An e3-Value Pattern for Valuing Customer Retention Initiatives

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Abstract. Customer retention is often a profitable activity but its benefits are not always well-communicated to all stakeholders. Using the e³-value ontology we develop a model to facilitate a shared understanding about customer retention management services and actions. Such a model allows to visualize and calculate the economic impact of customer retention initiatives, and facilitates scenario analysis. Additionally, we generalize the model such that it can be applied for valuing other CRM activities than customer retention.

Keywords: Customer Retention Management, e3-value, Profitability

1   Introduction

Although the value of marketing is strongly supported by research results from the social and behavioural sciences, it is often difficult to express its value in hard figures. Consequently, the value of marketing activities is largely neglected by accountants. They see marketing activities as mere expenses, while marketing is a determining factor for the long-term value of an enterprise [1]. Therefore marketing expenses should be seen as investments, taking both costs and estimated revenues into account.

The objective of this paper is to represent customer retention activities [2] (i.e. the ability to keep existing customers), which are potentially highly valuable in both contractual and non-contractual businesses [3]. In times of economic crisis, cutting costs is the primary concern of most companies, even if it is unlikely that the optimal point of spending, which is marked by a maximized ROI (i.e. return on investment), will be reached by blindly cutting budgets. Yet the marketing department is the first victim of forced budget cuts [4]. One of the possible explanations for this choice is that corporate boards are out of touch with the marketing department, meaning that CxO's are unaware of the potential return on investment of marketing activities.

Therefore, in accordance with the hierarchic view on the generic 'cognitive-affinitive-conative' pattern for stimuli response [5], people, in this case managers and accountants, first need to know about something, before they can have (positive) emotions towards it and can act in accordance with those emotions. As a result the management and stakeholders need to know (cognitive) how marketing activities

generate positive returns (affinitive) in order to support these activities with sufficient financial means (conative). An e3-value model is used to communicate (i.e. visualize and predict financial return) the financial aspects of customer retention to management and stakeholders. The e3-value ontology provides the appropriate terminology and axiomatisation to support modellers and their target audience to conceive and read such models correctly.

In the next section it is shown that customer retention management services and actions can be described as an e3-value model pattern,[1] which applies also to other CRM activities. . *"*

2   CRM Pattern

Figure 1 shows the CRM e3-value model pattern, which models actors called SUPPLIER and SERVICE PROVIDER and a market segment (i.e. the CUSTOMER BASE of the SUPPLIER). The SERVICE PROVIDER performs the value activities 'BEHAVIOR PREDICTION' (i.e. customer retention management services for developing the prediction model and classifying the customers into positives[2] and negatives) and 'ACTION' (i.e. the customer retention action that approaches the previously selected customers with an incentive). The SERVICE PROVIDER can be a profit centre in the Company or it can form an individual economic entity contracted by the COMPANY. Customers will perceive the SUPPLIER and SERVICE PROVIDER as one actor.

The SUPPLIER performs the activity 'REGULAR PRODUCTION' which embodies supplying customers with products (i.e. goods and services). The pattern (fig. 1) abstracts from the costs (e.g. labour cost) that come with supplying these products. At a certain point in time, customers stop buying products (i.e. customer churn). To limit this churn, the SUPPLIER invests in a value activity called 'STIMULATION' to renew the loyalty of churners, which comprises interacting with a retention SERVICE PROVIDER and a renewed revenue stream coming from converted customers.

Given that products supplied to converted customers are exactly the same in value and cost as those supplied to genuine customers, we aggregated the money and product flow into a value activity called 'PROVIDE OUTPUT', which is shared between customers that participated in the 'ACTION' of the SERVICE provider and those that did not. The effect of the action is an increased utility level for the customer. When the value of the utility experienced by the customer had dropped below this purchase price, which would have forced him/her to churn, then this action is a good investment (true positive), otherwise the customer would have continued purchasing anyway (false positive).

Start stimulus *A* models the start of the relationship between SUPPLIER and CUSTOMER. This start stimulus is represented in the CUSTOMER BASE reasoning that most contractual transaction are demand driven. Clearly, there is always a stimulus

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[1] *"A problem which occurs over and over again in an environment […], with one or more solutions for the identified problem"* [6]

[2] People that are likely to churn (i.e. stop purchasing the supplier's products)

originating from the COMPANY, but customer acquisition is another pillar of customer equity, next to customer retention and cross selling[3] [7]; therefore, it is considered outside the scope of the model. Hence we do not model any different scenarios concerning the start stimulus *A*.
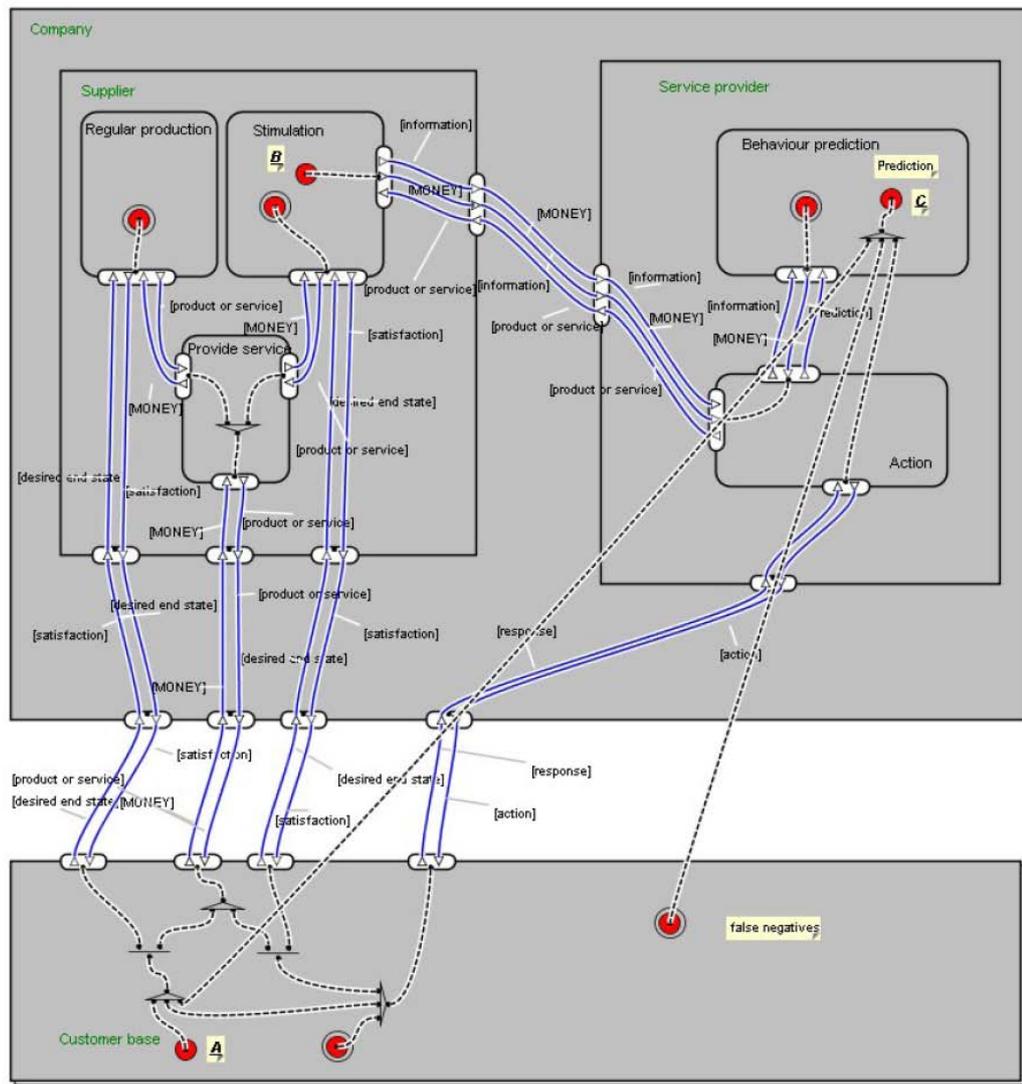

Fig. 1. CRM Pattern

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[3] Meaning selling an additional product or service to an existing customer.

The start stimulus leads directly to a value transaction which shows interaction between a customer and the COMPANY (i.e.: exchanging products for money and an emotional state desired by the SUPPLIER (e.g. loyalty) for satisfaction).

Another path starts in the value activity 'RENEW CUSTOMERS' with start stimulus **B**, leading to a value transaction between the SUPPLIER and SERVICE PROVIDER. This transaction involves information, money and the retention service itself. This value transaction might be a onetime deal or a continuous cooperation.

A third start stimulus (i.e. **C**) signals the start of predicting churn and choosing the cut-off in the 'BEHAVIOUR PREDICTION' activity. This stimulus is directly followed by an OR-fork that represents the selection of customers that are approached with an 'ACTION' incentive for churn prevention (i.e. positives) and those that are not (i.e. negatives). The activity 'ACTION' requires a list of customers that are predicted to churn, which are exchanged for money with the 'BEHAVIOUR PREDICTION' value activity. The customers for which the SERVICE PROVIDER decided not to invest in 'ACTION' follow the path to an end stimulus in case they were false negatives (i.e. churners that were not predicted to churn), or to a new purchase similar to prior ones in case they are true negatives. The contacted customers follow a path to another OR-fork which represents the partial conversion of the true positives by creating two sub paths (i.e. one towards a stop stimulus for those not converted and another towards a renewed relationship) and a sub path for the false positives which copies earlier value transactions.

The converted customers experience two different transactions: the conventional product for money exchange and the emotional exchange desired end state (e.g. renewed loyalty) for satisfaction, which creates value for the SUPPLIERS and is represented as the 'STIMULATION' value activity.

3   Conclusions and Future Research

This paper shows an e3-value patter for predicting the return on investment for a customer retention campaign, discriminating the regular production activities from the customer retention management services and action, to show that customer retention is an investment, not a cost. Therefore, the marketing department can no longer be marked as a spending instance with no measurable returns. Additionally, this pattern allows us to optimize retention management services, as they allow us to predict the financial outcomes for different scenario's (e.g. different prediction models and cut-off values), which may help clarifying the benefits of customer retention to managers and accountants. Hence, the model can also serve as a communication tool.

In the future we would like to refine this pattern and use it as a conceptual basis for creating empirically based predictions of CRM campaign returns. We would also like to investigate the use of this pattern as a template for other economic activities that involve predicting the behavior of customers and other economic partners (e.g. sales prediction, bankruptcy prediction, cross selling, market segmentation).

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