

TRIZ and CRM, hand in hand!

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Abstract

In today's competitive world it is not easy to attract costumers and keep them loyal just because of existence of rigorous competition and the increase of customer awareness about competing products or services. It is often said that attracting a new customer will cost 3 up to 5 times more than keeping a current one. So it is of great importance for a company to make its present customers loyal. Methods and techniques applied by different companies vary considerably and most of them are experimental. These methods and techniques (or maybe they must be called tricks!) are classified under the title: 'Customer Relationship Management' or 'CRM'. But in the meantime, theory of inventive problem solving (TRIZ) suggests that anything which has an innovative nature, like these tricks, can be made systematic. So we will try first to extract CRM tricks applied by the well-known retailers -such as Sears, Amazon, Wal-Mart, Argos and the Iranian one; shahrvand- through a summarized description of their operations. Then we will show you a comparison between them and TRIZ 40 inventive principles. For better recognition of the relationship, both the tricks and the principles are considered in groups. In the conclusion section we will point out difficulties of TRIZ application in CRM.

Key words

Theory of inventive problem solving (TRIZ), Customer Relationship Management (CRM), 40 Inventive Principles, Marketing, retailers, customers

Introduction

When it comes to innovation and creativity it's no right to focus our attention on anyone but Genrich Altshuller who was a Russian mechanical engineer employed in the ex-USSR navy patent office. After studying tens of thousands of patents called *authors certificate* then, he found out about patterns and rules that govern and direct innovation globally. Now we know these techniques as the theory of inventive problem solving or more commonly its Russian acronym, TRIZ.

Before TRIZ, many techniques were established to help individuals improve their problem solving ability. To name a few, we can consider brain storming, morphological analysis, synectics, etc. but still the need for a more advanced technique which guides the

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user up to the final step in the process of problem solving and offers both of the above characteristics, was clear and obvious. TRIZ is a collection of such techniques, which enables us to understand the real problem, formulate its contradictions, and evolve the system towards perfection while solving the problem. TRIZ is based on facts about previous innovations. TRIZ does not care about the difference between innovators and ordinary people, but asks about exclusive characteristics of brilliant ideas, solutions, designs, etc in comparison with ordinary ones. TRIZ looks for sources of innovation in the system itself not in the individuals or the organization surrounding it, so we can manage and guide the processes of value maximizing by problem solving.

Two functions are generally expected from a complete problem solving toolkit like TRIZ, first to solve problems and generate new ideas and second, to anticipate directions of future innovations and evaluate ideas. TRIZ was originally created for the first one. Its famous contradiction matrix (and 40 inventive principles) is among the most powerful problem solving tools ever developed.

In this article we are going to explore compatibilities between inventive principles and CRM tricks of the trade. CRM or “Customer Relationship Management” is one of the most popular subjects; many organizations find it useful and decide to focus on. It is about different techniques a company can use to manage relationships with customers and offer products and services to them.

We will compare some of the 40 principles to CRM tricks to explore applicability issues, but remember that TRIZ not only gives you these principles but also tells you when to choose each one. We ignore this part since it needs a full description of business versions of 39 parameters upon which there is not a global consensus among experts. We have created a story like description about these retailers and their typical CRM related activities. They have reached a number of ideas for better CRM upon time and experience. We will consider most successful ones. The criteria used for selecting successful ideas (solutions) applied by retailers have been similar to that used by TRIZ in problem solving processes. From the viewpoint of TRIZ any good solution has two general characteristics, TRIZ is able to generate and evaluate both of them:

- I. Solves a contradiction (a contradiction is a situation in which an event/system/trend/element/object/.. results in some useful results as well as at least one harmful result).
- II. Governs the system to follow the general directions of innovation. This means for example going closer to ideal state (in ideal state we have all the necessary results without any expenses or drawbacks and with no consumption of any resource), Using accessible resources that are often ignored.

Through reading the story you will be amazed of seeing how many TRIZ inventive principles would pop up with a little attention! Wherever the story is describing a creative idea, a number is used for reference which Later on will be used to elaborate corresponding TRIZ principle. Names of all the stores are replaced sears with the term Retailer and websites with retailer.com.

Case study: the good retailer

Retailer is one of the biggest chain stores in the world. After adding its click structure to traditional brick structure [1], this store offers its customers a variety of services and support in order to satisfy these clickers and make them loyal. These services which are called "Customer Relationship Management", are offered in a wide range. Here, some of these activities are considered and corresponding principles in TRIZ toolbox will be explained.

This organization benefits from a number of affiliated websites [2] which are dedicated to different activities and the customers can reach them via Retailer.com [3]. For example in one of them Retailer offers providing mass amounts of product or service for smaller retailers [4] while in another it is possible for the customer to do almost anything with a photo [5]! Some of them are exclusive to Retailer. [6] "Dealer stores" program has made it possible for customers to become dealers [7]. These local dealers are one of the best sources of information about customers [8].

Even when a customer hasn't signed up in Retailer and wants to search anything in its websites [9], Retailer offers related products to him [10] and tries hard to encourage him to buy. After he signs up in Retailer.com, a profile will be built [11]. All of the data about this customer will be saved there. Retailer tries to forecast his/her buying patterns [12] and trend to be able to present him with appropriate products available in the store [13]. These trends are extracted [14] from his data in Retailer's data warehouse and with comparison with similar customers and their behavior. For example last year, in January you bought drapes from Retailer. This was saved in your profile and this year, at the same time, Retailer will offer you a variety of drapes similar to last year purchase with discount. [15]

As a result of the fully integration between different databases, [16] which operate simultaneously, if you buy a product from one of Retailer affiliated websites; others offer you their related products [17]. That is the result of a good integration between all the parts of this organization and shared database with unique profile for any customer. It has also several services for its customers who log in the websites. Retailer is exclusive retailer and distributor of some famous brands. So when its customer wants to buy a product of these brands, Retailer is able to make very special offers [18]. Retailer also has special credit cards and offers more facilities to customers with good credit history. [19]

The first group of TRIZ principles is arrangement related principles. They discuss arrangement of parts, and their grouping in terms of time, space and conditions. Four objects can be segmented in these dimensions for use in CRM context. They are: market (customer), service or product and its features, interfaces and offers. **Segmentation** is the most famous one. It says: Segment an object into independent modules or Increase the degree of segmentation. In idea number [2] the corporate is segmented and in [10] we are segmenting the goods, and then using goods of the same segment for making offers. Then the opposite of it, **merging**, corresponds to number 4, 5 and 16. In [4] we are merging single goods and small offers. In [5] we are merging similar services and [16] applies the principle among databases. Number [14] represents **taking out** in which we extract a part or characteristic (a trend here) from a whole. In number [3] Retailer plays the role of an **intermediary** party and communicates with the two ends!

The second group of TRIZ principles is function related principles. They discuss quality of delivering functions in terms of time (& pace), space, and conditions. Again, those four objects can be used for delivering functions in these dimensions for use in CRM context. Retailer has powerful data mining applications along with integrated databases [17] they assist the company to better find patterns and trends of customer behavior [12] TRIZ suggests this in its **Preliminary Action** principle which is about forecasting the future and performing preliminary needed actions in advance. A similar principle is about **Preliminary Anti-Actions**. For example plans like 60 day money back guarantee which is very common among these sorts of retailers is a good example. It prevents future dissatisfaction of customers and avoids hesitation in time of buying.

Other principles of this group are less frequent in our case but some of them have interesting applications. **Universality** is about Use of standard or multifunctional parts. Or better say it assigns as many functions as possible to any object like customers who can act the role of a marketer or retailers who also collect customer data and perform market research related activities [8]. When we are trying to offer products or services matching every specific customer [13], we are very close to **Equipotentiality** principle which suggests that the customer and the offer must be in the same group (potential level) and they must fit each other. At last when customers become dealers [7] we have **inverted** the deal.

There are other functional principles in TRIZ that are similar to CRM tricks of the trade! TRIZ says use **Cheap Short-Living Objects** instead of expensive durable ones when you are working with unstable or changing objects. Here in our example gift shopping cards offered by Retailer are a short term possibility in an innovative way.

The third group of TRIZ principles discusses symmetry, asymmetry, homogeneity and heterogeneity. They refer to structural characteristics in terms of time (& pace), space, and

conditions. Again, four objects can be used for handling these characteristics in CRM context. They also describe solutions in which compensating structures with breaking symmetry, prevent harmful function from accumulation.

Local quality has the most frequency of use. Products and services (brands) exclusive to a retailer [6] (business side) and having personal profiles for each customer helping the company to make much customized offers [11 & 18] (customer side) are all **local qualities**. Another example of this principle is extra facilities offered to customers with good credit history [19]. **Dynamics** is another TRIZ principle in this group and is about changes over time and conditions. Click structure instead of traditional brick structure [1] is one end and dynamic pricing, offering and discounting [15] is the other one. 360 degree virtual showrooms which are gaining more and more popularity now, are in fact **images** of the reality with as few dimensions of reality as possible.

The last group of tricks (principles) is about features. They discuss about features and their variance along time, space or conditions. Marriage wish lists are in fact, recognition of a **phase change** in life of a customer by the retailer and are successful plans. They are win-win plans offering more value to both parts. Many sites like dating ones, retailers ... let a visitor (without an account) to search in their databases [9] so that they can evaluate the service and become interested in it. They with this piece of good job, try to make an **inert** but functional **atmosphere** for exploration, judgment and decision making of the customer.

As you see almost all of the tricks applied by Retailer are (at least it seems) in great compatibility with general rules of innovation stated by TRIZ. The effort to find applications of principles in business and also studying past innovations and their compatibility with principles is an interesting and fruitful one. In the conclusion section we will sum up results of the whole study.

Conclusion

Some of the principles are more compatible with business world! Others are fuzzy hints. In fact we are using the latter ones as sources of intuitions so in some cases it's hard to determine which principle is more dominant. It is a great challenge to conform some of TRIZ principles with CRM, like porous material. Principles which are closer to physical world, tools or phenomena, are of this sort. In contrast the more they become conceptual and abstract the easier it is to conform them. Some of the principles seem to be of upper levels of creativity compared to others, like segmentation, compared to thermal expansion.

One describes a systematic relationship and structural patterns and the other is about a phenomena.

Frequency of use of 40 inventive principles in CRM is different from that of technical world. Principles relating to functions are most frequent ones here. Principles about functions are most frequent ones. This is a common thing in business environment (not only in CRM).

We have examined the innovations and tricks of the trade first, and then compatibility of them with 40 principles, exactly the Altshuller way. But one should also keep it in the mind that 100 or even 400 cases are not something to be compared to 40000 and the total number of all CRM innovations are not that great, maybe one or two thousands at maximum. In fact business versions of TRIZ inventive principles are not that mature yet. So the comprehensiveness and validity of business versions of 40 inventive principles (including one we have used for this study) is significantly lower than technical one. But of course upon time and study, they will be more handy and applicable, maybe in a different appearance. Remember,

You ain't seen nothing yet!

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He is an instructor at project management research and development center in PIDMCo where he along with his colleagues is working on research projects defined to facilitate continuous improvement process in petrochemical plant projects in Iran. His former career was in field of MIS within petrochemical industries of Iran. He has translated some three books about management science to Farsi. He is also author of a book and several articles mostly in the field of project management and also innovation. He got interested in TRIZ for the first time when he read "the innovation algorithm" the brilliant book written by Mr. Altshuller. His academic background has been in field of industrial engineering, project management and business administration.

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