Customers DNA

Value Proposition for Insurance Companies

Customer Intelligence in the Insurance Industry

CONTENTS

CUSTOMERS-DNA

I.   CRM in the Insurance Industry

CRM is the strategy of creating, expanding and sustaining the customer relationship. CRM in the insurance industry aims at two main objectives:

- Customer Retention/Renewal

- Customer Development

An integrated CRM strategy should win the customer, build a relationship and intensify it by anticipating his needs and concerns through all phases of customer lifetime.

Lifecycle management integrates all appropriate activities that should be taken during the customers' lifecycles in order to maximize customer lifetime value.

Generally lifecycle management is described by the following figure:

II.   Customer Intelligence Applications
Customer Segmentation

Segmentation is the process of dividing the customer base in distinct and internally homogeneous groups in order to develop differentiated marketing strategies according to their characteristics. There are many different segmentation types according to the specific criteria / attributes used for segmentation. For the insurance industry the most critical types of segmentation are based on value, socio-demographics and behavioral patterns.

In <u>Value Based Segmentation</u> customers are grouped according to their revenue or profitability. It is one of the most important segmentation types since it can be used for identifying the most valuable customers and for tracking value changes over time. It is also

used for differentiating the service delivery strategies and for optimizing the allocation of resources in marketing initiatives.

Value based segmentation in the insurance industry can be applied at both individual & household level in order to support share of wallet analysis respectively.

A typical list of value segments is presented below.

- Gold. Top 20% of customers with the highest value

- Silver. 30% of customers with the second highest value

- Bronze. 50% of customers with lowest value

- Zero. Profitability = 0

Value based segmentation is mostly used for service prioritization and budget allocation for retention activities. When value segments are cross-examined with churn probability (see churn prediction) we have the Value at Risk segmentation, a compound segmentation which can help in prioritizing the churn prevention campaigns according to each customer's value and risk of defection.

Socio-Demographical segmentation reveals different customer groupings based on socio-demographical and/or life stage information such as age, income and education (see following graph). This type of segmentation is appropriate for positioning and segmentation marketing.
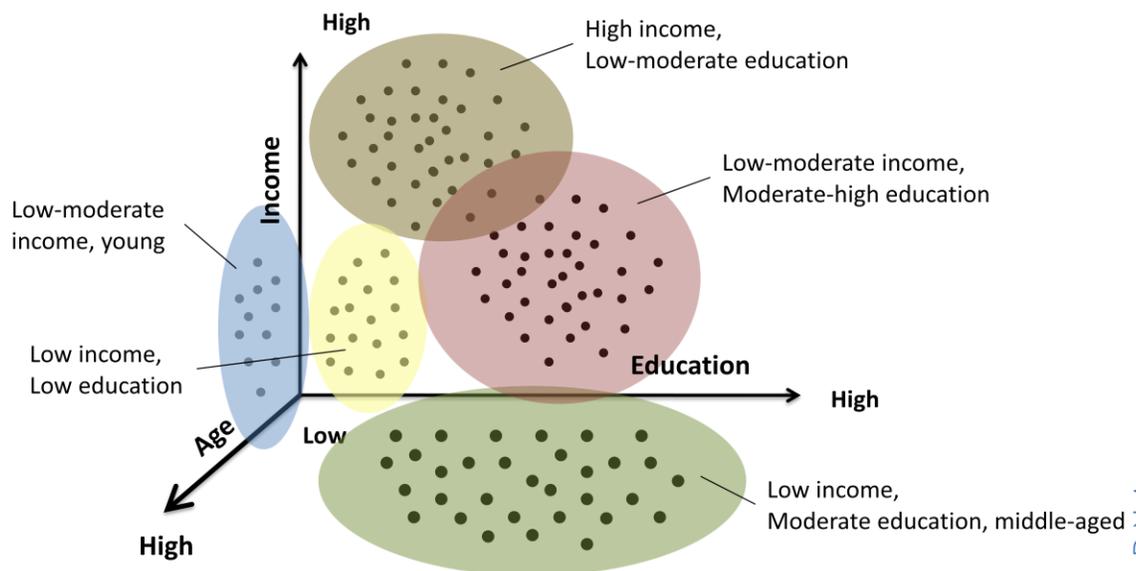
The family life cycle segmentation is mainly determined by customers' age, marital status, and number / age of children. Typical family life cycle segments include:

- Young singles

- Young families / no children

- Young families / children under 5

- Growing families / children above 5

- Families with children

- Older retired persons

Quite often demographical data are limited, and / or outdated or of questionable validity. Organizations can augment their demographical data repository with data purchase from an external supplier, provided of course this is permitted by the country's legislations. Alternatively, relevant data can be collected through a market survey.

The life stages are defined by special events that determine a person's priorities and main concerns such as the birth of the first child, a significant increase in the income etc.

Life stages present opportunities for promoting products and services that address the particular needs of the customers in the insurance industry.

An insurance company should try to identify the important life stage events and link them with insurance products and needs.

For example the birth of a child is strongly related with health insurances for children. Wealthy new families are more likely to be interested in a property insurance product.

Since quite often the fields required for life stage segmentation are not available in the organization's customer databases, analysts usually try to link the age of customers with specific life stage events.

`Behavioral segmentation is implemented by using database analysis on customer behavioral patterns. The segments are identified with the application of appropriate clustering models on relevant data that usually reside in the organization's data warehouse / data marts. Therefore behavioral segmentation can be implemented with a high degree of confidence and relatively low cost. Attributes that can be used for behavioral segmentation include products/policies ownership, payments and claims history etc.

Typical behavioral segments that can be found in insurance industry include:

- Basic Relationship: Customers with only the mandatory insurance products such as car insurance etc. Households with low financial status or just people who do not plan the future.

- Safety Seekers: Individuals or households focusing on safety for themselves and their children. Interested in life & health policies.

- Full Portfolio: People who plan their future owning bank assurance/retirement products as well as life/health and content insurance products. Households with medium / high financial status.

CUSTOMERS-DNA

- Performance Seekers: Wealthy customers with not much of safety considerations wishing focusing on wealth growth and insurance investment products.

Behavioral segmentation is mostly used for greater understanding of customer needs, greater differentiation, new product development tailored to differentiated needs and maximization of return on investment through targeted marketing (see following graph).
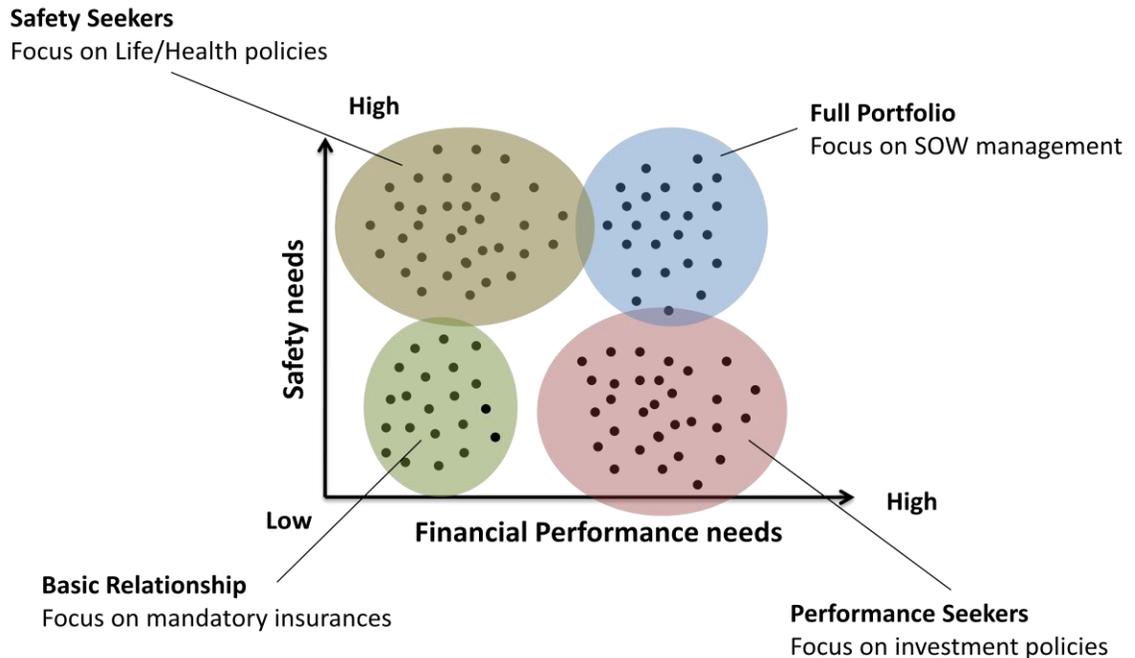
When behavioral segmentation is enriched with market research can be used for building effective strategies based on SWOT analysis.

For example 'Future Investors' may be a first priority segment for a specific insurance company based on the database attributes that have been analyzed. This segment proved to be a wick but with great potential sub-group that company should build a differentiated development strategy.

Target Campaigning

Marketers use direct marketing campaigns to directly communicate a message to their customers through mail, internet, e-mail, telemarketing (phone) and other direct channels in order to prevent churn (attrition) and drive customer acquisition and purchase of add-on products. Effective targeting is very important for minimizing the size of a campaign and maximizing the positive response rate. Multiple statistical techniques are used such as association analysis and propensity modeling for building effective targeting and maximize return on investment (ROI).

Generally the following analytical cycle is used for effective campaign management.

Our approach, as CUSTOMERS-DNA, supports all above mentioned phases starting from data gathering and ending results evaluation and next round enhancements.

Multiple analytical techniques can be used for analyzing data and improve the effectiveness of campaigning.

Association analysis is used for identifying related products typically purchased together. These models can be used for market basket analysis and for the revealing of bundles of products / services that can be sold together. Insurance firms can more accurately select which policies and services to offer to which customers. For example an association model may suggest that property protection products can be combined with income protection insurances at a confidence of 20%.

With this technique, insurance companies can also perform sequential (over time) analyses on customers. For example, what percentage of new auto insurance policyholders also purchases a homeowners insurance policy within five years?

Propensity modeling in marketing is used mostly for predicting an event such as a purchase of a new policy or switching to competition. The generated model can be used as a scoring engine for assigning customers in the predefined events. It also estimates a propensity score for each event that denotes the likelihood of event to happen.

The following table presents a list of propensity modeling applications in the insurance industry along with their business objectives.

Business Objective	Marketing Application
Getting customers	• Acquisition: Finding new customers and expanding the customer base with new and potentially profitable customers based on socio-demographical data from external lists
Developing customers	• Cross selling: Promoting and Selling additional insurance policies to existing customers • Up selling: Offering and switching customers to premium insurance policies, increasing the insured / investment amount or covered items etc
Retaining customers	• Retention: Prevention of voluntary churn, with priority given to presently or potentially valuable customers

As acquisition costs increase, insurance companies are beginning to place a greater emphasis on customer retention programs. Experience shows that a customer holding two policies with the same company is much more likely to renew than is a customer holding a single policy. Similarly, a customer holding three policies is less likely to switch than a customer holding less than three. By offering quantity discounts and selling bundled packages to customers, such as home and auto policies, a firm adds value and thereby increases customer loyalty, reducing the likelihood the customer will switch to a rival firm.

Many times propensity scores are cross examined with value segments in order to optimize budget allocation for retention actions. A company goal is set as the reduction of annual lost revenue, due to customer attrition, by 30%. The segmentation objective is to categorize customers based on value and likelihood of switching. High value at risk customers constitutes the first retention priority for the company since they contribute a large proportion of revenue and at the same they have shown signs of upcoming attrition. Different retention strategies are developed based on value and risk in order to effectively retain the most valuable customers.
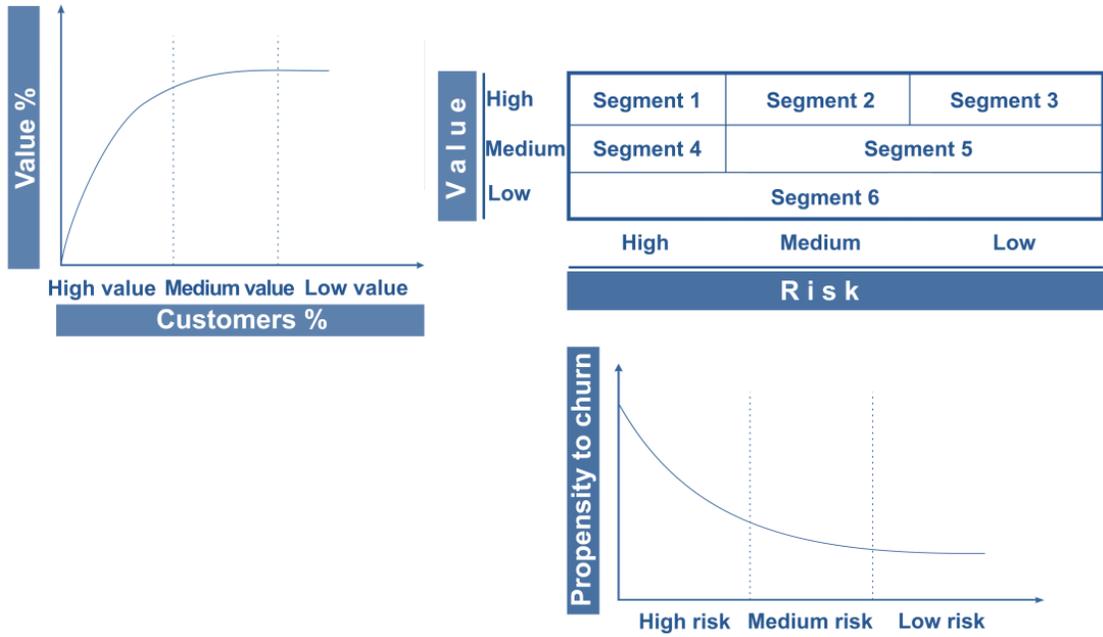
Based on the above graph segments 1, 2 and 4 should be prioritized for retention activities and segments 5 and 6 for development. Propensity modeling for new policies uptake should be further used, within segments, in order to manage an effective one-to-one approach.

Integrated Marketing & Next Best Activity

Customer intelligence outcomes should be put together and used in the every-day business operations of an organization to achieve an integrated customer management strategy. The knowledge extracted by data mining can contribute to the design of a Next Best Activity proposal. More specifically, the customer insight gained by data mining, can enable the setting of 'personalized' marketing objectives. The organization can decide on a more informed base the best next marketing activity for each customer and select an 'individualized' approach which might be:

- An offer for retention, mainly for high value at risk customers

- A promotion for the right add-on policy and a targeted cross / up selling offer for customers with growth potentials

- Imposing limitations and restrictions for customers with bad payment records or fraudulent claims

- The development of a new policy / new product offering tailored to the specific characteristics of an identified segment, etc.

The main components that should be taken in account in the design of the NBA strategy are illustrated in the following figure.
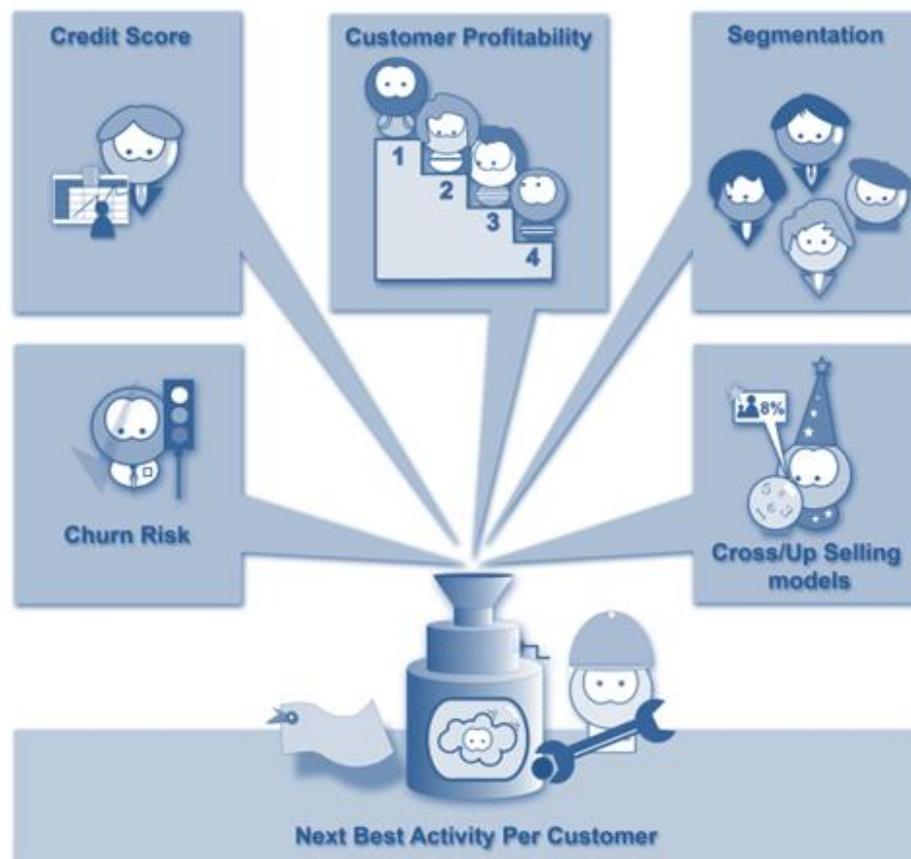
The following projected, by data mining information, should be used together to support an integrated strategic marketing approach and effective lifecycle management.

- The current and expected / estimated customer profitability and value

- The type of customer, the differentiating behavioral and demographical characteristics, the identified needs and attitudes revealed through data analysis and segmentation

- The growth potentials as designated by relevant Cross / Up Selling models and propensities

- The defection risk / churn propensity as estimated by a voluntary churn model

- The payment behavior as well as claim history

CUSTOMERS-DNA

III.   Data Requirements

In the insurance industry the following clusters of information are usually used for implementing the previously mentioned customer intelligence projects.

Customer Details such as:	Customer Payments
- Customer ID	- Policy ID
- Household ID	- Customer Payment ID
- etc	- Expected Date of Payment
Customer Demographics such as:	- Actual Date of Payment
- Customer ID	- Customer Payment Type
- Gender	- Customer Payment Amount
- Occupation	- etc
- Date of Birth	**Claims**
- Income	- Policy ID
- Num of Children	- Claim ID
- etc	- Date of Claim.
Customer Policies	- Claim Amount
- Policy ID	- Claim Details
- Policy Description	- etc
- Start Date	**Claims Payments**
- End Date	- Claim ID
- Renewal Date	- Claim Payment ID
- Delinquency Flag	- Date of Claim Payment
- Insured Amount	- Claim Payment Amount
- Insured Item	- etc
- etc	**Contacts***

* Historic contacts and especially complains when are systematically recorded constitutes valuable information that can be correlated with customer switching to competition.

CUSTOMERS-DNA

IV. Cooperation Approach – CRISP DM
Proof of Concept

Our cooperation approach is based on a full outsource model that requires minimum IT involvement, zero demands on human resources and zero demands on HW & SW infrastructure.

Anonymised data are requested in specific formats that covers specific projects' needs. The analytical process is done in our premises and results are installed and explained to customer in order to take full advantage of each project.

Proof of concept approach makes sure that customer will not invest money for a project that doesn't fully covers his needs. The following steps simply describe the proof of concept approach.

- Short interviews in order to define the exact analytical requirements

- Get a representative sample of appropriate encrypted data

- Analyze, score and create results summary in our premises

- Present the results as well as strategic deployment tips in your premises

- You decide if there is a value added from our work and if it worth paying for it.

Short interviews in order to define the exact analytical requirements	Get a representative sample of appropriate encrypted data	Analyze, score and create results summary in our premises	Present the results as well as strategic deployment tips in your premises	You decide if there is a value added from our work and if it worth paying for it.
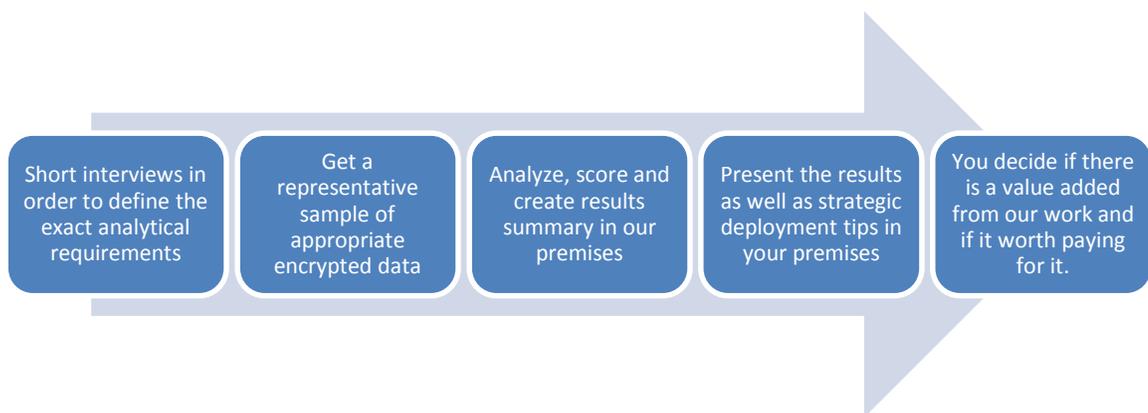
POC approach doesn't commit customer to pay for a project if he doesn't approve it

CUSTOMERS-DNA

CRISP DM

Data mining projects are not simple. They usually start with high expectations but they may end in business failure if the engaged team is not guided by a clear methodological framework. The CRISP-DM process model charts the steps that should be followed for successful data mining implementations. These steps are:

Business understanding. The data mining project should start with the understanding of the business objective and the assessment of the current situation. The project's parameters should be considered, including resources and limitations. The business objective should be translated to a data mining goal. Success criteria should be defined and a project plan should be developed.

Data understanding. This phase involves considering the data requirements for properly addressing the defined goal and an investigation on the availability of the required data. This phase also includes an initial data collection and exploration with summary statistics and visualization tools to understand the data and identify potential problems of availability and quality.

Data preparation. The data to be used should be identified, selected and prepared for inclusion in the data mining model. This phase involves the data acquisition, integration and formatting according to the needs of the project. The consolidated data should then be cleaned and properly transformed according to the requirements of the algorithm to be applied. New fields such as sums, averages, ratios, flags etc should be derived from the raw fields to enrich the customer information, better summarize the customer characteristics and therefore enhance the performance of the models.

Modelling. The processed data are then used for model training. Analysts should select the appropriate modelling technique for the particular business objective. Before the training of the models and especially in the case of predictive modelling, the modelling dataset should be partitioned so that the model's performance is evaluated on a separate dataset. This phase involves the examination of alternative modelling algorithms and parameter settings and a comparison of their fit and performance in order to find the one that yields the best results. Based on an initial evaluation of the model results, the model settings can be revised and fine-tuned.

Evaluation. The generated models are then formally evaluated not only in terms of technical measures but, more importantly, in the context of the of business success criteria set in the business understanding phase. The project team should decide whether the results of a given model properly address the initial business objectives. If so, this model is approved and prepared for deployment.

Deployment. The project's findings and conclusions are summarized in a report but this is hardly the end of the project. Even the best model will turn out to be a business failure if its results are not deployed and integrated in the organisation's every-day marketing operations. A procedure should be designed and developed that will enable the scoring of customers and the update of the results. The deployment procedure should also enable the distribution of the model results throughout the enterprise and their incorporation in the organization's data bases and Operational CRM system. Finally, a maintenance plan should be designed and

CUSTOMERS-DNA

the whole process should be reviewed. Lessons learned should be taken into account and next steps should be planned.

The aforementioned phases present strong dependencies and the outcomes of a phase may lead to revisiting and reviewing the results of preceding phases. The nature of the process is cyclical since the data mining itself is a never ending journey and quest, demanding continuous reassessment and update of completed tasks in the context of a rapidly changing business environment.

V. Deliverables

CUSTOMERS – DNA within a project implementation delivers the following:

- Technical document with appropriate SQL, streams or any other procedures needed for the implementation of the data preparation & modeling steps of the project

- Business document that present in detail the findings/conclusions and tactical directions to be followed based on the implementation of the project

- Training of the project teams based on the above mentioned documents

- Presentation to management for taking actions and making decisions for next steps

- A support period may be arranged for a year period after implementation of the project

VI. Contact

CUSTOMERS-DNA

Vironos 19 & Aegeou 1 – Maroussi Postal Code 15 122

E-mail: info@customers-dna.com

Phone Num: +30 694 4510540

CUSTOMERS-DNA