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HEC Lausanne

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Customer Relationship Management (CRM)

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Course Background

Customer relationship management (CRM) has come a long way from its roots in direct marketing as a system to support sales and promotion campaigns, often with great expectation but disappointing results, to a business strategy and a set of tactics with a significant technology component. Advances in information and communication technology have always shaped the practice of marketing. CRM principles and technology enable today more than ever before the realization of the key principle of marketing: that the allocation of resources to business activities is best done by focusing on the individual customer as the central unit of analysis and action and not the company's products. Customers generate revenues; products produce costs.

> *"CRM is the strategic process of selecting customers that a firm can most profitably serve and shaping interactions between a company and these customers. The ultimate goal is to optimize the current and future value of customers for the company."*
> Kumar V, Reinartz W (2018), Customer Relationship Management.

Course Objective

As indicated by the above definition, CRM places *customer value to the firm* as the guiding concept for marketing decisions. Of course, not all customers are created equal. Consequently, companies need to develop capabilities that allow them to attract and retain the *right customers* with *customized actions*, where the customization takes advantage of insights inferred from data generated by past interactions.

The goal of this course is to give a unified treatment of the strategic and tactical aspects of customer relationship management as we know it today. While data and analytic methods are central to CRM, the focus of the course is not on information technology. The key to data is not the size, but the application to management decisions. For that, we study the process, antecedents and consequences of a CRM strategy to understand:

- The theoretical and conceptual foundations of CRM;
- The valuation and prioritization of customers;
- The prediction of buying behavior and churn;
- The relationship of customer satisfaction and loyalty with customer value;
- The allocation of resources to acquire, retain and develop customers; and
- The application of CRM tools and concepts to different business settings.

Course Format

The course uses a variety of pedagogical approaches. Lectures and cases are used to introduce the concepts and tools behind CRM and elaborate on the posted readings. The challenges of CRM, however, are best appreciated and understood through practical applications. For that students are required to complete a number of exercises. For the simulation and the project, students are required to form their own groups of up to 5 members. Each group is responsible to come up with its own project proposal, which is to be approved by the instructor. Suggestions and guidelines for presentation and report will be provided in class.

To get the most out of the course, preparation and participation are critical. Every student is required to prepare the assigned reading material and cases in order to participate in class discussions. This syllabus contains a detailed description for each session to facilitate preparation. Details and updates will be posted on Moodle.

Course Overview by Week

1. 17.02.2020: Course Introduction: What is CRM?
2. 24.02.2020: Customer Value
3. 02.03.2020: Customer Lifetime
4. 09.03.2020: Customer Buying Behavior
5. 16.03.2020: Customer Satisfaction
6. 23.03.2020: Customer Loyalty
7. 30.03.2020: Price Customization
8. 06.04.2020: Customer Relationship Management
   13.04.2020: Easter Break
9. 20.04.2020: Customer Centricity Simulation
10. 27.04.2020: Simulation Debrief
11. 04.05.2020: Guest Lecture / Customer Journey and Experience
12. 11.05.2020: Guest Lecture / CRM Implementation
13. 18.05.2020: Group Presentations
14. 25.05.2020: Course Summary

Class Time: Monday 14h15–18h00
Classroom: Internef 125

Course Material

1. **Required Material***:* Simulation license and cases must be bought from Harvard Business Publishing; the price for the course pack is about $60 (see Appendix 1); Articles and Exercises available on Moodle.
2. **Recommended Textbook**: Kumar V, Reinartz W (2018), *Customer Relationship Management* (3rd edition), Springer.

Course Requirements & Evaluation

1. Individual Exercises (30%) – See Appendix 2
2. Simulation (20%) – See Appendix 3
   a. Simulation Results (50%)
   b. Simulation Report (50%)
3. Field Project (50%) – See Appendix 4
   a. Project Presentation (50%)
   b. Project Report (50%)

Session 1 **Course Introduction: What Is CRM?**

Description: While advances in information technology have drastically transformed how marketing decisions can be made, CRM is not primarily about information technology. It is about putting the *customer at the center of analysis and action* and following the principle that the purpose of marketing is to create a customer. The product is a result of marketing and not vice versa.

Video: https://www.youtube.com/watch?v=r2O5qKZlI50.

Key Words: Customer, Relationship, Management.

Readings: Fishman C (1999), "This is a Marketing Revolution," FastCompany (30.4.99) https://www.fastcompany.com/36975/marketing-revolution.

Session 2 **Customer Value**

Description: The objective of CRM is to allocate the company's resources to acquire, develop and retain the *best customers*, which requires first a definition of what is "best". Customer value to the firm is the guiding principle for doing that. What exactly is it and how can we measure it?

Key Words: Cost-To-Serve, Customer Profitability, CLV.

Reading: Berger PD, Nasr NI (1998), "Customer Lifetime Value: Marketing Models and Applications," *Journal of Interactive Marketing*, 12(1), 17-30 https://www.sciencedirect.com/science/article/pii/S1094996898702506.

Assignment: Convergys Case (due 1.3.2020).

Session 3 **Customer Lifetime**

Description: The value of a customer to the firm is potentially more than the value from a single transaction; it depends on the *duration of a customer relationship*. In a contractual relationship (e.g., mobile contract), contract duration defines the lifetime and past data can be used to estimate the probability of customers terminating or renewing a contract. In a noncontractual relationship (e.g., e-commerce), is typically much more difficult, especially for infrequently purchased products, to estimate which customers are still active. How can we estimate the lifetime of an individual customer?

Key Words: Churn Rate, Stochastic Buying Models, Transition Matrix.

Reading: Pfeiffer PE, Carraway RL (2000), "Modeling Customer Relationships as Markov Chains," *Journal of Interactive Marketing*, 14(2), 27-43 https://www.sciencedirect.com/science/article/pii/S1094996800702052.

Session 4 **Customer Buying Behavior**

Description: To customize campaigns and resource allocation, we need to be able to prioritize customers and predict their reactions to the company's marketing efforts. The best-known predictive model is the *RFM framework*. It sorts customers according to their recency, frequency, and monetary value of transactions to sort customers, but more detailed data make more advance sorting algorithms possible.

Key Words: RFM, Logistic Regression, Decision Tree.

Reading: Birant D (2011), "Data Mining Using RFM Analysis," Chapter 6 in *Knowledge-Oriented Applications in Data Mining*. http://cdn.intechopen.com/pdfs/13162/InTech-Data_mining_using_rfm_analysis.pdf.

Assignment: Hansen Foundation (due 15.3.2020).

Session 5 Customer Satisfaction

Description: For a customer to engage in a lasting and productive relationship, the relationship has to create *value for the customer* as well. The most frequently used metric to assess a customer's perception of value is customer satisfaction. How well does it predict future customer behavior and value? Are satisfied customers more loyal, bigger buyers, and less sensitive to price?

Key Words: SPC, Satisfaction, NPS.

Reading: A Guide to Customer Satisfaction Metrics – NPS vs CSAT vs CES. https://www.retently.com/blog/customer-satisfaction-metrics/

Session 6 Customer Loyalty

Description: Loyalty programs are often seen as synonymous to CRM. The retention rate has a significant effect on CLV estimates, but are loyal customers always more valuable? Loyalty programs are not free; rewards can make customers more demanding and even less loyal. What exactly is loyalty? What is the relationship to brand loyalty?

Key Words: Loyalty, CRM and Branding.

Reading: Kumar V, Reinartz W (2018), "Loyalty Programs: Design and Effectiveness," Chapter 10 in *Customer Relationship Management*, Springer, 179-206.

Case: Hilton HHonors Worldwide: Loyalty Wars (HBS 9-501-010)

Session 7 Price Customization

Description: The ultimate goal of customization is to charge different customers different prices. CRM enables complex price customization strategies, but who should be charged a higher or lower price is not trivial, especially with competition. Should you reward existing customers or entice new customers with lower prices? Or is this a wrong customization?

Key Words: Dynamic Pricing, Behavior-Based Pricing.

Assignment: Starbucks (due 5.4.2020).

Session 8 Customer Relationship Management

Description: After having introduced the basic conceptual and analytic building blocks of CRM, we need to see how they can be used to help a company make better marketing decisions. Can CRM be a source of competitive advantage?

Key Words: Customer Acquisition, Retention, Development.

Case: Harrah's Entertainment Inc. (HBS 9-502-011).

Session 9 Customer Centricity Simulation

Description: In the role as CMO at Hartnow, a 3D-printing company that rode its product-centric strategy into a sales rut, you are responsible for turning the business back into the black amid various challenges. To master this task, you have access to various CRM tools and analyses to decide which customers to acquire, develop and retain and which products, programs and campaigns to develop to improve the business performance of Hartnow.

Reading: Simulation Manual.

Assignment: Simulation Report (due 26.4.2019).

Session 10 **Customer Centricity Simulation – Debrief**

Description: CRM is not about data and information technology, but about a systematic and quantitative approach to attracting, developing and retaining the most profitable customers. More detailed customer data are not automatically better. Data are valuable to the extent they enable and support a business strategy. But strategy is first: who is our customer and how do we win?

Session 11 **Customer Journey and Experience**

Description: To reach a large number of widely dispersed consumers, companies often need third party intermediaries or channels. Different customers have different channel preferences and a company must provide the right blend of direct (websites, e-commerce, stores, call centers, and enterprise sales representatives) and indirect (distributors, retailers, solution providers, and online resellers) channels. But a company does not always have control over channels and thus over the consumer relationship.

Key Words: Customer Journey, Multichannel Strategy, Infomediaries.

Cases: AccorHotels and the Digital Transformation (INSEAD).

Session 12 **Group Work**

Session 13 **Group Presentations**

Description: CRM and customization are part of everyday life. The goal of the project is to become more aware of CRM activities and to understand and critically evaluate them. There are two possible types of group projects: (1) select a firm or organization (e.g., Nespresso, Salt, Migros, City of Lausanne, UNIL-HEC, Red Cross, etc.) and analyze the role CRM plays for its business strategy and activities and how the organization uses CRM; or (2) select a specific CRM element and describe and evaluate its use around us (e.g., customer acquisition strategies, loyalty programs, price customization, etc.).

Assignment: Project Report and Presentation (due 17.5.2019).

Session 14 **Course Summary**

Description: For a relationship, it takes two to tango. At the heart of CRM is measuring and managing customer value – the *value to the customer* as a means to create *value to the firm*. Relationship management does mean making all customers as loyal as possible; sometimes customer value is maximized with single interactions. Data and information technology are enablers of more and more sophisticated customer-centric strategies, but they critically depend on striking a balance between creating favorable customer interactions today and the need for better understanding customers to shape future interactions.

Appendix 1: Course Materials

Required Cases and Simulation (to be bought from the HBP website):

- Hilton HHonors Worldwide: Loyalty Wars – HBS Case (9-501-010).
- Harrah's Entertainment Inc. – HBS Case (9-502-011).
- AccorHotels and the Digital Transformation – INSEAD Case (2017).
- Marketing Simulation: Customer Centricity – WH0005-HTM-ENG.

Required Articles (available on Moodle):

- Fishman C (1999), "This is a Marketing Revolution," FastCompany (30.4.99).
- Berger PD, Nasr NI (1998), "Customer Lifetime Value: Marketing Models and Applications," *Journal of Interactive Marketing*, 12(1), 17-30.
- Pfeiffer PE, Carraway RL (2000), "Modeling Customer Relationships as Markov Chains," *Journal of Interactive Marketing*, 14(2), 27-43.
- Birant D (2011), "Data Mining Using RFM Analysis," Chapter 6 in *Knowledge-Oriented Applications in Data Mining*.
- A Guide to Customer Satisfaction Metrics – NPS vs CSAT vs CES.
- Kumar V, Reinartz W (2018), "Loyalty Programs: Design and Effectiveness," Chapter 10 in *Customer Relationship Management*, Springer, 179-206.

Additional Reading Suggestions (optional):

1. Boulding W, Staelin R, Ehret M, Johnston WJ (2005), "A Customer Relationship Management Roadmap," *J of Marketing*, 69 (October), 155-166.
2. Coussement K, Van den Bossche FAM, DeBock KW (2012), Data Accuracy's Impact on Segmentation Performance: Benchmarking RFM Analysis, Logisitc Regression, and Decition Trees," *Journal of Business Research*.
3. Reinartz W, Krafft M, Hoyer WD (2004), "The Customer Relationship Management Process: Its Measurement and Impact on Performance," *J of Marketing Research*, 41 (August), 293-305.
4. Reinartz W, Kumar V (2000), "On the Profitability of Long-life Customers in a Noncontractual Setting: An Empirical Investigation and Implications for Marketing," *J of Marketing*, 64(Oct), 17-35.
5. Anderson EW, Mittal V (2000), "Strengthening the Satisfaction-profit Chain," *Journal of Service Research*, 3(2), 107-120
6. Kamakura WA., Mittal V, De Rosa F, Mazzo JA (2002), "Assessing the Service-Profit Chain," *Marketing Science*, 21 (Summer), 294- 317.
7. Reinartz W, Kumar V (2002), "Mismanagement of Customer Loyalty," *HBR* (July).
8. Reichheld F, Sasser WE (1990), "Zero Defections: Quality comes to Service." *HBR* (Sep-Oct).
9. Morgan NA, Anderson EW, Mittal V (2005), "Understanding Firms' Customer Satisfaction Information Usage," *J of Marketing,* 69 (July), 131-151.
10. Hochmann M (1999), "Customer-Satisfaction Measurements: An Answer to Yesterday's Problem?" *HBR* (Aug).

Appendix 2: Individual Exercises

Each student must submit one report out of the two data-based exercises posted on Moodle. The Starbucks assignment is required for everyone. A report must not exceed 2 pages plus Appendix with the data analysis (if appropriate).

Convergys: **01.03.2020 (18h00)**

Hansen: **15.03.2020 (18h00)**

Starbucks: **29.03.2020 (18h00)**

Appendix 3: Simulation

The simulation exercise will be introduced in session 8. In this highly interactive simulation, groups are tasked with building a customer-centric strategy to drive business growth at *Hartnow*, a 3D printing company. Equipped with a CRM dashboard, groups must gather and analyze detailed customer behavior data make strategic investment decisions to develop and sustain a profitable customer base over 9 periods.

During session 9 groups will make their first few decisions. The second part of the decisions are then to be made before **Friday, 24. April 2020 (14h00)**. The report about the learning experience – details will be provided in class – is due on **Sunday, 26. April 2020 (18h00)**.

Appendix 4: Field Project

The goal of the project is to become more aware of CRM activities around us and to understand and critically evaluate them. There are two possible types of group projects: (1) contact a business or organization (e.g., Nespresso, Salt, Swisscom, Medtronic, Tetrapak, BCV, City of Lausanne, Saas Fee, UNIL-HEC, Red Cross, etc.) and analyze the role CRM plays for its business strategy and activities by interviewing responsible managers; or (2) select a specific CRM practice (e.g., customer acquisition strategies, loyalty programs, price customization, etc.) and describe and critically evaluate its use around us.

Each group will give a 10-minute presentation. The deliverables are a report and the deck of slides for the presentation. Extra materials, such as cited works, other evidence, or calculations can be included as an appendix at the end of the slide deck. Each presentation will be followed by about 10 minutes of Q&A and class discussion. The exact details will be provided in class.

We will allocate time during the course for groups to work on the project and get guidance from the instructors. By mid course the groups are required to provide a brief progress report. The final deliverables are due on **Friday 15. May 2020 (14h00)**.

Appendix 5: Individual Assignment for PhD Students (in lieu of the Field Project)

The purpose of this assignment is to allow you to research a theoretical or applied topic related to what we discuss in class, i.e., the modeling and estimation of customer purchase behavior (e.g., customer valuation and scoring, stochastic buying behavior, customer churn models, dynamic pricing, resource allocation to acquire, retain and develop customers, etc.). This will be an important exercise, because you will have to think how to collect and summarize existing research and how to model individual customer behavior. You have the freedom to determine what to investigate, which in the process will test your creativity and critical thinking ability.

Your task will be to identify a major customer management problem from a peer-reviewed journal article or book chapter. Summarize the theory in maximum 3-5 pages (double-spaced), explain what the major independent variables of the theory are and how or why they theoretically predict an outcome of interest. Using some of the modeling approaches we have discussed in class or other reputable sources, identify potential (theoretical) limitations and key modeling assumptions or new empirical applications of the theory. Then, find a minimum 8 peer-reviewed journal articles that will support or challenge your argumentation either theoretically or with empirical results (about 12 pages double-spaced). Finish with reflections and conclusions (about 3 pages, double-spaced).

All sources must be adequately cited and presented in full in the reference list. Do not "lift" sentences verbatim (i.e., do not copy word-for-word what someone else has written); please paraphrase what you borrow from others and document all sources (even if paraphrased). Failure to document a source of information, or plagiarism of any sort will result in a "zero" grade, low-contextually, universally speaking! Because of space limitations avoid using quotations, unless imperative.

This assignment is to be prepared individually and should be approximately 20 double-spaced pages (excluding cover page and references). The assignment is due by e-mail to me (markus.christen@unil.ch) in MS Word on 30 May 2020, 12h00 (midday, Swiss time).

The final grade will be calculated as follows (all parts with equal weight):

1. Presentation of theory based on a significant contributor to the topic
2. Identification of assumptions, applications
3. Review of relevant literature
4. Integration of literature
5. Reasoning, flow and presentation