two graded assignments. The first is a group-based project that challenges you to analyze how consumers generate data throughout their daily routines and how companies use these data in shaping marketing decisions. The second is an individual assignment in which you step into a strategic role and design a marketing solution that combines business goals, data sources, and machine learning capabilities. Both assignments mirror real-world decision environments, requiring you to link marketing strategy with data opportunities, assess trade-offs, and articulate clear recommendations.

By the end of the course, you will be able to evaluate and apply data-driven tools in strategic marketing contexts, translate analytical opportunities into business actions, and communicate insights clearly and responsibly.

EDUCATIONAL GOALS

The course teaches you to solve complex marketing strategy problems with data-driven approaches. After this course, you will be able to:

Learning areas	Educational Goals
I. Content-related	- Understand the goals of marketing strategy in data-driven environments. - Understand the value of big data in marketing strategy. - Understand the challenges caused by integrating marketing strategy with AI.
II. Skills-related	- Pick marketing analytics tools and data sources to develop marketing strategies. - Develop data-driven marketing strategies in a team.
III. Attitude-related	- Reflect on and manage ethical challenges caused by big data in marketing strategy.

TEACHING METHODS AND WORKLOAD

I will use different teaching methods to help you reach these learning goals: Lectures teach the fundamentals of marketing strategy, data, and machine learning. Case studies and breakout groups allow you to apply your knowledge in solving interesting marketing strategy problems. Discussing state-of-the-art scientific articles will prepare you to evaluate the effectiveness of machine learning methods and datasets, as well as their application.

In the lectures, I will use many examples from my own work in industry to demonstrate the practical value of the material and to teach important lessons about applying analytics solutions to solve marketing problems. Drawing on experience from AI startups, advisory roles, and research collaborations, I connect theoretical models and algorithms to the decisions firms face every day—from targeting and personalization to campaign optimization and retail media strategy.

This course is structured to reflect the way modern marketing teams actually work: combining analytical rigor with business relevance. You will engage in hands-on problem-solving, assess real-world data, and debate when AI tools are helpful—and when they are not. Each session builds your ability to evaluate, interpret, and communicate data-driven insights that are aligned with strategic objectives.

Two homework assignments provide further opportunities to apply what we learn during lectures and case discussions. These exercises are designed to reinforce technical concepts and offer structured practice with decision-making under uncertainty, often with imperfect or incomplete information—just like in practice. In summary, this course provides generalizable insights and best practices that will help you develop successful marketing strategies, and it offers plenty of opportunities to take what you have learned for a spin.

Description	Calculation	Total
In-class sessions	6 sessions x 3 hours	18 hours
Class preparation	6 sessions x 5 hours	30 hours
Team assignment	—	18 hours
Individual assignment	—	18 hours
Total course hours	3 EC x 28	84 Total hours

GRADING AND ASSESSMENT

Course Name: Advanced Marketing Strategy through AI and Analytics	Assessment formats			
Educational goals	Participation	Assignment 1	Assignment 2	Total
After following this course, students will be able to:				
Understand the goals of marketing strategy in data-driven environments.	✓		✓	✓
Understand the value of big data in marketing strategy.	✓	✓	✓	✓
Understand the challenges caused by integrating marketing strategy with AI.	✓			✓
Pick marketing analytics tools and data sources to develop marketing strategies.	✓	✓	✓	✓
Develop data-driven marketing strategies in a team.	✓	✓		✓
Reflect on and manage ethical challenges caused by big data in marketing strategy.	✓			✓
Weighting factor	–	50%	50%	100%
Minimum grade required	Pass/Fail	5.5	5.5	5.5
When failed, resit option within the academic year	No	Yes	Yes	–
Form of examination	–	Open-book	Open-book	–
Assessment type	Individual	Group	Individual	–

In order to pass the course, each assessment or deliverable (component grade) with a resit option, needs to be at least 5.5. Components with no resit option bear no minimum grade required, but to pass the overall course, the final grade needs to be at least 5.5.

Grades are rounded according to the rounding provisions included in the Teaching and Examination Regulations (TER) of the programme, and are expressed with 1 decimal point. Not meeting the minimum grade required for either a component grade or the overall course grade determines a fail for the course. Participants can resit a failed component only once. There is no capping of the grade for a resit examination. The only exception is when the nature of the failed assignment allows for an improvement effort of the same assignment (capped at 5.5 for that component).

For this particular course, the faculty has decided that *all* assignments allow for ***an improvement effort***.

Grade penalties for unauthorized late submissions will be automatically imposed. Penalties for unauthorised late submissions range from 10% to 20% deduction from the examination component, depending on the hours/days late. Unauthorised late submissions 4 days or longer after the deadline, without prior notification and a reasonable explanation for the late submission, will not be accepted.

Attendance is mandatory and a requirement to pass the course. Missing classes and arriving late may result in grading penalties and even a fail for the course.

Fraud, Plagiarism / Self-plagiarism (Refer to separate RSM Code of Conduct, Rules and Guidelines, and Teaching and Examination Regulations)

The Examination Board defines fraud as *“the action or negligence of a student because of which it is impossible, entirely, or partially, to form a correct judgment about the knowledge, insight, and skills of them or another student”* (R&Gs and TERs). Examples of fraud are cheating, cribbing, plagiarism, freeriding in a team assignment, availability of unauthorized (study) material during a test such as mobile phones, contract cheating/outsourcing/ghost-writing, unauthorized use of generative AI, identity fraud, theft.

Confirmed cases of fraud/plagiarism will lead to (appropriate and proportional) sanctions as defined by the Examination Board in the Rules and Guidelines (R&G). Repetitive cases of fraud/plagiarism lead to expulsion from the programme.

Plagiarism is presenting another person’s work as one’s own. Plagiarism includes any paraphrasing or summarising of the work of another person or group without acknowledgment, including submission of another student’s work as one’s own. Plagiarism frequently involves a failure to acknowledge the quotation of paragraphs, sentences, or even a few phrases written or spoken by someone else.

Using ideas from your own prior work (assignment) without referencing the work in your assignment is considered self-plagiarism.

Participants are required to adhere to the 6 principles outlined in the RSM AI guidelines with regard to the use of Artificial Intelligence Platforms such as ChatGPT and related software/tools. The unauthorised use constitutes violation of plagiarism/ fraud policy. For this particular course, the faculty promotes **an embraced use of AI**.

For more information about academic integrity and AI please refer to the Programme’s Teaching and Examination Regulations and RSM AI guidelines documents on the Student Hub.

Assessment	Due date (tentative)	% of final grade
Participation	–	0 %
Assignment 1	TBC	50 %
Assignment 2	TBC	50 %

For all Canvas submissions, please make sure to include the student name, EUR student number, and programme name within the document itself (on the cover page), and your initials, EUR student number, and programme name in the title of the file submission

REQUIRED TEXTBOOK(S) AND READINGS

Given in “Detailed Course Schedule” below

DETAILED COURSE SCHEDULE

Session 1: An Introduction to Marketing Strategy

Content	This opening session introduces students to the central role of marketing in shaping business success. We begin by clarifying what marketing is—and what it is not. Marketing is often misinterpreted as a matter of advertising or sales support, yet its true function lies in creating, communicating, and delivering value to customers in ways that ensure profitable growth. Students will compare the “selling concept,” which emphasizes pushing products onto buyers, with the “marketing concept,” which centers on identifying customer needs and designing solutions that meet them. To structure this discussion, we introduce three core analytical tools. The 3Cs framework (Company, Customers, Competitors) provides a way to understand the context in which marketing decisions are made. The STP process (Segmentation, Targeting, Positioning) highlights how marketers define and prioritize opportunities. The 4Ps (Product, Price, Place, Promotion) then translate these strategic choices into actionable tactics. These models serve as the foundation for all subsequent sessions in the course. By the end of this session, students will have a working definition of marketing strategy, understand its relationship to broader business goals, and see how the 3Cs, STP, and 4Ps provide a structured approach to decision-making. This sets the stage for more advanced discussions in later sessions, where data-driven tools and new technologies will further expand the marketer’s toolkit. The session concludes with a 15-minute Q&A, giving students the opportunity to connect the material to their own professional experience. This closing discussion encourages participants to share examples from their careers, compare perspectives across industries, and reflect on how the concepts explored in class apply to real managerial challenges.
Readings	TBC

Session 2: Customer Needs and User-Generated Content

Content	This session examines how firms identify and interpret customer needs using data generated by consumers in digital settings. In the second part, attention turns to the role of large language models (LLMs) in market research. Drawing on recent articles, students will discuss how these models can generate value in understanding consumer needs. The readings highlight both the promise of LLMs as fast, low-cost tools for exploring consumer preferences and the challenges of bias, reliability, and the absence of true demographic heterogeneity. The use of LLMs raises a broader question: should marketers view these tools as complements to human expertise or as potential substitutes for traditional research methods? This conceptual discussion underscores how digital platforms and AI technologies are reshaping the ways in which firms access, interpret, and act upon customer needs. As in every session, we conclude with a 15-minute Q&A to connect the material to students' professional experience and industry perspectives.
Readings	TBC

Session 3: AI for Personalization and Targeting

Content:	This session explores how artificial intelligence is transforming personalization and customer targeting, focusing on the opportunities and challenges of embedding AI into large-scale consumer-facing businesses. Students will debate whether a global enterprise with standardized operations can realistically deliver the type of personalization that digital-native firms have pioneered. In the second part of the session, we will explore how GenAI is reshaping user queries, result generation, and ad placement strategies. Students will gain insights into the technical and strategic implications of deploying GenAI at one of the world's largest digital platforms. The materials chosen for this session, encourage students to think critically about how AI reshapes the STP process, how the 4Ps are affected when offers and messages can be individualized, and how firms can align technological capabilities with customer expectations. As in every session, we conclude with a 15-minute Q&A to connect the material to students' professional experience and industry perspectives.
Readings:	TBC

Session 4: Foundation Models in Marketing: Design, Pretraining, and Adaptation

Content: This session introduces students to deep learning in marketing, beginning with the concept of representation learning. Representation learning refers to the use of neural networks to create product and customer embeddings—dense vector representations that capture latent similarities and relationships.

Building on this idea, we then turn to foundation models, which extend representation learning to a much larger scale. Foundation models are trained on massive, diverse datasets and designed to be adapted to multiple downstream applications. Their development relies on two key stages: pretraining, where the model learns general patterns from broad data, and adaptation, where the pretrained model is fine-tuned to specific tasks such as coupon redemption, personalized promotion, or churn prediction.

The session concludes by showing how these models deliver value for marketing managers. Pretrained representations accelerate experimentation, reduce the cost of building models for new applications, and improve personalization at scale. At the same time, the session highlights how design choices—such as network architecture, data used in pretraining, and adaptation strategies—determine both performance and applicability. By the end, students will understand the principles behind representation learning and foundation models, and how these innovations expand the role of AI in marketing practice.

As in every session, we conclude with a 15-minute Q&A to connect the material to students' professional experience and industry perspectives.

Readings: TBC

Session 5: Data Analytics and AI for Business Model Innovation

Contents: This session focuses on how firms can employ data analytics and artificial intelligence to rethink and innovate their business models.

In the second half of the session, we welcome a guest lecture who will present on how their company uses advanced analytics to provide firms with insights into competitor activities, market shifts, and product innovations. This talk illustrates how startups are building entire businesses around data and AI capabilities, and how these tools enable decision-makers to adapt their models to fast-changing environments.

As in every session, we conclude with a 15-minute Q&A to connect the material to students' professional experience and industry perspectives.

Readings: TBC

Session 6: The Dark Side of Customer Analytics

Topics: This closing session turns the spotlight on the ethical and societal risks of data-driven marketing. The first half of the session is structured as a college-style debate. Students take opposing sides on the central motion: Should Company A and Company B partner and use grocery data for insurance risk scoring? Teams are tasked with preparing arguments, rebuttals, and closing statements, guided by the structured debate format outlined in class. This interactive exercise challenges students not only to identify the benefits of advanced analytics, but also to confront the ethical trade-offs, reputational risks, and regulatory questions that come with them. In the second half, the course concludes with a comprehensive recap and Q&A. We revisit the key themes explored throughout the course—marketing strategy, customer needs, personalization, foundation models, and business model innovation—before reflecting on the unresolved tensions raised by the dark side of analytics. The Q&A provides an open forum for students to ask final questions, connect session content to their own professional experiences, and articulate how they might approach responsible use of AI and data in their future managerial roles.

Readings: TBC

ASSIGNMENTS DESCRIPTION

More information about the assignments and grading rubrics will be made available on Canvas closer to the start of the course