

Customer service- A Tool to Improve Quality of Experience(QoE)

A strategic competitive advantage of Nayatel

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Abstract— For internet service providers, providing quality customer service is as important as providing promised bandwidth and consistent service availability. In Pakistan, there is fierce competition among wireless and wire-line technology ISP's. The total number of broadband users in the country has exceeded 1.7m and the industry is yet to experience the boom in full enormity. Set in this scenario, we studied the Quality of Experience (QoE) enjoyed by the customers of the first broadband company in Pakistan, Nayatel (Pvt) Ltd., that provides triple play services (i.e. phone, video and internet) to public and corporate sector in two cities. Primary data was obtained by receiving customer feedback regarding their overall experience with the company's services. Overall Mean Opinion Score for customer satisfaction with voice, video and internet services and came out to be 4.30/5. Analysis was also done on secondary data like customer support calls record, customer appreciation emails and troubleshoot time durations etc. over a 3-month time period. The analysis showed astounding results including achievement of zero seconds' minimum call wait time in the Technical Assistance Centre of the company. The results offer a proof that customer satisfaction measures have raised the bar for broadband internet service quality in Pakistan and have made customers more apt than ever before to compare, evaluate and choose products based equally on quality, price and serviceability.

Keywords- *Quality of Experience, Customer Satisfaction, Triple-play services, Broadband*

I. INTRODUCTION

Quality of customer service is a fairly new concept for businesses in Pakistan, where the service providers cared only for customers until they signed a binding formality. Customer support was considered a peripheral process and hence no dedicated, experienced or professional team was appointed to work around the clock for customer tech support. As new IT businesses emerged with clearly thought-out vision, mission and goals; new concepts of ownership of customer service developed. These include cooperative and humble customer services, quick and competent customer support, customized and bundled services, throwing in delighters from time to

time, and increased availability in the form of 24-hour support for multi-product environment etc. Other businesses also realized that superior customer support in technological products can spell the difference between choosing one service provider over the other. A healthy competition now exists between different service providers striving for customer retention and making each customer a satisfied and loyal customer.

It is no secret that Fiber-to-the-Home (FTTH) is quickly becoming the favored architecture for bringing data, video and telephone and future technologies to customer premises. Fiber solutions have come with a promise of providing bandwidth intensive services for home and corporate users that enable them to remain competitive for years to come. More the bundled services, greater is the need for excellent customer service. As mentioned in Harvard Business Review, November/December 1995, "The gulf between satisfied customers and completely satisfied customers can swallow a business". There are few companies who have understood the importance of this divide and its immense impact in gaining and retaining good business. One such company is Nayatel – **the first fiber infrastructure of South Asia**, the Fiber-To-The-Home (FTTH) network of which has transformed Islamabad into one of the most connected and optically wired cities of the world. It was named the second fastest growing company in Pakistan in year 2011 by AllWorld Network.

The preliminary connection set-up costs and internet services provided by Nayatel are expensive as compared to local competitors, yet quality-conscious home users and mission-critical businesses are not only buying the services but also expressing their satisfaction. Resultantly, the company has focused in on its quality of customer experience as key benchmarks to maintain and uphold. This attitude of redefining quality standards as totally aligned with customers' expectations and requirements has set a new example of success and growth for businesses in Pakistan. A large number of customers are opting for Nayatel services, switching from its competitor service providers. In this case study, we venture

into a detailed tour to determine how quality of customer service serves and continues to be the strategic competitive advantage of Nayatel and what lessons are hidden in it for other businesses that want to grow.

II. LITERATURE REVIEW

With the proliferation of telcos, it is becoming an extreme matter of concern to understand the forces that are going to affect the consumer behavior [7]. In a highly growing competitive market, telecommunication service providers are maintaining a competitive advantage over each other by adopting a defensive market strategy rather than attracting new customers [1]. This explains that the cost of acquiring new customers and making them satisfied and loyal is much more than the cost associated with retaining the existing ones. Information Integration Theory (IIT) has been applied to demonstrate the super-additive effects in consumers' assessment of bundled services which cause the value of the bundle to be greater than the sum of the value of its parts [5]. Customers may benefit from searching only a single location, buying all services from a one-stop-shop provider, getting a single bill, and maintaining a single vendor relationship. In the case of triple play, a single bill for television, telephone and Internet access thus enhances the ease of use of the bundle. Perceived price advantage of the bundle is significantly related to the additional usefulness of the bundle according to the findings in [5]. Via the triple play service, the user can have a relish for all the aforementioned services; IPT V (video on demand or commercial—grade T V), voice over IP (VoIP) telephony and high-speed Internet access, all at the same time [4]. There are multiple approaches to delivering triple play service to the end user. The usage of fibers is one alternative, either by active Ethernet—in which each user is provided with a dedicated fiber connection to a switch at a neighborhood aggregation point, or by inheriting a passive last-mile architecture based on passive optical networks. Quality of service (QoS) guarantees and traffic management are acknowledged as technical challenges for the successful deployment of triple play services [4].

Study in [3] focuses on the consequences of convergence of technologies in the form of the new infrastructure based on optical fiber to the home (FTTH) replacing existing networks. It suggests that given the economies of scope in the provision of the three services and the increased use of internet protocol (IP) to provide fixed telephony and television, it can be expected that in the medium to long run consumers will take all three services from the same firm. Optical fiber has a much larger capacity than copper wire or the cable used for TV transmission due to which FTTH makes it possible to offer high-quality triple-play services on one network, opening possibilities for offering new and capacity intensive services. In the future it is likely that only one network will survive. A customer would most likely go for the service that would fulfill all his ever growing needs of communication at one

place. So, customer satisfaction comes in full play here and it is extremely important for a firm to focus on it in order to gain a competitive advantage over others and earn goodwill of its customers.

Generating satisfied customers is sometimes the gateway to creating loyal customers [6]. However, as opposed to this, in case of low switching costs satisfied customers may not be loyal customers. On the other hand, high switching costs may not generate satisfied customers but they remain loyal due to this cost barrier [6]. So we can conclude that switching costs act as moderator between satisfied and loyal customers.

Developing brand credibility can change perceptions on part of the consumer and thus affect satisfaction level [8]. In case of unfulfilled promises by the firm on part of the customer service, this may greatly harm a firm's reputation on the slogan and motto that is it maintaining. Brand motivates a firm to remain truthful about its products and services [8].

Brand credibility has two facets and they are the trustworthiness (belief of the firm to deliver product or service as promised) and expertise (actual ability of the firm to deliver services as promised) [8]. Thus creating a brand serves as a defensive marketing tool as opposed to offensive marketing tool where efforts are made to lure in new customers [8]. Failure to adopt appropriate strategies to satisfy customers can lead to customer churn.

Major determinants of customer churn are customer dissatisfaction, switching costs, service usage and customer status. Findings in [1] suggest that efficient company's management program which is used for handling customer complaints can prevent customer churn and customer status change. Service quality and perceived value has significant, positive effects on customer satisfaction [2]. Service quality significantly affects two critical factors value and image which determine satisfaction and loyalty. Thus, Service quality impact on these two factors for assessing the satisfaction and loyalty.

Customer satisfaction can be graded at three levels and they are the customer expectation before the purchase of product/service, perceived image of satisfaction after using the product/service, and the final evaluation of the product/service i.e. perceived quality [8]. Many factors are considered important in subscriber satisfaction and they are: high quality of network services at comparatively lower costs, overall cost of the provided services, reasonable billing, network availability, complaint handling capability and satisfying customers, security, brand credibility, education and technical support [8].

Findings in [2] propose and test an integrative model that examines inter-connections among evaluation of service quality, customer perceived value, perceptions of corporate image, customer satisfaction and loyalty. Adapting the framework to a service context suggests that the more cognitively-oriented service quality and value appraisals may lead to emotive satisfaction, which in turn drives loyalty [2]. The bundled services create The 'Halo Effect' i.e. a positive experience of the customer with one aspect of a service affecting his/her opinion about other aspects of the service

such that the overall service is perceived to be better than the sum of the individual parts.

III. METHODOLOGY

Our sources of information include:

1. Administrative data (includes call volumes data, website statistics)
2. Customer data (feedback including complaints, suggestions and compliment)
3. Existing survey data (Facebook ad-campaign results, customer portal reports)

A. Customer Feedback Data

The company conducts Periodic Satisfaction Surveys from time-to-time to get a snapshot of customer experiences and expectations. In one quarter of FY2012, we put forward a suggestion to the marketing department to get feedback from a group of customers (including home and corporate users) rating their experience of the service as a whole. An online survey was the obvious feedback method since almost all customers have easy access to internet. Customer's rating was based on a 5-point Likert Scale anchored from "Bad" to "Excellent". Sample size was calculated through Power and Precision. The study enrolled 66 people. With this sample size, there is a 95% likelihood that the sample mean will fall within 0.3 points of the true mean. If we observe a mean of 4.25 we will be able to report that the true mean probably falls in the range of 4.25 plus/minus 0.3 points. The expected pattern of responses is as follows: Bad (5%), Poor (10%), Fair (5%), good (15%), Excellent (65%). This corresponds to a mean of 4.25 with a standard deviation of 1.22.

Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, sc, dc, and rms do not have to be defined. Do not use abbreviations in the title or heads unless they are unavoidable.

B. Administrative Data

- The Technical Assistance Centre (TAC) handles calls and queries from its customers. Operators are available to assist customers 24/7 and also on national holidays. We were given access to some reports from the TAC department with data about the number of calls received to report technical problems and open Trouble Ticket thus requiring troubleshoot assistance. The data is segregated for each service so that customer satisfaction with each service can be measured.

Hypothesis 1: Less the Average Wait Time, better the customer service

- Trouble Tickets closing and opening time and duration of resolution data was obtained with help of the Database Department of the company. The data is segregated for each service so that customer satisfaction with each service can be measured.

Hypothesis 2: Shorter the TT duration, higher the customer satisfaction.

- Customers who leave the company create the churn rate. This data was accessed from the Marketing Department with reasons for customers opting to leave company service.

Hypothesis 3: If customer satisfaction is high, churn rate will be low.

C. Measures

To measure overall satisfaction or dissatisfaction with a product/service, a five-point satisfaction scale is often used. This measure, Overall Satisfaction (OSAT) score, has been used to grade overall consumer satisfaction with the service.

IV. FINDINGS

A. OSAT score

Overall rating measures provide a snapshot of how customers perceive services as a whole. This is a good measure of grabbing the headlines. Table 1 shows the SPSS result for OSAT score.

Table 1 Statistics

How would you rate your experience of Nayatel's services on the whole?

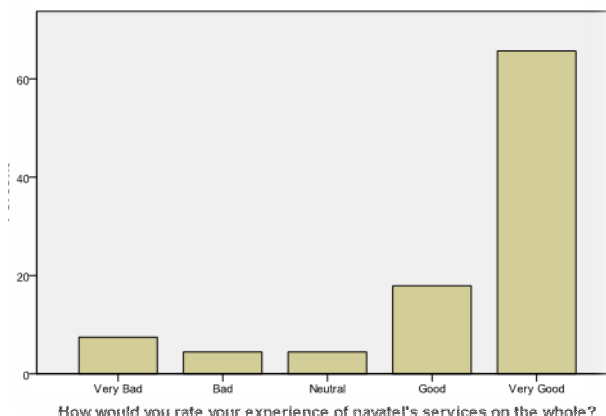
N	Valid	67
	Missing	0
Mean		4.30
Std. Deviation		1.219
Variance		1.485
Percentiles	25	4.00
	50	5.00
	75	5.00

a. Mean Value as calculated in SPSS

On a Likert scale of 5.00, we were able to get customer satisfaction data through a survey conducted by firm on regular basis. The result is shown in Table 2. Mean for customer satisfaction came out to be **4.30**, which shows the general trend that customers are 83.6% satisfied with the services provided.

When we see the customer satisfaction level of best ISPs of the world, O2 has 92%, Plus Net has 87%, Sky Broadband has 86%, Virgin Media has 82% and Talk Talk has 87%. We see that the OSAT score of Nayatel is comparable to these ISPs.

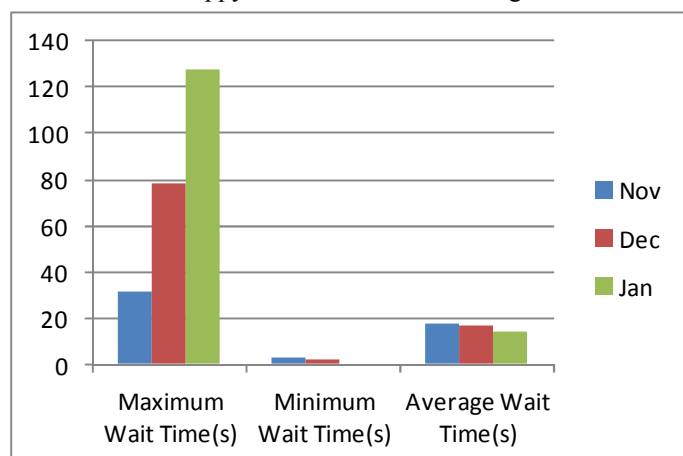
How would you rate your experience of nayatel's services on the whole?



1. OSAT score of Customer experience of Nayatel's services

B. Average Wait Time of Calls

The histogram shows that Average Wait Time of calls is decreasing gradually which is a sign of improvement in customer service. The Minimum Wait Time has achieved the target of being 0 seconds. Maximum Wait Time, however, is presenting a problem as it has escalated from .52 minutes in November to 2.13 minutes in January. This can create customer dissatisfaction since long wait or hold time doesn't make customers happy. Results are shown in Figure 2.



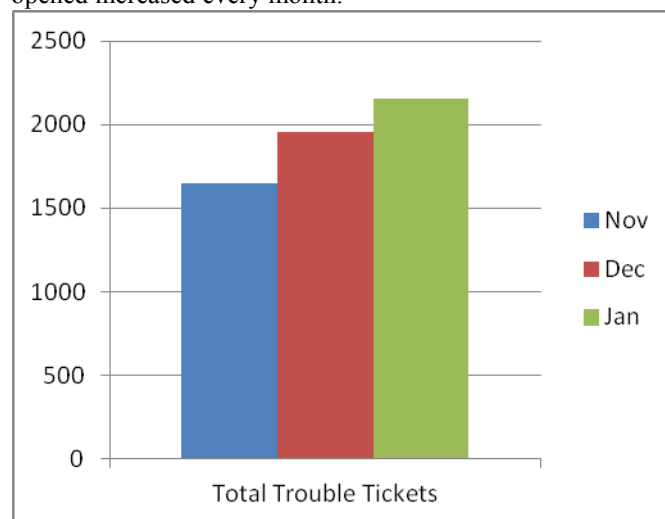
2. Average wait time of customer calls

Achieving an Average Wait Time of 14s against the company's set target of 16s with up to 8000 calls a month, 270 calls a day is a magnanimous achievement and proves our **hypothesis-1** that the timeliness (low calls wait time) at Nayatel customer assistance centre contributes to the overall customer satisfaction.

C. Trouble Ticket(TT) Resolution Time

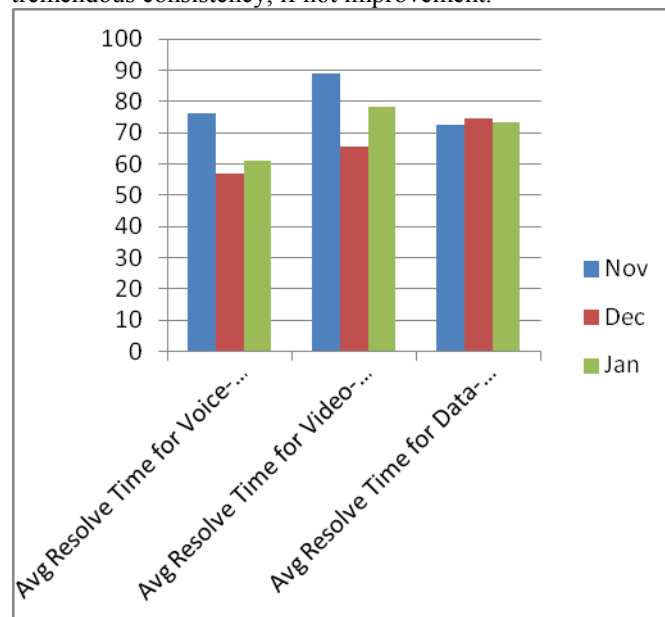
A record is maintained for all the trouble tickets opened by operators or launched by customers using the online customer portal. A trouble ticket for data service can, for example, be launched if Internet is down or for slow browsing problem. If

trouble tickets are closed early, customer satisfaction with services will be high. However if it takes longer to bring the service back up and running, it may even lead to customer churn. Figure 3 shows that the total number of trouble tickets opened increased every month.



3. Number of Trouble Tickets opened over 3-month period

Figure 4 shows that the average TT duration has decreased from 135.26 hours in November to 107.92 in January against the company's set target of 120 hours which is a giant leap forward. The TT duration in segregated services cannot be seen in isolation. Despite a rise in total number of TT's, the average TT resolution times for the three services have shown tremendous consistency, if not improvement.



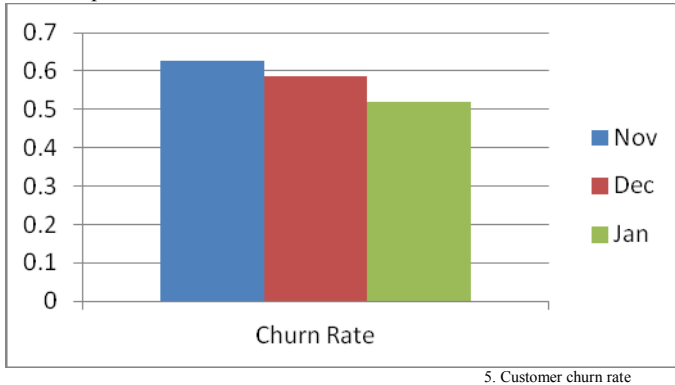
4. Average Trouble Ticket (TT) resolve time

D. Customer Churn

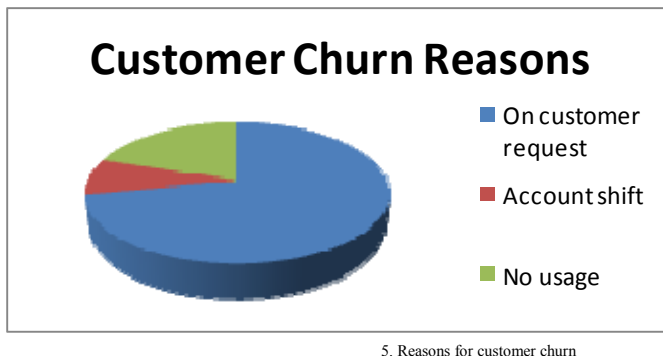
Customers who cancel the service every month contribute to the churn rate. At Nayatel, the most common reasons for discontinuing services as described by customers are:

- On customer request, mostly because they move to area where Nayatel service is not available
- Account has no usage for 6 months
- Shifting to new User account

The percentage of customers who discontinued their service in the 3-month period has decreased. Even those who leave form a very minute percentage. Provides proof for our hypothesis-4 that low churn rate/attrition rate is a sign of high customer satisfaction. Figure 5 shows the customer churn rate over 3-month period.



In addition to the low churn rate, we also see that the reason for churn mostly is not dissatisfaction of customer with Nayatel's services but service unavailability outside of the twin cities. The customers would continue with the company's services if and when Nayatel decides to expand its network.



E. Comparison with local competitors

The current broadband market of Pakistan offers several options to the public, from primitive wire-line copper, DSL and FTTH technology to modern wireless technologies like WiMAX and EvDO. In 2005-06, DSL ruled the internet market arena but was given tough competition by the promising introduction of wireless broadband solutions of WiMAX and EvDO in 2007-08. Currently a fierce competition for supremacy exists between fixed and wireless technologies. PTCL, Wateen, WorldCall and Wi-Tribe own a combined share of over 90% in the Pakistan broadband industry and are growing at a rate of 89%, 54%, 125% and 118% respectively as reported in 2010.

To compare the performance of Nayatel with its competitors in the local market, we studied the results of QoS survey of all

wireless and wire-line service providers carried out by Pakistan Telecommunication Authority (PTA) in 2011. The companies were evaluated on basis of KPI's like Service Availability, Download and Upload bandwidth Speed, Round-Trip Time (RTT) and Retain-ability. The key points are:

- For both 512kbps and 1mbps broadband packages for wire-line broadband service, both Nayatel and its competitor PTCL has been placed in Category A (>90% overall score in KPIs). However, this feat is more pronounced for PTCL as it has also been awarded Category A in regions other than Rawalpindi/Islamabad whereas Nayatel operations are limited to only these twin cities and thus its service is yet to be tested on broader customer and regional bases.

Moreover, the 1MB tariff ceiling is the highest for Nayatel among its competitors which may become cause of low market share once Nayatel takes its services to other cities already covered by competitor's networks. The high-price war may result in deterioration of service quality and customers getting bad internet at cheaper rates.

- All wire-line operators, including Nayatel, have minimum 60% Service Retain-ability in regions of 100% Service Availability. The fact that none of the operators could cross the 60% barrier shows that there is a big enough room for service improvement on Nayatel and other networks.
- The Round Trip Time (RTT) value bespeaks of Nayatels' excellent quality of service. For the 52kbps package, compared to Cyber Net's 44.83msec RTT, Nayatel has a competitive 15.33msec. Whereas for the 1mbps package, Naytel service has 15.33msec RTT against Cyber Net's 43.5msec and PTCL's 37.17msec.

V. CONCLUSION

It is said that "An organization cannot do today's job with yesterdays methods and be in business tomorrow." Earlier an organization learns this and implements it in their strategy, higher the chance they have of strengthening their foothold in the industry. In a competitive market, Nayatel first made its mark by offering products that are different and superior in ways that matter to customers. Then they made Nayatel a one-shop stop for services that every home and corporate office required and coupled it with an accessible single-point contact for resolving customer queries. If companies incorporate this provision of quality products and quality service to their customers in their mission, they can achieve high customer satisfaction levels. From Internet

connectivity to resilient network with zero downtime, robust teleconferencing services to unparalleled and reliable bandwidth, seamless FTP services to ensuring customer satisfaction, the ISP's in Pakistan are well on their way to providing 'First World' service to its customers.

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