Intelligence phase – Essay I
The issue I selected to write about concerns a strategic decision which I and the rest of the management in my division took in order to reduce the number of calls to the call center in 2004. Like most of the mobile telecommunication companies Xyz has two client types – postpaid and prepaid. The company has its own call center for servicing these clients since the very beginning of its establishment. The phone number to reach the call center has always been free of charge which in practice allows the customers dial as many times as they want without paying for this. In order to reduce the calls to an agent we use IVR (Interactive Voice Response) system. The IVR offers variety of automated services for the clients such as information about the products and the services offered by the company as well as their prices. It also provides information about current promotions and variety of self service options giving the customers an option to activate and deactivate plenty of services on their own. These capabilities let us keep close to 90% of the calls finishing in the IVR without going to an agent. Despite the available technical capabilities we still have the remaining 10% of the clients that don’t satisfy their requests in the IVR and choose an option to talk with an agent (customer service representative).
Since 2002 the number of Xyz’s clients (mainly consisting of prepaid clients) started growing rapidly and respectively the calls to customer care increased as well. The Call Center has limitations in aspect of space, number of seats, call volume capacity and budget for agents’ headcount. The customer’s growth tendency continued in the following years as well. In order to serve the increasing number of calls resulting from this growth we were hiring more and more agents. However starting in 2003 and continuing in 2004 we detected that the call volume to the call center increased in a greater rate compared to the growth of new clients. As a result the service level started going down and the customers began complaining for waiting more time in order to be served. It was obvious that we had problem that needed to be resolved as soon as possible.
Observing the statistics and looking for solution the customer care management scheduled a meeting in order to identify where the problem came from and what could be done in order to solve it.

The available information resources came from the statistics produced by the systems used in the call center. Looking at them (on a daily, weekly, monthly and quarterly base) we easily identified that there was significant increase of the calls to an agent that did not correspond to the rate of clients’ increase. We also observed that the service level was going down progressively, that the agents available were constantly increasing their efforts to serve more calls than they used to and that the customer satisfaction was decreasing because of the longer time the clients waited until being served.

Although we had pretty good and consistent reports that gave us lots of data we had to go more deeply in the details and investigate each call by type, time of call, call length, waiting time as well as the number repeating calls per client and the type of the clients making those calls. This information was not available at that time and we needed to find a way to obtain it. For that
reason we purchased additional software that was connected to the call center systems and produced the reports that were necessary to have the data and support our decision. The additional reports produced by the new system and analyzed afterwards were:

- Number of calls for each unique client to IVR per day, week and month
- Number of calls for each unique client to an agent per day, week and month
- Number of calls for each unique client to an agent in aspect of call length

Then we matched these results with the already available data about the number of calls for each unique client in aspect of subject of the request (what the call was about)

The results from the investigation revealed that most of the high call volumes were produced by prepaid customers, were spread over the time quite uniformly (there were no significant peaks in specific hours of the day) and that the less bills the clients used to pay the more they called. The matching between these statistics with the call typing ones revealed great number of unreasonable calls produced by the same clients that generated lots of calls. We also found lots of repetitive calls (according to the subject) made by particular clients (For example 1030 clients made 26932 calls with total duration of 387 hours for one month period – moreover 76 from those clients made 5577 calls). Another finding was that in general there were not many calls with high duration produced by the majority of the clients observed - these calls were produced by a limited number of customers (46 customers made 2868 calls with total duration over 136 hours). Comparing the repetitive calls with the ones with long duration we identified that they belonged to different groups of clients and were almost not connected.

Based on the daily statistics we identified lots of prepaid clients making more than 5 calls to an agent per day. The same clients existed in the list with repetitive calls and were found to produce over 30 calls to an agent a month. Another finding was the lack of many clients dialing repeatedly the call center, using the IVR and finishing their job in it (without using an agent).

During the intelligence phase we could perform better in several aspects. First of all we analyzed data, covering quite a short period of time – one month only and made our conclusions based on this data. The reason was that on the one hand we were restricted by the lack of supplementary statistics for the previous periods of time (we did not have appropriate software to produce them) and on the other hand we were short of time and had to take prompt actions. Secondly we analyzed the different data types but did not juxtaposed in details all types of reports we had (for example we did not investigate whether the clients calling to the IVR a lot were the same that were calling to an agent a lot). Thirdly we did not consider the possible external factors that might had influenced the call volume such as specific company promotions, services, technical troubles, etc.

The cognitive heuristics that helped us analyze the situation were:

- Anchoring Trap – based on the old statistical reports, having first impression that something goes wrong and not trying to consider additional factors we came to the conclusion that there was a problem - we were right.
- Confirmation – we easily found the information that supported our initial sense and avoided all possible reasons that might work against our intuition. We faster jumped to conclusion that the reason for the increasing call volume must come from the majority of the prepaid clients and those clients call more than usual times a day – it was true.
• Overconfidence – we took the statistics for one month only but were overconfident that one month is representative. Actually for some of us the statistics were necessary just to prove the validity of our initial hypothesis.
• Recallability – we imagined where the problem might come from and went into this direction. Because the agents all the time complained from the prepaid clients we immediately focused on them.

The cognitive biases that lead us to misleading investigation were:
• Anchoring Trap – we were sure that our first assumptions based on previous experience were correct and we were surprised to notice that not only prepaid but also some postpaid clients produce significant amount of repetitive and time consuming calls.
• Status Quo – we were monitoring for a years the tendency that the call volume increases but did nothing to prevent it. We just added more and more agents in order to serve the calls and believed that this was normal consequence of the increasing number of clients.
• Confirmation – in order to explain to ourselves the increasing call volume over the years we looked for variety of reasons that were suitable for us but did not thought that there might be problem.
• Selective perception – we were thinking of what we wished to. We were sure that the boosting call volume was due to the increasing number of clients.
• Overconfidence – we relied so much on our competence that we did not think broadly and neglected other alternatives that could explain the problem better.
Design Phase - Essay II

Based on the data collected and the supplementary reports produced we outlined the major problems and suggested possible alternatives for solving the problem. The analyst of the division combined the different statistical reports in order to analyze the dependencies between them. The management appointed three groups of people to think over the results and figure out alternatives. The first group consisted of two statisticians and one analyst, the second group consisted of call center representatives from different levels (agent, team leader, supervisor, etc.) and third group was formed by operations support employees dealing with the call center processes and procedures. The three groups were gathered together, the already identified problems were explained again and the statistics and their dependencies were presented by the analyst. After the presentation each group was given a task - to think over the data presented and offer alternatives for solving the problem in a week, providing written report and presentation. In a week the groups met together and presented their conclusions and suggestions supported by their arguments and the methods they used.

The management listened to each particular suggestion carefully and facilitated the whole process. None of the suggestions was thrown aside and all were combined into one report where the repeating ones were ignored. Among the variety of the alternatives the most consistent ones were to:

- Do nothing that will change the way the clients were served so far, hire more employees to serve the clients and extent the capacity of the call center;
- Periodically conduct outgoing scripted conversations to the clients producing repetitive calls (personal care) and try to change their behavior;
- Restrict the calls to the call center for those clients that create huge number repetitive calls for certain period of time, then discontinue the restriction and observe their behavior
- Restrict the calls to the call center to limited number (each client to be allowed to dial the call center 3 times a month). After the number is reached to restrict the possibility to talk with an agent until the beginning of the next month
- Restrict the calls to 3 times a month and then offer alternative number for connection to an agent that is not free of charge
- Make the call center number not free of charge and start charging each call without any restrictions about the number of calls to an agent allowed

The suggestions listed above are sorted from the most customers oriented to the most customers restricting one. It is easy for one to notice that the more customers oriented the solution the more expensive to the company it is. This was realized immediately by the management as well. After having all the alternatives supported by the arguments for them the management took a day in order to make its final decision. The selected alternative was announced the next day.

The whole process of the design phase was quite creative. The people from the different groups suggested variety of alternatives based on the information they were given. The information itself was quite consistent and representative (although it covered the period of one month only) so the materials provided were quite good in order to make decision based on them. The employees from the three groups were stimulated to produce as many ideas as they could and to offer whatever they wanted – even stupid in first sight ideas were taken seriously and then included in the final report. The ideas suggested were quite a lot and most of them were reasonable. The groups were given a chance to discuss frankly the pros and cons of each offered
alternative and state freely their agreements and disagreements. The management was supportive and facilitated the whole process.

The design phase could be probably more productive if the groups consisted of employees from different levels and units. On the one hand this could produce more consistent and reasonable suggestions but on the other hand this mix could reduce the number of suggestions because for example the operations support group that were familiar with the technical limitations could discard some of the suggestions before they have been stated. We also could conduct a survey in order to see what the clients in question would suggest but we were afraid that the common answer would be just to do nothing and hire more people in order to serve them. Maybe in the first presentation we could state the technical limitations in order to save time for thinking over suggestions that could not be realized even if they were good. In summary however the design phase was performed properly and in quite a good way.

The cognitive heuristics that were helpful in the design phase were:
- Prudence – the people from the groups exaggerated the restriction measures in order to make sure that their suggestions would work after the implementation of the solution they offered – we still benefit from this exaggeration.
- Selective perception – the group members edited somehow their memories in order to find solution that would restrict the number of calls. Almost no one thought about other alternatives.

The cognitive biases that caused problems in the design phase were:
- Anchoring – the employees from the groups received similar information from the analyst and made their suggestions based on this initial information and the first impression they got.
- Confirmation – most of the employees in the groups (especially the employees from the call center group that used to work with clients) were directly affected by the huge call volume and jumped to those types of ideas that could restrict the calls and make their job easier. They suggested and defended the ideas that they personally liked and supported most.
- Framing – the initial presentation from the analyst gave the audience a feeling that the company has to restrict the calls of the prepaid clients. This feeling later influenced the alternatives offered most of which were suggesting the same.
- Selective perception – most of the employees in the teams were victims of the increasing call volume and demonstrated wishful thinking that was working in favor of them.
Choice Phase - Essay III
The management took the decision which alternative to implement after considering variety of factors. The suggestions proposed by the three groups of people were combined – there were not passed over suggestions. The ideas were sorted in variety of ways as follows:

- According to the personal preference of the participants – each participant from the three groups sorted the combined ideas starting from the most relevant to the most irrelevant according to its own opinion.
- According to the extend they could influence the customers – the ideas were sorted from the most customers oriented (the ones that would affect the clients less) to the ones that would affect the customers most.
- According to the technical requirements necessary to implement the solution – from the most to the less complicated
- According to the budget required
- According to the time frame in order the solution to be implemented

Each participant was asked to argument its sorting decisions. Then the pros and cons of each alternative were evaluated in a group level. The final decision was left to the management which combined all the parameters into a matrix and selected the best ones. The selected alternative was announced on the next day. The management decided to restrict the number of free of charge calls to an agent to two per month (not to three as it was suggested) and after the limit is over to offer alternative number for connection that is charged at flat price per minute. The calls to the IVR (that does not engage operator) were decided to remain free of charge regardless of their number. The above stated restriction was determined to be applied for the prepaid clients while the postpaid clients continued having unlimited number of free of charge calls.

We addressed some issues of uncertainty and probability during the choice phase. It was no an easy task to take decision of implementing alternative that would change the way the company serves almost 1.5 million of its clients. We knew that the clients calling up to two times a month would not be influenced by the selected solution but the rest would experience significant change very soon. We did not know how the clients from the second group would behave after realizing the change - would they do nothing or start complaining, would they start using other channels for communication with the company (via the shops or internet) or they would decide to stop using our services and leave the company. It was meaningless to ask the clients about what they would do because the usual answer according to our previous experience was they would leave us. That’s why we had to guess. We were uncertain about whether the limit of two calls would be enough and we did not know how many of the clients would start using the paid line after using up their free limit. We counted on the fact that the calls would decrease and the customers would not use the paid number a lot because in the intelligence phase we identified that those making repetitive calls are those paying the lowest bills. This made us believe that they would not afford paying for this service unless they have real need. There was probability that the clients would continue making repetitive calls to an agent using the limit and afterwards using the line that was charged – if this had happened we would have failed completely.

The choice phase could be performed better if we had involved (interviewed) some of the clients we decided to restrict. If we had shared our decision for introducing call limitation with them we would have known what their preferences were. We did not do the survey because we knew that when someone is offered to be restricted (when taking something from someone) the reaction is
always negative and against the change. Because we were short of time we did not spent enough time for considering the pros and cons of the alternatives given by each group. We were also thinking for the technical limitations we used to have and the budget available. Hence we naturally selected one of the cheapest and easiest to be implemented options that could be ready in a relatively short period of time.

The cognitive heuristics that were helpful in the design phase were:

• Overconfidence – we were sure that the clients would not help us with their opinion regarding the alternative they would prefer us to implement in order to solve the problem. Therefore we did not ask them at all and took the decision by ourselves. I still believe that talking with the clients for such an issue is a waste of time.

• Prudence – Although the group suggested limiting the prepaid clients with three free of charge calls per month (even the statistics revealed that this number was the most reasonable) the management decided to reduce it into two. This was conservative decision that was taken in order to be on the safe side. This decision granted approximately 1,5 million calls per month less (the number of prepaid clients) compared to option with three calls a month that could bring us from 0 to 1,5 million free of charge calls more. I support the decision because the selected alternative works quite well even today when we have 1 million prepaid clients additionally.

The cognitive biases that were problems to us in the design phase were:

• Confirmation and Selective perception – we were looking for the alternatives that would solve our problem quickly and cheaply. We also looked for solution that would help us in a long term. Therefore at the back of our mind we were enthusiastic about the solutions that corresponded to these requirements and ignored the rest that did not. One of the easiest and cheapest solutions was selected at the end.

• Recallability – due to the big thread to the call center reputation the management made lots of noise and emphasized on the importance of the decision we had to make. Influenced by this noise the employees involved supported the alternatives that could bring quick wins. The employees from the groups were driven by the desire to restrict the customers in a certain way, with small budget and within short time.